























APPENDIX B:
EXISTING CONDITIONS ANALYSIS OUTPUT SHEETS

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

Existing
 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	71	471	6
Future Volume (veh/h)	13	218	354	791	418	91	123	213	728	71	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	77	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	621	1634	99	544	7
Arrive On Green	0.02	0.28	0.28	0.18	0.44	0.44	0.09	0.34	0.34	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	77	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	17.5	4.7	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	17.5	4.7	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	621	1634	99	0	552
V/C Ratio(X)	0.42	0.47	0.89	1.33	0.35	0.35	0.82	0.37	0.48	0.78	0.00	0.94
Avail Cap(c_a), veh/h	324	850	723	648	850	799	324	621	1634	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	27.3	16.6	50.5	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	4.9	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	7.6	2.4	0.0	18.3
LnGrp Delay(d),s/veh	55.7	33.0	42.2	202.1	20.2	20.2	52.1	27.4	16.7	55.4	0.0	57.9
LnGrp LOS	E	C	D	F	C	C	D	C	B	E		E
Approach Vol, veh/h		636			1413			1157			596	
Approach Delay, s/veh		39.1			130.9			23.0			57.6	
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	10.1	40.5	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	6.7	19.5	22.0	27.6	10.1	31.8	2.9	13.2				
Green Ext Time (p_c), s	0.1	3.6	0.0	2.2	0.2	0.7	0.0	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				71.2								
HCM 2010 LOS				E								

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

Existing
 Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	53	859	121	44	916	49	210	87	81	189	114	252
Future Volume (veh/h)	53	859	121	44	916	49	210	87	81	189	114	252
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	914	129	47	974	52	223	93	86	201	121	268
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	103	1032	146	87	1099	59	266	516	439	244	137	302
Arrive On Green	0.06	0.33	0.33	0.05	0.32	0.32	0.15	0.28	0.28	0.14	0.27	0.27
Sat Flow, veh/h	1757	3164	447	1757	3471	185	1757	1845	1568	1757	512	1133
Grp Volume(v), veh/h	56	533	510	47	518	508	223	93	86	201	0	389
Grp Sat Flow(s),veh/h/ln	1757	1845	1766	1757	1845	1812	1757	1845	1568	1757	0	1645
Q Serve(g_s), s	2.4	21.2	21.3	2.0	20.7	20.7	9.6	3.0	3.2	8.6	0.0	17.6
Cycle Q Clear(g_c), s	2.4	21.2	21.3	2.0	20.7	20.7	9.6	3.0	3.2	8.6	0.0	17.6
Prop In Lane	1.00		0.25	1.00		0.10	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	103	602	576	87	584	574	266	516	439	244	0	439
V/C Ratio(X)	0.54	0.89	0.89	0.54	0.89	0.89	0.84	0.18	0.20	0.83	0.00	0.89
Avail Cap(c_a), veh/h	453	1188	1137	453	1188	1167	453	713	606	453	0	636
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	35.5	24.8	24.8	36.1	25.2	25.2	32.0	21.2	21.3	32.5	0.0	27.3
Incr Delay (d2), s/veh	1.6	1.8	1.9	2.0	1.9	1.9	2.7	0.1	0.1	2.7	0.0	7.9
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	1.2	11.1	10.6	1.0	10.8	10.6	4.8	1.5	1.4	4.4	0.0	9.0
LnGrp Delay(d),s/veh	37.2	26.6	26.7	38.0	27.1	27.1	34.7	21.3	21.4	35.2	0.0	35.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	D		D
Approach Vol, veh/h		1099			1073			402			590	
Approach Delay, s/veh		27.1			27.6			28.7			35.3	
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	14.8	25.7	7.8	29.3	15.8	24.7	8.6	28.6				
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	30.0	20.0	50.0	20.0	30.0	20.0	50.0				
Max Q Clear Time (g_c+10), s	10.6	5.2	4.0	23.3	11.6	19.6	4.4	22.7				
Green Ext Time (p_c), s	0.3	1.3	0.0	2.1	0.3	1.1	2.0	1.9				
Intersection Summary												
HCM 2010 Ctrl Delay				29.0								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary

3: John Muir Pkwy & Balfour Rd

Existing
Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	958	129	44	969	34	33	6	30	4	2	10
Future Volume (veh/h)	40	958	129	44	969	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	998	134	46	1009	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	100	1617	687	214	1632	694	84	126	107	11	7	36
Arrive On Green	0.06	0.44	0.44	0.06	0.44	0.44	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	998	134	46	1009	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	7.8	2.0	0.5	7.9	0.5	0.7	0.1	0.7	0.1	0.0	0.3
Cycle Q Clear(g_c), s	0.9	7.8	2.0	0.5	7.9	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	100	1617	687	214	1632	694	84	126	107	11	0	43
V/C Ratio(X)	0.42	0.62	0.20	0.21	0.62	0.05	0.41	0.05	0.29	0.35	0.00	0.28
Avail Cap(c_a), veh/h	936	4913	2088	1872	4913	2088	936	1818	1545	936	0	1585
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	8.1	6.5	16.8	8.0	6.0	17.4	16.4	16.6	18.6	0.0	17.9
Incr Delay (d2), s/veh	1.1	0.1	0.1	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	0.4	3.9	0.8	0.2	4.0	0.2	0.4	0.1	0.3	0.1	0.0	0.1
LnGrp Delay(d),s/veh	18.2	8.3	6.5	17.0	8.2	6.0	18.5	16.4	17.2	25.2	0.0	19.2
LnGrp LOS	B	A	A	B	A	A	B	B	B	C		B
Approach Vol, veh/h		1174			1090			71			16	
Approach Delay, s/veh		8.4			8.5			17.8			20.7	
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	4.2	6.6	6.3	20.5	5.8	5.0	6.1	20.6				
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	11.5	2.7	2.5	9.8	2.7	2.3	2.9	9.9				
Green Ext Time (p_c), s	0.0	0.1	0.1	6.6	0.0	0.1	0.0	6.6				
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
Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	925	9	308	1016	44	4	29	300	114	28	38
Future Volume (veh/h)	47	925	9	308	1016	44	4	29	300	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	1016	10	338	1116	48	4	32	330	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	89	1301	553	438	1575	669	11	441	375	159	230	312
Arrive On Green	0.05	0.35	0.35	0.12	0.43	0.43	0.01	0.24	0.24	0.09	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	711	963
Grp Volume(v), veh/h	52	1016	10	338	1116	48	4	32	330	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	2.4	20.4	0.3	7.7	20.6	1.5	0.2	1.1	16.8	5.8	0.0	2.6
Cycle Q Clear(g_c), s	2.4	20.4	0.3	7.7	20.6	1.5	0.2	1.1	16.8	5.8	0.0	2.6
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	89	1301	553	438	1575	669	11	441	375	159	0	541
V/C Ratio(X)	0.59	0.78	0.02	0.77	0.71	0.07	0.36	0.07	0.88	0.79	0.00	0.13
Avail Cap(c_a), veh/h	424	2224	945	847	2224	945	424	934	794	424	0	848
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	38.5	24.0	17.5	35.2	19.5	14.1	41.0	24.4	30.4	36.9	0.0	19.9
Incr Delay (d2), s/veh	2.3	0.4	0.0	1.1	0.2	0.0	7.0	0.0	2.7	3.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.4	0.1	3.8	10.4	0.7	0.1	0.6	7.5	3.0	0.0	1.2
LnGrp Delay(d),s/veh	40.8	24.4	17.5	36.3	19.8	14.1	48.0	24.4	33.1	40.2	0.0	19.9
LnGrp LOS	D	C	B	D	B	B	D	C	C	D		B
Approach Vol, veh/h		1078			1502			366			198	
Approach Delay, s/veh		25.1			23.3			32.5			32.7	
Approach LOS		C			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	23.8	14.3	33.3	4.5	30.8	8.2	39.4				
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	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	17.8	18.8	9.7	22.4	2.2	4.6	4.4	22.6				
Green Ext Time (p_c), s	0.2	1.0	0.6	6.9	0.0	1.1	0.0	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay				25.6								
HCM 2010 LOS				C								

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

Existing
Timing Plan: AM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗	↖	↖	↖↗	↖	↖	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (veh/h)	514	701	267	77	807	455	155	647	36	282	674	389
Future Volume (veh/h)	514	701	267	77	807	455	155	647	36	282	674	389
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	547	746	284	82	859	0	165	688	38	300	717	414
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	599	1440	612	104	1030	438	193	1140	484	367	1119	475
Arrive On Green	0.17	0.39	0.39	0.06	0.28	0.00	0.11	0.31	0.31	0.10	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	547	746	284	82	859	0	165	688	38	300	717	414
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	17.9	18.0	15.7	5.4	25.5	0.0	10.8	18.5	2.0	9.8	19.6	29.2
Cycle Q Clear(g_c), s	17.9	18.0	15.7	5.4	25.5	0.0	10.8	18.5	2.0	9.8	19.6	29.2
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	599	1440	612	104	1030	438	193	1140	484	367	1119	475
V/C Ratio(X)	0.91	0.52	0.46	0.79	0.83	0.00	0.85	0.60	0.08	0.82	0.64	0.87
Avail Cap(c_a), veh/h	602	1675	712	301	1675	712	301	1580	672	602	1580	672
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	47.6	27.2	26.5	54.2	39.5	0.0	51.0	34.3	28.6	51.2	35.2	38.5
Incr Delay (d2), s/veh	18.1	0.1	0.2	4.8	0.9	0.0	8.1	0.2	0.0	1.7	0.2	6.7
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	10.2	9.1	6.8	2.8	13.1	0.0	5.7	9.4	0.9	4.8	10.0	13.5
LnGrp Delay(d),s/veh	65.7	27.3	26.7	59.0	40.4	0.0	59.2	34.5	28.6	52.9	35.4	45.2
LnGrp LOS	E	C	C	E	D		E	C	C	D	D	D
Approach Vol, veh/h		1577			941			891			1431	
Approach Delay, s/veh		40.5			42.0			38.8			41.9	
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	16.2	40.1	10.9	49.5	16.8	39.4	23.9	36.6				
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	50.0	20.0	53.0	20.0	50.0	20.0	53.0				
Max Q Clear Time (g_c+I), s	11.8	20.5	7.4	20.0	12.8	31.2	19.9	27.5				
Green Ext Time (p_c), s	0.4	4.4	0.1	5.2	0.1	4.2	0.0	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay				40.9								
HCM 2010 LOS				D								

Intersection

Intersection Delay, s/veh 16.7
Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	78	33	138	459	12
Future Vol, veh/h	5	78	33	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	99	42	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	9.2	9.7	20.5
HCM LOS	A	A	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	6%	0%
Vol Thru, %	0%	100%	0%	97%
Vol Right, %	0%	0%	94%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	138	83	471
LT Vol	33	0	5	0
Through Vol	0	138	0	459
RT Vol	0	0	78	12
Lane Flow Rate	42	175	105	596
Geometry Grp	7	7	2	5
Degree of Util (X)	0.067	0.257	0.152	0.757
Departure Headway (Hd)	5.793	5.289	5.225	4.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	676	681	787
Service Time	3.549	3.044	3.297	2.61
HCM Lane V/C Ratio	0.068	0.259	0.154	0.757
HCM Control Delay	9	9.9	9.2	20.5
HCM Lane LOS	A	A	A	C
HCM 95th-tile Q	0.2	1	0.5	7.2

Intersection												
Intersection Delay, s/veh	19.8											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	120	135	65	24	52	17	61	245	42	56	167	63
Future Vol, veh/h	120	135	65	24	52	17	61	245	42	56	167	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	158	178	86	32	68	22	80	322	55	74	220	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	12.7	25.2	18.8
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%	85%	0%	68%	0%	75%	0%	73%
Vol Right, %	0%	15%	0%	33%	0%	25%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	287	120	200	24	69	56	230
LT Vol	61	0	120	0	24	0	56	0
Through Vol	0	245	0	135	0	52	0	167
RT Vol	0	42	0	65	0	17	0	63
Lane Flow Rate	80	378	158	263	32	91	74	303
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.172	0.746	0.352	0.532	0.077	0.204	0.161	0.604
Departure Headway (Hd)	7.729	7.113	8.024	7.277	8.776	8.08	7.89	7.181
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	464	510	448	495	407	443	454	502
Service Time	5.482	4.865	5.78	5.033	6.546	5.849	5.646	4.936
HCM Lane V/C Ratio	0.172	0.741	0.353	0.531	0.079	0.205	0.163	0.604
HCM Control Delay	12.1	28	15.1	18.1	12.3	12.9	12.2	20.4
HCM Lane LOS	B	D	C	C	B	B	B	C
HCM 95th-tile Q	0.6	6.3	1.6	3.1	0.2	0.8	0.6	3.9

Intersection

Intersection Delay, s/veh	12
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	251	164	7	144	126
Future Vol, veh/h	9	251	164	7	144	126
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	225	10	197	173
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	12.7	11.6	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	171	260	144	126
LT Vol	0	9	144	0
Through Vol	164	0	0	126
RT Vol	7	251	0	0
Lane Flow Rate	234	356	197	173
Geometry Grp	5	2	7	7
Degree of Util (X)	0.359	0.491	0.346	0.279
Departure Headway (Hd)	5.516	4.964	6.319	5.812
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	730	570	618
Service Time	3.553	2.964	4.054	3.547
HCM Lane V/C Ratio	0.359	0.488	0.346	0.28
HCM Control Delay	11.6	12.7	12.4	10.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	2.7	1.5	1.1

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	74	91	55	52	74
Future Vol, veh/h	26	74	91	55	52	74
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	112	68	64	91

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	366	146	0	0	180
Stage 1	146	-	-	-	-
Stage 2	220	-	-	-	-
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	632	898	-	-	1389
Stage 1	879	-	-	-	-
Stage 2	814	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	603	898	-	-	1389
Mov Cap-2 Maneuver	603	-	-	-	-
Stage 1	879	-	-	-	-
Stage 2	776	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	3.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	797	1389
HCM Lane V/C Ratio	-	-	0.155	0.046
HCM Control Delay (s)	-	-	10.3	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	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	33.6
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	↶
Traffic Vol, veh/h	30	228	90	139	89	1	17	51	134	6	148	27
Future Vol, veh/h	30	228	90	139	89	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	317	125	193	124	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	57.9	18.3	22	19.2
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%	72%	0%	99%	0%	100%	0%
Vol Right, %	0%	72%	0%	28%	0%	1%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	185	30	318	139	90	6	148	27
LT Vol	17	0	30	0	139	0	6	0	0
Through Vol	0	51	0	228	0	89	0	148	0
RT Vol	0	134	0	90	0	1	0	0	27
Lane Flow Rate	24	257	42	442	193	125	8	206	38
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.062	0.596	0.099	0.966	0.489	0.298	0.022	0.512	0.086
Departure Headway (Hd)	9.401	8.354	8.587	7.872	9.117	8.594	9.489	8.97	8.244
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	432	417	459	396	418	377	401	434
Service Time	7.167	6.119	6.343	5.629	6.883	6.36	7.258	6.739	6.013
HCM Lane V/C Ratio	0.063	0.595	0.101	0.963	0.487	0.299	0.021	0.514	0.088
HCM Control Delay	12.8	22.8	12.3	62.2	20.4	15	12.5	20.8	11.8
HCM Lane LOS	B	C	B	F	C	B	B	C	B
HCM 95th-tile Q	0.2	3.8	0.3	11.9	2.6	1.2	0.1	2.8	0.3

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	0.92	0.73	0.73
Heavy Vehicles, %	3	3	3	3	3	3	3
Mvmt Flow	23	101	89	30	2	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	250
Geometry Grp	1	1	1
Degree of Util (X)	0.164	0.151	0.313
Departure Headway (Hd)	4.725	4.547	4.511
Convergence, Y/N	Yes	Yes	Yes
Cap	759	789	798
Service Time	2.752	2.574	2.537
HCM Lane V/C Ratio	0.165	0.151	0.313
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
Stage 1	-	-	-	-	207
Stage 2	-	-	-	-	424
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	1306	-	-	-	443
Stage 1	-	-	-	-	825
Stage 2	-	-	-	-	658
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1306	-	-	-	381
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
 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	152	85	265	682	182	159	31
Future Volume (veh/h)	52	330	68	313	356	152	85	265	682	182	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	165	92	288	741	198	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	108	529	108	479	623	262	139	505	1285	250	504	99
Arrive On Green	0.06	0.18	0.18	0.14	0.25	0.25	0.08	0.27	0.27	0.14	0.34	0.34
Sat Flow, veh/h	1757	2976	607	3514	2468	1038	1757	1845	3136	1757	1498	294
Grp Volume(v), veh/h	57	221	212	340	288	264	92	288	741	198	0	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1738	1757	1845	1662	1757	1845	1568	1757	0	1793
Q Serve(g_s), s	1.9	6.6	6.8	5.5	8.2	8.4	3.0	8.0	10.8	6.4	0.0	5.1
Cycle Q Clear(g_c), s	1.9	6.6	6.8	5.5	8.2	8.4	3.0	8.0	10.8	6.4	0.0	5.1
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	108	328	309	479	466	419	139	505	1285	250	0	603
V/C Ratio(X)	0.53	0.67	0.69	0.71	0.62	0.63	0.66	0.57	0.58	0.79	0.00	0.34
Avail Cap(c_a), veh/h	594	1559	1468	1188	1559	1404	594	935	2018	594	0	1091
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	26.9	22.7	22.8	24.4	19.6	19.7	26.5	18.5	13.5	24.5	0.0	14.7
Incr Delay (d2), s/veh	1.5	0.9	1.0	0.7	0.5	0.6	2.0	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	0.9	3.5	3.3	2.7	4.2	3.9	1.5	4.1	4.7	3.3	0.0	2.6
LnGrp Delay(d),s/veh	28.4	23.6	23.8	25.2	20.1	20.2	28.5	18.9	13.6	26.7	0.0	14.9
LnGrp LOS	C	C	C	C	C	C	C	B	B	C		B
Approach Vol, veh/h		490			892			1121				405
Approach Delay, s/veh		24.3			22.1			16.2				20.7
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	12.4	20.2	12.1	14.5	8.7	23.9	7.6	18.9				
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	30.0	20.0	50.0	20.0	36.0	20.0	50.0				
Max Q Clear Time (g_c+I1), s	8.4	12.8	7.5	8.8	5.0	7.1	3.9	10.4				
Green Ext Time (p_c), s	0.3	3.4	0.6	1.8	0.1	3.6	0.1	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				B								

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

Existing
 Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	114	896	140	98	683	123	113	93	85	112	65	64
Future Volume (veh/h)	114	896	140	98	683	123	113	93	85	112	65	64
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	121	953	149	104	727	131	120	99	90	119	69	68
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	286	1135	177	158	886	160	167	265	225	166	123	121
Arrive On Green	0.16	0.36	0.36	0.09	0.29	0.29	0.09	0.14	0.14	0.09	0.14	0.14
Sat Flow, veh/h	1757	3116	487	1757	3044	548	1757	1845	1568	1757	854	842
Grp Volume(v), veh/h	121	564	538	104	440	418	120	99	90	119	0	137
Grp Sat Flow(s),veh/h/ln	1757	1845	1759	1757	1845	1748	1757	1845	1568	1757	0	1696
Q Serve(g_s), s	3.2	14.6	14.6	3.0	11.6	11.6	3.5	2.5	2.7	3.4	0.0	3.9
Cycle Q Clear(g_c), s	3.2	14.6	14.6	3.0	11.6	11.6	3.5	2.5	2.7	3.4	0.0	3.9
Prop In Lane	1.00		0.28	1.00		0.31	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	286	672	641	158	537	509	167	265	225	166	0	243
V/C Ratio(X)	0.42	0.84	0.84	0.66	0.82	0.82	0.72	0.37	0.40	0.72	0.00	0.56
Avail Cap(c_a), veh/h	676	1773	1691	676	1773	1680	676	1064	904	676	0	978
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	19.6	15.1	15.1	22.9	17.2	17.2	22.9	20.1	20.2	22.9	0.0	20.8
Incr Delay (d2), s/veh	0.4	1.1	1.2	1.8	1.2	1.3	2.2	0.3	0.4	2.1	0.0	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	1.6	7.6	7.2	1.5	6.1	5.7	1.8	1.3	1.2	1.8	0.0	1.9
LnGrp Delay(d),s/veh	19.9	16.2	16.3	24.7	18.4	18.5	25.0	20.5	20.7	25.0	0.0	21.5
LnGrp LOS	B	B	B	C	B	B	C	C	C	C		C
Approach Vol, veh/h		1223			962			309			256	
Approach Delay, s/veh		16.6			19.1			22.3			23.1	
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	8.9	11.5	8.7	22.9	8.9	11.5	12.5	19.1				
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	11.4	4.7	5.0	16.6	5.5	5.9	5.2	13.6				
Green Ext Time (p_c), s	0.2	0.7	0.1	2.4	0.2	0.7	2.2	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				18.7								
HCM 2010 LOS				B								

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

Existing
 Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	982	53	48	825	28	56	21	60	30	11	23
Future Volume (veh/h)	61	982	53	48	825	28	56	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	1023	55	50	859	29	58	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	131	1499	637	220	1456	619	122	217	184	76	47	103
Arrive On Green	0.07	0.41	0.41	0.06	0.39	0.39	0.07	0.12	0.12	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	1023	55	50	859	29	58	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	1.5	9.8	0.9	0.6	7.9	0.5	1.4	0.5	1.6	0.7	0.0	0.9
Cycle Q Clear(g_c), s	1.5	9.8	0.9	0.6	7.9	0.5	1.4	0.5	1.6	0.7	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	131	1499	637	220	1456	619	122	217	184	76	0	150
V/C Ratio(X)	0.49	0.68	0.09	0.23	0.59	0.05	0.47	0.10	0.34	0.41	0.00	0.23
Avail Cap(c_a), veh/h	813	4269	1814	1626	4269	1814	813	1580	1343	813	0	1409
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	19.2	10.5	7.9	19.3	10.3	8.1	19.3	17.0	17.5	20.1	0.0	18.2
Incr Delay (d2), s/veh	1.1	0.2	0.0	0.2	0.1	0.0	1.1	0.1	0.4	1.3	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	5.0	0.4	0.3	4.0	0.2	0.7	0.2	0.7	0.4	0.0	0.4
LnGrp Delay(d),s/veh	20.3	10.7	7.9	19.4	10.5	8.1	20.4	17.1	17.9	21.4	0.0	18.5
LnGrp LOS	C	B	A	B	B	A	C	B	B	C		B
Approach Vol, veh/h		1142			938			142			66	
Approach Delay, s/veh		11.1			10.9			18.8			19.9	
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	5.9	9.1	6.7	21.6	7.0	7.9	7.2	21.0				
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	37.0	20.0	50.0	20.0	37.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	11.7	3.6	2.6	11.8	3.4	2.9	3.5	9.9				
Green Ext Time (p_c), s	0.0	0.2	0.1	5.7	0.1	0.2	0.1	5.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary

4: Eagle Rock Ave/Cortona Wy & Balfour Rd

Existing
Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1040	21	275	859	77	12	39	347	151	45	39
Future Volume (veh/h)	51	1040	21	275	859	77	12	39	347	151	45	39
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	56	1143	23	302	944	85	13	43	381	166	49	43
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	80	1339	569	378	1567	666	32	490	416	198	327	287
Arrive On Green	0.05	0.36	0.36	0.11	0.42	0.42	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	908	796
Grp Volume(v), veh/h	56	1143	23	302	944	85	13	43	381	166	0	92
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1704
Q Serve(g_s), s	3.3	30.2	1.0	8.9	20.9	3.5	0.8	1.9	24.9	9.8	0.0	3.9
Cycle Q Clear(g_c), s	3.3	30.2	1.0	8.9	20.9	3.5	0.8	1.9	24.9	9.8	0.0	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	80	1339	569	378	1567	666	32	490	416	198	0	614
V/C Ratio(X)	0.70	0.85	0.04	0.80	0.60	0.13	0.41	0.09	0.91	0.84	0.00	0.15
Avail Cap(c_a), veh/h	332	1746	742	665	1746	742	332	733	623	332	0	677
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	49.7	31.1	21.8	46.0	23.5	18.5	51.3	29.2	37.6	46.0	0.0	22.9
Incr Delay (d2), s/veh	4.0	2.7	0.0	1.5	0.3	0.0	3.1	0.0	10.4	3.7	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	1.7	15.9	0.4	4.4	10.7	1.5	0.4	0.9	12.0	4.9	0.0	1.8
LnGrp Delay(d),s/veh	53.7	33.8	21.8	47.5	23.8	18.5	54.5	29.2	48.1	49.6	0.0	22.9
LnGrp LOS	D	C	C	D	C	B	D	C	D	D		C
Approach Vol, veh/h		1222			1331			437			258	
Approach Delay, s/veh		34.5			28.8			46.4			40.1	
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	15.9	32.1	15.4	42.4	5.9	42.0	8.8	48.9				
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	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+I), s	11.8	26.9	10.9	32.2	2.8	5.9	5.3	22.9				
Green Ext Time (p_c), s	0.2	1.2	0.5	6.1	0.0	1.3	0.1	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay				34.2								
HCM 2010 LOS				C								

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

Existing
Timing Plan: PM-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	442	985	171	38	620	387	172	759	115	417	650	317
Future Volume (veh/h)	442	985	171	38	620	387	172	759	115	417	650	317
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	470	1048	182	40	660	0	183	807	122	444	691	337
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	557	1327	564	73	896	381	218	1016	432	530	1115	474
Arrive On Green	0.16	0.36	0.36	0.04	0.24	0.00	0.12	0.28	0.28	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	470	1048	182	40	660	0	183	807	122	444	691	337
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	12.1	23.6	7.8	2.1	15.3	0.0	9.5	18.8	5.7	11.4	14.9	17.7
Cycle Q Clear(g_c), s	12.1	23.6	7.8	2.1	15.3	0.0	9.5	18.8	5.7	11.4	14.9	17.7
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	557	1327	564	73	896	381	218	1016	432	530	1115	474
V/C Ratio(X)	0.84	0.79	0.32	0.55	0.74	0.00	0.84	0.79	0.28	0.84	0.62	0.71
Avail Cap(c_a), veh/h	757	2105	895	378	2105	895	378	1986	844	757	1986	844
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	38.0	26.6	21.5	43.7	32.4	0.0	39.8	31.2	26.4	38.3	27.8	28.8
Incr Delay (d2), s/veh	5.0	0.4	0.1	2.4	0.4	0.0	3.3	0.5	0.1	4.0	0.2	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	6.3	12.0	3.4	1.1	7.8	0.0	4.8	9.6	2.5	5.8	7.6	7.8
LnGrp Delay(d),s/veh	42.9	27.0	21.7	46.0	32.9	0.0	43.1	31.7	26.6	42.3	28.0	29.5
LnGrp LOS	D	C	C	D	C		D	C	C	D	C	C
Approach Vol, veh/h		1700			700			1112			1472	
Approach Delay, s/veh		30.8			33.6			33.0			32.7	
Approach LOS		C			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	18.0	29.6	7.9	37.4	15.5	32.1	18.7	26.6				
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	50.0	20.0	53.0	20.0	50.0	20.0	53.0				
Max Q Clear Time (g_c+M), s	11.4	20.8	4.1	25.6	11.5	19.7	14.1	17.3				
Green Ext Time (p_c), s	0.6	4.7	0.0	5.1	0.2	4.8	0.6	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay				32.3								
HCM 2010 LOS				C								

Intersection

Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	41	46	280	193	9
Future Vol, veh/h	8	41	46	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	52	58	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		
Conflicting Lanes Left	1	1	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	8.5	11.6	9.9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	16%	0%
Vol Thru, %	0%	100%	0%	96%
Vol Right, %	0%	0%	84%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	46	280	49	202
LT Vol	46	0	8	0
Through Vol	0	280	0	193
RT Vol	0	0	41	9
Lane Flow Rate	58	354	62	256
Geometry Grp	7	7	2	5
Degree of Util (X)	0.087	0.482	0.086	0.328
Departure Headway (Hd)	5.395	4.893	4.979	4.622
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	737	718	777
Service Time	3.121	2.619	3.017	2.648
HCM Lane V/C Ratio	0.087	0.48	0.086	0.329
HCM Control Delay	8.6	12.1	8.5	9.9
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.3	2.6	0.3	1.4

Intersection

Intersection Delay, s/veh 15.8

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Vol, veh/h	90	116	33	23	88	6	69	194	27	48	135	116
Future Vol, veh/h	90	116	33	23	88	6	69	194	27	48	135	116
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	118	153	43	30	116	8	91	255	36	63	178	153
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	12.8	16.4	17.8
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%	88%	0%	78%	0%	94%	0%	54%
Vol Right, %	0%	12%	0%	22%	0%	6%	0%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	221	90	149	23	94	48	251
LT Vol	69	0	90	0	23	0	48	0
Through Vol	0	194	0	116	0	88	0	135
RT Vol	0	27	0	33	0	6	0	116
Lane Flow Rate	91	291	118	196	30	124	63	330
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.188	0.553	0.257	0.389	0.069	0.262	0.13	0.605
Departure Headway (Hd)	7.443	6.845	7.812	7.142	8.19	7.63	7.436	6.595
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	526	459	504	437	470	483	548
Service Time	5.186	4.588	5.558	4.887	5.943	5.382	5.178	4.337
HCM Lane V/C Ratio	0.189	0.553	0.257	0.389	0.069	0.264	0.13	0.602
HCM Control Delay	11.9	17.8	13.3	14.4	11.6	13.1	11.3	19
HCM Lane LOS	B	C	B	B	B	B	B	C
HCM 95th-tile Q	0.7	3.3	1	1.8	0.2	1	0.4	4

Intersection

Intersection Delay, s/veh 10.7
Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗		↘	↗
Traffic Vol, veh/h	12	218	161	18	91	104
Future Vol, veh/h	12	218	161	18	91	104
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	221	25	125	142
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	10.9	11	10.2
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	0%	5%	100%	0%
Vol Thru, %	90%	0%	0%	100%
Vol Right, %	10%	95%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	179	230	91	104
LT Vol	0	12	91	0
Through Vol	161	0	0	104
RT Vol	18	218	0	0
Lane Flow Rate	245	315	125	142
Geometry Grp	5	2	7	7
Degree of Util (X)	0.354	0.407	0.213	0.224
Departure Headway (Hd)	5.19	4.646	6.153	5.648
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	766	586	638
Service Time	3.19	2.734	3.86	3.354
HCM Lane V/C Ratio	0.352	0.411	0.213	0.223
HCM Control Delay	11	10.9	10.5	10
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.6	2	0.8	0.9

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	46	111	27	49	120
Future Vol, veh/h	21	46	111	27	49	120
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	26	57	137	33	60	148

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	423	154	0	0	170
Stage 1	154	-	-	-	-
Stage 2	269	-	-	-	-
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	586	889	-	-	1401
Stage 1	872	-	-	-	-
Stage 2	774	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	561	889	-	-	1401
Mov Cap-2 Maneuver	561	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	741	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	2.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	751	1401
HCM Lane V/C Ratio	-	-	0.11	0.043
HCM Control Delay (s)	-	-	10.4	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
Conflicting Flow All	0	0	48
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	1553
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1553
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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	15.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	↶
Traffic Vol, veh/h	35	188	27	97	128	7	11	90	95	9	61	27
Future Vol, veh/h	35	188	27	97	128	7	11	90	95	9	61	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	261	38	135	178	10	15	125	132	13	85	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	17.8	13.8	16.5	11.8
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%	87%	0%	95%	0%	100%	0%
Vol Right, %	0%	51%	0%	13%	0%	5%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	185	35	215	97	135	9	61	27
LT Vol	11	0	35	0	97	0	9	0	0
Through Vol	0	90	0	188	0	128	0	61	0
RT Vol	0	95	0	27	0	7	0	0	27
Lane Flow Rate	15	257	49	299	135	188	12	85	38
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.504	0.102	0.579	0.286	0.37	0.029	0.185	0.074
Departure Headway (Hd)	7.936	7.056	7.575	6.979	7.655	7.11	8.363	7.85	7.132
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	511	473	517	469	506	428	457	501
Service Time	5.68	4.799	5.321	4.724	5.404	4.859	6.118	5.605	4.886
HCM Lane V/C Ratio	0.033	0.503	0.104	0.578	0.288	0.372	0.028	0.186	0.076
HCM Control Delay	11	16.8	11.2	18.9	13.5	14	11.4	12.4	10.5
HCM Lane LOS	B	C	B	C	B	B	B	B	B
HCM 95th-tile Q	0.1	2.8	0.3	3.6	1.2	1.7	0.1	0.7	0.2

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	83	44	29	6	84	67
Future Vol, veh/h	7	83	44	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	109	58	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	8.4	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	90	73	157
LT Vol	7	0	87
Through Vol	83	44	0
RT Vol	0	29	70
Lane Flow Rate	118	96	207
Geometry Grp	1	1	1
Degree of Util (X)	0.149	0.115	0.246
Departure Headway (Hd)	4.542	4.318	4.285
Convergence, Y/N	Yes	Yes	Yes
Cap	791	832	841
Service Time	2.56	2.336	2.3
HCM Lane V/C Ratio	0.149	0.115	0.246
HCM Control Delay	8.4	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

Existing
 Timing Plan: WKND-Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	134	4	49	178	80	10	10	77	83	13	16
Future Volume (veh/h)	12	134	4	49	178	80	10	10	77	83	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	85	11	11	82	88	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	800	22	241	665	287	31	254	646	175	167	203
Arrive On Green	0.02	0.22	0.22	0.07	0.27	0.27	0.02	0.14	0.14	0.10	0.22	0.22
Sat Flow, veh/h	1757	3572	100	3514	2446	1057	1757	1845	3136	1757	760	922
Grp Volume(v), veh/h	13	74	73	52	141	133	11	11	82	88	0	31
Grp Sat Flow(s),veh/h/ln	1757	1845	1827	1757	1845	1658	1757	1845	1568	1757	0	1682
Q Serve(g_s), s	0.2	1.1	1.1	0.5	2.0	2.2	0.2	0.2	0.7	1.6	0.0	0.5
Cycle Q Clear(g_c), s	0.2	1.1	1.1	0.5	2.0	2.2	0.2	0.2	0.7	1.6	0.0	0.5
Prop In Lane	1.00		0.05	1.00		0.64	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	36	413	409	241	502	451	31	254	646	175	0	370
V/C Ratio(X)	0.36	0.18	0.18	0.22	0.28	0.30	0.36	0.04	0.13	0.50	0.00	0.08
Avail Cap(c_a), veh/h	1033	2712	2686	2067	2712	2438	1033	1627	2981	1033	0	1781
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	16.4	10.7	10.7	15.0	9.8	9.8	16.5	12.7	11.0	14.5	0.0	10.5
Incr Delay (d2), s/veh	2.3	0.1	0.1	0.2	0.1	0.1	2.6	0.0	0.0	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	0.6	0.6	0.2	1.0	1.0	0.1	0.1	0.3	0.8	0.0	0.2
LnGrp Delay(d),s/veh	18.7	10.7	10.7	15.1	9.9	9.9	19.1	12.7	11.0	15.3	0.0	10.6
LnGrp LOS	B	B	B	B	A	A	B	B	B	B		B
Approach Vol, veh/h		160			326			104			119	
Approach Delay, s/veh		11.4			10.7			12.1			14.1	
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	7.4	8.7	6.3	11.6	4.6	11.5	4.7	13.2				
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	3.6	2.7	2.5	3.1	2.2	2.5	2.2	4.2				
Green Ext Time (p_c), s	0.1	0.3	0.1	0.7	0.0	0.3	0.0	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.6								
HCM 2010 LOS				B								

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

Existing
 Timing Plan: WKND-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	12	279	22	118	289	129	23	21	98	130	30	16
Future Volume (veh/h)	12	279	22	118	289	129	23	21	98	130	30	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	12	285	22	120	295	132	23	21	100	133	31	16
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	182	804	62	192	593	259	59	270	229	201	261	135
Arrive On Green	0.10	0.24	0.24	0.11	0.24	0.24	0.03	0.15	0.15	0.11	0.23	0.23
Sat Flow, veh/h	1757	3384	260	1757	2437	1064	1757	1845	1568	1757	1148	592
Grp Volume(v), veh/h	12	155	152	120	221	206	23	21	100	133	0	47
Grp Sat Flow(s),veh/h/ln	1757	1845	1799	1757	1845	1657	1757	1845	1568	1757	0	1740
Q Serve(g_s), s	0.3	2.8	2.9	2.7	4.2	4.4	0.5	0.4	2.4	3.0	0.0	0.9
Cycle Q Clear(g_c), s	0.3	2.8	2.9	2.7	4.2	4.4	0.5	0.4	2.4	3.0	0.0	0.9
Prop In Lane	1.00		0.14	1.00		0.64	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	182	438	427	192	449	403	59	270	229	201	0	395
V/C Ratio(X)	0.07	0.35	0.36	0.62	0.49	0.51	0.39	0.08	0.44	0.66	0.00	0.12
Avail Cap(c_a), veh/h	861	2261	2205	861	2261	2031	861	1357	1153	861	0	1280
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	16.5	12.9	13.0	17.4	13.3	13.3	19.3	15.0	15.9	17.3	0.0	12.5
Incr Delay (d2), s/veh	0.1	0.2	0.2	1.2	0.3	0.4	1.5	0.0	0.5	1.4	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	0.1	1.4	1.4	1.3	2.1	2.0	0.3	0.2	1.1	1.5	0.0	0.4
LnGrp Delay(d),s/veh	16.6	13.1	13.1	18.6	13.6	13.7	20.8	15.1	16.4	18.7	0.0	12.6
LnGrp LOS	B	B	B	B	B	B	C	B	B	B		B
Approach Vol, veh/h		319			547			144			180	
Approach Delay, s/veh		13.3			14.7			16.9			17.1	
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	8.7	10.0	8.5	13.7	5.4	13.3	8.2	13.9				
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	30.0	20.0	50.0	20.0	30.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	11.0	4.4	4.7	4.9	2.5	2.9	2.3	6.4				
Green Ext Time (p_c), s	0.2	0.3	0.1	0.5	0.0	0.3	0.5	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				15.0								
HCM 2010 LOS				B								

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

Existing
 Timing Plan: WKND-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	455	11	23	490	4	33	17	34	26	7	12
Future Volume (veh/h)	19	455	11	23	490	4	33	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	479	12	24	516	4	35	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	1165	495	127	1185	504	88	177	150	70	50	92
Arrive On Green	0.03	0.32	0.32	0.04	0.32	0.32	0.05	0.10	0.10	0.04	0.09	0.09
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	579	1076
Grp Volume(v), veh/h	20	479	12	24	516	4	35	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	3.2	0.2	0.2	3.4	0.1	0.6	0.3	0.7	0.5	0.0	0.3
Cycle Q Clear(g_c), s	0.3	3.2	0.2	0.2	3.4	0.1	0.6	0.3	0.7	0.5	0.0	0.3
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	1165	495	127	1185	504	88	177	150	70	0	142
V/C Ratio(X)	0.37	0.41	0.02	0.19	0.44	0.01	0.40	0.10	0.24	0.38	0.00	0.14
Avail Cap(c_a), veh/h	1125	5906	2510	2250	5906	2510	1125	2185	1858	1125	0	1960
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	14.8	8.4	7.4	14.6	8.4	7.2	14.4	12.9	13.1	14.6	0.0	13.2
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	1.6	0.1	0.1	1.7	0.0	0.3	0.1	0.3	0.2	0.0	0.2
LnGrp Delay(d),s/veh	16.4	8.5	7.4	14.9	8.5	7.2	15.4	13.0	13.4	15.9	0.0	13.4
LnGrp LOS	B	A	A	B	A	A	B	B	B	B		B
Approach Vol, veh/h		511			544			89			47	
Approach Delay, s/veh		8.8			8.7			14.1			14.8	
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	6.7	5.0	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), 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	5.2	2.6	2.3	2.3	5.4				
Green Ext Time (p_c), s	0.0	0.1	0.0	2.4	0.0	0.1	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.4									
HCM 2010 LOS			A									

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

Existing
 Timing Plan: WKND-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	500	3	115	534	50	4	9	145	124	13	19
Future Volume (veh/h)	54	500	3	115	534	50	4	9	145	124	13	19
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	56	521	3	120	556	52	4	9	151	129	14	20
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	882	375	378	1026	436	11	297	253	195	183	261
Arrive On Green	0.07	0.24	0.24	0.11	0.28	0.28	0.01	0.16	0.16	0.11	0.27	0.27
Sat Flow, veh/h	1757	3689	1568	3514	3689	1568	1757	1845	1568	1757	688	983
Grp Volume(v), veh/h	56	521	3	120	556	52	4	9	151	129	0	34
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	0	1671
Q Serve(g_s), s	1.3	5.3	0.1	1.3	5.4	1.0	0.1	0.2	3.8	3.0	0.0	0.6
Cycle Q Clear(g_c), s	1.3	5.3	0.1	1.3	5.4	1.0	0.1	0.2	3.8	3.0	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	120	882	375	378	1026	436	11	297	253	195	0	444
V/C Ratio(X)	0.47	0.59	0.01	0.32	0.54	0.12	0.35	0.03	0.60	0.66	0.00	0.08
Avail Cap(c_a), veh/h	837	4394	1867	1674	4394	1867	837	1845	1569	837	0	1672
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	18.8	14.2	12.2	17.3	12.9	11.3	20.8	14.8	16.3	17.9	0.0	11.6
Incr Delay (d2), s/veh	1.0	0.2	0.0	0.2	0.2	0.0	6.6	0.0	0.8	1.4	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	0.7	2.7	0.0	0.6	2.7	0.5	0.1	0.1	1.7	1.5	0.0	0.3
LnGrp Delay(d),s/veh	19.9	14.4	12.2	17.5	13.0	11.4	27.4	14.9	17.2	19.3	0.0	11.6
LnGrp LOS	B	B	B	B	B	B	C	B	B	B		B
Approach Vol, veh/h		580			728			164			163	
Approach Delay, s/veh		14.9			13.7			17.3			17.7	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	10.8	8.5	14.0	4.3	15.2	6.9	15.7				
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	42.0	42.0	20.0	50.0	20.0	42.0	20.0	50.0				
Max Q Clear Time (g_c+1), s	5.8	5.8	3.3	7.3	2.1	2.6	3.3	7.4				
Green Ext Time (p_c), s	0.2	0.4	0.2	2.8	0.0	0.4	0.1	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay				14.9								
HCM 2010 LOS				B								

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

Existing
Timing Plan: WKND-Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↗	↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	320	351	130	56	369	523	87	620	65	471	662	289
Future Volume (veh/h)	320	351	130	56	369	523	87	620	65	471	662	289
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	323	355	131	57	373	0	88	626	66	476	669	292
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	464	854	363	109	596	253	138	933	396	624	1299	552
Arrive On Green	0.13	0.23	0.23	0.06	0.16	0.00	0.08	0.25	0.25	0.18	0.35	0.35
Sat Flow, veh/h	3514	3689	1568	1757	3689	1568	1757	3689	1568	3514	3689	1568
Grp Volume(v), veh/h	323	355	131	57	373	0	88	626	66	476	669	292
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	5.1	4.7	4.1	1.8	5.5	0.0	2.8	8.9	1.9	7.5	8.3	8.6
Cycle Q Clear(g_c), s	5.1	4.7	4.1	1.8	5.5	0.0	2.8	8.9	1.9	7.5	8.3	8.6
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	464	854	363	109	596	253	138	933	396	624	1299	552
V/C Ratio(X)	0.70	0.42	0.36	0.52	0.63	0.00	0.64	0.67	0.17	0.76	0.51	0.53
Avail Cap(c_a), veh/h	1212	3372	1433	606	3372	1433	606	3181	1352	1212	3181	1352
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	24.1	19.0	18.7	26.4	22.7	0.0	25.9	19.5	16.9	22.7	14.9	15.0
Incr Delay (d2), s/veh	0.7	0.1	0.2	1.4	0.4	0.0	1.8	0.3	0.1	0.7	0.1	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	2.5	2.4	1.8	0.9	2.8	0.0	1.4	4.6	0.8	3.7	4.2	3.7
LnGrp Delay(d),s/veh	24.8	19.1	18.9	27.8	23.1	0.0	27.8	19.8	17.0	23.4	15.0	15.2
LnGrp LOS	C	B	B	C	C		C	B	B	C	B	B
Approach Vol, veh/h		809			430			780			1437	
Approach Delay, s/veh		21.3			23.7			20.5			17.8	
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	14.3	18.7	7.6	17.4	8.5	24.4	11.7	13.4				
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), s	19.5	10.9	3.8	6.7	4.8	10.6	7.1	7.5				
Green Ext Time (p_c), s	0.8	3.8	0.1	1.9	0.1	3.8	0.6	1.9				
Intersection Summary												
HCM 2010 Ctrl Delay			20.0									
HCM 2010 LOS			B									

Intersection

Intersection Delay, s/veh 8.2
Intersection LOS A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	38	35	124	141	2
Future Vol, veh/h	1	38	35	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	40	36	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	7.3	8.4	8.2
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	3%	0%
Vol Thru, %	0%	100%	0%	99%
Vol Right, %	0%	0%	97%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	124	39	143
LT Vol	35	0	1	0
Through Vol	0	124	0	141
RT Vol	0	0	38	2
Lane Flow Rate	36	129	41	149
Geometry Grp	7	7	2	5
Degree of Util (X)	0.053	0.169	0.046	0.175
Departure Headway (Hd)	5.198	4.697	4.094	4.234
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	687	761	880	837
Service Time	2.944	2.442	2.094	2.313
HCM Lane V/C Ratio	0.052	0.17	0.047	0.178
HCM Control Delay	8.2	8.4	7.3	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.1	0.6

Intersection

Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	78	6	5	42	8	5	50	5	7	48	102
Future Vol, veh/h	84	78	6	5	42	8	5	50	5	7	48	102
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	88	82	6	5	44	8	5	53	5	7	51	107
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	8.4	8.5	8.7
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%	91%	0%	93%	0%	84%	0%	32%
Vol Right, %	0%	9%	0%	7%	0%	16%	0%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	55	84	84	5	50	7	150
LT Vol	5	0	84	0	5	0	7	0
Through Vol	0	50	0	78	0	42	0	48
RT Vol	0	5	0	6	0	8	0	102
Lane Flow Rate	5	58	88	88	5	53	7	158
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.009	0.085	0.139	0.126	0.008	0.076	0.012	0.209
Departure Headway (Hd)	5.828	5.261	5.671	5.119	5.806	5.191	5.735	4.754
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	614	681	632	699	615	688	625	755
Service Time	3.563	2.996	3.408	2.856	3.55	2.934	3.465	2.484
HCM Lane V/C Ratio	0.008	0.085	0.139	0.126	0.008	0.077	0.011	0.209
HCM Control Delay	8.6	8.5	9.3	8.6	8.6	8.4	8.5	8.7
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.5	0.4	0	0.2	0	0.8

Intersection

Intersection Delay, s/veh 7.7
Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	5	81	1	4	73
Future Vol, veh/h	1	5	81	1	4	73
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	89	1	4	80
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	7.6	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	82	6	4	73
LT Vol	0	1	4	0
Through Vol	81	0	0	73
RT Vol	1	5	0	0
Lane Flow Rate	90	7	4	80
Geometry Grp	5	2	7	7
Degree of Util (X)	0.103	0.007	0.006	0.103
Departure Headway (Hd)	4.117	3.884	5.107	4.606
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	870	927	703	781
Service Time	2.147	1.884	2.821	2.321
HCM Lane V/C Ratio	0.103	0.008	0.006	0.102
HCM Control Delay	7.6	6.9	7.9	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0	0	0.3

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Traffic Vol, veh/h	13	9	75	24	12	59
Future Vol, veh/h	13	9	75	24	12	59
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	14	10	82	26	13	64

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	185	95	0	0	108	0
Stage 1	95	-	-	-	-	-
Stage 2	90	-	-	-	-	-
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	802	959	-	-	1476	-
Stage 1	926	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	795	959	-	-	1476	-
Mov Cap-2 Maneuver	795	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	923	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	855	1476
HCM Lane V/C Ratio	-	-	0.028	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		
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	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵		↵	↵		↵	↵	↵
Traffic Vol, veh/h	21	109	2	52	53	2	4	42	45	1	19	6
Future Vol, veh/h	21	109	2	52	53	2	4	42	45	1	19	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	127	2	60	62	2	5	49	52	1	22	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	8.8	8.6	8.3
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%	48%	0%	98%	0%	96%	0%	100%	0%
Vol Right, %	0%	52%	0%	2%	0%	4%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	87	21	111	52	55	1	19	6
LT Vol	4	0	21	0	52	0	1	0	0
Through Vol	0	42	0	109	0	53	0	19	0
RT Vol	0	45	0	2	0	2	0	0	6
Lane Flow Rate	5	101	24	129	60	64	1	22	7
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.142	0.039	0.186	0.097	0.093	0.002	0.034	0.009
Departure Headway (Hd)	5.932	5.064	5.696	5.182	5.75	5.224	6.073	5.57	4.865
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	603	706	628	692	623	685	588	640	732
Service Time	3.674	2.806	3.435	2.921	3.49	2.963	3.827	3.324	2.619
HCM Lane V/C Ratio	0.008	0.143	0.038	0.186	0.096	0.093	0.002	0.034	0.01
HCM Control Delay	8.7	8.6	8.7	9.1	9.1	8.5	8.8	8.5	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

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	41.4	83.8	0.48	20.7	D
John Muir Pkwy	II	35	21.2	18.5	39.7	0.17	15.4	E
Eagle Rock Ave	II	35	11.5	46.4	57.9	0.09	5.7	F
SR 4	II	45	20.9	37.6	58.5	0.19	11.8	F
Total	II		109.1	188.1	297.2	1.05	12.7	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	52.9	69.2	0.13	6.8	F
Cortona Wy	II	35	23.9	35.1	59.0	0.19	11.7	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	41.5	60.0	0.17	10.2	F
W Country Club Dr	II	45	42.4	23.8	66.2	0.48	26.2	C
Total	II		111.2	173.0	284.2	1.06	13.5	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	33.7	46.8	0.11	8.8	F
Foothill Dr	II	45	42.4	33.1	75.5	0.48	23.0	C
John Muir Pkwy	II	35	21.2	20.6	41.8	0.17	14.6	E
Eagle Rock Ave	II	35	11.5	51.8	63.3	0.09	5.2	F
SR 4	II	45	20.9	40.6	61.5	0.19	11.2	F
Total	II		109.1	179.8	288.9	1.05	13.1	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	48.5	64.8	0.13	7.2	F
Cortona Wy	II	35	23.9	33.7	57.6	0.19	12.0	F
John Muir Pkwy	II	45	10.1	22.9	33.0	0.09	10.1	F
E Country Club Dr	II	45	18.5	37.2	55.7	0.17	11.0	F
W Country Club Dr	II	45	42.4	26.7	69.1	0.48	25.1	C
Total	II		111.2	169.0	280.2	1.06	13.7	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	15.9	29.0	0.11	14.1	E
Foothill Dr	II	45	42.4	24.7	67.1	0.48	25.8	C
John Muir Pkwy	II	35	21.2	16.8	38.0	0.17	16.1	E
Eagle Rock Ave	II	35	11.5	33.5	45.0	0.09	7.4	F
SR 4	II	45	20.9	29.7	50.6	0.19	13.6	E
Total	II		109.1	120.6	229.7	1.05	16.4	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	37.2	53.5	0.13	8.8	F
Cortona Wy	II	35	23.9	30.4	54.3	0.19	12.7	F
John Muir Pkwy	II	45	10.1	17.2	27.3	0.09	12.2	F
E Country Club Dr	II	45	18.5	19.5	38.0	0.17	16.1	E
W Country Club Dr	II	45	42.4	11.3	53.7	0.48	32.3	B
Total	II		111.2	115.6	226.8	1.06	16.9	E