






















APPENDIX D:
**EXISTING PLUS PROJECT CONDITIONS ANALYSIS OUTPUT
SHEETS**

HCM 2010 Signalized Intersection Summary
 1: American Ave/W Country Club Dr & Balfour Rd

Existing With Project
 Timing Plan: AM-Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	218	354	791	418	91	123	213	728	77	471	6
Future Volume (veh/h)	13	218	354	791	418	91	123	213	728	77	471	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	14	237	385	860	454	99	134	232	791	84	512	7
Adj No. of Lanes	1	2	0	2	2	0	1	1	2	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	33	507	431	648	1295	280	164	612	1619	107	544	7
Arrive On Green	0.02	0.28	0.28	0.18	0.44	0.44	0.09	0.33	0.33	0.06	0.30	0.30
Sat Flow, veh/h	1757	1845	1568	3514	2940	637	1757	1845	3136	1757	1815	25
Grp Volume(v), veh/h	14	237	385	860	284	269	134	232	791	84	0	519
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1732	1757	1845	1568	1757	0	1840
Q Serve(g_s), s	0.9	11.6	25.6	20.0	11.0	11.2	8.1	10.4	17.7	5.1	0.0	29.8
Cycle Q Clear(g_c), s	0.9	11.6	25.6	20.0	11.0	11.2	8.1	10.4	17.7	5.1	0.0	29.8
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	33	507	431	648	812	763	164	612	1619	107	0	552
V/C Ratio(X)	0.42	0.47	0.89	1.33	0.35	0.35	0.82	0.38	0.49	0.78	0.00	0.94
Avail Cap(c_a), veh/h	324	850	723	648	850	799	324	612	1619	324	0	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.6	32.7	37.8	44.2	20.1	20.1	48.3	27.7	17.0	50.2	0.0	37.0
Incr Delay (d2), s/veh	3.1	0.2	4.5	157.9	0.1	0.1	3.8	0.1	0.1	4.6	0.0	20.9
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	0.4	6.0	11.5	23.8	5.6	5.3	4.1	5.3	7.7	2.6	0.0	18.3
LnGrp Delay(d),s/veh	55.7	33.0	42.2	202.1	20.2	20.2	52.1	27.8	17.1	54.8	0.0	57.9
LnGrp LOS	E	C	D	F	C	C	D	C	B	D		E
Approach Vol, veh/h		636			1413			1157			603	
Approach Delay, s/veh		39.1			130.9			23.3			57.5	
Approach LOS		D			F			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	40.0	24.0	33.8	14.1	36.5	6.1	51.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	30.0	20.0	50.0	20.0	36.0	20.0	50.0				
Max Q Clear Time (g_c+I1), s	7.1	19.7	22.0	27.6	10.1	31.8	2.9	13.2				
Green Ext Time (p_c), s	0.1	3.5	0.0	2.2	0.2	0.7	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				71.3								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary
 2: Foothill Dr/E Country Club Dr & Balfour Rd

Existing With Project
 Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	53	865	122	42	936	71	212	87	94	232	113	253
Future Volume (veh/h)	53	865	122	42	936	71	212	87	94	232	113	253
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	56	920	130	45	996	76	226	93	100	247	120	269
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	101	1073	152	83	1113	85	267	467	397	289	135	302
Arrive On Green	0.06	0.34	0.34	0.05	0.33	0.33	0.15	0.25	0.25	0.16	0.27	0.27
Sat Flow, veh/h	1757	3164	447	1757	3385	258	1757	1845	1568	1757	507	1137
Grp Volume(v), veh/h	56	536	514	45	543	529	226	93	100	247	0	389
Grp Sat Flow(s),veh/h/ln	1757	1845	1766	1757	1845	1799	1757	1845	1568	1757	0	1644
Q Serve(g_s), s	2.5	22.1	22.1	2.0	22.8	22.8	10.2	3.2	4.2	11.2	0.0	18.6
Cycle Q Clear(g_c), s	2.5	22.1	22.1	2.0	22.8	22.8	10.2	3.2	4.2	11.2	0.0	18.6
Prop In Lane	1.00		0.25	1.00		0.14	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	101	626	599	83	607	592	267	467	397	289	0	436
V/C Ratio(X)	0.55	0.86	0.86	0.54	0.89	0.89	0.85	0.20	0.25	0.86	0.00	0.89
Avail Cap(c_a), veh/h	431	1130	1082	431	1130	1102	431	678	576	431	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	25.1	25.1	38.0	26.0	26.0	33.7	24.0	24.3	33.2	0.0	28.8
Incr Delay (d2), s/veh	1.8	1.4	1.4	2.1	1.9	2.0	4.4	0.1	0.1	7.2	0.0	9.7
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	11.4	10.9	1.0	11.9	11.6	5.3	1.7	1.8	6.0	0.0	9.6
LnGrp Delay(d),s/veh	39.2	26.5	26.5	40.1	28.0	28.0	38.0	24.0	24.4	40.4	0.0	38.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D		D
Approach Vol, veh/h		1106			1117			419			636	
Approach Delay, s/veh		27.1			28.5			31.7			39.3	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	24.7	7.8	31.7	16.4	25.7	8.7	30.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	30.0	20.0	50.0	20.0	30.0	20.0	50.0				
Max Q Clear Time (g_c+11), s	11.2	6.2	4.0	24.1	12.2	20.6	4.5	24.8				
Green Ext Time (p_c), s	0.3	1.3	0.0	2.1	0.3	1.1	2.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				30.5								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 3: John Muir Pkwy & Balfour Rd

Existing With Project
 Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1020	129	44	1009	34	33	6	30	4	2	10
Future Volume (veh/h)	40	1020	129	44	1009	34	33	6	30	4	2	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	42	1062	134	46	1051	35	34	6	31	4	2	10
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	0
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	1680	714	212	1695	721	83	125	106	11	7	36
Arrive On Green	0.06	0.46	0.46	0.06	0.46	0.46	0.05	0.07	0.07	0.01	0.03	0.03
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	268	1340
Grp Volume(v), veh/h	42	1062	134	46	1051	35	34	6	31	4	0	12
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1608
Q Serve(g_s), s	0.9	8.6	2.0	0.5	8.4	0.5	0.7	0.1	0.7	0.1	0.0	0.3
Cycle Q Clear(g_c), s	0.9	8.6	2.0	0.5	8.4	0.5	0.7	0.1	0.7	0.1	0.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	99	1680	714	212	1695	721	83	125	106	11	0	43
V/C Ratio(X)	0.43	0.63	0.19	0.22	0.62	0.05	0.41	0.05	0.29	0.35	0.00	0.28
Avail Cap(c_a), veh/h	900	4727	2009	1801	4727	2009	900	1749	1487	900	0	1525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.8	8.1	6.3	17.5	8.0	5.8	18.1	17.0	17.3	19.3	0.0	18.6
Incr Delay (d2), s/veh	1.1	0.1	0.0	0.2	0.1	0.0	1.2	0.1	0.6	6.6	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.3	0.8	0.2	4.3	0.2	0.4	0.1	0.3	0.1	0.0	0.1
LnGrp Delay(d),s/veh	18.9	8.3	6.4	17.6	8.1	5.8	19.2	17.1	17.9	25.9	0.0	19.9
LnGrp LOS	B	A	A	B	A	A	B	B	B	C		B
Approach Vol, veh/h		1238			1132			71			16	
Approach Delay, s/veh		8.4			8.4			18.5			21.4	
Approach LOS		A			A			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.3	6.6	6.4	21.8	5.8	5.0	6.2	21.9				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	37.0	20.0	50.0	20.0	37.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	11.5	2.7	2.5	10.6	2.7	2.3	2.9	10.4				
Green Ext Time (p_c), s	0.0	0.1	0.1	7.2	0.0	0.1	0.0	7.2				
Intersection Summary												
HCM 2010 Ctrl Delay			8.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
4: Eagle Rock Ave/Cortona Wy & Balfour Rd

Existing With Project
Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	987	9	306	1055	44	4	29	313	114	28	38
Future Volume (veh/h)	47	987	9	306	1055	44	4	29	313	114	28	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	52	1085	10	336	1159	48	4	32	344	125	31	42
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	1350	574	427	1620	689	11	453	385	157	234	317
Arrive On Green	0.05	0.37	0.37	0.12	0.44	0.44	0.01	0.25	0.25	0.09	0.33	0.33
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	711	963
Grp Volume(v), veh/h	52	1085	10	336	1159	48	4	32	344	125	0	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1675
Q Serve(g_s), s	2.6	23.9	0.4	8.4	23.2	1.6	0.2	1.2	19.2	6.3	0.0	2.8
Cycle Q Clear(g_c), s	2.6	23.9	0.4	8.4	23.2	1.6	0.2	1.2	19.2	6.3	0.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	85	1350	574	427	1620	689	11	453	385	157	0	551
V/C Ratio(X)	0.61	0.80	0.02	0.79	0.72	0.07	0.36	0.07	0.89	0.79	0.00	0.13
Avail Cap(c_a), veh/h	389	2041	867	778	2041	867	389	857	729	389	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	25.7	18.3	38.6	20.7	14.7	44.7	26.2	32.9	40.3	0.0	21.3
Incr Delay (d2), s/veh	2.6	0.7	0.0	1.2	0.6	0.0	7.1	0.0	2.9	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	1.3	12.2	0.2	4.1	11.9	0.7	0.1	0.6	8.5	3.2	0.0	1.3
LnGrp Delay(d),s/veh	44.8	26.5	18.3	39.8	21.3	14.7	51.8	26.2	35.9	43.7	0.0	21.3
LnGrp LOS	D	C	B	D	C	B	D	C	D	D		C
Approach Vol, veh/h		1147			1543			380			198	
Approach Delay, s/veh		27.2			25.1			35.2			35.5	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	26.2	15.0	37.1	4.6	33.7	8.4	43.7				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+1/3), s	19.3	21.2	10.4	25.9	2.2	4.8	4.6	25.2				
Green Ext Time (p_c), s	0.2	1.1	0.6	7.2	0.0	1.1	0.0	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay				27.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
5: SR 4 & Balfour Rd

Existing With Project
Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗	↖	↖	↖↗	↖	↖	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (veh/h)	554	706	297	77	809	455	170	647	36	282	674	410
Future Volume (veh/h)	554	706	297	77	809	455	170	647	36	282	674	410
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	589	751	316	82	861	0	181	688	38	300	717	436
Adj No. of Lanes	2	2	1	1	2	1	1	2	1	2	2	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	567	1402	596	104	1024	435	208	1212	515	362	1157	492
Arrive On Green	0.16	0.38	0.38	0.06	0.28	0.00	0.12	0.33	0.33	0.10	0.31	0.31
Sat Flow, veh/h	3514	3689	1568	1757	3689	1568	1757	3689	1568	3514	3689	1568
Grp Volume(v), veh/h	589	751	316	82	861	0	181	688	38	300	717	436
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	20.0	19.6	19.4	5.7	27.2	0.0	12.5	19.1	2.1	10.4	20.5	32.8
Cycle Q Clear(g_c), s	20.0	19.6	19.4	5.7	27.2	0.0	12.5	19.1	2.1	10.4	20.5	32.8
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	567	1402	596	104	1024	435	208	1212	515	362	1157	492
V/C Ratio(X)	1.04	0.54	0.53	0.79	0.84	0.00	0.87	0.57	0.07	0.83	0.62	0.89
Avail Cap(c_a), veh/h	567	1579	671	284	1579	671	284	1489	633	567	1489	633
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	29.9	29.8	57.5	42.2	0.0	53.7	34.3	28.6	54.5	36.2	40.4
Incr Delay (d2), s/veh	48.0	0.1	0.3	5.0	1.5	0.0	15.5	0.2	0.0	3.1	0.2	10.2
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	13.4	10.0	8.5	2.9	14.1	0.0	7.0	9.8	0.9	5.2	10.5	15.6
LnGrp Delay(d),s/veh	100.0	30.0	30.1	62.5	43.6	0.0	69.2	34.5	28.6	57.5	36.4	50.7
LnGrp LOS	F	C	C	E	D		E	C	C	E	D	D
Approach Vol, veh/h		1656			943			907			1453	
Approach Delay, s/veh		54.9			45.3			41.1			45.1	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	44.7	11.3	51.1	18.6	42.8	24.0	38.4				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	50.0	20.0	53.0	20.0	50.0	20.0	53.0				
Max Q Clear Time (g_c+1/2), s	12.5	21.1	7.7	21.6	14.5	34.8	22.0	29.2				
Green Ext Time (p_c), s	0.4	4.5	0.1	5.3	0.1	4.1	0.0	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay				47.7								
HCM 2010 LOS				D								

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	121	55	138	459	12
Future Vol, veh/h	5	121	55	138	459	12
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	153	70	175	581	15
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	2	0	1
HCM Control Delay	10	10.1	23.3
HCM LOS	A	B	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	4%	0%
Vol Thru, %	0%	100%	0%	97%
Vol Right, %	0%	0%	96%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	138	126	471
LT Vol	55	0	5	0
Through Vol	0	138	0	459
RT Vol	0	0	121	12
Lane Flow Rate	70	175	159	596
Geometry Grp	7	7	2	5
Degree of Util (X)	0.116	0.266	0.235	0.788
Departure Headway (Hd)	5.989	5.483	5.298	4.758
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	648	670	757
Service Time	3.783	3.277	3.397	2.828
HCM Lane V/C Ratio	0.118	0.27	0.237	0.787
HCM Control Delay	9.6	10.3	10	23.3
HCM Lane LOS	A	B	A	C
HCM 95th-tile Q	0.4	1.1	0.9	8

Intersection	
Intersection Delay, s/veh	22
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	121	135	64	22	52	17	61	259	55	56	164	63
Future Vol, veh/h	121	135	64	22	52	17	61	259	55	56	164	63
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
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	159	178	84	29	68	22	80	341	72	74	216	83
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	17.3	12.9	30.6	18.9
HCM LOS	C	B	D	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	82%	0%	68%	0%	75%	0%	72%
Vol Right, %	0%	18%	0%	32%	0%	25%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	314	121	199	22	69	56	227
LT Vol	61	0	121	0	22	0	56	0
Through Vol	0	259	0	135	0	52	0	164
RT Vol	0	55	0	64	0	17	0	63
Lane Flow Rate	80	413	159	262	29	91	74	299
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.173	0.815	0.359	0.536	0.072	0.207	0.163	0.602
Departure Headway (Hd)	7.739	7.101	8.12	7.375	8.899	8.202	7.973	7.26
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	508	443	487	402	437	449	496
Service Time	5.494	4.856	5.878	5.133	6.675	5.977	5.735	5.021
HCM Lane V/C Ratio	0.173	0.813	0.359	0.538	0.072	0.208	0.165	0.603
HCM Control Delay	12.1	34.2	15.4	18.4	12.4	13.1	12.3	20.5
HCM Lane LOS	B	D	C	C	B	B	B	C
HCM 95th-tile Q	0.6	7.9	1.6	3.1	0.2	0.8	0.6	3.9

Intersection

Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	251	190	7	144	119
Future Vol, veh/h	9	251	190	7	144	119
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	12	344	260	10	197	163
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	13	12.4	11.7
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	3%	100%	0%
Vol Thru, %	96%	0%	0%	100%
Vol Right, %	4%	97%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	260	144	119
LT Vol	0	9	144	0
Through Vol	190	0	0	119
RT Vol	7	251	0	0
Lane Flow Rate	270	356	197	163
Geometry Grp	5	2	7	7
Degree of Util (X)	0.414	0.499	0.35	0.266
Departure Headway (Hd)	5.527	5.042	6.382	5.875
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	719	564	611
Service Time	3.568	3.042	4.122	3.615
HCM Lane V/C Ratio	0.415	0.495	0.349	0.267
HCM Control Delay	12.4	13	12.5	10.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2	2.8	1.6	1.1

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	74	117	55	52	67
Future Vol, veh/h	26	74	117	55	52	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	91	144	68	64	83

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	389	178	0	0	212
Stage 1	178	-	-	-	-
Stage 2	211	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	613	862	-	-	1352
Stage 1	850	-	-	-	-
Stage 2	822	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	584	862	-	-	1352
Mov Cap-2 Maneuver	584	-	-	-	-
Stage 1	850	-	-	-	-
Stage 2	783	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	3.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	767	1352
HCM Lane V/C Ratio	-	-	0.161	0.047
HCM Control Delay (s)	-	-	10.6	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

Intersection

Int Delay, s/veh 5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	
Traffic Vol, veh/h	1	32	0	0	66	0
Future Vol, veh/h	1	32	0	0	66	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	39	0	0	80	0

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	40	0	22
Stage 1	-	-	-	-	21
Stage 2	-	-	-	-	1
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	1563	-	992
Stage 1	-	-	-	-	999
Stage 2	-	-	-	-	1020
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1563	-	992
Mov Cap-2 Maneuver	-	-	-	-	992
Stage 1	-	-	-	-	999
Stage 2	-	-	-	-	1020

Approach

	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	992	-	-	1563	-
HCM Lane V/C Ratio	0.081	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Intersection Delay, s/veh	37.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	↰
Traffic Vol, veh/h	30	241	90	139	87	1	17	51	134	6	148	27
Future Vol, veh/h	30	241	90	139	87	1	17	51	134	6	148	27
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
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	42	335	125	193	121	1	24	71	186	8	206	38
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	67.9	18.3	22	19.3
HCM LOS	F	C	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	28%	0%	73%	0%	99%	0%	100%	0%
Vol Right, %	0%	72%	0%	27%	0%	1%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	185	30	331	139	88	6	148	27
LT Vol	17	0	30	0	139	0	6	0	0
Through Vol	0	51	0	241	0	87	0	148	0
RT Vol	0	134	0	90	0	1	0	0	27
Lane Flow Rate	24	257	42	460	193	122	8	206	38
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.061	0.592	0.1	1.01	0.488	0.291	0.022	0.51	0.086
Departure Headway (Hd)	9.536	8.487	8.613	7.906	9.243	8.72	9.622	9.103	8.376
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	429	418	460	392	414	374	399	431
Service Time	7.236	6.187	6.32	5.613	6.943	6.42	7.322	6.803	6.076
HCM Lane V/C Ratio	0.063	0.599	0.1	1	0.492	0.295	0.021	0.516	0.088
HCM Control Delay	12.9	22.8	12.3	72.9	20.4	15	12.5	20.9	11.9
HCM Lane LOS	B	C	B	F	C	B	B	C	B
HCM 95th-tile Q	0.2	3.7	0.3	13.4	2.6	1.2	0.1	2.8	0.3

Intersection

Int Delay, s/veh 2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	83	0	22	45	0	43
Future Vol, veh/h	83	0	22	45	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	90	0	24	49	0	47

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	90	0	187
Stage 1	-	-	-	-	90
Stage 2	-	-	-	-	97
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	1499	-	800
Stage 1	-	-	-	-	931
Stage 2	-	-	-	-	924
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1499	-	787
Mov Cap-2 Maneuver	-	-	-	-	787
Stage 1	-	-	-	-	931
Stage 2	-	-	-	-	909

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	965	-	-	1499	-
HCM Lane V/C Ratio	0.048	-	-	0.016	-
HCM Control Delay (s)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	93	88	5
Future Vol, veh/h	0	0	0	93	88	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	101	96	5

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	98	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-
Pot Cap-1 Maneuver	0	955	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	955	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

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

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	0	0	68	105	6
Future Vol, veh/h	32	0	0	68	105	6
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	-	55	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	35	0	0	74	114	7

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	191	117	121	0	0
Stage 1	117	-	-	-	-
Stage 2	74	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	796	932	1460	-	-
Stage 1	906	-	-	-	-
Stage 2	946	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	796	932	1460	-	-
Mov Cap-2 Maneuver	796	-	-	-	-
Stage 1	906	-	-	-	-
Stage 2	946	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1460	-	796	-	-
HCM Lane V/C Ratio	-	-	0.044	-	-
HCM Control Delay (s)	0	-	9.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	67	100	5
Future Vol, veh/h	0	0	0	67	100	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	73	109	5

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	111	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-
Pot Cap-1 Maneuver	0	940	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	940	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

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

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↕	↔			↕	
Traffic Vol, veh/h	17	74	65	22	2	133	48
Future Vol, veh/h	17	74	65	22	2	133	48
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	23	101	89	30	3	182	66
Number of Lanes	0	1	1	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.7	8.4	9.6
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	73%
Vol Thru, %	81%	75%	0%
Vol Right, %	0%	25%	27%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	91	87	183
LT Vol	17	0	134
Through Vol	74	65	0
RT Vol	0	22	49
Lane Flow Rate	125	119	251
Geometry Grp	1	1	1
Degree of Util (X)	0.164	0.151	0.314
Departure Headway (Hd)	4.725	4.547	4.511
Convergence, Y/N	Yes	Yes	Yes
Cap	759	789	797
Service Time	2.754	2.576	2.537
HCM Lane V/C Ratio	0.165	0.151	0.315
HCM Control Delay	8.7	8.4	9.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.5	1.3

Intersection

Int Delay, s/veh 7.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	123	51	113	64	34	240
Future Vol, veh/h	123	51	113	64	34	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	176	73	161	91	49	343

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	253	0	0	631	207
Stage 1	-	-	-	207	-
Stage 2	-	-	-	424	-
Critical Hdwy	4.13	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	3.527	3.327
Pot Cap-1 Maneuver	1306	-	-	443	831
Stage 1	-	-	-	825	-
Stage 2	-	-	-	658	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1306	-	-	381	831
Mov Cap-2 Maneuver	-	-	-	381	-
Stage 1	-	-	-	825	-
Stage 2	-	-	-	566	-

Approach






















	EB	WB	SB
HCM Control Delay, s	5.8	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1306	-	-	-	381	831
HCM Lane V/C Ratio	0.135	-	-	-	0.127	0.413
HCM Control Delay (s)	8.2	0	-	-	15.8	12.3
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.4	2

HCM 2010 Signalized Intersection Summary
 1: American Ave/W Country Club Dr & Balfour Rd

Existing With Project
 Timing Plan: PM-Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	330	68	313	356	150	85	265	682	217	159	31
Future Volume (veh/h)	52	330	68	313	356	150	85	265	682	217	159	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	57	359	74	340	387	163	92	288	741	236	173	34
Adj No. of Lanes	1	2	0	2	2	0	1	1	2	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	106	520	106	472	617	256	135	498	1268	289	536	105
Arrive On Green	0.06	0.17	0.17	0.13	0.25	0.25	0.08	0.27	0.27	0.16	0.36	0.36
Sat Flow, veh/h	1757	2976	607	3514	2478	1029	1757	1845	3136	1757	1498	294
Grp Volume(v), veh/h	57	221	212	340	287	263	92	288	741	236	0	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1738	1757	1845	1663	1757	1845	1568	1757	0	1793
Q Serve(g_s), s	2.0	7.0	7.2	5.8	8.6	8.8	3.2	8.4	11.5	8.1	0.0	5.2
Cycle Q Clear(g_c), s	2.0	7.0	7.2	5.8	8.6	8.8	3.2	8.4	11.5	8.1	0.0	5.2
Prop In Lane	1.00		0.35	1.00		0.62	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	106	322	304	472	459	414	135	498	1268	289	0	641
V/C Ratio(X)	0.54	0.69	0.70	0.72	0.62	0.64	0.68	0.58	0.58	0.82	0.00	0.32
Avail Cap(c_a), veh/h	563	1478	1393	1126	1478	1333	563	887	1929	563	0	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	24.1	24.2	25.9	20.8	20.9	28.1	19.7	14.5	25.2	0.0	14.5
Incr Delay (d2), s/veh	1.6	1.0	1.1	0.8	0.5	0.6	2.3	0.4	0.2	2.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.6	3.5	2.8	4.4	4.1	1.6	4.3	5.0	4.1	0.0	2.6
LnGrp Delay(d),s/veh	30.0	25.1	25.3	26.7	21.4	21.5	30.3	20.1	14.7	27.3	0.0	14.7
LnGrp LOS	C	C	C	C	C	C	C	C	B	C		B
Approach Vol, veh/h		490			890			1121			443	
Approach Delay, s/veh		25.8			23.4			17.3			21.4	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	20.8	12.4	14.9	8.8	26.3	7.8	19.5				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	30.0	20.0	50.0	20.0	36.0	20.0	50.0				
Max Q Clear Time (g_c+I1), s	10.1	13.5	7.8	9.2	5.2	7.2	4.0	10.8				
Green Ext Time (p_c), s	0.3	3.3	0.6	1.8	0.1	3.6	0.1	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
2: Foothill Dr/E Country Club Dr & Balfour Rd

Existing With Project
Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	928	143	112	707	186	115	91	93	169	64	65
Future Volume (veh/h)	116	928	143	112	707	186	115	91	93	169	64	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	123	987	152	119	752	198	122	97	99	180	68	69
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1154	178	156	888	234	159	245	209	230	146	148
Arrive On Green	0.14	0.37	0.37	0.09	0.32	0.32	0.09	0.13	0.13	0.13	0.17	0.17
Sat Flow, veh/h	1757	3124	481	1757	2817	742	1757	1845	1568	1757	841	853
Grp Volume(v), veh/h	123	583	556	119	492	458	122	97	99	180	0	137
Grp Sat Flow(s),veh/h/ln	1757	1845	1760	1757	1845	1714	1757	1845	1568	1757	0	1694
Q Serve(g_s), s	3.7	16.7	16.8	3.8	14.3	14.3	3.9	2.8	3.4	5.7	0.0	4.2
Cycle Q Clear(g_c), s	3.7	16.7	16.8	3.8	14.3	14.3	3.9	2.8	3.4	5.7	0.0	4.2
Prop In Lane	1.00		0.27	1.00		0.43	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	251	681	650	156	582	541	159	245	209	230	0	294
V/C Ratio(X)	0.49	0.86	0.86	0.76	0.85	0.85	0.77	0.40	0.47	0.78	0.00	0.47
Avail Cap(c_a), veh/h	611	1603	1530	611	1603	1490	611	962	818	611	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.7	16.7	16.7	25.6	18.4	18.4	25.6	22.8	23.1	24.2	0.0	21.4
Incr Delay (d2), s/veh	0.6	1.2	1.3	2.9	1.3	1.4	2.9	0.4	0.6	2.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.6	8.3	2.0	7.5	7.0	2.0	1.4	1.5	2.9	0.0	2.0
LnGrp Delay(d),s/veh	23.3	17.9	18.0	28.5	19.7	19.8	28.5	23.2	23.7	26.4	0.0	21.8
LnGrp LOS	C	B	B	C	B	B	C	C	C	C		C
Approach Vol, veh/h		1262			1069			318			317	
Approach Delay, s/veh		18.5			20.8			25.4			24.4	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	11.7	9.1	25.2	9.2	14.0	12.2	22.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	30.0	20.0	50.0	20.0	30.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	11.5	5.4	5.8	18.8	5.9	6.2	5.7	16.3				
Green Ext Time (p_c), s	0.3	0.7	0.1	2.5	0.2	0.7	2.3	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				20.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 3: John Muir Pkwy & Balfour Rd

Existing With Project
 Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1078	54	48	925	28	57	21	60	30	11	23
Future Volume (veh/h)	61	1078	54	48	925	28	57	21	60	30	11	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	64	1123	56	50	964	29	59	22	62	31	11	24
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	0
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	1606	682	216	1564	665	121	211	179	75	45	99
Arrive On Green	0.07	0.44	0.44	0.06	0.42	0.42	0.07	0.11	0.11	0.04	0.09	0.09
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	517	1128
Grp Volume(v), veh/h	64	1123	56	50	964	29	59	22	62	31	0	35
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1646
Q Serve(g_s), s	1.6	11.4	1.0	0.6	9.4	0.5	1.5	0.5	1.7	0.8	0.0	0.9
Cycle Q Clear(g_c), s	1.6	11.4	1.0	0.6	9.4	0.5	1.5	0.5	1.7	0.8	0.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	128	1606	682	216	1564	665	121	211	179	75	0	145
V/C Ratio(X)	0.50	0.70	0.08	0.23	0.62	0.04	0.49	0.10	0.35	0.41	0.00	0.24
Avail Cap(c_a), veh/h	761	3994	1697	1521	3994	1697	761	1478	1256	761	0	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.6	10.6	7.6	20.6	10.4	7.8	20.7	18.3	18.9	21.5	0.0	19.6
Incr Delay (d2), s/veh	1.1	0.2	0.0	0.2	0.1	0.0	1.1	0.1	0.4	1.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.8	0.4	0.3	4.7	0.2	0.8	0.3	0.7	0.4	0.0	0.4
LnGrp Delay(d),s/veh	21.7	10.8	7.7	20.8	10.5	7.8	21.8	18.4	19.3	22.9	0.0	19.9
LnGrp LOS	C	B	A	C	B	A	C	B	B	C		B
Approach Vol, veh/h		1243			1043			143			66	
Approach Delay, s/veh		11.2			10.9			20.2			21.3	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	9.3	6.8	24.1	7.2	8.1	7.4	23.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	37.0	20.0	50.0	20.0	37.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	11.8	3.7	2.6	13.4	3.5	2.9	3.6	11.4				
Green Ext Time (p_c), s	0.0	0.2	0.1	6.7	0.1	0.2	0.1	6.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 4: Eagle Rock Ave/Cortona Wy & Balfour Rd

Existing With Project
 Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1135	21	289	958	77	12	38	355	151	44	40
Future Volume (veh/h)	52	1135	21	289	958	77	12	38	355	151	44	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	57	1247	23	318	1053	85	13	42	390	166	48	44
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	76	1378	586	386	1624	690	31	495	421	195	321	294
Arrive On Green	0.04	0.37	0.37	0.11	0.44	0.44	0.02	0.27	0.27	0.11	0.36	0.36
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	888	814
Grp Volume(v), veh/h	57	1247	23	318	1053	85	13	42	390	166	0	92
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1701
Q Serve(g_s), s	3.7	37.3	1.1	10.3	26.1	3.7	0.9	2.0	28.2	10.8	0.0	4.3
Cycle Q Clear(g_c), s	3.7	37.3	1.1	10.3	26.1	3.7	0.9	2.0	28.2	10.8	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	76	1378	586	386	1624	690	31	495	421	195	0	615
V/C Ratio(X)	0.75	0.90	0.04	0.82	0.65	0.12	0.42	0.08	0.93	0.85	0.00	0.15
Avail Cap(c_a), veh/h	301	1582	672	603	1624	690	301	664	565	301	0	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	0.00	1.00
Uniform Delay (d), s/veh	55.2	34.6	23.2	50.8	25.6	19.3	56.7	31.9	41.5	50.9	0.0	25.1
Incr Delay (d2), s/veh	5.4	6.6	0.0	2.8	0.7	0.0	3.3	0.0	15.8	8.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	20.1	0.5	5.2	13.3	1.6	0.4	1.0	14.0	5.7	0.0	2.0
LnGrp Delay(d),s/veh	60.6	41.1	23.2	53.6	26.3	19.4	60.0	32.0	57.3	59.1	0.0	25.2
LnGrp LOS	E	D	C	D	C	B	E	C	E	E		C
Approach Vol, veh/h		1327			1456			445			258	
Approach Delay, s/veh		41.7			31.8			55.0			47.0	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.9	35.3	16.8	47.6	6.1	46.2	9.1	55.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+1/2), s	12.8	30.2	12.3	39.3	2.9	6.3	5.7	28.1				
Green Ext Time (p_c), s	0.2	1.1	0.5	4.3	0.0	1.3	0.1	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay				39.7								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
5: SR 4 & Balfour Rd

Existing With Project
Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗	↖	↖	↖↗	↖	↖	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (veh/h)	498	991	213	38	627	387	217	759	115	417	650	378
Future Volume (veh/h)	498	991	213	38	627	387	217	759	115	417	650	378
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	530	1054	227	40	667	0	231	807	122	444	691	402
Adj No. of Lanes	2	2	1	1	2	1	1	2	1	2	2	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	592	1350	574	68	870	370	260	1124	478	513	1115	474
Arrive On Green	0.17	0.37	0.37	0.04	0.24	0.00	0.15	0.30	0.30	0.15	0.30	0.30
Sat Flow, veh/h	3514	3689	1568	1757	3689	1568	1757	3689	1568	3514	3689	1568
Grp Volume(v), veh/h	530	1054	227	40	667	0	231	807	122	444	691	402
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.3	28.0	11.8	2.5	18.6	0.0	14.2	21.5	6.5	13.6	17.7	26.5
Cycle Q Clear(g_c), s	16.3	28.0	11.8	2.5	18.6	0.0	14.2	21.5	6.5	13.6	17.7	26.5
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	592	1350	574	68	870	370	260	1124	478	513	1115	474
V/C Ratio(X)	0.90	0.78	0.40	0.59	0.77	0.00	0.89	0.72	0.26	0.87	0.62	0.85
Avail Cap(c_a), veh/h	637	1773	753	319	1773	753	319	1672	711	637	1672	711
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	31.0	25.9	52.2	39.3	0.0	46.1	34.1	28.9	46.0	33.0	36.1
Incr Delay (d2), s/veh	13.9	1.2	0.2	3.1	0.5	0.0	19.4	0.3	0.1	8.8	0.2	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	14.4	5.1	1.3	9.5	0.0	8.3	11.0	2.8	7.2	9.1	12.0
LnGrp Delay(d),s/veh	58.8	32.2	26.1	55.2	39.8	0.0	65.5	34.5	29.0	54.8	33.2	40.1
LnGrp LOS	E	C	C	E	D		E	C	C	D	C	D
Approach Vol, veh/h		1811			707			1160			1537	
Approach Delay, s/veh		39.2			40.7			40.1			41.3	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.1	37.6	8.2	44.4	20.3	37.3	22.6	30.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	50.0	20.0	53.0	20.0	50.0	20.0	53.0				
Max Q Clear Time (g_c+1.5), s	11.6	23.5	4.5	30.0	16.2	28.5	18.3	20.6				
Green Ext Time (p_c), s	0.5	4.9	0.0	5.2	0.1	4.8	0.3	5.4				
Intersection Summary												
HCM 2010 Ctrl Delay				40.2								
HCM 2010 LOS				D								

Intersection

Intersection Delay, s/veh 11.2
Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↔	
Traffic Vol, veh/h	8	98	109	280	193	9
Future Vol, veh/h	8	98	109	280	193	9
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	124	138	354	244	11
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	9.3	12.1	10.6
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	8%	0%
Vol Thru, %	0%	100%	0%	96%
Vol Right, %	0%	0%	92%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	280	106	202
LT Vol	109	0	8	0
Through Vol	0	280	0	193
RT Vol	0	0	98	9
Lane Flow Rate	138	354	134	256
Geometry Grp	7	7	2	5
Degree of Util (X)	0.215	0.503	0.188	0.348
Departure Headway (Hd)	5.608	5.105	5.055	4.893
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	637	702	706	731
Service Time	3.363	2.859	3.118	2.949
HCM Lane V/C Ratio	0.217	0.504	0.19	0.35
HCM Control Delay	9.9	13	9.3	10.6
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.8	2.8	0.7	1.6

Intersection

Intersection Delay, s/veh	17.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	91	116	32	36	88	6	67	202	35	48	149	118
Future Vol, veh/h	91	116	32	36	88	6	67	202	35	48	149	118
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
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	120	153	42	47	116	8	88	266	46	63	196	155
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	14.4	13.1	18.3	20.2
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	85%	0%	78%	0%	94%	0%	56%
Vol Right, %	0%	15%	0%	22%	0%	6%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	237	91	148	36	94	48	267
LT Vol	67	0	91	0	36	0	48	0
Through Vol	0	202	0	116	0	88	0	149
RT Vol	0	35	0	32	0	6	0	118
Lane Flow Rate	88	312	120	195	47	124	63	351
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.186	0.606	0.267	0.398	0.11	0.269	0.133	0.66
Departure Headway (Hd)	7.609	6.992	8.031	7.362	8.385	7.823	7.593	6.765
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	472	515	447	489	427	459	472	534
Service Time	5.36	4.742	5.785	5.116	6.145	5.583	5.342	4.514
HCM Lane V/C Ratio	0.186	0.606	0.268	0.399	0.11	0.27	0.133	0.657
HCM Control Delay	12.1	20	13.7	14.9	12.2	13.5	11.5	21.8
HCM Lane LOS	B	C	B	B	B	B	B	C
HCM 95th-tile Q	0.7	4	1.1	1.9	0.4	1.1	0.5	4.8

Intersection

Intersection Delay, s/veh 11.2
Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	12	218	173	18	91	129
Future Vol, veh/h	12	218	173	18	91	129
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	16	299	237	25	125	177
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	11.4	11.5	10.6
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	5%	100%	0%
Vol Thru, %	91%	0%	0%	100%
Vol Right, %	9%	95%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	230	91	129
LT Vol	0	12	91	0
Through Vol	173	0	0	129
RT Vol	18	218	0	0
Lane Flow Rate	262	315	125	177
Geometry Grp	5	2	7	7
Degree of Util (X)	0.382	0.425	0.215	0.279
Departure Headway (Hd)	5.251	4.856	6.197	5.691
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	686	747	580	633
Service Time	3.278	2.856	3.925	3.418
HCM Lane V/C Ratio	0.382	0.422	0.216	0.28
HCM Control Delay	11.5	11.4	10.6	10.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.8	2.1	0.8	1.1

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗		↖		↖	↗
Traffic Vol, veh/h	20	46	123	26	49	144
Future Vol, veh/h	20	46	123	26	49	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	25	57	152	32	60	178

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	467	168	0	0	184
Stage 1	168	-	-	-	-
Stage 2	299	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227
Pot Cap-1 Maneuver	552	874	-	-	1385
Stage 1	859	-	-	-	-
Stage 2	750	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	528	874	-	-	1385
Mov Cap-2 Maneuver	528	-	-	-	-
Stage 1	859	-	-	-	-
Stage 2	718	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	729	1385
HCM Lane V/C Ratio	-	-	0.112	0.044
HCM Control Delay (s)	-	-	10.6	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1

Intersection						
Int Delay, s/veh	4.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↑	↻	
Traffic Vol, veh/h	3	36	0	6	41	3
Future Vol, veh/h	3	36	0	6	41	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	44	0	7	50	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	48	0	33
Stage 1	-	-	-	-	26
Stage 2	-	-	-	-	7
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	1553	-	978
Stage 1	-	-	-	-	994
Stage 2	-	-	-	-	1013
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1553	-	978
Mov Cap-2 Maneuver	-	-	-	-	978
Stage 1	-	-	-	-	994
Stage 2	-	-	-	-	1013

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	982	-	-	1553	-
HCM Lane V/C Ratio	0.055	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↵		↵	↵	↵
Traffic Vol, veh/h	35	196	27	97	141	7	11	91	95	9	62	27
Future Vol, veh/h	35	196	27	97	141	7	11	91	95	9	62	27
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
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	49	272	38	135	196	10	15	126	132	13	86	38
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	19.1	14.4	17	11.9
HCM LOS	C	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	49%	0%	88%	0%	95%	0%	100%	0%
Vol Right, %	0%	51%	0%	12%	0%	5%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	186	35	223	97	148	9	62	27
LT Vol	11	0	35	0	97	0	9	0	0
Through Vol	0	91	0	196	0	141	0	62	0
RT Vol	0	95	0	27	0	7	0	0	27
Lane Flow Rate	15	258	49	310	135	206	12	86	38
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.516	0.104	0.609	0.29	0.411	0.03	0.191	0.076
Departure Headway (Hd)	8.064	7.185	7.669	7.076	7.738	7.196	8.504	7.991	7.272
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	444	501	467	511	463	500	420	448	491
Service Time	5.82	4.94	5.423	4.829	5.493	4.951	6.27	5.757	5.037
HCM Lane V/C Ratio	0.034	0.515	0.105	0.607	0.292	0.412	0.029	0.192	0.077
HCM Control Delay	11.1	17.4	11.3	20.3	13.6	14.9	11.5	12.6	10.6
HCM Lane LOS	B	C	B	C	B	B	B	B	B
HCM 95th-tile Q	0.1	2.9	0.3	4	1.2	2	0.1	0.7	0.2

Intersection

Int Delay, s/veh 4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	49	0	63	55	0	57
Future Vol, veh/h	49	0	63	55	0	57
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	53	0	68	60	0	62

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	53	0	250 53
Stage 1	-	-	-	-	53 -
Stage 2	-	-	-	-	197 -
Critical Hdwy	-	-	4.13	-	6.43 6.23
Critical Hdwy Stg 1	-	-	-	-	5.43 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.227	-	3.527 3.327
Pot Cap-1 Maneuver	-	-	1546	-	736 1012
Stage 1	-	-	-	-	967 -
Stage 2	-	-	-	-	834 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1546	-	703 1012
Mov Cap-2 Maneuver	-	-	-	-	703 -
Stage 1	-	-	-	-	967 -
Stage 2	-	-	-	-	796 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1546	-
HCM Lane V/C Ratio	0.061	-	-	0.044	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	55	150	15
Future Vol, veh/h	0	0	0	55	150	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	60	163	16

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	171	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.23	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.327	-
Pot Cap-1 Maneuver	0	870	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	870	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

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

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	0	0	45	157	20
Future Vol, veh/h	47	0	0	45	157	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	55	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	0	0	49	171	22

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	231	182	192	0	0
Stage 1	182	-	-	-	-
Stage 2	49	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-
Pot Cap-1 Maneuver	755	858	1375	-	-
Stage 1	847	-	-	-	-
Stage 2	971	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	755	858	1375	-	-
Mov Cap-2 Maneuver	755	-	-	-	-
Stage 1	847	-	-	-	-
Stage 2	971	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1375	-	755	-	-
HCM Lane V/C Ratio	-	-	0.068	-	-
HCM Control Delay (s)	0	-	10.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	44	141	15
Future Vol, veh/h	0	0	0	44	141	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	48	153	16

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	161	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.23	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.327	-
Pot Cap-1 Maneuver	0	881	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	881	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

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

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↕	↔			↕	
Traffic Vol, veh/h	7	82	43	29	6	84	67
Future Vol, veh/h	7	82	43	29	6	84	67
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	9	108	57	38	8	111	88
Number of Lanes	0	1	1	0	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.3	7.9	8.7
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	0%	56%
Vol Thru, %	92%	60%	0%
Vol Right, %	0%	40%	44%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	89	72	157
LT Vol	7	0	87
Through Vol	82	43	0
RT Vol	0	29	70
Lane Flow Rate	117	95	207
Geometry Grp	1	1	1
Degree of Util (X)	0.148	0.114	0.246
Departure Headway (Hd)	4.541	4.313	4.279
Convergence, Y/N	Yes	Yes	Yes
Cap	792	833	841
Service Time	2.559	2.332	2.296
HCM Lane V/C Ratio	0.148	0.114	0.246
HCM Control Delay	8.3	7.9	8.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	1

Intersection

Int Delay, s/veh 5.7






















Movement	EBL	EBT	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↶	↷			↶	↷
Traffic Vol, veh/h	81	57	44	55	1	50	116
Future Vol, veh/h	81	57	44	55	1	50	116
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	None	-	None	-	-	None
Storage Length	-	-	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	-	0	-
Grade, %	-	0	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	98	69	53	66	1	60	140

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	119	0	0
Stage 1	-	-	0
Stage 2	-	-	0
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	1463	-	-
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1463	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	0
Stage 2	-	-	0

Approach	EB	WB	SB
HCM Control Delay, s	4.5	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1463	-	-	-	600	970
HCM Lane V/C Ratio	0.067	-	-	-	0.1	0.144
HCM Control Delay (s)	7.6	0	-	-	11.7	9.3
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.5

HCM 2010 Signalized Intersection Summary
 1: American Ave/W Country Club Dr & Balfour Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	134	4	49	178	78	10	10	77	122	13	16
Future Volume (veh/h)	12	134	4	49	178	78	10	10	77	122	13	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	13	143	4	52	189	83	11	11	82	130	14	17
Adj No. of Lanes	1	2	0	2	2	0	1	1	2	1	1	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	36	776	22	239	653	276	31	251	639	216	183	223
Arrive On Green	0.02	0.22	0.22	0.07	0.26	0.26	0.02	0.14	0.14	0.12	0.24	0.24
Sat Flow, veh/h	1757	3572	100	3514	2465	1041	1757	1845	3136	1757	760	922
Grp Volume(v), veh/h	13	74	73	52	140	132	11	11	82	130	0	31
Grp Sat Flow(s),veh/h/ln	1757	1845	1827	1757	1845	1661	1757	1845	1568	1757	0	1682
Q Serve(g_s), s	0.3	1.1	1.1	0.5	2.1	2.2	0.2	0.2	0.8	2.5	0.0	0.5
Cycle Q Clear(g_c), s	0.3	1.1	1.1	0.5	2.1	2.2	0.2	0.2	0.8	2.5	0.0	0.5
Prop In Lane	1.00		0.05	1.00		0.63	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	36	401	397	239	489	440	31	251	639	216	0	406
V/C Ratio(X)	0.36	0.18	0.18	0.22	0.29	0.30	0.36	0.04	0.13	0.60	0.00	0.08
Avail Cap(c_a), veh/h	1001	2629	2604	2003	2629	2367	1001	1577	2895	1001	0	1726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	11.2	11.2	15.5	10.3	10.3	17.0	13.2	11.4	14.6	0.0	10.3
Incr Delay (d2), s/veh	2.3	0.1	0.1	0.2	0.1	0.1	2.6	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.2	1.1	1.0	0.1	0.1	0.3	1.3	0.0	0.2
LnGrp Delay(d),s/veh	19.3	11.3	11.3	15.6	10.4	10.4	19.7	13.2	11.5	15.6	0.0	10.3
LnGrp LOS	B	B	B	B	B	B	B	B	B	B		B
Approach Vol, veh/h		160			324			104				161
Approach Delay, s/veh		11.9			11.2			12.5				14.6
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	8.8	6.4	11.6	4.6	12.5	4.7	13.3				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	30.0	20.0	50.0	20.0	36.0	20.0	50.0				
Max Q Clear Time (g_c+I1), s	4.5	2.8	2.5	3.1	2.2	2.5	2.3	4.2				
Green Ext Time (p_c), s	0.2	0.3	0.1	0.7	0.0	0.3	0.0	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			12.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
2: Foothill Dr/E Country Club Dr & Balfour Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (veh/h)	14	315	25	124	324	186	26	19	101	181	28	18
Future Volume (veh/h)	14	315	25	124	324	186	26	19	101	181	28	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	14	321	26	127	331	190	27	19	103	185	29	18
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	187	781	63	193	522	293	68	265	225	242	259	161
Arrive On Green	0.11	0.23	0.23	0.11	0.24	0.24	0.04	0.14	0.14	0.14	0.24	0.24
Sat Flow, veh/h	1757	3370	271	1757	2221	1248	1757	1845	1568	1757	1066	662
Grp Volume(v), veh/h	14	175	172	127	274	247	27	19	103	185	0	47
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1757	1845	1624	1757	1845	1568	1757	0	1728
Q Serve(g_s), s	0.3	3.4	3.5	2.9	5.7	5.8	0.6	0.4	2.6	4.3	0.0	0.9
Cycle Q Clear(g_c), s	0.3	3.4	3.5	2.9	5.7	5.8	0.6	0.4	2.6	4.3	0.0	0.9
Prop In Lane	1.00		0.15	1.00		0.77	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	187	427	416	193	434	382	68	265	225	242	0	420
V/C Ratio(X)	0.07	0.41	0.41	0.66	0.63	0.65	0.40	0.07	0.46	0.76	0.00	0.11
Avail Cap(c_a), veh/h	828	2173	2117	828	2173	1914	828	1304	1108	828	0	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	13.8	13.9	18.1	14.6	14.6	19.9	15.7	16.7	17.6	0.0	12.5
Incr Delay (d2), s/veh	0.1	0.2	0.2	1.4	0.6	0.7	1.4	0.0	0.5	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	0.2	1.8	1.7	1.5	2.9	2.7	0.3	0.2	1.1	2.2	0.0	0.4
LnGrp Delay(d),s/veh	17.1	14.1	14.1	19.6	15.1	15.3	21.3	15.8	17.2	19.5	0.0	12.5
LnGrp LOS	B	B	B	B	B	B	C	B	B	B		B
Approach Vol, veh/h		361			648			149			232	
Approach Delay, s/veh		14.2			16.1			17.8			18.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	10.1	8.7	13.8	5.6	14.3	8.5	14.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax)	20.0	30.0	20.0	50.0	20.0	30.0	20.0	50.0				
Max Q Clear Time (g_c+1)	10.3	4.6	4.9	5.5	2.6	2.9	2.3	7.8				
Green Ext Time (p_c), s	0.3	0.3	0.2	0.6	0.0	0.4	0.5	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				16.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: John Muir Pkwy & Balfour Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	544	12	23	587	4	34	17	34	26	7	12
Future Volume (veh/h)	19	544	12	23	587	4	34	17	34	26	7	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	20	573	13	24	618	4	36	18	36	27	7	13
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	54	1171	497	127	1191	506	90	177	150	70	49	91
Arrive On Green	0.03	0.32	0.32	0.04	0.32	0.32	0.05	0.10	0.10	0.04	0.08	0.08
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	579	1076
Grp Volume(v), veh/h	20	573	13	24	618	4	36	18	36	27	0	20
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1655
Q Serve(g_s), s	0.3	3.9	0.2	0.2	4.3	0.1	0.6	0.3	0.7	0.5	0.0	0.4
Cycle Q Clear(g_c), s	0.3	3.9	0.2	0.2	4.3	0.1	0.6	0.3	0.7	0.5	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	54	1171	497	127	1191	506	90	177	150	70	0	140
V/C Ratio(X)	0.37	0.49	0.03	0.19	0.52	0.01	0.40	0.10	0.24	0.38	0.00	0.14
Avail Cap(c_a), veh/h	1122	5889	2503	2243	5889	2503	1122	2179	1852	1122	0	1955
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	8.6	7.4	14.7	8.6	7.2	14.4	12.9	13.1	14.7	0.0	13.3
Incr Delay (d2), s/veh	1.6	0.1	0.0	0.3	0.1	0.0	1.1	0.1	0.3	1.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	0.1	0.1	2.2	0.0	0.3	0.1	0.3	0.2	0.0	0.2
LnGrp Delay(d),s/veh	16.5	8.8	7.4	14.9	8.8	7.2	15.4	13.0	13.4	15.9	0.0	13.5
LnGrp LOS	B	A	A	B	A	A	B	B	B	B		B
Approach Vol, veh/h		606			646			90			47	
Approach Delay, s/veh		9.0			9.0			14.1			14.9	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	7.0	5.1	13.9	5.6	6.6	5.0	14.1				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	37.0	20.0	50.0	20.0	37.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	12.5	2.7	2.2	5.9	2.6	2.4	2.3	6.3				
Green Ext Time (p_c), s	0.0	0.1	0.0	2.9	0.0	0.1	0.0	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay				9.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
4: Eagle Rock Ave/Cortona Wy & Balfour Rd

Brentwood Golf Redevelopment
Timing Plan: WKND-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	588	3	121	631	50	4	8	148	124	12	20
Future Volume (veh/h)	55	588	3	121	631	50	4	8	148	124	12	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	57	612	3	126	657	52	4	8	154	129	12	21
Adj No. of Lanes	1	2	1	2	2	1	1	1	1	1	1	0
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	120	988	420	375	1130	480	11	288	245	189	155	272
Arrive On Green	0.07	0.27	0.27	0.11	0.31	0.31	0.01	0.16	0.16	0.11	0.26	0.26
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	603	1055
Grp Volume(v), veh/h	57	612	3	126	657	52	4	8	154	129	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1658
Q Serve(g_s), s	1.4	6.4	0.1	1.5	6.7	1.1	0.1	0.2	4.1	3.1	0.0	0.7
Cycle Q Clear(g_c), s	1.4	6.4	0.1	1.5	6.7	1.1	0.1	0.2	4.1	3.1	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	120	988	420	375	1130	480	11	288	245	189	0	427
V/C Ratio(X)	0.48	0.62	0.01	0.34	0.58	0.11	0.35	0.03	0.63	0.68	0.00	0.08
Avail Cap(c_a), veh/h	794	4168	1771	1588	4168	1771	794	1751	1488	794	0	1574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.9	14.2	11.9	18.3	13.0	11.0	21.9	15.8	17.5	19.0	0.0	12.5
Incr Delay (d2), s/veh	1.1	0.2	0.0	0.2	0.2	0.0	6.7	0.0	1.0	1.6	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	0.7	3.3	0.0	0.7	3.4	0.5	0.1	0.1	1.8	1.6	0.0	0.3
LnGrp Delay(d),s/veh	20.9	14.5	11.9	18.5	13.1	11.1	28.5	15.8	18.5	20.6	0.0	12.5
LnGrp LOS	C	B	B	B	B	B	C	B	B	C		B
Approach Vol, veh/h		672			835			166			162	
Approach Delay, s/veh		15.0			13.8			18.6			19.0	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	10.9	8.7	15.9	4.3	15.4	7.0	17.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	1.5	6.1	3.5	8.4	2.1	2.7	3.4	8.7				
Green Ext Time (p_c), s	0.2	0.5	0.2	3.4	0.0	0.5	0.1	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay			15.1									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
5: SR 4 & Balfour Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑	↖	↖	↑↑	↖	↖	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	371	357	167	56	375	523	128	620	65	471	662	345
Future Volume (veh/h)	371	357	167	56	375	523	128	620	65	471	662	345
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	375	361	169	57	379	0	129	626	66	476	669	348
Adj No. of Lanes	2	2	1	1	2	1	1	2	1	2	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	514	913	388	107	599	255	167	928	395	617	1227	521
Arrive On Green	0.15	0.25	0.25	0.06	0.16	0.00	0.09	0.25	0.25	0.18	0.33	0.33
Sat Flow, veh/h	3514	3689	1568	1757	3689	1568	1757	3689	1568	3514	3689	1568
Grp Volume(v), veh/h	375	361	169	57	379	0	129	626	66	476	669	348
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	6.2	4.9	5.5	1.9	5.8	0.0	4.3	9.3	2.0	7.8	9.0	11.5
Cycle Q Clear(g_c), s	6.2	4.9	5.5	1.9	5.8	0.0	4.3	9.3	2.0	7.8	9.0	11.5
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	514	913	388	107	599	255	167	928	395	617	1227	521
V/C Ratio(X)	0.73	0.40	0.44	0.53	0.63	0.00	0.77	0.67	0.17	0.77	0.55	0.67
Avail Cap(c_a), veh/h	1160	3227	1371	580	3227	1371	580	3044	1294	1160	3044	1294
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	19.0	19.2	27.6	23.7	0.0	26.8	20.4	17.7	23.8	16.5	17.4
Incr Delay (d2), s/veh	0.8	0.1	0.3	1.5	0.4	0.0	2.9	0.3	0.1	0.8	0.1	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	8.0	2.5	2.4	1.0	3.0	0.0	2.2	4.7	0.9	3.8	4.6	5.1
LnGrp Delay(d),s/veh	25.5	19.1	19.5	29.1	24.1	0.0	29.7	20.8	17.8	24.6	16.6	17.9
LnGrp LOS	C	B	B	C	C		C	C	B	C	B	B
Approach Vol, veh/h		905			436			821			1493	
Approach Delay, s/veh		21.8			24.8			21.9			19.5	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	19.2	7.7	19.0	9.7	24.1	12.9	13.8				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	20.0	50.0	20.0	53.0	20.0	50.0	20.0	53.0				
Max Q Clear Time (g_c+1), s	19.8	11.3	3.9	7.5	6.3	13.5	8.2	7.8				
Green Ext Time (p_c), s	0.8	4.0	0.1	2.0	0.1	4.0	0.7	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								

Intersection

Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	89	92	124	141	2
Future Vol, veh/h	1	89	92	124	141	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	93	96	129	147	2
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	2	0	1
HCM Control Delay	7.8	8.8	8.5
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	1%	0%
Vol Thru, %	0%	100%	0%	99%
Vol Right, %	0%	0%	99%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	124	90	143
LT Vol	92	0	1	0
Through Vol	0	124	0	141
RT Vol	0	0	89	2
Lane Flow Rate	96	129	94	149
Geometry Grp	7	7	2	5
Degree of Util (X)	0.141	0.172	0.11	0.186
Departure Headway (Hd)	5.296	4.795	4.23	4.498
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	670	739	851	800
Service Time	3.086	2.584	2.238	2.512
HCM Lane V/C Ratio	0.143	0.175	0.11	0.186
HCM Control Delay	9	8.6	7.8	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.6	0.4	0.7

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	86	78	4	10	42	8	3	54	8	7	54	104
Future Vol, veh/h	86	78	4	10	42	8	3	54	8	7	54	104
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	91	82	4	11	44	8	3	57	8	7	57	109
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	9	8.5	8.6	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	87%	0%	95%	0%	84%	0%	34%
Vol Right, %	0%	13%	0%	5%	0%	16%	0%	66%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	62	86	82	10	50	7	158
LT Vol	3	0	86	0	10	0	7	0
Through Vol	0	54	0	78	0	42	0	54
RT Vol	0	8	0	4	0	8	0	104
Lane Flow Rate	3	65	91	86	11	53	7	166
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.005	0.095	0.144	0.124	0.017	0.076	0.012	0.221
Departure Headway (Hd)	5.855	5.261	5.712	5.175	5.844	5.228	5.758	4.792
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	611	680	627	692	611	684	622	748
Service Time	3.595	3.001	3.45	2.913	3.589	2.973	3.49	2.525
HCM Lane V/C Ratio	0.005	0.096	0.145	0.124	0.018	0.077	0.011	0.222
HCM Control Delay	8.6	8.6	9.4	8.6	8.7	8.4	8.6	8.9
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.5	0.4	0.1	0.2	0	0.8

Intersection

Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	5	84	1	4	81
Future Vol, veh/h	1	5	84	1	4	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	5	92	1	4	89
Number of Lanes	1	0	1	0	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	1	0
HCM Control Delay	6.9	7.7	7.9
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	17%	100%	0%
Vol Thru, %	99%	0%	0%	100%
Vol Right, %	1%	83%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	6	4	81
LT Vol	0	1	4	0
Through Vol	84	0	0	81
RT Vol	1	5	0	0
Lane Flow Rate	93	7	4	89
Geometry Grp	5	2	7	7
Degree of Util (X)	0.107	0.007	0.006	0.114
Departure Headway (Hd)	4.124	3.912	5.108	4.608
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	868	920	703	780
Service Time	2.156	1.912	2.824	2.323
HCM Lane V/C Ratio	0.107	0.008	0.006	0.114
HCM Control Delay	7.7	6.9	7.9	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0	0	0.4

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	9	77	23	12	66
Future Vol, veh/h	12	9	77	23	12	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	13	10	84	25	13	72

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	194	96	0	0	109	0
Stage 1	96	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	793	958	-	-	1475	-
Stage 1	925	-	-	-	-	-
Stage 2	923	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	786	958	-	-	1475	-
Mov Cap-2 Maneuver	786	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	852	1475
HCM Lane V/C Ratio	-	-	0.027	0.009
HCM Control Delay (s)	-	-	9.3	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	4.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↑	↻	
Traffic Vol, veh/h	3	30	1	5	43	0
Future Vol, veh/h	3	30	1	5	43	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	-	-	50	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	32	1	5	46	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	35	0	27
Stage 1	-	-	-	-	19
Stage 2	-	-	-	-	8
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	1570	-	986
Stage 1	-	-	-	-	1001
Stage 2	-	-	-	-	1012
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1570	-	985
Mov Cap-2 Maneuver	-	-	-	-	985
Stage 1	-	-	-	-	1001
Stage 2	-	-	-	-	1011

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1570	-
HCM Lane V/C Ratio	0.047	-	-	0.001	-
HCM Control Delay (s)	8.8	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔		↔	↔	↔
Traffic Vol, veh/h	21	112	2	52	58	2	4	43	45	1	20	6
Future Vol, veh/h	21	112	2	52	58	2	4	43	45	1	20	6
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
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	24	130	2	60	67	2	5	50	52	1	23	7
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	9.1	8.8	8.7	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	49%	0%	98%	0%	97%	0%	100%	0%
Vol Right, %	0%	51%	0%	2%	0%	3%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	88	21	114	52	60	1	20	6
LT Vol	4	0	21	0	52	0	1	0	0
Through Vol	0	43	0	112	0	58	0	20	0
RT Vol	0	45	0	2	0	2	0	0	6
Lane Flow Rate	5	102	24	133	60	70	1	23	7
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.145	0.039	0.192	0.097	0.102	0.002	0.036	0.009
Departure Headway (Hd)	5.964	5.1	5.72	5.207	5.768	5.244	6.107	5.603	4.899
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	599	702	626	688	620	682	584	637	727
Service Time	3.706	2.842	3.458	2.944	3.509	2.984	3.861	3.358	2.653
HCM Lane V/C Ratio	0.008	0.145	0.038	0.193	0.097	0.103	0.002	0.036	0.01
HCM Control Delay	8.8	8.7	8.7	9.2	9.1	8.6	8.9	8.6	7.7
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.5	0.1	0.7	0.3	0.3	0	0.1	0

Intersection						
Int Delay, s/veh	4.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	39	0	57	37	0	51
Future Vol, veh/h	39	0	57	37	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	42	0	62	40	0	55

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	42	0	206
Stage 1	-	-	-	-	42
Stage 2	-	-	-	-	164
Critical Hdwy	-	-	4.13	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.227	-	3.527
Pot Cap-1 Maneuver	-	-	1561	-	780
Stage 1	-	-	-	-	978
Stage 2	-	-	-	-	863
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1561	-	748
Mov Cap-2 Maneuver	-	-	-	-	748
Stage 1	-	-	-	-	978
Stage 2	-	-	-	-	828

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1026	-	-	1561	-
HCM Lane V/C Ratio	0.054	-	-	0.04	-
HCM Control Delay (s)	8.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	47	64	14
Future Vol, veh/h	0	0	0	47	64	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	51	70	15

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	77	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.23	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.327	-
Pot Cap-1 Maneuver	0	981	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	981	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

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

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	WT		WT	↑	↑	
Traffic Vol, veh/h	42	0	0	47	87	18
Future Vol, veh/h	42	0	0	47	87	18
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	-	55	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	46	0	0	51	95	20

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	155	104	114	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	834	948	1469	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	834	948	1469	-	-	-
Mov Cap-2 Maneuver	834	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1469	-	834	-	-
HCM Lane V/C Ratio	-	-	0.055	-	-
HCM Control Delay (s)	0	-	9.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑	↘	
Traffic Vol, veh/h	0	0	0	46	72	14
Future Vol, veh/h	0	0	0	46	72	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	50	78	15

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	86	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.23	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.327	-
Pot Cap-1 Maneuver	0	970	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	970	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

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

Arterial Level of Service: EB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
American Ave	II	39	13.1	44.2	57.3	0.11	7.2	F
Foothill Dr	II	45	42.4	39.7	82.1	0.48	21.1	D
John Muir Pkwy	II	35	21.2	18.6	39.8	0.17	15.3	E
Eagle Rock Ave	II	35	11.5	48.0	59.5	0.09	5.6	F
SR 4	II	45	20.9	39.4	60.3	0.19	11.4	F
Total	II		109.1	189.9	299.0	1.05	12.6	F

Arterial Level of Service: WB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR 4	II	35	16.3	55.2	71.5	0.13	6.6	F
Cortona Wy	II	35	23.9	35.6	59.5	0.19	11.6	F
John Muir Pkwy	II	45	10.1	19.7	29.8	0.09	11.1	F
E Country Club Dr	II	45	18.5	41.9	60.4	0.17	10.1	F
W Country Club Dr	II	45	42.4	23.8	66.2	0.48	26.2	C
Total	II		111.2	176.2	287.4	1.06	13.3	E

Arterial Level of Service: EB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
American Ave	II	39	13.1	34.9	48.0	0.11	8.5	F
Foothill Dr	II	45	42.4	39.7	82.1	0.48	21.1	D
John Muir Pkwy	II	35	21.2	24.3	45.5	0.17	13.4	E
Eagle Rock Ave	II	35	11.5	54.7	66.2	0.09	5.0	F
SR 4	II	45	20.9	42.7	63.6	0.19	10.8	F
Total	II		109.1	196.3	305.4	1.05	12.4	F

Arterial Level of Service: WB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR 4	II	35	16.3	50.0	66.3	0.13	7.1	F
Cortona Wy	II	35	23.9	35.0	58.9	0.19	11.7	F
John Muir Pkwy	II	45	10.1	26.5	36.6	0.09	9.1	F
E Country Club Dr	II	45	18.5	39.6	58.1	0.17	10.5	F
W Country Club Dr	II	45	42.4	27.7	70.1	0.48	24.7	C
Total	II		111.2	178.8	290.0	1.06	13.2	E

Arterial Level of Service: EB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
American Ave	II	39	13.1	16.7	29.8	0.11	13.8	E
Foothill Dr	II	45	42.4	27.7	70.1	0.48	24.7	C
John Muir Pkwy	II	35	21.2	17.0	38.2	0.17	16.0	E
Eagle Rock Ave	II	35	11.5	35.1	46.6	0.09	7.1	F
SR 4	II	45	20.9	30.5	51.4	0.19	13.4	E
Total	II		109.1	127.0	236.1	1.05	16.0	E

Arterial Level of Service: WB Balfour Rd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR 4	II	35	16.3	39.3	55.6	0.13	8.4	F
Cortona Wy	II	35	23.9	31.4	55.3	0.19	12.5	F
John Muir Pkwy	II	45	10.1	17.5	27.6	0.09	12.0	F
E Country Club Dr	II	45	18.5	22.9	41.4	0.17	14.7	E
W Country Club Dr	II	45	42.4	11.9	54.3	0.48	31.9	B
Total	II		111.2	123.0	234.2	1.06	16.4	E

Methodology	Scenario	Segment	Direction	segment length	average time	free flow time	=F/G delay index
Arterial	Ex AM	SR-4 to American Ave/Country Club Dr	EB	1.05	297.2	109.1	2.72
			WB	1.06	284.2	111.2	2.56
Arterial	Ex PM	SR-4 to American Ave/Country Club Dr	EB	1.05	288.9	109.1	2.65
			WB	1.06	280.2	111.2	2.52
Arterial	Ex SAT	SR-4 to American Ave/Country Club Dr	EB	1.05	229.7	109.1	2.11
			WB	1.06	226.8	111.2	2.04
Arterial	Ex + P AM	SR-4 to American Ave/Country Club Dr	EB	1.05	299.0	109.1	2.74
			WB	1.06	287.4	111.2	2.58
Arterial	Ex + P PM	SR-4 to American Ave/Country Club Dr	EB	1.05	305.4	109.1	2.80
			WB	1.06	290.0	111.2	2.61
Arterial	Ex + P SAT	SR-4 to American Ave/Country Club Dr	EB	1.05	236.1	109.1	2.16
			WB	1.06	234.2	111.2	2.11
Arterial	Ex + P AM - Mit	SR-4 to American Ave/Country Club Dr	EB	1.05	292.5	109.1	2.68
			WB	1.06	283.8	111.2	2.55
Arterial	Ex + P PM - Mit	SR-4 to American Ave/Country Club Dr	EB	1.05	295.8	109.1	2.71
			WB	1.06	285.8	111.2	2.57
Arterial	Ex + P SAT - Mit	SR-4 to American Ave/Country Club Dr	EB	1.05	235.3	109.1	2.16
			WB	1.06	234.0	111.2	2.10

Methodology	Scenario	Segment	Direction	segment length	average speed	free flow speed	average time	free flow time	delay index	average time	free flow time	delay index
2 lane	Existing AM	Sand Creek to Balfour	NB	1.1	33.4	59.8	118.6	66.2	1.79	296.0	192.6	1.54
			SB	1.1	33.5	59.8	118.2	66.2	1.79	296.5	192.6	1.54
		Balfour to Marsh Creek	NB	2.1	42.6	59.8	177.5	126.4	1.40			
			SB	2.1	42.4	59.8	178.3	126.4	1.41			
2 lane	Existing PM	Sand Creek to Balfour	NB	1.1	33.3	59.8	118.9	66.2	1.80	298.9	192.6	1.55
			SB	1.1	33.4	59.8	118.6	66.2	1.79	297.7	192.6	1.55
		Balfour to Marsh Creek	NB	2.1	42	59.8	180.0	126.4	1.42			
			SB	2.1	42.2	59.8	179.1	126.4	1.42			
2 lane	Existing SAT	Sand Creek to Balfour	NB	1.1	34.1	59.8	116.1	66.2	1.75	286.0	192.6	1.48
			SB	1.1	34.1	59.8	116.1	66.2	1.75	286.4	192.6	1.49
		Balfour to Marsh Creek	NB	2.1	44.5	59.8	169.9	126.4	1.34			
			SB	2.1	44.4	59.8	170.3	126.4	1.35			
2 lane	Existing plus Project AM	Sand Creek to Balfour	NB	1.1	32.9	59.8	120.4	66.2	1.82	299.5	192.6	1.55
			SB	1.1	32.9	59.8	120.4	66.2	1.82	299.9	192.6	1.56
		Balfour to Marsh Creek	NB	2.1	42.2	59.8	179.1	126.4	1.42			
			SB	2.1	42.1	59.8	179.6	126.4	1.42			
2 lane	Existing plus Project PM	Sand Creek to Balfour	NB	1.1	32.4	59.8	122.2	66.2	1.85	305.3	192.6	1.58
			SB	1.1	32.4	59.8	122.2	66.2	1.85	304.0	192.6	1.58
		Balfour to Marsh Creek	NB	2.1	41.3	59.8	183.1	126.4	1.45			
			SB	2.1	41.6	59.8	181.7	126.4	1.44			
2 lane	Existing plus Project SAT	Sand Creek to Balfour	NB	1.1	33.2	59.8	119.3	66.2	1.80	291.5	192.6	1.51
			SB	1.1	33.2	59.8	119.3	66.2	1.80	291.9	192.6	1.52
		Balfour to Marsh Creek	NB	2.1	43.9	59.8	172.2	126.4	1.36			
			SB	2.1	43.8	59.8	172.6	126.4	1.37			