

Appendix G

Traffic

APPENDIX G.1:

Existing Conditions

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-001 SR 99 & SR 20

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	18	132	30	0	180	22	120	12	0	154	38	78	42	0	158	12	106	27	0	145	637	0
7:15	22	151	51	0	224	37	167	24	0	228	45	98	43	0	186	19	134	37	0	190	828	0
7:30	30	150	53	0	233	32	210	21	0	263	57	145	57	0	259	22	166	35	0	223	978	0
7:45	38	184	59	0	281	45	201	14	0	260	65	144	67	0	276	33	196	44	0	273	1090	0
Total	108	617	193	0	918	136	698	71	0	905	205	465	209	0	879	86	602	143	0	831	3533	0
8:00	24	149	25	0	198	39	208	12	0	259	74	120	74	0	268	33	173	52	0	258	983	0
8:15	36	154	33	0	223	51	189	24	0	264	64	117	68	0	249	21	168	32	0	221	957	0
8:30	17	107	30	0	154	46	196	23	0	265	67	98	61	0	226	20	190	45	0	255	900	0
8:45	24	126	36	0	186	55	203	18	0	276	57	91	54	0	202	19	171	59	0	249	913	0
Total	101	536	124	0	761	191	796	77	0	1064	262	426	257	0	945	93	702	188	0	983	3753	0
16:00	39	142	27	0	208	108	282	45	0	435	57	152	111	0	320	42	257	76	0	375	1338	0
16:15	38	134	26	0	198	83	281	51	0	415	64	139	82	0	285	38	249	79	0	366	1264	0
16:30	31	133	17	0	181	115	255	36	0	406	72	143	92	0	307	39	259	83	0	381	1275	0
16:45	32	151	25	0	208	100	265	47	0	412	52	147	84	0	283	42	290	78	0	410	1313	0
Total	140	560	95	0	795	406	1083	179	0	1668	245	581	369	0	1195	161	1055	316	0	1532	5190	0
17:00	33	128	28	0	189	125	291	49	0	465	53	178	98	0	329	46	278	88	0	412	1395	0
17:15	34	177	23	0	234	90	261	40	0	391	78	177	76	0	331	33	257	69	0	359	1315	0
17:30	39	139	22	0	200	98	242	54	0	394	53	166	73	0	292	22	255	58	0	335	1221	0
17:45	38	151	24	0	213	82	205	36	0	323	71	186	111	0	368	30	244	47	0	321	1225	0
Total	144	595	97	0	836	395	999	179	0	1573	255	707	358	0	1320	131	1034	262	0	1427	5156	0
Grand Total	493	2308	509	0	3310	1128	3576	506	0	5210	967	2179	1193	0	4339	471	3393	909	0	4773	17632	0
Apprch %	14.9%	69.7%	15.4%	0.0%		21.7%	68.6%	9.7%	0.0%		22.3%	50.2%	27.5%	0.0%		9.9%	71.1%	19.0%	0.0%			
Total %	2.8%	13.1%	2.9%	0.0%	18.8%	6.4%	20.3%	2.9%	0.0%	29.5%	5.5%	12.4%	6.8%	0.0%	24.6%	2.7%	19.2%	5.2%	0.0%	27.1%	100.0%	

AM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	30	150	53	0	233	32	210	21	0	263	57	145	57	0	259	22	166	35	0	223	978
7:45	38	184	59	0	281	45	201	14	0	260	65	144	67	0	276	33	196	44	0	273	1090
8:00	24	149	25	0	198	39	208	12	0	259	74	120	74	0	268	33	173	52	0	258	983
8:15	36	154	33	0	223	51	189	24	0	264	64	117	68	0	249	21	168	32	0	221	957
Total Volume	128	637	170	0	935	167	808	71	0	1046	260	526	266	0	1052	109	703	163	0	975	4008
% App Total	13.7%	68.1%	18.2%	0.0%		16.0%	77.2%	6.8%	0.0%		24.7%	50.0%	25.3%	0.0%		11.2%	72.1%	16.7%	0.0%		
PHF	.842	.865	.720	.000	.832	.819	.962	.740	.000	.991	.878	.907	.899	.000	.953	.826	.897	.784	.000	.893	.919

PM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	31	133	17	0	181	115	255	36	0	406	72	143	92	0	307	39	259	83	0	381	1275
16:45	32	151	25	0	208	100	265	47	0	412	52	147	84	0	283	42	290	78	0	410	1313
17:00	33	128	28	0	189	125	291	49	0	465	53	178	98	0	329	46	278	88	0	412	1395
17:15	34	177	23	0	234	90	261	40	0	391	78	177	76	0	331	33	257	69	0	359	1315
Total Volume	130	589	93	0	812	430	1072	172	0	1674	255	645	350	0	1250	160	1084	318	0	1562	5298
% App Total	16.0%	72.5%	11.5%	0.0%		25.7%	64.0%	10.3%	0.0%		20.4%	51.6%	28.0%	0.0%		10.2%	69.4%	20.4%	0.0%		
PHF	.956	.832	.830	.000	.868	.860	.921	.878	.000	.900	.817	.906	.893	.000	.944	.870	.934	.903	.000	.948	.949

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-001 SR 99 & SR 20

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total	Peds Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL					
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0
16:15	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	1	0
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0
Total	0	0	0	2	0	2	0	0	0	2	0	0	0	0	0	0	2	0	1	2	2	4	3	3	
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2	1	2	1	
Grand Total	0	0	0	3	0	2	1	0	0	3	0	0	1	2	1	0	4	0	1	4	8	6	6	6	
Apprch %	0.0%	0.0%	0.0%			66.7%	33.3%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%							
Total %	0.0%	0.0%	0.0%		0.0%	25.0%	12.5%	0.0%		37.5%	0.0%	0.0%	12.5%		12.5%	0.0%	50.0%	0.0%		50.0%				100.0%	

AM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
Peak Hour Analysis From 07:30 to 08:30																								
Peak Hour For Entire Intersection Begins at 07:30																								
7:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	1	0	0	0	1	2	2	0
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%						
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.250	.000		.250		.500			

PM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
Peak Hour Analysis From 16:30 to 17:30																								
Peak Hour For Entire Intersection Begins at 16:30																								
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0
Total Volume	0	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	1	0	0	0	1	3	3	0
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%						
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.250		.250	.000	.250	.000		.250		.750		

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-001 SR 99 & SR 20

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	1	9	3	0	13	3	7	2	0	12	3	17	5	0	25	1	7	4	0	12	62	0
7:15	0	9	2	0	11	2	6	0	0	8	2	11	3	0	16	2	7	2	0	11	46	0
7:30	0	8	4	0	12	2	7	1	0	10	4	23	4	0	31	2	6	1	0	9	62	0
7:45	1	5	1	0	7	2	6	2	0	10	2	11	2	0	15	4	2	4	0	10	42	0
Total	2	31	10	0	43	9	26	5	0	40	11	62	14	0	87	9	22	11	0	42	212	0
8:00	0	15	1	0	16	3	5	2	0	10	2	13	2	0	17	5	3	2	0	10	53	0
8:15	2	3	3	0	8	2	6	1	0	9	7	21	1	0	29	5	4	5	0	14	60	0
8:30	0	15	5	0	20	1	2	2	0	5	5	13	2	0	20	1	6	2	0	9	54	0
8:45	0	18	3	0	21	4	4	3	0	11	3	10	2	0	15	3	6	4	0	13	60	0
Total	2	51	12	0	65	10	17	8	0	35	17	57	7	0	81	14	19	13	0	46	227	0
16:00	0	9	0	0	9	1	1	3	0	5	1	9	0	0	10	2	7	2	0	11	35	0
16:15	1	4	1	0	6	4	2	2	0	8	6	10	1	0	17	0	8	2	0	10	41	0
16:30	0	6	2	0	8	3	1	1	0	5	6	5	3	0	14	1	6	1	0	8	35	0
16:45	0	5	2	0	7	0	2	0	0	2	0	5	2	0	7	0	3	0	0	3	19	0
Total	1	24	5	0	30	8	6	6	0	20	13	29	6	0	48	3	24	5	0	32	130	0
17:00	2	7	1	0	10	0	3	0	0	3	2	1	0	0	3	1	0	2	0	3	19	0
17:15	0	7	1	0	8	2	0	0	0	2	2	6	0	0	8	0	7	1	0	8	26	0
17:30	0	7	1	0	8	1	2	2	0	5	0	7	0	0	7	0	3	1	0	4	24	0
17:45	1	8	5	0	14	1	4	0	0	5	1	4	0	0	5	1	2	0	0	3	27	0
Total	3	29	8	0	40	4	9	2	0	15	5	18	0	0	23	2	12	4	0	18	96	0
Grand Total	8	135	35	0	178	31	58	21	0	110	46	166	27	0	239	28	77	33	0	138	665	0
Apprch %	4.5%	75.8%	19.7%			28.2%	52.7%	19.1%			19.2%	69.5%	11.3%			20.3%	55.8%	23.9%				
Total %	1.2%	20.3%	5.3%		26.8%	4.7%	8.7%	3.2%		16.5%	6.9%	25.0%	4.1%		35.9%	4.2%	11.6%	5.0%		20.8%	100.0%	

AM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	8	4	0	12	2	7	1	0	10	4	23	4	0	31	2	6	1	0	9	62	
7:45	1	5	1	0	7	2	6	2	0	10	2	11	2	0	15	4	2	4	0	10	42	
8:00	0	15	1	0	16	3	5	2	0	10	2	13	2	0	17	5	3	2	0	10	53	
8:15	2	3	3	0	8	2	6	1	0	9	7	21	1	0	29	5	4	5	0	14	60	
Total Volume	3	31	9	0	43	9	24	6	0	39	15	68	9	0	92	16	15	12	0	43	217	
% App Total	7.0%	72.1%	20.9%			23.1%	61.5%	15.4%			16.3%	73.9%	9.8%			37.2%	34.9%	27.9%				
PHF	.375	.517	.563		.672	.750	.857	.750		.975	.536	.739	.563		.742	.800	.625	.600		.768	.875	

PM PEAK HOUR	SR 99 Southbound					SR 20 Westbound					SR 99 Northbound					SR 20 Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	6	2	0	8	3	1	1	0	5	6	5	3	0	14	1	6	1	0	8	35	
16:45	0	5	2	0	7	0	2	0	0	2	0	5	2	0	7	0	3	0	0	3	19	
17:00	2	7	1	0	10	0	3	0	0	3	2	1	0	0	3	1	0	2	0	3	19	
17:15	0	7	1	0	8	2	0	0	0	2	2	6	0	0	8	0	7	1	0	8	26	
Total Volume	2	25	6	0	33	5	6	1	0	12	10	17	5	0	32	2	16	4	0	22	99	
% App Total	6.1%	75.8%	18.2%			41.7%	50.0%	8.3%			31.3%	53.1%	15.6%			9.1%	72.7%	18.2%				
PHF	.250	.893	.750		.825	.417	.500	.250		.600	.417	.708	.417		.571	.500	.571	.500		.688	.707	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-002 SR 99 & Sunsweet Boulevard
 Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	3	178	2	0	183	0	0	0	0	0	6	167	6	0	179	4	1	5	0	10	372	0
7:15	1	213	4	3	221	3	0	2	0	5	20	183	2	0	205	4	0	5	0	9	440	3
7:30	2	197	2	0	201	0	0	1	0	1	12	256	7	0	275	7	3	4	0	14	491	0
7:45	9	226	2	8	245	2	1	0	0	3	21	267	4	0	292	11	2	8	0	21	561	8
Total	15	814	10	11	850	5	1	3	0	9	59	873	19	0	951	26	6	22	0	54	1864	11
8:00	3	244	5	3	255	0	0	0	0	0	9	278	5	0	292	7	1	1	0	9	556	3
8:15	6	216	4	3	229	0	0	2	0	2	11	207	12	0	230	11	2	3	0	16	477	3
8:30	8	190	4	7	209	2	1	1	0	4	5	233	7	0	245	5	1	6	0	12	470	7
8:45	4	215	5	1	225	5	2	3	0	10	10	185	1	0	196	6	1	2	0	9	440	1
Total	21	865	18	14	918	7	3	6	0	16	35	903	25	0	963	29	5	12	0	46	1943	14
16:00	2	288	13	7	310	8	2	8	0	18	26	263	6	0	295	27	0	27	0	54	677	7
16:15	5	264	14	8	291	9	2	6	0	17	24	269	5	0	298	18	1	21	0	40	646	8
16:30	2	298	27	3	330	5	0	3	0	8	21	273	2	0	296	24	2	23	0	49	683	3
16:45	1	308	12	6	327	7	0	7	0	14	30	256	5	0	291	24	1	20	0	45	677	6
Total	10	1158	66	24	1258	29	4	24	0	57	101	1061	18	0	1180	93	4	91	0	188	2683	24
17:00	3	308	15	6	332	4	3	5	0	12	26	299	0	0	325	35	0	28	0	63	732	6
17:15	3	295	20	7	325	5	3	3	0	11	31	283	2	0	316	30	5	22	0	57	709	7
17:30	1	271	19	4	295	4	2	4	0	10	36	296	3	0	335	41	1	26	0	68	708	4
17:45	2	244	16	5	267	3	1	8	0	12	35	309	3	0	347	16	0	22	0	38	664	5
Total	9	1118	70	22	1219	16	9	20	0	45	128	1187	8	0	1323	122	6	98	0	226	2813	22
Grand Total	55	3955	164	71	4245	57	17	53	0	127	323	4024	70	0	4417	270	21	223	0	514	9303	71
Apprch %	1.3%	93.2%	3.9%	1.7%		44.9%	13.4%	41.7%	0.0%		7.3%	91.1%	1.6%	0.0%		52.5%	4.1%	43.4%	0.0%			
Total %	0.6%	42.5%	1.8%	0.8%	45.6%	0.6%	0.2%	0.6%	0.0%	1.4%	3.5%	43.3%	0.8%	0.0%	47.5%	2.9%	0.2%	2.4%	0.0%	5.5%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	2	197	2	0	201	0	0	1	0	1	12	256	7	0	275	7	3	4	0	14	491	
7:45	9	226	2	8	245	2	1	0	0	3	21	267	4	0	292	11	2	8	0	21	561	
8:00	3	244	5	3	255	0	0	0	0	0	9	278	5	0	292	7	1	1	0	9	556	
8:15	6	216	4	3	229	0	0	2	0	2	11	207	12	0	230	11	2	3	0	16	477	
Total Volume	20	883	13	14	930	2	1	3	0	6	53	1008	28	0	1089	36	8	16	0	60	2085	
% App Total	2.2%	94.9%	1.4%	1.5%		33.3%	16.7%	50.0%	0.0%		4.9%	92.6%	2.6%	0.0%		60.0%	13.3%	26.7%	0.0%			
PHF	.556	.905	.650	.438	.912	.250	.250	.375	.000	.500	.631	.906	.583	.000	.932	.818	.667	.500	.000	.714	.929	

PM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	1	308	12	6	327	7	0	7	0	14	30	256	5	0	291	24	1	20	0	45	677	
17:00	3	308	15	6	332	4	3	5	0	12	26	299	0	0	325	35	0	28	0	63	732	
17:15	3	295	20	7	325	5	3	3	0	11	31	283	2	0	316	30	5	22	0	57	709	
17:30	1	271	19	4	295	4	2	4	0	10	36	296	3	0	335	41	1	26	0	68	708	
Total Volume	8	1182	66	23	1279	20	8	19	0	47	123	1134	10	0	1267	130	7	96	0	233	2826	
% App Total	0.6%	92.4%	5.2%	1.8%		42.6%	17.0%	40.4%	0.0%		9.7%	89.5%	0.8%	0.0%		55.8%	3.0%	41.2%	0.0%			
PHF	.667	.959	.825	.821	.963	.714	.667	.679	.000	.839	.854	.948	.500	.000	.946	.793	.350	.857	.000	.857	.965	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-002 SR 99 & Sunsweet Boulevard
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	3
16:00	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
Total	0	1	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0
Grand Total	0	2	2	0	4	0	0	0	0	0	0	0	1	2	1	0	0	0	1	0	5	3
Apprch %	0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%				
Total %	0.0%	40.0%	40.0%		80.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	20.0%		20.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250	

PM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.250		.000	.000	.000	.000		.000	.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-002 SR 99 & Sunsweet Boulevard

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	14	0	0	14	0	0	0	0	0	0	24	1	0	25	1	0	1	0	2	41	0
7:15	0	12	0	0	12	1	0	0	0	1	0	16	0	0	16	0	0	1	0	1	30	0
7:30	0	9	1	0	10	0	0	0	0	0	0	30	1	0	31	1	0	0	0	1	42	0
7:45	0	13	0	0	13	0	0	0	0	0	1	15	0	0	16	0	0	0	0	0	29	0
Total	0	48	1	0	49	1	0	0	0	1	1	85	2	0	88	2	0	2	0	4	142	0
8:00	0	23	0	0	23	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	42	0
8:15	0	13	1	0	14	0	0	0	0	0	0	27	1	0	28	1	0	0	0	1	43	0
8:30	0	21	0	0	21	0	0	0	0	0	1	20	1	0	22	0	0	2	0	2	45	0
8:45	0	26	0	0	26	0	0	0	0	0	0	14	0	0	14	1	0	0	0	1	41	0
Total	0	83	1	0	84	0	0	0	0	0	1	80	2	0	83	2	0	2	0	4	171	0
16:00	0	14	0	0	14	1	0	0	0	1	0	9	0	0	9	0	0	1	0	1	25	0
16:15	0	10	0	0	10	0	0	0	0	0	1	15	0	0	16	0	0	0	0	0	26	0
16:30	0	15	0	0	15	0	0	0	0	0	0	14	0	0	14	1	0	0	0	1	30	0
16:45	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	13	0
Total	0	44	0	0	44	1	0	0	0	1	1	46	0	0	47	1	0	1	0	2	94	0
17:00	0	13	0	0	13	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	17	0
17:15	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	16	0
17:30	0	8	1	0	9	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	19	0
17:45	0	9	0	0	9	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	14	0
Total	0	39	1	0	40	0	0	0	0	0	1	24	0	0	25	0	0	1	0	1	66	0
Grand Total	0	214	3	0	217	2	0	0	0	2	4	235	4	0	243	5	0	6	0	11	473	0
Apprch %	0.0%	98.6%	1.4%			100.0%	0.0%	0.0%			1.6%	96.7%	1.6%			45.5%	0.0%	54.5%				
Total %	0.0%	45.2%	0.6%		45.9%	0.4%	0.0%	0.0%		0.4%	0.8%	49.7%	0.8%		51.4%	1.1%	0.0%	1.3%		2.3%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	9	1	0	10	0	0	0	0	0	0	30	1	0	31	1	0	0	0	1	42
7:45	0	13	0	0	13	0	0	0	0	0	1	15	0	0	16	0	0	0	0	0	29
8:00	0	23	0	0	23	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	42
8:15	0	13	1	0	14	0	0	0	0	0	0	27	1	0	28	1	0	0	0	1	43
Total Volume	0	58	2	0	60	0	0	0	0	0	1	91	2	0	94	2	0	0	0	2	156
% App Total	0.0%	96.7%	3.3%			0.0%	0.0%	0.0%			1.1%	96.8%	2.1%			100.0%	0.0%	0.0%			
PHF	.000	.630	.500		.652	.000	.000	.000		.000	.250	.758	.500		.758	.500	.000	.000		.500	.907

PM PEAK HOUR	SR 99 Southbound					Sunsweet Boulevard Westbound					SR 99 Northbound					Sunsweet Boulevard Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	13
17:00	0	13	0	0	13	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	17
17:15	0	9	0	0	9	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	16
17:30	0	8	1	0	9	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	19
Total Volume	0	35	1	0	36	0	0	0	0	0	0	28	0	0	28	0	0	1	0	1	65
% App Total	0.0%	97.2%	2.8%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.673	.250		.692	.000	.000	.000		.000	.000	.778	.000		.778	.000	.000	.250		.250	.855

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-003 SR 99 & Bridge Street

Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	11	142	13	0	166	16	25	17	0	58	17	156	42	0	215	13	43	9	0	65	504	0
7:15	28	173	15	0	216	21	57	13	0	91	20	191	52	0	263	1	50	17	0	68	638	0
7:30	25	172	14	0	211	33	89	22	0	144	23	239	54	0	316	13	68	23	0	104	775	0
7:45	35	179	18	0	232	27	83	28	0	138	34	259	65	0	358	13	97	24	0	134	862	0
Total	99	666	60	0	825	97	254	80	0	431	94	845	213	0	1152	40	258	73	0	371	2779	0
8:00	33	211	14	0	258	27	69	20	0	116	22	253	63	0	338	16	87	32	0	135	847	0
8:15	22	185	14	0	221	29	70	21	0	120	37	213	60	0	310	5	46	23	0	74	725	0
8:30	15	158	24	0	197	30	59	20	0	109	22	197	49	0	268	16	46	25	0	87	661	0
8:45	26	147	24	0	197	37	53	7	0	97	32	190	43	0	265	9	55	21	0	85	644	0
Total	96	701	76	0	873	123	251	68	0	442	113	853	215	0	1181	46	234	101	0	381	2877	0
16:00	54	215	44	0	313	57	133	32	0	222	44	220	59	0	323	26	118	40	0	184	1042	0
16:15	34	221	43	0	298	55	148	43	0	246	37	233	46	0	316	30	94	48	0	172	1032	0
16:30	40	243	52	0	335	64	132	33	0	229	34	236	54	0	324	19	117	36	0	172	1060	0
16:45	40	218	56	0	314	48	137	33	0	218	41	238	52	0	331	30	113	41	0	184	1047	0
Total	168	897	195	0	1260	224	550	141	0	915	156	927	211	0	1294	105	442	165	0	712	4181	0
17:00	47	268	48	0	363	56	135	37	0	228	44	258	39	0	341	28	123	37	0	188	1120	0
17:15	29	235	45	0	309	56	113	33	0	202	45	270	57	0	372	22	92	47	0	161	1044	0
17:30	35	210	51	0	296	55	114	43	0	212	31	268	55	0	354	34	108	40	0	182	1044	0
17:45	42	200	38	0	280	48	115	37	0	200	41	278	43	0	362	26	92	36	0	154	996	0
Total	153	913	182	0	1248	215	477	150	0	842	161	1074	194	0	1429	110	415	160	0	685	4204	0
Grand Total	516	3177	513	0	4206	659	1532	439	0	2630	524	3699	833	0	5056	301	1349	499	0	2149	14041	0
Apprch %	12.3%	75.5%	12.2%	0.0%		25.1%	58.3%	16.7%	0.0%		10.4%	73.2%	16.5%	0.0%		14.0%	62.8%	23.2%	0.0%			
Total %	3.7%	22.6%	3.7%	0.0%	30.0%	4.7%	10.9%	3.1%	0.0%	18.7%	3.7%	26.3%	5.9%	0.0%	36.0%	2.1%	9.6%	3.6%	0.0%	15.3%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	25	172	14	0	211	33	89	22	0	144	23	239	54	0	316	13	68	23	0	104	775	
7:45	35	179	18	0	232	27	83	28	0	138	34	259	65	0	358	13	97	24	0	134	862	
8:00	33	211	14	0	258	27	69	20	0	116	22	253	63	0	338	16	87	32	0	135	847	
8:15	22	185	14	0	221	29	70	21	0	120	37	213	60	0	310	5	46	23	0	74	725	
Total Volume	115	747	60	0	922	116	311	91	0	518	116	964	242	0	1322	47	298	102	0	447	3209	
% App Total	12.5%	81.0%	6.5%	0.0%		22.4%	60.0%	17.6%	0.0%		8.8%	72.9%	18.3%	0.0%		10.5%	66.7%	22.8%	0.0%			
PHF	.821	.885	.833	.000	.893	.879	.874	.813	.000	.899	.784	.931	.931	.000	.923	.734	.768	.797	.000	.828	.931	

PM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	40	243	52	0	335	64	132	33	0	229	34	236	54	0	324	19	117	36	0	172	1060	
16:45	40	218	56	0	314	48	137	33	0	218	41	238	52	0	331	30	113	41	0	184	1047	
17:00	47	268	48	0	363	56	135	37	0	228	44	258	39	0	341	28	123	37	0	188	1120	
17:15	29	235	45	0	309	56	113	33	0	202	45	270	57	0	372	22	92	47	0	161	1044	
Total Volume	156	964	201	0	1321	224	517	136	0	877	164	1002	202	0	1368	99	445	161	0	705	4271	
% App Total	11.8%	73.0%	15.2%	0.0%		25.5%	59.0%	15.5%	0.0%		12.0%	73.2%	14.8%	0.0%		14.0%	63.1%	22.8%	0.0%			
PHF	.830	.899	.897	.000	.910	.875	.943	.919	.000	.957	.911	.928	.886	.000	.919	.825	.904	.856	.000	.938	.953	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-003 SR 99 & Bridge Street

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	4
7:45	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	1	0	0	1	2	2	2	2
Total	0	0	0	0	0	0	1	0	1	1	0	0	0	5	0	0	2	0	0	2	3	6	6	
8:00	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	1	3	3
8:15	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	2	2	2	2
8:30	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
8:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	5	1	0	0	0	1	0	0	0	2	0	0	1	1	0	0	2	3	8	8	
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2
16:30	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	8	8
16:45	0	0	0	1	0	0	0	0	1	0	0	1	3	1	0	0	0	0	0	0	1	5	5	
Total	0	0	0	4	0	0	0	0	1	0	0	1	11	1	0	0	0	0	0	0	1	16	16	
17:00	0	0	0	2	0	0	1	1	1	2	0	0	0	2	0	0	1	0	0	1	3	5	5	
17:15	0	0	0	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	7	7	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	10	
17:45	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	6	6	
Total	0	0	0	5	0	0	1	1	1	2	0	0	22	0	0	1	0	0	1	3	28	28		
Grand Total	0	1	0	14	1	0	2	1	4	3	0	1	0	40	1	0	4	1	0	5	10	58	58	
Apprch %	0.0%	100.0%	0.0%			0.0%	66.7%	33.3%			0.0%	100.0%	0.0%			0.0%	80.0%	20.0%						
Total %	0.0%	10.0%	0.0%		10.0%	0.0%	20.0%	10.0%		30.0%	0.0%	10.0%	0.0%		10.0%	0.0%	40.0%	10.0%		50.0%	100.0%			

AM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 07:30 to 08:30																							
Peak Hour For Entire Intersection Begins at 07:30																							
7:30	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	1	0	0	1	0	0	2	0	0	1	0	0	1	0	1	2	2
8:00	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	1	1
8:15	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	2	2
Total Volume	0	1	0	3	1	0	1	0	1	1	0	0	7	0	0	2	1	0	3	5	5	5	5
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	66.7%	33.3%					
PHF	.000	.250	.000		.250	.000	.250	.000		.250	.000	.000	.000		.000	.500	.250		.750	.625	.625	.625	

PM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 16:30 to 17:30																							
Peak Hour For Entire Intersection Begins at 16:30																							
16:30	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	1	0	0	0	0	1	0	0	1	3	1	0	0	0	0	0	0	0	1	1
17:00	0	0	0	2	0	0	1	1	1	2	0	0	2	0	0	1	0	0	1	1	3	3	3
17:15	0	0	0	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	4	4
Total Volume	0	0	0	6	0	0	1	1	2	2	0	1	17	1	0	1	0	0	1	4	4	4	4
% App Total	0.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%					
PHF	.000	.000	.000		.000	.000	.250	.250		.250	.000	.250	.000		.250	.000	.250	.000		.250	.333	.333	.333

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-003 SR 99 & Bridge Street

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	14	0	0	14	0	2	1	0	3	4	20	0	0	24	2	0	0	0	2	43	0
7:15	1	14	0	0	15	0	1	0	0	1	1	16	3	0	20	0	1	1	0	2	38	0
7:30	1	8	0	0	9	0	3	1	0	4	1	28	0	0	29	2	1	0	0	3	45	0
7:45	0	12	1	0	13	0	2	0	0	2	1	15	1	0	17	1	2	1	0	4	36	0
Total	2	48	1	0	51	0	8	2	0	10	7	79	4	0	90	5	4	2	0	11	162	0
8:00	0	23	0	0	23	0	1	0	0	1	1	18	1	0	20	1	2	2	0	5	49	0
8:15	0	13	0	0	13	0	1	0	0	1	0	28	1	0	29	0	1	0	0	1	44	0
8:30	1	21	1	0	23	0	1	0	0	1	2	23	0	0	25	0	1	1	0	2	51	0
8:45	0	25	1	0	26	1	2	1	0	4	2	12	0	0	14	0	1	1	0	2	46	0
Total	1	82	2	0	85	1	5	1	0	7	5	81	2	0	88	1	5	4	0	10	190	0
16:00	0	15	1	0	16	0	1	0	0	1	1	8	1	0	10	0	1	1	0	2	29	0
16:15	0	9	1	0	10	0	0	0	0	0	1	14	0	0	15	0	2	3	0	5	30	0
16:30	0	15	0	0	15	2	1	0	0	3	4	15	1	0	20	2	2	0	0	4	42	0
16:45	0	4	1	0	5	0	1	0	0	1	1	7	1	0	9	0	2	1	0	3	18	0
Total	0	43	3	0	46	2	3	0	0	5	7	44	3	0	54	2	7	5	0	14	119	0
17:00	0	13	0	0	13	0	1	0	0	1	0	4	0	0	4	0	2	0	0	2	20	0
17:15	0	7	2	0	9	2	1	0	0	3	0	7	0	0	7	0	0	0	0	0	19	0
17:30	0	6	0	0	6	1	1	0	0	2	1	9	0	0	10	1	1	0	0	2	20	0
17:45	1	11	0	0	12	0	0	0	0	0	1	4	0	0	5	0	1	1	0	2	19	0
Total	1	37	2	0	40	3	3	0	0	6	2	24	0	0	26	1	4	1	0	6	78	0
Grand Total	4	210	8	0	222	6	19	3	0	28	21	228	9	0	258	9	20	12	0	41	549	0
Apprch %	1.8%	94.6%	3.6%			21.4%	67.9%	10.7%			8.1%	88.4%	3.5%			22.0%	48.8%	29.3%				
Total %	0.7%	38.3%	1.5%		40.4%	1.1%	3.5%	0.5%		5.1%	3.8%	41.5%	1.6%		47.0%	1.6%	3.6%	2.2%		7.5%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	8	0	0	9	0	3	1	0	4	1	28	0	0	29	2	1	0	0	3	45
7:45	0	12	1	0	13	0	2	0	0	2	1	15	1	0	17	1	2	1	0	4	36
8:00	0	23	0	0	23	0	1	0	0	1	1	18	1	0	20	1	2	2	0	5	49
8:15	0	13	0	0	13	0	1	0	0	1	0	28	1	0	29	0	1	0	0	1	44
Total Volume	1	56	1	0	58	0	7	1	0	8	3	89	3	0	95	4	6	3	0	13	174
% App Total	1.7%	96.6%	1.7%			0.0%	87.5%	12.5%			3.2%	93.7%	3.2%			30.8%	46.2%	23.1%			
PHF	.250	.609	.250		.630	.000	.583	.250		.500	.750	.795	.750		.819	.500	.750	.375		.650	.888

PM PEAK HOUR	SR 99 Southbound					Bridge Street Westbound					SR 99 Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	15	0	0	15	2	1	0	0	3	4	15	1	0	20	2	2	0	0	4	42
16:45	0	4	1	0	5	0	1	0	0	1	1	7	1	0	9	0	2	1	0	3	18
17:00	0	13	0	0	13	0	1	0	0	1	0	4	0	0	4	0	2	0	0	2	20
17:15	0	7	2	0	9	2	1	0	0	3	0	7	0	0	7	0	0	0	0	0	19
Total Volume	0	39	3	0	42	4	4	0	0	8	5	33	2	0	40	2	6	1	0	9	99
% App Total	0.0%	92.9%	7.1%			50.0%	50.0%	0.0%			12.5%	82.5%	5.0%			22.2%	66.7%	11.1%			
PHF	.000	.650	.375		.700	.500	1.000	.000		.667	.313	.550	.500		.500	.250	.750	.250		.563	.589

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-004 SR 99 & Franklin Road
 Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	3	137	24	0	164	19	30	14	0	63	23	164	21	0	208	34	61	29	0	124	559	0
7:15	20	190	18	0	228	20	43	14	0	77	24	221	38	0	283	38	51	31	0	120	708	0
7:30	14	165	26	0	205	16	72	19	0	107	42	235	43	0	320	47	106	23	0	176	808	0
7:45	33	182	30	0	245	20	80	26	0	126	42	319	36	0	397	32	106	50	0	188	956	0
Total	70	674	98	0	842	75	225	73	0	373	131	939	138	0	1208	151	324	133	0	608	3031	0
8:00	21	193	35	0	249	14	83	26	0	123	25	229	58	0	312	58	94	38	2	192	876	2
8:15	23	185	41	0	249	18	71	25	0	114	47	255	29	0	331	38	80	32	1	151	845	1
8:30	14	147	33	0	194	20	52	25	0	97	46	203	15	0	264	42	67	35	1	145	700	1
8:45	21	163	38	0	222	10	58	22	0	90	26	223	24	0	273	32	64	31	3	130	715	3
Total	79	688	147	0	914	62	264	98	0	424	144	910	126	0	1180	170	305	136	7	618	3136	7
16:00	31	228	61	0	320	24	89	37	0	150	49	202	18	0	269	70	81	43	5	199	938	5
16:15	23	241	68	0	332	31	120	29	0	180	48	240	38	0	326	54	90	42	7	193	1031	7
16:30	20	235	81	0	336	32	109	29	0	170	62	263	32	0	357	47	92	38	4	181	1044	4
16:45	35	217	55	0	307	25	93	27	0	145	63	244	39	0	346	51	111	52	2	216	1014	2
Total	109	921	265	0	1295	112	411	122	0	645	222	949	127	0	1298	222	374	175	18	789	4027	18
17:00	25	253	85	0	363	26	102	39	0	167	58	258	17	0	333	50	116	64	3	233	1096	3
17:15	29	247	64	0	340	27	108	30	0	165	61	283	32	0	376	54	97	50	3	204	1085	3
17:30	20	240	56	0	316	20	115	38	0	173	65	275	36	0	376	58	95	47	4	204	1069	4
17:45	22	201	53	0	276	22	88	31	0	141	66	268	32	0	366	54	99	49	6	208	991	6
Total	96	941	258	0	1295	95	413	138	0	646	250	1084	117	0	1451	216	407	210	16	849	4241	16
Grand Total	354	3224	768	0	4346	344	1313	431	0	2088	747	3882	508	0	5137	759	1410	654	41	2864	14435	41
Apprch %	8.1%	74.2%	17.7%	0.0%		16.5%	62.9%	20.6%	0.0%		14.5%	75.6%	9.9%	0.0%		26.5%	49.2%	22.8%	1.4%			
Total %	2.5%	22.3%	5.3%	0.0%	30.1%	2.4%	9.1%	3.0%	0.0%	14.5%	5.2%	26.9%	3.5%	0.0%	35.6%	5.3%	9.8%	4.5%	0.3%	19.8%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	14	165	26	0	205	16	72	19	0	107	42	235	43	0	320	47	106	23	0	176	808
7:45	33	182	30	0	245	20	80	26	0	126	42	319	36	0	397	32	106	50	0	188	956
8:00	21	193	35	0	249	14	83	26	0	123	25	229	58	0	312	58	94	38	2	192	876
8:15	23	185	41	0	249	18	71	25	0	114	47	255	29	0	331	38	80	32	1	151	845
Total Volume	91	725	132	0	948	68	306	96	0	470	156	1038	166	0	1360	175	386	143	3	707	3485
% App Total	9.6%	76.5%	13.9%	0.0%		14.5%	65.1%	20.4%	0.0%		11.5%	76.3%	12.2%	0.0%		24.8%	54.6%	20.2%	0.4%		
PHF	.689	.939	.805	.000	.952	.850	.922	.923	.000	.933	.830	.813	.716	.000	.856	.754	.910	.715	.375	.921	.911

PM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	35	217	55	0	307	25	93	27	0	145	63	244	39	0	346	51	111	52	2	216	1014
17:00	25	253	85	0	363	26	102	39	0	167	58	258	17	0	333	50	116	64	3	233	1096
17:15	29	247	64	0	340	27	108	30	0	165	61	283	32	0	376	54	97	50	3	204	1085
17:30	20	240	56	0	316	20	115	38	0	173	65	275	36	0	376	58	95	47	4	204	1069
Total Volume	109	957	260	0	1326	98	418	134	0	650	247	1060	124	0	1431	213	419	213	12	857	4264
% App Total	8.2%	72.2%	19.6%	0.0%		15.1%	64.3%	20.6%	0.0%		17.3%	74.1%	8.7%	0.0%		24.9%	48.9%	24.9%	1.4%		
PHF	.779	.946	.765	.000	.913	.907	.909	.859	.000	.939	.950	.936	.795	.000	.951	.918	.903	.832	.750	.920	.973

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-004 SR 99 & Franklin Road

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
8:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	3
Total	1	1	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3	3	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0
16:45	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4
Total	0	0	0	1	0	0	0	0	2	0	0	0	0	3	0	0	2	0	1	2	2	7	
17:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	5
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
17:45	0	0	0	2	0	0	1	0	0	1	0	1	0	4	1	0	1	0	0	1	1	3	6
Total	0	0	0	6	0	0	1	0	0	1	0	1	0	7	1	0	1	0	1	1	3	14	
Grand Total	1	1	0	9	2	0	1	0	2	1	0	1	0	14	1	0	4	0	2	4	8	27	
Apprch %	50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%					
Total %	12.5%	12.5%	0.0%		25.0%	0.0%	12.5%	0.0%		12.5%	0.0%	12.5%	0.0%		12.5%	0.0%	50.0%	0.0%		50.0%		100.0%	

AM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
8:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	1	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2
% App Total	50.0%	50.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.250	.250	.000		.500	.000	.000	.000		.000	.000	.000		.000	.000	.000	.000		.000	.000	.500	

PM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0
17:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	4	0	0	0	0	2	0	0	0	0	5	0	0	0	1	0	0	0	
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-004 SR 99 & Franklin Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	12	1	0	13	0	0	2	0	2	0	19	1	0	20	1	2	1	0	4	39	0
7:15	1	15	0	0	16	2	3	0	0	5	1	17	1	0	19	3	2	2	0	7	47	0
7:30	0	8	0	0	8	1	1	0	0	2	2	28	1	0	31	1	0	1	0	2	43	0
7:45	0	13	0	0	13	0	3	0	0	3	0	17	0	0	17	0	1	0	0	1	34	0
Total	1	48	1	0	50	3	7	2	0	12	3	81	3	0	87	5	5	4	0	14	163	0
8:00	0	25	0	0	25	0	1	0	0	1	0	20	0	0	20	0	0	0	0	0	46	0
8:15	1	10	1	0	12	1	0	1	0	2	0	30	2	0	32	0	2	0	0	2	48	0
8:30	0	23	0	0	23	1	0	1	0	2	2	21	2	0	25	1	2	0	0	3	53	0
8:45	0	26	1	0	27	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	45	0
Total	1	84	2	0	87	3	1	2	0	6	2	88	4	0	94	1	4	0	0	5	192	0
16:00	1	15	0	0	16	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	26	0
16:15	0	12	0	0	12	1	1	0	0	2	1	14	0	0	15	1	0	2	0	3	32	0
16:30	0	16	1	0	17	0	0	0	0	0	0	18	0	0	18	2	0	0	0	2	37	0
16:45	0	6	1	0	7	1	1	0	0	2	3	8	0	0	11	1	0	0	0	1	21	0
Total	1	49	2	0	52	2	2	0	0	4	4	50	0	0	54	4	0	2	0	6	116	0
17:00	0	14	0	0	14	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	20	0
17:15	0	8	0	0	8	0	0	0	0	0	3	7	0	0	10	0	0	0	0	0	18	0
17:30	0	7	0	0	7	0	0	1	0	1	1	9	0	0	10	1	0	0	0	1	19	0
17:45	0	10	1	0	11	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	16	0
Total	0	39	1	0	40	0	1	1	0	2	6	24	0	0	30	1	0	0	0	1	73	0
Grand Total	3	220	6	0	229	8	11	5	0	24	15	243	7	0	265	11	9	6	0	26	544	0
Apprch %	1.3%	96.1%	2.6%			33.3%	45.8%	20.8%			5.7%	91.7%	2.6%			42.3%	34.6%	23.1%				
Total %	0.6%	40.4%	1.1%		42.1%	1.5%	2.0%	0.9%		4.4%	2.8%	44.7%	1.3%		48.7%	2.0%	1.7%	1.1%		4.8%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	8	0	0	8	1	1	0	0	2	2	28	1	0	31	1	0	1	0	2	43
7:45	0	13	0	0	13	0	3	0	0	3	0	17	0	0	17	0	1	0	0	1	34
8:00	0	25	0	0	25	0	1	0	0	1	0	20	0	0	20	0	0	0	0	0	46
8:15	1	10	1	0	12	1	0	1	0	2	0	30	2	0	32	0	2	0	0	2	48
Total Volume	1	56	1	0	58	2	5	1	0	8	2	95	3	0	100	1	3	1	0	5	171
% App Total	1.7%	96.6%	1.7%			25.0%	62.5%	12.5%			2.0%	95.0%	3.0%			20.0%	60.0%	20.0%			
PHF	.250	.560	.250		.580	.500	.417	.250		.667	.250	.792	.375		.781	.250	.375	.250		.625	.891

PM PEAK HOUR	SR 99 Southbound					Franklin Road Westbound					SR 99 Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	6	1	0	7	1	1	0	0	2	3	8	0	0	11	1	0	0	0	1	21
17:00	0	14	0	0	14	0	1	0	0	1	1	4	0	0	5	0	0	0	0	0	20
17:15	0	8	0	0	8	0	0	0	0	0	3	7	0	0	10	0	0	0	0	0	18
17:30	0	7	0	0	7	0	0	1	0	1	1	9	0	0	10	1	0	0	0	1	19
Total Volume	0	35	1	0	36	1	2	1	0	4	8	28	0	0	36	2	0	0	0	2	78
% App Total	0.0%	97.2%	2.8%			25.0%	50.0%	25.0%			22.2%	77.8%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.625	.250		.643	.250	.500	.250		.500	.667	.778	.000		.818	.500	.000	.000		.500	.929

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-005 SR 99 & Hunn Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	1	186	2	0	189	1	0	1	0	2	4	220	1	0	225	4	0	5	0	9	425	0
7:15	3	231	4	0	238	1	0	3	0	4	5	273	0	0	278	1	0	4	0	5	525	0
7:30	4	195	5	0	204	0	0	10	0	10	13	362	1	0	376	0	1	6	0	7	597	0
7:45	20	232	4	0	256	1	1	10	0	12	6	326	15	0	347	1	2	8	0	11	626	0
Total	28	844	15	0	887	3	1	24	0	28	28	1181	17	0	1226	6	3	23	0	32	2173	0
8:00	12	229	6	0	247	1	0	3	0	4	3	318	7	0	328	1	1	6	0	8	587	0
8:15	14	218	5	0	237	0	0	3	0	3	2	315	8	0	325	1	1	7	0	9	574	0
8:30	16	184	6	0	206	0	0	5	0	5	7	267	5	0	279	0	0	2	0	2	492	0
8:45	10	190	1	0	201	0	0	11	0	11	2	246	4	0	252	3	1	5	0	9	473	0
Total	52	821	18	0	891	1	0	22	0	23	14	1146	24	0	1184	5	3	20	0	28	2126	0
16:00	15	281	8	0	304	2	0	8	0	10	4	268	9	0	281	2	0	6	0	8	603	0
16:15	14	284	10	0	308	3	1	21	0	25	6	296	5	0	307	3	0	8	0	11	651	0
16:30	8	285	7	0	300	1	0	17	0	18	11	331	6	0	348	3	1	13	0	17	683	0
16:45	16	277	7	0	300	0	0	14	0	14	4	336	8	0	348	2	0	2	0	4	666	0
Total	53	1127	32	0	1212	6	1	60	0	67	25	1231	28	0	1284	10	1	29	0	40	2603	0
17:00	15	316	5	0	336	2	1	19	0	22	6	306	5	0	317	2	0	1	0	3	678	0
17:15	10	312	7	2	331	1	1	26	0	28	11	351	5	1	368	2	0	7	0	9	736	3
17:30	9	297	9	0	315	0	0	21	0	21	13	348	2	0	363	1	2	7	0	10	709	0
17:45	5	254	4	0	263	2	2	12	0	16	10	353	4	0	367	6	1	9	0	16	662	0
Total	39	1179	25	2	1245	5	4	78	0	87	40	1358	16	1	1415	11	3	24	0	38	2785	3
Grand Total	172	3971	90	2	4235	15	6	184	0	205	107	4916	85	1	5109	32	10	96	0	138	9687	3
Apprch %	4.1%	93.8%	2.1%	0.0%		7.3%	2.9%	89.8%	0.0%		2.1%	96.2%	1.7%	0.0%		23.2%	7.2%	69.6%	0.0%			
Total %	1.8%	41.0%	0.9%	0.0%	43.7%	0.2%	0.1%	1.9%	0.0%	2.1%	1.1%	50.7%	0.9%	0.0%	52.7%	0.3%	0.1%	1.0%	0.0%	1.4%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	4	195	5	0	204	0	0	10	0	10	13	362	1	0	376	0	1	6	0	7	597
7:45	20	232	4	0	256	1	1	10	0	12	6	326	15	0	347	1	2	8	0	11	626
8:00	12	229	6	0	247	1	0	3	0	4	3	318	7	0	328	1	1	6	0	8	587
8:15	14	218	5	0	237	0	0	3	0	3	2	315	8	0	325	1	1	7	0	9	574
Total Volume	50	874	20	0	944	2	1	26	0	29	24	1321	31	0	1376	3	5	27	0	35	2384
% App Total	5.3%	92.6%	2.1%	0.0%		6.9%	3.4%	89.7%	0.0%		1.7%	96.0%	2.3%	0.0%		8.6%	14.3%	77.1%	0.0%		
PHF	.625	.942	.833	.000	.922	.500	.250	.650	.000	.604	.462	.912	.517	.000	.915	.750	.625	.844	.000	.795	.952

PM PEAK HOUR	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	16	277	7	0	300	0	0	14	0	14	4	336	8	0	348	2	0	2	0	4	666
17:00	15	316	5	0	336	2	1	19	0	22	6	306	5	0	317	2	0	1	0	3	678
17:15	10	312	7	2	331	1	1	26	0	28	11	351	5	1	368	2	0	7	0	9	736
17:30	9	297	9	0	315	0	0	21	0	21	13	348	2	0	363	1	2	7	0	10	709
Total Volume	50	1202	28	2	1282	3	2	80	0	85	34	1341	20	1	1396	7	2	17	0	26	2789
% App Total	3.9%	93.8%	2.2%	0.2%		3.5%	2.4%	94.1%	0.0%		2.4%	96.1%	1.4%	0.1%		26.9%	7.7%	65.4%	0.0%		
PHF	.781	.951	.778	.250	.954	.375	.500	.769	.000	.759	.654	.955	.625	.250	.948	.875	.250	.607	.000	.650	.947

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-005 SR 99 & Hunn Road
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	100.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-005 SR 99 & Hunn Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	10	0	0	10	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	30	0
7:15	0	20	0	0	20	0	0	1	0	1	0	24	0	0	24	0	0	0	0	0	45	0
7:30	0	8	2	0	10	0	0	1	0	1	0	25	0	0	25	0	1	0	0	1	37	0
7:45	0	13	0	0	13	0	1	0	0	1	1	17	0	0	18	0	0	0	0	0	32	0
Total	0	51	2	0	53	0	1	2	0	3	1	86	0	0	87	0	1	0	0	1	144	0
8:00	0	25	0	0	25	0	0	0	0	0	0	20	0	0	20	0	0	1	0	1	46	0
8:15	0	10	0	0	10	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	42	0
8:30	0	25	0	0	25	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	54	0
8:45	0	27	0	0	27	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	41	0
Total	0	87	0	0	87	0	0	0	0	0	0	95	0	0	95	0	0	1	0	1	183	0
16:00	0	15	0	0	15	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	27	0
16:15	0	15	0	0	15	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	30	0
16:30	0	15	0	0	15	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	33	0
16:45	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	17	0
Total	0	52	0	0	52	0	0	0	0	0	0	55	0	0	55	0	0	0	0	0	107	0
17:00	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20	0
17:15	0	7	0	0	7	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	18	0
17:30	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	18	0
17:45	0	9	0	0	9	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	14	0
Total	0	38	0	0	38	0	0	0	0	0	0	31	1	0	32	0	0	0	0	0	70	0
Grand Total	0	228	2	0	230	0	1	2	0	3	1	267	1	0	269	0	1	1	0	2	504	0
Apprch %	0.0%	99.1%	0.9%			0.0%	33.3%	66.7%			0.4%	99.3%	0.4%			0.0%	50.0%	50.0%				
Total %	0.0%	45.2%	0.4%		45.6%	0.0%	0.2%	0.4%		0.6%	0.2%	53.0%	0.2%		53.4%	0.0%	0.2%	0.2%		0.4%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	8	2	0	10	0	0	1	0	1	0	25	0	0	25	0	1	0	0	1	37
7:45	0	13	0	0	13	0	1	0	0	1	1	17	0	0	18	0	0	0	0	0	32
8:00	0	25	0	0	25	0	0	0	0	0	0	20	0	0	20	0	0	1	0	1	46
8:15	0	10	0	0	10	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	42
Total Volume	0	56	2	0	58	0	1	1	0	2	1	94	0	0	95	0	1	1	0	2	157
% App Total	0.0%	96.6%	3.4%			0.0%	50.0%	50.0%			1.1%	98.9%	0.0%			0.0%	50.0%	50.0%			
PHF	.000	.560	.250		.580	.000	.250	.250		.500	.250	.734	.000		.742	.000	.250	.250		.500	.853

PM PEAK HOUR	SR 99 Southbound					Hunn Road Westbound					SR 99 Northbound					Hunn Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	17
17:00	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20
17:15	0	7	0	0	7	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	18
17:30	0	8	0	0	8	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	18
Total Volume	0	36	0	0	36	0	0	0	0	0	0	36	1	0	37	0	0	0	0	0	73
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	97.3%	2.7%			0.0%	0.0%	0.0%			
PHF	.000	.643	.000		.643	.000	.000	.000		.000	.000	.900	.250		.841	.000	.000	.000		.000	.913

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-006 SR 99 & Richland Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	3	188	3	0	194	9	5	16	0	30	1	188	1	0	190	15	9	13	0	37	451	0
7:15	4	227	0	0	231	9	13	14	0	36	5	243	3	0	251	15	9	6	0	30	548	0
7:30	8	203	4	0	215	8	11	34	0	53	5	337	11	0	353	13	16	4	0	33	654	0
7:45	22	211	3	0	236	17	15	28	0	60	10	286	25	0	321	28	48	9	0	85	702	0
Total	37	829	10	0	876	43	44	92	0	179	21	1054	40	0	1115	71	82	32	0	185	2355	0
8:00	20	214	2	0	236	19	13	16	0	48	7	293	8	0	308	21	28	10	0	59	651	0
8:15	8	215	5	0	228	4	15	23	0	42	2	288	4	0	294	9	17	4	0	30	594	0
8:30	6	179	3	0	188	3	5	16	0	24	4	257	5	0	266	9	8	7	0	24	502	0
8:45	11	178	2	0	191	7	6	10	0	23	1	226	6	0	233	6	17	3	0	26	473	0
Total	45	786	12	0	843	33	39	65	0	137	14	1064	23	0	1101	45	70	24	0	139	2220	0
16:00	19	247	10	0	276	7	18	22	0	47	8	244	4	0	256	7	21	3	0	31	610	0
16:15	16	273	11	0	300	9	21	23	0	53	7	279	5	0	291	10	31	2	0	43	687	0
16:30	12	266	15	0	293	3	11	24	0	38	7	314	9	0	330	6	22	7	0	35	696	0
16:45	24	256	11	0	291	8	26	25	0	59	3	309	15	0	327	6	20	5	0	31	708	0
Total	71	1042	47	0	1160	27	76	94	0	197	25	1146	33	0	1204	29	94	17	0	140	2701	0
17:00	20	294	13	0	327	16	32	39	0	87	9	296	7	0	312	8	15	5	0	28	754	0
17:15	19	270	11	0	300	14	15	28	0	57	6	336	11	0	353	12	19	1	0	32	742	0
17:30	26	257	16	1	300	15	28	36	0	79	9	291	13	0	313	8	17	4	0	29	721	1
17:45	13	255	7	0	275	5	13	24	0	42	3	343	6	0	352	11	24	5	0	40	709	0
Total	78	1076	47	1	1202	50	88	127	0	265	27	1266	37	0	1330	39	75	15	0	129	2926	1
Grand Total	231	3733	116	1	4081	153	247	378	0	778	87	4530	133	0	4750	184	321	88	0	593	10202	1
Apprch %	5.7%	91.5%	2.8%	0.0%		19.7%	31.7%	48.6%	0.0%		1.8%	95.4%	2.8%	0.0%		31.0%	54.1%	14.8%	0.0%			
Total %	2.3%	36.6%	1.1%	0.0%	40.0%	1.5%	2.4%	3.7%	0.0%	7.6%	0.9%	44.4%	1.3%	0.0%	46.6%	1.8%	3.1%	0.9%	0.0%	5.8%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	8	203	4	0	215	8	11	34	0	53	5	337	11	0	353	13	16	4	0	33	654
7:45	22	211	3	0	236	17	15	28	0	60	10	286	25	0	321	28	48	9	0	85	702
8:00	20	214	2	0	236	19	13	16	0	48	7	293	8	0	308	21	28	10	0	59	651
8:15	8	215	5	0	228	4	15	23	0	42	2	288	4	0	294	9	17	4	0	30	594
Total Volume	58	843	14	0	915	48	54	101	0	203	24	1204	48	0	1276	71	109	27	0	207	2601
% App Total	6.3%	92.1%	1.5%	0.0%		23.6%	26.6%	49.8%	0.0%		1.9%	94.4%	3.8%	0.0%		34.3%	52.7%	13.0%	0.0%		
PHF	.659	.980	.700	.000	.969	.632	.900	.743	.000	.846	.600	.893	.480	.000	.904	.634	.568	.675	.000	.609	.926

PM PEAK HOUR	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	24	256	11	0	291	8	26	25	0	59	3	309	15	0	327	6	20	5	0	31	708
17:00	20	294	13	0	327	16	32	39	0	87	9	296	7	0	312	8	15	5	0	28	754
17:15	19	270	11	0	300	14	15	28	0	57	6	336	11	0	353	12	19	1	0	32	742
17:30	26	257	16	1	300	15	28	36	0	79	9	291	13	0	313	8	17	4	0	29	721
Total Volume	89	1077	51	1	1218	53	101	128	0	282	27	1232	46	0	1305	34	71	15	0	120	2925
% App Total	7.3%	88.4%	4.2%	0.1%		18.8%	35.8%	45.4%	0.0%		2.1%	94.4%	3.5%	0.0%		28.3%	59.2%	12.5%	0.0%		
PHF	.856	.916	.797	.250	.931	.828	.789	.821	.000	.810	.750	.917	.767	.000	.924	.708	.888	.750	.000	.938	.970

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-006 SR 99 & Richland Road
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	2
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%

PM PEAK HOUR	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.000	.000		.000	.500	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-006 SR 99 & Richland Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	11	0	0	11	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	30	0
7:15	0	18	0	0	18	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	45	0
7:30	0	9	0	0	9	0	0	0	0	0	0	23	2	0	25	0	0	0	0	0	34	0
7:45	0	13	0	0	13	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	30	0
Total	0	51	0	0	51	0	0	0	0	0	0	86	2	0	88	0	0	0	0	0	139	0
8:00	1	25	0	0	26	0	0	0	0	0	1	22	0	0	23	0	0	0	0	0	49	0
8:15	0	11	0	0	11	0	0	1	0	1	0	30	0	0	30	0	0	0	0	0	42	0
8:30	0	23	0	0	23	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	48	0
8:45	0	27	0	0	27	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	45	0
Total	1	86	0	0	87	1	0	1	0	2	1	94	0	0	95	0	0	0	0	0	184	0
16:00	1	14	0	0	15	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	28	0
16:15	0	15	0	0	15	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	30	0
16:30	0	15	0	0	15	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	33	0
16:45	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	17	0
Total	1	51	0	0	52	0	0	0	0	0	0	56	0	0	56	0	0	0	0	0	108	0
17:00	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20	0
17:15	0	8	0	0	8	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	21	0
17:30	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	15	0
17:45	0	10	0	0	10	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	15	0
Total	0	39	0	0	39	0	0	0	0	0	0	32	0	0	32	0	0	0	0	0	71	0
Grand Total	2	227	0	0	229	1	0	1	0	2	1	268	2	0	271	0	0	0	0	0	502	0
Apprch %	0.9%	99.1%	0.0%			50.0%	0.0%	50.0%			0.4%	98.9%	0.7%			0.0%	0.0%	0.0%				
Total %	0.4%	45.2%	0.0%		45.6%	0.2%	0.0%	0.2%		0.4%	0.2%	53.4%	0.4%		54.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	9	0	0	9	0	0	0	0	0	0	23	2	0	25	0	0	0	0	0	34	
7:45	0	13	0	0	13	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	30	
8:00	1	25	0	0	26	0	0	0	0	0	1	22	0	0	23	0	0	0	0	0	49	
8:15	0	11	0	0	11	0	0	1	0	1	0	30	0	0	30	0	0	0	0	0	42	
Total Volume	1	58	0	0	59	0	0	1	0	1	1	92	2	0	95	0	0	0	0	0	155	
% App Total	1.7%	98.3%	0.0%			0.0%	0.0%	100.0%			1.1%	96.8%	2.1%			0.0%	0.0%	0.0%				
PHF	.250	.580	.000		.567	.000	.000	.250		.250	.250	.767	.250		.792	.000	.000	.000		.000	.791	

PM PEAK HOUR	SR 99 Southbound					Richland Road Westbound					SR 99 Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	7	0	0	7	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	17	
17:00	0	14	0	0	14	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	20	
17:15	0	8	0	0	8	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	21	
17:30	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	15	
Total Volume	0	36	0	0	36	0	0	0	0	0	0	37	0	0	37	0	0	0	0	0	73	
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.643	.000		.643	.000	.000	.000		.000	.000	.712	.000		.712	.000	.000	.000		.000	.869	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-007 SR 99 & Lincoln Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	18	196	13	0	227	10	20	44	0	74	4	125	7	0	136	26	30	9	0	65	502	0
7:15	32	183	17	0	232	15	23	57	0	95	4	150	4	0	158	42	33	10	0	85	570	0
7:30	30	178	11	0	219	7	52	64	0	123	11	203	12	0	226	65	71	11	0	147	715	0
7:45	36	155	25	0	216	12	52	63	0	127	14	197	19	0	230	62	104	16	0	182	755	0
Total	116	712	66	0	894	44	147	228	0	419	33	675	42	0	750	195	238	46	0	479	2542	0
8:00	31	188	29	0	248	7	43	55	0	105	8	196	13	0	217	75	62	15	0	152	722	0
8:15	30	196	14	0	240	7	33	58	0	98	11	188	9	0	208	45	41	7	0	93	639	0
8:30	26	156	9	0	191	5	26	49	0	80	7	171	13	0	191	35	31	12	0	78	540	0
8:45	17	148	18	0	183	8	31	46	1	86	3	162	5	0	170	29	33	6	0	68	507	1
Total	104	688	70	0	862	27	133	208	1	369	29	717	40	0	786	184	167	40	0	391	2408	1
16:00	51	163	43	0	257	8	45	49	0	102	16	190	14	0	220	26	55	11	0	92	671	0
16:15	50	173	41	0	264	11	53	49	0	113	10	209	21	0	240	48	57	11	0	116	733	0
16:30	60	203	41	0	304	13	59	58	0	130	20	242	15	0	277	29	58	8	0	95	806	0
16:45	67	159	32	0	258	4	69	65	0	138	15	216	23	0	254	37	75	9	0	121	771	0
Total	228	698	157	0	1083	36	226	221	0	483	61	857	73	0	991	140	245	39	0	424	2981	0
17:00	67	199	47	0	313	16	85	82	0	183	20	190	18	0	228	30	64	7	0	101	825	0
17:15	52	187	47	0	286	2	87	77	1	167	18	217	12	0	247	48	74	8	0	130	830	1
17:30	63	179	42	0	284	9	72	64	0	145	10	237	19	0	266	36	64	3	0	103	798	0
17:45	44	182	39	0	265	12	55	62	0	129	17	246	13	0	276	24	65	6	0	95	765	0
Total	226	747	175	0	1148	39	299	285	1	624	65	890	62	0	1017	138	267	24	0	429	3218	1
Grand Total	674	2845	468	0	3987	146	805	942	2	1895	188	3139	217	0	3544	657	917	149	0	1723	11149	2
Apprch %	16.9%	71.4%	11.7%	0.0%		7.7%	42.5%	49.7%	0.1%		5.3%	88.6%	6.1%	0.0%		38.1%	53.2%	8.6%	0.0%			
Total %	6.0%	25.5%	4.2%	0.0%	35.8%	1.3%	7.2%	8.4%	0.0%	17.0%	1.7%	28.2%	1.9%	0.0%	31.8%	5.9%	8.2%	1.3%	0.0%	15.5%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	30	178	11	0	219	7	52	64	0	123	11	203	12	0	226	65	71	11	0	147	715	
7:45	36	155	25	0	216	12	52	63	0	127	14	197	19	0	230	62	104	16	0	182	755	
8:00	31	188	29	0	248	7	43	55	0	105	8	196	13	0	217	75	62	15	0	152	722	
8:15	30	196	14	0	240	7	33	58	0	98	11	188	9	0	208	45	41	7	0	93	639	
Total Volume	127	717	79	0	923	33	180	240	0	453	44	784	53	0	881	247	278	49	0	574	2831	
% App Total	13.8%	77.7%	8.6%	0.0%		7.3%	39.7%	53.0%	0.0%		5.0%	89.0%	6.0%	0.0%		43.0%	48.4%	8.5%	0.0%			
PHF	.882	.915	.681	.000	.930	.688	.865	.938	.000	.892	.786	.966	.697	.000	.958	.823	.668	.766	.000	.788	.937	

PM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	60	203	41	0	304	13	59	58	0	130	20	242	15	0	277	29	58	8	0	95	806	
16:45	67	159	32	0	258	4	69	65	0	138	15	216	23	0	254	37	75	9	0	121	771	
17:00	67	199	47	0	313	16	85	82	0	183	20	190	18	0	228	30	64	7	0	101	825	
17:15	52	187	47	0	286	2	87	77	1	167	18	217	12	0	247	48	74	8	0	130	830	
Total Volume	246	748	167	0	1161	35	300	282	1	618	73	865	68	0	1006	144	271	32	0	447	3232	
% App Total	21.2%	64.4%	14.4%	0.0%		5.7%	48.5%	45.6%	0.2%		7.3%	86.0%	6.8%	0.0%		32.2%	60.6%	7.2%	0.0%			
PHF	.918	.921	.888	.000	.927	.547	.862	.860	.250	.844	.913	.894	.739	.000	.908	.750	.903	.889	.000	.860	.973	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-007 SR 99 & Lincoln Road

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	1	3	0
16:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	2	1	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	2	3	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	4
Total	0	0	0	0	0	0	1	0	0	1	0	0	5	0	0	0	2	0	0	2	0	7	
Grand Total	1	0	0	2	1	0	3	1	0	4	0	0	0	6	0	0	2	0	2	2	7	10	
Apprch %	100.0%	0.0%	0.0%			0.0%	75.0%	25.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%					
Total %	14.3%	0.0%	0.0%		14.3%	0.0%	42.9%	14.3%		57.1%	0.0%	0.0%	0.0%		0.0%	0.0%	28.6%	0.0%		28.6%	100.0%		

AM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	2
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.500	.000		.500	.500	.500	.500

PM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	0	1	0	1	0	0	4	0	0	0	0	0	0	0	0	2
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.250	.000	.000		.250	.000	.000	.250		.250	.000	.000	.000		.000	.000	.000		.000	.000	.250	.250

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-007 SR 99 & Lincoln Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	14	0	0	14	0	0	0	0	0	0	17	1	0	18	1	1	0	0	2	34	0
7:15	1	16	0	0	17	0	0	1	0	1	0	26	1	0	27	0	0	1	0	1	46	0
7:30	2	9	0	0	11	0	3	2	0	5	1	23	1	0	25	0	1	0	0	1	42	0
7:45	0	11	1	0	12	0	1	1	0	2	0	16	1	0	17	0	1	0	0	1	32	0
Total	3	50	1	0	54	0	4	4	0	8	1	82	4	0	87	1	3	1	0	5	154	0
8:00	0	23	0	0	23	0	1	0	0	1	2	22	0	0	24	1	1	1	0	3	51	0
8:15	1	12	0	0	13	1	0	2	0	3	1	28	1	0	30	0	0	0	0	0	46	0
8:30	0	22	0	0	22	0	0	2	0	2	0	22	2	0	24	2	1	1	0	4	52	0
8:45	1	25	0	0	26	0	0	4	0	4	0	12	0	0	12	0	1	0	0	1	43	0
Total	2	82	0	0	84	1	1	8	0	10	3	84	3	0	90	3	3	2	0	8	192	0
16:00	0	11	1	0	12	1	0	1	0	2	1	13	0	0	14	0	3	0	0	3	31	0
16:15	0	14	1	0	15	0	0	2	0	2	0	13	0	0	13	0	0	0	0	0	30	0
16:30	1	13	0	0	14	0	0	1	0	1	0	17	1	0	18	0	0	0	0	0	33	0
16:45	2	6	0	0	8	0	1	1	0	2	0	9	0	0	9	0	1	0	0	1	20	0
Total	3	44	2	0	49	1	1	5	0	7	1	52	1	0	54	0	4	0	0	4	114	0
17:00	2	12	1	0	15	0	1	0	0	1	0	6	0	0	6	0	5	0	0	5	27	0
17:15	3	3	0	0	6	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	18	0
17:30	0	8	0	0	8	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	18	0
17:45	0	10	0	0	10	3	0	0	0	3	0	5	0	0	5	0	1	0	0	1	19	0
Total	5	33	1	0	39	3	1	0	0	4	1	32	0	0	33	0	6	0	0	6	82	0
Grand Total	13	209	4	0	226	5	7	17	0	29	6	250	8	0	264	4	16	3	0	23	542	0
Apprch %	5.8%	92.5%	1.8%			17.2%	24.1%	58.6%			2.3%	94.7%	3.0%			17.4%	69.6%	13.0%				
Total %	2.4%	38.6%	0.7%		41.7%	0.9%	1.3%	3.1%		5.4%	1.1%	46.1%	1.5%		48.7%	0.7%	3.0%	0.6%		4.2%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	2	9	0	0	11	0	3	2	0	5	1	23	1	0	25	0	1	0	0	1	42
7:45	0	11	1	0	12	0	1	1	0	2	0	16	1	0	17	0	1	0	0	1	32
8:00	0	23	0	0	23	0	1	0	0	1	2	22	0	0	24	1	1	1	0	3	51
8:15	1	12	0	0	13	1	0	2	0	3	1	28	1	0	30	0	0	0	0	0	46
Total Volume	3	55	1	0	59	1	5	5	0	11	4	89	3	0	96	1	3	1	0	5	171
% App Total	5.1%	93.2%	1.7%			9.1%	45.5%	45.5%			4.2%	92.7%	3.1%			20.0%	60.0%	20.0%			
PHF	.375	.598	.250		.641	.250	.417	.625		.550	.500	.795	.750		.800	.250	.750	.250		.417	.838

PM PEAK HOUR	SR 99 Southbound					Lincoln Road Westbound					SR 99 Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	1	13	0	0	14	0	0	1	0	1	0	17	1	0	18	0	0	0	0	0	33
16:45	2	6	0	0	8	0	1	1	0	2	0	9	0	0	9	0	1	0	0	1	20
17:00	2	12	1	0	15	0	1	0	0	1	0	6	0	0	6	0	5	0	0	5	27
17:15	3	3	0	0	6	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	18
Total Volume	8	34	1	0	43	0	2	2	0	4	0	44	1	0	45	0	6	0	0	6	98
% App Total	18.6%	79.1%	2.3%			0.0%	50.0%	50.0%			0.0%	97.8%	2.2%			0.0%	100.0%	0.0%			
PHF	.667	.654	.250		.717	.000	.500	.500		.500	.000	.647	.250		.625	.000	.300	.000		.300	.742

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-008 SR 99 & Smith Road
 Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	172	1	0	173	0	0	5	0	5	2	135	2	0	139	0	2	3	0	5	322	0
7:15	0	176	3	0	179	0	1	13	0	14	3	196	2	0	201	1	2	2	0	5	399	0
7:30	5	202	3	0	210	0	2	10	0	12	1	222	0	0	223	5	1	1	0	7	452	0
7:45	5	188	0	0	193	0	2	8	0	10	2	234	1	0	237	4	2	1	0	7	447	0
Total	10	738	7	0	755	0	5	36	0	41	8	787	5	0	800	10	7	7	0	24	1620	0
8:00	10	203	5	0	218	0	3	9	0	12	0	206	3	0	209	4	1	1	0	6	445	0
8:15	5	180	1	0	186	0	0	5	0	5	2	196	1	0	199	3	0	1	0	4	394	0
8:30	5	172	2	0	179	0	0	5	0	5	3	186	0	0	189	2	1	1	0	4	377	0
8:45	5	152	1	0	158	1	1	10	0	12	2	176	0	0	178	0	0	2	0	2	350	0
Total	25	707	9	0	741	1	4	29	0	34	7	764	4	0	775	9	2	5	0	16	1566	0
16:00	7	209	4	0	220	0	1	8	0	9	4	292	3	0	299	0	0	3	0	3	531	0
16:15	13	193	2	0	208	0	0	3	0	3	6	268	3	0	277	3	3	2	0	8	496	0
16:30	6	174	2	0	182	0	2	11	0	13	7	285	1	0	293	4	0	0	0	4	492	0
16:45	9	177	6	0	192	0	2	5	0	7	6	246	0	0	252	1	1	2	0	4	455	0
Total	35	753	14	0	802	0	5	27	0	32	23	1091	7	0	1121	8	4	7	0	19	1974	0
17:00	9	178	4	0	191	1	1	6	0	8	6	300	0	0	306	0	1	0	0	1	506	0
17:15	17	227	6	0	250	0	2	4	0	6	13	240	3	0	256	0	2	1	0	3	515	0
17:30	13	192	5	0	210	0	3	4	0	7	5	236	1	0	242	1	0	0	0	1	460	0
17:45	7	193	5	0	205	0	0	4	0	4	3	241	0	0	244	0	4	2	0	6	459	0
Total	46	790	20	0	856	1	6	18	0	25	27	1017	4	0	1048	1	7	3	0	11	1940	0
Grand Total	116	2988	50	0	3154	2	20	110	0	132	65	3659	20	0	3744	28	20	22	0	70	7100	0
Apprch %	3.7%	94.7%	1.6%	0.0%		1.5%	15.2%	83.3%	0.0%		1.7%	97.7%	0.5%	0.0%		40.0%	28.6%	31.4%	0.0%			
Total %	1.6%	42.1%	0.7%	0.0%	44.4%	0.0%	0.3%	1.5%	0.0%	1.9%	0.9%	51.5%	0.3%	0.0%	52.7%	0.4%	0.3%	0.3%	0.0%	1.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:15 to 08:15																						
Peak Hour For Entire Intersection Begins at 07:15																						
7:15	0	176	3	0	179	0	1	13	0	14	3	196	2	0	201	1	2	2	0	5	399	
7:30	5	202	3	0	210	0	2	10	0	12	1	222	0	0	223	5	1	1	0	7	452	
7:45	5	188	0	0	193	0	2	8	0	10	2	234	1	0	237	4	2	1	0	7	447	
8:00	10	203	5	0	218	0	3	9	0	12	0	206	3	0	209	4	1	1	0	6	445	
Total Volume	20	769	11	0	800	0	8	40	0	48	6	858	6	0	870	14	6	5	0	25	1743	
% App Total	2.5%	96.1%	1.4%	0.0%		0.0%	16.7%	83.3%	0.0%		0.7%	98.6%	0.7%	0.0%		56.0%	24.0%	20.0%	0.0%			
PHF	.500	.947	.550	.000	.917	.000	.667	.769	.000	.857	.500	.917	.500	.000	.918	.700	.750	.625	.000	.893	.964	

PM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	7	209	4	0	220	0	1	8	0	9	4	292	3	0	299	0	0	3	0	3	531	
16:15	13	193	2	0	208	0	0	3	0	3	6	268	3	0	277	3	3	2	0	8	496	
16:30	6	174	2	0	182	0	2	11	0	13	7	285	1	0	293	4	0	0	0	4	492	
16:45	9	177	6	0	192	0	2	5	0	7	6	246	0	0	252	1	1	2	0	4	455	
Total Volume	35	753	14	0	802	0	5	27	0	32	23	1091	7	0	1121	8	4	7	0	19	1974	
% App Total	4.4%	93.9%	1.7%	0.0%		0.0%	15.6%	84.4%	0.0%		2.1%	97.3%	0.6%	0.0%		42.1%	21.1%	36.8%	0.0%			
PHF	.673	.901	.583	.000	.911	.000	.625	.614	.000	.615	.821	.934	.583	.000	.937	.500	.333	.583	.000	.594	.929	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@aldtraffic.com

File Name : 16-7206-008 SR 99 & Smith Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	3
Grand Total	0	0	0	1	0	0	0	0	1	0	1	0	0	0	1	1	0	0	2	1	2	4
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	50.0%	0.0%	0.0%		50.0%	50.0%	0.0%	0.0%		50.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:15 to 08:15																						
Peak Hour For Entire Intersection Begins at 07:15																						
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	1	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	1	2	
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.000		.250	.250	.000	.000		.250	.250	

PM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-008 SR 99 & Smith Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	13	0	0	13	0	0	0	0	0	0	22	0	0	22	0	0	0	0	0	35	0
7:15	0	18	0	0	18	0	0	0	0	0	1	32	0	0	33	0	0	0	0	0	51	0
7:30	0	15	0	0	15	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	34	0
7:45	0	14	0	0	14	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	42	0
Total	0	60	0	0	60	0	0	0	0	0	1	101	0	0	102	0	0	0	0	0	162	0
8:00	1	17	1	0	19	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	49	0
8:15	0	15	0	0	15	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	43	0
8:30	0	27	0	0	27	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	44	0
8:45	0	28	0	0	28	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	53	0
Total	1	87	1	0	89	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	189	0
16:00	0	21	0	0	21	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	30	0
16:15	0	14	0	0	14	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	23	0
16:30	0	11	0	0	11	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	25	0
16:45	0	10	0	0	10	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	25	0
Total	0	56	0	0	56	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	103	0
17:00	0	12	0	0	12	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	24	0
17:15	0	12	0	0	12	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	19	0
17:30	0	18	0	0	18	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	23	0
17:45	0	7	0	0	7	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	21	0
Total	0	49	0	0	49	0	0	0	0	0	0	38	0	0	38	0	0	0	0	0	87	0
Grand Total	1	252	1	0	254	0	0	0	0	0	1	286	0	0	287	0	0	0	0	0	541	0
Apprch %	0.4%	99.2%	0.4%			0.0%	0.0%	0.0%			0.3%	99.7%	0.0%			0.0%	0.0%	0.0%				
Total %	0.2%	46.6%	0.2%		47.0%	0.0%	0.0%	0.0%		0.0%	0.2%	52.9%	0.0%		53.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:15 to 08:15																						
Peak Hour For Entire Intersection Begins at 07:15																						
7:15	0	18	0	0	18	0	0	0	0	0	1	32	0	0	33	0	0	0	0	0	51	
7:30	0	15	0	0	15	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	34	
7:45	0	14	0	0	14	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	42	
8:00	1	17	1	0	19	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	49	
Total Volume	1	64	1	0	66	0	0	0	0	0	1	109	0	0	110	0	0	0	0	0	176	
% App Total	1.5%	97.0%	1.5%			0.0%	0.0%	0.0%			0.9%	99.1%	0.0%			0.0%	0.0%	0.0%				
PHF	.250	.889	.250		.868	.000	.000	.000		.000	.250	.852	.000		.833	.000	.000	.000		.000	.863	

PM PEAK HOUR	SR 99 Southbound					Smith Road Westbound					SR 99 Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	0	21	0	0	21	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	30	
16:15	0	14	0	0	14	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	23	
16:30	0	11	0	0	11	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	25	
16:45	0	10	0	0	10	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	25	
Total Volume	0	56	0	0	56	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	103	
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.667	.000		.667	.000	.000	.000		.000	.000	.783	.000		.783	.000	.000	.000		.000	.858	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-009 SR 99 & Bogue Road
 Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	11	158	17	0	186	40	28	27	0	95	6	104	10	0	120	13	13	37	0	63	464	0
7:15	15	149	10	0	174	20	38	48	0	106	6	131	10	0	147	17	20	39	0	76	503	0
7:30	18	160	16	0	194	36	48	60	0	144	14	145	13	0	172	29	45	38	0	112	622	0
7:45	14	164	14	0	192	20	35	45	0	100	7	155	22	0	184	20	56	36	0	112	588	0
Total	58	631	57	0	746	116	149	180	0	445	33	535	55	0	623	79	134	150	0	363	2177	0
8:00	20	173	21	0	214	28	41	39	0	108	25	164	16	0	205	14	42	40	0	96	623	0
8:15	14	138	24	0	176	20	29	27	0	76	27	145	14	0	186	22	30	46	0	98	536	0
8:30	17	136	22	0	175	18	26	45	0	89	8	120	12	0	140	19	20	23	0	62	466	0
8:45	12	124	15	0	151	18	23	43	0	84	7	126	6	0	139	12	22	15	0	49	423	0
Total	63	571	82	0	716	84	119	154	0	357	67	555	48	0	670	67	114	124	0	305	2048	0
16:00	52	135	28	0	215	10	32	56	0	98	16	243	42	0	301	10	44	24	0	78	692	0
16:15	37	135	22	0	194	10	28	53	0	91	22	200	27	0	249	14	55	21	0	90	624	0
16:30	45	115	17	0	177	15	37	65	0	117	31	200	39	0	270	17	54	21	0	92	656	0
16:45	46	104	24	0	174	11	36	44	0	91	25	201	34	0	260	20	44	15	0	79	604	0
Total	180	489	91	0	760	46	133	218	0	397	94	844	142	0	1080	61	197	81	0	339	2576	0
17:00	41	113	17	0	171	14	47	32	0	93	25	243	35	0	303	17	59	26	0	102	669	0
17:15	48	157	29	0	234	22	36	40	0	98	26	198	40	0	264	14	52	18	0	84	680	0
17:30	44	140	11	0	195	18	51	60	0	129	30	171	30	0	231	13	44	18	0	75	630	0
17:45	57	115	19	0	191	20	38	43	0	101	23	180	37	0	240	16	41	27	0	84	616	0
Total	190	525	76	0	791	74	172	175	0	421	104	792	142	0	1038	60	196	89	0	345	2595	0
Grand Total	491	2216	306	0	3013	320	573	727	0	1620	298	2726	387	0	3411	267	641	444	0	1352	9396	0
Apprch %	16.3%	73.5%	10.2%	0.0%		19.8%	35.4%	44.9%	0.0%		8.7%	79.9%	11.3%	0.0%		19.7%	47.4%	32.8%	0.0%			
Total %	5.2%	23.6%	3.3%	0.0%	32.1%	3.4%	6.1%	7.7%	0.0%	17.2%	3.2%	29.0%	4.1%	0.0%	36.3%	2.8%	6.8%	4.7%	0.0%	14.4%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	18	160	16	0	194	36	48	60	0	144	14	145	13	0	172	29	45	38	0	112	622	
7:45	14	164	14	0	192	20	35	45	0	100	7	155	22	0	184	20	56	36	0	112	588	
8:00	20	173	21	0	214	28	41	39	0	108	25	164	16	0	205	14	42	40	0	96	623	
8:15	14	138	24	0	176	20	29	27	0	76	27	145	14	0	186	22	30	46	0	98	536	
Total Volume	66	635	75	0	776	104	153	171	0	428	73	609	65	0	747	85	173	160	0	418	2369	
% App Total	8.5%	81.8%	9.7%	0.0%		24.3%	35.7%	40.0%	0.0%		9.8%	81.5%	8.7%	0.0%		20.3%	41.4%	38.3%	0.0%			
PHF	.825	.918	.781	.000	.907	.722	.797	.713	.000	.743	.676	.928	.739	.000	.911	.733	.772	.870	.000	.933	.951	

PM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	45	115	17	0	177	15	37	65	0	117	31	200	39	0	270	17	54	21	0	92	656	
16:45	46	104	24	0	174	11	36	44	0	91	25	201	34	0	260	20	44	15	0	79	604	
17:00	41	113	17	0	171	14	47	32	0	93	25	243	35	0	303	17	59	26	0	102	669	
17:15	48	157	29	0	234	22	36	40	0	98	26	198	40	0	264	14	52	18	0	84	680	
Total Volume	180	489	87	0	756	62	156	181	0	399	107	842	148	0	1097	68	209	80	0	357	2609	
% App Total	23.8%	64.7%	11.5%	0.0%		15.5%	39.1%	45.4%	0.0%		9.8%	76.8%	13.5%	0.0%		19.0%	58.5%	22.4%	0.0%			
PHF	.938	.779	.750	.000	.808	.705	.830	.696	.000	.853	.863	.866	.925	.000	.905	.850	.886	.769	.000	.875	.959	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-009 SR 99 & Bogue Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	66.7%	0.0%		66.7%	0.0%	0.0%	0.0%		0.0%	0.0%	33.3%	0.0%		33.3%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

PM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-009 SR 99 & Bogue Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	15	0	0	15	1	1	0	0	2	0	26	2	0	28	1	0	0	0	1	46	0
7:15	0	18	0	0	18	1	0	1	0	2	0	23	1	0	24	1	0	2	0	3	47	0
7:30	0	14	1	0	15	1	1	0	0	2	1	23	1	0	25	0	0	0	0	0	42	0
7:45	0	12	2	0	14	0	0	0	0	0	0	26	1	0	27	1	3	1	0	5	46	0
Total	0	59	3	0	62	3	2	1	0	6	1	98	5	0	104	3	3	3	0	9	181	0
8:00	0	18	0	0	18	2	1	0	0	3	1	32	1	0	34	0	2	1	0	3	58	0
8:15	0	13	1	0	14	0	1	0	0	1	0	22	0	0	22	2	0	1	0	3	40	0
8:30	3	24	0	0	27	0	1	0	0	1	0	22	0	0	22	0	0	0	0	0	50	0
8:45	0	27	1	0	28	1	1	0	0	2	1	21	0	0	22	1	0	1	0	2	54	0
Total	3	82	2	0	87	3	4	0	0	7	2	97	1	0	100	3	2	3	0	8	202	0
16:00	1	20	0	0	21	1	1	0	0	2	0	8	0	0	8	0	0	2	0	2	33	0
16:15	0	13	0	0	13	1	2	0	0	3	0	9	0	0	9	0	1	0	0	1	26	0
16:30	0	12	0	0	12	0	1	2	0	3	0	12	3	0	15	0	0	0	0	0	30	0
16:45	0	9	1	0	10	0	0	2	0	2	0	14	1	0	15	1	0	1	0	2	29	0
Total	1	54	1	0	56	2	4	4	0	10	0	43	4	0	47	1	1	3	0	5	118	0
17:00	2	8	2	0	12	0	0	0	0	0	0	10	1	0	11	0	0	2	0	2	25	0
17:15	0	11	1	0	12	1	1	0	0	2	0	7	4	0	11	0	0	1	0	1	26	0
17:30	0	15	2	0	17	0	0	1	0	1	0	4	2	0	6	0	0	0	0	0	24	0
17:45	0	8	0	0	8	1	0	1	0	2	0	13	0	0	13	0	0	2	0	2	25	0
Total	2	42	5	0	49	2	1	2	0	5	0	34	7	0	41	0	0	5	0	5	100	0
Grand Total	6	237	11	0	254	10	11	7	0	28	3	272	17	0	292	7	6	14	0	27	601	0
Apprch %	2.4%	93.3%	4.3%			35.7%	39.3%	25.0%			1.0%	93.2%	5.8%			25.9%	22.2%	51.9%				
Total %	1.0%	39.4%	1.8%		42.3%	1.7%	1.8%	1.2%		4.7%	0.5%	45.3%	2.8%		48.6%	1.2%	1.0%	2.3%		4.5%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	14	1	0	15	1	1	0	0	2	1	23	1	0	25	0	0	0	0	0	42
7:45	0	12	2	0	14	0	0	0	0	0	0	26	1	0	27	1	3	1	0	5	46
8:00	0	18	0	0	18	2	1	0	0	3	1	32	1	0	34	0	2	1	0	3	58
8:15	0	13	1	0	14	0	1	0	0	1	0	22	0	0	22	2	0	1	0	3	40
Total Volume	0	57	4	0	61	3	3	0	0	6	2	103	3	0	108	3	5	3	0	11	186
% App Total	0.0%	93.4%	6.6%			50.0%	50.0%	0.0%			1.9%	95.4%	2.8%			27.3%	45.5%	27.3%			
PHF	.000	.792	.500		.847	.375	.750	.000		.500	.500	.805	.750		.794	.375	.417	.750		.550	.802

PM PEAK HOUR	SR 99 Southbound					Bogue Road Westbound					SR 99 Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	12	0	0	12	0	1	2	0	3	0	12	3	0	15	0	0	0	0	0	30
16:45	0	9	1	0	10	0	0	2	0	2	0	14	1	0	15	1	0	1	0	2	29
17:00	2	8	2	0	12	0	0	0	0	0	0	10	1	0	11	0	0	2	0	2	25
17:15	0	11	1	0	12	1	1	0	0	2	0	7	4	0	11	0	0	1	0	1	26
Total Volume	2	40	4	0	46	1	2	4	0	7	0	43	9	0	52	1	0	4	0	5	110
% App Total	4.3%	87.0%	8.7%			14.3%	28.6%	57.1%			0.0%	82.7%	17.3%			20.0%	0.0%	80.0%			
PHF	.250	.833	.500		.958	.250	.500	.500		.583	.000	.768	.563		.867	.250	.000	.500		.625	.917

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-010 SR 99 & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	2	235	2	0	239	1	0	2	0	3	1	123	1	0	125	0	0	3	0	3	370	0
7:15	13	195	1	0	209	2	1	10	0	13	0	134	2	0	136	0	0	1	0	1	359	0
7:30	20	206	1	0	227	1	1	23	0	25	0	158	2	0	160	0	3	0	0	3	415	0
7:45	27	195	0	0	222	2	0	18	0	20	2	170	4	0	176	1	0	2	0	3	421	0
Total	62	831	4	0	897	6	2	53	0	61	3	585	9	0	597	1	3	6	0	10	1565	0
8:00	31	213	7	0	251	2	0	29	0	31	1	181	4	0	186	2	1	3	0	6	474	0
8:15	14	188	0	1	203	1	1	40	0	42	5	141	9	0	155	1	2	2	0	5	405	1
8:30	4	162	4	0	170	1	1	16	0	18	6	137	3	0	146	0	0	2	0	2	336	0
8:45	6	159	5	0	170	0	1	6	0	7	1	126	2	0	129	0	0	0	0	0	306	0
Total	55	722	16	1	794	4	3	91	0	98	13	585	18	0	616	3	3	7	0	13	1521	1
16:00	6	165	1	0	172	2	1	12	0	15	2	288	4	0	294	1	0	2	0	3	484	0
16:15	10	160	1	0	171	0	0	5	0	5	3	235	4	0	242	2	0	1	0	3	421	0
16:30	8	143	0	0	151	0	1	11	0	12	4	271	2	0	277	2	1	0	0	3	443	0
16:45	9	121	0	0	130	1	1	11	0	13	0	239	4	0	243	0	0	4	0	4	390	0
Total	33	589	2	0	624	3	3	39	0	45	9	1033	14	0	1056	5	1	7	0	13	1738	0
17:00	9	149	0	0	158	0	2	12	0	14	4	292	4	0	300	1	0	1	0	2	474	0
17:15	8	171	2	0	181	1	1	6	0	8	1	248	1	0	250	2	1	0	0	3	442	0
17:30	7	172	0	0	179	0	2	8	0	10	1	229	2	0	232	1	2	3	0	6	427	0
17:45	12	150	3	0	165	1	2	9	0	12	2	227	5	1	235	1	1	1	0	3	415	1
Total	36	642	5	0	683	2	7	35	0	44	8	996	12	1	1017	5	4	5	0	14	1758	1
Grand Total	186	2784	27	1	2998	15	15	218	0	248	33	3199	53	1	3286	14	11	25	0	50	6582	2
Apprch %	6.2%	92.9%	0.9%	0.0%		6.0%	6.0%	87.9%	0.0%		1.0%	97.4%	1.6%	0.0%		28.0%	22.0%	50.0%	0.0%			
Total %	2.8%	42.3%	0.4%	0.0%	45.5%	0.2%	0.2%	3.3%	0.0%	3.8%	0.5%	48.6%	0.8%	0.0%	49.9%	0.2%	0.2%	0.4%	0.0%	0.8%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	20	206	1	0	227	1	1	23	0	25	0	158	2	0	160	0	3	0	0	3	415
7:45	27	195	0	0	222	2	0	18	0	20	2	170	4	0	176	1	0	2	0	3	421
8:00	31	213	7	0	251	2	0	29	0	31	1	181	4	0	186	2	1	3	0	6	474
8:15	14	188	0	1	203	1	1	40	0	42	5	141	9	0	155	1	2	2	0	5	405
Total Volume	92	802	8	1	903	6	2	110	0	118	8	650	19	0	677	4	6	7	0	17	1715
% App Total	10.2%	88.8%	0.9%	0.1%		5.1%	1.7%	93.2%	0.0%		1.2%	96.0%	2.8%	0.0%		23.5%	35.3%	41.2%	0.0%		
PHF	.742	.941	.286	.250	.899	.750	.500	.688	.000	.702	.400	.898	.528	.000	.910	.500	.500	.583	.000	.708	.905

PM PEAK HOUR	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	9	149	0	0	158	0	2	12	0	14	4	292	4	0	300	1	0	1	0	2	474
17:15	8	171	2	0	181	1	1	6	0	8	1	248	1	0	250	2	1	0	0	3	442
17:30	7	172	0	0	179	0	2	8	0	10	1	229	2	0	232	1	2	3	0	6	427
17:45	12	150	3	0	165	1	2	9	0	12	2	227	5	1	235	1	1	1	0	3	415
Total Volume	36	642	5	0	683	2	7	35	0	44	8	996	12	1	1017	5	4	5	0	14	1758
% App Total	5.3%	94.0%	0.7%	0.0%		4.5%	15.9%	79.5%	0.0%		0.8%	97.9%	1.2%	0.1%		35.7%	28.6%	35.7%	0.0%		
PHF	.750	.933	.417	.000	.943	.500	.875	.729	.000	.786	.500	.853	.600	.250	.848	.625	.500	.417	.000	.583	.927

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-010 SR 99 & Stewart Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	16	0	0	16	0	0	0	0	0	0	28	0	0	28	0	0	1	0	1	45	0
7:15	0	21	0	0	21	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	45	0
7:30	1	14	0	0	15	0	0	0	0	0	0	25	1	0	26	0	0	0	0	0	41	0
7:45	0	11	0	0	11	0	0	0	0	0	1	28	0	0	29	0	0	2	0	2	42	0
Total	1	62	0	0	63	0	0	0	0	0	1	105	1	0	107	0	0	3	0	3	173	0
8:00	0	17	6	0	23	0	0	1	0	1	1	32	1	0	34	0	0	0	0	0	58	0
8:15	0	14	0	0	14	0	0	2	0	2	5	21	0	0	26	0	0	1	0	1	43	0
8:30	0	18	3	0	21	0	0	0	0	0	2	21	1	0	24	0	0	0	0	0	45	0
8:45	0	29	3	0	32	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	55	0
Total	0	78	12	0	90	0	0	3	0	3	8	97	2	0	107	0	0	1	0	1	201	0
16:00	0	22	1	0	23	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	31	0
16:15	0	14	1	0	15	0	0	0	0	0	1	9	0	0	10	0	0	1	0	1	26	0
16:30	0	11	0	0	11	0	0	0	0	0	2	15	0	0	17	0	0	0	0	0	28	0
16:45	0	10	0	0	10	0	0	0	0	0	0	15	0	0	15	0	0	1	0	1	26	0
Total	0	57	2	0	59	0	0	0	0	0	3	47	0	0	50	0	0	2	0	2	111	0
17:00	0	10	0	0	10	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	24	0
17:15	0	12	1	0	13	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	22	0
17:30	0	15	0	0	15	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	22	0
17:45	0	12	0	0	12	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	26	0
Total	0	49	1	0	50	0	0	0	0	0	2	41	0	0	43	0	0	1	0	1	94	0
Grand Total	1	246	15	0	262	0	0	3	0	3	14	290	3	0	307	0	0	7	0	7	579	0
Apprch %	0.4%	93.9%	5.7%			0.0%	0.0%	100.0%			4.6%	94.5%	1.0%			0.0%	0.0%	100.0%				
Total %	0.2%	42.5%	2.6%		45.3%	0.0%	0.0%	0.5%		0.5%	2.4%	50.1%	0.5%		53.0%	0.0%	0.0%	1.2%		1.2%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	14	0	0	15	0	0	0	0	0	0	25	1	0	26	0	0	0	0	0	41
7:45	0	11	0	0	11	0	0	0	0	0	1	28	0	0	29	0	0	2	0	2	42
8:00	0	17	6	0	23	0	0	1	0	1	1	32	1	0	34	0	0	0	0	0	58
8:15	0	14	0	0	14	0	0	2	0	2	5	21	0	0	26	0	0	1	0	1	43
Total Volume	1	56	6	0	63	0	0	3	0	3	7	106	2	0	115	0	0	3	0	3	184
% App Total	1.6%	88.9%	9.5%			0.0%	0.0%	100.0%			6.1%	92.2%	1.7%			0.0%	0.0%	100.0%			
PHF	.250	.824	.250		.685	.000	.000	.375		.375	.350	.828	.500		.846	.000	.000	.375		.375	.793

PM PEAK HOUR	SR 99 Southbound					Stewart Road Westbound					SR 99 Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	10	0	0	10	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	24
17:15	0	12	1	0	13	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	22
17:30	0	15	0	0	15	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	22
17:45	0	12	0	0	12	0	0	0	0	0	1	13	0	0	14	0	0	0	0	0	26
Total Volume	0	49	1	0	50	0	0	0	0	0	2	41	0	0	43	0	0	1	0	1	94
% App Total	0.0%	98.0%	2.0%			0.0%	0.0%	0.0%			4.7%	95.3%	0.0%			0.0%	0.0%	100.0%			
PHF	.000	.817	.250		.833	.000	.000	.000		.000	.500	.788	.000		.788	.000	.000	.250		.250	.904

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-011 SR 99 & Reed Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	233	3	0	236	0	0	2	0	2	2	122	0	0	124	0	1	0	0	1	363	0
7:15	1	198	0	0	199	0	1	2	0	3	1	133	0	0	134	2	0	2	0	4	340	0
7:30	2	199	0	0	201	1	2	4	0	7	1	153	0	0	154	1	2	0	0	3	365	0
7:45	1	199	2	0	202	0	1	5	0	6	0	174	1	0	175	0	1	1	0	2	385	0
Total	4	829	5	0	838	1	4	13	0	18	4	582	1	0	587	3	4	3	0	10	1453	0
8:00	5	208	0	0	213	0	0	3	0	3	2	173	1	0	176	0	0	2	0	2	394	0
8:15	3	191	0	0	194	2	0	6	0	8	1	163	4	0	168	0	0	3	0	3	373	0
8:30	2	161	2	0	165	1	2	2	0	5	1	135	2	0	138	2	0	1	0	3	311	0
8:45	0	150	1	0	151	0	0	2	0	2	1	128	2	0	131	1	2	0	0	3	287	0
Total	10	710	3	0	723	3	2	13	0	18	5	599	9	0	613	3	2	6	0	11	1365	0
16:00	4	160	1	0	165	0	2	1	0	3	0	279	1	0	280	0	2	1	0	3	451	0
16:15	4	152	2	0	158	0	0	3	0	3	0	248	2	0	250	0	0	2	0	2	413	0
16:30	2	143	2	0	147	3	0	6	0	9	2	262	5	0	269	0	0	1	0	1	426	0
16:45	4	121	2	0	127	0	0	7	0	7	4	238	1	0	243	0	2	0	0	2	379	0
Total	14	576	7	0	597	3	2	17	0	22	6	1027	9	0	1042	0	4	4	0	8	1669	0
17:00	2	139	3	0	144	0	0	4	0	4	2	294	1	0	297	1	0	2	0	3	448	0
17:15	6	160	1	0	167	1	0	6	0	7	2	242	2	0	246	0	1	1	0	2	422	0
17:30	3	170	3	0	176	0	1	1	0	2	3	233	2	0	238	0	0	0	0	0	416	0
17:45	0	153	4	0	157	0	0	2	0	2	3	227	2	0	232	0	1	0	0	1	392	0
Total	11	622	11	0	644	1	1	13	0	15	10	996	7	0	1013	1	2	3	0	6	1678	0
Grand Total	39	2737	26	0	2802	8	9	56	0	73	25	3204	26	0	3255	7	12	16	0	35	6165	0
Apprch %	1.4%	97.7%	0.9%	0.0%		11.0%	12.3%	76.7%	0.0%		0.8%	98.4%	0.8%	0.0%		20.0%	34.3%	45.7%	0.0%			
Total %	0.6%	44.4%	0.4%	0.0%	45.5%	0.1%	0.1%	0.9%	0.0%	1.2%	0.4%	52.0%	0.4%	0.0%	52.8%	0.1%	0.2%	0.3%	0.0%	0.6%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	2	199	0	0	201	1	2	4	0	7	1	153	0	0	154	1	2	0	0	3	365
7:45	1	199	2	0	202	0	1	5	0	6	0	174	1	0	175	0	1	1	0	2	385
8:00	5	208	0	0	213	0	0	3	0	3	2	173	1	0	176	0	0	2	0	2	394
8:15	3	191	0	0	194	2	0	6	0	8	1	163	4	0	168	0	0	3	0	3	373
Total Volume	11	797	2	0	810	3	3	18	0	24	4	663	6	0	673	1	3	6	0	10	1517
% App Total	1.4%	98.4%	0.2%	0.0%		12.5%	12.5%	75.0%	0.0%		0.6%	98.5%	0.9%	0.0%		10.0%	30.0%	60.0%	0.0%		
PHF	.550	.958	.250	.000	.951	.375	.375	.750	.000	.750	.500	.953	.375	.000	.956	.250	.375	.500	.000	.833	.963

PM PEAK HOUR	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	4	160	1	0	165	0	2	1	0	3	0	279	1	0	280	0	2	1	0	3	451
16:15	4	152	2	0	158	0	0	3	0	3	0	248	2	0	250	0	0	2	0	2	413
16:30	2	143	2	0	147	3	0	6	0	9	2	262	5	0	269	0	0	1	0	1	426
16:45	4	121	2	0	127	0	0	7	0	7	4	238	1	0	243	0	2	0	0	2	379
Total Volume	14	576	7	0	597	3	2	17	0	22	6	1027	9	0	1042	0	4	4	0	8	1669
% App Total	2.3%	96.5%	1.2%	0.0%		13.6%	9.1%	77.3%	0.0%		0.6%	98.6%	0.9%	0.0%		0.0%	50.0%	50.0%	0.0%		
PHF	.875	.900	.875	.000	.905	.250	.250	.607	.000	.611	.375	.920	.450	.000	.930	.000	.500	.500	.000	.667	.925

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-011 SR 99 & Reed Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-011 SR 99 & Reed Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	17	0	0	17	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	45	0
7:15	0	21	0	0	21	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	45	0
7:30	0	12	0	0	12	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	38	0
7:45	0	15	0	0	15	0	0	2	0	2	0	27	0	0	27	0	0	0	0	0	44	0
Total	0	65	0	0	65	0	0	2	0	2	0	105	0	0	105	0	0	0	0	0	172	0
8:00	1	16	0	0	17	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	51	0
8:15	1	14	0	0	15	1	0	2	0	3	0	24	0	0	24	0	0	0	0	0	42	0
8:30	0	18	0	0	18	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	43	0
8:45	0	29	0	0	29	0	0	0	0	0	0	22	1	0	23	0	0	0	0	0	52	0
Total	2	77	0	0	79	1	0	2	0	3	0	105	1	0	106	0	0	0	0	0	188	0
16:00	0	19	0	0	19	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	27	0
16:15	0	18	0	0	18	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	28	0
16:30	0	11	0	0	11	0	0	0	0	0	1	17	1	0	19	0	0	0	0	0	30	0
16:45	0	11	0	0	11	0	0	0	0	0	1	14	0	0	15	0	0	0	0	0	26	0
Total	0	59	0	0	59	0	0	0	0	0	2	49	1	0	52	0	0	0	0	0	111	0
17:00	0	10	0	0	10	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	25	0
17:15	0	11	0	0	11	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	20	0
17:30	1	16	0	0	17	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	23	0
17:45	0	12	0	0	12	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	27	0
Total	1	49	0	0	50	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	95	0
Grand Total	3	250	0	0	253	1	0	4	0	5	2	304	2	0	308	0	0	0	0	0	566	0
Apprch %	1.2%	98.8%	0.0%			20.0%	0.0%	80.0%			0.6%	98.7%	0.6%			0.0%	0.0%	0.0%				
Total %	0.5%	44.2%	0.0%		44.7%	0.2%	0.0%	0.7%		0.9%	0.4%	53.7%	0.4%		54.4%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	12	0	0	12	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	38
7:45	0	15	0	0	15	0	0	2	0	2	0	27	0	0	27	0	0	0	0	0	44
8:00	1	16	0	0	17	0	0	0	0	0	0	34	0	0	34	0	0	0	0	0	51
8:15	1	14	0	0	15	1	0	2	0	3	0	24	0	0	24	0	0	0	0	0	42
Total Volume	2	57	0	0	59	1	0	4	0	5	0	111	0	0	111	0	0	0	0	0	175
% App Total	3.4%	96.6%	0.0%			20.0%	0.0%	80.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.500	.891	.000		.868	.250	.000	.500		.417	.000	.816	.000		.816	.000	.000	.000		.000	.858

PM PEAK HOUR	SR 99 Southbound					Reed Road Westbound					SR 99 Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	19	0	0	19	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	27
16:15	0	18	0	0	18	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	28
16:30	0	11	0	0	11	0	0	0	0	0	1	17	1	0	19	0	0	0	0	0	30
16:45	0	11	0	0	11	0	0	0	0	0	1	14	0	0	15	0	0	0	0	0	26
Total Volume	0	59	0	0	59	0	0	0	0	0	2	49	1	0	52	0	0	0	0	0	111
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			3.8%	94.2%	1.9%			0.0%	0.0%	0.0%			
PHF	.000	.776	.000		.776	.000	.000	.000		.000	.500	.721	.250		.684	.000	.000	.000		.000	.925

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-012 SR 99 & Walnut Avenue

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	1	230	0	0	231	0	0	0	0	0	0	128	0	0	128	0	0	0	0	0	359	0
7:15	1	199	0	0	200	0	0	0	0	0	0	130	0	0	130	0	0	1	0	1	331	0
7:30	0	193	0	0	193	0	0	0	0	0	0	162	0	0	162	0	0	1	0	1	356	0
7:45	1	204	0	0	205	0	0	4	0	4	1	169	1	0	171	0	0	0	0	0	380	0
Total	3	826	0	0	829	0	0	4	0	4	1	589	1	0	591	0	0	2	0	2	1426	0
8:00	1	214	0	0	215	0	0	0	0	0	0	181	5	0	186	0	0	0	0	0	401	0
8:15	7	175	1	0	183	0	0	2	0	2	0	159	1	0	160	0	0	2	0	2	347	0
8:30	1	167	0	0	168	1	0	4	0	5	0	133	0	0	133	1	1	1	0	3	309	0
8:45	0	159	0	0	159	0	0	0	0	0	0	132	0	0	132	1	0	0	0	1	292	0
Total	9	715	1	0	725	1	0	6	0	7	0	605	6	0	611	2	1	3	0	6	1349	0
16:00	2	160	1	0	163	0	1	1	0	2	1	286	1	0	288	0	0	2	0	2	455	0
16:15	1	154	2	0	157	0	0	0	0	0	0	246	0	0	246	0	0	0	0	0	403	0
16:30	0	145	0	0	145	0	1	3	0	4	0	270	1	0	271	1	0	0	0	1	421	0
16:45	2	121	0	0	123	1	1	0	0	2	0	236	2	0	238	0	0	0	0	0	363	0
Total	5	580	3	0	588	1	3	4	0	8	1	1038	4	0	1043	1	0	2	0	3	1642	0
17:00	2	142	0	0	144	0	0	2	0	2	1	298	0	0	299	0	1	0	0	1	446	0
17:15	3	154	1	0	158	0	0	0	0	0	1	255	0	0	256	0	0	0	0	0	414	0
17:30	2	171	1	0	174	0	0	0	0	0	2	224	1	0	227	0	0	0	0	0	401	0
17:45	0	153	0	0	153	0	0	0	0	0	0	240	2	0	242	0	1	0	0	1	396	0
Total	7	620	2	0	629	0	0	2	0	2	4	1017	3	0	1024	0	2	0	0	2	1657	0
Grand Total	24	2741	6	0	2771	2	3	16	0	21	6	3249	14	0	3269	3	3	7	0	13	6074	0
Apprch %	0.9%	98.9%	0.2%	0.0%		9.5%	14.3%	76.2%	0.0%		0.2%	99.4%	0.4%	0.0%		23.1%	23.1%	53.8%	0.0%			
Total %	0.4%	45.1%	0.1%	0.0%	45.6%	0.0%	0.0%	0.3%	0.0%	0.3%	0.1%	53.5%	0.2%	0.0%	53.8%	0.0%	0.0%	0.1%	0.0%	0.2%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	193	0	0	193	0	0	0	0	0	0	162	0	0	162	0	0	1	0	1	356
7:45	1	204	0	0	205	0	0	4	0	4	1	169	1	0	171	0	0	0	0	0	380
8:00	1	214	0	0	215	0	0	0	0	0	0	181	5	0	186	0	0	0	0	0	401
8:15	7	175	1	0	183	0	0	2	0	2	0	159	1	0	160	0	0	2	0	2	347
Total Volume	9	786	1	0	796	0	0	6	0	6	1	671	7	0	679	0	0	3	0	3	1484
% App Total	1.1%	98.7%	0.1%	0.0%		0.0%	0.0%	100.0%	0.0%		0.1%	98.8%	1.0%	0.0%		0.0%	0.0%	100.0%	0.0%		
PHF	.321	.918	.250	.000	.926	.000	.000	.375	.000	.375	.250	.927	.350	.000	.913	.000	.000	.375	.000	.375	.925

PM PEAK HOUR	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	2	160	1	0	163	0	1	1	0	2	1	286	1	0	288	0	0	2	0	2	455
16:15	1	154	2	0	157	0	0	0	0	0	0	246	0	0	246	0	0	0	0	0	403
16:30	0	145	0	0	145	0	1	3	0	4	0	270	1	0	271	1	0	0	0	1	421
16:45	2	121	0	0	123	1	1	0	0	2	0	236	2	0	238	0	0	0	0	0	363
Total Volume	5	580	3	0	588	1	3	4	0	8	1	1038	4	0	1043	1	0	2	0	3	1642
% App Total	0.9%	98.6%	0.5%	0.0%		12.5%	37.5%	50.0%	0.0%		0.1%	99.5%	0.4%	0.0%		33.3%	0.0%	66.7%	0.0%		
PHF	.625	.906	.375	.000	.902	.250	.750	.333	.000	.500	.250	.907	.500	.000	.905	.250	.000	.250	.000	.375	.902

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-012 SR 99 & Walnut Avenue

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	18	0	0	18	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	45	0
7:15	0	19	0	0	19	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	44	0
7:30	0	13	0	0	13	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	36	0
7:45	0	15	0	0	15	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	44	0
Total	0	65	0	0	65	0	0	0	0	0	0	104	0	0	104	0	0	0	0	0	169	0
8:00	0	16	0	0	16	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	49	0
8:15	0	15	0	0	15	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	42	0
8:30	0	18	0	0	18	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	41	0
8:45	0	29	0	0	29	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	53	0
Total	0	78	0	0	78	0	0	0	0	0	0	107	0	0	107	0	0	0	0	0	185	0
16:00	0	17	0	0	17	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	25	0
16:15	0	20	0	0	20	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	30	0
16:30	0	11	0	0	11	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	30	0
16:45	0	11	0	0	11	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	26	0
Total	0	59	0	0	59	0	0	0	0	0	0	52	0	0	52	0	0	0	0	0	111	0
17:00	0	10	0	0	10	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	25	0
17:15	0	11	0	0	11	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	20	0
17:30	0	16	0	0	16	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	22	0
17:45	0	13	0	0	13	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	29	0
Total	0	50	0	0	50	0	0	0	0	0	0	46	0	0	46	0	0	0	0	0	96	0
Grand Total	0	252	0	0	252	0	0	0	0	0	0	309	0	0	309	0	0	0	0	0	561	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	44.9%	0.0%		44.9%	0.0%	0.0%	0.0%		0.0%	0.0%	55.1%	0.0%		55.1%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	13	0	0	13	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	36
7:45	0	15	0	0	15	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	44
8:00	0	16	0	0	16	0	0	0	0	0	0	33	0	0	33	0	0	0	0	0	49
8:15	0	15	0	0	15	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	42
Total Volume	0	59	0	0	59	0	0	0	0	0	0	112	0	0	112	0	0	0	0	0	171
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.922	.000		.922	.000	.000	.000		.000	.000	.848	.000		.848	.000	.000	.000		.000	.872

PM PEAK HOUR	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	17	0	0	17	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	25
16:15	0	20	0	0	20	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	30
16:30	0	11	0	0	11	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	30
16:45	0	11	0	0	11	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	26
Total Volume	0	59	0	0	59	0	0	0	0	0	0	52	0	0	52	0	0	0	0	0	111
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.738	.000		.738	.000	.000	.000		.000	.000	.684	.000		.684	.000	.000	.000		.000	.925

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-013 SR 99 & Barry Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	5	225	5	0	235	2	4	9	0	15	1	111	1	0	113	5	4	3	0	12	375	0
7:15	5	187	5	0	197	3	2	5	0	10	0	125	2	0	127	5	4	1	0	10	344	0
7:30	11	186	3	0	200	6	1	12	0	19	2	149	3	0	154	4	6	0	0	10	383	0
7:45	17	181	7	0	205	7	9	11	0	27	3	146	2	0	151	10	16	0	0	26	409	0
Total	38	779	20	0	837	18	16	37	0	71	6	531	8	0	545	24	30	4	0	58	1511	0
8:00	32	180	0	0	212	9	21	43	0	73	2	144	5	0	151	2	35	0	0	37	473	0
8:15	19	156	4	0	179	7	26	58	0	91	0	89	3	0	92	6	35	1	0	42	404	0
8:30	4	156	4	0	164	5	11	23	0	39	1	104	4	0	109	2	9	1	0	12	324	0
8:45	4	155	1	0	160	0	2	6	0	8	1	122	0	0	123	5	3	2	0	10	301	0
Total	59	647	9	0	715	21	60	130	0	211	4	459	12	0	475	15	82	4	0	101	1502	0
16:00	12	145	1	0	158	2	8	11	0	21	3	265	4	0	272	8	5	1	0	14	465	0
16:15	5	155	6	0	166	1	5	13	0	19	4	233	4	0	241	8	4	1	0	13	439	0
16:30	3	130	8	0	141	3	7	11	0	21	2	260	2	0	264	1	7	3	0	11	437	0
16:45	5	113	6	0	124	3	7	3	0	13	0	227	7	0	234	4	6	0	0	10	381	0
Total	25	543	21	0	589	9	27	38	0	74	9	985	17	0	1011	21	22	5	0	48	1722	0
17:00	5	137	1	0	143	1	6	11	0	18	1	290	7	0	298	12	3	0	0	15	474	0
17:15	3	136	7	0	146	2	4	9	0	15	2	229	4	0	235	9	1	2	0	12	408	0
17:30	6	162	6	0	174	5	5	5	0	15	4	222	3	0	229	11	5	1	0	17	435	0
17:45	2	145	2	0	149	2	4	4	0	10	1	228	3	0	232	6	3	1	0	10	401	0
Total	16	580	16	0	612	10	19	29	0	58	8	969	17	0	994	38	12	4	0	54	1718	0
Grand Total	138	2549	66	0	2753	58	122	234	0	414	27	2944	54	0	3025	98	146	17	0	261	6453	0
Apprch %	5.0%	92.6%	2.4%	0.0%		14.0%	29.5%	56.5%	0.0%		0.9%	97.3%	1.8%	0.0%		37.5%	55.9%	6.5%	0.0%			
Total %	2.1%	39.5%	1.0%	0.0%	42.7%	0.9%	1.9%	3.6%	0.0%	6.4%	0.4%	45.6%	0.8%	0.0%	46.9%	1.5%	2.3%	0.3%	0.0%	4.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	11	186	3	0	200	6	1	12	0	19	2	149	3	0	154	4	6	0	0	10	383
7:45	17	181	7	0	205	7	9	11	0	27	3	146	2	0	151	10	16	0	0	26	409
8:00	32	180	0	0	212	9	21	43	0	73	2	144	5	0	151	2	35	0	0	37	473
8:15	19	156	4	0	179	7	26	58	0	91	0	89	3	0	92	6	35	1	0	42	404
Total Volume	79	703	14	0	796	29	57	124	0	210	7	528	13	0	548	22	92	1	0	115	1669
% App Total	9.9%	88.3%	1.8%	0.0%		13.8%	27.1%	59.0%	0.0%		1.3%	96.4%	2.4%	0.0%		19.1%	80.0%	0.9%	0.0%		
PHF	.617	.945	.500	.000	.939	.806	.548	.534	.000	.577	.583	.886	.650	.000	.890	.550	.657	.250	.000	.685	.882

PM PEAK HOUR	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	5	155	6	0	166	1	5	13	0	19	4	233	4	0	241	8	4	1	0	13	439
16:30	3	130	8	0	141	3	7	11	0	21	2	260	2	0	264	1	7	3	0	11	437
16:45	5	113	6	0	124	3	7	3	0	13	0	227	7	0	234	4	6	0	0	10	381
17:00	5	137	1	0	143	1	6	11	0	18	1	290	7	0	298	12	3	0	0	15	474
Total Volume	18	535	21	0	574	8	25	38	0	71	7	1010	20	0	1037	25	20	4	0	49	1731
% App Total	3.1%	93.2%	3.7%	0.0%		11.3%	35.2%	53.5%	0.0%		0.7%	97.4%	1.9%	0.0%		51.0%	40.8%	8.2%	0.0%		
PHF	.900	.863	.656	.000	.864	.667	.893	.731	.000	.845	.438	.871	.714	.000	.870	.521	.714	.333	.000	.817	.913

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-013 SR 99 & Barry Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Total	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
Grand Total	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
Apprch %	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		100.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-013 SR 99 & Barry Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	19	0	0	19	0	0	0	0	0	1	25	0	0	26	0	0	1	0	1	46	0
7:15	0	19	0	0	19	0	1	0	0	1	0	25	1	0	26	0	0	0	0	0	46	0
7:30	0	13	0	0	13	0	1	1	0	2	1	21	0	0	22	1	0	0	0	1	38	0
7:45	0	14	1	0	15	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	44	0
Total	0	65	1	0	66	0	2	1	0	3	2	100	1	0	103	1	0	1	0	2	174	0
8:00	0	15	0	0	15	0	0	1	0	1	0	34	0	0	34	0	0	0	0	0	50	0
8:15	0	16	0	0	16	0	1	4	0	5	0	21	0	0	21	0	0	0	0	0	42	0
8:30	0	17	0	0	17	1	0	1	0	2	0	22	0	0	22	0	0	0	0	0	41	0
8:45	0	30	0	0	30	0	0	1	0	1	0	23	0	0	23	1	0	0	0	1	55	0
Total	0	78	0	0	78	1	1	7	0	9	0	100	0	0	100	1	0	0	0	1	188	0
16:00	0	16	0	0	16	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	24	0
16:15	1	21	0	0	22	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	32	0
16:30	0	10	0	0	10	2	0	1	0	3	1	18	0	0	19	0	0	0	0	0	32	0
16:45	0	10	2	0	12	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	27	0
Total	1	57	2	0	60	2	0	1	0	3	1	50	0	0	51	0	0	1	0	1	115	0
17:00	0	10	0	0	10	0	0	0	0	0	0	14	2	0	16	1	0	0	0	1	27	0
17:15	0	11	0	0	11	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	20	0
17:30	0	16	0	0	16	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	23	0
17:45	0	13	0	0	13	0	0	0	0	0	0	14	0	0	14	1	0	0	0	1	28	0
Total	0	50	0	0	50	0	0	0	0	0	0	44	2	0	46	2	0	0	0	2	98	0
Grand Total	1	250	3	0	254	3	3	9	0	15	3	294	3	0	300	4	0	2	0	6	575	0
Apprch %	0.4%	98.4%	1.2%			20.0%	20.0%	60.0%			1.0%	98.0%	1.0%			66.7%	0.0%	33.3%				
Total %	0.2%	43.5%	0.5%		44.2%	0.5%	0.5%	1.6%		2.6%	0.5%	51.1%	0.5%		52.2%	0.7%	0.0%	0.3%		1.0%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	13	0	0	13	0	1	1	0	2	1	21	0	0	22	1	0	0	0	1	38
7:45	0	14	1	0	15	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	44
8:00	0	15	0	0	15	0	0	1	0	1	0	34	0	0	34	0	0	0	0	0	50
8:15	0	16	0	0	16	0	1	4	0	5	0	21	0	0	21	0	0	0	0	0	42
Total Volume	0	58	1	0	59	0	2	6	0	8	1	105	0	0	106	1	0	0	0	1	174
% App Total	0.0%	98.3%	1.7%			0.0%	25.0%	75.0%			0.9%	99.1%	0.0%			100.0%	0.0%	0.0%			
PHF	.000	.906	.250		.922	.000	.500	.375		.400	.250	.772	.000		.779	.250	.000	.000		.250	.870

PM PEAK HOUR	SR 99 Southbound					Barry Road Westbound					SR 99 Northbound					Barry Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	1	21	0	0	22	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	32
16:30	0	10	0	0	10	2	0	1	0	3	1	18	0	0	19	0	0	0	0	0	32
16:45	0	10	2	0	12	0	0	0	0	0	0	15	0	0	15	0	0	0	0	0	27
17:00	0	10	0	0	10	0	0	0	0	0	0	14	2	0	16	1	0	0	0	1	27
Total Volume	1	51	2	0	54	2	0	1	0	3	1	57	2	0	60	1	0	0	0	1	118
% App Total	1.9%	94.4%	3.7%			66.7%	0.0%	33.3%			1.7%	95.0%	3.3%			100.0%	0.0%	0.0%			
PHF	.250	.607	.250		.614	.250	.000	.250		.250	.250	.792	.250		.789	.250	.000	.000		.250	.922

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-014 Walton Avenue & Bridge Street

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	22	38	1	0	61	9	4	32	0	45	2	66	20	0	88	5	10	14	0	29	223	0
7:15	21	52	0	0	73	16	11	39	0	66	20	87	26	0	133	2	11	21	0	34	306	0
7:30	43	93	1	0	137	30	24	63	0	117	33	150	28	0	211	3	27	34	0	64	529	0
7:45	53	125	2	0	180	36	38	71	0	145	27	172	42	0	241	2	35	70	0	107	673	0
Total	139	308	4	0	451	91	77	205	0	373	82	475	116	0	673	12	83	139	0	234	1731	0
8:00	46	74	1	0	121	25	17	60	0	102	29	118	40	0	187	0	33	35	0	68	478	0
8:15	36	50	0	0	86	26	16	49	0	91	24	125	25	0	174	4	13	26	0	43	394	0
8:30	20	73	3	0	96	18	13	40	0	71	15	113	29	0	157	1	7	23	0	31	355	0
8:45	47	76	5	0	128	16	12	38	0	66	15	107	16	0	138	3	19	16	0	38	370	0
Total	149	273	9	0	431	85	58	187	0	330	83	463	110	0	656	8	72	100	0	180	1597	0
16:00	85	180	1	0	266	48	27	72	0	147	16	133	42	0	191	1	26	51	0	78	682	0
16:15	76	149	2	0	227	44	32	77	0	153	16	126	42	0	184	3	30	38	0	71	635	0
16:30	73	175	4	0	252	58	36	68	0	162	19	126	34	0	179	5	25	43	0	73	666	0
16:45	70	137	1	0	208	48	39	88	0	175	19	124	37	0	180	6	32	44	0	82	645	0
Total	304	641	8	0	953	198	134	305	0	637	70	509	155	0	734	15	113	176	0	304	2628	0
17:00	89	226	5	0	320	61	39	78	0	178	22	120	36	0	178	2	40	55	0	97	773	0
17:15	69	164	3	0	236	60	34	68	0	162	24	159	31	0	214	3	41	49	0	93	705	0
17:30	71	153	6	0	230	55	31	66	0	152	26	122	49	0	197	4	31	51	0	86	665	0
17:45	50	132	1	0	183	58	22	67	1	148	23	143	42	0	208	2	34	48	0	84	623	1
Total	279	675	15	0	969	234	126	279	1	640	95	544	158	0	797	11	146	203	0	360	2766	1
Grand Total	871	1897	36	0	2804	608	395	976	1	1980	330	1991	539	0	2860	46	414	618	0	1078	8722	1
Apprch %	31.1%	67.7%	1.3%	0.0%		30.7%	19.9%	49.3%	0.1%		11.5%	69.6%	18.8%	0.0%		4.3%	38.4%	57.3%	0.0%			
Total %	10.0%	21.7%	0.4%	0.0%	32.1%	7.0%	4.5%	11.2%	0.0%	22.7%	3.8%	22.8%	6.2%	0.0%	32.8%	0.5%	4.7%	7.1%	0.0%	12.4%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	43	93	1	0	137	30	24	63	0	117	33	150	28	0	211	3	27	34	0	64	529
7:45	53	125	2	0	180	36	38	71	0	145	27	172	42	0	241	2	35	70	0	107	673
8:00	46	74	1	0	121	25	17	60	0	102	29	118	40	0	187	0	33	35	0	68	478
8:15	36	50	0	0	86	26	16	49	0	91	24	125	25	0	174	4	13	26	0	43	394
Total Volume	178	342	4	0	524	117	95	243	0	455	113	565	135	0	813	9	108	165	0	282	2074
% App Total	34.0%	65.3%	0.8%	0.0%		25.7%	20.9%	53.4%	0.0%		13.9%	69.5%	16.6%	0.0%		3.2%	38.3%	58.5%	0.0%		
PHF	.840	.684	.500	.000	.728	.813	.625	.856	.000	.784	.856	.821	.804	.000	.843	.563	.771	.589	.000	.659	.770

PM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	70	137	1	0	208	48	39	88	0	175	19	124	37	0	180	6	32	44	0	82	645
17:00	89	226	5	0	320	61	39	78	0	178	22	120	36	0	178	2	40	55	0	97	773
17:15	69	164	3	0	236	60	34	68	0	162	24	159	31	0	214	3	41	49	0	93	705
17:30	71	153	6	0	230	55	31	66	0	152	26	122	49	0	197	4	31	51	0	86	665
Total Volume	299	680	15	0	994	224	143	300	0	667	91	525	153	0	769	15	144	199	0	358	2788
% App Total	30.1%	68.4%	1.5%	0.0%		33.6%	21.4%	45.0%	0.0%		11.8%	68.3%	19.9%	0.0%		4.2%	40.2%	55.6%	0.0%		
PHF	.840	.752	.625	.000	.777	.918	.917	.852	.000	.937	.875	.825	.781	.000	.898	.625	.878	.905	.000	.923	.902

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-014 Walton Avenue & Bridge Street

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	1	0	2	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	2
7:15	0	1	0	1	1	0	0	0	2	0	1	0	0	2	1	0	0	0	0	0	2	5
7:30	0	0	0	1	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	5
7:45	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	2
Total	0	2	0	6	2	0	0	0	3	0	3	0	0	5	3	0	0	0	0	0	5	14
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	4
8:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45	0	0	0	2	0	0	0	0	4	0	0	1	0	1	1	0	0	0	1	0	1	8
Total	0	0	0	4	0	0	0	0	7	0	0	1	0	2	1	0	0	0	1	0	1	14
16:00	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2	0	0	1	0	1	3	1
16:15	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
16:30	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	2	0	4	2	2	8
16:45	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	4
Total	0	0	0	4	0	0	0	0	1	0	0	2	0	7	2	0	2	1	4	3	5	16
17:00	1	0	0	2	1	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	1	8
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	2	2
17:30	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	5
17:45	0	0	0	3	0	0	0	0	0	0	1	0	0	1	1	0	0	0	2	0	1	6
Total	1	1	0	8	2	0	0	0	1	0	1	0	0	4	1	0	1	0	8	1	4	21
Grand Total	1	3	0	22	4	0	0	0	12	0	4	3	0	18	7	0	3	1	13	4	15	65
Apprch %	25.0%	75.0%	0.0%			0.0%	0.0%	0.0%			57.1%	42.9%	0.0%			0.0%	75.0%	25.0%				
Total %	6.7%	20.0%	0.0%		26.7%	0.0%	0.0%	0.0%		0.0%	26.7%	20.0%	0.0%		46.7%	0.0%	20.0%	6.7%		26.7%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	1	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0
7:45	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Total Volume	0	0	0	5	0	0	0	0	2	0	1	0	0	4	1	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.000		.000	.250

PM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
17:00	1	0	0	2	1	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	1
17:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	2
17:30	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Total Volume	1	1	0	6	2	0	0	0	2	0	0	0	0	5	0	0	1	0	6	1	3
% App Total	50.0%	50.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.250	.000		.500	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000		.250		.375

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-014 Walton Avenue & Bridge Street

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	1	1	1	0	3	2	0	1	0	3	0	1	1	0	2	0	0	0	0	0	8	0
7:15	1	2	0	0	3	3	0	1	0	4	0	1	0	0	1	0	1	1	0	2	10	0
7:30	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	0	0	1	0	1	5	0
7:45	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4	0
Total	4	4	2	0	10	6	0	4	0	10	0	3	1	0	4	0	1	2	0	3	27	0
8:00	1	2	0	0	3	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	6	0
8:15	2	1	0	0	3	0	1	2	0	3	0	4	0	0	4	0	0	1	0	1	11	0
8:30	1	6	0	0	7	0	0	1	0	1	1	4	1	0	6	0	0	0	0	0	14	0
8:45	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	3	0
Total	5	9	0	0	14	0	1	7	0	8	1	9	1	0	11	0	0	1	0	1	34	0
16:00	2	1	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4	0
16:15	3	1	0	0	4	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	7	0
16:30	1	0	1	0	2	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	5	0
16:45	4	0	0	0	4	0	1	2	0	3	0	2	0	0	2	0	0	0	0	0	9	0
Total	10	2	1	0	13	0	2	5	0	7	0	4	0	0	4	1	0	0	0	1	25	0
17:00	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	4	0
17:15	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	4	0
17:30	1	0	0	0	1	1	0	2	0	3	0	1	1	0	2	1	0	0	0	1	7	0
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	2	2	0	0	4	1	0	3	0	4	0	5	1	0	6	1	2	0	0	3	17	0
Grand Total	21	17	3	0	41	7	3	19	0	29	1	21	3	0	25	2	3	3	0	8	103	0
Apprch %	51.2%	41.5%	7.3%			24.1%	10.3%	65.5%			4.0%	84.0%	12.0%			25.0%	37.5%	37.5%				
Total %	20.4%	16.5%	2.9%		39.8%	6.8%	2.9%	18.4%		28.2%	1.0%	20.4%	2.9%		24.3%	1.9%	2.9%	2.9%		7.8%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1	0	0	1	0	1	5
7:45	2	0	1	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	4
8:00	1	2	0	0	3	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	6
8:15	2	1	0	0	3	0	1	2	0	3	0	4	0	0	4	0	0	1	0	1	11
Total Volume	5	4	1	0	10	1	1	6	0	8	0	6	0	0	6	0	0	2	0	2	26
% App Total	50.0%	40.0%	10.0%			12.5%	12.5%	75.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			
PHF	.625	.500	.250		.833	.250	.250	.750		.667	.000	.375	.000		.375	.000	.000	.500		.500	.591

PM PEAK HOUR	Walton Avenue Southbound					Bridge Street Westbound					Walton Avenue Northbound					Bridge Street Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	4	0	0	0	4	0	1	2	0	3	0	2	0	0	2	0	0	0	0	0	9
17:00	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	4
17:15	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	4
17:30	1	0	0	0	1	1	0	2	0	3	0	1	1	0	2	1	0	0	0	1	7
Total Volume	5	2	0	0	7	1	1	5	0	7	0	7	1	0	8	1	1	0	0	2	24
% App Total	71.4%	28.6%	0.0%			14.3%	14.3%	71.4%			0.0%	87.5%	12.5%			50.0%	50.0%	0.0%			
PHF	.313	.500	.000		.438	.250	.250	.625		.583	.000	.875	.250		1.000	.250	.250	.000		.500	.667

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-015 Walton Avenue & Franklin Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	17	33	19	0	69	11	32	18	0	61	8	48	19	0	75	18	52	3	0	73	278	0
7:15	12	44	22	0	78	11	51	20	0	82	9	72	12	0	93	39	67	3	0	109	362	0
7:30	33	77	52	0	162	28	55	52	0	135	20	115	41	0	176	44	75	9	0	128	601	0
7:45	49	103	82	0	234	25	62	42	0	129	22	114	34	0	170	63	83	9	0	155	688	0
Total	111	257	175	0	543	75	200	132	0	407	59	349	106	0	514	164	277	24	0	465	1929	0
8:00	34	71	48	0	153	20	39	41	0	100	12	138	48	0	198	18	87	9	0	114	565	0
8:15	20	57	23	0	100	11	44	49	0	104	10	90	18	0	118	39	75	7	0	121	443	0
8:30	23	55	27	0	105	6	36	36	0	78	6	87	23	0	116	31	63	7	0	101	400	0
8:45	32	57	20	0	109	20	37	41	0	98	5	73	29	0	107	28	58	7	0	93	407	0
Total	109	240	118	0	467	57	156	167	0	380	33	388	118	0	539	116	283	30	0	429	1815	0
16:00	57	131	66	0	254	22	72	59	0	153	5	90	23	0	118	43	73	16	0	132	657	0
16:15	44	141	46	0	231	30	71	56	0	157	11	101	24	0	136	39	64	20	0	123	647	0
16:30	48	147	68	0	263	40	68	58	0	166	7	79	32	0	118	38	68	10	0	116	663	0
16:45	54	112	51	0	217	34	69	59	0	162	12	102	21	0	135	38	76	12	0	126	640	0
Total	203	531	231	0	965	126	280	232	0	638	35	372	100	0	507	158	281	58	0	497	2607	0
17:00	72	193	64	0	329	44	94	55	0	193	10	89	19	0	118	42	86	15	0	143	783	0
17:15	50	151	67	0	268	41	77	54	0	172	13	101	20	0	134	54	68	15	0	137	711	0
17:30	36	157	68	0	261	42	81	55	0	178	9	112	33	0	154	39	81	8	0	128	721	0
17:45	52	128	44	0	224	36	72	59	0	167	11	93	37	0	141	51	63	8	0	122	654	0
Total	210	629	243	0	1082	163	324	223	0	710	43	395	109	0	547	186	298	46	0	530	2869	0
Grand Total	633	1657	767	0	3057	421	960	754	0	2135	170	1504	433	0	2107	624	1139	158	0	1921	9220	0
Apprch %	20.7%	54.2%	25.1%	0.0%		19.7%	45.0%	35.3%	0.0%		8.1%	71.4%	20.6%	0.0%		32.5%	59.3%	8.2%	0.0%			
Total %	6.9%	18.0%	8.3%	0.0%	33.2%	4.6%	10.4%	8.2%	0.0%	23.2%	1.8%	16.3%	4.7%	0.0%	22.9%	6.8%	12.4%	1.7%	0.0%	20.8%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	33	77	52	0	162	28	55	52	0	135	20	115	41	0	176	44	75	9	0	128	601
7:45	49	103	82	0	234	25	62	42	0	129	22	114	34	0	170	63	83	9	0	155	688
8:00	34	71	48	0	153	20	39	41	0	100	12	138	48	0	198	18	87	9	0	114	565
8:15	20	57	23	0	100	11	44	49	0	104	10	90	18	0	118	39	75	7	0	121	443
Total Volume	136	308	205	0	649	84	200	184	0	468	64	457	141	0	662	164	320	34	0	518	2297
% App Total	21.0%	47.5%	31.6%	0.0%		17.9%	42.7%	39.3%	0.0%		9.7%	69.0%	21.3%	0.0%		31.7%	61.8%	6.6%	0.0%		
PHF	.694	.748	.625	.000	.693	.750	.806	.885	.000	.867	.727	.828	.734	.000	.836	.651	.920	.944	.000	.835	.835

PM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	72	193	64	0	329	44	94	55	0	193	10	89	19	0	118	42	86	15	0	143	783
17:15	50	151	67	0	268	41	77	54	0	172	13	101	20	0	134	54	68	15	0	137	711
17:30	36	157	68	0	261	42	81	55	0	178	9	112	33	0	154	39	81	8	0	128	721
17:45	52	128	44	0	224	36	72	59	0	167	11	93	37	0	141	51	63	8	0	122	654
Total Volume	210	629	243	0	1082	163	324	223	0	710	43	395	109	0	547	186	298	46	0	530	2869
% App Total	19.4%	58.1%	22.5%	0.0%		23.0%	45.6%	31.4%	0.0%		7.9%	72.2%	19.9%	0.0%		35.1%	56.2%	8.7%	0.0%		
PHF	.729	.815	.893	.000	.822	.926	.862	.945	.000	.920	.827	.882	.736	.000	.888	.861	.866	.767	.000	.927	.916

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-015 Walton Avenue & Franklin Road
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	3
7:15	0	0	0	1	0	1	0	0	5	1	0	0	0	5	0	0	0	2	0	0	1	13	
7:30	0	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	7	
7:45	0	0	0	1	0	0	0	0	1	0	0	0	0	3	0	0	1	1	1	1	1	6	
Total	0	0	0	3	0	1	0	0	13	1	0	0	0	10	0	0	1	3	1	2	29		
8:00	0	0	0	1	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	6	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	
8:30	0	0	0	4	0	0	0	0	3	0	0	1	0	1	0	0	0	1	0	1	1	8	
8:45	0	0	0	1	0	0	0	0	2	0	0	2	0	2	1	0	0	0	1	1	3	3	
Total	0	0	0	6	0	0	0	0	6	0	0	3	0	6	3	1	0	0	1	1	4	19	
16:00	0	0	0	5	0	0	0	0	1	0	0	1	0	4	1	0	1	0	0	1	2	10	
16:15	0	0	0	2	0	0	1	0	1	1	0	0	0	2	0	0	2	2	2	2	3	7	
16:30	0	1	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	2	0	1	7	7	
16:45	0	0	0	4	0	0	0	0	1	0	0	0	0	2	0	1	0	0	3	1	1	10	
Total	0	1	0	11	1	0	1	0	4	1	0	1	0	12	1	1	1	2	7	4	7	34	
17:00	0	0	0	1	0	1	0	0	0	1	0	0	0	3	0	0	0	0	1	0	1	5	
17:15	0	0	1	3	1	0	0	0	1	0	0	0	0	3	0	0	0	0	5	0	1	12	
17:30	0	1	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	
17:45	0	0	0	7	0	0	0	0	4	0	2	2	0	0	4	0	1	0	0	1	5	11	
Total	0	1	1	15	2	1	0	0	5	1	2	2	0	6	4	0	1	0	6	1	8	32	
Grand Total	0	2	1	35	3	2	1	0	28	3	2	6	0	34	8	2	3	2	17	7	21	114	
Apprch %	0.0%	66.7%	33.3%			66.7%	33.3%	0.0%			25.0%	75.0%	0.0%			28.6%	42.9%	28.6%					
Total %	0.0%	9.5%	4.8%		14.3%	9.5%	4.8%	0.0%		14.3%	9.5%	28.6%	0.0%		38.1%	9.5%	14.3%	9.5%			33.3%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	1	0	0	0	0	1	0	0	0	0	3	0	0	1	0	1	1	1
8:00	0	0	0	1	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Total Volume	0	0	0	3	0	0	0	0	8	0	0	0	0	9	0	0	1	0	1	1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000		.250		.250

PM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	1	0	1	0	0	0	1	0	0	0	3	0	0	0	0	1	0	1
17:15	0	0	1	3	1	0	0	0	1	0	0	0	0	3	0	0	0	0	5	0	1
17:30	0	1	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	7	0	0	0	0	4	0	2	2	0	0	4	0	1	0	0	1	5
Total Volume	0	1	1	15	2	1	0	0	5	1	2	2	0	6	4	0	1	0	6	1	8
% App Total	0.0%	50.0%	50.0%			100.0%	0.0%	0.0%			50.0%	50.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.250	.250		.500	.250	.000	.000		.250	.250	.250	.000		.250	.000	.250	.000		.250	.400

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-015 Walton Avenue & Franklin Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	1	0	1	0	2	0	2	0	0	2	1	2	1	0	4	0	1	0	0	1	9	0
7:15	1	3	1	0	5	0	3	1	0	4	0	0	3	0	3	0	4	0	0	4	16	0
7:30	0	1	1	0	2	0	3	1	0	4	0	0	1	0	1	0	1	0	0	1	8	0
7:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	2	4	3	0	9	0	10	2	0	12	1	2	5	0	8	0	6	0	0	6	35	0
8:00	0	2	0	0	2	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	5	0
8:15	0	2	1	0	3	0	2	1	0	3	1	2	0	0	3	1	2	0	0	3	12	0
8:30	0	6	0	0	6	1	0	3	0	4	0	0	0	0	0	1	1	0	0	2	12	0
8:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	10	1	0	11	2	2	6	0	10	2	2	0	0	4	2	3	0	0	5	30	0
16:00	0	1	0	0	1	1	1	0	0	2	0	0	1	0	1	0	0	0	0	0	4	0
16:15	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	2	3	0	0	5	8	0
16:30	1	0	0	0	1	0	2	0	0	2	1	0	1	0	2	0	0	0	0	0	5	0
16:45	0	0	1	0	1	1	4	2	0	7	0	0	0	0	0	0	0	0	0	0	8	0
Total	2	1	1	0	4	3	8	2	0	13	1	0	2	0	3	2	3	0	0	5	25	0
17:00	0	2	0	0	2	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	6	0
17:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
17:30	0	1	0	0	1	0	2	1	0	3	0	1	1	0	2	0	0	0	0	0	6	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	3	0	0	3	1	6	3	0	10	0	1	1	0	2	0	1	0	0	1	16	0
Grand Total	4	18	5	0	27	6	26	13	0	45	4	5	8	0	17	4	13	0	0	17	106	0
Apprch %	14.8%	66.7%	18.5%			13.3%	57.8%	28.9%			23.5%	29.4%	47.1%			23.5%	76.5%	0.0%				
Total %	3.8%	17.0%	4.7%		25.5%	5.7%	24.5%	12.3%		42.5%	3.8%	4.7%	7.5%		16.0%	3.8%	12.3%	0.0%		16.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	1	1	0	2	0	3	1	0	4	0	0	1	0	1	0	1	0	0	1	8
7:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:00	0	2	0	0	2	1	0	1	0	2	1	0	0	0	1	0	0	0	0	0	5
8:15	0	2	1	0	3	0	2	1	0	3	1	2	0	0	3	1	2	0	0	3	12
Total Volume	0	5	2	0	7	1	7	3	0	11	2	2	1	0	5	1	3	0	0	4	27
% App Total	0.0%	71.4%	28.6%			9.1%	63.6%	27.3%			40.0%	40.0%	20.0%			25.0%	75.0%	0.0%			
PHF	.000	.625	.500		.583	.250	.583	.750		.688	.500	.250	.250		.417	.250	.375	.000		.333	.563

PM PEAK HOUR	Walton Avenue Southbound					Franklin Road Westbound					Walton Avenue Northbound					Franklin Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	2	0	0	2	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	6
17:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
17:30	0	1	0	0	1	0	2	1	0	3	0	1	1	0	2	0	0	0	0	0	6
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	3	0	0	3	1	6	3	0	10	0	1	1	0	2	0	1	0	0	1	16
% App Total	0.0%	100.0%	0.0%			10.0%	60.0%	30.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.375	.000		.375	.250	.750	.375		.625	.000	.250	.250		.250	.000	.250	.000		.250	.667

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-016 Walton Avenue & Richland Road
 Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	18	36	0	0	54	2	0	6	0	8	0	47	16	0	63	0	0	0	0	0	125	0
7:15	5	37	0	0	42	5	0	14	0	19	0	69	12	0	81	0	0	0	0	0	142	0
7:30	10	65	0	0	75	6	0	16	0	22	0	134	22	0	156	0	0	0	0	0	253	0
7:45	49	131	0	0	180	10	0	22	0	32	0	151	34	0	185	0	0	0	0	0	397	0
Total	82	269	0	0	351	23	0	58	0	81	0	401	84	0	485	0	0	0	0	0	917	0
8:00	27	92	0	0	119	7	0	11	0	18	0	92	29	0	121	0	0	0	0	0	258	0
8:15	13	58	0	0	71	8	0	13	0	21	0	76	11	0	87	0	0	0	0	0	179	0
8:30	11	46	0	0	57	2	0	13	0	15	0	85	9	0	94	0	0	0	0	0	166	0
8:45	15	62	0	0	77	5	0	10	0	15	0	67	12	0	79	0	0	0	0	0	171	0
Total	66	258	0	0	324	22	0	47	0	69	0	320	61	0	381	0	0	0	0	0	774	0
16:00	27	120	0	0	147	12	0	15	0	27	0	93	7	0	100	0	0	0	0	0	274	0
16:15	26	163	0	0	189	22	0	20	0	42	0	97	6	0	103	0	0	0	0	0	334	0
16:30	19	134	0	0	153	14	0	18	0	32	0	83	12	0	95	0	0	0	0	0	280	0
16:45	16	121	0	0	137	16	0	18	0	34	0	105	13	0	118	0	0	0	0	0	289	0
Total	88	538	0	0	626	64	0	71	0	135	0	378	38	0	416	0	0	0	0	0	1177	0
17:00	20	148	0	0	168	17	0	24	0	41	0	96	10	0	106	0	0	0	0	0	315	0
17:15	20	139	0	0	159	19	0	16	0	35	0	103	18	0	121	0	0	0	0	0	315	0
17:30	24	145	0	0	169	20	0	25	0	45	0	103	12	0	115	0	0	0	0	0	329	0
17:45	20	124	0	0	144	16	0	17	0	33	0	113	13	0	126	0	0	0	0	0	303	0
Total	84	556	0	0	640	72	0	82	0	154	0	415	53	0	468	0	0	0	0	0	1262	0
Grand Total	320	1621	0	0	1941	181	0	258	0	439	0	1514	236	0	1750	0	0	0	0	0	4130	0
Apprch %	16.5%	83.5%	0.0%	0.0%		41.2%	0.0%	58.8%	0.0%		0.0%	86.5%	13.5%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
Total %	7.7%	39.2%	0.0%	0.0%	47.0%	4.4%	0.0%	6.2%	0.0%	10.6%	0.0%	36.7%	5.7%	0.0%	42.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	10	65	0	0	75	6	0	16	0	22	0	134	22	0	156	0	0	0	0	0	253
7:45	49	131	0	0	180	10	0	22	0	32	0	151	34	0	185	0	0	0	0	0	397
8:00	27	92	0	0	119	7	0	11	0	18	0	92	29	0	121	0	0	0	0	0	258
8:15	13	58	0	0	71	8	0	13	0	21	0	76	11	0	87	0	0	0	0	0	179
Total Volume	99	346	0	0	445	31	0	62	0	93	0	453	96	0	549	0	0	0	0	0	1087
% App Total	22.2%	77.8%	0.0%	0.0%		33.3%	0.0%	66.7%	0.0%		0.0%	82.5%	17.5%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
PHF	.505	.660	.000	.000	.618	.775	.000	.705	.000	.727	.000	.750	.706	.000	.742	.000	.000	.000	.000	.000	.685

PM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	20	148	0	0	168	17	0	24	0	41	0	96	10	0	106	0	0	0	0	0	315
17:15	20	139	0	0	159	19	0	16	0	35	0	103	18	0	121	0	0	0	0	0	315
17:30	24	145	0	0	169	20	0	25	0	45	0	103	12	0	115	0	0	0	0	0	329
17:45	20	124	0	0	144	16	0	17	0	33	0	113	13	0	126	0	0	0	0	0	303
Total Volume	84	556	0	0	640	72	0	82	0	154	0	415	53	0	468	0	0	0	0	0	1262
% App Total	13.1%	86.9%	0.0%	0.0%		46.8%	0.0%	53.2%	0.0%		0.0%	88.7%	11.3%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
PHF	.875	.939	.000	.000	.947	.900	.000	.820	.000	.856	.000	.918	.736	.000	.929	.000	.000	.000	.000	.000	.959

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-016 Walton Avenue & Richland Road
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0
7:45	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	1	1	0	0	2	1	0	3	0	3	0	0	0	0	0	0	5	2	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0
8:45	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0
Total	0	0	0	0	0	0	0	1	0	1	0	3	0	3	0	0	0	0	0	0	4	0	
16:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:15	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	2	1	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	2	
17:00	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	4	0
Total	0	1	0	0	1	2	0	2	1	4	0	1	0	0	1	0	0	0	0	0	6	1	
Grand Total	2	3	0	0	5	3	0	3	5	6	0	7	0	0	7	0	0	0	0	0	18	5	
Apprch %	40.0%	60.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%					
Total %	11.1%	16.7%	0.0%		27.8%	16.7%	0.0%	16.7%		33.3%	0.0%	38.9%	0.0%		38.9%	0.0%	0.0%	0.0%		0.0%	100.0%		

AM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3
7:45	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	4
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.250	.000	.250	.000	.000	.000		.000	.000	.333	

PM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	0	1	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	4
Total Volume	0	1	0	0	1	2	0	2	1	4	0	1	0	0	1	0	0	0	0	0	0	6
% App Total	0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.500	.000	.250		.500	.000	.250	.000	.250	.000	.000	.000		.000	.000	.375	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-016 Walton Avenue & Richland Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
7:15	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
7:30	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0
7:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	8	0	0	8	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	15	0
8:00	0	4	0	0	4	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	6	0
8:15	0	3	0	0	3	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	5	0
8:30	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	0
8:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	12	0	0	12	0	0	3	0	3	0	3	0	0	3	0	0	0	0	0	18	0
16:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
16:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7	0
17:00	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
17:30	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	7	0
Grand Total	0	26	0	0	26	1	0	3	0	4	0	16	1	0	17	0	0	0	0	0	47	0
Apprch %	0.0%	100.0%	0.0%			25.0%	0.0%	75.0%			0.0%	94.1%	5.9%			0.0%	0.0%	0.0%				
Total %	0.0%	55.3%	0.0%		55.3%	2.1%	0.0%	6.4%		8.5%	0.0%	34.0%	2.1%		36.2%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3	
7:45	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:00	0	4	0	0	4	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	6	
8:15	0	3	0	0	3	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	5	
Total Volume	0	11	0	0	11	0	0	3	0	3	0	1	1	0	2	0	0	0	0	0	16	
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%				
PHF	.000	.688	.000		.688	.000	.000	.375		.375	.000	.250	.250		.500	.000	.000	.000		.000	.667	

PM PEAK HOUR	Walton Avenue Southbound					Richland Road Westbound					Walton Avenue Northbound					Richland Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
17:30	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	2	
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
Total Volume	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	7	
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.750	.000		.750	.000	.000	.000		.000	.583	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-017 Walton Avenue & Lincoln Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	14	19	6	0	39	3	22	7	0	32	2	23	17	0	42	15	34	3	0	52	165	0
7:15	11	26	9	0	46	10	19	14	0	43	4	34	22	0	60	20	53	0	0	73	222	0
7:30	28	31	8	0	67	13	31	21	0	65	3	64	38	0	105	37	78	7	0	122	359	0
7:45	47	67	16	0	130	18	50	41	0	109	11	64	52	0	127	35	106	15	0	156	522	0
Total	100	143	39	0	282	44	122	83	0	249	20	185	129	0	334	107	271	25	0	403	1268	0
8:00	34	48	18	0	100	29	64	12	0	105	14	50	57	0	121	30	86	14	0	130	456	0
8:15	12	34	9	0	55	12	30	19	0	61	3	44	18	2	67	8	54	2	0	64	247	2
8:30	16	30	9	0	55	6	25	10	0	41	2	38	19	0	59	20	36	1	0	57	212	0
8:45	12	32	11	0	55	10	28	15	0	53	2	37	9	0	48	18	38	1	0	57	213	0
Total	74	144	47	0	265	57	147	56	0	260	21	169	103	2	295	76	214	18	0	308	1128	2
16:00	25	44	29	0	98	29	45	18	0	92	7	43	13	0	63	23	37	10	0	70	323	0
16:15	39	86	28	0	153	21	54	18	0	93	7	49	26	0	82	23	57	8	0	88	416	0
16:30	33	79	25	0	137	33	50	26	0	109	5	36	22	0	63	27	44	3	0	74	383	0
16:45	33	54	22	0	109	26	62	25	0	113	7	46	20	0	73	32	56	7	0	95	390	0
Total	130	263	104	0	497	109	211	87	0	407	26	174	81	0	281	105	194	28	0	327	1512	0
17:00	31	68	25	0	124	29	72	34	0	135	5	44	18	0	67	27	62	2	0	91	417	0
17:15	27	77	35	0	139	35	74	32	0	141	5	55	23	0	83	21	49	7	0	77	440	0
17:30	28	63	39	0	130	41	53	22	0	116	10	33	23	0	66	32	47	8	0	87	399	0
17:45	19	73	28	0	120	24	56	15	0	95	3	54	29	0	86	33	52	7	0	92	393	0
Total	105	281	127	0	513	129	255	103	0	487	23	186	93	0	302	113	210	24	0	347	1649	0
Grand Total	409	831	317	0	1557	339	735	329	0	1403	90	714	406	2	1212	401	889	95	0	1385	5557	2
Apprch %	26.3%	53.4%	20.4%	0.0%		24.2%	52.4%	23.4%	0.0%		7.4%	58.9%	33.5%	0.2%		29.0%	64.2%	6.9%	0.0%			
Total %	7.4%	15.0%	5.7%	0.0%	28.0%	6.1%	13.2%	5.9%	0.0%	25.2%	1.6%	12.8%	7.3%	0.0%	21.8%	7.2%	16.0%	1.7%	0.0%	24.9%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	28	31	8	0	67	13	31	21	0	65	3	64	38	0	105	37	78	7	0	122	359	
7:45	47	67	16	0	130	18	50	41	0	109	11	64	52	0	127	35	106	15	0	156	522	
8:00	34	48	18	0	100	29	64	12	0	105	14	50	57	0	121	30	86	14	0	130	456	
8:15	12	34	9	0	55	12	30	19	0	61	3	44	18	2	67	8	54	2	0	64	247	
Total Volume	121	180	51	0	352	72	175	93	0	340	31	222	165	2	420	110	324	38	0	472	1584	
% App Total	34.4%	51.1%	14.5%	0.0%		21.2%	51.5%	27.4%	0.0%		7.4%	52.9%	39.3%	0.5%		23.3%	68.6%	8.1%	0.0%			
PHF	.644	.672	.708	.000	.677	.621	.684	.567	.000	.780	.554	.867	.724	.250	.827	.743	.764	.633	.000	.756	.759	

PM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	31	68	25	0	124	29	72	34	0	135	5	44	18	0	67	27	62	2	0	91	417	
17:15	27	77	35	0	139	35	74	32	0	141	5	55	23	0	83	21	49	7	0	77	440	
17:30	28	63	39	0	130	41	53	22	0	116	10	33	23	0	66	32	47	8	0	87	399	
17:45	19	73	28	0	120	24	56	15	0	95	3	54	29	0	86	33	52	7	0	92	393	
Total Volume	105	281	127	0	513	129	255	103	0	487	23	186	93	0	302	113	210	24	0	347	1649	
% App Total	20.5%	54.8%	24.8%	0.0%		26.5%	52.4%	21.1%	0.0%		7.6%	61.6%	30.8%	0.0%		32.6%	60.5%	6.9%	0.0%			
PHF	.847	.912	.814	.000	.923	.787	.861	.757	.000	.863	.575	.845	.802	.000	.878	.856	.847	.750	.000	.943	.937	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-017 Walton Avenue & Lincoln Road

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
7:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	1	0	0	2	0	10	2	1	0	2	3	3	5	14	14	
7:45	0	0	0	0	0	0	0	0	2	0	0	0	0	27	0	0	1	0	5	1	1	34	34	
Total	0	0	0	0	0	1	0	0	4	1	0	2	0	38	2	1	1	2	8	4	7	50		
8:00	0	0	0	1	0	0	0	0	1	0	0	0	0	43	0	0	0	0	1	0	0	0	46	
8:15	0	0	0	0	0	0	0	0	8	0	0	0	1	7	1	0	0	0	0	0	1	15	15	
8:30	0	0	0	0	0	0	0	1	3	1	0	0	0	1	0	0	0	0	0	0	1	4	4	
8:45	0	0	0	1	0	0	0	1	3	1	0	0	0	2	0	0	0	0	2	0	1	8	8	
Total	0	0	0	2	0	0	0	2	15	2	0	0	1	53	1	0	0	0	3	0	3	73		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	4	4	
16:15	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	1	3	1	1	8	8	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	3	
16:45	0	0	1	2	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	2	3	3	
Total	0	0	1	2	1	0	0	0	2	0	0	0	0	10	0	0	0	2	4	2	3	18		
17:00	0	0	0	0	0	0	1	0	1	1	0	0	0	7	0	0	0	0	0	0	1	8	8	
17:15	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	2	
17:30	0	0	0	3	0	0	0	0	0	0	0	1	0	3	1	0	1	0	0	1	2	6	6	
17:45	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	1	8	8	
Total	0	1	1	3	2	0	1	0	2	1	0	1	0	12	1	0	1	0	7	1	5	24		
Grand Total	0	1	2	7	3	1	1	2	23	4	0	3	1	113	4	1	2	4	22	7	18	165		
Apprch %	0.0%	33.3%	66.7%			25.0%	25.0%	50.0%			0.0%	75.0%	25.0%			14.3%	28.6%	57.1%						
Total %	0.0%	5.6%	11.1%		16.7%	5.6%	5.6%	11.1%		22.2%	0.0%	16.7%	5.6%		22.2%	5.6%	11.1%	22.2%		38.9%		100.0%		

AM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	1	0	0	2	0	10	2	1	0	2	3	3	5	5
7:45	0	0	0	0	0	0	0	0	2	0	0	0	0	27	0	0	1	0	5	1	1	1
8:00	0	0	0	1	0	0	0	0	1	0	0	0	0	43	0	0	0	0	1	0	0	0
8:15	0	0	0	0	0	0	0	0	8	0	0	0	1	7	1	0	0	0	0	0	1	1
Total Volume	0	0	0	1	0	0	0	0	12	0	0	2	1	87	3	1	1	2	9	4	7	7
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	66.7%	33.3%			25.0%	25.0%	50.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.250		.375	.250	.250	.250		.333	.350	

PM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	0	0	0	1	0	1	1	0	0	0	7	0	0	0	0	0	0	1	1
17:15	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1
17:30	0	0	0	3	0	0	0	0	0	0	0	1	0	3	1	0	1	0	0	1	2	2
17:45	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	1	1
Total Volume	0	1	1	3	2	0	1	0	2	1	0	1	0	12	1	0	1	0	7	1	5	5
% App Total	0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%				
PHF	.000	.250	.250		.500	.000	.250	.000		.250	.000	.250	.000		.250	.000	.250	.000		.250	.625	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-017 Walton Avenue & Lincoln Road
 Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	2	0	0	0	2	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	5	0
7:15	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	1	0	0	0	1	6	0
7:30	1	1	0	0	2	0	1	0	0	1	0	1	1	0	2	0	1	1	0	2	7	0
7:45	1	2	0	0	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	5	0
Total	4	5	0	0	9	1	3	0	0	4	1	4	1	0	6	2	1	1	0	4	23	0
8:00	1	2	2	0	5	1	1	0	0	2	0	1	0	0	1	1	2	0	0	3	11	0
8:15	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	1	2	0	0	3	7	0
8:30	1	6	0	0	7	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	9	0
8:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	2	10	2	0	14	1	3	1	0	5	0	2	1	0	3	2	5	0	0	7	29	0
16:00	1	1	2	0	4	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	8	0
16:15	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	3	0
16:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	1	2	2	0	5	1	0	1	0	2	0	2	0	0	2	0	3	1	0	4	13	0
17:00	2	0	0	0	2	0	2	0	0	2	0	1	1	0	2	0	2	0	0	2	8	0
17:15	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3	0
17:30	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2	0
17:45	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	3	0
Total	2	1	0	0	3	0	4	0	0	4	0	4	2	0	6	0	3	0	0	3	16	0
Grand Total	9	18	4	0	31	3	10	2	0	15	1	12	4	0	17	4	12	2	0	18	81	0
Apprch %	29.0%	58.1%	12.9%			20.0%	66.7%	13.3%			5.9%	70.6%	23.5%			22.2%	66.7%	11.1%				
Total %	11.1%	22.2%	4.9%		38.3%	3.7%	12.3%	2.5%		18.5%	1.2%	14.8%	4.9%		21.0%	4.9%	14.8%	2.5%		22.2%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	1	0	0	2	0	1	0	0	1	0	1	1	0	2	0	1	1	0	2	7
7:45	1	2	0	0	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	5
8:00	1	2	2	0	5	1	1	0	0	2	0	1	0	0	1	1	2	0	0	3	11
8:15	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	1	2	0	0	3	7
Total Volume	3	6	2	0	11	2	5	1	0	8	0	2	1	0	3	2	5	1	0	8	30
% App Total	27.3%	54.5%	18.2%			25.0%	62.5%	12.5%			0.0%	66.7%	33.3%			25.0%	62.5%	12.5%			
PHF	.750	.750	.250		.550	.500	.625	.250		.667	.000	.500	.250		.375	.500	.625	.250		.667	.682

PM PEAK HOUR	Walton Avenue Southbound					Lincoln Road Westbound					Walton Avenue Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	2	0	0	0	2	0	2	0	0	2	0	1	1	0	2	0	2	0	0	2	8
17:15	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	3
17:30	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
17:45	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	3
Total Volume	2	1	0	0	3	0	4	0	0	4	0	4	2	0	6	0	3	0	0	3	16
% App Total	66.7%	33.3%	0.0%			0.0%	100.0%	0.0%			0.0%	66.7%	33.3%			0.0%	100.0%	0.0%			
PHF	.250	.250	.000		.375	.000	.500	.000		.500	.000	1.000	.500		.750	.000	.375	.000		.375	.500

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-018 Walton Avenue & Bogue Road
 Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	16	14	0	0	30	3	29	8	0	40	4	12	7	0	23	1	37	2	0	40	133	0
7:15	22	8	6	0	36	2	33	8	0	43	1	8	6	0	15	1	39	1	0	41	135	0
7:30	29	8	6	0	43	2	39	15	0	56	3	12	14	0	29	9	52	6	0	67	195	0
7:45	26	16	4	0	46	5	27	16	0	48	1	13	6	0	20	1	69	4	0	74	188	0
Total	93	46	16	0	155	12	128	47	0	187	9	45	33	0	87	12	197	13	0	222	651	0
8:00	28	18	4	0	50	4	47	12	0	63	8	9	2	0	19	6	59	21	0	86	218	0
8:15	21	14	1	0	36	1	44	21	0	66	11	16	4	0	31	3	50	16	0	69	202	0
8:30	17	10	4	0	31	9	20	13	0	42	7	14	6	0	27	4	28	4	0	36	136	0
8:45	11	8	3	0	22	0	27	6	0	33	5	10	7	0	22	2	21	3	0	26	103	0
Total	77	50	12	0	139	14	138	52	0	204	31	49	19	0	99	15	158	44	0	217	659	0
16:00	23	19	6	0	48	11	38	13	0	62	9	21	10	0	40	9	32	7	0	48	198	0
16:15	32	14	3	0	49	7	44	13	0	64	4	13	6	0	23	7	37	2	0	46	182	0
16:30	37	14	5	0	56	9	32	23	0	64	8	15	7	0	30	5	33	5	0	43	193	0
16:45	26	11	5	0	42	7	39	22	0	68	5	16	17	0	38	7	29	5	0	41	189	0
Total	118	58	19	0	195	34	153	71	0	258	26	65	40	0	131	28	131	19	0	178	762	0
17:00	39	18	10	0	67	7	49	26	0	82	8	15	10	0	33	3	41	3	0	47	229	0
17:15	27	9	4	0	40	8	50	26	0	84	4	15	9	0	28	4	45	3	0	52	204	0
17:30	25	13	3	0	41	9	41	27	0	77	3	13	5	0	21	5	37	2	0	44	183	0
17:45	28	17	6	0	51	6	44	25	0	75	2	10	9	1	22	3	39	2	1	45	193	2
Total	119	57	23	0	199	30	184	104	0	318	17	53	33	1	104	15	162	10	1	188	809	2
Grand Total	407	211	70	0	688	90	603	274	0	967	83	212	125	1	421	70	648	86	1	805	2881	2
Apprch %	59.2%	30.7%	10.2%	0.0%		9.3%	62.4%	28.3%	0.0%		19.7%	50.4%	29.7%	0.2%		8.7%	80.5%	10.7%	0.1%			
Total %	14.1%	7.3%	2.4%	0.0%	23.9%	3.1%	20.9%	9.5%	0.0%	33.6%	2.9%	7.4%	4.3%	0.0%	14.6%	2.4%	22.5%	3.0%	0.0%	27.9%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	29	8	6	0	43	2	39	15	0	56	3	12	14	0	29	9	52	6	0	67	195
7:45	26	16	4	0	46	5	27	16	0	48	1	13	6	0	20	1	69	4	0	74	188
8:00	28	18	4	0	50	4	47	12	0	63	8	9	2	0	19	6	59	21	0	86	218
8:15	21	14	1	0	36	1	44	21	0	66	11	16	4	0	31	3	50	16	0	69	202
Total Volume	104	56	15	0	175	12	157	64	0	233	23	50	26	0	99	19	230	47	0	296	803
% App Total	59.4%	32.0%	8.6%	0.0%		5.2%	67.4%	27.5%	0.0%		23.2%	50.5%	26.3%	0.0%		6.4%	77.7%	15.9%	0.0%		
PHF	.897	.778	.625	.000	.875	.600	.835	.762	.000	.883	.523	.781	.464	.000	.798	.528	.833	.560	.000	.860	.921

PM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	37	14	5	0	56	9	32	23	0	64	8	15	7	0	30	5	33	5	0	43	193
16:45	26	11	5	0	42	7	39	22	0	68	5	16	17	0	38	7	29	5	0	41	189
17:00	39	18	10	0	67	7	49	26	0	82	8	15	10	0	33	3	41	3	0	47	229
17:15	27	9	4	0	40	8	50	26	0	84	4	15	9	0	28	4	45	3	0	52	204
Total Volume	129	52	24	0	205	31	170	97	0	298	25	61	43	0	129	19	148	16	0	183	815
% App Total	62.9%	25.4%	11.7%	0.0%		10.4%	57.0%	32.6%	0.0%		19.4%	47.3%	33.3%	0.0%		10.4%	80.9%	8.7%	0.0%		
PHF	.827	.722	.600	.000	.765	.861	.850	.933	.000	.887	.781	.953	.632	.000	.849	.679	.822	.800	.000	.880	.890

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@aldtraffic.com

File Name : 16-7206-018 Walton Avenue & Bogue Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Total	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	1	3	3	0
Grand Total	0	1	0	1	1	0	1	1	0	2	0	0	0	0	0	1	1	0	0	2	5	1	5	1
Apprch %	0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%						
Total %	0.0%	20.0%	0.0%		20.0%	0.0%	20.0%	20.0%		40.0%	0.0%	0.0%	0.0%		0.0%	20.0%	20.0%	0.0%		40.0%	100.0%		100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
Peak Hour Analysis From 07:30 to 08:30																								
Peak Hour For Entire Intersection Begins at 07:30																								
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%						
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000	.000

PM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
Peak Hour Analysis From 16:30 to 17:30																								
Peak Hour For Entire Intersection Begins at 16:30																								
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1	0
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	3	0	3	0
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%						
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250	.250	.000		.500	.750		.750	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-018 Walton Avenue & Bogue Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0	4	0
7:15	1	0	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0
7:30	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3	0
7:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Total	1	1	1	0	3	0	1	1	0	2	1	1	3	0	5	0	2	0	0	2	12	0
8:00	2	0	0	0	2	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	6	0
8:15	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	0	3	2	0	5	10	0
8:30	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	0	1	0	1	6	0	
8:45	0	1	0	0	1	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	5	0
Total	2	6	0	0	8	1	4	3	0	8	1	1	1	0	3	0	4	4	0	8	27	0
16:00	1	3	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	4	0	4	9	0
16:15	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	0
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2	3	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
Total	1	4	0	0	5	1	2	0	0	3	0	0	1	0	1	0	1	6	0	7	16	0
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	1	1	0	0	2	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	5	0
Grand Total	5	12	1	0	18	2	9	4	0	15	2	2	5	0	9	0	8	10	0	18	60	0
Apprch %	27.8%	66.7%	5.6%			13.3%	60.0%	26.7%			22.2%	22.2%	55.6%			0.0%	44.4%	55.6%				
Total %	8.3%	20.0%	1.7%		30.0%	3.3%	15.0%	6.7%		25.0%	3.3%	3.3%	8.3%		15.0%	0.0%	13.3%	16.7%		30.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
7:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
8:00	2	0	0	0	2	0	0	3	0	3	0	0	0	0	0	0	0	1	0	1	6
8:15	0	1	0	0	1	0	2	0	0	2	1	1	0	0	2	0	3	2	0	5	10
Total Volume	2	2	1	0	5	0	2	3	0	5	1	2	0	0	3	0	5	3	0	8	21
% App Total	40.0%	40.0%	20.0%			0.0%	40.0%	60.0%			33.3%	66.7%	0.0%			0.0%	62.5%	37.5%			
PHF	.250	.500	.250		.625	.000	.250	.250		.417	.250	.500	.000		.375	.000	.417	.375		.400	.525

PM PEAK HOUR	Walton Avenue Southbound					Bogue Road Westbound					Walton Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	2	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
17:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	0	1	2	0	3	7
% App Total	0.0%	0.0%	0.0%			33.3%	66.7%	0.0%			0.0%	0.0%	100.0%			0.0%	33.3%	66.7%			
PHF	.000	.000	.000		.000	.250	.500	.000		.750	.000	.000	.250		.250	.000	.250	.250		.375	.583

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-019 Walton Avenue & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	5	18	0	0	23	1	0	6	0	7	0	15	1	0	16	0	0	0	0	0	46	0
7:15	3	8	0	0	11	0	0	1	0	1	0	14	0	0	14	0	0	0	0	0	26	0
7:30	3	15	0	0	18	0	0	6	0	6	0	19	2	0	21	0	0	0	0	0	45	0
7:45	1	22	0	0	23	0	0	2	0	2	0	18	1	0	19	0	0	0	0	0	44	0
Total	12	63	0	0	75	1	0	15	0	16	0	66	4	0	70	0	0	0	0	0	161	0
8:00	4	35	0	0	39	0	0	1	0	1	0	19	2	0	21	0	0	0	0	0	61	0
8:15	6	28	0	0	34	0	0	2	0	2	0	28	0	0	28	0	0	0	0	0	64	0
8:30	9	15	0	0	24	2	0	6	0	8	0	19	2	0	21	0	0	0	0	0	53	0
8:45	1	13	0	0	14	1	0	8	0	9	0	10	0	0	10	0	0	0	0	0	33	0
Total	20	91	0	0	111	3	0	17	0	20	0	76	4	0	80	0	0	0	0	0	211	0
16:00	8	25	0	0	33	0	0	8	0	8	0	26	3	0	29	0	0	0	0	0	70	0
16:15	0	19	0	0	19	0	0	5	0	5	0	18	2	0	20	0	0	0	0	0	44	0
16:30	4	16	0	0	20	0	0	6	0	6	0	26	1	0	27	0	0	0	0	0	53	0
16:45	1	13	0	0	14	0	0	7	0	7	0	26	0	0	26	0	0	0	0	0	47	0
Total	13	73	0	0	86	0	0	26	0	26	0	96	6	0	102	0	0	0	0	0	214	0
17:00	2	22	0	0	24	0	0	8	0	8	0	24	1	0	25	0	0	0	0	0	57	0
17:15	1	10	0	0	11	0	0	6	0	6	0	24	0	0	24	0	0	0	0	0	41	0
17:30	2	19	0	0	21	0	0	3	0	3	0	25	1	0	26	0	0	0	0	0	50	0
17:45	2	15	0	0	17	1	0	3	0	4	0	21	0	0	21	0	0	0	0	0	42	0
Total	7	66	0	0	73	1	0	20	0	21	0	94	2	0	96	0	0	0	0	0	190	0
Grand Total	52	293	0	0	345	5	0	78	0	83	0	332	16	0	348	0	0	0	0	0	776	0
Apprch %	15.1%	84.9%	0.0%	0.0%		6.0%	0.0%	94.0%	0.0%		0.0%	95.4%	4.6%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
Total %	6.7%	37.8%	0.0%	0.0%	44.5%	0.6%	0.0%	10.1%	0.0%	10.7%	0.0%	42.8%	2.1%	0.0%	44.8%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	1	22	0	0	23	0	0	2	0	2	0	18	1	0	19	0	0	0	0	0	44
8:00	4	35	0	0	39	0	0	1	0	1	0	19	2	0	21	0	0	0	0	0	61
8:15	6	28	0	0	34	0	0	2	0	2	0	28	0	0	28	0	0	0	0	0	64
8:30	9	15	0	0	24	2	0	6	0	8	0	19	2	0	21	0	0	0	0	0	53
Total Volume	20	100	0	0	120	2	0	11	0	13	0	84	5	0	89	0	0	0	0	0	222
% App Total	16.7%	83.3%	0.0%	0.0%		15.4%	0.0%	84.6%	0.0%		0.0%	94.4%	5.6%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
PHF	.556	.714	.000	.000	.769	.250	.000	.458	.000	.406	.000	.750	.625	.000	.795	.000	.000	.000	.000	.000	.867

PM PEAK HOUR	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	8	25	0	0	33	0	0	8	0	8	0	26	3	0	29	0	0	0	0	0	70
16:15	0	19	0	0	19	0	0	5	0	5	0	18	2	0	20	0	0	0	0	0	44
16:30	4	16	0	0	20	0	0	6	0	6	0	26	1	0	27	0	0	0	0	0	53
16:45	1	13	0	0	14	0	0	7	0	7	0	26	0	0	26	0	0	0	0	0	47
Total Volume	13	73	0	0	86	0	0	26	0	26	0	96	6	0	102	0	0	0	0	0	214
% App Total	15.1%	84.9%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	94.1%	5.9%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	
PHF	.406	.730	.000	.000	.652	.000	.000	.813	.000	.813	.000	.923	.500	.000	.879	.000	.000	.000	.000	.000	.764

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-019 Walton Avenue & Stewart Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total	Peds Total					
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL							
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	100.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%						100.0%	

PM PEAK HOUR	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total						
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL							
Peak Hour Analysis From 16:00 to 17:00																											
Peak Hour For Entire Intersection Begins at 16:00																											
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000					.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-019 Walton Avenue & Stewart Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	1	0	0	0	0	1	0	3	1	0	4	0	0	0	0	0	5	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0
7:45	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0
Total	1	0	0	0	1	1	0	0	0	1	0	4	3	0	7	0	0	0	0	0	9	0	
8:00	1	0	0	0	1	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	4	0
8:15	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0
8:30	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
8:45	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	11	1	0	0	12	0	0	2	0	2	0	2	2	0	4	0	0	0	0	0	18	0	
16:00	4	1	0	0	5	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	7	0
16:15	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
16:30	2	1	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0
16:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	6	5	0	0	11	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0	15	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	
Grand Total	19	6	0	0	25	1	0	4	0	5	0	6	8	0	14	0	0	0	0	0	44	0	
Apprch %	76.0%	24.0%	0.0%			20.0%	0.0%	80.0%			0.0%	42.9%	57.1%			0.0%	0.0%	0.0%					
Total %	43.2%	13.6%	0.0%		56.8%	2.3%	0.0%	9.1%		11.4%	0.0%	13.6%	18.2%		31.8%	0.0%	0.0%	0.0%		0.0%	100.0%		

AM PEAK HOUR	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:45 to 08:45																						
Peak Hour For Entire Intersection Begins at 07:45																						
7:45	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
8:00	1	0	0	0	1	0	0	1	0	1	0	0	2	0	2	0	0	0	0	0	0	4
8:15	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
8:30	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total Volume	12	0	0	0	12	0	0	1	0	1	0	2	3	0	5	0	0	0	0	0	0	18
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	40.0%	60.0%			0.0%	0.0%	0.0%				
PHF	.429	.000	.000		.429	.000	.000	.250		.250	.000	.250	.375		.625	.000	.000	.000		.000	.643	

PM PEAK HOUR	Walton Avenue Southbound					Stewart Road Westbound					Walton Avenue Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	4	1	0	0	5	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	7
16:15	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
16:30	2	1	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4
16:45	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	6	5	0	0	11	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0	0	15
% App Total	54.5%	45.5%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%				
PHF	.375	.417	.000		.550	.000	.000	.500		.500	.000	.000	.250		.250	.000	.000	.000		.000	.536	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-020 Walton Avenue & Reed Road
 Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	19	1	1	21	0	4	0	0	4	1	9	0	0	10	1	0	1	0	2	37	1
7:15	0	8	0	0	8	0	1	1	0	2	1	9	0	0	10	4	4	0	0	8	28	0
7:30	1	14	1	0	16	0	3	1	0	4	3	21	0	0	24	1	2	2	0	5	49	0
7:45	1	20	1	0	22	0	1	2	0	3	0	18	0	0	18	0	1	4	0	5	48	0
Total	2	61	3	1	67	0	9	4	0	13	5	57	0	0	62	6	7	7	0	20	162	1
8:00	0	34	0	0	34	0	0	2	0	2	1	20	0	0	21	0	0	2	0	2	59	0
8:15	0	27	0	0	27	0	0	0	0	0	2	26	0	0	28	0	2	1	0	3	58	0
8:30	0	13	0	0	13	0	3	1	0	4	0	17	0	0	17	2	2	0	0	4	38	0
8:45	0	13	1	0	14	0	2	1	0	3	0	5	0	0	5	3	3	0	0	6	28	0
Total	0	87	1	0	88	0	5	4	0	9	3	68	0	0	71	5	7	3	0	15	183	0
16:00	1	20	2	0	23	0	3	0	0	3	3	24	1	0	28	2	0	0	0	2	56	0
16:15	0	15	1	0	16	0	1	1	0	2	1	19	0	0	20	0	2	1	0	3	41	0
16:30	1	14	1	0	16	0	2	3	0	5	1	21	0	0	22	1	0	0	0	1	44	0
16:45	1	12	0	0	13	1	1	3	0	5	0	18	0	0	18	3	2	1	0	6	42	0
Total	3	61	4	0	68	1	7	7	0	15	5	82	1	0	88	6	4	2	0	12	183	0
17:00	1	20	1	0	22	1	2	0	0	3	0	20	0	0	20	1	1	2	0	4	49	0
17:15	2	6	2	0	10	1	1	2	0	4	0	20	0	0	20	3	1	1	0	5	39	0
17:30	0	16	2	0	18	1	1	5	0	7	0	20	0	0	20	2	0	1	0	3	48	0
17:45	0	13	3	0	16	1	3	2	0	6	0	16	0	0	16	4	1	0	0	5	43	0
Total	3	55	8	0	66	4	7	9	0	20	0	76	0	0	76	10	3	4	0	17	179	0
Grand Total	8	264	16	1	289	5	28	24	0	57	13	283	1	0	297	27	21	16	0	64	707	1
Apprch %	2.8%	91.3%	5.5%	0.3%		8.8%	49.1%	42.1%	0.0%		4.4%	95.3%	0.3%	0.0%		42.2%	32.8%	25.0%	0.0%			
Total %	1.1%	37.3%	2.3%	0.1%	40.9%	0.7%	4.0%	3.4%	0.0%	8.1%	1.8%	40.0%	0.1%	0.0%	42.0%	3.8%	3.0%	2.3%	0.0%	9.1%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	14	1	0	16	0	3	1	0	4	3	21	0	0	24	1	2	2	0	5	49
7:45	1	20	1	0	22	0	1	2	0	3	0	18	0	0	18	0	1	4	0	5	48
8:00	0	34	0	0	34	0	0	2	0	2	1	20	0	0	21	0	0	2	0	2	59
8:15	0	27	0	0	27	0	0	0	0	0	2	26	0	0	28	0	2	1	0	3	58
Total Volume	2	95	2	0	99	0	4	5	0	9	6	85	0	0	91	1	5	9	0	15	214
% App Total	2.0%	96.0%	2.0%	0.0%		0.0%	44.4%	55.6%	0.0%		6.6%	93.4%	0.0%	0.0%		6.7%	33.3%	60.0%	0.0%		
PHF	.500	.699	.500	.000	.728	.000	.333	.625	.000	.563	.500	.817	.000	.000	.813	.250	.625	.563	.000	.750	.907

PM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	1	20	2	0	23	0	3	0	0	3	3	24	1	0	28	2	0	0	0	2	56
16:15	0	15	1	0	16	0	1	1	0	2	1	19	0	0	20	0	2	1	0	3	41
16:30	1	14	1	0	16	0	2	3	0	5	1	21	0	0	22	1	0	0	0	1	44
16:45	1	12	0	0	13	1	1	3	0	5	0	18	0	0	18	3	2	1	0	6	42
Total Volume	3	61	4	0	68	1	7	7	0	15	5	82	1	0	88	6	4	2	0	12	183
% App Total	4.4%	89.7%	5.9%	0.0%		6.7%	46.7%	46.7%	0.0%		5.7%	93.2%	1.1%	0.0%		50.0%	33.3%	16.7%	0.0%		
PHF	.750	.763	.500	.000	.739	.250	.583	.583	.000	.750	.417	.854	.250	.000	.786	.500	.500	.500	.000	.500	.817

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@aldtraffic.com

File Name : 16-7206-020 Walton Avenue & Reed Road

Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	1	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4
Aprch %	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	100.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

PM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-020 Walton Avenue & Reed Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0
7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5	0
8:00	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0
8:15	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	0
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0
16:15	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0
16:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	3	0	0	3	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	6	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
Grand Total	0	5	0	0	5	0	1	1	0	2	1	7	0	0	8	1	0	0	0	1	16	0
Apprch %	0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			12.5%	87.5%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	31.3%	0.0%		31.3%	0.0%	6.3%	6.3%		12.5%	6.3%	43.8%	0.0%		50.0%	6.3%	0.0%	0.0%		6.3%	100.0%	

AM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	
7:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
8:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	
8:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	6	
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.750	.000		.750	.000	.000	.000		.000	.750	

PM PEAK HOUR	Walton Avenue Southbound					Reed Road Westbound					Walton Avenue Northbound					Reed Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:00 to 17:00																						
Peak Hour For Entire Intersection Begins at 16:00																						
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	
16:15	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	
16:30	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	0	3	0	0	3	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	6	
% App Total	0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%				
PHF	.000	.750	.000		.750	.000	.250	.250		.500	.000	.000	.000		.000	.250	.000	.000		.250	.750	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-021 Phillips Road & Lincoln Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	0	0	0	0	2	52	0	0	54	15	0	6	0	21	0	50	7	0	57	132	0
7:15	0	0	0	0	0	8	75	0	0	83	18	0	12	0	30	0	59	10	0	69	182	0
7:30	0	0	0	0	0	17	95	0	0	112	24	0	23	0	47	0	96	24	0	120	279	0
7:45	0	0	0	0	0	12	84	0	0	96	37	0	32	0	69	0	124	34	0	158	323	0
Total	0	0	0	0	0	39	306	0	0	345	94	0	73	0	167	0	329	75	0	404	916	0
8:00	0	0	0	0	0	31	66	0	0	97	37	0	31	0	68	0	76	38	0	114	279	0
8:15	0	0	0	0	0	12	74	0	0	86	28	0	27	0	55	0	69	11	0	80	221	0
8:30	0	0	0	0	0	5	66	0	0	71	8	0	9	0	17	0	65	4	0	69	157	0
8:45	0	0	0	0	0	3	64	0	0	67	16	0	8	0	24	0	49	5	0	54	145	0
Total	0	0	0	0	0	51	270	0	0	321	89	0	75	0	164	0	259	58	0	317	802	0
16:00	0	0	0	0	0	8	96	0	0	104	17	0	18	0	35	0	99	17	0	116	255	0
16:15	0	0	0	0	0	15	104	0	0	119	12	0	18	0	30	0	105	21	0	126	275	0
16:30	0	0	0	0	0	11	122	0	0	133	16	0	12	0	28	0	113	24	0	137	298	0
16:45	0	0	0	0	0	12	118	0	0	130	19	0	15	0	34	0	128	35	0	163	327	0
Total	0	0	0	0	0	46	440	0	0	486	64	0	63	0	127	0	445	97	0	542	1155	0
17:00	0	0	0	0	0	14	158	0	0	172	20	0	25	0	45	0	120	32	0	152	369	0
17:15	0	0	0	0	0	16	129	0	0	145	26	0	20	0	46	0	111	18	0	129	320	0
17:30	0	0	0	0	0	14	125	0	0	139	26	0	16	0	42	0	122	22	0	144	325	0
17:45	0	0	0	0	0	10	111	0	0	121	17	0	12	0	29	0	108	15	0	123	273	0
Total	0	0	0	0	0	54	523	0	0	577	89	0	73	0	162	0	461	87	0	548	1287	0
Grand Total	0	0	0	0	0	190	1539	0	0	1729	336	0	284	0	620	0	1494	317	0	1811	4160	0
Apprch %	0.0%	0.0%	0.0%	0.0%		11.0%	89.0%	0.0%	0.0%		54.2%	0.0%	45.8%	0.0%		0.0%	82.5%	17.5%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	4.6%	37.0%	0.0%	0.0%	41.6%	8.1%	0.0%	6.8%	0.0%	14.9%	0.0%	35.9%	7.6%	0.0%	43.5%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	17	95	0	0	112	24	0	23	0	47	0	96	24	0	120	279	
7:45	0	0	0	0	0	12	84	0	0	96	37	0	32	0	69	0	124	34	0	158	323	
8:00	0	0	0	0	0	31	66	0	0	97	37	0	31	0	68	0	76	38	0	114	279	
8:15	0	0	0	0	0	12	74	0	0	86	28	0	27	0	55	0	69	11	0	80	221	
Total Volume	0	0	0	0	0	72	319	0	0	391	126	0	113	0	239	0	365	107	0	472	1102	
% App Total	0.0%	0.0%	0.0%	0.0%		18.4%	81.6%	0.0%	0.0%		52.7%	0.0%	47.3%	0.0%		0.0%	77.3%	22.7%	0.0%			
PHF	.000	.000	.000	.000	.000	.581	.839	.000	.000	.873	.851	.000	.883	.000	.866	.000	.736	.704	.000	.747	.853	

PM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	12	118	0	0	130	19	0	15	0	34	0	128	35	0	163	327	
17:00	0	0	0	0	0	14	158	0	0	172	20	0	25	0	45	0	120	32	0	152	369	
17:15	0	0	0	0	0	16	129	0	0	145	26	0	20	0	46	0	111	18	0	129	320	
17:30	0	0	0	0	0	14	125	0	0	139	26	0	16	0	42	0	122	22	0	144	325	
Total Volume	0	0	0	0	0	56	530	0	0	586	91	0	76	0	167	0	481	107	0	588	1341	
% App Total	0.0%	0.0%	0.0%	0.0%		9.6%	90.4%	0.0%	0.0%		54.5%	0.0%	45.5%	0.0%		0.0%	81.8%	18.2%	0.0%			
PHF	.000	.000	.000	.000	.000	.875	.839	.000	.000	.852	.875	.000	.760	.000	.908	.000	.939	.764	.000	.902	.909	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-021 Phillips Road & Lincoln Road

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	2	2
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	3	0	0	1	0	0	1	0	2	3
8:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	1	0	0	0	1	2	0	0	0	2	0	0	1	0	1	0	4	0
16:00	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	3
16:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	1	2
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	4	1	0	0	0	2	0	0	1	0	0	1	0	2	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0	2	0	4	0
Total	0	0	0	0	0	0	0	0	1	0	2	0	1	1	3	0	0	2	0	2	0	5	2
Grand Total	0	0	1	0	1	1	1	0	5	2	4	0	1	6	5	0	2	3	0	5	13	11	
Apprch %	0.0%	0.0%	100.0%			50.0%	50.0%	0.0%			80.0%	0.0%	20.0%			0.0%	40.0%	60.0%					
Total %	0.0%	0.0%	7.7%		7.7%	7.7%	7.7%	0.0%		15.4%	30.8%	0.0%	7.7%		38.5%	0.0%	15.4%	23.1%		38.5%	100.0%		

AM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	2
8:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
Total Volume	0	0	1	0	1	1	0	0	0	1	0	0	0	2	0	0	1	1	0	2	0	4
% App Total	0.0%	0.0%	100.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	50.0%	50.0%				
PHF	.000	.000	.250		.250	.250	.000	.000		.250	.000	.000	.000		.000	.250	.250		.500		.500	

PM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250		.250	.000	.000	.000		.000		.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-021 Phillips Road & Lincoln Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
7:15	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	4	0
7:30	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9	0
7:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	0
Total	0	0	0	0	0	0	9	0	0	9	0	0	1	0	1	0	10	0	0	10	20	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
8:15	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	0
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	0
8:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4	0
Total	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	9	0	0	9	15	0
16:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5	0
16:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	10	0	0	10	15	0
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	7	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	0
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	14	0
Grand Total	0	0	0	0	0	0	24	0	0	24	0	0	1	0	1	0	39	0	0	39	64	0
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	37.5%	0.0%		37.5%	0.0%	0.0%	1.6%		1.6%	0.0%	60.9%	0.0%		60.9%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	9
7:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6
Total Volume	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10	21
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.550	.000		.550	.000	.000	.000		.000	.000	.625	.000		.625	.583

PM PEAK HOUR	Phillips Road Southbound					Lincoln Road Westbound					Phillips Road Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
17:00	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	7
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	12	0	0	12	13
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.500	.000		.500	.464	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-022 Railroad Avenue & Lincoln Road
 Date : 3/22/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	7	10	2	0	19	1	28	5	0	34	13	10	8	0	31	1	53	4	0	58	142	0
7:15	10	12	7	0	29	5	36	7	0	48	12	13	10	0	35	5	55	8	0	68	180	0
7:30	9	13	7	0	29	4	48	9	0	61	32	38	8	0	78	8	74	10	0	92	260	0
7:45	15	20	11	0	46	3	47	14	0	64	28	35	12	0	75	21	89	10	0	120	305	0
Total	41	55	27	0	123	13	159	35	0	207	85	96	38	0	219	35	271	32	0	338	887	0
8:00	19	23	19	0	61	9	54	16	0	79	22	44	9	0	75	15	79	10	0	104	319	0
8:15	14	28	6	0	48	5	46	9	0	60	25	21	9	0	55	18	54	15	0	87	250	0
8:30	3	11	8	0	22	3	43	2	0	48	13	19	3	0	35	8	52	7	0	67	172	0
8:45	6	8	2	0	16	2	31	7	0	40	19	14	7	0	40	5	53	5	0	63	159	0
Total	42	70	35	0	147	19	174	34	0	227	79	98	28	0	205	46	238	37	0	321	900	0
16:00	16	19	13	0	48	5	84	4	0	93	15	19	6	0	40	11	57	22	0	90	271	0
16:15	9	26	8	0	43	9	73	7	0	89	23	16	8	0	47	7	52	20	0	79	258	0
16:30	19	19	9	0	47	7	76	13	0	96	18	18	8	0	44	12	61	17	0	90	277	0
16:45	26	22	12	0	60	10	81	20	0	111	20	29	6	0	55	11	87	17	0	115	341	0
Total	70	86	42	0	198	31	314	44	0	389	76	82	28	0	186	41	257	76	0	374	1147	0
17:00	22	33	21	0	76	11	95	19	0	125	24	20	6	0	50	12	62	27	0	101	352	0
17:15	21	25	9	0	55	5	101	14	0	120	15	19	4	0	38	10	70	24	0	104	317	0
17:30	16	25	9	0	50	9	88	12	0	109	20	25	9	0	54	8	71	24	0	103	316	0
17:45	24	16	5	0	45	4	67	7	0	78	21	26	6	0	53	4	65	21	0	90	266	0
Total	83	99	44	0	226	29	351	52	0	432	80	90	25	0	195	34	268	96	0	398	1251	0
Grand Total	236	310	148	0	694	92	998	165	0	1255	320	366	119	0	805	156	1034	241	0	1431	4185	0
Apprch %	34.0%	44.7%	21.3%	0.0%		7.3%	79.5%	13.1%	0.0%		39.8%	45.5%	14.8%	0.0%		10.9%	72.3%	16.8%	0.0%			
Total %	5.6%	7.4%	3.5%	0.0%	16.6%	2.2%	23.8%	3.9%	0.0%	30.0%	7.6%	8.7%	2.8%	0.0%	19.2%	3.7%	24.7%	5.8%	0.0%	34.2%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	9	13	7	0	29	4	48	9	0	61	32	38	8	0	78	8	74	10	0	92	260	
7:45	15	20	11	0	46	3	47	14	0	64	28	35	12	0	75	21	89	10	0	120	305	
8:00	19	23	19	0	61	9	54	16	0	79	22	44	9	0	75	15	79	10	0	104	319	
8:15	14	28	6	0	48	5	46	9	0	60	25	21	9	0	55	18	54	15	0	87	250	
Total Volume	57	84	43	0	184	21	195	48	0	264	107	138	38	0	283	62	296	45	0	403	1134	
% App Total	31.0%	45.7%	23.4%	0.0%		8.0%	73.9%	18.2%	0.0%		37.8%	48.8%	13.4%	0.0%		15.4%	73.4%	11.2%	0.0%			
PHF	.750	.750	.566	.000	.754	.583	.903	.750	.000	.835	.836	.784	.792	.000	.907	.738	.831	.750	.000	.840	.889	

PM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	26	22	12	0	60	10	81	20	0	111	20	29	6	0	55	11	87	17	0	115	341	
17:00	22	33	21	0	76	11	95	19	0	125	24	20	6	0	50	12	62	27	0	101	352	
17:15	21	25	9	0	55	5	101	14	0	120	15	19	4	0	38	10	70	24	0	104	317	
17:30	16	25	9	0	50	9	88	12	0	109	20	25	9	0	54	8	71	24	0	103	316	
Total Volume	85	105	51	0	241	35	365	65	0	465	79	93	25	0	197	41	290	92	0	423	1326	
% App Total	35.3%	43.6%	21.2%	0.0%		7.5%	78.5%	14.0%	0.0%		40.1%	47.2%	12.7%	0.0%		9.7%	68.6%	21.7%	0.0%			
PHF	.817	.795	.607	.000	.793	.795	.903	.813	.000	.930	.823	.802	.694	.000	.895	.854	.833	.852	.000	.920	.942	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-022 Railroad Avenue & Lincoln Road

Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	8	
7:15	0	0	0	1	0	0	0	0	1	0	0	0	5	0	0	0	0	4	0	0	0	11	
7:30	0	0	0	2	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	5	
7:45	0	0	0	2	0	1	0	0	0	1	0	1	0	2	1	0	0	0	2	0	0	6	
Total	0	0	0	8	0	1	0	0	6	1	0	1	0	8	1	0	0	8	0	0	2	30	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	5	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	4	
8:30	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:45	0	0	0	0	0	0	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	2	
Total	1	0	0	0	1	0	0	0	2	0	0	2	0	4	2	0	0	5	0	0	3	11	
16:00	0	0	0	0	0	0	0	0	3	0	0	1	0	4	1	0	0	1	0	0	1	8	
16:15	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	3	1	0	1	5	
16:30	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	3	1	0	2	4	
16:45	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	
Total	0	0	1	1	1	0	1	0	5	1	0	1	0	6	1	2	0	7	2	0	5	19	
17:00	0	0	0	3	0	0	0	0	0	0	1	0	1	1	0	0	0	5	0	0	1	9	
17:15	0	0	0	3	0	0	0	1	0	1	0	0	2	0	0	1	0	0	1	0	1	5	
17:30	0	2	0	2	2	0	0	0	0	0	0	0	4	0	0	0	3	0	0	0	2	9	
17:45	0	1	0	1	1	0	0	0	0	0	0	0	3	0	1	0	1	2	0	0	3	5	
Total	0	3	0	9	3	0	0	1	0	1	0	1	0	10	1	1	0	9	3	0	8	28	
Grand Total	1	3	1	18	5	1	1	1	13	3	0	5	0	28	5	3	0	2	29	5	18	88	
Apprch %	20.0%	60.0%	20.0%			33.3%	33.3%	33.3%			0.0%	100.0%	0.0%			60.0%	0.0%	40.0%					
Total %	5.6%	16.7%	5.6%		27.8%	5.6%	5.6%	5.6%		16.7%	0.0%	27.8%	0.0%		27.8%	16.7%	0.0%	11.1%			27.8%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	2	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0
7:45	0	0	0	2	0	1	0	0	0	1	0	1	0	2	1	0	0	0	2	0	0	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	
Total Volume	0	0	0	4	0	1	0	0	2	1	0	1	0	7	1	0	0	7	0	0	2	
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.250	.000		.250	.000	.000		.000	.000	.250	

PM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1
17:00	0	0	0	3	0	0	0	0	0	0	0	1	0	1	1	0	0	5	0	0	1	1
17:15	0	0	0	3	0	0	0	1	0	1	0	0	2	0	0	0	1	0	1	0	2	2
17:30	0	2	0	2	2	0	0	0	0	0	0	0	4	0	0	0	0	3	0	0	2	2
Total Volume	0	2	1	8	3	0	0	1	1	1	0	1	0	8	1	0	0	8	1	0	6	6
% App Total	0.0%	66.7%	33.3%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%			0.0%	0.0%	100.0%				
PHF	.000	.250	.250		.375	.000	.000	.250		.250	.000	.250	.000		.250	.000	.000	.250		.250	.750	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-022 Railroad Avenue & Lincoln Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	5	0
7:15	0	1	0	0	1	0	3	2	0	5	0	0	0	0	0	0	2	0	0	2	8	0
7:30	0	1	0	0	1	0	6	0	0	6	1	0	0	0	1	0	6	0	0	6	14	0
7:45	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	0	1	0	2	7	0
Total	0	3	0	0	3	0	14	2	0	16	1	0	1	0	2	1	11	1	0	13	34	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
8:15	0	1	0	0	1	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	8	0
8:30	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	7	0
8:45	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	4	0
Total	0	1	0	0	1	0	8	0	0	8	1	0	1	0	2	0	9	1	0	10	21	0
16:00	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	7	0
16:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
16:30	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	0
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5	0
Total	0	1	0	0	1	0	7	0	0	7	0	0	0	0	0	0	11	0	0	11	19	0
17:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	10	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
17:45	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	0
Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	15	0	0	15	20	0
Grand Total	0	5	0	0	5	0	34	2	0	36	2	0	2	0	4	1	46	2	0	49	94	0
Apprch %	0.0%	100.0%	0.0%			0.0%	94.4%	5.6%			50.0%	0.0%	50.0%			2.0%	93.9%	4.1%				
Total %	0.0%	5.3%	0.0%		5.3%	0.0%	36.2%	2.1%		38.3%	2.1%	0.0%	2.1%		4.3%	1.1%	48.9%	2.1%		52.1%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	1	0	0	1	0	6	0	0	6	1	0	0	0	1	0	6	0	0	6	14
7:45	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	0	1	0	2	7
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
8:15	0	1	0	0	1	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	8
Total Volume	0	2	0	0	2	0	13	0	0	13	1	0	2	0	3	1	11	1	0	13	31
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			33.3%	0.0%	66.7%			7.7%	84.6%	7.7%			
PHF	.000	.500	.000		.500	.000	.542	.000		.542	.250	.000	.500		.750	.250	.458	.250		.542	.554

PM PEAK HOUR	Railroad Avenue Southbound					Lincoln Road Westbound					Railroad Avenue Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5
17:00	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	10
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	18	0	0	18	21
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.000		.000	.000	.563	.000		.563	.525

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-023 Garden Highway & Lincoln Road

Date : 3/22/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	49	16	0	65	0	0	0	0	0	19	86	0	0	105	49	0	21	0	70	240	0
7:15	0	85	17	0	102	0	0	0	0	0	18	138	0	0	156	49	0	30	0	79	337	0
7:30	0	82	28	0	110	0	0	0	0	0	25	178	0	0	203	57	0	30	0	87	400	0
7:45	0	96	22	0	118	0	0	0	0	0	37	221	0	0	258	89	0	37	0	126	502	0
Total	0	312	83	0	395	0	0	0	0	0	99	623	0	0	722	244	0	118	0	362	1479	0
8:00	0	117	38	0	155	0	0	0	0	0	39	167	0	0	206	67	0	38	0	105	466	0
8:15	0	103	30	0	133	0	0	0	0	0	24	117	0	0	141	51	0	26	0	77	351	0
8:30	0	64	32	0	96	0	0	0	0	0	15	130	0	0	145	40	0	18	0	58	299	0
8:45	0	88	12	0	100	0	0	0	0	0	17	92	0	0	109	40	0	26	0	66	275	0
Total	0	372	112	0	484	0	0	0	0	0	95	506	0	0	601	198	0	108	0	306	1391	0
16:00	0	139	50	0	189	0	0	0	0	0	35	105	0	0	140	42	0	41	0	83	412	0
16:15	0	153	59	0	212	0	0	0	0	0	27	92	0	0	119	33	0	29	0	62	393	0
16:30	0	162	51	0	213	0	0	0	0	0	43	116	0	0	159	50	0	35	0	85	457	0
16:45	0	144	61	0	205	0	0	0	0	0	44	112	0	1	157	54	0	47	0	101	463	1
Total	0	598	221	0	819	0	0	0	0	0	149	425	0	1	575	179	0	152	0	331	1725	1
17:00	0	167	63	0	230	0	0	0	0	0	63	146	0	0	209	41	0	45	0	86	525	0
17:15	0	177	63	0	240	0	0	0	0	0	55	115	0	0	170	47	0	42	0	89	499	0
17:30	0	112	55	0	167	0	0	0	0	0	48	144	0	1	193	44	0	42	0	86	446	1
17:45	0	141	51	0	192	0	0	0	0	0	34	124	0	0	158	46	0	32	0	78	428	0
Total	0	597	232	0	829	0	0	0	0	0	200	529	0	1	730	178	0	161	0	339	1898	1
Grand Total	0	1879	648	0	2527	0	0	0	0	0	543	2083	0	2	2628	799	0	539	0	1338	6493	2
Apprch %	0.0%	74.4%	25.6%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	20.7%	79.3%	0.0%	0.1%		59.7%	0.0%	40.3%	0.0%			
Total %	0.0%	28.9%	10.0%	0.0%	38.9%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%	32.1%	0.0%	0.0%	40.5%	12.3%	0.0%	8.3%	0.0%	20.6%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	82	28	0	110	0	0	0	0	0	25	178	0	0	203	57	0	30	0	87	400	
7:45	0	96	22	0	118	0	0	0	0	0	37	221	0	0	258	89	0	37	0	126	502	
8:00	0	117	38	0	155	0	0	0	0	0	39	167	0	0	206	67	0	38	0	105	466	
8:15	0	103	30	0	133	0	0	0	0	0	24	117	0	0	141	51	0	26	0	77	351	
Total Volume	0	398	118	0	516	0	0	0	0	0	125	683	0	0	808	264	0	131	0	395	1719	
% App Total	0.0%	77.1%	22.9%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	15.5%	84.5%	0.0%	0.0%		66.8%	0.0%	33.2%	0.0%			
PHF	.000	.850	.776	.000	.832	.000	.000	.000	.000	.000	.801	.773	.000	.000	.783	.742	.000	.862	.000	.784	.856	

PM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	162	51	0	213	0	0	0	0	0	43	116	0	0	159	50	0	35	0	85	457	
16:45	0	144	61	0	205	0	0	0	0	0	44	112	0	1	157	54	0	47	0	101	463	
17:00	0	167	63	0	230	0	0	0	0	0	63	146	0	0	209	41	0	45	0	86	525	
17:15	0	177	63	0	240	0	0	0	0	0	55	115	0	0	170	47	0	42	0	89	499	
Total Volume	0	650	238	0	888	0	0	0	0	0	205	489	0	1	695	192	0	169	0	361	1944	
% App Total	0.0%	73.2%	26.8%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	29.5%	70.4%	0.0%	0.1%		53.2%	0.0%	46.8%	0.0%			
PHF	.000	.918	.944	.000	.925	.000	.000	.000	.000	.000	.813	.837	.000	.250	.831	.889	.000	.899	.000	.894	.926	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-023 Garden Highway & Lincoln Road
 Date : 3/22/2016

Bank 1 Count = Bikes & Peds

START TIME	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total	Peds Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL					
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	2	1	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	
Total	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	1	1	1	0	4	1	1	
16:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	1	2	2	
16:15	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	0	2	0	0	1	4	4	
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	
Total	0	0	0	0	0	0	0	0	0	0	3	1	0	2	4	0	0	0	4	0	0	4	6	6	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	
17:45	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	1	0	1	0	3	0	0	
Total	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	4	0	0	0	
Grand Total	0	1	0	0	1	0	0	0	0	0	5	4	0	2	9	0	0	2	7	2	12	9	9	9	
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			55.6%	44.4%	0.0%			0.0%	0.0%	100.0%							
Total %	0.0%	8.3%	0.0%		8.3%	0.0%	0.0%	0.0%		0.0%	41.7%	33.3%	0.0%		75.0%	0.0%	0.0%	16.7%		16.7%		100.0%			

AM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 07:30 to 08:30																							
Peak Hour For Entire Intersection Begins at 07:30																							
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	2	0
Total Volume	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0	0	2	2
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%					
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000		.000	.000	.000	.250	.250

PM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 16:30 to 17:30																							
Peak Hour For Entire Intersection Begins at 16:30																							
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	2	2
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%			0.0%	0.0%	0.0%					
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.250	.250	.000		.500	.000	.000	.000		.000	.000	.500	.500

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-023 Garden Highway & Lincoln Road

Date : 3/22/2016

Bank 2 Count = Heavy Trucks

START TIME	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	5	0
7:15	0	3	0	0	3	0	0	0	0	0	4	1	0	0	5	1	0	2	0	3	11	0
7:30	0	2	2	0	4	0	0	0	0	0	3	1	0	0	4	4	0	1	0	5	13	0
7:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4	0
Total	0	7	3	0	10	0	0	0	0	0	7	5	0	0	12	7	0	4	0	11	33	0
8:00	0	3	1	0	4	0	0	0	0	0	1	0	0	0	1	2	0	1	0	3	8	0
8:15	0	6	0	0	6	0	0	0	0	0	2	3	0	0	5	1	0	0	0	1	12	0
8:30	0	4	2	0	6	0	0	0	0	0	2	3	0	0	5	3	0	1	0	4	15	0
8:45	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	2	0	2	7	0
Total	0	15	3	0	18	0	0	0	0	0	6	8	0	0	14	6	0	4	0	10	42	0
16:00	0	0	1	0	1	0	0	0	0	0	2	1	0	0	3	2	0	1	0	3	7	0
16:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	3	0
16:30	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	10	0
16:45	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	2	0	4	0	6	12	0
Total	0	8	4	0	12	0	0	0	0	0	2	4	0	0	6	8	0	6	0	14	32	0
17:00	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	3	0	3	0	6	9	0
17:15	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	4	0	5	10	0
17:30	0	3	4	0	7	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	10	0
17:45	0	1	0	0	1	0	0	0	0	0	2	1	0	0	3	1	0	0	0	1	5	0
Total	0	7	5	0	12	0	0	0	0	0	3	4	0	0	7	7	0	8	0	15	34	0
Grand Total	0	37	15	0	52	0	0	0	0	0	18	21	0	0	39	28	0	22	0	50	141	0
Apprch %	0.0%	71.2%	28.8%			0.0%	0.0%	0.0%			46.2%	53.8%	0.0%			56.0%	0.0%	44.0%				
Total %	0.0%	26.2%	10.6%		36.9%	0.0%	0.0%	0.0%		0.0%	12.8%	14.9%	0.0%		27.7%	19.9%	0.0%	15.6%		35.5%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	2	2	0	4	0	0	0	0	0	3	1	0	0	4	4	0	1	0	5	13
7:45	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:00	0	3	1	0	4	0	0	0	0	0	1	0	0	0	1	2	0	1	0	3	8
8:15	0	6	0	0	6	0	0	0	0	0	2	3	0	0	5	1	0	0	0	1	12
Total Volume	0	13	3	0	16	0	0	0	0	0	6	6	0	0	12	7	0	2	0	9	37
% App Total	0.0%	81.3%	18.8%			0.0%	0.0%	0.0%			50.0%	50.0%	0.0%			77.8%	0.0%	22.2%			
PHF	.000	.542	.375		.667	.000	.000	.000		.000	.500	.500	.000		.600	.438	.000	.500		.450	.712

PM PEAK HOUR	Garden Highway Southbound					Lincoln Road Westbound					Garden Highway Northbound					Lincoln Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	4	2	0	6	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	10
16:45	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	2	0	4	0	6	12
17:00	0	1	1	0	2	0	0	0	0	0	1	0	0	0	1	3	0	3	0	6	9
17:15	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	1	0	4	0	5	10
Total Volume	0	10	4	0	14	0	0	0	0	0	1	5	0	0	6	9	0	12	0	21	41
% App Total	0.0%	71.4%	28.6%			0.0%	0.0%	0.0%			16.7%	83.3%	0.0%			42.9%	0.0%	57.1%			
PHF	.000	.625	.500		.583	.000	.000	.000		.000	.250	.417	.000		.500	.750	.000	.750		.875	.854

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-024 Phillips Road & Bogue Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	1	0	19	0	20	0	68	2	0	70	0	0	0	0	0	3	32	0	0	35	125	0
7:15	1	0	4	0	5	0	101	3	0	104	0	0	0	0	0	4	29	0	0	33	142	0
7:30	5	0	17	0	22	0	113	10	0	123	0	0	0	0	0	7	61	0	0	68	213	0
7:45	16	0	10	0	26	0	93	14	0	107	0	0	0	0	0	10	81	0	0	91	224	0
Total	23	0	50	0	73	0	375	29	0	404	0	0	0	0	0	24	203	0	0	227	704	0
8:00	16	0	18	0	34	0	84	20	2	106	0	0	0	0	0	6	62	0	0	68	208	2
8:15	13	0	9	0	22	0	66	5	0	71	0	0	0	0	0	1	53	0	0	54	147	0
8:30	7	0	6	0	13	0	66	8	0	74	0	0	0	0	0	0	50	0	0	50	137	0
8:45	0	0	8	0	8	0	78	2	0	80	0	0	0	0	0	2	37	0	0	39	127	0
Total	36	0	41	0	77	0	294	35	2	331	0	0	0	0	0	9	202	0	0	211	619	2
16:00	1	0	7	0	8	0	79	2	0	81	0	0	0	0	0	12	118	0	0	130	219	0
16:15	1	0	10	0	11	0	73	4	0	77	0	0	0	0	0	9	99	0	0	108	196	0
16:30	4	0	6	0	10	0	84	2	0	86	0	0	0	0	0	11	122	0	0	133	229	0
16:45	5	0	9	0	14	0	69	0	0	69	0	0	0	0	0	12	112	0	0	124	207	0
Total	11	0	32	0	43	0	305	8	0	313	0	0	0	0	0	44	451	0	0	495	851	0
17:00	2	0	8	0	10	0	64	6	0	70	0	0	0	0	0	13	124	0	0	137	217	0
17:15	9	0	9	0	18	0	79	3	0	82	0	0	0	0	0	20	114	0	0	134	234	0
17:30	3	0	12	0	15	0	99	3	0	102	0	0	0	0	0	10	87	0	0	97	214	0
17:45	3	0	4	0	7	0	83	1	0	84	0	0	0	0	0	10	137	0	0	147	238	0
Total	17	0	33	0	50	0	325	13	0	338	0	0	0	0	0	53	462	0	0	515	903	0
Grand Total	87	0	156	0	243	0	1299	85	2	1386	0	0	0	0	0	130	1318	0	0	1448	3077	2
Apprch %	35.8%	0.0%	64.2%	0.0%		0.0%	93.7%	6.1%	0.1%		0.0%	0.0%	0.0%	0.0%		9.0%	91.0%	0.0%	0.0%			
Total %	2.8%	0.0%	5.1%	0.0%	7.9%	0.0%	42.2%	2.8%	0.1%	45.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	42.8%	0.0%	0.0%	47.1%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	5	0	17	0	22	0	113	10	0	123	0	0	0	0	0	7	61	0	0	68	213
7:45	16	0	10	0	26	0	93	14	0	107	0	0	0	0	0	10	81	0	0	91	224
8:00	16	0	18	0	34	0	84	20	2	106	0	0	0	0	0	6	62	0	0	68	208
8:15	13	0	9	0	22	0	66	5	0	71	0	0	0	0	0	1	53	0	0	54	147
Total Volume	50	0	54	0	104	0	356	49	2	407	0	0	0	0	0	24	257	0	0	281	792
% App Total	48.1%	0.0%	51.9%	0.0%		0.0%	87.5%	12.0%	0.5%		0.0%	0.0%	0.0%	0.0%		8.5%	91.5%	0.0%	0.0%		
PHF	.781	.000	.750	.000	.765	.000	.788	.613	.250	.827	.000	.000	.000	.000	.000	.600	.793	.000	.000	.772	.884

PM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	2	0	8	0	10	0	64	6	0	70	0	0	0	0	0	13	124	0	0	137	217
17:15	9	0	9	0	18	0	79	3	0	82	0	0	0	0	0	20	114	0	0	134	234
17:30	3	0	12	0	15	0	99	3	0	102	0	0	0	0	0	10	87	0	0	97	214
17:45	3	0	4	0	7	0	83	1	0	84	0	0	0	0	0	10	137	0	0	147	238
Total Volume	17	0	33	0	50	0	325	13	0	338	0	0	0	0	0	53	462	0	0	515	903
% App Total	34.0%	0.0%	66.0%	0.0%		0.0%	96.2%	3.8%	0.0%		0.0%	0.0%	0.0%	0.0%		10.3%	89.7%	0.0%	0.0%		
PHF	.472	.000	.688	.000	.694	.000	.821	.542	.000	.828	.000	.000	.000	.000	.000	.663	.843	.000	.000	.876	.949

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-024 Phillips Road & Bogue Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	2	0
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	2	0	0	0	3	4	1
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%		25.0%	0.0%	0.0%	0.0%		33.3%	66.7%	0.0%						
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	25.0%	0.0%		25.0%	0.0%	0.0%	0.0%		25.0%	50.0%	0.0%			75.0%		100.0%	

AM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	100.0%	0.0%						
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000		.000	.250	.000			.250		.250	

PM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%						
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000		.000	.000	.000			.000		.000	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-024 Phillips Road & Bogue Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0
7:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	0
7:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0
7:45	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	1	0	0	2	4	0
Total	0	0	1	0	1	0	4	2	0	6	0	0	0	0	0	1	4	0	0	5	12	0
8:00	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5	0
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
8:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	2	0	2	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	12	0
16:00	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
16:15	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	0
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
16:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	11	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
17:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	5	0
Grand Total	1	0	3	0	4	0	18	2	0	20	0	0	0	0	0	2	14	0	0	16	40	0
Apprch %	25.0%	0.0%	75.0%			0.0%	90.0%	10.0%			0.0%	0.0%	0.0%			12.5%	87.5%	0.0%				
Total %	2.5%	0.0%	7.5%		10.0%	0.0%	45.0%	5.0%		50.0%	0.0%	0.0%	0.0%		0.0%	5.0%	35.0%	0.0%		40.0%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2
7:45	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	1	1	0	0	2	4
8:00	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	2	0	0	0	2	5
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
Total Volume	0	0	2	0	2	0	4	2	0	6	0	0	0	0	0	1	4	0	0	5	13
% App Total	0.0%	0.0%	100.0%			0.0%	66.7%	33.3%			0.0%	0.0%	0.0%			20.0%	80.0%	0.0%			
PHF	.000	.000	.250		.250	.000	1.000	.500		.750	.000	.000	.000		.000	.250	.500	.000		.625	.650

PM PEAK HOUR	Phillips Road Southbound					Bogue Road Westbound					Phillips Road Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
17:45	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			33.3%	66.7%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.250	.250	.000		.375	.625

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-025 Railroad Avenue & Bogue Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	7	3	9	0	19	3	54	9	0	66	2	3	5	0	10	3	33	1	0	37	132	0
7:15	11	9	14	0	34	4	80	9	0	93	6	4	8	0	18	2	26	2	0	30	175	0
7:30	9	23	4	0	36	4	108	14	0	126	7	19	11	0	37	6	52	3	0	61	260	0
7:45	7	21	9	0	37	9	82	12	0	103	10	23	2	0	35	8	67	13	0	88	263	0
Total	34	56	36	0	126	20	324	44	0	388	25	49	26	0	100	19	178	19	0	216	830	0
8:00	16	31	12	0	59	8	79	8	0	95	15	29	13	0	57	6	61	10	0	77	288	0
8:15	16	28	6	0	50	8	48	9	0	65	20	35	23	0	78	6	51	9	0	66	259	0
8:30	7	3	7	0	17	6	61	8	0	75	11	11	5	0	27	7	47	2	0	56	175	0
8:45	5	2	4	0	11	4	66	5	0	75	2	4	4	0	10	3	29	1	0	33	129	0
Total	44	64	29	0	137	26	254	30	0	310	48	79	45	0	172	22	188	22	0	232	851	0
16:00	10	3	6	0	19	1	70	9	0	80	7	15	12	0	34	14	102	2	0	118	251	0
16:15	2	7	6	0	15	5	76	4	0	85	4	8	9	0	21	5	80	7	0	92	213	0
16:30	11	14	10	0	35	5	72	8	0	85	5	12	7	0	24	18	99	4	0	121	265	0
16:45	12	12	4	0	28	5	61	12	0	78	1	10	7	0	18	16	94	6	0	116	240	0
Total	35	36	26	0	97	16	279	33	0	328	17	45	35	0	97	53	375	19	0	447	969	0
17:00	11	7	5	0	23	11	60	10	0	81	3	16	14	0	33	13	100	4	0	117	254	0
17:15	16	12	9	0	37	8	72	11	0	91	3	21	2	0	26	16	97	5	0	118	272	0
17:30	12	12	5	0	29	10	86	7	0	103	5	11	7	0	23	12	80	3	0	95	250	0
17:45	9	9	8	0	26	4	77	11	0	92	7	13	2	0	22	13	109	5	0	127	267	0
Total	48	40	27	0	115	33	295	39	0	367	18	61	25	0	104	54	386	17	0	457	1043	0
Grand Total	161	196	118	0	475	95	1152	146	0	1393	108	234	131	0	473	148	1127	77	0	1352	3693	0
Apprch %	33.9%	41.3%	24.8%	0.0%		6.8%	82.7%	10.5%	0.0%		22.8%	49.5%	27.7%	0.0%		10.9%	83.4%	5.7%	0.0%			
Total %	4.4%	5.3%	3.2%	0.0%	12.9%	2.6%	31.2%	4.0%	0.0%	37.7%	2.9%	6.3%	3.5%	0.0%	12.8%	4.0%	30.5%	2.1%	0.0%	36.6%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	9	23	4	0	36	4	108	14	0	126	7	19	11	0	37	6	52	3	0	61	260
7:45	7	21	9	0	37	9	82	12	0	103	10	23	2	0	35	8	67	13	0	88	263
8:00	16	31	12	0	59	8	79	8	0	95	15	29	13	0	57	6	61	10	0	77	288
8:15	16	28	6	0	50	8	48	9	0	65	20	35	23	0	78	6	51	9	0	66	259
Total Volume	48	103	31	0	182	29	317	43	0	389	52	106	49	0	207	26	231	35	0	292	1070
% App Total	26.4%	56.6%	17.0%	0.0%		7.5%	81.5%	11.1%	0.0%		25.1%	51.2%	23.7%	0.0%		8.9%	79.1%	12.0%	0.0%		
PHF	.750	.831	.646	.000	.771	.806	.734	.768	.000	.772	.650	.757	.533	.000	.663	.813	.862	.673	.000	.830	.929

PM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	11	7	5	0	23	11	60	10	0	81	3	16	14	0	33	13	100	4	0	117	254
17:15	16	12	9	0	37	8	72	11	0	91	3	21	2	0	26	16	97	5	0	118	272
17:30	12	12	5	0	29	10	86	7	0	103	5	11	7	0	23	12	80	3	0	95	250
17:45	9	9	8	0	26	4	77	11	0	92	7	13	2	0	22	13	109	5	0	127	267
Total Volume	48	40	27	0	115	33	295	39	0	367	18	61	25	0	104	54	386	17	0	457	1043
% App Total	41.7%	34.8%	23.5%	0.0%		9.0%	80.4%	10.6%	0.0%		17.3%	58.7%	24.0%	0.0%		11.8%	84.5%	3.7%	0.0%		
PHF	.750	.833	.750	.000	.777	.750	.858	.886	.000	.891	.643	.726	.446	.000	.788	.844	.885	.850	.000	.900	.959

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-025 Railroad Avenue & Bogue Road

Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	1	0	0	1	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	1	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	
8:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	2	0	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
16:45	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1	1	
Total	0	0	0	0	0	0	0	0	3	0	0	1	0	1	0	0	0	0	0	0	1	3		
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	
Total	0	1	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	2	
Grand Total	1	1	0	2	2	2	1	1	3	4	0	1	0	1	1	0	1	0	0	1	8	6		
Apprch %	50.0%	50.0%	0.0%			50.0%	25.0%	25.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%						
Total %	12.5%	12.5%	0.0%		25.0%	25.0%	12.5%	12.5%		50.0%	0.0%	12.5%	0.0%		12.5%	0.0%	12.5%	0.0%		12.5%	100.0%			

AM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	3
% App Total	100.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
PHF	.250	.000	.000		.250	.250	.000	.000		.250	.000	.000	.000		.000	.250	.000		.250		.750	

PM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
% App Total	0.0%	100.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000		.000		.500	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-025 Railroad Avenue & Bogue Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3	0
7:15	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	0
7:30	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
7:45	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	4	0
Total	0	3	0	0	3	0	6	1	0	7	0	0	0	0	0	1	2	0	0	3	13	0
8:00	0	1	0	0	1	1	1	0	0	2	0	1	0	0	1	0	2	1	0	3	7	0
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	0
8:45	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0
Total	0	2	0	0	2	1	5	0	0	6	0	1	0	0	1	0	5	1	0	6	15	0
16:00	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	3	0
16:15	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	5	0
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	1	0	1	0	5	0	0	5	0	1	0	0	1	0	4	0	0	4	11	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	0
17:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	0
Grand Total	0	5	1	0	6	1	19	1	0	21	0	2	0	0	2	1	14	1	0	16	45	0
Apprch %	0.0%	83.3%	16.7%			4.8%	90.5%	4.8%			0.0%	100.0%	0.0%			6.3%	87.5%	6.3%				
Total %	0.0%	11.1%	2.2%		13.3%	2.2%	42.2%	2.2%		46.7%	0.0%	4.4%	0.0%		4.4%	2.2%	31.1%	2.2%		35.6%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3	
7:45	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	4	
8:00	0	1	0	0	1	1	1	0	0	2	0	1	0	0	1	0	2	1	0	3	7	
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2	
Total Volume	0	3	0	0	3	1	6	0	0	7	0	1	0	0	1	1	3	1	0	5	16	
% App Total	0.0%	100.0%	0.0%			14.3%	85.7%	0.0%			0.0%	100.0%	0.0%			20.0%	60.0%	20.0%				
PHF	.000	.750	.000		.750	.250	.750	.000		.875	.000	.250	.000		.250	.250	.375	.250		.417	.571	

PM PEAK HOUR	Railroad Avenue Southbound					Bogue Road Westbound					Railroad Avenue Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	
17:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.000		.000	.000	.250	.000		.250	.500	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-026 Garden Highway & Bogue Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	5	29	17	0	51	2	18	13	0	33	32	57	1	0	90	32	5	17	0	54	228	0
7:15	7	40	20	0	67	4	32	21	0	57	49	61	2	0	112	33	8	17	0	58	294	0
7:30	8	44	33	0	85	8	40	25	0	73	48	95	2	1	146	49	12	31	0	92	396	1
7:45	3	59	24	0	86	10	19	21	0	50	44	116	2	0	162	49	10	37	0	96	394	0
Total	23	172	94	0	289	24	109	80	0	213	173	329	7	1	510	163	35	102	0	300	1312	1
8:00	8	91	34	1	134	7	17	14	0	38	49	116	5	0	170	44	10	53	0	107	449	1
8:15	10	73	17	1	101	11	7	14	0	32	35	89	6	0	130	36	11	53	0	100	363	1
8:30	6	17	26	0	49	1	8	9	0	18	47	52	2	0	101	36	10	16	0	62	230	0
8:45	3	28	16	0	47	0	13	14	0	27	44	33	3	1	81	37	6	16	0	59	214	1
Total	27	209	93	2	331	19	45	51	0	115	175	290	16	1	482	153	37	138	0	328	1256	3
16:00	12	72	26	1	111	0	19	18	0	37	33	60	2	0	95	30	25	54	0	109	352	1
16:15	9	64	33	0	106	2	14	8	0	24	35	78	2	0	115	29	25	46	0	100	345	0
16:30	13	75	43	0	131	0	20	10	0	30	34	57	4	0	95	32	27	51	0	110	366	0
16:45	20	82	42	0	144	0	12	8	0	20	36	77	4	0	117	27	35	55	0	117	398	0
Total	54	293	144	1	492	2	65	44	0	111	138	272	12	0	422	118	112	206	0	436	1461	1
17:00	17	75	48	0	140	1	10	11	0	22	39	67	3	1	110	30	29	54	0	113	385	1
17:15	22	79	40	1	142	3	12	18	0	33	33	88	2	1	124	29	21	48	1	99	398	3
17:30	12	66	48	0	126	1	20	15	0	36	43	70	3	0	116	30	20	49	0	99	377	0
17:45	16	64	41	0	121	1	20	12	0	33	43	66	6	0	115	33	17	59	0	109	378	0
Total	67	284	177	1	529	6	62	56	0	124	158	291	14	2	465	122	87	210	1	420	1538	4
Grand Total	171	958	508	4	1641	51	281	231	0	563	644	1182	49	4	1879	556	271	656	1	1484	5567	9
Apprch %	10.4%	58.4%	31.0%	0.2%		9.1%	49.9%	41.0%	0.0%		34.3%	62.9%	2.6%	0.2%		37.5%	18.3%	44.2%	0.1%			
Total %	3.1%	17.2%	9.1%	0.1%	29.5%	0.9%	5.0%	4.1%	0.0%	10.1%	11.6%	21.2%	0.9%	0.1%	33.8%	10.0%	4.9%	11.8%	0.0%	26.7%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	8	44	33	0	85	8	40	25	0	73	48	95	2	1	146	49	12	31	0	92	396	
7:45	3	59	24	0	86	10	19	21	0	50	44	116	2	0	162	49	10	37	0	96	394	
8:00	8	91	34	1	134	7	17	14	0	38	49	116	5	0	170	44	10	53	0	107	449	
8:15	10	73	17	1	101	11	7	14	0	32	35	89	6	0	130	36	11	53	0	100	363	
Total Volume	29	267	108	2	406	36	83	74	0	193	176	416	15	1	608	178	43	174	0	395	1602	
% App Total	7.1%	65.8%	26.6%	0.5%		18.7%	43.0%	38.3%	0.0%		28.9%	68.4%	2.5%	0.2%		45.1%	10.9%	44.1%	0.0%			
PHF	.725	.734	.794	.500	.757	.818	.519	.740	.000	.661	.898	.897	.625	.250	.894	.908	.896	.821	.000	.923	.892	

PM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total	
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	20	82	42	0	144	0	12	8	0	20	36	77	4	0	117	27	35	55	0	117	398	
17:00	17	75	48	0	140	1	10	11	0	22	39	67	3	1	110	30	29	54	0	113	385	
17:15	22	79	40	1	142	3	12	18	0	33	33	88	2	1	124	29	21	48	1	99	398	
17:30	12	66	48	0	126	1	20	15	0	36	43	70	3	0	116	30	20	49	0	99	377	
Total Volume	71	302	178	1	552	5	54	52	0	111	151	302	12	2	467	116	105	206	1	428	1558	
% App Total	12.9%	54.7%	32.2%	0.2%		4.5%	48.6%	46.8%	0.0%		32.3%	64.7%	2.6%	0.4%		27.1%	24.5%	48.1%	0.2%			
PHF	.807	.921	.927	.250	.958	.417	.675	.722	.000	.771	.878	.858	.750	.500	.942	.967	.750	.936	.250	.915	.979	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-026 Garden Highway & Bogue Road

Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	1	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	3	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	2
Total	0	1	0	1	1	0	2	0	0	2	0	0	1	2	1	1	0	0	3	1	5	6
8:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	2	3	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	1	1	2	2	3	5
16:00	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
16:15	0	1	0	1	1	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	1	9
16:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	2	2	1
Total	0	2	0	2	2	1	0	0	0	1	0	0	0	4	0	0	2	0	6	2	5	12
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	4	0	0	6
17:15	0	1	1	0	2	0	0	0	0	0	1	0	0	4	1	0	0	0	2	0	3	6
17:30	0	1	1	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	0	2	7	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	2	2	0	4	0	0	0	1	0	1	0	0	12	1	0	0	0	7	0	5	20
Grand Total	0	5	2	5	7	1	2	0	1	3	2	0	1	19	3	1	3	1	18	5	18	43
Apprch %	0.0%	71.4%	28.6%			33.3%	66.7%	0.0%			66.7%	0.0%	33.3%			20.0%	60.0%	20.0%				
Total %	0.0%	27.8%	11.1%		38.9%	5.6%	11.1%	0.0%		16.7%	11.1%	0.0%	5.6%		16.7%	5.6%	16.7%	5.6%		27.8%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7:45	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2
8:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	2	3
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	1	0	1	1	2	0	1	1	4	2	5
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			50.0%	0.0%	50.0%			0.0%	50.0%	50.0%			
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.250	.000	.250		.500	.000	.250	.250		.250	.417

PM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2	2
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	4	0	0
17:15	0	1	1	0	2	0	0	0	0	0	1	0	0	4	1	0	0	0	2	0	3
17:30	0	1	1	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	2
Total Volume	0	2	2	0	4	0	0	0	1	0	1	0	0	12	1	0	2	0	7	2	7
% App Total	0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.500	.500		.500	.000	.000	.000		.000	.250	.000	.000		.250	.000	.250	.000		.250	.583

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-026 Garden Highway & Bogue Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	1	1	0	2	0	0	0	0	0	2	1	0	0	3	1	0	0	0	1	6	0
7:15	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
7:30	1	1	2	0	4	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	8	0
7:45	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	3	0
Total	1	4	4	0	9	0	2	0	0	2	3	3	0	0	6	2	1	0	0	3	20	0
8:00	0	3	2	0	5	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	8	0
8:15	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5	0
8:30	0	0	2	0	2	0	0	0	0	0	0	4	0	0	4	1	0	0	0	1	7	0
8:45	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6	0
Total	0	8	7	0	15	1	0	0	0	1	0	7	0	0	7	1	0	2	0	3	26	0
16:00	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0
16:15	0	1	1	0	2	0	0	0	0	0	2	1	0	0	3	0	0	1	0	1	6	0
16:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	4	0
Total	0	3	3	0	6	0	0	0	0	0	2	2	0	0	4	2	0	3	0	5	15	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	3	0
17:15	0	0	1	0	1	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	5	0
17:30	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	0
17:45	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
Total	0	1	4	0	5	0	1	0	0	1	0	8	0	0	8	1	0	1	0	2	16	0
Grand Total	1	16	18	0	35	1	3	0	0	4	5	20	0	0	25	6	1	6	0	13	77	0
Apprch %	2.9%	45.7%	51.4%			25.0%	75.0%	0.0%			20.0%	80.0%	0.0%			46.2%	7.7%	46.2%				
Total %	1.3%	20.8%	23.4%		45.5%	1.3%	3.9%	0.0%		5.2%	6.5%	26.0%	0.0%		32.5%	7.8%	1.3%	7.8%		16.9%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	1	2	0	4	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	8
7:45	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	3
8:00	0	3	2	0	5	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1	8
8:15	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	5
Total Volume	1	7	5	0	13	1	2	0	0	3	1	3	0	0	4	1	1	2	0	4	24
% App Total	7.7%	53.8%	38.5%			33.3%	66.7%	0.0%			25.0%	75.0%	0.0%			25.0%	25.0%	50.0%			
PHF	.250	.583	.625		.650	.250	.250	.000		.375	.250	.750	.000		1.000	.250	.250	.500		1.000	.750

PM PEAK HOUR	Garden Highway Southbound					Bogue Road Westbound					Garden Highway Northbound					Bogue Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	4
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	3
17:15	0	0	1	0	1	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	5
17:30	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Total Volume	0	2	2	0	4	0	1	0	0	1	0	8	0	0	8	2	0	2	0	4	17
% App Total	0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			
PHF	.000	.500	.500		.500	.000	.250	.000		.250	.000	.667	.000		.667	.500	.000	.500		.500	.850

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-027 Phillips Road & Smith Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	16	1	0	17	0	0	0	0	0	6	5	0	0	11	2	0	2	0	4	32	0
7:15	0	5	4	0	9	0	0	0	0	0	10	9	0	0	19	1	0	2	0	3	31	0
7:30	0	12	5	0	17	0	0	0	0	0	9	17	0	0	26	4	0	2	0	6	49	0
7:45	0	18	5	0	23	0	0	0	0	0	7	22	0	0	29	3	0	1	0	4	56	0
Total	0	51	15	0	66	0	0	0	0	0	32	53	0	0	85	10	0	7	0	17	168	0
8:00	0	36	9	0	45	0	0	0	0	0	2	28	0	0	30	6	0	4	0	10	85	0
8:15	0	17	1	0	18	0	0	0	0	0	2	7	0	0	9	3	0	4	0	7	34	0
8:30	0	8	1	0	9	0	0	0	0	0	5	5	0	0	10	2	0	4	0	6	25	0
8:45	0	6	2	0	8	0	0	0	0	0	8	3	0	0	11	1	0	4	0	5	24	0
Total	0	67	13	0	80	0	0	0	0	0	17	43	0	0	60	12	0	16	0	28	168	0
16:00	0	10	0	0	10	0	0	0	0	0	7	13	0	0	20	3	0	6	0	9	39	0
16:15	0	9	1	0	10	0	0	0	0	0	1	9	0	0	10	5	0	14	0	19	39	0
16:30	0	9	3	0	12	0	0	0	0	0	6	8	0	0	14	5	0	5	0	10	36	0
16:45	0	9	3	0	12	0	0	0	0	0	2	13	0	0	15	3	0	8	0	11	38	0
Total	0	37	7	0	44	0	0	0	0	0	16	43	0	0	59	16	0	33	0	49	152	0
17:00	0	10	4	0	14	0	0	0	0	0	4	16	0	0	20	6	0	6	0	12	46	0
17:15	0	15	3	0	18	0	0	0	0	0	4	17	0	0	21	7	0	13	0	20	59	0
17:30	0	12	4	0	16	0	0	0	0	0	0	10	0	0	10	5	0	9	0	14	40	0
17:45	0	2	1	0	3	0	0	0	0	0	3	9	0	0	12	7	0	7	0	14	29	0
Total	0	39	12	0	51	0	0	0	0	0	11	52	0	0	63	25	0	35	0	60	174	0
Grand Total	0	194	47	0	241	0	0	0	0	0	76	191	0	0	267	63	0	91	0	154	662	0
Apprch %	0.0%	80.5%	19.5%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	28.5%	71.5%	0.0%	0.0%		40.9%	0.0%	59.1%	0.0%			
Total %	0.0%	29.3%	7.1%	0.0%	36.4%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5%	28.9%	0.0%	0.0%	40.3%	9.5%	0.0%	13.7%	0.0%	23.3%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	12	5	0	17	0	0	0	0	0	9	17	0	0	26	4	0	2	0	6	49
7:45	0	18	5	0	23	0	0	0	0	0	7	22	0	0	29	3	0	1	0	4	56
8:00	0	36	9	0	45	0	0	0	0	0	2	28	0	0	30	6	0	4	0	10	85
8:15	0	17	1	0	18	0	0	0	0	0	2	7	0	0	9	3	0	4	0	7	34
Total Volume	0	83	20	0	103	0	0	0	0	0	20	74	0	0	94	16	0	11	0	27	224
% App Total	0.0%	80.6%	19.4%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	21.3%	78.7%	0.0%	0.0%		59.3%	0.0%	40.7%	0.0%		
PHF	.000	.576	.556	.000	.572	.000	.000	.000	.000	.000	.556	.661	.000	.000	.783	.667	.000	.688	.000	.675	.659

PM PEAK HOUR	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	9	3	0	12	0	0	0	0	0	2	13	0	0	15	3	0	8	0	11	38
17:00	0	10	4	0	14	0	0	0	0	0	4	16	0	0	20	6	0	6	0	12	46
17:15	0	15	3	0	18	0	0	0	0	0	4	17	0	0	21	7	0	13	0	20	59
17:30	0	12	4	0	16	0	0	0	0	0	0	10	0	0	10	5	0	9	0	14	40
Total Volume	0	46	14	0	60	0	0	0	0	0	10	56	0	0	66	21	0	36	0	57	183
% App Total	0.0%	76.7%	23.3%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	15.2%	84.8%	0.0%	0.0%		36.8%	0.0%	63.2%	0.0%		
PHF	.000	.767	.875	.000	.833	.000	.000	.000	.000	.000	.625	.824	.000	.000	.786	.750	.000	.692	.000	.713	.775

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-027 Phillips Road & Smith Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
17:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%	
Total %	0.0%	25.0%	0.0%		25.0%	0.0%	0.0%	0.0%		0.0%	0.0%	75.0%	0.0%		75.0%	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%		100.0%

PM PEAK HOUR	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total			
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
Peak Hour Analysis From 16:45 to 17:45																								
Peak Hour For Entire Intersection Begins at 16:45																								
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
17:30	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%	
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.375	.000		.375	.000	.000	.000		.000	.000	.333		

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-027 Phillips Road & Smith Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total	Peds Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
7:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0
8:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	4	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	4	0
16:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0
Grand Total	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	1	0	0	0	0	1	10	0
Apprch %	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%					
Total %	0.0%	40.0%	0.0%		40.0%	0.0%	0.0%	0.0%		0.0%	0.0%	50.0%	0.0%		50.0%	10.0%	0.0%	0.0%			10.0%	100.0%	

AM PEAK HOUR	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
8:00	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	4
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	1	0	0	0	0	1	7
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.500	.000		.500	.250	.000	.000		.250	.438	

PM PEAK HOUR	Phillips Road Southbound					Smith Road Westbound					Phillips Road Northbound					Smith Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:45 to 17:45																						
Peak Hour For Entire Intersection Begins at 16:45																						
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-028 Wallace Drive & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Wallace Drive Southbound					Stewart Road Westbound					Wallace Drive Northbound					Stewart Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	0	0	0	0	0	3	0	0	3	0	0	2	0	2	0	3	0	0	3	8	0
7:15	0	0	0	0	0	0	12	0	0	12	2	0	1	0	3	0	12	1	0	13	28	0
7:30	0	0	0	0	0	0	21	0	0	21	1	0	0	0	1	0	23	1	0	24	46	0
7:45	0	0	0	0	0	0	18	0	0	18	1	0	2	0	3	0	33	0	0	33	54	0
Total	0	0	0	0	0	0	54	0	0	54	4	0	5	0	9	0	71	2	0	73	136	0
8:00	0	0	0	0	0	0	33	0	0	33	1	0	3	0	4	0	36	0	0	36	73	0
8:15	0	0	0	0	0	0	38	0	0	39	0	0	2	0	2	0	25	0	0	25	66	0
8:30	0	0	0	0	0	0	19	0	0	20	0	0	1	0	1	0	6	0	0	6	27	0
8:45	0	0	0	0	0	0	8	0	0	8	1	0	1	0	2	0	4	2	0	6	16	0
Total	0	0	0	0	0	2	98	0	0	100	2	0	7	0	9	0	71	2	0	73	182	0
16:00	0	0	0	0	0	0	15	0	0	15	1	0	1	0	2	0	8	0	0	8	25	0
16:15	0	0	0	0	0	0	3	0	0	4	1	0	2	0	3	0	11	2	0	13	20	0
16:30	0	0	0	0	0	0	9	0	1	11	1	0	0	0	1	0	10	1	0	11	23	1
16:45	0	0	0	0	0	0	11	0	0	13	3	0	0	0	3	0	10	1	0	11	27	0
Total	0	0	0	0	0	4	38	0	1	43	6	0	3	0	9	0	39	4	0	43	95	1
17:00	0	0	0	0	0	0	11	0	0	12	1	0	0	0	1	0	11	1	0	12	25	0
17:15	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	0	8	2	0	10	19	0
17:30	0	0	0	0	0	0	9	0	0	12	1	0	0	0	1	0	11	1	0	12	25	0
17:45	0	0	0	0	0	0	10	0	0	13	2	0	0	0	2	0	15	1	1	17	32	1
Total	0	0	0	0	0	7	38	0	0	45	4	0	1	0	5	0	45	5	1	51	101	1
Grand Total	0	0	0	0	0	13	228	0	1	242	16	0	16	0	32	0	226	13	1	240	514	2
Apprch %	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	94.2%	0.0%	0.4%	47.1%	50.0%	0.0%	50.0%	0.0%	6.2%	0.0%	94.2%	5.4%	0.4%	46.7%	100.0%	
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	44.4%	0.0%	0.2%	47.1%	3.1%	0.0%	3.1%	0.0%	6.2%	0.0%	44.0%	2.5%	0.2%	46.7%	100.0%	

AM PEAK HOUR	Wallace Drive Southbound					Stewart Road Westbound					Wallace Drive Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	21	0	0	21	1	0	0	0	1	0	23	1	0	24	46
7:45	0	0	0	0	0	0	18	0	0	18	1	0	2	0	3	0	33	0	0	33	54
8:00	0	0	0	0	0	0	33	0	0	33	1	0	3	0	4	0	36	0	0	36	73
8:15	0	0	0	0	0	0	38	0	0	39	0	0	2	0	2	0	25	0	0	25	66
Total Volume	0	0	0	0	0	1	110	0	0	111	3	0	7	0	10	0	117	1	0	118	239
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	99.1%	0.0%	0.0%	71.2%	30.0%	0.0%	70.0%	0.0%	62.5%	0.0%	99.2%	0.8%	0.0%	81.9%	81.8%
PHF	.000	.000	.000	.000	.000	.250	.724	.000	.000	.712	.750	.000	.583	.000	.625	.000	.813	.250	.000	.819	.818

PM PEAK HOUR	Wallace Drive Southbound					Stewart Road Westbound					Wallace Drive Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	0	11	0	0	12	1	0	0	0	1	0	11	1	0	12	25
17:15	0	0	0	0	0	0	8	0	0	8	0	0	1	0	1	0	8	2	0	10	19
17:30	0	0	0	0	0	0	9	0	0	12	1	0	0	0	1	0	11	1	0	12	25
17:45	0	0	0	0	0	0	10	0	0	13	2	0	0	0	2	0	15	1	1	17	32
Total Volume	0	0	0	0	0	7	38	0	0	45	4	0	1	0	5	0	45	5	1	51	101
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	15.6%	84.4%	0.0%	0.0%	71.2%	80.0%	0.0%	20.0%	0.0%	62.5%	0.0%	88.2%	9.8%	2.0%	81.9%	81.8%
PHF	.000	.000	.000	.000	.000	.583	.864	.000	.000	.865	.500	.000	.250	.000	.625	.000	.750	.625	.250	.750	.789

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-028 Wallace Drive & Stewart Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Wallace Drive Southbound					Stewart Road Westbound					Wallace Drive Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	0
8:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	3	0
8:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	1	0	0	1	5	0
Grand Total	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	2	1	0	3	7	0
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			0.0%	66.7%	33.3%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	28.6%	0.0%		28.6%	14.3%	0.0%	14.3%		28.6%	0.0%	28.6%	14.3%		42.9%	100.0%	

AM PEAK HOUR	Wallace Drive Southbound					Stewart Road Westbound					Wallace Drive Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2	
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	3	
8:15	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	2	1	0	3	7	
% App Total	0.0%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			0.0%	66.7%	33.3%				
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.000	.250		.250	.000	.500	.250		.375	.583	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-029 Muir Road & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Uturns

START TIME	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	0	0	0	0	0	2	0	0	2	1	0	2	0	3	0	4	1	0	5	10	0
7:15	0	0	0	0	0	3	12	0	0	15	0	0	3	0	3	0	13	0	0	13	31	0
7:30	0	0	0	0	0	3	19	0	0	22	2	0	7	0	9	0	22	1	0	23	54	0
7:45	0	0	0	0	0	2	15	0	0	17	3	0	6	0	9	0	34	1	0	35	61	0
Total	0	0	0	0	0	8	48	0	0	56	6	0	18	0	24	0	73	3	0	76	156	0
8:00	0	0	0	0	0	6	33	0	0	39	1	0	10	0	11	0	38	1	0	39	89	0
8:15	0	0	0	0	0	6	40	0	0	46	0	0	3	0	3	0	25	2	0	27	76	0
8:30	0	0	0	0	0	2	18	0	0	20	1	0	0	0	1	0	6	1	0	7	28	0
8:45	0	0	0	0	0	4	5	0	0	9	3	0	1	0	4	0	3	2	0	5	18	0
Total	0	0	0	0	0	18	96	0	0	114	5	0	14	0	19	0	72	6	0	78	211	0
16:00	0	0	0	0	0	3	9	0	0	12	6	0	5	0	11	0	7	2	0	9	32	0
16:15	0	0	0	0	0	4	2	0	0	6	3	0	3	0	6	0	13	0	0	13	25	0
16:30	0	0	0	0	0	6	9	0	0	15	2	0	7	0	9	0	9	3	0	12	36	0
16:45	0	0	0	0	0	4	11	0	0	15	2	0	3	0	5	0	8	2	0	10	30	0
Total	0	0	0	0	0	17	31	0	0	48	13	0	18	0	31	0	37	7	0	44	123	0
17:00	0	0	0	0	0	3	8	0	0	11	4	0	3	0	7	0	10	1	0	11	29	0
17:15	0	0	0	0	0	11	5	0	0	16	3	0	9	0	12	0	6	3	0	9	37	0
17:30	0	0	0	0	0	6	10	0	0	16	2	0	1	0	3	0	9	2	0	11	30	0
17:45	0	0	0	0	0	8	11	0	0	19	2	0	7	0	9	0	11	4	0	15	43	0
Total	0	0	0	0	0	28	34	0	0	62	11	0	20	0	31	0	36	10	0	46	139	0
Grand Total	0	0	0	0	0	71	209	0	0	280	35	0	70	0	105	0	218	26	0	244	629	0
Apprch %	0.0%	0.0%	0.0%	0.0%	0.0%	25.4%	74.6%	0.0%	0.0%	44.5%	33.3%	0.0%	66.7%	0.0%	16.7%	0.0%	89.3%	10.7%	0.0%	38.8%	100.0%	0
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	11.3%	33.2%	0.0%	0.0%	44.5%	5.6%	0.0%	11.1%	0.0%	16.7%	0.0%	34.7%	4.1%	0.0%	38.8%	100.0%	0

AM PEAK HOUR	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	3	19	0	0	22	2	0	7	0	9	0	22	1	0	23	54
7:45	0	0	0	0	0	2	15	0	0	17	3	0	6	0	9	0	34	1	0	35	61
8:00	0	0	0	0	0	6	33	0	0	39	1	0	10	0	11	0	38	1	0	39	89
8:15	0	0	0	0	0	6	40	0	0	46	0	0	3	0	3	0	25	2	0	27	76
Total Volume	0	0	0	0	0	17	107	0	0	124	6	0	26	0	32	0	119	5	0	124	280
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	13.7%	86.3%	0.0%	0.0%	44.5%	18.8%	0.0%	81.3%	0.0%	16.7%	0.0%	96.0%	4.0%	0.0%	38.8%	100.0%
PHF	.000	.000	.000	.000	.000	.708	.669	.000	.000	.674	.500	.000	.650	.000	.727	.000	.783	.625	.000	.795	.787

PM PEAK HOUR	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	3	8	0	0	11	4	0	3	0	7	0	10	1	0	11	29
17:15	0	0	0	0	0	11	5	0	0	16	3	0	9	0	12	0	6	3	0	9	37
17:30	0	0	0	0	0	6	10	0	0	16	2	0	1	0	3	0	9	2	0	11	30
17:45	0	0	0	0	0	8	11	0	0	19	2	0	7	0	9	0	11	4	0	15	43
Total Volume	0	0	0	0	0	28	34	0	0	62	11	0	20	0	31	0	36	10	0	46	139
% App Total	0.0%	0.0%	0.0%	0.0%	0.0%	45.2%	54.8%	0.0%	0.0%	44.5%	35.5%	0.0%	64.5%	0.0%	16.7%	0.0%	78.3%	21.7%	0.0%	38.8%	100.0%
PHF	.000	.000	.000	.000	.000	.636	.773	.000	.000	.816	.688	.000	.556	.000	.646	.000	.818	.625	.000	.767	.808

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@aldtraffic.com

File Name : 16-7206-029 Muir Road & Stewart Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	3
Apprch %	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		100.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

PM PEAK HOUR	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 17:00 to 18:00																						
Peak Hour For Entire Intersection Begins at 17:00																						
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Uturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-029 Muir Road & Stewart Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
7:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
8:00	0	0	0	0	0	2	0	0	0	2	0	0	1	0	1	0	2	0	0	2	5	0
8:15	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	0	0	0	0	4	2	0	0	6	0	0	1	0	1	0	2	0	0	2	9	0
Grand Total	0	0	0	0	0	5	2	0	0	7	0	0	1	0	1	0	3	0	0	3	11	0
Apprch %	0.0%	0.0%	0.0%			71.4%	28.6%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	45.5%	18.2%	0.0%		63.6%	0.0%	0.0%	9.1%		9.1%	0.0%	27.3%	0.0%		27.3%	100.0%	

AM PEAK HOUR	Muir Road Southbound					Stewart Road Westbound					Muir Road Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
7:45	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
8:00	0	0	0	0	0	2	0	0	0	2	0	0	1	0	1	0	2	0	0	2	5	
8:15	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
Total Volume	0	0	0	0	0	4	2	0	0	6	0	0	1	0	1	0	3	0	0	3	10	
% App Total	0.0%	0.0%	0.0%			66.7%	33.3%	0.0%			0.0%	0.0%	100.0%			0.0%	100.0%	0.0%				
PHF	.000	.000	.000		.000	.500	.250	.000		.500	.000	.000	.250		.250	.000	.375	.000		.375	.500	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-030 Railroad Avenue & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	3	5	0	0	8	2	2	1	0	5	0	4	0	0	4	3	3	0	1	7	24	1
7:15	6	7	1	0	14	1	12	6	0	19	0	4	0	0	4	4	11	0	0	15	52	0
7:30	18	12	2	0	32	3	17	25	0	45	2	5	7	0	14	4	23	1	0	28	119	0
7:45	26	17	2	0	45	3	13	23	0	39	2	6	1	0	9	7	34	0	0	41	134	0
Total	53	41	5	0	99	9	44	55	0	108	4	19	8	0	31	18	71	1	1	91	329	1
8:00	32	18	5	0	55	1	35	40	0	76	0	5	1	0	6	12	36	0	0	48	185	0
8:15	32	20	5	0	57	8	39	59	0	106	2	13	2	0	17	6	20	2	0	28	208	0
8:30	5	5	2	0	12	1	15	12	0	28	1	6	0	0	7	3	2	1	0	6	53	0
8:45	1	2	4	0	7	1	5	2	0	8	0	3	1	0	4	2	2	0	0	4	23	0
Total	70	45	16	0	131	11	94	113	0	218	3	27	4	0	34	23	60	3	0	86	469	0
16:00	1	5	3	0	9	1	9	9	0	19	1	15	4	0	20	5	8	0	0	13	61	0
16:15	3	6	5	0	14	1	1	3	0	5	0	11	1	0	12	7	7	1	0	15	46	0
16:30	9	4	6	0	19	1	11	2	0	14	0	14	0	0	14	6	10	0	0	16	63	0
16:45	7	10	6	0	23	3	9	6	0	18	1	7	0	0	8	7	5	1	0	13	62	0
Total	20	25	20	0	65	6	30	20	0	56	2	47	5	0	54	25	30	2	0	57	232	0
17:00	2	11	5	0	18	3	6	7	0	16	0	17	2	0	19	6	6	1	0	13	66	0
17:15	8	8	10	0	26	0	7	12	0	19	0	7	0	0	7	6	8	1	0	15	67	0
17:30	4	6	9	0	19	1	10	6	0	17	1	12	2	0	15	1	7	2	0	10	61	0
17:45	2	7	6	0	15	0	8	2	0	10	2	12	1	0	15	3	15	0	0	18	58	0
Total	16	32	30	0	78	4	31	27	0	62	3	48	5	0	56	16	36	4	0	56	252	0
Grand Total	159	143	71	0	373	30	199	215	0	444	12	141	22	0	175	82	197	10	1	290	1282	1
Apprch %	42.6%	38.3%	19.0%	0.0%		6.8%	44.8%	48.4%	0.0%		6.9%	80.6%	12.6%	0.0%		28.3%	67.9%	3.4%	0.3%			
Total %	12.4%	11.2%	5.5%	0.0%	29.1%	2.3%	15.5%	16.8%	0.0%	34.6%	0.9%	11.0%	1.7%	0.0%	13.7%	6.4%	15.4%	0.8%	0.1%	22.6%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	18	12	2	0	32	3	17	25	0	45	2	5	7	0	14	4	23	1	0	28	119
7:45	26	17	2	0	45	3	13	23	0	39	2	6	1	0	9	7	34	0	0	41	134
8:00	32	18	5	0	55	1	35	40	0	76	0	5	1	0	6	12	36	0	0	48	185
8:15	32	20	5	0	57	8	39	59	0	106	2	13	2	0	17	6	20	2	0	28	208
Total Volume	108	67	14	0	189	15	104	147	0	266	6	29	11	0	46	29	113	3	0	145	646
% App Total	57.1%	35.4%	7.4%	0.0%		5.6%	39.1%	55.3%	0.0%		13.0%	63.0%	23.9%	0.0%		20.0%	77.9%	2.1%	0.0%		
PHF	.844	.838	.700	.000	.829	.469	.667	.623	.000	.627	.750	.558	.393	.000	.676	.604	.785	.375	.000	.755	.776

PM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	9	4	6	0	19	1	11	2	0	14	0	14	0	0	14	6	10	0	0	16	63
16:45	7	10	6	0	23	3	9	6	0	18	1	7	0	0	8	7	5	1	0	13	62
17:00	2	11	5	0	18	3	6	7	0	16	0	17	2	0	19	6	6	1	0	13	66
17:15	8	8	10	0	26	0	7	12	0	19	0	7	0	0	7	6	8	1	0	15	67
Total Volume	26	33	27	0	86	7	33	27	0	67	1	45	2	0	48	25	29	3	0	57	258
% App Total	30.2%	38.4%	31.4%	0.0%		10.4%	49.3%	40.3%	0.0%		2.1%	93.8%	4.2%	0.0%		43.9%	50.9%	5.3%	0.0%		
PHF	.722	.750	.675	.000	.827	.583	.750	.583	.000	.882	.250	.662	.250	.000	.632	.893	.725	.750	.000	.891	.963

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@aldtraffic.com

File Name : 16-7206-030 Railroad Avenue & Stewart Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	0
Grand Total	0	1	1	1	2	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	4	2
Apprch %	0.0%	50.0%	50.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
Total %	0.0%	25.0%	25.0%		50.0%	0.0%	0.0%	0.0%		0.0%	0.0%	50.0%	0.0%		50.0%	0.0%	0.0%	0.0%		0.0%	100.0%	

AM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

PM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.500

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-030 Railroad Avenue & Stewart Road
 Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0
7:30	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	4	0
7:45	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Total	2	1	0	0	3	1	1	0	0	2	0	1	0	0	1	0	2	0	0	2	8	0		
8:00	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	6	0		
8:15	0	1	0	0	1	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	7	0		
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
Total	1	1	3	0	5	3	3	0	0	6	0	0	0	0	0	1	2	0	0	3	14	0		
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0		
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0		
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0		
Grand Total	3	2	3	0	8	4	4	0	0	8	0	2	1	0	3	1	4	0	0	5	24	0		
Apprch %	37.5%	25.0%	37.5%			50.0%	50.0%	0.0%			0.0%	66.7%	33.3%			20.0%	80.0%	0.0%						
Total %	12.5%	8.3%	12.5%		33.3%	16.7%	16.7%	0.0%		33.3%	0.0%	8.3%	4.2%		12.5%	4.2%	16.7%	0.0%		20.8%	100.0%			

AM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	4
7:45	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:00	1	0	2	0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	6
8:15	0	1	0	0	1	3	3	0	0	6	0	0	0	0	0	0	0	0	0	0	7
Total Volume	3	2	2	0	7	3	4	0	0	7	0	0	0	0	0	1	4	0	0	5	19
% App Total	42.9%	28.6%	28.6%			42.9%	57.1%	0.0%			0.0%	0.0%	0.0%			20.0%	80.0%	0.0%			
PHF	.750	.500	.250		.583	.250	.333	.000		.292	.000	.000	.000		.000	.250	.500	.000		.417	.679

PM PEAK HOUR	Railroad Avenue Southbound					Stewart Road Westbound					Railroad Avenue Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.250		.250	.000	.000	.000		.000	.250

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-031 Garden Highway & Stewart Road

Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	0	39	6	0	45	0	0	0	0	0	0	15	0	0	15	3	0	1	0	4	64	0
7:15	0	39	32	0	71	0	0	0	0	0	1	11	0	0	12	10	0	0	0	10	93	0
7:30	0	23	65	2	90	0	0	1	0	1	1	12	0	0	13	38	0	3	0	41	145	2
7:45	0	33	83	3	119	0	0	0	0	0	2	16	0	0	18	54	0	3	0	57	194	3
Total	0	134	186	5	325	0	0	1	0	1	4	54	0	0	58	105	0	7	0	112	496	5
8:00	0	31	116	1	148	0	0	0	0	0	4	23	0	0	27	68	0	1	0	69	244	1
8:15	0	31	159	6	196	0	0	0	0	0	1	16	0	0	17	105	0	3	0	108	321	6
8:30	0	20	15	1	36	0	0	0	0	0	1	16	0	0	17	31	0	1	0	32	85	1
8:45	0	19	7	0	26	0	0	0	0	0	1	21	0	0	22	3	0	0	0	3	51	0
Total	0	101	297	8	406	0	0	0	0	0	7	76	0	0	83	207	0	5	0	212	701	8
16:00	0	16	12	0	28	0	0	0	0	0	2	44	0	0	46	28	0	2	1	31	105	1
16:15	0	30	6	0	36	0	0	0	0	0	0	49	0	0	49	8	0	1	1	10	95	1
16:30	0	24	9	0	33	0	0	0	0	0	5	55	0	0	60	12	0	1	0	13	106	0
16:45	1	26	18	1	46	0	1	0	0	1	3	47	0	0	50	14	1	1	0	16	113	1
Total	1	96	45	1	143	0	1	0	0	1	10	195	0	0	205	62	1	5	2	70	419	3
17:00	0	32	11	0	43	0	0	0	0	0	0	56	0	0	56	17	0	0	0	17	116	0
17:15	0	25	24	0	49	0	0	0	0	0	2	53	0	0	55	21	0	2	4	27	131	4
17:30	0	20	10	0	30	0	0	0	0	0	0	46	0	0	46	11	0	1	0	12	88	0
17:45	0	22	11	0	33	0	1	0	0	1	0	39	0	0	39	17	0	2	1	20	93	1
Total	0	99	56	0	155	0	1	0	0	1	2	194	0	0	196	66	0	5	5	76	428	5
Grand Total	1	430	584	14	1029	0	2	1	0	3	23	519	0	0	542	440	1	22	7	470	2044	21
Apprch %	0.1%	41.8%	56.8%	1.4%		0.0%	66.7%	33.3%	0.0%		4.2%	95.8%	0.0%	0.0%		93.6%	0.2%	4.7%	1.5%			
Total %	0.0%	21.0%	28.6%	0.7%	50.3%	0.0%	0.1%	0.0%	0.0%	0.1%	1.1%	25.4%	0.0%	0.0%	26.5%	21.5%	0.0%	1.1%	0.3%	23.0%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	23	65	2	90	0	0	1	0	1	1	12	0	0	13	38	0	3	0	41	145
7:45	0	33	83	3	119	0	0	0	0	0	2	16	0	0	18	54	0	3	0	57	194
8:00	0	31	116	1	148	0	0	0	0	0	4	23	0	0	27	68	0	1	0	69	244
8:15	0	31	159	6	196	0	0	0	0	0	1	16	0	0	17	105	0	3	0	108	321
Total Volume	0	118	423	12	553	0	0	1	0	1	8	67	0	0	75	265	0	10	0	275	904
% App Total	0.0%	21.3%	76.5%	2.2%		0.0%	0.0%	100.0%	0.0%		10.7%	89.3%	0.0%	0.0%		96.4%	0.0%	3.6%	0.0%		
PHF	.000	.894	.665	.500	.705	.000	.000	.250	.000	.250	.500	.728	.000	.000	.694	.631	.000	.833	.000	.637	.704

PM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	24	9	0	33	0	0	0	0	0	5	55	0	0	60	12	0	1	0	13	106
16:45	1	26	18	1	46	0	1	0	0	1	3	47	0	0	50	14	1	1	0	16	113
17:00	0	32	11	0	43	0	0	0	0	0	0	56	0	0	56	17	0	0	0	17	116
17:15	0	25	24	0	49	0	0	0	0	0	2	53	0	0	55	21	0	2	4	27	131
Total Volume	1	107	62	1	171	0	1	0	0	1	10	211	0	0	221	64	1	4	4	73	466
% App Total	0.6%	62.6%	36.3%	0.6%		0.0%	100.0%	0.0%	0.0%		4.5%	95.5%	0.0%	0.0%		87.7%	1.4%	5.5%	5.5%		
PHF	.250	.836	.646	.250	.872	.000	.250	.000	.000	.250	.500	.942	.000	.000	.921	.762	.250	.500	.250	.676	.889

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 16-7206-031 Garden Highway & Stewart Road
 Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
Grand Total	2	0	0	1	2	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	3	3
Apprch %	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	66.7%	0.0%	0.0%		66.7%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%		33.3%	0.0%		33.3%	100.0%		

AM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	

PM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			100.0%	0.0%					
PHF	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000		.000	.250	.000		.250		.250		

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-031 Garden Highway & Stewart Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	Peds Total
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
7:00	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
Total	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	5	0
8:00	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6	0
8:15	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5	0
8:30	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5	0
8:45	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5	0
Total	0	10	4	0	14	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	21	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	3	0
17:30	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	8	0
Grand Total	0	14	4	0	18	0	0	0	0	0	0	16	0	0	16	2	0	0	0	2	36	0
Apprch %	0.0%	77.8%	22.2%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
Total %	0.0%	38.9%	11.1%		50.0%	0.0%	0.0%	0.0%		0.0%	0.0%	44.4%	0.0%		44.4%	5.6%	0.0%	0.0%		5.6%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 07:30 to 08:30																						
Peak Hour For Entire Intersection Begins at 07:30																						
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
7:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
8:00	0	3	2	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
8:15	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Total Volume	0	7	3	0	10	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	14	
% App Total	0.0%	70.0%	30.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
PHF	.000	.583	.375		.500	.000	.000	.000		.000	.000	.750	.000		.750	.250	.000	.000		.250	.583	

PM PEAK HOUR	Garden Highway Southbound					Stewart Road Westbound					Garden Highway Northbound					Stewart Road Eastbound					Total	
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL		
Peak Hour Analysis From 16:30 to 17:30																						
Peak Hour For Entire Intersection Begins at 16:30																						
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	1	3
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	4	
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			100.0%	0.0%	0.0%				
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.375	.000		.375	.250	.000	.000		.250	.333	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-032 Garden Highway & Shanghai Bend Road
 Date : 3/23/2016

Unshifted Count = All Vehicles & Utturns

START TIME	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL		
7:00	10	33	4	0	47	5	0	34	0	39	2	36	1	0	39	26	1	5	0	32	157	0
7:15	12	38	9	0	59	10	0	32	0	42	4	46	0	0	50	37	0	10	0	47	198	0
7:30	11	64	12	0	87	14	0	49	0	63	2	72	4	0	78	37	1	9	0	47	275	0
7:45	19	78	9	0	106	15	0	48	0	63	4	80	8	0	92	28	0	17	0	45	306	0
Total	52	213	34	0	299	44	0	163	0	207	12	234	13	0	259	128	2	41	0	171	936	0
8:00	20	108	17	1	146	34	0	41	0	75	9	99	16	0	124	30	0	23	0	53	398	1
8:15	16	106	14	0	136	26	2	17	0	45	24	96	17	0	137	17	0	28	0	45	363	0
8:30	8	27	7	0	42	4	2	23	0	29	10	46	8	0	64	28	0	7	0	35	170	0
8:45	10	20	9	0	39	1	0	16	0	17	3	38	3	0	44	27	0	2	0	29	129	0
Total	54	261	47	1	363	65	4	97	0	166	46	279	44	0	369	102	0	60	0	162	1060	1
16:00	42	55	34	0	131	3	3	25	0	31	7	57	4	0	68	12	4	1	0	17	247	0
16:15	29	52	32	0	113	1	0	27	0	28	4	67	6	0	77	21	0	4	0	25	243	0
16:30	46	56	22	1	125	5	4	27	0	36	8	51	10	0	69	21	4	1	0	26	256	1
16:45	35	72	31	0	138	7	6	28	0	41	6	73	6	0	85	20	2	7	0	29	293	0
Total	152	235	119	1	507	16	13	107	0	136	25	248	26	0	299	74	10	13	0	97	1039	1
17:00	44	51	36	0	131	3	0	29	0	32	9	61	8	0	78	22	1	6	0	29	270	0
17:15	38	68	31	0	137	5	1	27	0	33	5	76	7	0	88	21	1	5	0	27	285	0
17:30	42	42	28	0	112	5	2	28	0	35	7	63	5	0	75	23	2	0	0	25	247	0
17:45	42	53	24	1	120	6	1	32	0	39	4	54	3	0	61	19	2	3	0	24	244	1
Total	166	214	119	1	500	19	4	116	0	139	25	254	23	0	302	85	6	14	0	105	1046	1
Grand Total	424	923	319	3	1669	144	21	483	0	648	108	1015	106	0	1229	389	18	128	0	535	4081	3
Apprch %	25.4%	55.3%	19.1%	0.2%		22.2%	3.2%	74.5%	0.0%		8.8%	82.6%	8.6%	0.0%		72.7%	3.4%	23.9%	0.0%			
Total %	10.4%	22.6%	7.8%	0.1%	40.9%	3.5%	0.5%	11.8%	0.0%	15.9%	2.6%	24.9%	2.6%	0.0%	30.1%	9.5%	0.4%	3.1%	0.0%	13.1%	100.0%	

AM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	11	64	12	0	87	14	0	49	0	63	2	72	4	0	78	37	1	9	0	47	275
7:45	19	78	9	0	106	15	0	48	0	63	4	80	8	0	92	28	0	17	0	45	306
8:00	20	108	17	1	146	34	0	41	0	75	9	99	16	0	124	30	0	23	0	53	398
8:15	16	106	14	0	136	26	2	17	0	45	24	96	17	0	137	17	0	28	0	45	363
Total Volume	66	356	52	1	475	89	2	155	0	246	39	347	45	0	431	112	1	77	0	190	1342
% App Total	13.9%	74.9%	10.9%	0.2%		36.2%	0.8%	63.0%	0.0%		9.0%	80.5%	10.4%	0.0%		58.9%	0.5%	40.5%	0.0%		
PHF	.825	.824	.765	.250	.813	.654	.250	.791	.000	.820	.406	.876	.662	.000	.786	.757	.250	.688	.000	.896	.843

PM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	46	56	22	1	125	5	4	27	0	36	8	51	10	0	69	21	4	1	0	26	256
16:45	35	72	31	0	138	7	6	28	0	41	6	73	6	0	85	20	2	7	0	29	293
17:00	44	51	36	0	131	3	0	29	0	32	9	61	8	0	78	22	1	6	0	29	270
17:15	38	68	31	0	137	5	1	27	0	33	5	76	7	0	88	21	1	5	0	27	285
Total Volume	163	247	120	1	531	20	11	111	0	142	28	261	31	0	320	84	8	19	0	111	1104
% App Total	30.7%	46.5%	22.6%	0.2%		14.1%	7.7%	78.2%	0.0%		8.8%	81.6%	9.7%	0.0%		75.7%	7.2%	17.1%	0.0%		
PHF	.886	.858	.833	.250	.962	.714	.458	.957	.000	.866	.778	.859	.775	.000	.909	.955	.500	.679	.000	.957	.942

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Turns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-032 Garden Highway & Shanghai Bend Road

Date : 3/23/2016

Bank 1 Count = Bikes & Peds

START TIME	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total	Peds Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL				
7:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15	0	2	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	2	5
7:30	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0	8
7:45	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2	0	0	0	5	0	0	0	2	6
Total	0	2	0	3	2	0	0	0	1	0	0	2	0	6	2	0	0	0	10	0	0	0	4	20
8:00	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	3
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	0	3	0	0	0	1	8
16:00	0	3	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1
16:15	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	0	2	4	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	4	6	
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	2	0	0	0	0	6
17:15	1	0	0	1	1	0	0	0	0	0	1	0	0	1	1	0	0	0	2	0	0	0	2	4
17:30	0	2	0	4	2	0	0	0	1	0	0	0	0	6	0	0	0	0	1	0	0	0	2	12
17:45	0	0	0	4	0	0	1	0	7	1	0	0	0	6	0	0	0	0	0	0	0	0	1	17
Total	1	2	0	9	3	0	1	0	9	1	0	1	0	16	1	0	0	0	5	0	0	5	39	
Grand Total	1	9	0	14	10	0	1	0	12	1	0	3	0	29	3	0	0	0	18	0	0	0	14	73
Apprch %	10.0%	90.0%	0.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%						
Total %	7.1%	64.3%	0.0%		71.4%	0.0%	7.1%	0.0%		7.1%	0.0%	21.4%	0.0%		21.4%	0.0%	0.0%	0.0%		0.0%			100.0%	

AM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 07:30 to 08:30																							
Peak Hour For Entire Intersection Begins at 07:30																							
7:30	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	0
7:45	0	0	0	0	0	0	0	0	1	0	0	2	0	0	2	0	0	0	5	0	0	0	2
8:00	0	1	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Total Volume	0	1	0	2	1	0	0	0	2	0	0	2	0	3	2	0	0	0	10	0	0	0	3
% App Total	0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%					
PHF	.000	.250	.000		.250	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000		.375	

PM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total		
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL			
Peak Hour Analysis From 16:30 to 17:30																							
Peak Hour For Entire Intersection Begins at 16:30																							
16:30	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	2	0	0	0	0
17:15	1	0	0	1	1	0	0	0	0	0	0	1	0	1	1	0	0	0	2	0	0	0	2
Total Volume	1	0	0	3	1	0	0	0	1	0	0	1	0	7	1	0	0	0	4	0	0	0	2
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%					
PHF	.250	.000	.000		.250	.000	.000	.000		.000	.250	.000		.250	.000	.000	.000	.000		.000		.250	

ALL TRAFFIC DATA

City of Yuba City
 All Vehicles & Utturns On Unshifted
 Bikes & Peds On Bank 1
 Heavy Trucks On Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 16-7206-032 Garden Highway & Shanghai Bend Road

Date : 3/23/2016

Bank 2 Count = Heavy Trucks

START TIME	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total	Peds Total					
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL							
7:00	1	1	0	0	2	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0
7:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0
7:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
Total	2	2	0	0	4	0	0	3	0	3	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	11	0
8:00	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	0
8:15	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	6	0
8:30	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0
8:45	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0
Total	0	12	0	0	12	0	0	0	0	0	0	7	0	0	7	1	0	0	0	0	1	0	0	0	1	20	0
16:00	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
16:15	0	2	0	0	2	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	2	2	1	0	5	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	9	0
17:00	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	2	0	2	0	0	0	0	0	5	0
17:30	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	4	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	2	0	0	0	0	0	0	6	1	0	7	0	0	2	0	2	0	0	2	0	2	11	0
Grand Total	4	17	2	0	23	0	0	6	0	6	0	17	2	0	19	1	0	2	0	3	0	0	2	0	3	51	0
Apprch %	17.4%	73.9%	8.7%			0.0%	0.0%	100.0%			0.0%	89.5%	10.5%			33.3%	0.0%	66.7%									
Total %	7.8%	33.3%	3.9%		45.1%	0.0%	0.0%	11.8%		11.8%	0.0%	33.3%	3.9%		37.3%	2.0%	0.0%	3.9%		5.9%						100.0%	

AM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total					
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL						
Peak Hour Analysis From 07:30 to 08:30																										
Peak Hour For Entire Intersection Begins at 07:30																										
7:30	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3
7:45	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
8:00	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6
8:15	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	1	6
Total Volume	1	10	0	0	11	0	0	0	0	0	0	4	1	0	5	1	0	0	0	0	1	0	0	0	1	17
% App Total	9.1%	90.9%	0.0%			0.0%	0.0%	0.0%			0.0%	80.0%	20.0%			100.0%	0.0%	0.0%								
PHF	.250	.500	.000		.550	.000	.000	.000		.000	.000	1.000	.250		.625	.250	.000	.000		.250					.708	

PM PEAK HOUR	Garden Highway Southbound					Shanghai Bend Road Westbound					Garden Highway Northbound					Shanghai Bend Road Eastbound					Total					
	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL						
Peak Hour Analysis From 16:30 to 17:30																										
Peak Hour For Entire Intersection Begins at 16:30																										
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	2	0	2	0	0	0	0	2	5
Total Volume	0	0	2	0	2	0	0	0	0	0	0	3	1	0	4	0	0	2	0	2	0	0	2	0	2	8
% App Total	0.0%	0.0%	100.0%			0.0%	0.0%	0.0%			0.0%	75.0%	25.0%			0.0%	0.0%	100.0%								
PHF	.000	.000	.500		.500	.000	.000	.000		.000	.000	.375	.250		.333	.000	.000	.250		.250					.400	

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	266	210	78.9%	36.9	4.7	D
	Through	537	434	80.7%	26.2	4.2	C
	Right Turn	271	230	84.9%	12.6	1.5	B
	Subtotal	1,074	873	81.3%	25.1	2.5	C
SB	Left Turn	128	127	99.2%	37.0	3.3	D
	Through	637	630	98.8%	27.9	3.7	C
	Right Turn	170	173	102.0%	5.8	1.2	A
	Subtotal	935	930	99.5%	25.1	2.3	C
EB	Left Turn	109	99	91.2%	37.9	4.9	D
	Through	703	663	94.3%	26.4	3.2	C
	Right Turn	163	180	110.6%	9.9	1.6	A
	Subtotal	975	942	96.7%	24.5	2.4	C
WB	Left Turn	167	177	105.8%	37.5	3.1	D
	Through	808	792	98.1%	23.4	2.9	C
	Right Turn	71	70	98.5%	6.6	1.6	A
	Subtotal	1,046	1,039	99.3%	24.7	2.7	C
Total		4,030	3,785	93.9%	24.9	1.9	C

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	53	41	77.8%	26.0	8.2	C
	Through	1,021	880	86.2%	10.3	1.3	B
	Right Turn	28	22	80.2%	8.7	1.6	A
	Subtotal	1,102	944	85.7%	10.8	1.4	B
SB	Left Turn	34	34	100.7%	24.3	4.8	C
	Through	920	953	103.6%	9.3	2.2	A
	Right Turn	13	12	93.4%	6.2	1.1	A
	Subtotal	967	999	103.4%	9.7	2.1	A
EB	Left Turn	36	40	110.4%	19.4	4.8	B
	Through	8	10	128.8%	14.2	10.7	B
	Right Turn	16	14	89.7%	5.6	3.5	A
	Subtotal	60	64	107.3%	15.6	3.8	B
WB	Left Turn	2	2	110.4%	14.8	18.8	B
	Through	1	1	73.6%	3.4	7.2	A
	Right Turn	3	2	73.6%	2.1	3.9	A
	Subtotal	6	5	85.9%	12.4	13.7	B
Total		2,135	2,013	94.3%	10.5	1.2	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	116	105	90.7%	51.4	5.9	D
	Through	964	824	85.4%	36.0	6.9	D
	Right Turn	242	199	82.3%	16.7	4.5	B
	Subtotal	1,322	1,128	85.3%	34.0	5.5	C
SB	Left Turn	115	120	104.6%	41.7	7.5	D
	Through	763	763	100.0%	24.8	4.3	C
	Right Turn	60	68	114.1%	8.4	1.7	A
	Subtotal	938	952	101.5%	25.8	3.6	C
EB	Left Turn	47	45	95.5%	55.4	11.8	E
	Through	298	301	101.1%	30.4	3.8	C
	Right Turn	102	98	96.3%	15.9	3.0	B
	Subtotal	447	445	99.5%	29.7	3.7	C
WB	Left Turn	116	120	103.1%	38.3	5.7	D
	Through	311	280	90.0%	23.6	2.4	C
	Right Turn	91	89	97.9%	16.7	3.9	B
	Subtotal	518	489	94.3%	25.9	1.5	C
Total		3,225	3,013	93.4%	29.5	3.2	C

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	156	124	79.3%	40.9	4.2	D
	Through	1,048	898	85.7%	31.5	4.4	C
	Right Turn	166	142	85.3%	18.7	3.2	B
	Subtotal	1,370	1,164	84.9%	30.9	4.0	C
SB	Left Turn	91	78	86.1%	48.5	5.7	D
	Through	758	740	97.6%	34.1	5.3	C
	Right Turn	132	143	108.4%	13.6	2.1	B
	Subtotal	981	961	98.0%	32.2	4.7	C
EB	Left Turn	178	176	99.0%	50.2	9.5	D
	Through	386	385	99.7%	36.0	6.7	D
	Right Turn	143	146	102.2%	7.1	1.8	A
	Subtotal	707	707	100.0%	33.6	5.3	C
WB	Left Turn	68	66	97.4%	53.4	12.0	D
	Through	306	300	98.0%	28.2	3.1	C
	Right Turn	99	99	99.6%	17.2	5.1	B
	Subtotal	473	465	98.3%	29.6	4.5	C
Total		3,531	3,297	93.4%	31.7	3.0	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	24	18	73.6%	8.6	4.0	A
	Through	1,341	1,190	88.8%	5.4	0.8	A
	Right Turn	31	30	97.3%	5.7	1.9	A
	Subtotal	1,396	1,238	88.7%	5.5	0.8	A
SB	Left Turn	50	53	106.7%	18.7	7.7	C
	Through	899	864	96.1%	6.9	0.6	A
	Right Turn	20	22	112.2%	6.4	2.8	A
	Subtotal	969	940	97.0%	7.6	0.7	A
EB	Left Turn	3	2	61.3%	22.6	30.4	C
	Through	5	3	66.2%	29.0	29.0	D
	Right Turn	27	25	94.0%	11.0	3.8	B
	Subtotal	35	31	87.3%	19.0	8.7	C
WB	Left Turn	2	1	55.2%	7.3	13.4	A
	Through	1	1	110.4%	4.6	11.1	A
	Right Turn	26	25	96.2%	12.4	4.7	B
	Subtotal	29	27	93.9%	13.1	5.1	B
Total		2,429	2,236	92.0%	6.6	0.5	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	24	18	73.6%	42.6	6.7	D
	Through	1,224	1,095	89.4%	19.3	2.0	B
	Right Turn	48	42	88.2%	8.6	1.9	A
	Subtotal	1,296	1,155	89.1%	19.2	2.0	B
SB	Left Turn	58	51	88.2%	43.9	11.7	D
	Through	856	807	94.3%	24.6	5.4	C
	Right Turn	14	11	81.5%	10.2	1.8	B
	Subtotal	928	870	93.7%	25.5	5.5	C
EB	Left Turn	71	60	84.5%	29.1	4.8	C
	Through	109	89	81.7%	28.8	6.0	C
	Right Turn	27	30	111.8%	13.0	7.7	B
	Subtotal	207	179	86.6%	26.7	5.3	C
WB	Left Turn	48	43	90.5%	29.0	8.1	C
	Through	54	47	86.5%	33.9	9.6	C
	Right Turn	101	95	93.6%	17.7	4.6	B
	Subtotal	203	185	91.0%	24.2	6.1	C
Total		2,634	2,389	90.7%	22.5	3.3	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	44	40	92.0%	44.8	7.0	D
	Through	809	711	87.8%	36.1	4.1	D
	Right Turn	53	51	95.8%	11.4	2.6	B
	Subtotal	906	802	88.5%	35.0	3.8	D
SB	Left Turn	127	117	92.1%	35.6	8.1	D
	Through	725	659	90.9%	21.7	3.4	C
	Right Turn	79	78	98.3%	9.7	2.3	A
	Subtotal	931	853	91.7%	22.5	3.4	C
EB	Left Turn	247	249	100.7%	41.1	6.8	D
	Through	278	270	97.2%	29.7	6.3	C
	Right Turn	49	57	117.2%	24.2	5.2	C
	Subtotal	574	576	100.4%	34.0	5.6	C
WB	Left Turn	33	33	100.4%	53.2	13.8	D
	Through	180	174	96.9%	36.2	6.8	D
	Right Turn	240	231	96.3%	11.9	2.4	B
	Subtotal	453	439	96.8%	24.8	4.0	C
Total		2,864	2,670	93.2%	29.2	3.4	C

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	4	88.3%	4.5	4.7	A
	Through	858	796	92.7%	7.9	1.1	A
	Right Turn	5	8	154.6%	5.1	4.2	A
	Subtotal	868	808	93.1%	7.9	1.1	A
SB	Left Turn	25	21	82.4%	9.6	3.6	A
	Through	772	722	93.5%	8.6	1.2	A
	Right Turn	10	8	84.6%	8.0	6.6	A
	Subtotal	807	751	93.1%	8.6	1.2	A
EB	Left Turn	16	19	117.3%	17.7	12.4	C
	Through	4	4	92.0%	10.0	12.0	B
	Right Turn	4	4	92.0%	3.8	5.5	A
	Subtotal	24	26	108.9%	16.8	10.6	C
WB	Left Turn						
	Through	7	10	147.2%	16.0	4.5	C
	Right Turn	32	30	93.2%	6.4	2.7	A
	Subtotal	39	40	102.9%	9.4	2.7	A
Total		1,738	1,625	93.5%	8.4	0.8	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	73	71	97.8%	32.4	3.1	C
	Through	609	566	92.9%	23.3	2.7	C
	Right Turn	65	63	96.2%	10.9	2.3	B
	Subtotal	747	700	93.7%	23.2	2.1	C
SB	Left Turn	66	52	78.6%	40.0	7.7	D
	Through	635	575	90.5%	27.7	3.4	C
	Right Turn	75	65	86.8%	15.7	1.9	B
	Subtotal	776	692	89.2%	27.5	3.2	C
EB	Left Turn	85	74	86.6%	30.8	5.8	C
	Through	173	178	102.7%	22.0	3.1	C
	Right Turn	164	146	89.3%	7.6	1.7	A
	Subtotal	422	398	94.3%	18.1	1.7	B
WB	Left Turn	104	101	97.3%	28.0	3.4	C
	Through	153	158	103.2%	18.9	4.1	B
	Right Turn	174	178	102.4%	8.9	2.1	A
	Subtotal	431	437	101.4%	16.9	1.9	B
Total		2,376	2,227	93.7%	22.4	1.3	C

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	8	8	101.2%	4.6	5.1	A
	Through	632	599	94.9%	2.6	0.6	A
	Right Turn	19	21	112.3%	0.8	0.6	A
	Subtotal	659	629	95.4%	2.6	0.5	A
SB	Left Turn	93	71	76.8%	9.8	3.0	A
	Through	802	714	89.0%	7.9	0.9	A
	Right Turn	8	8	105.8%	11.6	6.4	B
	Subtotal	903	794	87.9%	8.1	0.9	A
EB	Left Turn	4	2	46.0%	3.8	7.3	A
	Through	6	8	128.8%	16.2	14.3	C
	Right Turn	7	11	157.7%	5.6	3.5	A
	Subtotal	17	21	121.2%	11.6	5.0	B
WB	Left Turn	6	8	128.8%	16.5	10.6	C
	Through	2	2	92.0%	9.7	15.4	A
	Right Turn	110	106	96.3%	6.1	0.7	A
	Subtotal	118	116	97.9%	7.3	1.1	A
Total		1,697	1,559	91.9%	5.9	0.6	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	4	4	110.4%	13.9	18.0	B
	Through	640	610	95.3%	2.2	0.7	A
	Right Turn	6	4	61.3%	0.9	1.2	A
	Subtotal	650	618	95.1%	2.3	0.6	A
SB	Left Turn	11	11	100.4%	2.3	2.0	A
	Through	797	702	88.1%	4.3	0.2	A
	Right Turn	7	7	99.9%	0.9	0.5	A
	Subtotal	815	720	88.4%	4.3	0.2	A
EB	Left Turn	1	0	36.8%	9.1	28.9	A
	Through	3	3	98.1%	8.6	10.3	A
	Right Turn	6	7	110.4%	5.0	6.3	A
	Subtotal	10	10	99.4%	11.5	10.7	B
WB	Left Turn	3	3	85.9%	13.6	18.3	B
	Through	3	1	36.8%	4.7	8.3	A
	Right Turn	18	21	118.6%	4.5	2.2	A
	Subtotal	24	25	104.3%	7.0	2.4	A
Total		1,499	1,373	91.6%	3.5	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	1	1	110.4%	1.9	3.9	A
	Through	644	617	95.8%	2.6	0.5	A
	Right Turn	7	11	163.0%	1.7	1.4	A
	Subtotal	652	630	96.6%	2.6	0.5	A
SB	Left Turn	9	9	98.1%	2.4	1.5	A
	Through	793	686	86.5%	0.7	0.2	A
	Right Turn	4	4	92.0%	1.0	1.7	A
	Subtotal	806	698	86.6%	0.7	0.2	A
EB	Left Turn						
	Through						
	Right Turn	3	3	110.4%	2.2	3.8	A
Subtotal	3	3	110.4%	2.2	3.8	A	
WB	Left Turn						
	Through						
	Right Turn	6	5	85.9%	4.1	4.9	A
Subtotal	6	5	85.9%	4.1	4.9	A	
Total		1,467	1,336	91.1%	1.6	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	7	7	105.1%	31.1	18.4	C
	Through	506	443	87.6%	21.7	2.0	C
	Right Turn	13	13	99.1%	6.6	4.5	A
	Subtotal	526	464	88.2%	21.6	2.1	C
SB	Left Turn	79	72	91.8%	46.4	9.9	D
	Through	703	551	78.3%	26.4	2.3	C
	Right Turn	14	13	94.6%	12.9	5.2	B
	Subtotal	796	636	79.9%	28.4	2.7	C
EB	Left Turn	22	19	85.3%	36.4	13.3	D
	Through	92	95	102.8%	35.4	6.1	D
	Right Turn	1	1	73.6%	2.1	5.5	A
	Subtotal	115	114	99.2%	35.3	4.4	D
WB	Left Turn	29	31	106.6%	37.8	11.0	D
	Through	57	57	100.1%	34.9	7.6	C
	Right Turn	124	129	103.9%	20.6	6.1	C
	Subtotal	210	217	103.2%	26.6	6.2	C
Total		1,647	1,431	86.9%	26.5	2.0	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	126	114	90.5%	20.2	8.3	C
	Through						
	Right Turn	113	107	95.1%	13.4	6.5	B
	Subtotal	239	222	92.7%	17.0	7.5	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	365	351	96.1%	1.6	0.4	A
	Right Turn	107	95	88.7%	0.6	0.3	A
	Subtotal	472	446	94.4%	1.4	0.3	A
WB	Left Turn	72	67	93.0%	6.5	1.9	A
	Through	319	314	98.3%	1.8	0.5	A
	Right Turn						
	Subtotal	391	381	97.3%	2.6	0.7	A
Total		1,102	1,048	95.1%	5.1	1.6	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	50	42	83.9%	10.6	2.8	B
	Through						
	Right Turn	54	49	90.0%	5.4	1.3	A
	Subtotal	104	91	87.0%	7.8	1.9	A
EB	Left Turn	24	21	88.9%	3.4	1.5	A
	Through	257	253	98.4%	1.0	0.6	A
	Right Turn						
	Subtotal	281	274	97.6%	1.2	0.7	A
WB	Left Turn	2	0	18.4%	7.2	#DIV/0!	A
	Through	356	365	102.6%	1.1	0.3	A
	Right Turn	49	53	108.1%	0.5	0.2	A
	Subtotal	407	419	102.9%	1.0	0.3	A
Total		792	783	98.9%	1.9	0.4	A

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	14	69.9%	2.3	0.8	A
	Through	74	82	111.4%	0.6	0.4	A
	Right Turn						
	Subtotal	94	96	102.6%	0.8	0.4	A
SB	Left Turn						
	Through	83	75	90.9%	0.3	0.2	A
	Right Turn	19	27	141.4%	0.2	0.2	A
	Subtotal	102	102	100.3%	0.3	0.2	A
EB	Left Turn	18	15	83.8%	4.5	0.6	A
	Through						
	Right Turn	16	17	103.5%	2.8	0.7	A
	Subtotal	34	32	93.1%	3.6	0.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		230	230	100.2%	1.0	0.2	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
AM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	3	3	85.9%	3.2	3.1	A
	Through						
	Right Turn	7	6	78.9%	2.0	1.1	A
	Subtotal	10	8	81.0%	2.9	1.3	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	117	96	82.4%	0.1	0.1	A
	Right Turn	1	1	73.6%	0.0	0.0	A
	Subtotal	118	97	82.3%	0.1	0.1	A
WB	Left Turn	1	0	36.8%	0.2	0.6	A
	Through	115	116	100.8%	0.1	0.1	A
	Right Turn						
	Subtotal	116	116	100.2%	0.1	0.1	A
Total		244	222	90.8%	0.2	0.1	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	6	3	55.2%	2.2	2.3	A
	Through						
	Right Turn	26	29	110.4%	3.2	0.6	A
	Subtotal	32	32	100.1%	3.3	0.6	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	119	96	80.4%	0.1	0.0	A
	Right Turn	5	3	66.2%	0.0	0.0	A
	Subtotal	124	99	79.8%	0.1	0.0	A
WB	Left Turn	17	14	82.3%	2.7	1.2	A
	Through	110	112	102.0%	0.3	0.1	A
	Right Turn						
	Subtotal	127	126	99.4%	0.5	0.2	A
Total		283	257	90.9%	0.7	0.2	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Existing Conditions
 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	108	165	117	95	243	113	565	135	178	342	4
Future Volume (veh/h)	9	108	165	117	95	243	113	565	135	178	342	4
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		0.99	1.00		0.99	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1858	1900
Adj Flow Rate, veh/h	12	140	214	152	123	316	147	734	175	231	444	5
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	28	419	354	260	531	591	194	1088	259	351	1349	15
Arrive On Green	0.02	0.22	0.22	0.08	0.28	0.27	0.11	0.38	0.37	0.10	0.38	0.36
Sat Flow, veh/h	1774	1863	1575	3442	1863	1575	1774	2836	676	3408	3576	40
Grp Volume(v), veh/h	12	140	214	152	123	316	147	458	451	231	219	230
Grp Sat Flow(s),veh/h/ln	1774	1863	1575	1721	1863	1575	1774	1770	1742	1704	1765	1851
Q Serve(g_s), s	0.5	4.7	9.2	3.2	3.8	11.8	6.0	16.2	16.2	4.9	6.6	6.6
Cycle Q Clear(g_c), s	0.5	4.7	9.2	3.2	3.8	11.8	6.0	16.2	16.2	4.9	6.6	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		0.02
Lane Grp Cap(c), veh/h	28	419	354	260	531	591	194	679	668	351	666	698
V/C Ratio(X)	0.44	0.33	0.60	0.59	0.23	0.54	0.76	0.67	0.67	0.66	0.33	0.33
Avail Cap(c_a), veh/h	721	1774	1500	802	1774	1641	721	1673	1647	1384	1669	1750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	24.4	26.1	33.6	20.6	18.4	32.5	19.2	19.4	32.4	16.6	16.6
Incr Delay (d2), s/veh	4.0	0.5	1.7	0.8	0.2	0.8	2.3	1.2	1.2	0.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	4.1	1.5	2.0	5.2	3.1	8.1	8.0	2.3	3.2	3.4
LnGrp Delay(d),s/veh	40.6	24.9	27.8	34.4	20.8	19.1	34.7	20.4	20.6	33.2	16.7	16.7
LnGrp LOS	D	C	C	C	C	B	C	C	C	C	B	B
Approach Vol, veh/h		366			591			1056			680	
Approach Delay, s/veh		27.1			23.4			22.5			22.3	
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	11.7	32.8	9.7	20.9	12.2	32.3	5.2	25.4				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	6.9	18.2	5.2	11.2	8.0	8.6	2.5	13.8				
Green Ext Time (p_c), s	0.4	9.5	0.2	3.6	0.1	9.6	0.0	3.6				
Intersection Summary												
HCM 2010 Ctrl Delay			23.3									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Existing Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	320	34	84	200	184	64	457	141	136	308	205
Future Volume (veh/h)	164	320	34	84	200	184	64	457	141	136	308	205
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1844	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	198	386	41	101	241	222	77	551	170	164	371	247
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	232	1190	126	129	546	482	100	815	251	197	740	485
Arrive On Green	0.13	0.37	0.36	0.07	0.31	0.30	0.06	0.31	0.29	0.11	0.36	0.35
Sat Flow, veh/h	1774	3228	341	1774	1761	1555	1774	2662	818	1774	2049	1344
Grp Volume(v), veh/h	198	211	216	101	240	223	77	366	355	164	320	298
Grp Sat Flow(s),veh/h/ln	1774	1770	1800	1774	1752	1564	1774	1770	1710	1774	1770	1624
Q Serve(g_s), s	12.3	9.6	9.8	6.3	12.3	13.1	4.8	20.4	20.6	10.2	15.9	16.4
Cycle Q Clear(g_c), s	12.3	9.6	9.8	6.3	12.3	13.1	4.8	20.4	20.6	10.2	15.9	16.4
Prop In Lane	1.00		0.19	1.00		0.99	1.00		0.48	1.00		0.83
Lane Grp Cap(c), veh/h	232	652	663	129	544	485	100	542	524	197	639	586
V/C Ratio(X)	0.85	0.32	0.33	0.79	0.44	0.46	0.77	0.67	0.68	0.83	0.50	0.51
Avail Cap(c_a), veh/h	472	1121	1140	472	1110	991	472	1121	1083	472	1121	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	25.5	25.7	51.5	31.1	32.0	52.5	34.2	34.6	49.1	28.1	28.8
Incr Delay (d2), s/veh	8.6	1.0	1.0	10.0	2.0	2.5	11.7	1.5	1.6	8.8	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	4.9	5.0	3.4	6.3	6.0	2.7	10.2	9.9	5.5	7.8	7.5
LnGrp Delay(d),s/veh	56.6	26.6	26.7	61.5	33.1	34.4	64.2	35.7	36.2	57.9	28.7	29.5
LnGrp LOS	E	C	C	E	C	C	E	D	D	E	C	C
Approach Vol, veh/h		625			564			798			782	
Approach Delay, s/veh		36.2			38.7			38.7			35.1	
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	36.5	38.6	12.2	45.6	10.4	44.7	18.8	39.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1/2), s	11.2	22.6	8.3	11.8	6.8	18.4	14.3	15.1				
Green Ext Time (p_c), s	0.4	10.5	0.2	18.7	0.2	10.6	0.5	18.4				
Intersection Summary												
HCM 2010 Ctrl Delay			37.1									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	31	62	453	96	99	346
Future Vol, veh/h	31	62	453	96	99	346
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	68	68	68	68
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	46	91	666	141	146	509
























Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1537	737	0 0 807 0
Stage 1	737	-	- - - -
Stage 2	800	-	- - - -
Critical Hdwy	6.42	6.25	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.345	- - 2.218 -
Pot Cap-1 Maneuver	128	413	- - 818 -
Stage 1	473	-	- - - -
Stage 2	442	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	105	413	- - 818 -
Mov Cap-2 Maneuver	234	-	- - - -
Stage 1	473	-	- - - -
Stage 2	363	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	23.5	0	2.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 329	818	-
HCM Lane V/C Ratio	-	- 0.416	0.178	-
HCM Control Delay (s)	-	- 23.5	10.4	-
HCM Lane LOS	-	- C	B	-
HCM 95th %tile Q(veh)	-	- 2	0.6	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Existing Conditions
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	110	324	38	72	175	93	2	31	222	165	121	180
Future Volume (veh/h)	110	324	38	72	175	93	2	31	222	165	121	180
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.88	1.00		1.00		1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1863		1863	1863	1863	1863	1841
Adj Flow Rate, veh/h	145	426	50	95	230	122		41	292	217	159	237
Adj No. of Lanes	1	1	1	1	1	1		1	1	1	1	1
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76		0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	3	3	3	2		2	2	2	2	3
Cap, veh/h	195	662	489	123	582	499		79	481	399	211	457
Arrive On Green	0.11	0.36	0.36	0.07	0.32	0.32		0.04	0.26	0.26	0.12	0.33
Sat Flow, veh/h	1774	1863	1376	1757	1845	1581		1774	1863	1547	1774	1376
Grp Volume(v), veh/h	145	426	50	95	230	122		41	292	217	159	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1376	1757	1845	1581		1774	1863	1547	1774	0
Q Serve(g_s), s	6.4	15.5	2.0	4.3	7.9	4.6		1.8	11.2	9.8	7.0	0.0
Cycle Q Clear(g_c), s	6.4	15.5	2.0	4.3	7.9	4.6		1.8	11.2	9.8	7.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	195	662	489	123	582	499		79	481	399	211	0
V/C Ratio(X)	0.74	0.64	0.10	0.77	0.40	0.24		0.52	0.61	0.54	0.75	0.00
Avail Cap(c_a), veh/h	561	1049	775	555	1039	890		561	1624	1348	561	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
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
Uniform Delay (d), s/veh	34.9	21.8	17.5	37.0	21.7	20.6		37.8	26.4	25.9	34.5	0.0
Incr Delay (d2), s/veh	4.1	0.8	0.1	7.3	0.3	0.2		3.9	0.9	0.9	4.0	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
%ile BackOfQ(50%),veh/ln	3.4	8.1	0.7	2.3	4.1	2.0		1.0	5.9	4.3	3.7	0.0
LnGrp Delay(d),s/veh	39.0	22.6	17.5	44.3	22.0	20.8		41.7	27.4	26.8	38.6	0.0
LnGrp LOS	D	C	B	D	C	C		D	C	C	D	
Approach Vol, veh/h		621			447				550			463
Approach Delay, s/veh		26.0			26.4				28.2			27.9
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	13.6	24.9	9.7	32.8	7.6	30.9	12.9	29.5				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+1), s	9.0	13.2	6.3	17.5	3.8	13.3	8.4	9.9				
Green Ext Time (p_c), s	0.3	3.9	0.1	4.0	0.0	3.9	0.2	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			27.1									
HCM 2010 LOS			C									
Notes												

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	51
Future Volume (veh/h)	51
Number	16
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.99
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	67
Adj No. of Lanes	0
Peak Hour Factor	0.76
Percent Heavy Veh, %	3
Cap, veh/h	129
Arrive On Green	0.32
Sat Flow, veh/h	389
Grp Volume(v), veh/h	304
Grp Sat Flow(s),veh/h/ln	1766
Q Serve(g_s), s	11.3
Cycle Q Clear(g_c), s	11.3
Prop In Lane	0.22
Lane Grp Cap(c), veh/h	587
V/C Ratio(X)	0.52
Avail Cap(c_a), veh/h	1539
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	21.9
Incr Delay (d2), s/veh	0.5
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	5.6
LnGrp Delay(d),s/veh	22.4
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Intersection																
Intersection Delay, s/veh11.4																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	19	230	47	0	12	157	64	0	23	50	26	0	104	56	15
Future Vol, veh/h	0	19	230	47	0	12	157	64	0	23	50	26	0	104	56	15
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	21	250	51	0	13	171	70	0	25	54	28	0	113	61	16
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach																
	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				1			
HCM Control Delay	12.3				11				9.9				11.1			
HCM LOS	B				B				A				B			
Lane																
	NBLn1		EBLn1		WBLn1		SBLn1									
Vol Left, %	23%		6%		5%		59%									
Vol Thru, %	51%		78%		67%		32%									
Vol Right, %	26%		16%		27%		9%									
Sign Control	Stop		Stop		Stop		Stop									
Traffic Vol by Lane	99		296		233		175									
LT Vol	23		19		12		104									
Through Vol	50		230		157		56									
RT Vol	26		47		64		15									
Lane Flow Rate	108		322		253		190									
Geometry Grp	1		1		1		1									
Degree of Util (X)	0.17		0.455		0.36		0.3									
Departure Headway (Hd)	5.699		5.095		5.122		5.678									
Convergence, Y/N	Yes		Yes		Yes		Yes									
Cap	628		708		702		633									
Service Time	3.744		3.128		3.158		3.716									
HCM Lane V/C Ratio	0.172		0.455		0.36		0.3									
HCM Control Delay	9.9		12.3		11		11.1									
HCM Lane LOS	A		B		B		B									
HCM 95th-tile Q	0.6		2.4		1.6		1.3									

Intersection

Int Delay, s/veh 1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	2	11	84	5	20	100
Future Vol, veh/h	2	11	84	5	20	100
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	87	87	87	87	87	87
Heavy Vehicles, %	2	9	2	60	60	2
Mvmt Flow	2	13	97	6	23	115

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	260	99	0 0 102 0
Stage 1	99	-	- - - -
Stage 2	161	-	- - - -
Critical Hdwy	6.42	6.29	- - 4.7 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.381	- - 2.74 -
Pot Cap-1 Maneuver	729	938	- - 1195 -
Stage 1	925	-	- - - -
Stage 2	868	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	714	938	- - 1195 -
Mov Cap-2 Maneuver	714	-	- - - -
Stage 1	925	-	- - - -
Stage 2	850	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 895	1195	-
HCM Lane V/C Ratio	-	- 0.017	0.019	-
HCM Control Delay (s)	-	- 9.1	8.1	0
HCM Lane LOS	-	- A	A	A
HCM 95th %tile Q(veh)	-	- 0.1	0.1	-

Intersection												
Int Delay, s/veh	1.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	1	5	9	0	4	5	6	85	0	2	95	2
Future Vol, veh/h	1	5	9	0	4	5	6	85	0	2	95	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2
Mvmt Flow	1	5	10	0	4	5	7	93	0	2	104	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	222	217	105	225	218	93	107	0	0	93	0	0
Stage 1	110	110	-	107	107	-	-	-	-	-	-	-
Stage 2	112	107	-	118	111	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	734	681	949	730	671	964	1484	-	-	1501	-	-
Stage 1	895	804	-	898	797	-	-	-	-	-	-	-
Stage 2	893	807	-	887	794	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	723	677	949	715	667	964	1484	-	-	1501	-	-
Mov Cap-2 Maneuver	723	677	-	715	667	-	-	-	-	-	-	-
Stage 1	891	803	-	894	793	-	-	-	-	-	-	-
Stage 2	879	803	-	871	793	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.5	0.5	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	822	805	1501	-
HCM Lane V/C Ratio	0.004	-	-	0.02	0.012	0.001	-
HCM Control Delay (s)	7.4	0	-	9.5	9.5	7.4	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Intersection												
Intersection Delay, s/veh	16.2											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	62	296	45	0	21	195	48	0	107	138	38
Future Vol, veh/h	0	62	296	45	0	21	195	48	0	107	138	38
Peak Hour Factor	0.92	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.92	0.89	0.89	0.89
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	70	333	51	0	24	219	54	0	120	155	43
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1
Approach												
	EB			WB			NB					
Opposing Approach	WB			EB			SB					
Opposing Lanes	3			3			3					
Conflicting Approach Left	SB			NB			EB					
Conflicting Lanes Left	3			3			3					
Conflicting Approach Right	NB			SB			WB					
Conflicting Lanes Right	3			3			3					
HCM Control Delay	20.4			15.3			13.5					
HCM LOS	C			C			B					
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	107	138	38	62	296	45	21	195	48	57	84	
LT Vol	107	0	0	62	0	0	21	0	0	57	0	
Through Vol	0	138	0	0	296	0	0	195	0	0	84	
RT Vol	0	0	38	0	0	45	0	0	48	0	0	
Lane Flow Rate	120	155	43	70	333	51	24	219	54	64	94	
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	
Degree of Util (X)	0.272	0.329	0.082	0.15	0.672	0.092	0.053	0.467	0.103	0.15	0.208	
Departure Headway (Hd)	8.131	7.631	6.931	7.743	7.277	6.543	8.094	7.679	6.894	8.417	7.917	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cap	442	471	516	463	496	547	442	469	519	426	453	
Service Time	5.881	5.381	4.681	5.487	5.021	4.287	5.845	5.43	4.645	6.17	5.67	
HCM Lane V/C Ratio	0.271	0.329	0.083	0.151	0.671	0.093	0.054	0.467	0.104	0.15	0.208	
HCM Control Delay	13.9	14.1	10.3	11.9	23.7	10	11.3	17	10.4	12.7	12.8	
HCM Lane LOS	B	B	B	B	C	A	B	C	B	B	B	
HCM 95th-tile Q	1.1	1.4	0.3	0.5	4.9	0.3	0.2	2.4	0.3	0.5	0.8	

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	57	84	43
Future Vol, veh/h	0	57	84	43
Peak Hour Factor	0.92	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	64	94	48
Number of Lanes	0	1	1	1
Approach		SB		
Opposing Approach		NB		
Opposing Lanes		3		
Conflicting Approach Left		WB		
Conflicting Lanes Left		3		
Conflicting Approach Right		EB		
Conflicting Lanes Right		3		
HCM Control Delay		12.3		
HCM LOS		B		
Lane	SBLn3			

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Existing Conditions
 AM Peak Hour

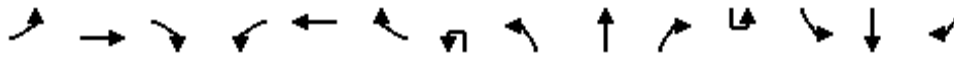


Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↖↗	↗	↖	↑↑	↑↑	↗		
Traffic Volume (veh/h)	264	131	125	683	398	118		
Future Volume (veh/h)	264	131	125	683	398	118		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	307	152	145	794	463	137		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	620	288	261	2214	1325	590		
Arrive On Green	0.18	0.18	0.15	0.63	0.38	0.38		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1562		
Grp Volume(v), veh/h	307	152	145	794	463	137		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1562		
Q Serve(g_s), s	3.4	3.6	3.2	4.5	3.9	2.5		
Cycle Q Clear(g_c), s	3.4	3.6	3.2	4.5	3.9	2.5		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	620	288	261	2214	1325	590		
V/C Ratio(X)	0.49	0.53	0.56	0.36	0.35	0.23		
Avail Cap(c_a), veh/h	3739	1737	1061	4002	3963	1766		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.3	15.4	16.3	3.8	9.3	8.8		
Incr Delay (d2), s/veh	0.2	0.6	0.7	0.0	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	3.2	1.6	2.1	1.9	1.1		
LnGrp Delay(d),s/veh	15.5	15.9	17.0	3.8	9.3	8.9		
LnGrp LOS	B	B	B	A	A	A		
Approach Vol, veh/h	459			939	600			
Approach Delay, s/veh	15.7			5.8	9.2			
Approach LOS	B			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.0		11.6	10.3	19.7		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		6.5		5.6	5.2	5.9		
Green Ext Time (p_c), s		7.4		0.9	0.1	7.4		
Intersection Summary								
HCM 2010 Ctrl Delay			9.1					
HCM 2010 LOS			A					

Intersection																
Intersection Delay, s/veh17.3																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	26	231	35	0	29	317	43	0	52	106	49	0	48	103	31
Future Vol, veh/h	0	26	231	35	0	29	317	43	0	52	106	49	0	48	103	31
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	28	248	38	0	31	341	46	0	56	114	53	0	52	111	33
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0
Approach																
	EB			WB			NB			SB						
Opposing Approach	WB			EB			SB			NB						
Opposing Lanes	2			1			1			1						
Conflicting Approach Left	SB			NB			EB			WB						
Conflicting Lanes Left	1			1			1			2						
Conflicting Approach Right	NB			SB			WB			EB						
Conflicting Lanes Right	1			1			2			1						
HCM Control Delay	16.9			20.8			14.2			13.7						
HCM LOS	C			C			B			B						
Lane																
	NBLn1		EBLn1		WBLn1		WBLn2		SBLn1							
Vol Left, %	25%		9%		8%		0%		26%							
Vol Thru, %	51%		79%		92%		0%		57%							
Vol Right, %	24%		12%		0%		100%		17%							
Sign Control	Stop		Stop		Stop		Stop		Stop							
Traffic Vol by Lane	207		292		346		43		182							
LT Vol	52		26		29		0		48							
Through Vol	106		231		317		0		103							
RT Vol	49		35		0		43		31							
Lane Flow Rate	223		314		372		46		196							
Geometry Grp	2		5		7		7		2							
Degree of Util (X)	0.409		0.551		0.681		0.075		0.366							
Departure Headway (Hd)	6.609		6.313		6.593		5.819		6.726							
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes							
Cap	543		571		547		614		534							
Service Time	4.669		4.367		4.343		3.569		4.788							
HCM Lane V/C Ratio	0.411		0.55		0.68		0.075		0.367							
HCM Control Delay	14.2		16.9		22.3		9		13.7							
HCM Lane LOS	B		C		C		A		B							
HCM 95th-tile Q	2		3.3		5.2		0.2		1.7							

HCM 2010 Signalized Intersection Summary
 26: Garden Hwy & Bogue Rd

Existing Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	178	43	174	36	83	74	1	176	416	15	2	29	267	108
Future Volume (veh/h)	178	43	174	36	83	74	1	176	416	15	2	29	267	108
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1846	1834	1900
Adj Flow Rate, veh/h	200	48	196	40	93	83		198	467	17		33	300	121
Adj No. of Lanes	1	1	1	1	1	1		1	2	0		1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		0.89	0.89	0.89		0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	262	510	433	63	302	257		260	1315	48		54	635	250
Arrive On Green	0.15	0.27	0.27	0.04	0.16	0.16		0.15	0.38	0.34		0.03	0.26	0.23
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583		1774	3480	126		1758	2422	952
Grp Volume(v), veh/h	200	48	196	40	93	83		198	237	247		33	214	207
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583		1774	1770	1837		1758	1743	1631
Q Serve(g_s), s	6.2	1.1	5.8	1.3	2.5	2.6		6.1	5.5	5.5		1.1	5.9	6.2
Cycle Q Clear(g_c), s	6.2	1.1	5.8	1.3	2.5	2.6		6.1	5.5	5.5		1.1	5.9	6.2
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.07		1.00		0.58
Lane Grp Cap(c), veh/h	262	510	433	63	302	257		260	669	694		54	457	428
V/C Ratio(X)	0.76	0.09	0.45	0.63	0.31	0.32		0.76	0.35	0.36		0.61	0.47	0.48
Avail Cap(c_a), veh/h	952	2361	2005	943	2361	2007		952	2243	2329		944	2209	2068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	15.4	17.1	27.0	21.0	21.0		23.3	12.7	12.8		27.2	17.6	18.2
Incr Delay (d2), s/veh	1.8	0.0	0.3	3.9	0.2	0.3		1.8	0.1	0.1		4.1	0.3	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	8.1	0.6	2.6	0.7	1.3	1.2		3.1	2.7	2.8		0.6	2.8	2.8
LnGrp Delay(d),s/veh	25.0	15.4	17.4	30.9	21.2	21.3		25.1	12.8	12.9		31.3	17.9	18.6
LnGrp LOS	C	B	B	C	C	C		C	B	B		C	B	B
Approach Vol, veh/h		444			216				682				454	
Approach Delay, s/veh		20.6			23.0				16.4				19.2	
Approach LOS		C			C				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	5.7	25.5	6.0	19.6	12.3	18.9	12.4	13.2						
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0						
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0						
Max Q Clear Time (g_c+1), s	13.5	7.5	3.3	7.8	8.1	8.2	8.2	4.6						
Green Ext Time (p_c), s	0.0	4.0	0.0	1.0	0.1	4.0	0.1	1.0						
Intersection Summary														
HCM 2010 Ctrl Delay			18.9											
HCM 2010 LOS			B											
Notes														

Intersection																
Intersection Delay, s/veh11.6																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	29	113	3	0	15	104	147	0	6	29	11	0	108	67	14
Future Vol, veh/h	0	29	113	3	0	15	104	147	0	6	29	11	0	108	67	14
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	37	145	4	0	19	133	188	0	8	37	14	0	138	86	18
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach																
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				1			
HCM Control Delay	10.4				12.5				9.2				11.7			
HCM LOS	B				B				A				B			
Lane																
Lane	NBLn1		EBLn1		WBLn1		SBLn1									
Vol Left, %	13%		20%		6%		57%									
Vol Thru, %	63%		78%		39%		35%									
Vol Right, %	24%		2%		55%		7%									
Sign Control	Stop		Stop		Stop		Stop									
Traffic Vol by Lane	46		145		266		189									
LT Vol	6		29		15		108									
Through Vol	29		113		104		67									
RT Vol	11		3		147		14									
Lane Flow Rate	59		186		341		242									
Geometry Grp	1		1		1		1									
Degree of Util (X)	0.092		0.276		0.471		0.37									
Departure Headway (Hd)	5.642		5.343		5.096		5.502									
Convergence, Y/N	Yes		Yes		Yes		Yes									
Cap	636		675		713		657									
Service Time	3.664		3.364		3.096		3.515									
HCM Lane V/C Ratio	0.093		0.276		0.478		0.368									
HCM Control Delay	9.2		10.4		12.5		11.7									
HCM Lane LOS	A		B		B		B									
HCM 95th-tile Q	0.3		1.1		2.5		1.7									

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Existing Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	265	0	10	0	0	1	8	67	0	12	0	118	423
Future Volume (veh/h)	265	0	10	0	0	1	8	67	0	12	0	118	423
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	1863	1863	1863	1900	1863	1900	1863	1827	0		1863	1792	1863
Adj Flow Rate, veh/h	379	0	14	0	0	1	11	96	0		0	169	604
Adj No. of Lanes	2	0	1	0	1	0	1	1	0		1	1	1
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70		0.70	0.70	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	0		2	6	2
Cap, veh/h	668	0	298	0	0	39	18	1024	0		3	851	752
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.01	0.01	0.56	0.00		0.00	0.47	0.47
Sat Flow, veh/h	3548	0	1583	0	0	1580	1774	1827	0		1774	1792	1583
Grp Volume(v), veh/h	379	0	14	0	0	1	11	96	0		0	169	604
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1580	1774	1827	0		1774	1792	1583
Q Serve(g_s), s	5.2	0.0	0.4	0.0	0.0	0.0	0.3	1.3	0.0		0.0	2.9	17.2
Cycle Q Clear(g_c), s	5.2	0.0	0.4	0.0	0.0	0.0	0.3	1.3	0.0		0.0	2.9	17.2
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00		1.00		1.00
Lane Grp Cap(c), veh/h	668	0	298	0	0	39	18	1024	0		3	851	752
V/C Ratio(X)	0.57	0.00	0.05	0.00	0.00	0.03	0.60	0.09	0.00		0.00	0.20	0.80
Avail Cap(c_a), veh/h	2742	0	1223	0	0	1221	572	1412	0		572	1385	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00		0.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	0.0	17.6	0.0	0.0	25.7	26.1	5.4	0.0		0.0	8.1	11.8
Incr Delay (d2), s/veh	0.9	0.0	0.1	0.0	0.0	0.3	27.5	0.0	0.0		0.0	0.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.2	0.0	0.0	0.0	0.3	0.7	0.0		0.0	1.4	7.9
LnGrp Delay(d),s/veh	20.5	0.0	17.7	0.0	0.0	26.0	53.6	5.5	0.0		0.0	8.2	14.3
LnGrp LOS	C		B			C	D	A				A	B
Approach Vol, veh/h		393			1			107				773	
Approach Delay, s/veh		20.4			26.0			10.4				13.0	
Approach LOS		C			C			B				B	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	33.8			14.0	4.5	29.2		5.3					
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0					
Max Green Setting (Gmax), s	40.0			40.0	17.0	40.0		40.0					
Max Q Clear Time (g_c+I), s	3.3			7.2	2.3	19.2		2.0					
Green Ext Time (p_c), s	0.0	5.7		1.9	0.0	5.0		0.0					
Intersection Summary													
HCM 2010 Ctrl Delay			15.1										
HCM 2010 LOS			B										
Notes													

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Existing Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	112	1	77	89	2	155	39	347	45	1	66	356	52
Future Volume (veh/h)	112	1	77	89	2	155	39	347	45	1	66	356	52
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		0.97		1.00		0.96
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	1863	1863	1900	1863	1863	1863	1863	1863	1900		1845	1863	1900
Adj Flow Rate, veh/h	133	1	92	106	2	185	46	413	54		79	424	62
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84		0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2		3	2	2
Cap, veh/h	194	4	340	157	367	311	73	1012	131		119	1076	156
Arrive On Green	0.11	0.22	0.21	0.09	0.20	0.20	0.04	0.32	0.28		0.07	0.35	0.31
Sat Flow, veh/h	1774	17	1562	1774	1863	1579	1774	3140	408		1757	3085	448
Grp Volume(v), veh/h	133	0	93	106	2	185	46	232	235		79	242	244
Grp Sat Flow(s),veh/h/ln	1774	0	1579	1774	1863	1579	1774	1770	1778		1757	1770	1764
Q Serve(g_s), s	3.8	0.0	2.6	3.1	0.0	5.6	1.3	5.4	5.5		2.3	5.4	5.6
Cycle Q Clear(g_c), s	3.8	0.0	2.6	3.1	0.0	5.6	1.3	5.4	5.5		2.3	5.4	5.6
Prop In Lane	1.00		0.99	1.00		1.00	1.00		0.23		1.00		0.25
Lane Grp Cap(c), veh/h	194	0	344	157	367	311	73	571	573		119	617	615
V/C Ratio(X)	0.69	0.00	0.27	0.67	0.01	0.59	0.63	0.41	0.41		0.67	0.39	0.40
Avail Cap(c_a), veh/h	859	0	1364	825	1609	1364	859	1579	1587		851	1579	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	17.3	23.3	17.0	19.2	24.8	13.9	14.1		24.0	12.9	13.2
Incr Delay (d2), s/veh	4.3	0.0	0.4	5.0	0.0	1.8	8.5	0.5	0.5		6.3	0.4	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	2.1	0.0	1.2	1.7	0.0	2.6	0.8	2.6	2.8		1.3	2.7	2.7
LnGrp Delay(d),s/veh	26.9	0.0	17.8	28.2	17.0	21.0	33.4	14.4	14.6		30.2	13.3	13.6
LnGrp LOS	C		B	C	B	C	C	B	B		C	B	B
Approach Vol, veh/h		226			293			513				565	
Approach Delay, s/veh		23.1			23.6			16.2				15.8	
Approach LOS		C			C			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	7.6	21.0	8.7	15.5	6.2	22.4	9.7	14.4					
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5					
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0					
Max Q Clear Time (g_c+1), s	11.3	7.5	5.1	4.6	3.3	7.6	5.8	7.6					
Green Ext Time (p_c), s	0.2	5.9	0.2	1.3	0.1	5.9	0.3	1.3					
Intersection Summary													
HCM 2010 Ctrl Delay	18.4												
HCM 2010 LOS	B												
Notes													

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	280	216	77.2%	50.6	6.4	D
	Through	695	560	80.6%	38.4	6.6	D
	Right Turn	375	283	75.6%	20.5	4.8	C
	Subtotal	1,350	1,060	78.5%	36.2	4.1	D
SB	Left Turn	130	128	98.8%	47.7	7.6	D
	Through	589	564	95.7%	39.3	5.1	D
	Right Turn	93	89	96.0%	8.0	2.2	A
	Subtotal	812	782	96.3%	37.1	4.3	D
EB	Left Turn	160	160	99.8%	60.0	13.9	E
	Through	1,084	1,018	93.9%	53.0	14.5	D
	Right Turn	318	326	102.4%	31.5	9.5	C
	Subtotal	1,562	1,504	96.3%	49.2	13.4	D
WB	Left Turn	430	424	98.5%	52.4	5.6	D
	Through	1,072	1,063	99.2%	24.8	2.1	C
	Right Turn	172	184	106.7%	10.0	1.7	A
	Subtotal	1,674	1,670	99.8%	30.2	1.6	C
Total		5,398	5,016	92.9%	38.2	4.0	D

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	108	94	87.3%	26.4	4.9	C
	Through	1,197	982	82.0%	13.2	1.7	B
	Right Turn	9	8	84.4%	9.5	7.8	A
	Subtotal	1,314	1,084	82.5%	14.3	1.7	B
SB	Left Turn	31	27	85.8%	38.8	9.9	D
	Through	1,232	1,204	97.7%	18.2	3.3	B
	Right Turn	74	76	103.2%	10.9	2.2	B
	Subtotal	1,337	1,307	97.8%	18.1	3.3	B
EB	Left Turn	113	124	109.3%	24.0	2.5	C
	Through	8	6	80.8%	20.1	19.9	C
	Right Turn	93	87	94.0%	9.5	2.5	A
	Subtotal	214	217	101.6%	18.3	2.4	B
WB	Left Turn	21	16	74.2%	25.1	6.6	C
	Through	6	5	88.7%	19.7	16.5	B
	Right Turn	18	15	84.4%	10.0	7.3	A
	Subtotal	45	36	80.2%	17.9	6.2	B
Total		2,910	2,644	90.9%	16.6	2.0	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	164	136	83.0%	61.5	6.4	E
	Through	1,079	890	82.5%	53.6	6.8	D
	Right Turn	202	171	84.8%	21.7	4.4	C
	Subtotal	1,445	1,197	82.9%	50.1	6.0	D
SB	Left Turn	156	143	91.6%	55.4	12.7	E
	Through	989	905	91.5%	50.0	14.5	D
	Right Turn	201	194	96.6%	20.8	7.7	C
	Subtotal	1,346	1,242	92.3%	46.2	12.8	D
EB	Left Turn	99	89	90.2%	67.6	13.5	E
	Through	445	446	100.3%	35.0	3.4	D
	Right Turn	161	157	97.7%	26.8	5.5	C
	Subtotal	705	693	98.3%	37.3	4.7	D
WB	Left Turn	224	204	91.3%	58.1	28.5	E
	Through	517	496	95.9%	38.7	17.7	D
	Right Turn	136	138	101.1%	30.4	16.1	C
	Subtotal	877	838	95.5%	42.4	20.7	D
Total		4,373	3,970	90.8%	45.0	5.7	D

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	244	198	81.3%	45.9	5.6	D
	Through	1,118	993	88.8%	35.8	3.1	D
	Right Turn	120	112	93.1%	19.2	1.6	B
	Subtotal	1,482	1,303	87.9%	35.9	2.7	D
SB	Left Turn	109	102	93.4%	48.3	9.7	D
	Through	980	899	91.7%	35.9	6.7	D
	Right Turn	285	261	91.7%	17.6	2.1	B
	Subtotal	1,374	1,262	91.9%	33.2	4.6	C
EB	Left Turn	214	202	94.3%	67.2	15.4	E
	Through	416	394	94.7%	50.0	14.5	D
	Right Turn	204	201	98.5%	9.5	2.4	A
	Subtotal	834	797	95.5%	44.0	10.5	D
WB	Left Turn	110	98	89.1%	68.8	11.2	E
	Through	412	410	99.6%	34.5	3.4	C
	Right Turn	125	118	94.5%	24.9	4.1	C
	Subtotal	647	627	96.9%	38.2	5.0	D
Total		4,337	3,989	92.0%	37.0	2.0	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 5

SR 99/Hunn Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	33	27	82.9%	17.1	6.5	C
	Through	1,395	1,270	91.0%	5.4	0.6	A
	Right Turn	24	17	72.8%	4.4	1.5	A
	Subtotal	1,452	1,314	90.5%	5.7	0.7	A
SB	Left Turn	51	51	99.1%	21.4	8.4	C
	Through	1,217	1,087	89.3%	7.6	0.5	A
	Right Turn	26	22	84.8%	8.0	2.3	A
	Subtotal	1,294	1,160	89.6%	8.2	0.6	A
EB	Left Turn	9	7	76.0%	91.8	87.4	F
	Through	1	0	0.0%	0.0	0.0	A
	Right Turn	23	21	92.5%	17.2	6.5	C
	Subtotal	33	28	85.2%	41.7	28.2	E
WB	Left Turn	4	4	95.0%	18.6	24.1	C
	Through	2	3	152.0%	35.8	44.5	E
	Right Turn	76	76	99.5%	19.2	6.1	C
	Subtotal	82	82	100.6%	21.3	7.2	C
Total		2,861	2,585	90.3%	7.7	0.7	A

Intersection 6

SR 99/Richland Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	22	88.2%	41.0	15.4	D
	Through	1,304	1,171	89.8%	24.6	4.9	C
	Right Turn	42	41	97.7%	9.7	2.3	A
	Subtotal	1,371	1,234	90.0%	24.3	4.9	C
SB	Left Turn	75	57	75.5%	38.9	4.6	D
	Through	1,120	996	88.9%	24.4	3.5	C
	Right Turn	50	48	95.0%	12.5	1.1	B
	Subtotal	1,245	1,100	88.3%	24.7	3.2	C
EB	Left Turn	32	35	109.3%	28.3	5.1	C
	Through	76	85	112.0%	28.3	5.0	C
	Right Turn	18	21	114.0%	13.8	6.1	B
	Subtotal	126	141	111.6%	25.9	4.1	C
WB	Left Turn	41	41	101.0%	22.9	5.1	C
	Through	84	80	95.5%	22.7	3.6	C
	Right Turn	116	115	99.3%	14.8	2.1	B
	Subtotal	241	237	98.2%	18.8	2.1	B
Total		2,983	2,711	90.9%	24.1	3.1	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	73	58	79.6%	52.4	7.4	D
	Through	945	863	91.3%	38.8	4.2	D
	Right Turn	68	68	99.5%	13.9	2.7	B
	Subtotal	1,086	989	91.0%	37.9	3.6	D
SB	Left Turn	246	200	81.3%	48.1	9.1	D
	Through	766	655	85.5%	23.8	4.9	C
	Right Turn	167	154	92.2%	12.1	2.6	B
	Subtotal	1,179	1,009	85.6%	26.9	4.3	C
EB	Left Turn	144	146	101.3%	50.8	8.7	D
	Through	271	268	98.9%	29.5	5.4	C
	Right Turn	32	31	97.4%	23.7	9.9	C
	Subtotal	447	445	99.5%	36.4	5.4	D
WB	Left Turn	36	31	85.5%	48.8	12.9	D
	Through	300	286	95.4%	37.9	4.3	D
	Right Turn	282	282	99.9%	14.9	2.8	B
	Subtotal	618	599	96.8%	27.5	2.5	C
Total		3,330	3,041	91.3%	32.0	2.0	C

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	32	33	103.3%	9.2	4.1	A
	Through	1,055	1,023	97.0%	8.1	0.8	A
	Right Turn	4	5	133.0%	5.8	4.4	A
	Subtotal	1,091	1,061	97.3%	8.2	0.8	A
SB	Left Turn	41	37	89.9%	14.6	6.5	B
	Through	752	629	83.7%	7.7	1.0	A
	Right Turn	40	34	85.5%	8.1	2.2	A
	Subtotal	833	700	84.1%	8.1	1.2	A
EB	Left Turn	5	5	98.8%	16.0	15.5	C
	Through	4	3	66.5%	8.5	12.2	A
	Right Turn	3	2	76.0%	3.6	4.5	A
	Subtotal	12	10	82.3%	15.3	8.2	C
WB	Left Turn	1	0	0.0%	0.2	0.1	A
	Through	7	8	108.6%	15.9	10.3	C
	Right Turn	26	16	62.8%	7.2	5.5	A
	Subtotal	34	24	70.4%	10.3	6.4	B
Total		1,970	1,796	91.1%	8.2	0.7	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	107	114	106.5%	40.4	5.8	D
	Through	842	811	96.3%	27.5	3.4	C
	Right Turn	148	135	90.9%	16.5	2.0	B
	Subtotal	1,097	1,059	96.6%	27.5	2.9	C
SB	Left Turn	180	147	81.7%	41.9	6.3	D
	Through	489	374	76.5%	24.5	3.6	C
	Right Turn	87	81	93.0%	14.1	2.4	B
	Subtotal	756	602	79.7%	27.4	3.4	C
EB	Left Turn	68	60	87.7%	38.8	8.7	D
	Through	209	214	102.4%	27.8	4.2	C
	Right Turn	80	95	118.3%	6.0	1.0	A
	Subtotal	357	368	103.1%	23.9	3.6	C
WB	Left Turn	62	59	95.6%	32.8	4.8	C
	Through	156	164	105.0%	23.2	4.0	C
	Right Turn	181	177	98.0%	12.9	2.8	B
	Subtotal	399	401	100.4%	20.1	3.1	C
Total		2,609	2,430	93.2%	25.7	2.0	C

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	9	9	97.1%	3.4	3.0	A
	Through	1,052	1,081	102.7%	2.8	0.3	A
	Right Turn	11	13	120.9%	1.2	0.6	A
	Subtotal	1,072	1,103	102.9%	2.7	0.3	A
SB	Left Turn	34	29	84.9%	12.6	4.3	B
	Through	595	478	80.3%	6.1	1.1	A
	Right Turn	2	2	76.0%	4.4	8.6	A
	Subtotal	631	508	80.6%	6.5	1.1	A
EB	Left Turn	5	3	53.2%	6.5	16.8	A
	Through	2	2	95.0%	4.0	9.4	A
	Right Turn	5	6	121.6%	1.9	1.7	A
	Subtotal	12	11	88.7%	7.5	9.3	A
WB	Left Turn	2	2	95.0%	13.0	20.7	B
	Through	5	8	159.6%	18.9	18.2	C
	Right Turn	40	45	113.1%	11.5	5.3	B
	Subtotal	47	55	117.2%	12.9	4.0	B
Total		1,762	1,677	95.2%	4.3	0.4	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
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PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	98.8%	5.3	4.6	A
	Through	1,048	1,070	102.1%	4.1	0.5	A
	Right Turn	9	8	88.7%	2.8	2.3	A
	Subtotal	1,067	1,088	101.9%	4.2	0.5	A
SB	Left Turn	14	13	89.6%	12.3	9.7	B
	Through	580	473	81.6%	3.8	0.3	A
	Right Turn	8	6	71.3%	0.3	0.4	A
	Subtotal	602	492	81.7%	4.0	0.3	A
EB	Left Turn	1	1	76.0%	2.5	6.7	A
	Through	3	4	126.7%	24.7	29.2	C
	Right Turn	4	5	123.5%	3.8	4.5	A
	Subtotal	8	10	118.8%	14.8	12.3	B
WB	Left Turn	4	4	95.0%	25.1	22.7	D
	Through						
	Right Turn	23	20	87.6%	10.1	7.1	B
	Subtotal	27	24	88.7%	14.0	8.5	B
Total		1,704	1,613	94.6%	4.3	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	2	2	76.0%	2.8	3.8	A
	Through	1,061	1,041	98.1%	5.0	0.8	A
	Right Turn	3	4	126.7%	2.8	2.9	A
	Subtotal	1,066	1,046	98.1%	5.0	0.9	A
SB	Left Turn	7	4	59.7%	7.1	10.0	A
	Through	580	469	80.9%	0.6	0.1	A
	Right Turn	1	1	114.0%	0.5	1.2	A
	Subtotal	588	475	80.7%	0.7	0.3	A
EB	Left Turn	1	1	76.0%	1.5	3.6	A
	Through	1	1	76.0%	1.4	4.3	A
	Right Turn						
	Subtotal	2	2	76.0%	2.9	5.2	A
WB	Left Turn	1	1	114.0%	14.4	26.7	B
	Through	2	2	114.0%	10.5	20.4	B
	Right Turn	5	4	76.0%	4.9	7.9	A
	Subtotal	8	7	90.3%	20.4	21.0	C
Total		1,664	1,530	91.9%	3.8	0.7	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
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Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	5	3	60.8%	32.2	31.8	C
	Through	1,006	1,019	101.3%	28.8	2.6	C
	Right Turn	20	21	102.6%	16.8	6.4	B
	Subtotal	1,031	1,043	101.1%	28.6	2.7	C
SB	Left Turn	16	14	90.3%	43.5	18.1	D
	Through	543	420	77.3%	24.9	2.6	C
	Right Turn	22	18	81.2%	10.7	3.4	B
	Subtotal	581	452	77.8%	25.1	2.0	C
EB	Left Turn	26	28	106.7%	26.8	9.2	C
	Through	17	16	91.6%	29.2	12.6	C
	Right Turn	5	3	53.2%	7.0	12.0	A
	Subtotal	48	46	95.8%	27.9	7.2	C
WB	Left Turn	9	8	84.4%	24.0	20.0	C
	Through	24	22	93.4%	29.3	9.0	C
	Right Turn	34	34	99.5%	10.4	3.8	B
	Subtotal	67	64	95.3%	19.3	5.5	B
Total		1,727	1,604	92.9%	27.3	2.0	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	81	74	91.0%	24.8	6.2	C
	Through						
	Right Turn	72	73	100.8%	13.3	3.6	B
	Subtotal	153	146	95.6%	18.9	4.7	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	477	431	90.3%	1.9	0.4	A
	Right Turn	109	107	98.0%	0.8	0.3	A
	Subtotal	586	537	91.7%	1.7	0.3	A
WB	Left Turn	53	45	85.3%	8.2	2.6	A
	Through	537	540	100.5%	2.0	0.9	A
	Right Turn						
	Subtotal	590	585	99.1%	2.5	0.9	A
Total		1,329	1,268	95.4%	4.1	1.1	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	20	17	85.5%	11.5	8.3	B
	Through						
	Right Turn	32	28	86.7%	4.5	1.6	A
	Subtotal	52	45	86.2%	7.8	4.9	A
EB	Left Turn	56	51	91.6%	2.9	0.6	A
	Through	472	432	91.6%	1.4	0.4	A
	Right Turn						
	Subtotal	528	484	91.6%	1.6	0.5	A
WB	Left Turn						
	Through	296	298	100.6%	0.5	0.2	A
	Right Turn	11	14	127.8%	0.1	0.1	A
	Subtotal	307	312	101.6%	0.5	0.2	A
Total		887	841	94.8%	1.5	0.3	A

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	16	11	66.5%	2.3	0.5	A
	Through	54	55	102.0%	0.7	0.5	A
	Right Turn						
	Subtotal	70	66	93.9%	1.0	0.6	A
SB	Left Turn						
	Through	43	41	96.3%	0.1	0.2	A
	Right Turn	13	12	93.5%	0.1	0.2	A
	Subtotal	56	54	95.7%	0.1	0.2	A
EB	Left Turn	21	20	94.1%	4.4	0.4	A
	Through						
	Right Turn	32	30	93.8%	2.5	0.2	A
	Subtotal	53	50	93.9%	3.2	0.3	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		179	169	94.5%	1.4	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Conditions
PM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

























Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	7	136.8%	3.8	1.4	A
	Through						
	Right Turn	1	0	38.0%	0.2	0.7	A
	Subtotal	6	7	120.3%	3.7	1.4	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	42	36	86.9%	0.1	0.2	A
	Right Turn	5	6	121.6%	0.0	0.0	A
	Subtotal	47	43	90.6%	0.1	0.1	A
WB	Left Turn	5	5	106.4%	1.5	1.6	A
	Through	42	49	116.7%	0.2	0.1	A
	Right Turn						
	Subtotal	47	54	115.6%	0.3	0.2	A
Total		100	104	104.1%	0.5	0.2	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	11	13	120.9%	4.4	0.6	A
	Through						
	Right Turn	22	24	108.8%	2.8	0.4	A
	Subtotal	33	37	112.8%	3.4	0.6	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	35	32	92.3%	0.1	0.2	A
	Right Turn	9	6	63.3%	0.0	0.1	A
	Subtotal	44	38	86.4%	0.1	0.1	A
WB	Left Turn	24	19	77.6%	1.7	0.2	A
	Through	36	41	115.1%	0.1	0.2	A
	Right Turn						
	Subtotal	60	60	100.1%	0.6	0.2	A
Total		137	135	98.7%	1.2	0.3	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Existing Conditions
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	144	199	224	143	300	91	525	153	299	680	15
Future Volume (veh/h)	15	144	199	224	143	300	91	525	153	299	680	15
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		0.99	1.00		0.99	1.00		1.00	1.00		0.97
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	160	221	249	159	333	101	583	170	332	756	17
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	20	392	331	337	552	664	129	898	261	429	1357	31
Arrive On Green	0.01	0.21	0.21	0.10	0.30	0.30	0.07	0.33	0.33	0.12	0.38	0.38
Sat Flow, veh/h	1691	1863	1572	3442	1863	1574	1774	2705	787	3442	3536	79
Grp Volume(v), veh/h	17	160	221	249	159	333	101	381	372	332	378	395
Grp Sat Flow(s),veh/h/ln	1691	1863	1572	1721	1863	1574	1774	1770	1722	1721	1770	1846
Q Serve(g_s), s	0.8	6.1	10.7	5.8	5.4	12.9	4.6	15.2	15.3	7.7	13.9	13.9
Cycle Q Clear(g_c), s	0.8	6.1	10.7	5.8	5.4	12.9	4.6	15.2	15.3	7.7	13.9	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.04
Lane Grp Cap(c), veh/h	20	392	331	337	552	664	129	587	572	429	679	708
V/C Ratio(X)	0.86	0.41	0.67	0.74	0.29	0.50	0.78	0.65	0.65	0.77	0.56	0.56
Avail Cap(c_a), veh/h	612	1574	1328	706	1574	1527	642	1495	1455	1246	1495	1560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	28.3	30.1	36.3	22.4	17.6	37.8	23.6	23.6	35.1	20.0	20.0
Incr Delay (d2), s/veh	29.9	0.7	2.3	1.2	0.3	0.6	3.9	1.2	1.3	1.1	0.3	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	0.5	3.2	4.8	2.8	2.8	5.7	2.4	7.6	7.4	3.8	6.8	7.1
LnGrp Delay(d),s/veh	70.7	28.9	32.4	37.5	22.7	18.2	41.7	24.8	24.8	36.3	20.3	20.3
LnGrp LOS	E	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		398			741			854			1105	
Approach Delay, s/veh		32.6			25.7			26.8			25.1	
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	14.8	32.5	12.6	22.9	10.5	36.8	5.5	30.1				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	9.7	17.3	7.8	12.7	6.6	15.9	2.8	14.9				
Green Ext Time (p_c), s	0.6	10.1	0.3	4.1	0.0	10.1	0.0	4.1				
Intersection Summary												
HCM 2010 Ctrl Delay			26.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Existing Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	298	46	163	324	223	43	395	109	210	629	243
Future Volume (veh/h)	186	298	46	163	324	223	43	395	109	210	629	243
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		0.98	1.00		0.97	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	202	324	50	177	352	242	47	429	118	228	684	264
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1026	157	207	640	431	61	701	191	258	911	352
Arrive On Green	0.13	0.33	0.33	0.12	0.32	0.32	0.03	0.26	0.26	0.15	0.37	0.37
Sat Flow, veh/h	1774	3071	469	1774	2002	1349	1774	2738	746	1774	2484	959
Grp Volume(v), veh/h	202	185	189	177	310	284	47	276	271	228	487	461
Grp Sat Flow(s),veh/h/ln	1774	1770	1770	1774	1770	1582	1774	1770	1714	1774	1770	1673
Q Serve(g_s), s	14.3	10.0	10.2	12.6	18.5	19.1	3.4	17.6	17.9	16.2	30.8	30.9
Cycle Q Clear(g_c), s	14.3	10.0	10.2	12.6	18.5	19.1	3.4	17.6	17.9	16.2	30.8	30.9
Prop In Lane	1.00		0.26	1.00		0.85	1.00		0.44	1.00		0.57
Lane Grp Cap(c), veh/h	232	591	591	207	566	506	61	453	439	258	649	614
V/C Ratio(X)	0.87	0.31	0.32	0.86	0.55	0.56	0.77	0.61	0.62	0.88	0.75	0.75
Avail Cap(c_a), veh/h	415	966	966	415	966	863	415	966	936	415	966	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	31.8	31.8	55.6	36.0	36.2	61.4	42.0	42.2	53.7	35.5	35.5
Incr Delay (d2), s/veh	9.7	1.1	1.1	9.8	3.0	3.5	17.9	1.3	1.4	12.6	1.8	1.9
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	7.6	5.1	5.2	6.7	9.5	8.8	2.0	8.7	8.7	8.8	15.4	14.5
LnGrp Delay(d),s/veh	64.4	32.8	32.9	65.4	39.0	39.7	79.2	43.4	43.6	66.3	37.3	37.4
LnGrp LOS	E	C	C	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		576			771			594			1176	
Approach Delay, s/veh		43.9			45.3			46.3			43.0	
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	32.6	38.3	18.9	48.3	8.4	52.5	20.8	46.5				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	70.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1/9), s	19.9	19.9	14.6	12.2	5.4	32.9	16.3	21.1				
Green Ext Time (p_c), s	0.5	12.9	0.4	21.2	0.1	12.1	0.4	19.9				
Intersection Summary												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	72	82	415	53	84	556
Future Vol, veh/h	72	82	415	53	84	556
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	85	432	55	88	579

























Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1214	460	0 0 488 0
Stage 1	460	-	- - - -
Stage 2	754	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	201	601	- - 1075 -
Stage 1	636	-	- - - -
Stage 2	465	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	184	601	- - 1075 -
Mov Cap-2 Maneuver	312	-	- - - -
Stage 1	636	-	- - - -
Stage 2	427	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	18.8	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 419	1075	-
HCM Lane V/C Ratio	-	- 0.383	0.081	-
HCM Control Delay (s)	-	- 18.8	8.6	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 1.8	0.3	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Existing Conditions
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	210	24	129	255	103	23	186	93	105	281	127
Future Volume (veh/h)	113	210	24	129	255	103	23	186	93	105	281	127
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		0.98	1.00		0.99	1.00		1.00	1.00		0.97
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	120	223	26	137	271	110	24	198	99	112	299	135
Adj No. of Lanes	1	1	1	1	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	452	375	179	456	385	49	515	437	147	400	180
Arrive On Green	0.09	0.24	0.24	0.10	0.24	0.24	0.03	0.28	0.28	0.08	0.33	0.33
Sat Flow, veh/h	1774	1863	1544	1774	1863	1574	1774	1863	1578	1774	1203	543
Grp Volume(v), veh/h	120	223	26	137	271	110	24	198	99	112	0	434
Grp Sat Flow(s),veh/h/ln	1774	1863	1544	1774	1863	1574	1774	1863	1578	1774	0	1745
Q Serve(g_s), s	4.0	6.2	0.8	4.5	7.7	3.4	0.8	5.2	2.9	3.7	0.0	13.3
Cycle Q Clear(g_c), s	4.0	6.2	0.8	4.5	7.7	3.4	0.8	5.2	2.9	3.7	0.0	13.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	158	452	375	179	456	385	49	515	437	147	0	580
V/C Ratio(X)	0.76	0.49	0.07	0.76	0.59	0.29	0.49	0.38	0.23	0.76	0.00	0.75
Avail Cap(c_a), veh/h	739	1397	1158	757	1397	1180	739	2172	1840	739	0	2036
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	26.7	19.6	17.5	26.3	20.0	18.4	28.8	17.6	16.8	26.9	0.0	17.8
Incr Delay (d2), s/veh	5.6	0.6	0.1	5.0	0.9	0.3	5.6	0.3	0.2	5.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.2	0.3	2.5	4.0	1.5	0.5	2.7	1.3	2.0	0.0	6.6
LnGrp Delay(d),s/veh	32.3	20.2	17.6	31.3	20.9	18.7	34.4	17.9	16.9	32.8	0.0	19.3
LnGrp LOS	C	C	B	C	C	B	C	B	B	C		B
Approach Vol, veh/h		369			518			321			546	
Approach Delay, s/veh		23.9			23.2			18.8			22.1	
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	9.6	21.2	10.1	19.2	6.2	24.5	9.9	19.3				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+I1), s	5.7	7.2	6.5	8.2	2.8	15.3	6.0	9.7				
Green Ext Time (p_c), s	0.2	4.0	0.2	2.9	0.0	4.0	0.2	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			22.2									
HCM 2010 LOS			C									

Intersection																
Intersection Delay, s/veh11.9																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	19	148	16	0	31	170	97	0	25	61	43	0	129	52	24
Future Vol, veh/h	0	19	148	16	0	31	170	97	0	25	61	43	0	129	52	24
Peak Hour Factor	0.92	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.92	0.89	0.89	0.89	0.92	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	166	18	0	35	191	109	0	28	69	48	0	145	58	27
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach																
	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				1			
HCM Control Delay	11.1				13				10.4				12			
HCM LOS	B				B				B				B			
Lane																
	NBLn1		EBLn1		WBLn1		SBLn1									
Vol Left, %	19%		10%		10%		63%									
Vol Thru, %	47%		81%		57%		25%									
Vol Right, %	33%		9%		33%		12%									
Sign Control	Stop		Stop		Stop		Stop									
Traffic Vol by Lane	129		183		298		205									
LT Vol	25		19		31		129									
Through Vol	61		148		170		52									
RT Vol	43		16		97		24									
Lane Flow Rate	145		206		335		230									
Geometry Grp	1		1		1		1									
Degree of Util (X)	0.228		0.315		0.482		0.365									
Departure Headway (Hd)	5.654		5.517		5.183		5.699									
Convergence, Y/N	Yes		Yes		Yes		Yes									
Cap	632		650		693		629									
Service Time	3.712		3.572		3.231		3.751									
HCM Lane V/C Ratio	0.229		0.317		0.483		0.366									
HCM Control Delay	10.4		11.1		13		12									
HCM Lane LOS	B		B		B		B									
HCM 95th-tile Q	0.9		1.3		2.6		1.7									

Intersection

Int Delay, s/veh 1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	26	96	6	13	73
Future Vol, veh/h	0	26	96	6	13	73
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	76	76	76	76	76	76
Heavy Vehicles, %	2	8	2	33	46	7
Mvmt Flow	0	34	126	8	17	96

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	260	130	0
Stage 1	130	-	-
Stage 2	130	-	-
Critical Hdwy	6.42	6.28	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.372	-
Pot Cap-1 Maneuver	729	904	-
Stage 1	896	-	-
Stage 2	896	-	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	718	904	-
Mov Cap-2 Maneuver	718	-	-
Stage 1	896	-	-
Stage 2	883	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	1.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	904	1220
HCM Lane V/C Ratio	-	-	0.038	0.014
HCM Control Delay (s)	-	-	9.1	8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection												
Int Delay, s/veh	1.8											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	6	4	2	1	7	7	5	82	1	3	61	4
Future Vol, veh/h	6	4	2	1	7	7	5	82	1	3	61	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	7	5	2	1	9	9	6	100	1	4	74	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	205	197	77	201	200	101	79	0	0	101	0	0
Stage 1	84	84	-	113	113	-	-	-	-	-	-	-
Stage 2	121	113	-	88	87	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	722	699	984	757	675	923	1519	-	-	1491	-	-
Stage 1	888	825	-	892	779	-	-	-	-	-	-	-
Stage 2	848	802	-	920	800	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	705	694	984	747	670	923	1519	-	-	1491	-	-
Mov Cap-2 Maneuver	705	694	-	747	670	-	-	-	-	-	-	-
Stage 1	884	823	-	888	776	-	-	-	-	-	-	-
Stage 2	828	799	-	910	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.8	0.4	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1519	-	-	736	774	1491	-	-
HCM Lane V/C Ratio	0.004	-	-	0.02	0.024	0.002	-	-
HCM Control Delay (s)	7.4	0	-	10	9.8	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection												
Intersection Delay, s/veh	21.6											
Intersection LOS	C											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	41	290	92	0	35	365	65	0	79	93	25
Future Vol, veh/h	0	41	290	92	0	35	365	65	0	79	93	25
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	44	309	98	0	37	388	69	0	84	99	27
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1
Approach												
	EB			WB			NB					
Opposing Approach	WB			EB			SB					
Opposing Lanes	3			3			3					
Conflicting Approach Left	SB			NB			EB					
Conflicting Lanes Left	3			3			3					
Conflicting Approach Right	NB			SB			WB					
Conflicting Lanes Right	3			3			3					
HCM Control Delay	20.4			30.4			13.5					
HCM LOS	C			D			B					
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	79	93	25	41	290	92	35	365	65	85	105	
LT Vol	79	0	0	41	0	0	35	0	0	85	0	
Through Vol	0	93	0	0	290	0	0	365	0	0	105	
RT Vol	0	0	25	0	0	92	0	0	65	0	0	
Lane Flow Rate	84	99	27	44	309	98	37	388	69	90	112	
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	
Degree of Util (X)	0.207	0.23	0.057	0.099	0.663	0.189	0.083	0.813	0.131	0.22	0.256	
Departure Headway (Hd)	8.882	8.382	7.682	8.163	7.731	6.963	8.041	7.541	6.841	8.759	8.259	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cap	403	427	465	438	466	514	445	478	523	409	433	
Service Time	6.653	6.153	5.453	5.924	5.492	4.724	5.8	5.3	4.6	6.528	6.028	
HCM Lane V/C Ratio	0.208	0.232	0.058	0.1	0.663	0.191	0.083	0.812	0.132	0.22	0.259	
HCM Control Delay	14	13.7	10.9	11.8	24.5	11.4	11.5	35.7	10.6	14	13.9	
HCM Lane LOS	B	B	B	B	C	B	B	E	B	B	B	
HCM 95th-tile Q	0.8	0.9	0.2	0.3	4.7	0.7	0.3	7.7	0.4	0.8	1	

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	85	105	51
Future Vol, veh/h	0	85	105	51
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	90	112	54
Number of Lanes	0	1	1	1
Approach		SB		
Opposing Approach		NB		
Opposing Lanes		3		
Conflicting Approach Left		WB		
Conflicting Lanes Left		3		
Conflicting Approach Right		EB		
Conflicting Lanes Right		3		
HCM Control Delay		13.4		
HCM LOS		B		
Lane	SBLn3			

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Existing Conditions
 PM Peak Hour



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗		↖	↑↑	↑↑	↗
Traffic Volume (veh/h)	186	176	2	210	517	600	242
Future Volume (veh/h)	186	176	2	210	517	600	242
Number	7	14		5	2	6	16
Initial Q (Qb), veh	0	0		0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1776		1863	1863	1863	1863
Adj Flow Rate, veh/h	200	189		226	556	645	260
Adj No. of Lanes	2	1		1	2	2	1
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	7		2	2	2	2
Cap, veh/h	590	264		281	2121	1213	543
Arrive On Green	0.17	0.17		0.16	0.60	0.34	0.34
Sat Flow, veh/h	3375	1509		1774	3632	3632	1583
Grp Volume(v), veh/h	200	189		226	556	645	260
Grp Sat Flow(s),veh/h/ln	1688	1509		1774	1770	1770	1583
Q Serve(g_s), s	2.4	5.5		5.8	3.5	6.9	6.1
Cycle Q Clear(g_c), s	2.4	5.5		5.8	3.5	6.9	6.1
Prop In Lane	1.00	1.00		1.00			1.00
Lane Grp Cap(c), veh/h	590	264		281	2121	1213	543
V/C Ratio(X)	0.34	0.72		0.80	0.26	0.53	0.48
Avail Cap(c_a), veh/h	3237	1448		945	3394	3394	1519
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	18.3		19.0	4.5	12.4	12.1
Incr Delay (d2), s/veh	0.1	1.4		2.0	0.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.5		3.0	1.7	3.3	2.6
LnGrp Delay(d),s/veh	17.1	19.6		21.1	4.5	12.5	12.4
LnGrp LOS	B	B		C	A	B	B
Approach Vol, veh/h	389				782	905	
Approach Delay, s/veh	18.3				9.3	12.5	
Approach LOS	B				A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.1		12.8	12.0	22.1		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		5.5		7.5	7.8	8.9		
Green Ext Time (p_c), s		7.3		0.7	0.1	7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Notes

Intersection																
Intersection Delay, s/veh16.7																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	63	390	19	0	29	265	41	0	12	59	30	0	50	45	28
Future Vol, veh/h	0	63	390	19	0	29	265	41	0	12	59	30	0	50	45	28
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	66	406	20	0	30	276	43	0	13	61	31	0	52	47	29
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0
Approach																
Approach	EB			WB			NB			SB						
Opposing Approach	WB			EB			SB			NB						
Opposing Lanes	2			1			1			1						
Conflicting Approach Left	SB			NB			EB			WB						
Conflicting Lanes Left	1			1			1			2						
Conflicting Approach Right	NB			SB			WB			EB						
Conflicting Lanes Right	1			1			2			1						
HCM Control Delay	21.4			13.8			10.8			11.2						
HCM LOS	C			B			B			B						
Lane																
Lane	NBLn1		EBLn1		WBLn1		WBLn2		SBLn1							
Vol Left, %	12%		13%		10%		0%		41%							
Vol Thru, %	58%		83%		90%		0%		37%							
Vol Right, %	30%		4%		0%		100%		23%							
Sign Control	Stop		Stop		Stop		Stop		Stop							
Traffic Vol by Lane	101		472		294		41		123							
LT Vol	12		63		29		0		50							
Through Vol	59		390		265		0		45							
RT Vol	30		19		0		41		28							
Lane Flow Rate	105		492		306		43		128							
Geometry Grp	2		5		7		7		2							
Degree of Util (X)	0.184		0.728		0.504		0.061		0.225							
Departure Headway (Hd)	6.292		5.327		5.925		5.165		6.324							
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes							
Cap	567		679		606		691		565							
Service Time	4.368		3.374		3.678		2.918		4.397							
HCM Lane V/C Ratio	0.185		0.725		0.505		0.062		0.227							
HCM Control Delay	10.8		21.4		14.6		8.3		11.2							
HCM Lane LOS	B		C		B		A		B							
HCM 95th-tile Q	0.7		6.3		2.8		0.2		0.9							

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Existing Conditions
PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	1	122	87	210	6	62	56	2	158	291	14	1	67	284	177
Future Volume (veh/h)	1	122	87	210	6	62	56	2	158	291	14	1	67	284	177
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		0.99	1.00		1.00		1.00		1.00		1.00		0.96
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		1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900
Adj Flow Rate, veh/h		124	89	214	6	63	57		161	297	14		68	290	181
Adj No. of Lanes		1	1	1	1	1	1		1	2	0		1	2	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, %		2	2	2	2	2	2		3	2	2		2	2	2
Cap, veh/h		159	476	399	8	318	270		203	1086	51		86	518	312
Arrive On Green		0.09	0.26	0.26	0.00	0.17	0.17		0.12	0.32	0.32		0.05	0.25	0.25
Sat Flow, veh/h		1774	1863	1561	1774	1863	1583		1757	3442	162		1774	2089	1259
Grp Volume(v), veh/h		124	89	214	6	63	57		161	152	159		68	244	227
Grp Sat Flow(s),veh/h/ln		1774	1863	1561	1774	1863	1583		1757	1770	1834		1774	1770	1579
Q Serve(g_s), s		3.8	2.1	6.6	0.2	1.6	1.7		5.0	3.6	3.6		2.1	6.7	7.1
Cycle Q Clear(g_c), s		3.8	2.1	6.6	0.2	1.6	1.7		5.0	3.6	3.6		2.1	6.7	7.1
Prop In Lane		1.00		1.00	1.00		1.00		1.00		0.09		1.00		0.80
Lane Grp Cap(c), veh/h		159	476	399	8	318	270		203	558	578		86	439	392
V/C Ratio(X)		0.78	0.19	0.54	0.71	0.20	0.21		0.79	0.27	0.27		0.79	0.56	0.58
Avail Cap(c_a), veh/h		953	2334	1956	953	2334	1984		944	2218	2298		953	2218	1979
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh		24.9	16.3	17.9	27.8	19.9	19.9		24.0	14.3	14.3		26.3	18.3	18.4
Incr Delay (d2), s/veh		3.1	0.1	0.4	33.0	0.1	0.1		2.6	0.1	0.1		6.0	0.4	0.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.0	1.1	2.9	0.2	0.8	0.8		2.6	1.7	1.8		1.2	3.3	3.1
LnGrp Delay(d),s/veh		28.0	16.3	18.4	60.8	20.0	20.1		26.7	14.4	14.4		32.3	18.7	19.0
LnGrp LOS		C	B	B	E	B	C		C	B	B		C	B	B
Approach Vol, veh/h			427			126				472				539	
Approach Delay, s/veh			20.7			22.0				18.6				20.5	
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	7.2	23.6	4.8	20.3	11.0	19.9	9.5	15.5							
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0							
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0							
Max Q Clear Time (g_c+1), s	11.5	5.6	2.2	8.6	7.0	9.1	5.8	3.7							
Green Ext Time (p_c), s	0.0	3.4	0.0	1.0	0.1	3.4	0.0	1.0							
Intersection Summary															
HCM 2010 Ctrl Delay			20.1												
HCM 2010 LOS			C												
Notes															

Intersection																
Intersection Delay, s/veh	7.6															
Intersection LOS	A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	25	29	3	0	7	33	27	0	1	45	2	0	26	33	27
Future Vol, veh/h	0	25	29	3	0	7	33	27	0	1	45	2	0	26	33	27
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	26	30	3	0	7	34	28	0	1	47	2	0	27	34	28
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				1			
HCM Control Delay	7.7				7.4				7.6				7.6			
HCM LOS	A				A				A				A			
Lane	NBLn1		EBLn1		WBLn1		SBLn1									
Vol Left, %	2%		44%		10%		30%									
Vol Thru, %	94%		51%		49%		38%									
Vol Right, %	4%		5%		40%		31%									
Sign Control	Stop		Stop		Stop		Stop									
Traffic Vol by Lane	48		57		67		86									
LT Vol	1		25		7		26									
Through Vol	45		29		33		33									
RT Vol	2		3		27		27									
Lane Flow Rate	50		59		70		90									
Geometry Grp	1		1		1		1									
Degree of Util (X)	0.058		0.071		0.078		0.101									
Departure Headway (Hd)	4.207		4.286		4		4.068									
Convergence, Y/N	Yes		Yes		Yes		Yes									
Cap	840		825		883		870									
Service Time	2.293		2.369		2.084		2.146									
HCM Lane V/C Ratio	0.06		0.072		0.079		0.103									
HCM Control Delay	7.6		7.7		7.4		7.6									
HCM Lane LOS	A		A		A		A									
HCM 95th-tile Q	0.2		0.2		0.3		0.3									

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

Existing Conditions
PM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔	↔	↔		↔		↔	↑			↔	↑	↔
Traffic Volume (veh/h)	4	64	1	4	0	1	0	10	211	0	1	1	107	62
Future Volume (veh/h)	4	64	1	4	0	1	0	10	211	0	1	1	107	62
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		1863	1863	1863	1900	1863	1900	1863	1863	0		1863	1863	1863
Adj Flow Rate, veh/h		73	0	4	0	1	0	11	237	0		1	120	70
Adj No. of Lanes		2	0	1	0	1	0	1	1	0		1	1	1
Peak Hour Factor		0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89		0.89	0.89	0.89
Percent Heavy Veh, %		2	2	2	2	2	2	2	2	0		2	2	2
Cap, veh/h		389	0	173	0	6	0	16	502	0		6	487	414
Arrive On Green		0.11	0.00	0.11	0.00	0.00	0.00	0.01	0.27	0.00		0.00	0.26	0.26
Sat Flow, veh/h		3548	0	1583	0	1863	0	1774	1863	0		1774	1863	1583
Grp Volume(v), veh/h		73	0	4	0	1	0	11	237	0		1	120	70
Grp Sat Flow(s),veh/h/ln		1774	0	1583	0	1863	0	1774	1863	0		1774	1863	1583
Q Serve(g_s), s		0.6	0.0	0.1	0.0	0.0	0.0	0.2	3.3	0.0		0.0	1.6	1.1
Cycle Q Clear(g_c), s		0.6	0.0	0.1	0.0	0.0	0.0	0.2	3.3	0.0		0.0	1.6	1.1
Prop In Lane		1.00		1.00	0.00		0.00	1.00		0.00		1.00		1.00
Lane Grp Cap(c), veh/h		389	0	173	0	6	0	16	502	0		6	487	414
V/C Ratio(X)		0.19	0.00	0.02	0.00	0.17	0.00	0.71	0.47	0.00		0.17	0.25	0.17
Avail Cap(c_a), veh/h		4593	0	2050	0	2411	0	976	2411	0		976	2411	2050
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)		1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00		1.00	1.00	1.00
Uniform Delay (d), s/veh		12.5	0.0	12.3	0.0	15.4	0.0	15.3	9.4	0.0		15.4	9.0	8.8
Incr Delay (d2), s/veh		0.3	0.0	0.1	0.0	14.9	0.0	45.3	0.8	0.0		13.8	0.3	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		0.3	0.0	0.0	0.0	0.0	0.0	0.3	1.8	0.0		0.0	0.8	0.5
LnGrp Delay(d),s/veh		12.8	0.0	12.3	0.0	30.3	0.0	60.6	10.3	0.0		29.2	9.3	9.0
LnGrp LOS		B		B		C		E	B			C	A	A
Approach Vol, veh/h			77			1			248				191	
Approach Delay, s/veh			12.8			30.3			12.5				9.3	
Approach LOS			B			C			B				A	
Timer	1	2	3	4	5	6	7	8						
Assigned Phs	1	2		4	5	6		8						
Phs Duration (G+Y+Rc), s	4.1	13.3		8.4	4.4	13.1		5.1						
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0						
Max Green Setting (Gmax), s	40.0			40.0	17.0	40.0		40.0						
Max Q Clear Time (g_c+1), s	5.3			2.6	2.2	3.6		2.0						
Green Ext Time (p_c), s	0.0	3.0		0.3	0.0	3.1		0.0						
Intersection Summary														
HCM 2010 Ctrl Delay			11.4											
HCM 2010 LOS			B											
Notes														

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Existing Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	84	8	19	20	11	111	28	261	31	1	163	247	120
Future Volume (veh/h)	84	8	19	20	11	111	28	261	31	1	163	247	120
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		0.99	1.00		0.99	1.00		1.00		1.00		0.99
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	1863	1756	1900	1863	1863	1863	1863	1861	1900		1863	1863	1900
Adj Flow Rate, veh/h	89	9	20	21	12	118	30	278	33		173	263	128
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2		2	2	2
Cap, veh/h	117	99	221	27	290	245	37	714	84		231	777	367
Arrive On Green	0.07	0.21	0.21	0.02	0.16	0.16	0.02	0.22	0.22		0.13	0.33	0.33
Sat Flow, veh/h	1774	482	1072	1774	1863	1574	1774	3187	375		1774	2330	1100
Grp Volume(v), veh/h	89	0	29	21	12	118	30	153	158		173	198	193
Grp Sat Flow(s),veh/h/ln	1774	0	1554	1774	1863	1574	1774	1768	1794		1774	1770	1661
Q Serve(g_s), s	2.3	0.0	0.7	0.5	0.3	3.1	0.8	3.4	3.4		4.3	3.9	4.0
Cycle Q Clear(g_c), s	2.3	0.0	0.7	0.5	0.3	3.1	0.8	3.4	3.4		4.3	3.9	4.0
Prop In Lane	1.00		0.69	1.00		1.00	1.00		0.21		1.00		0.66
Lane Grp Cap(c), veh/h	117	0	321	27	290	245	37	396	402		231	590	554
V/C Ratio(X)	0.76	0.00	0.09	0.77	0.04	0.48	0.81	0.39	0.39		0.75	0.34	0.35
Avail Cap(c_a), veh/h	965	0	1521	926	1823	1541	965	1730	1756		965	1732	1626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	14.8	22.6	16.5	17.7	22.4	15.2	15.2		19.3	11.5	11.6
Incr Delay (d2), s/veh	9.7	0.0	0.1	35.7	0.1	1.5	33.1	0.6	0.6		4.8	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.3	0.5	0.1	1.5	0.7	1.7	1.8		2.4	1.9	1.9
LnGrp Delay(d),s/veh	30.8	0.0	14.9	58.3	16.5	19.2	55.6	15.8	15.8		24.1	11.8	11.9
LnGrp LOS	C		B	E	B	B	E	B	B		C	B	B
Approach Vol, veh/h		118			151			341				564	
Approach Delay, s/veh		26.9			24.4			19.3				15.6	
Approach LOS		C			C			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	10.5	16.3	5.2	14.0	5.5	21.3	7.5	11.7					
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5					
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0					
Max Q Clear Time (g_c+10), s	10.3	5.4	2.5	2.7	2.8	6.0	4.3	5.1					
Green Ext Time (p_c), s	0.4	4.1	0.0	0.7	0.0	4.1	0.2	0.7					
Intersection Summary													
HCM 2010 Ctrl Delay			19.0										
HCM 2010 LOS			B										
Notes													

Queuing and Blocking Report

Existing Conditions AM Peak Hour

6/1/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	91	136	91	104	110	88	87	200	201	35	75	177
Average Queue (ft)	57	77	50	66	65	54	46	114	120	16	39	95
95th Queue (ft)	101	142	94	115	110	91	90	205	202	39	80	176
Link Distance (ft)		1198		59	59	59		3916	3916			1977
Upstream Blk Time (%)				15	10	5						
Queuing Penalty (veh)				24	16	8						
Storage Bay Dist (ft)	80		200				450			300	450	
Storage Blk Time (%)	5	6										
Queuing Penalty (veh)	17	17										

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	184	42
Average Queue (ft)	99	18
95th Queue (ft)	184	45
Link Distance (ft)	1977	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Existing Conditions AM Peak Hour

6/1/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	L	T	R	UL	T
Maximum Queue (ft)	27	42	59	57	31	2	1	49	2
Average Queue (ft)	9	10	15	42	5	0	0	20	0
95th Queue (ft)	33	40	54	58	29	4	3	51	4
Link Distance (ft)	961		506			1341			3916
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		30		30	450		70	450	
Storage Blk Time (%)	2	1	3	10					
Queuing Penalty (veh)	0	0	4	1					

Queuing and Blocking Report
Existing Conditions PM Peak Hour

6/1/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	95	208	110	74	126	97	129	261	272	131	185	131
Average Queue (ft)	53	121	39	44	79	62	83	154	154	50	98	71
95th Queue (ft)	104	219	119	80	131	103	141	283	300	140	183	130
Link Distance (ft)		1198		59	59	59		3916	3916			1977
Upstream Blk Time (%)				8	14	8						
Queuing Penalty (veh)				12	20	12						
Storage Bay Dist (ft)	80		200				450			300	450	
Storage Blk Time (%)	5	18							0	0		
Queuing Penalty (veh)	15	27							1	0		

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	135	56
Average Queue (ft)	75	23
95th Queue (ft)	136	60
Link Distance (ft)	1977	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Existing Conditions PM Peak Hour

6/1/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	L	T	L	T
Maximum Queue (ft)	16	26	32	46	21	2	39	2
Average Queue (ft)	5	6	10	30	3	0	11	0
95th Queue (ft)	22	26	34	55	19	4	33	4
Link Distance (ft)	961		506			1341		3916
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		30		30	450		450	
Storage Blk Time (%)	2	0	4	4				
Queuing Penalty (veh)	0	0	2	0				

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

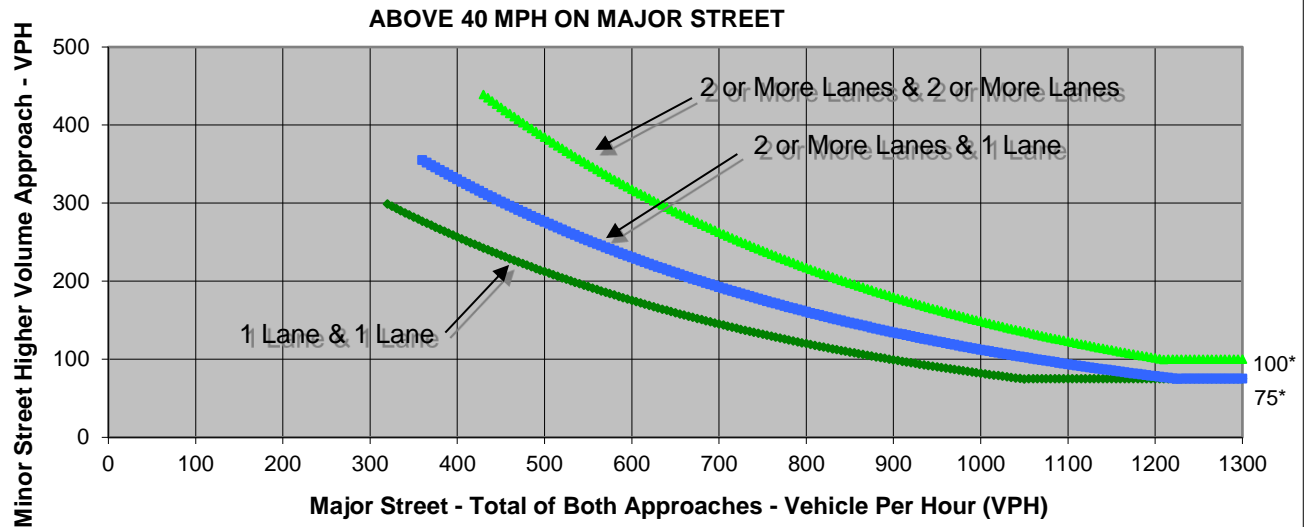
Turn Movement Volumes

	NB	SB	EB	WB
Left	24	50	3	2
Through	1,341	899	5	1
Right	31	20	27	26
Total	1,396	969	35	29

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,365	35	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

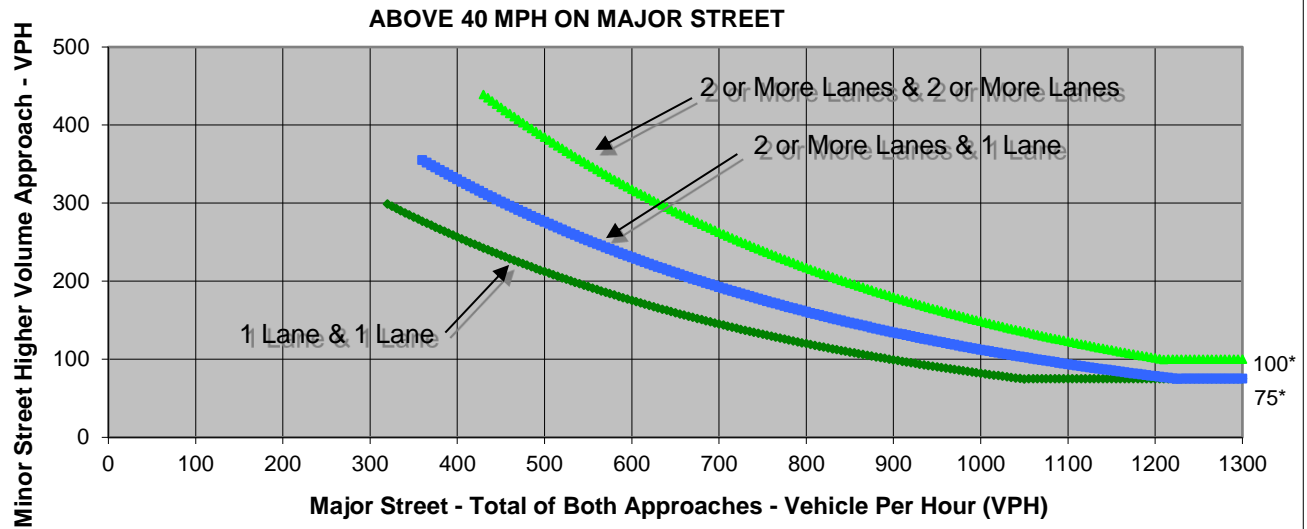
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	25	16	0
Through	858	772	4	7
Right	5	10	4	32
Total	868	807	24	39

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,675	39	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

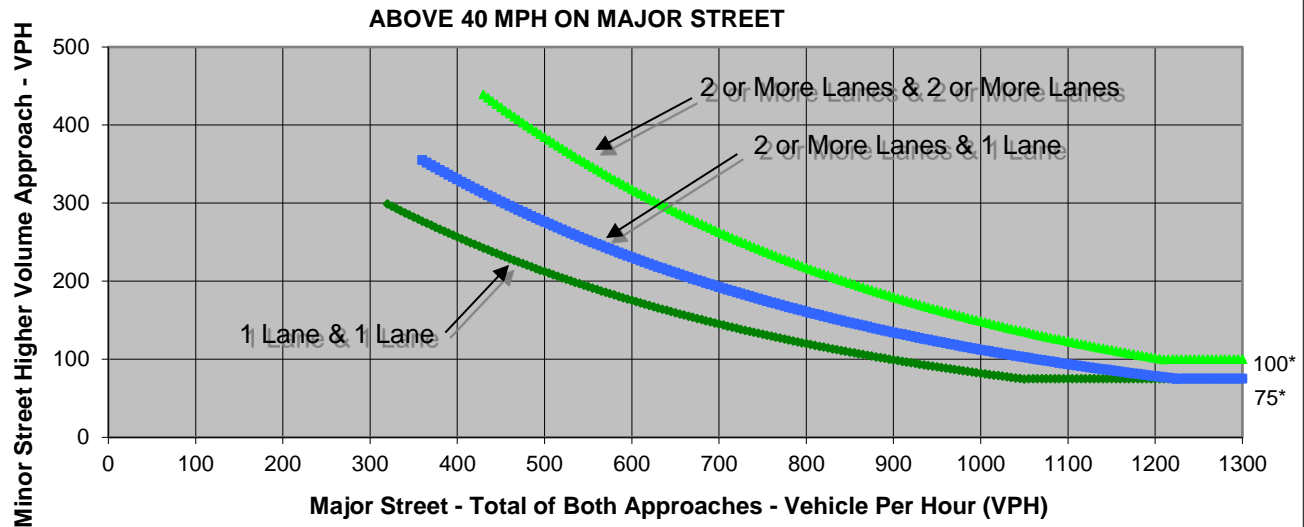
Turn Movement Volumes

	NB	SB	EB	WB
Left	8	93	4	6
Through	632	802	6	2
Right	19	8	7	110
Total	659	903	17	118

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,562	118	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

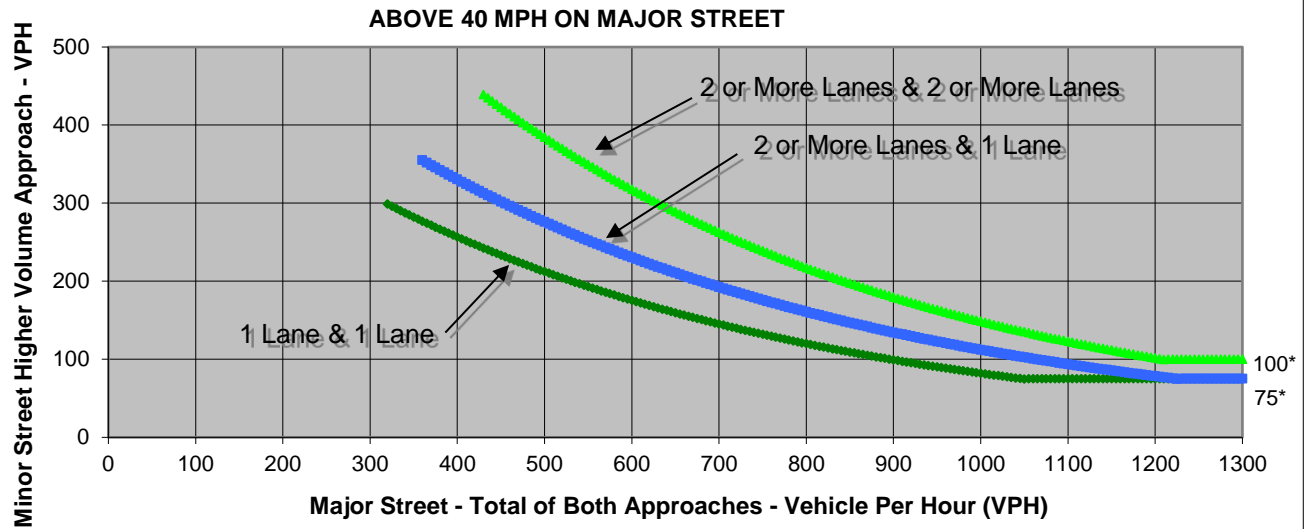
Turn Movement Volumes

	NB	SB	EB	WB
Left	4	11	1	3
Through	640	797	3	3
Right	6	7	6	18
Total	650	815	10	24

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,465	24	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

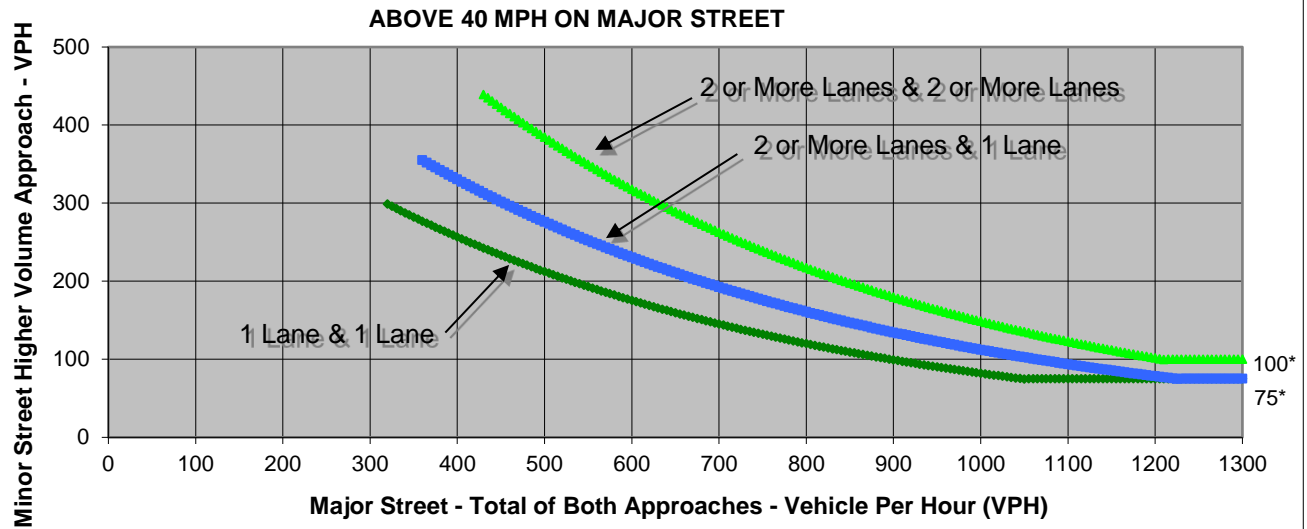
Turn Movement Volumes

	NB	SB	EB	WB
Left	1	9	0	0
Through	644	793	0	0
Right	7	4	3	6
Total	652	806	3	6

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,458	6	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Existing Conditions**
 Peak Hour **AM**

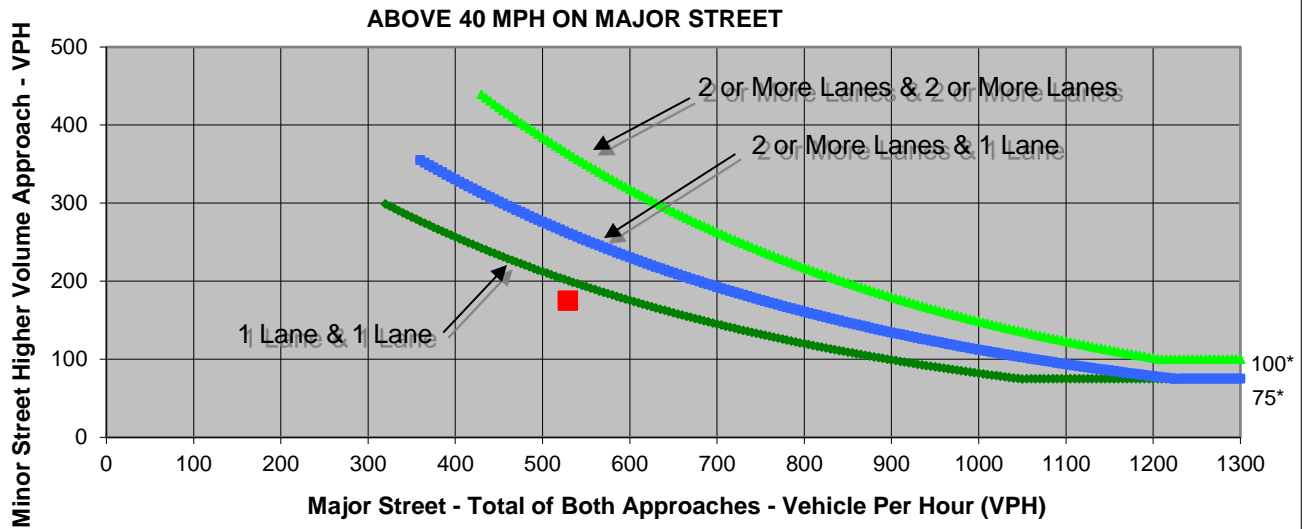
Turn Movement Volumes

	NB	SB	EB	WB
Left	23	104	19	12
Through	50	56	230	157
Right	26	15	47	64
Total	99	175	296	233

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	529	175	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

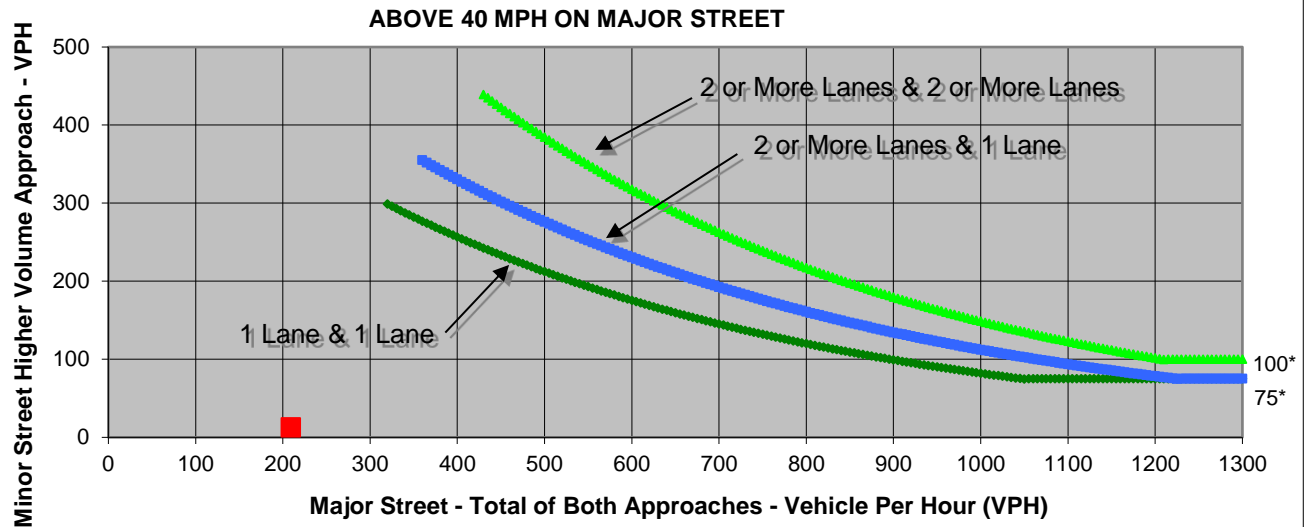
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	2
Through	84	100	0	0
Right	5	0	0	11
Total	89	120	0	13

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	209	13	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

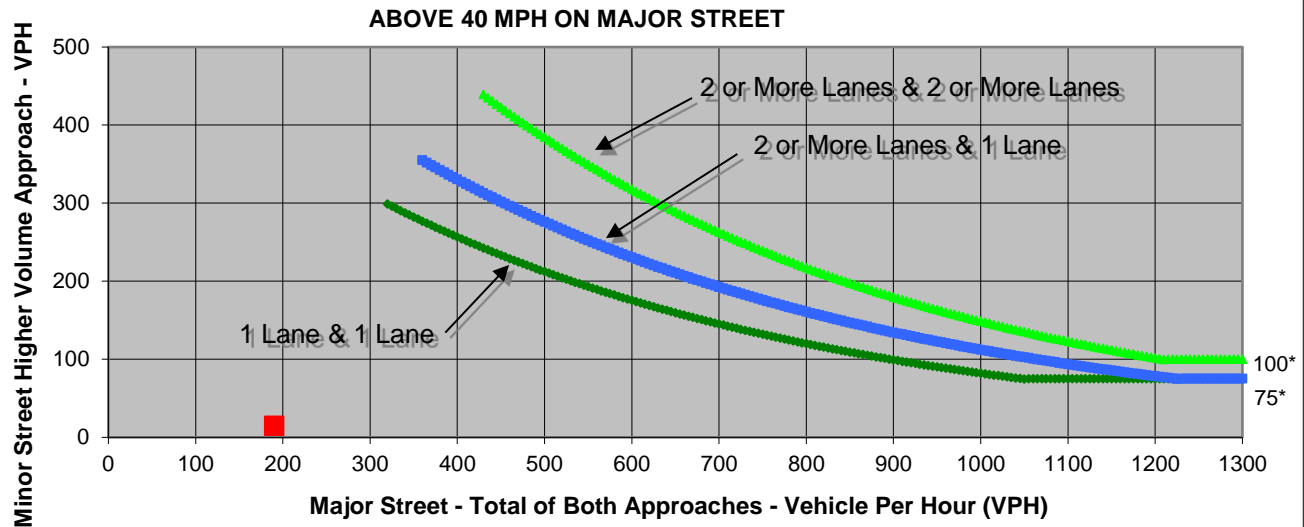
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	2	1	0
Through	85	95	5	4
Right	0	2	9	5
Total	91	99	15	9

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	190	15	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

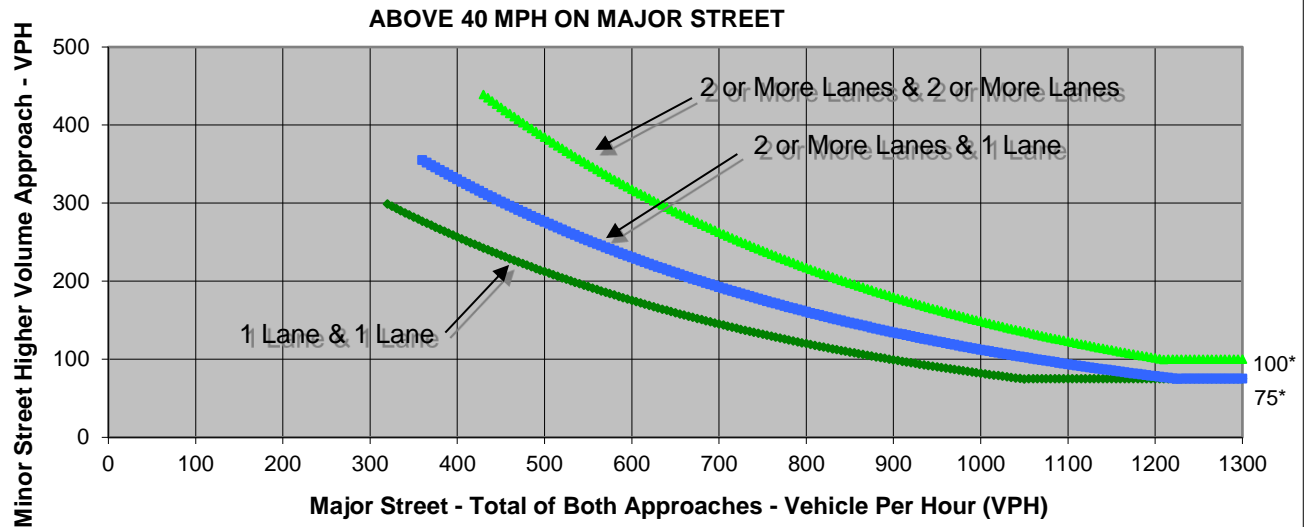
Turn Movement Volumes

	NB	SB	EB	WB
Left	33	51	9	4
Through	1,395	1,217	1	2
Right	24	26	23	76
Total	1,452	1,294	33	82

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,746	82	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

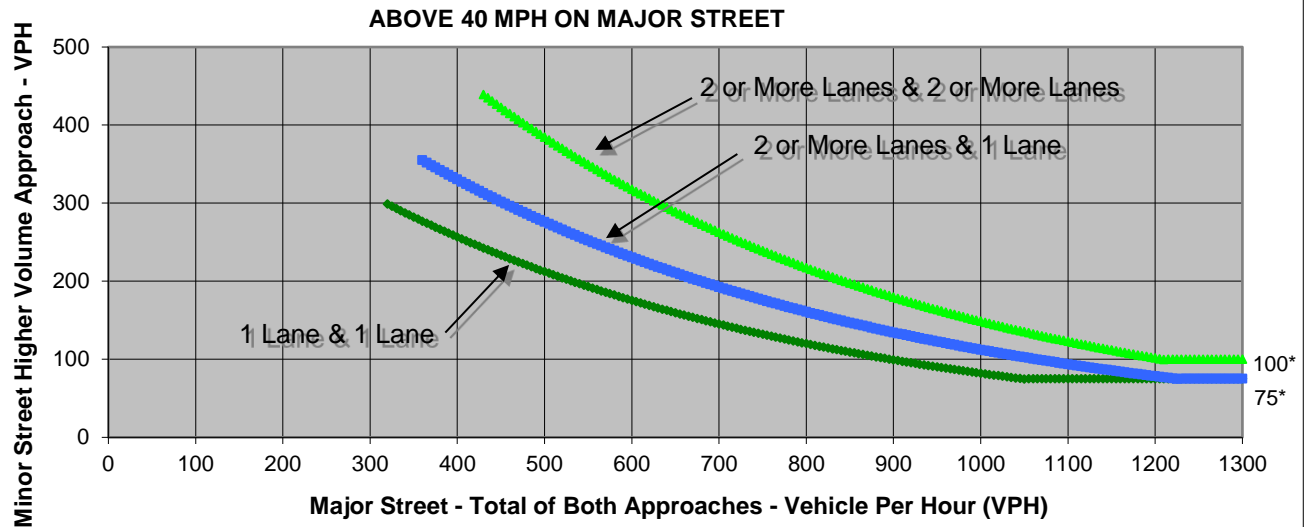
Turn Movement Volumes

	NB	SB	EB	WB
Left	32	41	5	1
Through	1,055	752	4	7
Right	4	40	3	26
Total	1,091	833	12	34

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,924	34	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

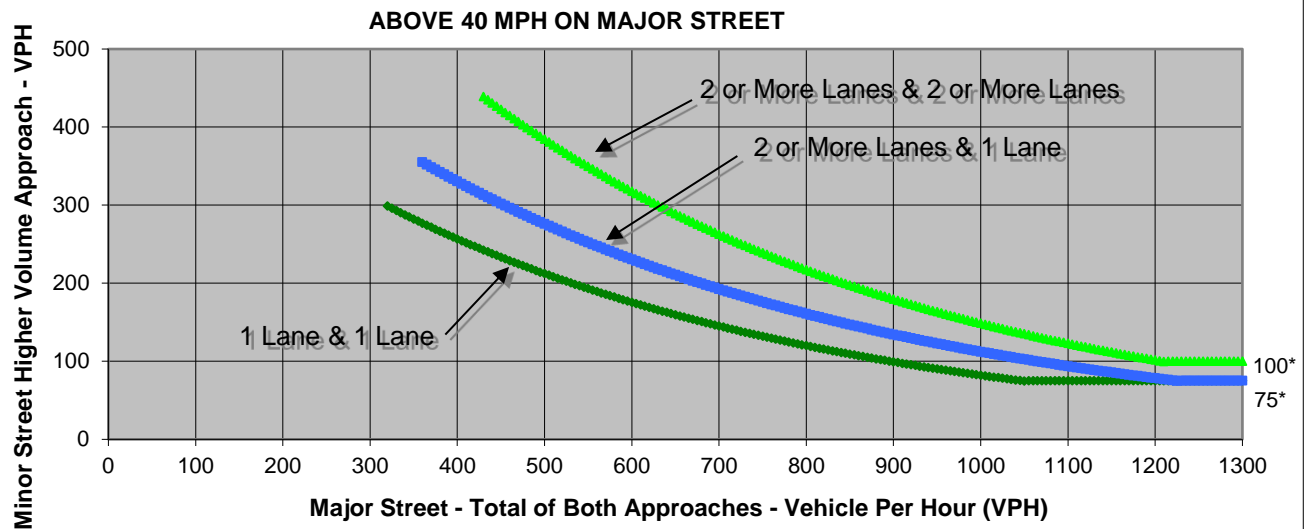
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	34	5	2
Through	1,052	595	2	5
Right	11	2	5	40
Total	1,072	631	12	47

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,703	47	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

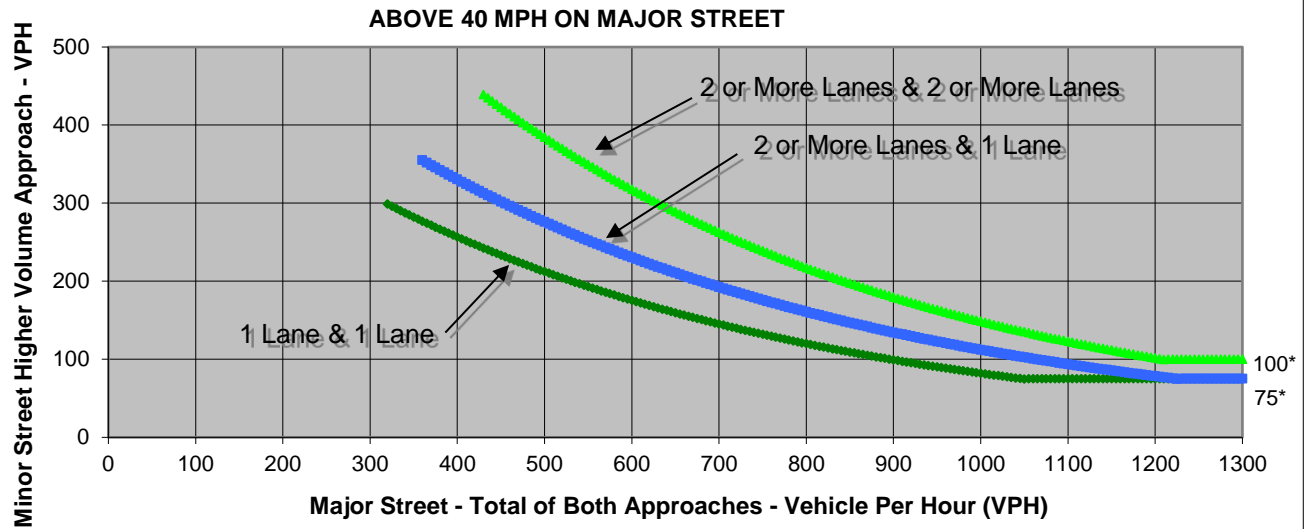
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	14	1	4
Through	1,048	580	3	0
Right	9	8	4	23
Total	1,067	602	8	27

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,669	27	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

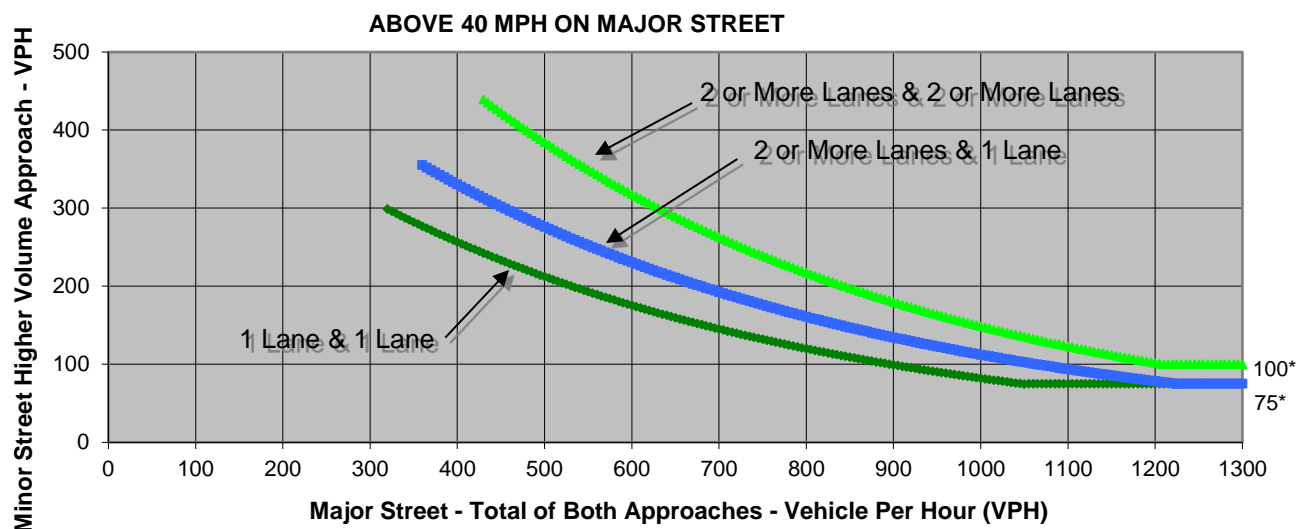
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	7	1	1
Through	1,061	580	1	2
Right	3	1	0	5
Total	1,066	588	2	8

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,654	8	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street S Walton Ave

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

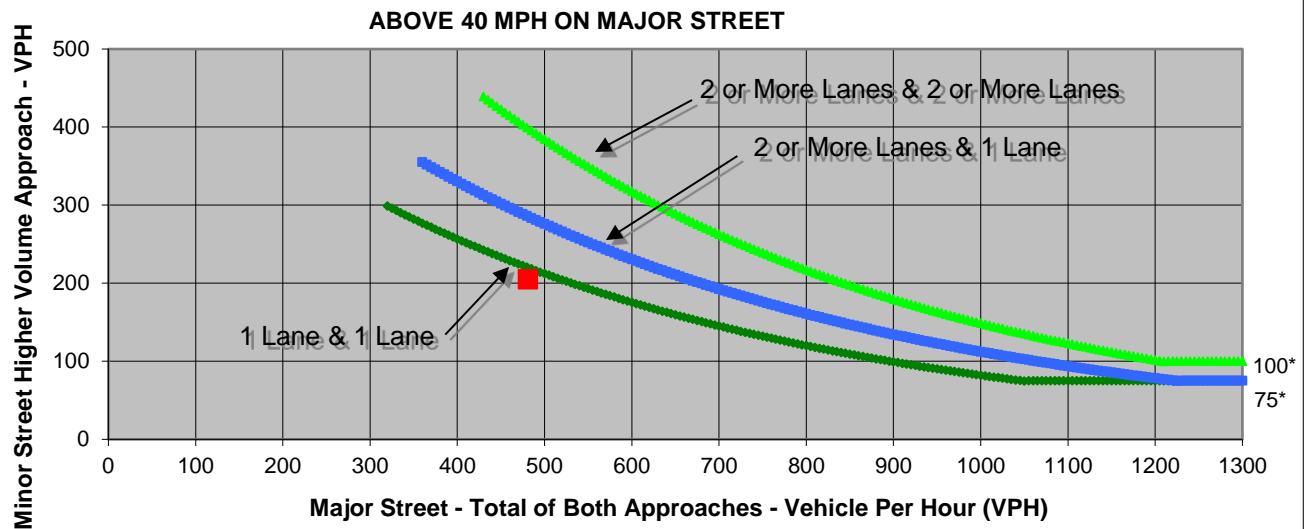
Turn Movement Volumes

	NB	SB	EB	WB
Left	25	129	19	31
Through	61	52	148	170
Right	43	24	16	97
Total	129	205	183	298

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	481	205	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

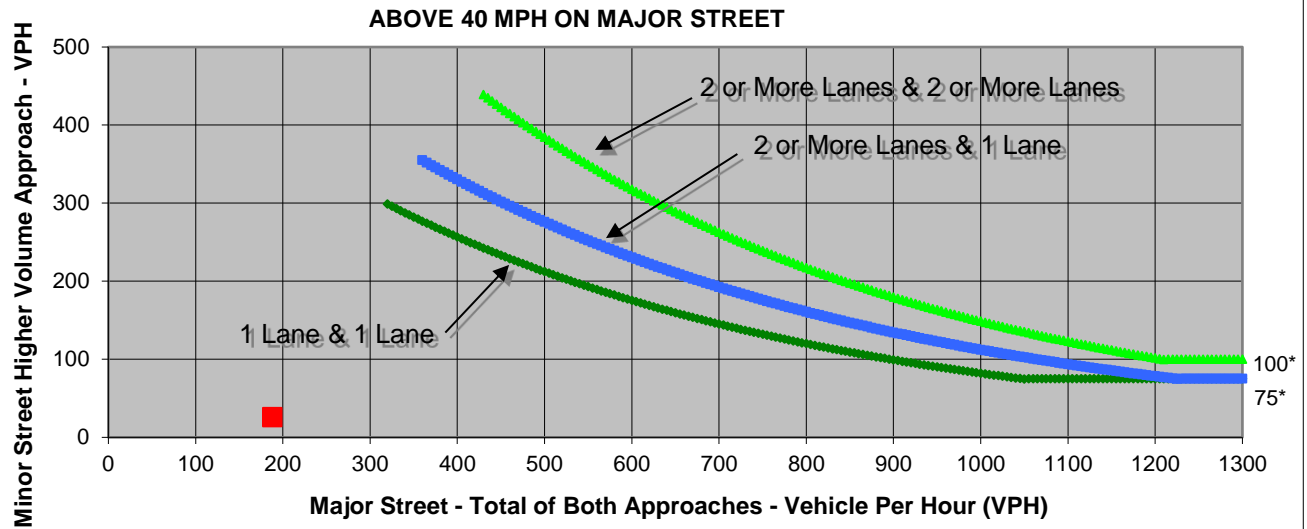
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	13	0	0
Through	96	73	0	0
Right	6	0	0	26
Total	102	86	0	26

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	188	26	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

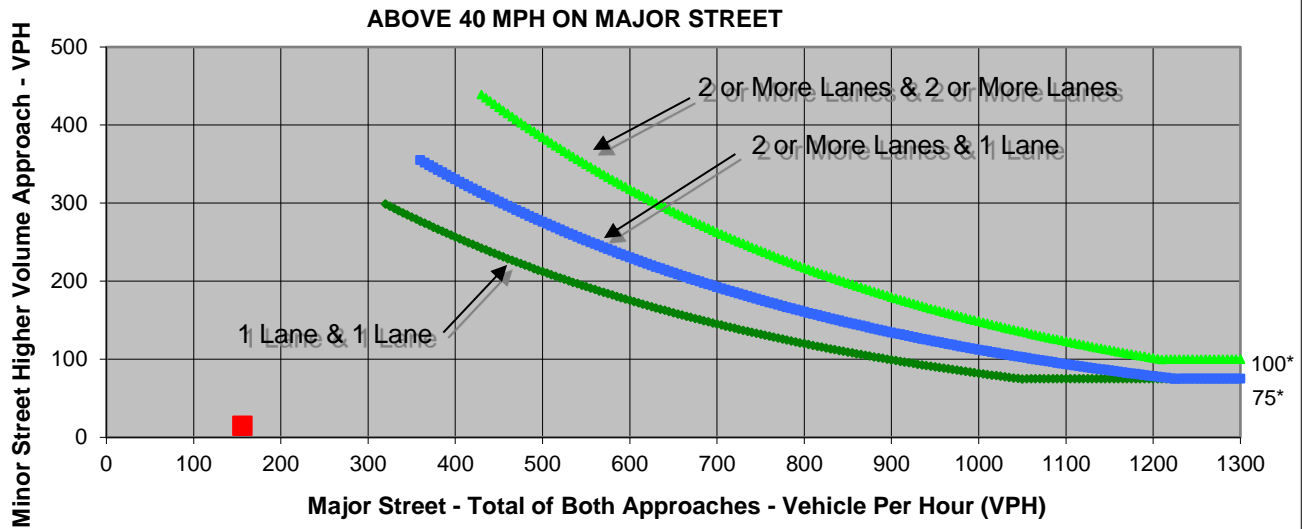
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	3	6	1
Through	82	61	4	7
Right	1	4	2	7
Total	88	68	12	15

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	156	15	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

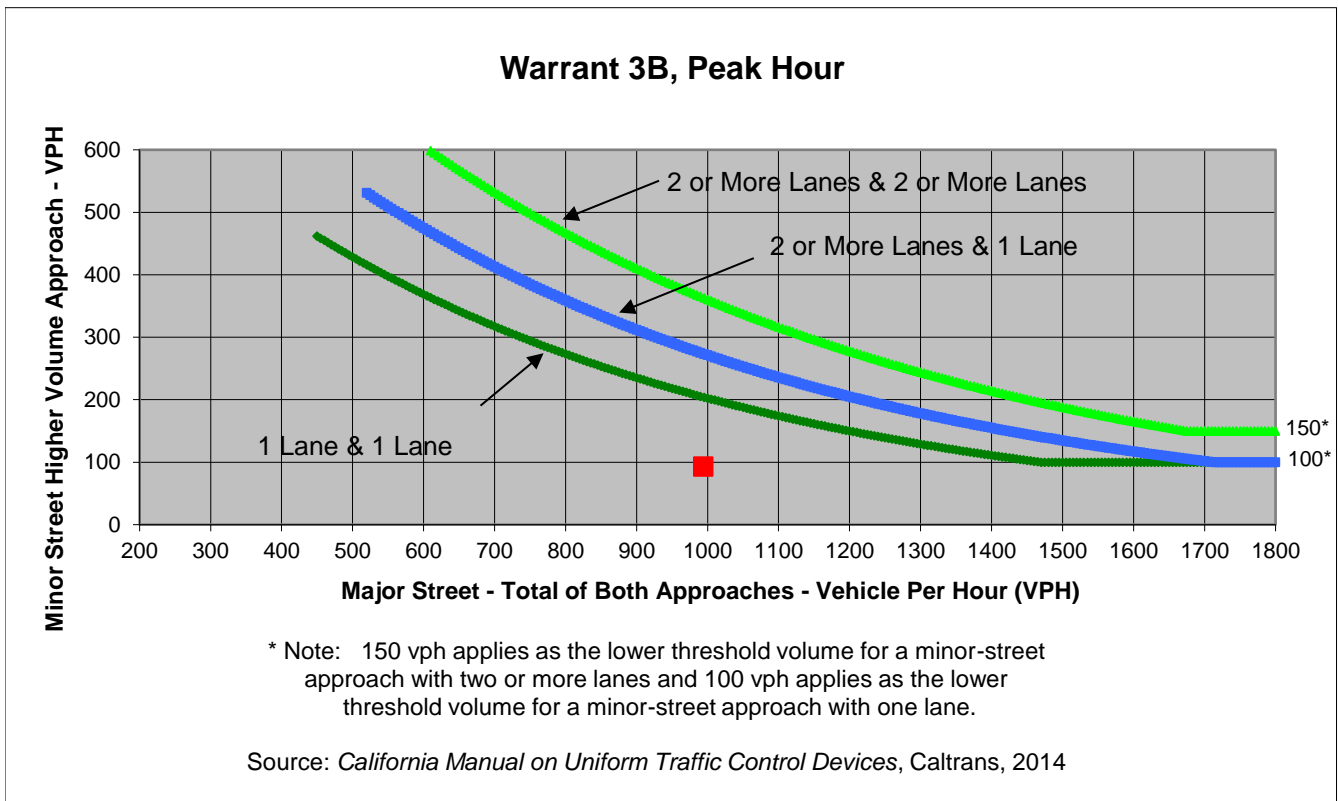
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	99	0	31
Through	453	346	0	0
Right	96	0	0	62
Total	549	445	0	93

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	994	93	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

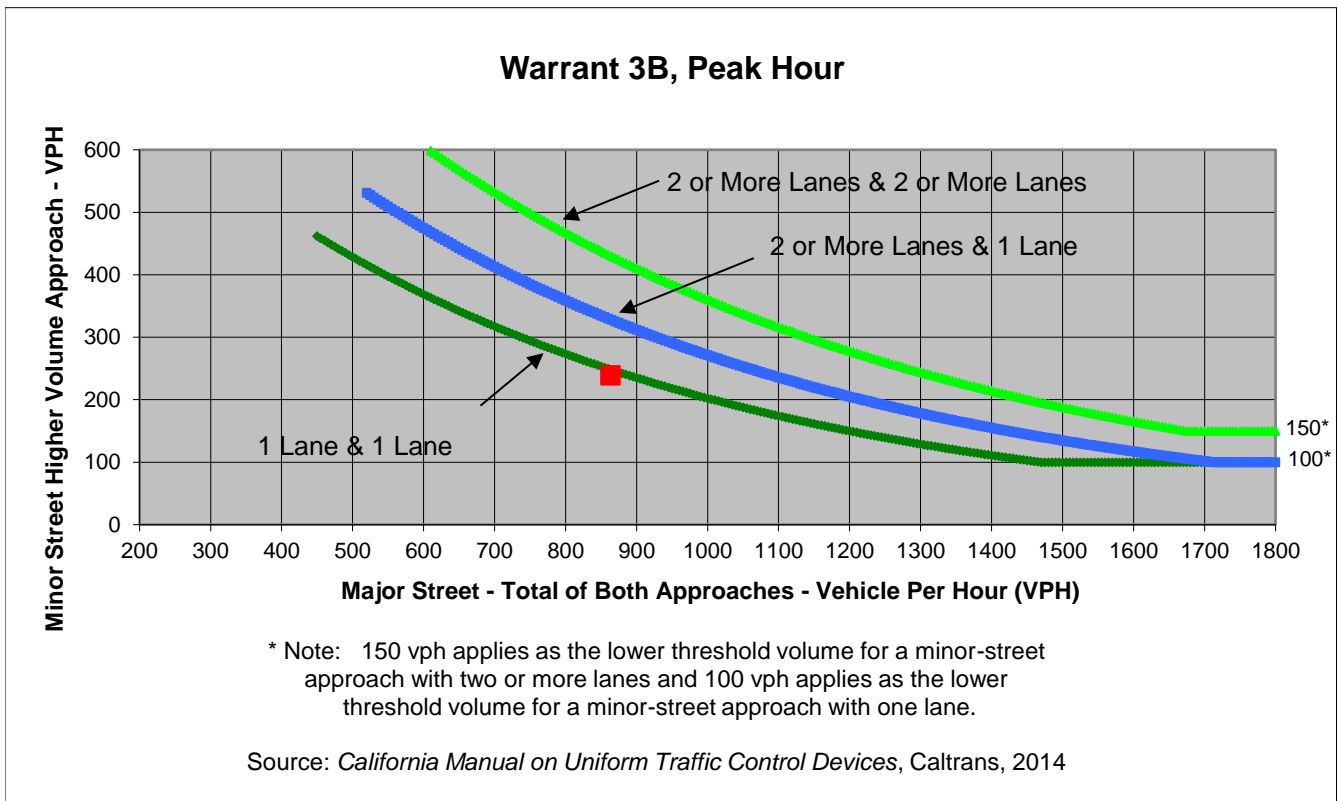
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	126	0	0	72
Through	0	0	365	319
Right	113	0	107	0
Total	239	0	472	391

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	863	239	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

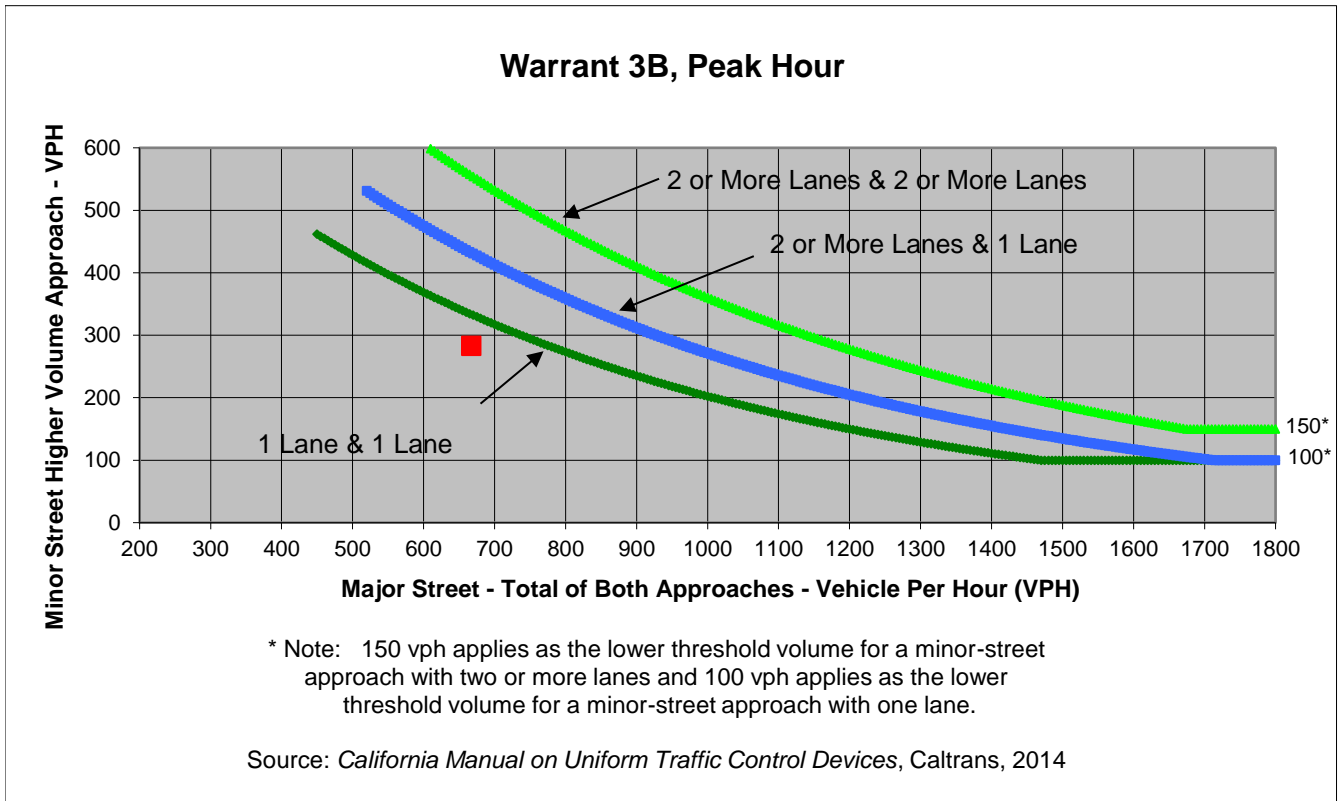
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	107	57	62	21
Through	138	84	296	195
Right	38	43	45	48
Total	283	184	403	264

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	667	283	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Phillips Rd

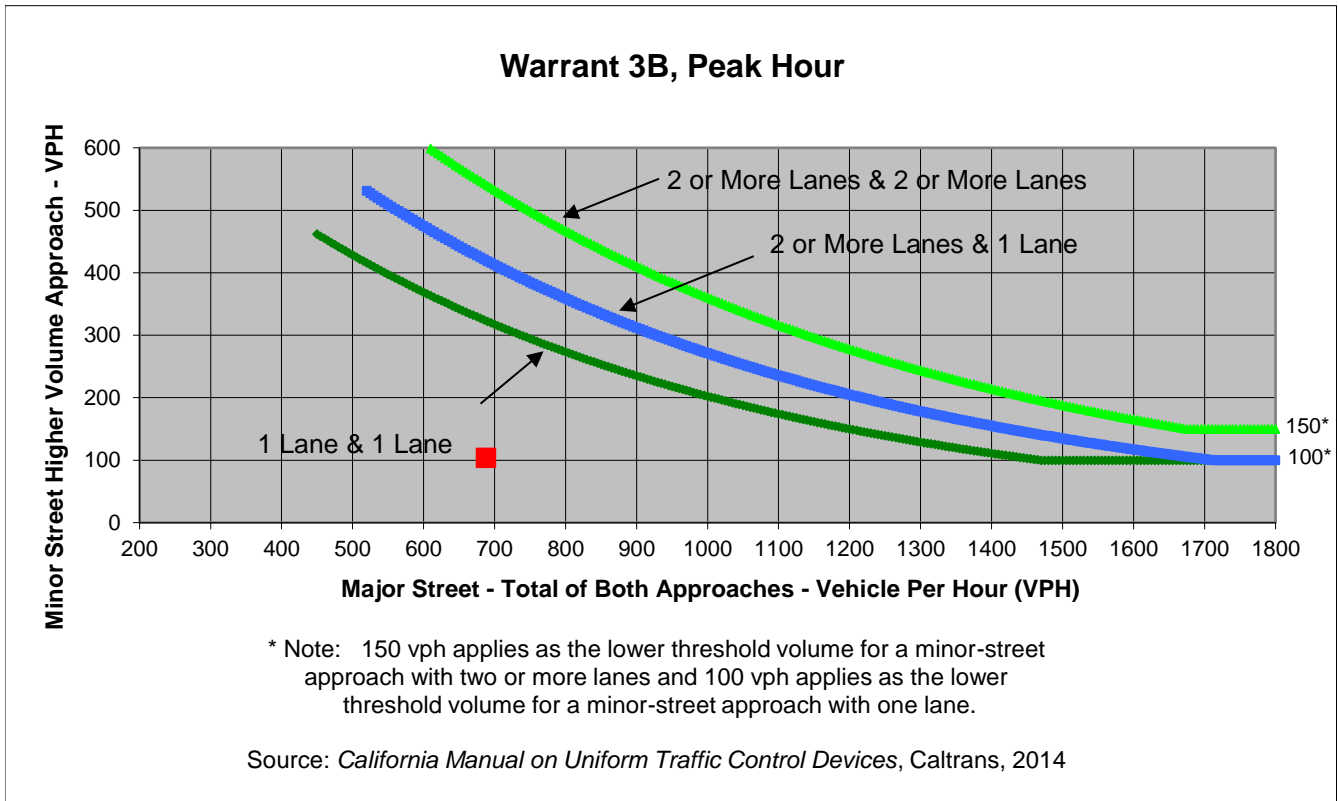
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	50	24	2
Through	0	0	257	356
Right	0	54	0	49
Total	0	104	281	407

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	688	104	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

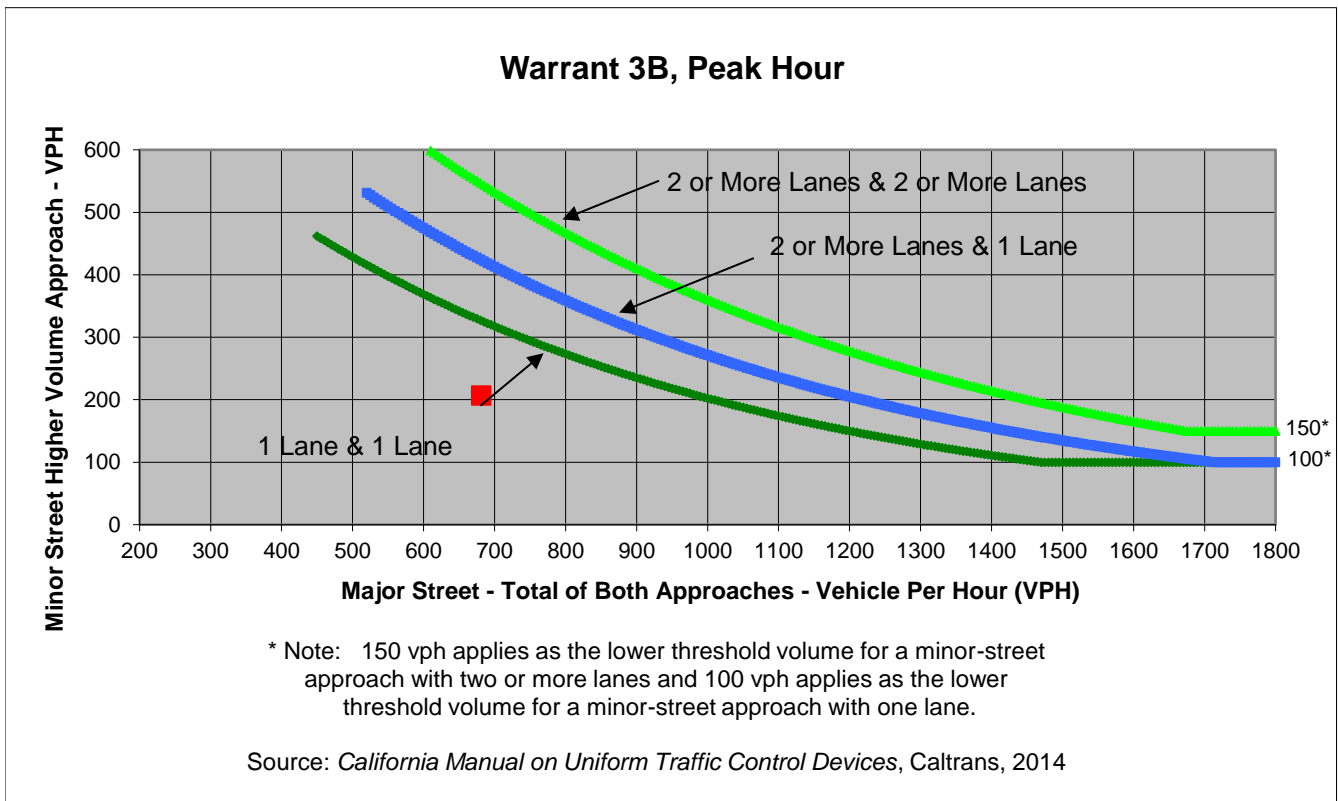
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	52	48	26	29
Through	106	103	231	317
Right	49	31	35	43
Total	207	182	292	389

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	681	207	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Smith Rd

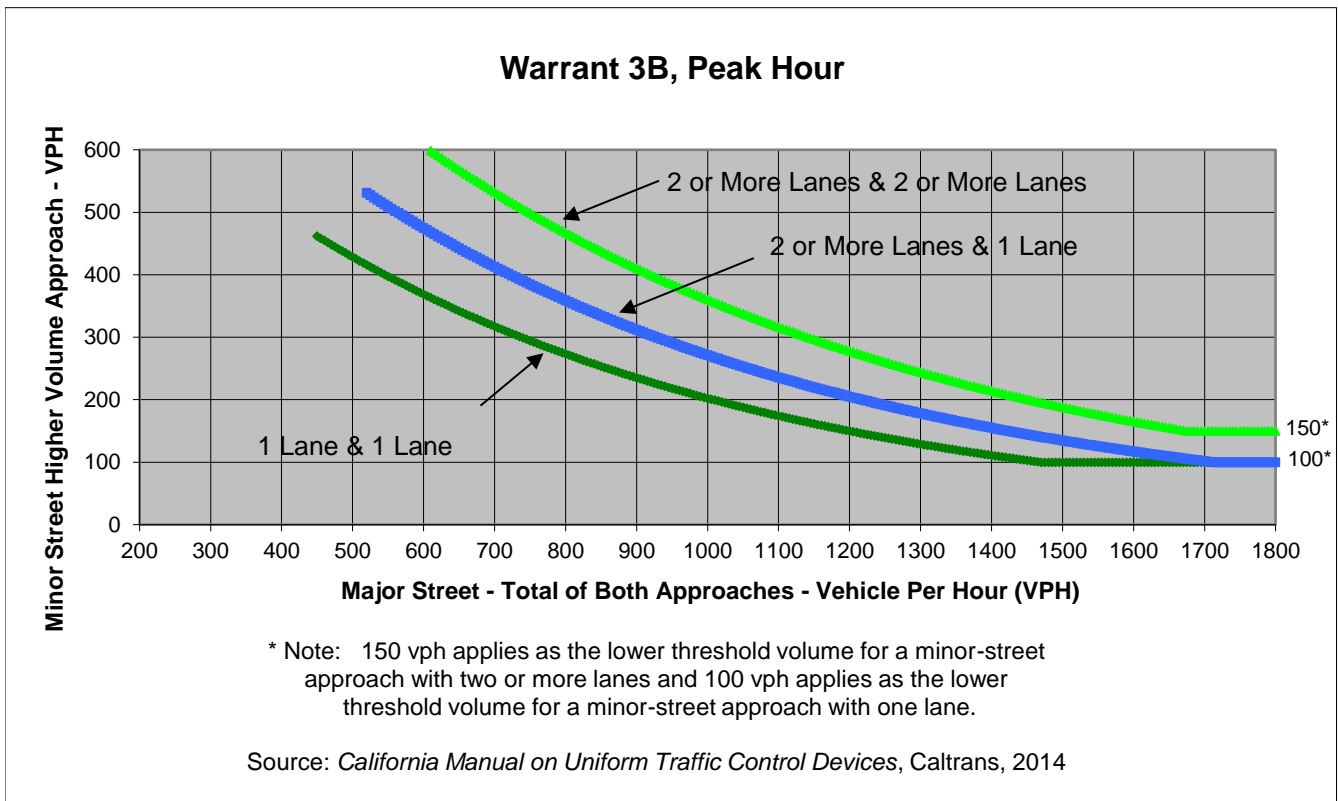
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	18	0
Through	74	83	0	0
Right	0	19	16	0
Total	94	102	34	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Smith Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	196	34	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Wallace Dr
 Minor Street Stewart Rd

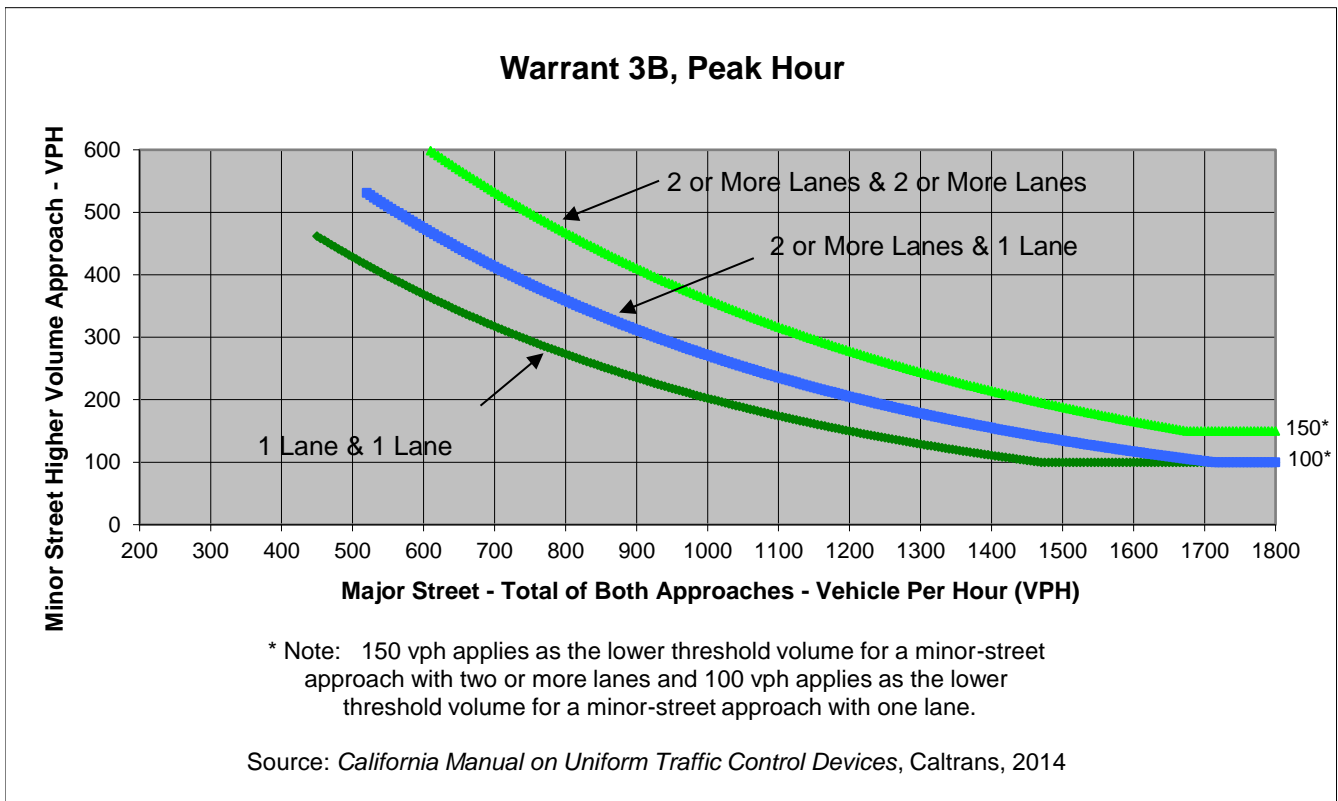
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	3	0	0	1
Through	0	0	117	115
Right	7	0	1	0
Total	10	0	118	116

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	10	118	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

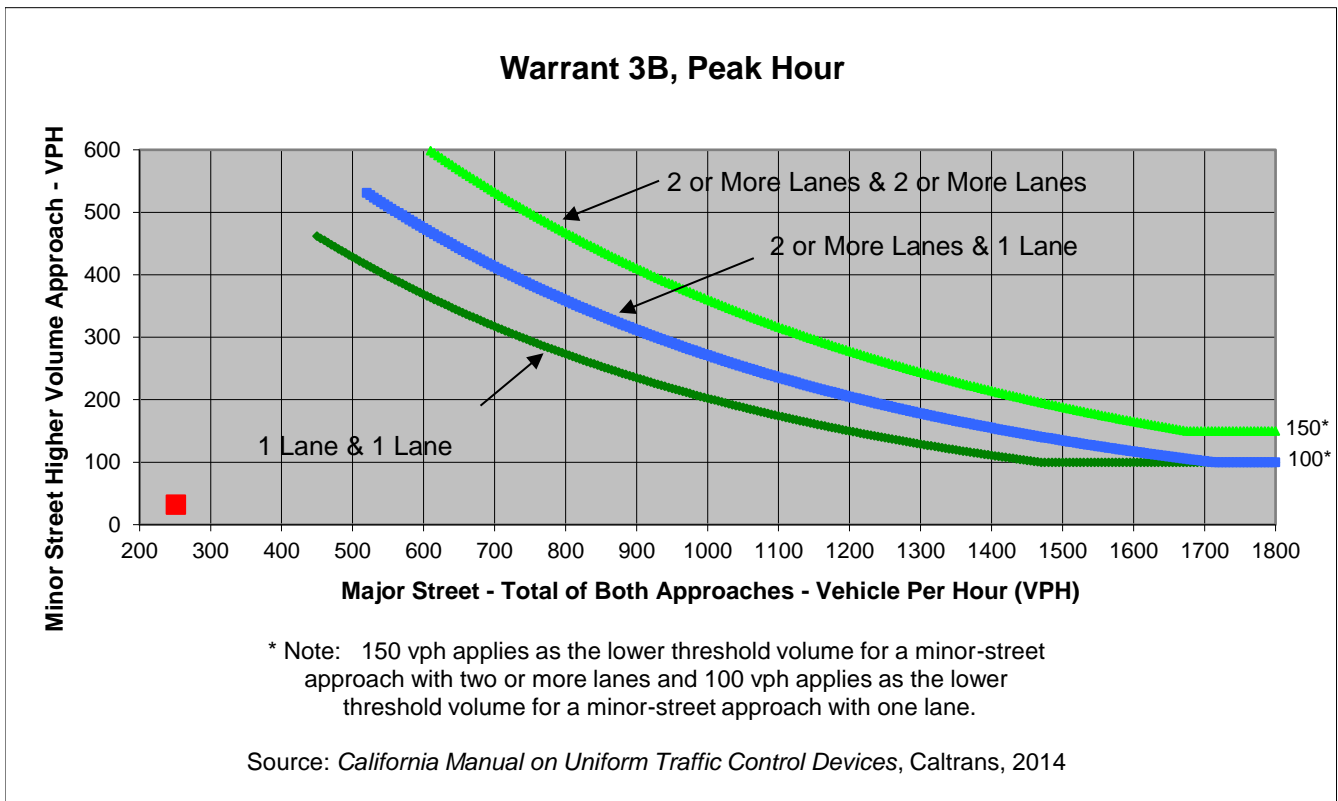
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	6	0	0	17
Through	0	0	119	110
Right	26	0	5	0
Total	32	0	124	127

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	251	32	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Railroad Ave

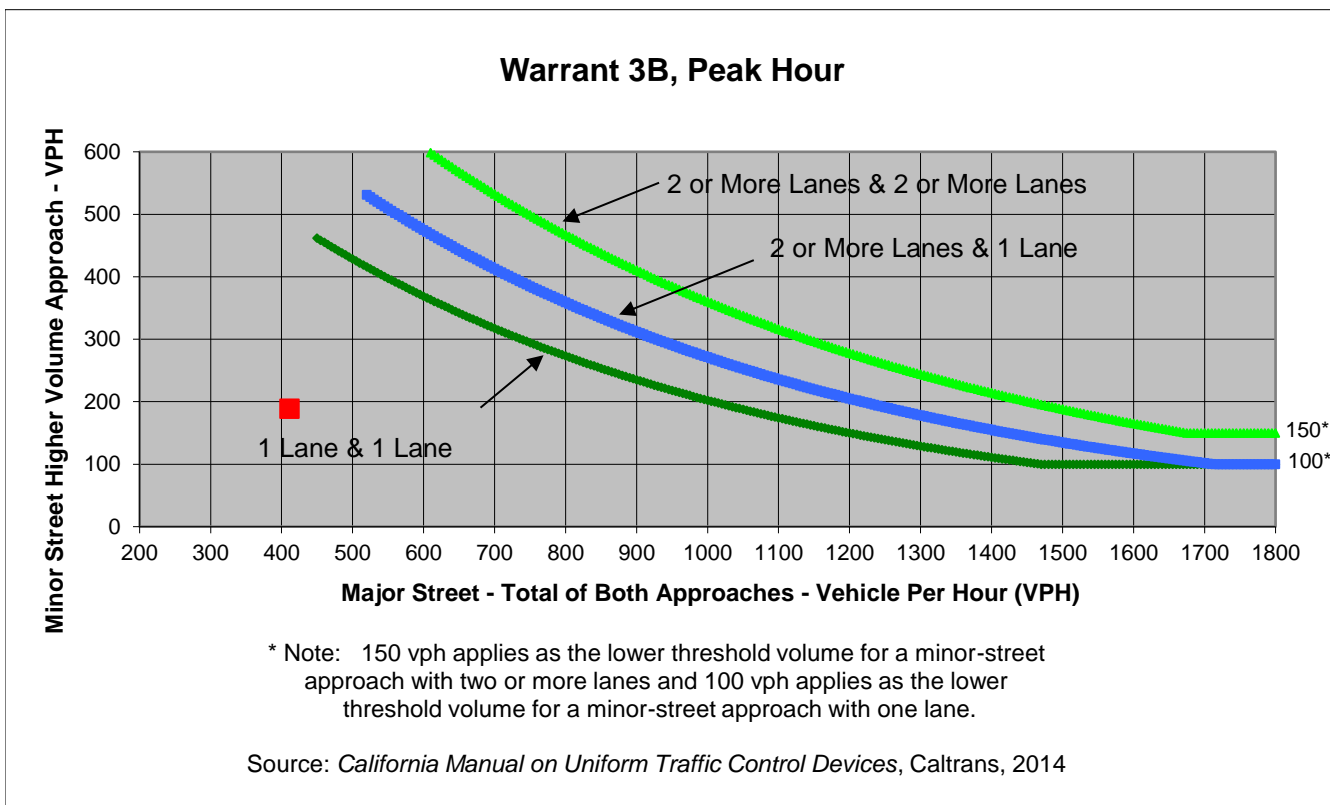
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	6	108	29	15
Through	29	67	113	104
Right	11	14	3	147
Total	46	189	145	266

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	411	189	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Walton Ave
 Minor Street Richland Rd

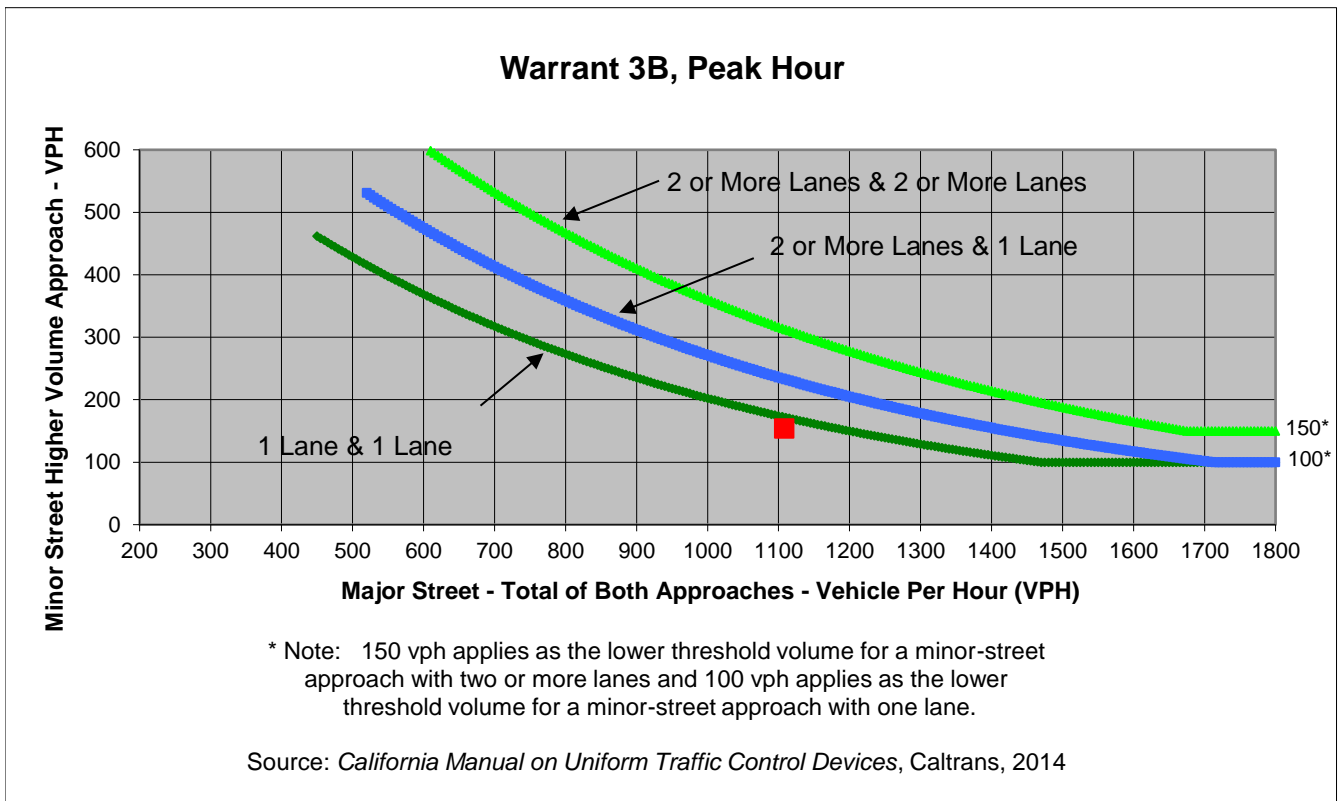
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	84	0	72
Through	415	556	0	0
Right	53	0	0	82
Total	468	640	0	154

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	1,108	154	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

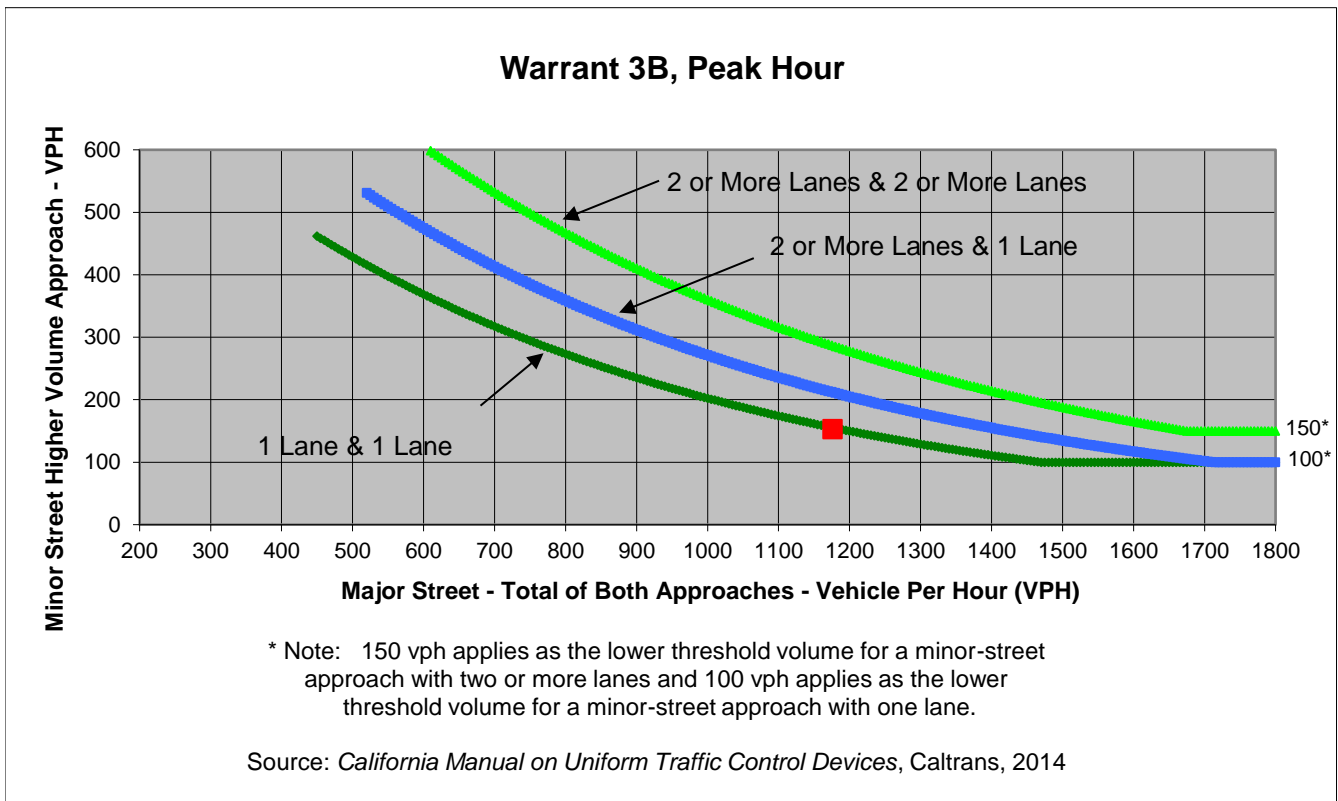
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	81	0	0	53
Through	0	0	477	537
Right	72	0	109	0
Total	153	0	586	590

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	1,176	153	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Railroad Ave

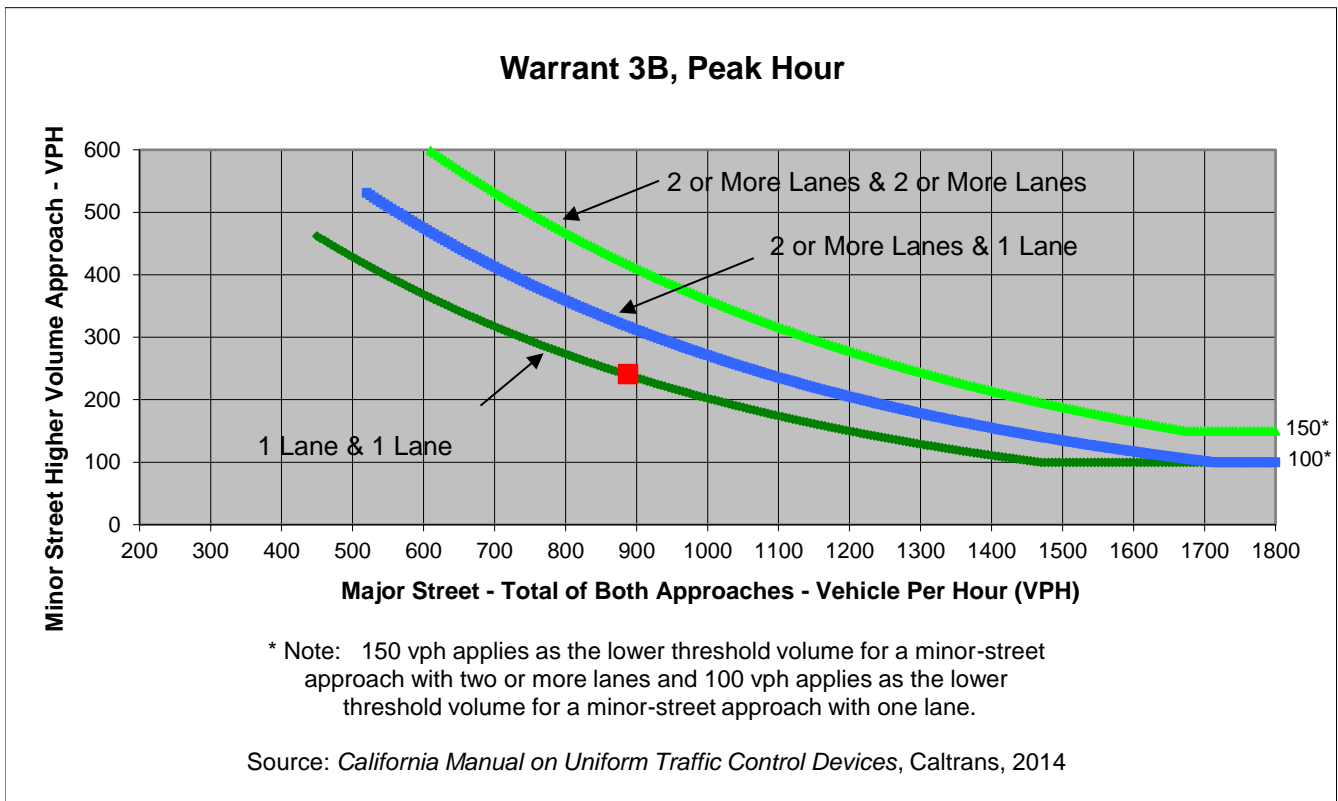
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	79	85	41	35
Through	93	105	290	365
Right	25	51	92	65
Total	197	241	423	465

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	888	241	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Phillips Rd

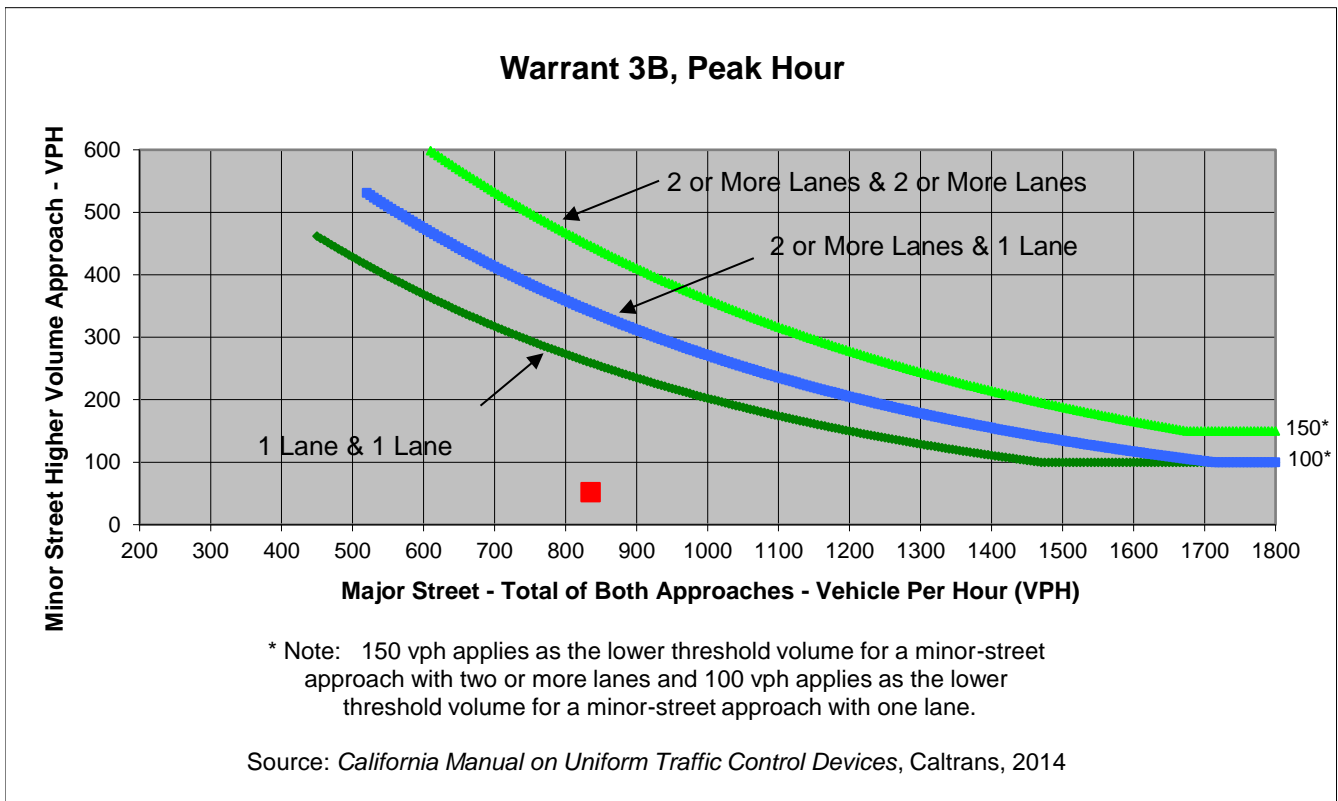
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	56	0
Through	0	0	472	296
Right	0	32	0	11
Total	0	52	528	307

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	835	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

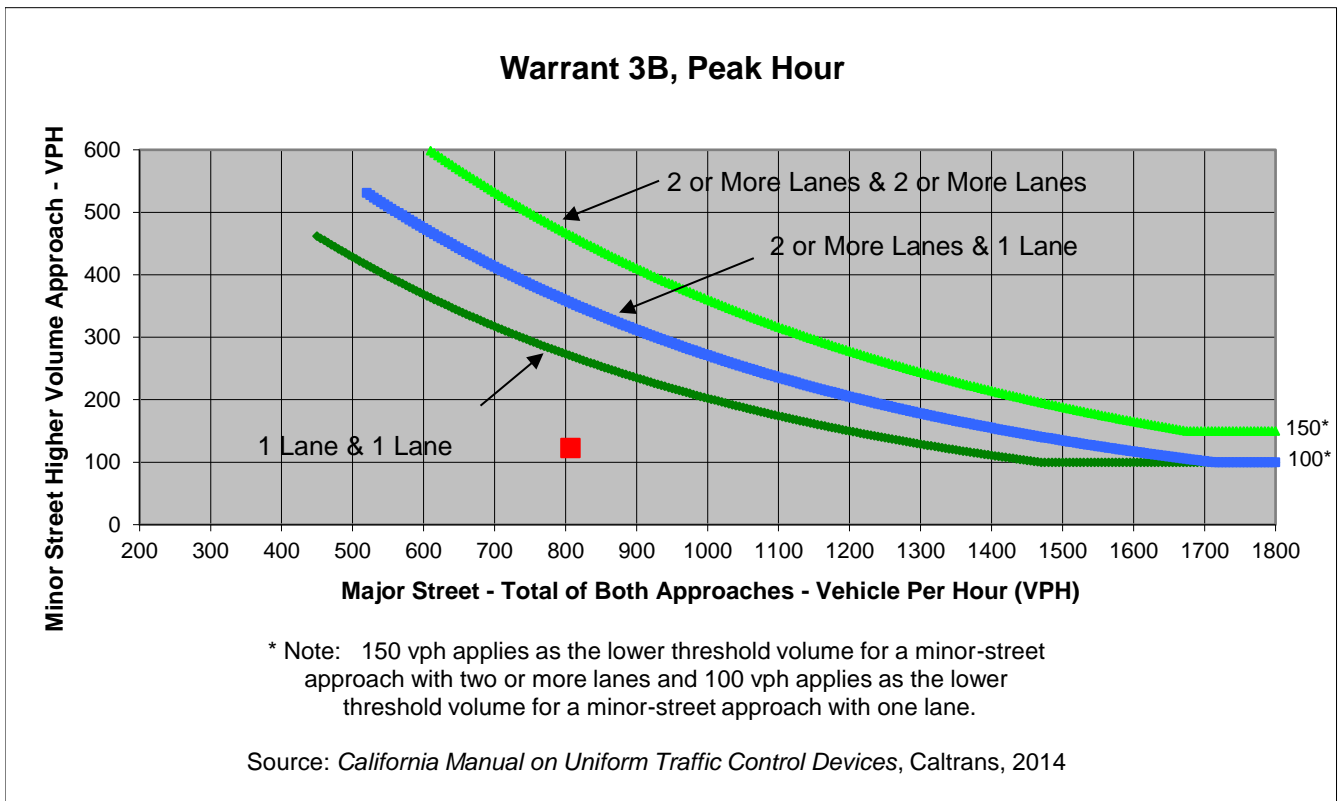
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	12	50	63	29
Through	59	45	390	265
Right	30	28	19	41
Total	101	123	472	335

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	807	123	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Smith Rd

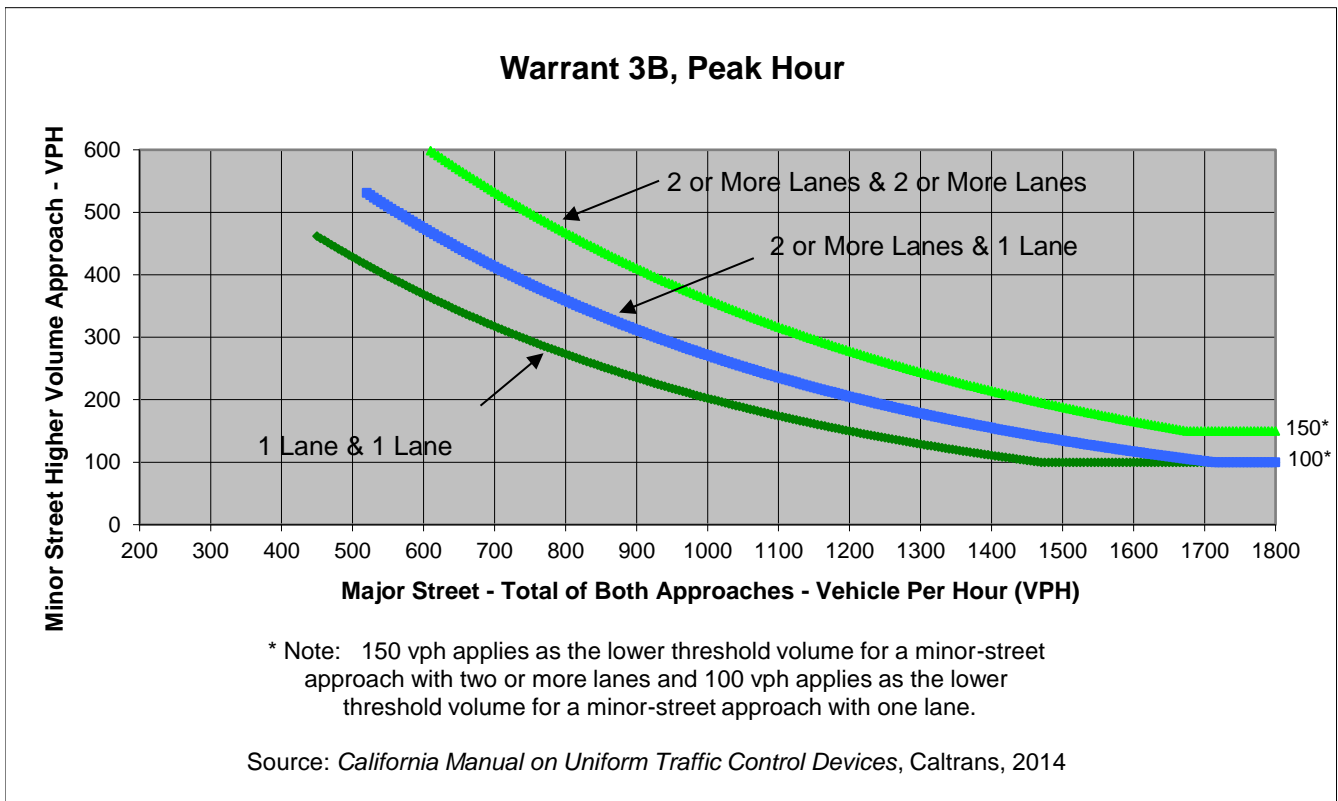
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	16	0	21	0
Through	54	43	0	0
Right	0	13	32	0
Total	70	56	53	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Smith Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	126	53	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Wallace Dr
 Minor Street Stewart Rd

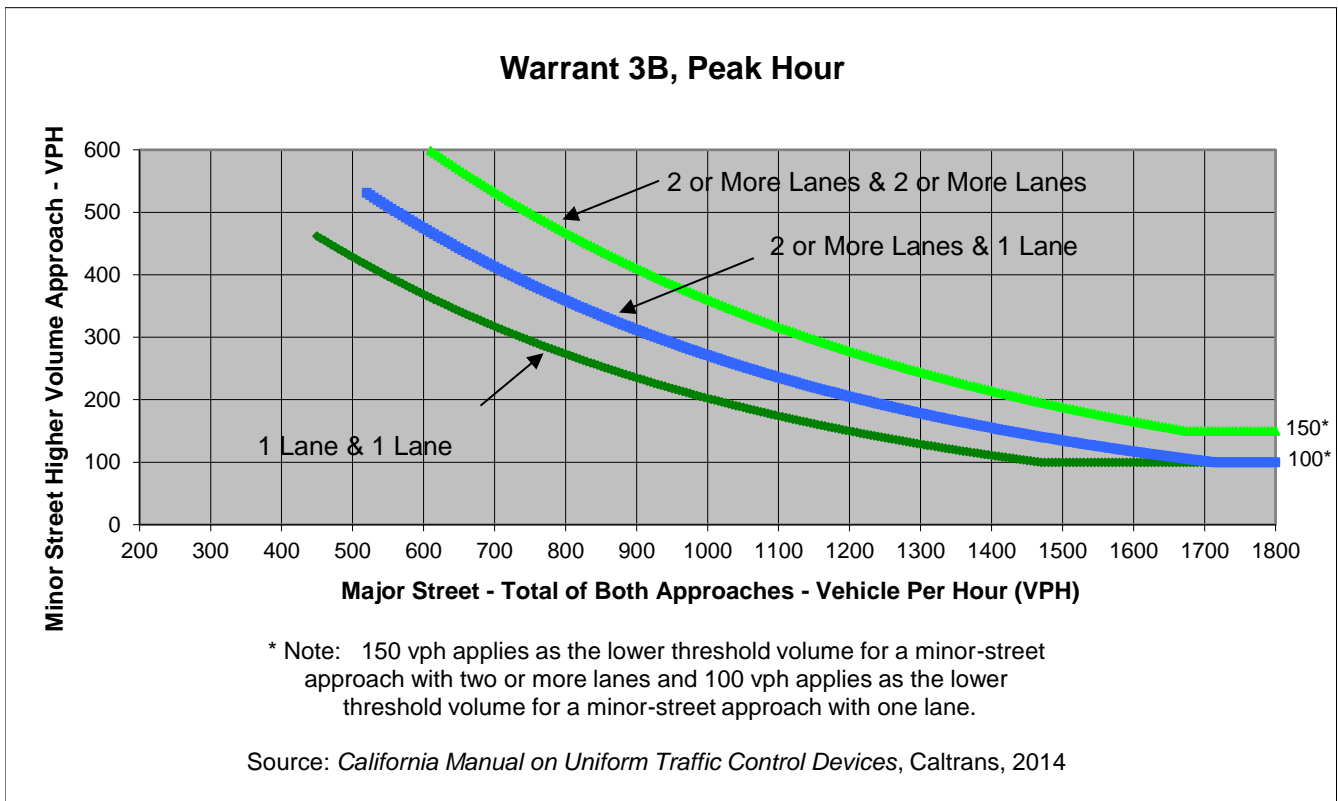
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	0	0	5
Through	0	0	42	42
Right	1	0	5	0
Total	6	0	47	47

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	6	47	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

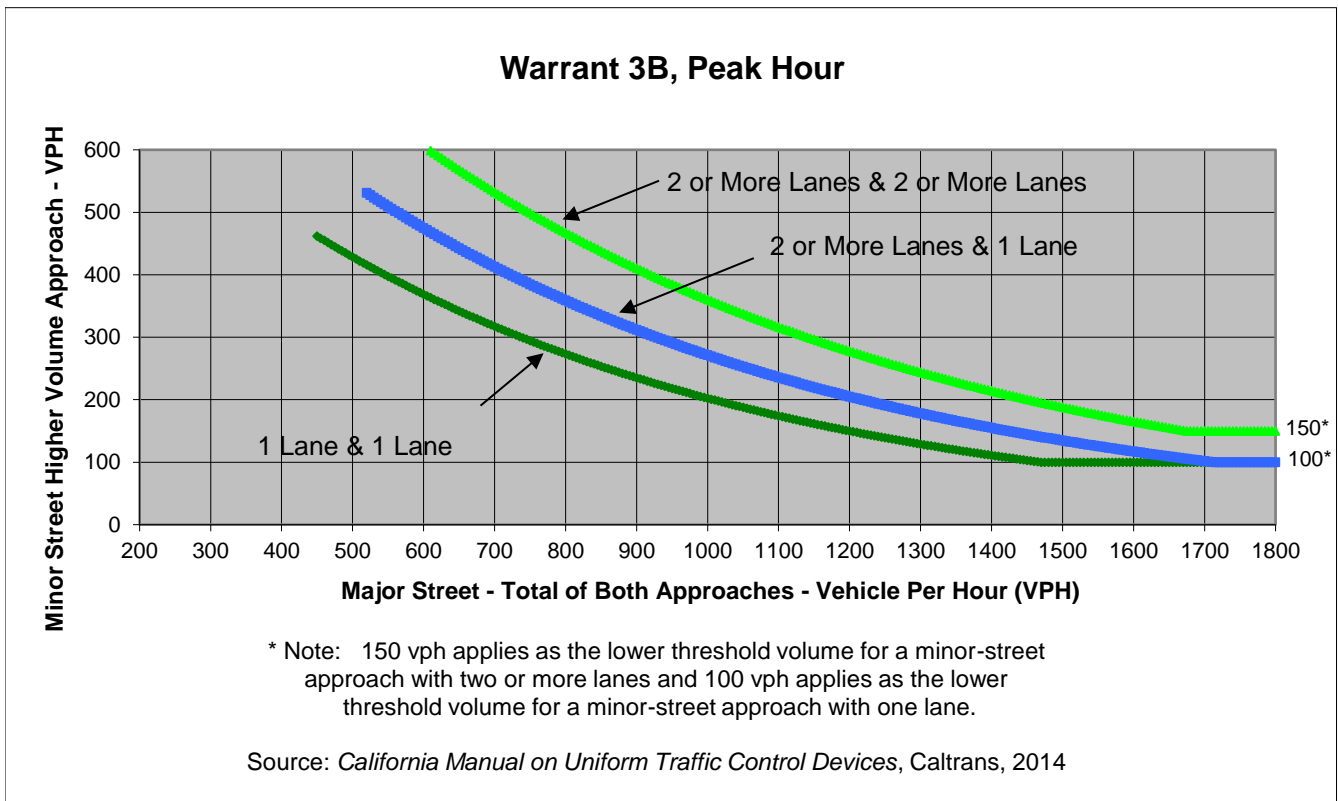
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	11	0	0	24
Through	0	0	35	36
Right	22	0	9	0
Total	33	0	44	60

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	104	33	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

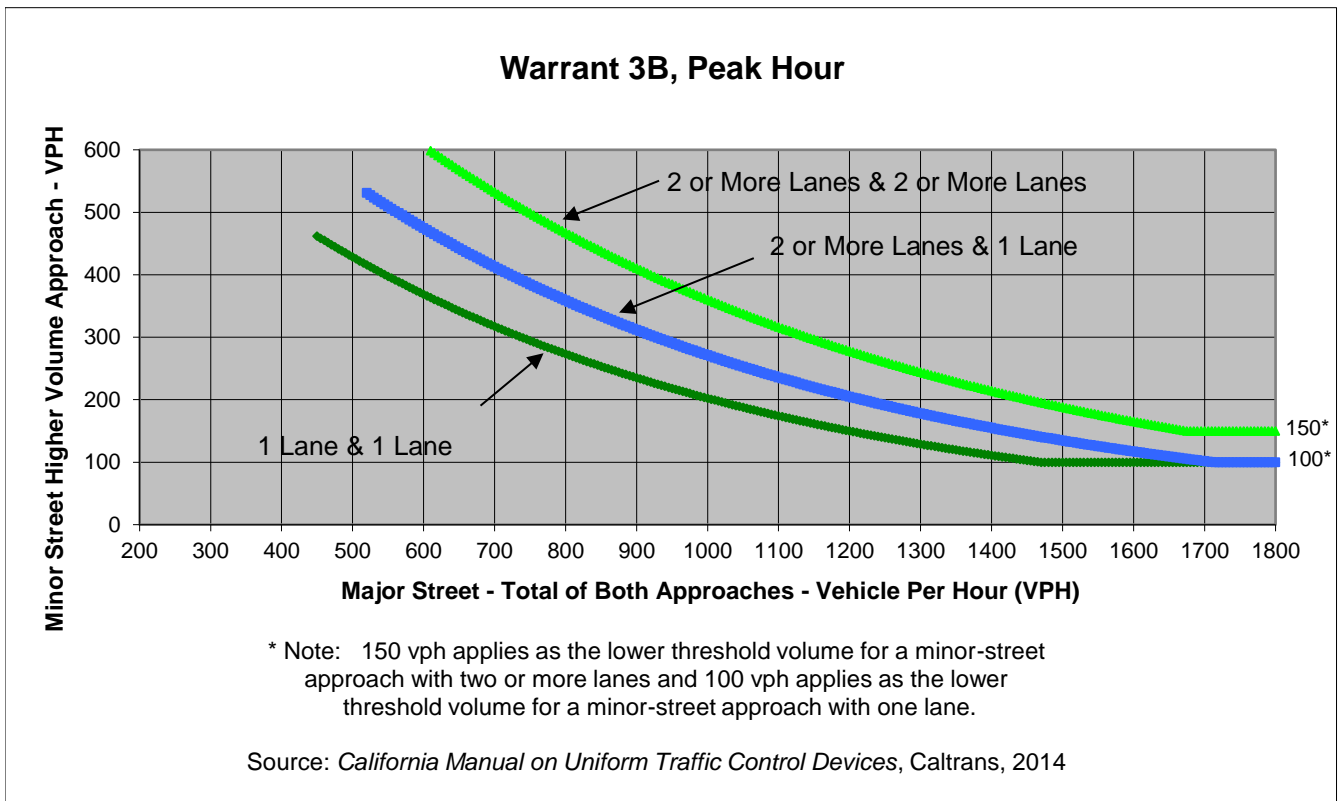
Project Bogue Stewart Master Plan
 Scenario Existing Conditions
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	1	26	25	7
Through	45	33	29	33
Right	2	27	3	27
Total	48	86	57	67

Major Street Direction

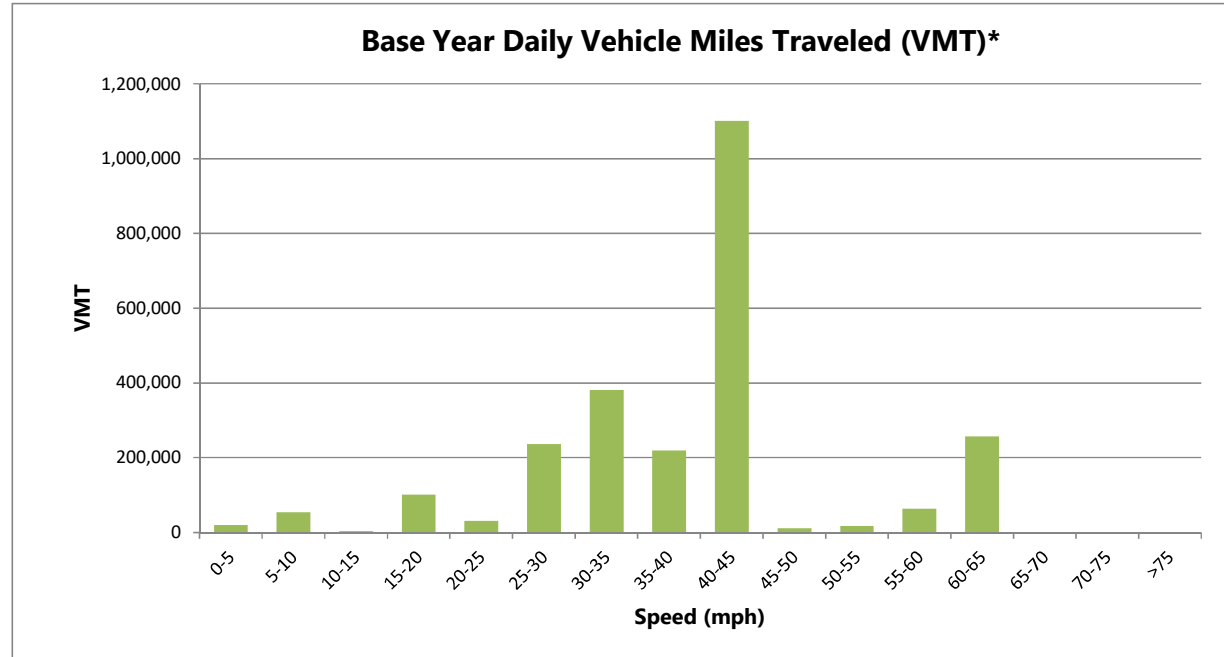
	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	124	86	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	19,812
>5	<=10	5-10	54,034
>10	<=15	10-15	3,701
>15	<=20	15-20	101,056
>20	<=25	20-25	31,120
>25	<=30	25-30	236,324
>30	<=35	30-35	381,160
>35	<=40	35-40	219,455
>40	<=45	40-45	1,100,337
>45	<=50	45-50	11,355
>50	<=55	50-55	17,306
>55	<=60	55-60	63,546
>60	<=65	60-65	256,505
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			2,495,712



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.2:

Travel Characteristics

**MXD & Yuba City Model Newkom Ranch Comparison
Mainstreet [MXD+] Trip Generation Analysis**

Land Use	Units	ITE Code	Quantity	Daily	AM			PM		
					In	Out	Total	In	Out	Total
Net New Uses										
(210) - Single-Family Detached Housing (Adj Streets, 7-9A, 4-6P)	Dwelling Units	2102	427	3,993	77	232	309	244	144	388
(221) - Low-Rise Apartment (Adj Streets, 7-9A, 4-6P)	Occupied Dwelling Units	2216	216	1,493	22	81	103	86	47	133
(710) - General Office Building (Pk Hr, AM; PM)	1000 sq ft gross floor area	7103	108.5	1,397	180	24	204	34	166	200
(488) - Soccer Complex (Adj Streets 7-9A, 4-6P)	Fields	4884	2	143	1	1	2	23	12	35
(820) - Shopping Center (Adj Streets, 7-9A, 4-6P)	1000 sq ft leasable area	8205	229.8	11,663	161	98	259	502	544	1,046
Net Raw Project Trips*				18,689	441	436	877	889	913	1,802
Reductions										
Internal Capture				-1,486	-59	-59	-118	-80	-80	-160
<i>MXD Newkom Ranch After Internal Capture**</i>				17,203	382	377	759	809	833	1,642
Diverted Link Reduction		9.0%	18.0%	-916	-13	-13	-26	-80	-80	-160
<i>Subtotal - Newkom Ranch with Diverted Link Reduction</i>				16,287	369	364	733	729	753	1,482
Pass By Reduction		9.0%	18%	-916	-13	-13	-26	-80	-80	-160
<i>Subtotal - Newkom Ranch with Pass By Reduction</i>				16,287	369	364	733	729	753	1,482
Final MXD Newkom Ranch Result**				15,371	356	351	707	649	673	1,322
Yuba City TDM Newkom Ranch Result				16,033	516	458	974	652	731	1,385
Delta: Yuba City Model - MXD				662	160	107	267	3	58	63

*Raw project trips based on Institute of Transportation Engineers, 9th Edition, 2012

**Final MXD results include trip adjustments based on project location and engineering judgment.

Fehr & Peers, 2017

**MXD & Yuba City Model Kells East Comparison
Mainstreet [MXD+] Trip Generation Analysis**

Land Use	Units	ITE Code	Quantity	Daily	AM			PM		
					In	Out	Total	In	Out	Total
Net New Uses										
(210) - Single-Family Detached Housing (Adj Streets, 7-9A, 4-6P)	Dwelling Units	2102	147	1,497	28	85	113	94	55	149
(221) - Low-Rise Apartment (Pk Hr of Generator, AM & PM)	Occupied Dwelling Units	2213	122	1,012	14	54	68	56	31	87
(820) - Shopping Center (Adj Streets, 7-9A, 4-6P)	1000 sq ft leasable area	8204	161.2	9,262	130	79	209	396	429	825
Net Raw Project Trips*				11,771	172	218	390	546	515	1,061
Reductions										
Internal Capture				-210	-11	-13	-24	-11	-11	-22
<i>MXD Kells East After Internal Capture**</i>				<i>11,561</i>	<i>161</i>	<i>205</i>	<i>366</i>	<i>535</i>	<i>504</i>	<i>1,039</i>
Diverted Link Reduction		8.7%	17.4%	-788	-8	-8	-16	-70	-70	-140
<i>Subtotal - Kells East with Diverted Link Reduction</i>				<i>10,773</i>	<i>153</i>	<i>197</i>	<i>350</i>	<i>465</i>	<i>434</i>	<i>899</i>
Pass By Reduction		7.4%	15%	-670	-7	-7	-14	-60	-60	-120
<i>Subtotal - Kells East with Pass By Reduction</i>				<i>10,891</i>	<i>154</i>	<i>198</i>	<i>352</i>	<i>475</i>	<i>444</i>	<i>919</i>
Final MXD Kells East Result**				10,104	146	190	336	405	374	779

*Raw project trips based on Institute of Transportation Engineers, 9th Edition, 2012

**Final MXD results include trip adjustments based on project location and engineering judgment.

Fehr & Peers, 2017

Bogue Stewart Master Plan Buildout
Mainstreet [MXD+] Trip Generation Analysis

Land Use	Units	ITE Code	Quantity	Daily	AM			PM		
					In	Out	Total	In	Out	Total
Net New Uses										
(210) - Single-Family Detached Housing (Adj Streets, 7-9A, 4-6P)	Dwelling Units	2102	1,759	16,746	330	989	1,319	1,108	651	1,759
(220) - Apartment (Adj Streets, 7-9A, 4-6P)	Dwelling Units	2203	758	5,041	77	310	387	306	165	470
Custom	Custom	0004	473	25,332	340	227	568	1,179	1,088	2,267
Custom	Custom	0005	223.5	2,880	357	63	420	62	349	411
(110) - General Light Industrial (Adj Streets, 7-9A, 4-6P)	1,000 Square Feet Gross Floor Area	1106	230	1,616	160	22	182	21	151	172
(140) - Manufacturing (Adj Streets, 7-9A, 4-6P)	1,000 Square Feet Gross Floor Area	1407	230	872	126	35	161	59	104	163
Custom	Custom	0008	1,400	1,806	315	315	630	105	105	210
Net Raw Project Trips				54,293	1,705	1,961	3,667	2,840	2,613	5,452
Internal Capture Reductions				-6,978	-298	-342	-640	-668	-614	-1,282
Percentage				-12.9%			-17.5%			-23.5%

*Raw project trips based on Institute of Transportation Engineers, 9th Edition, 2012

**Final MXD results include trip adjustments based on project location and engineering judgment.

Fehr & Peers, 2017

APPENDIX G.3.1:
Existing Conditions Plus
Bogue Stewart Master Plan
Buildout

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	330	248	75.0%	41.3	5.7	D
	Through	570	401	70.4%	26.5	5.4	C
	Right Turn	320	235	73.4%	13.9	3.8	B
	Subtotal	1,220	884	72.5%	27.4	3.2	C
SB	Left Turn	130	118	90.6%	42.3	3.6	D
	Through	725	699	96.4%	33.6	4.1	C
	Right Turn	160	149	92.9%	7.2	1.7	A
	Subtotal	1,015	965	95.1%	30.6	3.4	C
EB	Left Turn	110	104	94.7%	41.9	7.3	D
	Through	710	670	94.4%	29.0	3.5	C
	Right Turn	220	223	101.4%	13.1	2.4	B
	Subtotal	1,040	998	95.9%	26.8	3.4	C
WB	Left Turn	190	178	93.5%	40.3	4.4	D
	Through	810	775	95.7%	27.1	3.3	C
	Right Turn	80	77	95.7%	6.6	1.9	A
	Subtotal	1,080	1,030	95.3%	27.9	2.3	C
Total		4,355	3,877	89.0%	28.2	2.2	C

Intersection 2 SR 99/Sunsweet Blvd-I-80 EB On-ramp Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	84	69.6%	25.0	5.7	C
	Through	1,160	881	75.9%	11.4	1.3	B
	Right Turn	30	22	74.8%	7.9	2.3	A
	Subtotal	1,310	987	75.3%	12.4	1.3	B
SB	Left Turn	35	36	104.1%	27.4	7.7	C
	Through	1,070	1,049	98.0%	13.1	1.9	B
	Right Turn	30	22	74.8%	7.4	3.7	A
	Subtotal	1,135	1,108	97.6%	13.5	2.1	B
EB	Left Turn	40	39	96.6%	20.8	4.8	C
	Through	10	8	77.3%	15.7	14.3	B
	Right Turn	20	20	101.2%	7.3	3.5	A
	Subtotal	70	67	95.2%	16.3	4.1	B
WB	Left Turn	10	11	114.1%	24.5	6.9	C
	Through	10	10	103.0%	24.0	7.7	C
	Right Turn	5	4	73.6%	6.1	8.3	A
	Subtotal	25	25	101.6%	22.4	5.4	C
Total		2,540	2,186	86.1%	13.2	1.3	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	200	169	84.5%	57.8	12.7	E
	Through	1,110	830	74.8%	41.4	6.7	D
	Right Turn	270	198	73.2%	17.4	3.2	B
	Subtotal	1,580	1,196	75.7%	39.8	5.8	D
SB	Left Turn	110	96	87.0%	41.8	9.0	D
	Through	910	869	95.5%	33.0	4.2	C
	Right Turn	80	86	107.2%	11.5	2.1	B
	Subtotal	1,100	1,050	95.5%	32.1	4.2	C
EB	Left Turn	50	46	92.0%	71.7	16.0	E
	Through	380	368	96.8%	35.3	6.0	D
	Right Turn	140	128	91.7%	22.7	5.5	C
	Subtotal	570	542	95.2%	35.4	6.4	D
WB	Left Turn	160	143	89.2%	44.5	11.3	D
	Through	320	300	93.8%	29.3	4.7	C
	Right Turn	150	159	106.0%	20.5	5.8	C
	Subtotal	630	602	95.6%	30.7	6.4	C
Total		3,880	3,391	87.4%	35.1	3.3	D

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	170	128	75.5%	51.2	9.5	D
	Through	1,300	990	76.1%	36.6	6.1	D
	Right Turn	270	215	79.7%	25.1	4.2	C
	Subtotal	1,740	1,333	76.6%	36.1	5.7	D
SB	Left Turn	90	84	92.8%	57.8	11.2	E
	Through	960	902	94.0%	38.2	6.1	D
	Right Turn	160	143	89.5%	17.0	3.3	B
	Subtotal	1,210	1,129	93.3%	36.9	4.8	D
EB	Left Turn	185	160	86.7%	95.8	22.0	F
	Through	450	374	83.1%	76.1	16.9	E
	Right Turn	170	169	99.6%	11.8	2.9	B
	Subtotal	805	704	87.4%	65.3	13.5	E
WB	Left Turn	120	109	90.8%	71.6	15.8	E
	Through	310	292	94.1%	32.6	6.5	C
	Right Turn	100	107	106.7%	23.2	2.8	C
	Subtotal	530	507	95.7%	39.2	8.4	D
Total		4,285	3,673	85.7%	42.4	3.8	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	19	63.8%	17.4	8.0	C
	Through	1,710	1,367	79.9%	7.2	0.7	A
	Right Turn	40	31	78.2%	8.1	0.9	A
	Subtotal	1,780	1,417	79.6%	7.4	0.8	A
SB	Left Turn	50	52	103.0%	33.3	6.8	D
	Through	1,170	1,078	92.2%	7.9	0.6	A
	Right Turn	30	29	98.1%	8.8	2.3	A
	Subtotal	1,250	1,159	92.7%	9.1	0.9	A
EB	Left Turn	3	2	61.3%	21.1	32.7	C
	Through	5	3	58.9%	34.8	65.5	D
	Right Turn	40	40	99.4%	17.2	5.4	C
	Subtotal	48	45	92.8%	23.7	17.7	C
WB	Left Turn	2	1	55.2%	11.6	34.2	B
	Through	1	1	73.6%	6.7	16.3	A
	Right Turn	27	22	83.1%	21.6	13.1	C
	Subtotal	30	24	81.0%	22.5	16.1	C
Total		3,108	2,645	85.1%	8.6	0.6	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	44	88.3%	49.4	7.9	D
	Through	1,610	1,278	79.4%	37.1	9.5	D
	Right Turn	80	61	76.4%	19.5	5.3	B
	Subtotal	1,740	1,383	79.5%	36.7	9.1	D
SB	Left Turn	58	52	90.1%	61.7	11.3	E
	Through	1,140	1,006	88.2%	40.0	8.7	D
	Right Turn	14	12	86.7%	18.5	11.1	B
	Subtotal	1,212	1,070	88.3%	40.8	8.5	D
EB	Left Turn	70	74	105.1%	40.7	7.4	D
	Through	120	109	90.8%	41.9	7.3	D
	Right Turn	40	45	111.3%	26.2	7.5	C
	Subtotal	230	227	98.7%	38.0	6.0	D
WB	Left Turn	60	63	104.9%	41.0	4.7	D
	Through	60	64	106.1%	38.0	6.0	D
	Right Turn	100	98	98.3%	27.0	6.6	C
	Subtotal	220	225	102.2%	33.9	5.0	C
Total		3,402	2,905	85.4%	38.1	6.3	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	68	57	83.9%	63.4	4.3	E
	Through	1,250	1,069	85.5%	58.1	14.1	E
	Right Turn	90	76	84.2%	19.4	7.0	B
	Subtotal	1,408	1,202	85.4%	55.9	13.2	E
SB	Left Turn	130	98	75.6%	46.7	8.5	D
	Through	1,030	889	86.3%	28.3	6.0	C
	Right Turn	80	74	92.0%	16.3	3.5	B
	Subtotal	1,240	1,061	85.6%	29.2	6.0	C
EB	Left Turn	250	187	74.9%	94.5	22.4	F
	Through	290	249	85.8%	82.8	21.9	F
	Right Turn	100	81	80.6%	74.6	24.3	E
	Subtotal	640	517	80.7%	85.9	21.9	F
WB	Left Turn	90	81	90.0%	53.5	8.2	D
	Through	190	188	99.0%	45.5	4.0	D
	Right Turn	240	234	97.5%	20.0	3.1	B
	Subtotal	520	503	96.7%	34.9	2.1	C
Total		3,808	3,283	86.2%	48.7	4.0	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	103.0%	13.3	8.9	B
	Through	1,360	1,259	92.6%	8.2	1.0	A
	Right Turn	5	3	58.9%	6.0	8.3	A
	Subtotal	1,375	1,272	92.5%	8.2	1.0	A
SB	Left Turn	30	25	84.6%	22.4	11.7	C
	Through	1,180	988	83.8%	11.2	1.3	B
	Right Turn	10	7	69.9%	12.3	9.6	B
	Subtotal	1,220	1,021	83.7%	11.5	1.3	B
EB	Left Turn	16	18	110.4%	54.9	22.6	F
	Through	4	3	73.6%	71.4	50.2	F
	Right Turn	7	6	89.4%	15.9	16.6	C
	Subtotal	27	27	99.5%	48.8	18.8	E
WB	Left Turn	13	14	104.7%	74.9	53.1	F
	Through	7	6	78.9%	59.3	64.1	F
	Right Turn	32	30	94.3%	13.2	5.6	B
	Subtotal	52	49	94.8%	41.8	32.0	E
Total		2,674	2,369	88.6%	10.8	1.1	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	135	112	83.1%	50.1	2.5	D
	Through	645	614	95.2%	43.8	5.2	D
	Right Turn	105	96	91.1%	17.8	2.8	B
	Subtotal	885	822	92.9%	41.7	4.1	D
SB	Left Turn	285	205	72.1%	72.0	12.8	E
	Through	610	516	84.6%	43.7	6.8	D
	Right Turn	305	248	81.4%	21.9	3.0	C
	Subtotal	1,200	970	80.8%	44.3	4.8	D
EB	Left Turn	225	197	87.7%	78.9	16.4	E
	Through	310	314	101.1%	42.7	13.1	D
	Right Turn	185	177	95.7%	40.7	21.1	D
	Subtotal	720	688	95.5%	52.9	12.8	D
WB	Left Turn	165	142	86.3%	61.8	12.2	E
	Through	340	322	94.7%	42.1	4.7	D
	Right Turn	505	442	87.6%	38.5	5.5	D
	Subtotal	1,010	907	89.8%	43.6	5.5	D
Total		3,815	3,386	88.8%	45.2	4.6	D

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	45	44	98.1%	14.2	7.6	B
	Through	660	686	104.0%	3.9	0.5	A
	Right Turn	65	65	100.2%	1.8	0.6	A
	Subtotal	770	796	103.3%	4.3	0.7	A
SB	Left Turn	130	107	82.4%	15.6	3.7	C
	Through	820	679	82.8%	9.4	1.4	A
	Right Turn	10	10	95.7%	14.4	8.8	B
	Subtotal	960	796	82.9%	10.4	1.1	B
EB	Left Turn	26	22	84.9%	81.5	36.3	F
	Through	27	29	107.7%	72.5	21.9	F
	Right Turn	67	61	91.2%	47.2	32.6	E
	Subtotal	120	112	93.5%	60.0	30.5	F
WB	Left Turn	94	68	72.4%	120.7	28.5	F
	Through	42	35	83.2%	117.1	26.1	F
	Right Turn	194	153	78.9%	69.3	22.0	F
	Subtotal	330	256	77.6%	89.6	23.9	F
Total		2,180	1,960	89.9%	21.2	4.2	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	4	73.6%	6.0	7.6	A
	Through	745	767	102.9%	2.8	0.6	A
	Right Turn	10	12	117.8%	1.0	1.0	A
	Subtotal	760	782	102.9%	2.8	0.7	A
SB	Left Turn	26	20	75.0%	9.6	7.9	A
	Through	935	784	83.9%	5.0	0.4	A
	Right Turn	20	15	73.6%	2.1	1.3	A
	Subtotal	981	818	83.4%	5.0	0.4	A
EB	Left Turn	5	4	88.3%	18.8	20.4	C
	Through	5	4	81.0%	20.1	19.7	C
	Right Turn	10	13	125.1%	5.0	2.2	A
	Subtotal	20	21	104.9%	13.4	6.9	B
WB	Left Turn	5	3	51.5%	22.6	25.2	C
	Through	5	3	58.9%	11.4	20.3	B
	Right Turn	20	20	97.5%	7.7	4.6	A
	Subtotal	30	25	83.4%	10.8	6.5	B
Total		1,791	1,646	91.9%	4.2	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	4	88.3%	2.7	3.0	A
	Through	760	785	103.3%	3.2	0.4	A
	Right Turn	10	10	95.7%	1.8	1.5	A
	Subtotal	775	799	103.1%	3.1	0.4	A
SB	Left Turn	10	5	51.5%	5.1	7.5	A
	Through	935	765	81.8%	0.7	0.1	A
	Right Turn	5	4	81.0%	0.5	1.1	A
	Subtotal	950	774	81.5%	0.7	0.1	A
EB	Left Turn						
	Through						
	Right Turn	10	10	103.0%	6.0	4.7	A
Subtotal	10	10	103.0%	6.0	4.7	A	
WB	Left Turn						
	Through						
	Right Turn						
Subtotal							
Total		1,735	1,583	91.2%	2.0	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	9	92.0%	41.2	20.5	D
	Through	595	564	94.8%	23.0	2.0	C
	Right Turn	20	17	86.5%	11.6	6.3	B
	Subtotal	625	591	94.5%	23.0	2.0	C
SB	Left Turn	85	66	77.5%	48.7	7.7	D
	Through	840	621	73.9%	27.9	2.7	C
	Right Turn	20	20	97.5%	20.4	6.1	C
	Subtotal	945	706	74.7%	29.6	2.3	C
EB	Left Turn	30	35	115.3%	36.3	16.1	D
	Through	100	95	94.9%	34.4	8.7	C
	Right Turn	5	5	95.7%	14.7	14.6	B
	Subtotal	135	134	99.5%	34.7	9.6	C
WB	Left Turn	30	32	106.7%	39.6	12.7	D
	Through	60	55	92.0%	36.3	8.9	D
	Right Turn	150	152	101.6%	25.9	4.2	C
	Subtotal	240	240	99.8%	29.7	4.7	C
Total		1,945	1,671	85.9%	27.7	1.8	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	130	137	105.6%	24.1	7.4	C
	Through						
	Right Turn	120	120	100.3%	18.5	7.9	C
	Subtotal	250	258	103.0%	21.4	7.7	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	410	342	83.3%	1.7	0.3	A
	Right Turn	110	93	84.3%	0.7	0.3	A
	Subtotal	520	434	83.5%	1.5	0.3	A
WB	Left Turn	80	74	92.9%	7.6	1.9	A
	Through	360	350	97.1%	3.1	0.4	A
	Right Turn						
	Subtotal	440	424	96.3%	3.9	0.5	A
Total		1,210	1,116	92.2%	7.1	2.0	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	375	318	84.9%	109.2	49.5	F
	Through	10	6	62.6%	155.9	61.2	F
	Right Turn	30	33	109.2%	3.8	0.7	A
	Subtotal	415	357	86.1%	100.3	43.5	F
SB	Left Turn	60	53	87.7%	24.2	8.3	C
	Through	20	24	119.6%	47.0	13.5	E
	Right Turn	60	60	100.6%	21.4	6.3	C
	Subtotal	140	137	97.8%	27.4	7.3	D
EB	Left Turn	30	28	92.0%	4.8	2.0	A
	Through	330	292	88.5%	1.3	0.2	A
	Right Turn	140	119	84.9%	1.5	0.2	A
	Subtotal	500	439	87.7%	1.6	0.2	A
WB	Left Turn	95	94	98.8%	4.8	1.0	A
	Through	545	538	98.7%	1.1	0.2	A
	Right Turn	50	42	83.9%	0.5	0.2	A
	Subtotal	690	673	97.6%	1.6	0.3	A
Total		1,745	1,606	92.1%	25.4	10.2	D

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	103.0%	2.6	0.9	A
	Through	90	82	91.6%	0.4	0.2	A
	Right Turn						
	Subtotal	110	103	93.7%	0.8	0.3	A
SB	Left Turn						
	Through	110	121	110.4%	0.4	0.2	A
	Right Turn	40	38	95.7%	0.3	0.2	A
	Subtotal	150	160	106.5%	0.4	0.2	A
EB	Left Turn	30	26	85.9%	5.2	2.1	A
	Through						
	Right Turn	20	14	71.8%	2.7	0.5	A
	Subtotal	50	40	80.2%	4.4	0.9	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		310	303	97.7%	1.1	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
AM Peak Hour

Intersection 28

Wallace Dr/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	4	73.6%	4.0	3.2	A
	Through	5	5	95.7%	6.5	5.0	A
	Right Turn	10	11	110.4%	2.7	1.2	A
	Subtotal	20	20	97.5%	5.0	1.8	A
SB	Left Turn	10	10	99.4%	7.3	3.5	A
	Through	5	5	103.0%	6.1	2.4	A
	Right Turn	55	56	101.0%	2.6	0.2	A
	Subtotal	70	71	100.9%	3.6	0.5	A
EB	Left Turn	40	33	82.8%	2.6	0.7	A
	Through	165	156	94.3%	0.3	0.1	A
	Right Turn	5	5	95.7%	0.0	0.0	A
	Subtotal	210	194	92.2%	0.7	0.2	A
WB	Left Turn	5	4	81.0%	1.8	1.3	A
	Through	210	214	102.0%	0.2	0.1	A
	Right Turn	10	7	73.6%	0.1	0.2	A
	Subtotal	225	226	100.3%	0.2	0.1	A
Total		525	509	97.0%	1.0	0.1	A

Intersection 29

























Muir Rd/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	14	143.5%	7.0	2.1	A
	Through						
	Right Turn	30	36	120.2%	3.7	0.5	A
	Subtotal	40	50	126.0%	4.6	0.9	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	165	159	96.3%	0.4	0.1	A
	Right Turn	20	16	81.0%	0.1	0.2	A
	Subtotal	185	175	94.7%	0.4	0.1	A
WB	Left Turn	25	22	86.8%	2.6	0.8	A
	Through	215	212	98.4%	0.3	0.1	A
	Right Turn						
	Subtotal	240	233	97.2%	0.5	0.1	A
Total		465	459	98.7%	0.9	0.2	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Ex Plus Buildout
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	110	180	120	100	290	120	580	220	180	370	10
Future Volume (veh/h)	10	110	180	120	100	290	120	580	220	180	370	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		0.99	1.00		0.99	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1851	1900
Adj Flow Rate, veh/h	13	139	228	152	127	367	152	734	278	228	468	13
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	27	420	355	250	527	583	196	1037	393	336	1402	39
Arrive On Green	0.02	0.23	0.23	0.07	0.28	0.27	0.11	0.41	0.40	0.10	0.40	0.39
Sat Flow, veh/h	1774	1863	1575	3442	1863	1575	1774	2512	951	3408	3496	97
Grp Volume(v), veh/h	13	139	228	152	127	367	152	517	495	228	235	246
Grp Sat Flow(s),veh/h/ln	1774	1863	1575	1721	1863	1575	1774	1770	1693	1704	1759	1834
Q Serve(g_s), s	0.6	5.2	11.0	3.6	4.4	16.1	7.0	20.4	20.5	5.4	7.8	7.8
Cycle Q Clear(g_c), s	0.6	5.2	11.0	3.6	4.4	16.1	7.0	20.4	20.5	5.4	7.8	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.05
Lane Grp Cap(c), veh/h	27	420	355	250	527	583	196	731	699	336	705	735
V/C Ratio(X)	0.48	0.33	0.64	0.61	0.24	0.63	0.77	0.71	0.71	0.68	0.33	0.33
Avail Cap(c_a), veh/h	644	1585	1340	717	1585	1477	644	1495	1431	1237	1486	1550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	27.3	29.5	37.8	23.2	21.8	36.4	20.5	20.7	36.6	17.4	17.4
Incr Delay (d2), s/veh	4.8	0.5	1.9	0.9	0.2	1.1	2.5	1.3	1.3	0.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.8	4.9	1.7	2.3	7.1	3.6	10.2	9.8	2.6	3.8	4.0
LnGrp Delay(d),s/veh	45.8	27.7	31.4	38.7	23.4	22.9	38.8	21.7	22.1	37.5	17.5	17.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		380			646			1164			709	
Approach Delay, s/veh		30.6			26.7			24.1			23.9	
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	12.3	38.7	10.1	22.9	13.3	37.7	5.3	27.8				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	7.4	22.5	5.6	13.0	9.0	9.8	2.6	18.1				
Green Ext Time (p_c), s	0.4	11.2	0.2	3.9	0.1	11.5	0.0	3.9				
Intersection Summary												
HCM 2010 Ctrl Delay			25.5									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Ex Plus Buildout
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	310	40	110	210	190	70	530	150	150	350	210
Future Volume (veh/h)	200	310	40	110	210	190	70	530	150	150	350	210
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1844	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	235	365	47	129	247	224	82	624	176	176	412	247
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	265	1104	141	157	513	447	105	874	246	206	807	479
Arrive On Green	0.15	0.35	0.34	0.09	0.29	0.28	0.06	0.32	0.31	0.12	0.38	0.37
Sat Flow, veh/h	1774	3154	403	1774	1773	1544	1774	2723	767	1774	2139	1269
Grp Volume(v), veh/h	235	204	208	129	244	227	82	405	395	176	340	319
Grp Sat Flow(s),veh/h/ln	1774	1770	1788	1774	1752	1565	1774	1770	1720	1774	1770	1638
Q Serve(g_s), s	16.7	10.8	11.0	9.2	14.7	15.6	5.8	25.9	26.0	12.5	19.0	19.5
Cycle Q Clear(g_c), s	16.7	10.8	11.0	9.2	14.7	15.6	5.8	25.9	26.0	12.5	19.0	19.5
Prop In Lane	1.00		0.23	1.00		0.99	1.00		0.45	1.00		0.77
Lane Grp Cap(c), veh/h	265	620	626	157	507	453	105	568	552	206	668	618
V/C Ratio(X)	0.89	0.33	0.33	0.82	0.48	0.50	0.78	0.71	0.72	0.86	0.51	0.52
Avail Cap(c_a), veh/h	415	987	997	415	977	873	415	987	959	415	987	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	30.6	30.8	57.5	37.6	38.6	59.5	38.4	38.7	55.6	30.7	31.3
Incr Delay (d2), s/veh	13.5	1.1	1.1	10.2	2.6	3.1	11.9	1.7	1.7	9.8	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.5	5.7	4.9	7.5	7.1	3.2	12.9	12.6	6.7	9.4	8.9
LnGrp Delay(d),s/veh	67.0	31.7	31.9	67.6	40.2	41.7	71.4	40.0	40.4	65.4	31.4	32.0
LnGrp LOS	E	C	C	E	D	D	E	D	D	E	C	C
Approach Vol, veh/h		647			600			882			835	
Approach Delay, s/veh		44.6			46.7			43.1			38.8	
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	18.9	45.1	15.3	48.9	11.6	52.4	23.1	41.1				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1/4), s	14.5	28.0	11.2	13.0	7.8	21.5	18.7	17.6				
Green Ext Time (p_c), s	0.4	11.6	0.3	18.4	0.2	11.9	0.5	18.0				
Intersection Summary												
HCM 2010 Ctrl Delay				42.9								
HCM 2010 LOS				D								

Intersection

Int Delay, s/veh 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	80	490	110	110	420
Future Vol, veh/h	30	80	490	110	110	420
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	43	114	700	157	157	600

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1694	780	0	0	858	0
Stage 1	780	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Critical Hdwy	7.12	6.25	-	-	4.12	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	3.518	3.345	-	-	2.218	-
Pot Cap-1 Maneuver	73	391	-	-	783	-
Stage 1	388	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	62	391	-	-	783	-
Mov Cap-2 Maneuver	169	-	-	-	-	-
Stage 1	388	-	-	-	-	-
Stage 2	261	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	31.5		0		2.2
HCM LOS	D				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 288	783	-
HCM Lane V/C Ratio	-	- 0.546	0.201	-
HCM Control Delay (s)	-	- 31.5	10.7	-
HCM Lane LOS	-	- D	B	-
HCM 95th %tile Q(veh)	-	- 3	0.7	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Ex Plus Buildout
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	340	50	80	200	100	45	280	170	120	250	60
Future Volume (veh/h)	110	340	50	80	200	100	45	280	170	120	250	60
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		0.87	1.00		1.00	1.00		0.98	1.00		0.99
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	1863	1863	1845	1845	1845	1863	1863	1863	1863	1863	1841	1900
Adj Flow Rate, veh/h	141	436	64	103	256	128	58	359	218	154	321	77
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	3	3	3	2	2	2	2	2	3	3
Cap, veh/h	188	637	468	133	574	492	89	531	442	203	500	120
Arrive On Green	0.11	0.34	0.34	0.08	0.31	0.31	0.05	0.29	0.29	0.11	0.35	0.34
Sat Flow, veh/h	1774	1863	1368	1757	1845	1581	1774	1863	1550	1774	1432	343
Grp Volume(v), veh/h	141	436	64	103	256	128	58	359	218	154	0	398
Grp Sat Flow(s),veh/h/ln	1774	1863	1368	1757	1845	1581	1774	1863	1550	1774	0	1775
Q Serve(g_s), s	6.7	17.6	2.8	5.0	9.7	5.3	2.8	14.9	10.2	7.4	0.0	16.4
Cycle Q Clear(g_c), s	6.7	17.6	2.8	5.0	9.7	5.3	2.8	14.9	10.2	7.4	0.0	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	188	637	468	133	574	492	89	531	442	203	0	620
V/C Ratio(X)	0.75	0.68	0.14	0.78	0.45	0.26	0.65	0.68	0.49	0.76	0.00	0.64
Avail Cap(c_a), veh/h	520	973	714	515	963	825	520	1506	1253	520	0	1435
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	37.9	24.7	19.8	39.6	24.1	22.5	40.7	27.6	26.0	37.5	0.0	23.9
Incr Delay (d2), s/veh	4.4	1.0	0.1	7.0	0.4	0.2	5.9	1.1	0.6	4.3	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	3.5	9.1	1.1	2.7	5.0	2.3	1.5	7.8	4.5	3.8	0.0	8.2
LnGrp Delay(d),s/veh	42.3	25.7	19.9	46.7	24.5	22.8	46.6	28.8	26.6	41.9	0.0	24.7
LnGrp LOS	D	C	B	D	C	C	D	C	C	D		C
Approach Vol, veh/h		641			487			635			552	
Approach Delay, s/veh		28.8			28.7			29.6			29.5	
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	14.0	28.9	10.6	33.8	8.4	34.5	13.3	31.2				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+I1), s	9.4	16.9	7.0	19.6	4.8	18.4	8.7	11.7				
Green Ext Time (p_c), s	0.3	5.1	0.2	4.3	0.1	5.1	0.2	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay			29.2									
HCM 2010 LOS			C									
Notes												

Intersection																
Intersection Delay, s/veh 26.6																
Intersection LOS D																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕			↙	↘	↗		↙	↘	↗			↕	
Traffic Vol, veh/h	0	20	270	70	0	30	200	120	0	30	80	60	0	150	140	20
Future Vol, veh/h	0	20	270	70	0	30	200	120	0	30	80	60	0	150	140	20
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	21	287	74	0	32	213	128	0	32	85	64	0	160	149	21
Number of Lanes	0	0	1	0	0	1	1	1	0	1	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	3	1
HCM Control Delay	39.1	14.7	12.4	33.3
HCM LOS	E	B	B	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	0%	6%	100%	0%	0%	48%
Vol Thru, %	0%	100%	0%	75%	0%	100%	0%	45%
Vol Right, %	0%	0%	100%	19%	0%	0%	100%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	80	60	360	30	200	120	310
LT Vol	30	0	0	20	30	0	0	150
Through Vol	0	80	0	270	0	200	0	140
RT Vol	0	0	60	70	0	0	120	20
Lane Flow Rate	32	85	64	383	32	213	128	330
Geometry Grp	7	7	7	8	7	7	7	8
Degree of Util (X)	0.078	0.197	0.134	0.834	0.073	0.454	0.249	0.763
Departure Headway (Hd)	8.851	8.333	7.572	7.843	8.196	7.68	7.012	8.331
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	430	472	463	437	468	512	435
Service Time	6.613	6.094	5.333	5.566	5.951	5.436	4.767	6.056
HCM Lane V/C Ratio	0.079	0.198	0.136	0.827	0.073	0.455	0.25	0.759
HCM Control Delay	12.4	13.1	11.5	39.1	11.6	16.7	12.1	33.3
HCM Lane LOS	B	B	B	E	B	C	B	D
HCM 95th-tile Q	0.3	0.7	0.5	8.1	0.2	2.3	1	6.4

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	35	90	10	20	110
Future Vol, veh/h	5	35	90	10	20	110
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	0	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	9	2	60	60	2
Mvmt Flow	6	39	101	11	22	124

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	276	107	0	0	112	0
Stage 1	107	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.42	6.29	-	-	4.7	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	-	-	2.74	-
Pot Cap-1 Maneuver	714	928	-	-	1184	-
Stage 1	917	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	701	928	-	-	1184	-
Mov Cap-2 Maneuver	701	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.2		0		1.2
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	701	928	1184	-
HCM Lane V/C Ratio	-	-	0.008	0.042	0.019	-
HCM Control Delay (s)	-	-	10.2	9.1	8.1	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	10	0	5	5	10	90	0	5	100	5
Future Vol, veh/h	5	5	10	0	5	5	10	90	0	5	100	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2
Mvmt Flow	5	5	11	0	5	5	11	98	0	5	109	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	242	111	250	245	98	114	0	0	98	0	0
Stage 1	122	122	-	120	120	-	-	-	-	-	-	-
Stage 2	125	120	-	130	125	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	707	660	942	703	649	958	1475	-	-	1495	-	-
Stage 1	882	795	-	884	787	-	-	-	-	-	-	-
Stage 2	879	796	-	874	783	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	692	652	942	684	641	958	1475	-	-	1495	-	-
Mov Cap-2 Maneuver	692	652	-	684	641	-	-	-	-	-	-	-
Stage 1	875	792	-	877	781	-	-	-	-	-	-	-
Stage 2	861	790	-	855	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.8	0.7	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1475	-	-	784	768	1495	-
HCM Lane V/C Ratio	0.007	-	-	0.028	0.014	0.004	-
HCM Control Delay (s)	7.5	0	-	9.7	9.8	7.4	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Intersection	
Intersection Delay, s/veh	18.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↘	↗	↗		↘	↗	↘		↘	↗	↗
Traffic Vol, veh/h	0	110	300	60	0	30	200	60	0	140	190	50
Future Vol, veh/h	0	110	300	60	0	30	200	60	0	140	190	50
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	122	333	67	0	33	222	67	0	156	211	56
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	23.7	17.6	16.7
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	190	50	110	300	60	30	200	60	60	100
LT Vol	140	0	0	110	0	0	30	0	0	60	0
Through Vol	0	190	0	0	300	0	0	200	0	0	100
RT Vol	0	0	50	0	0	60	0	0	60	0	0
Lane Flow Rate	156	211	56	122	333	67	33	222	67	67	111
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.374	0.478	0.115	0.284	0.733	0.133	0.082	0.52	0.142	0.169	0.267
Departure Headway (Hd)	8.651	8.151	7.451	8.379	7.913	7.179	8.841	8.426	7.641	9.15	8.65
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	415	441	479	428	457	497	404	427	467	391	413
Service Time	6.429	5.929	5.229	6.153	5.687	4.953	6.624	6.209	5.424	6.939	6.439
HCM Lane V/C Ratio	0.376	0.478	0.117	0.285	0.729	0.135	0.082	0.52	0.143	0.171	0.269
HCM Control Delay	16.6	18.2	11.2	14.5	29.6	11.1	12.4	20.1	11.7	13.8	14.6
HCM Lane LOS	C	C	B	B	D	B	B	C	B	B	B
HCM 95th-tile Q	1.7	2.5	0.4	1.2	5.9	0.5	0.3	2.9	0.5	0.6	1.1

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	60	100	50
Future Vol, veh/h	0	60	100	50
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	67	111	56
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.7
HCM LOS	B

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Ex Plus Buildout
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↖↗	↗	↖	↑↑	↑↑	↗		
Traffic Volume (veh/h)	280	130	130	820	550	130		
Future Volume (veh/h)	280	130	130	820	550	130		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	318	148	148	932	625	148		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	560	260	245	2344	1519	677		
Arrive On Green	0.16	0.16	0.14	0.66	0.43	0.43		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1563		
Grp Volume(v), veh/h	318	148	148	932	625	148		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1563		
Q Serve(g_s), s	4.0	4.0	3.7	5.6	5.7	2.7		
Cycle Q Clear(g_c), s	4.0	4.0	3.7	5.6	5.7	2.7		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	560	260	245	2344	1519	677		
V/C Ratio(X)	0.57	0.57	0.60	0.40	0.41	0.22		
Avail Cap(c_a), veh/h	3370	1565	957	3606	3571	1592		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.8	17.8	18.6	3.6	9.0	8.2		
Incr Delay (d2), s/veh	0.3	0.7	0.9	0.0	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9	3.5	1.8	2.6	2.7	1.2		
LnGrp Delay(d),s/veh	18.1	18.5	19.5	3.6	9.1	8.2		
LnGrp LOS	B	B	B	A	A	A		
Approach Vol, veh/h	466			1080	773			
Approach Delay, s/veh	18.2			5.8	8.9			
Approach LOS	B			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		34.5		11.6	10.5	24.0		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		7.6		6.0	5.7	7.7		
Green Ext Time (p_c), s		10.0		0.9	0.1	10.0		
Intersection Summary								
HCM 2010 Ctrl Delay			9.3					
HCM 2010 LOS			A					

Intersection																
Intersection Delay, s/veh71.6																
Intersection LOS F																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷			↶	↷				↕				↕	
Traffic Vol, veh/h	0	50	290	70	0	70	470	50	0	165	170	105	0	60	130	70
Future Vol, veh/h	0	50	290	70	0	70	470	50	0	165	170	105	0	60	130	70
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	53	305	74	0	74	495	53	0	174	179	111	0	63	137	74
Number of Lanes	0	1	1	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	79.7	34.8	134.6	35.8
HCM LOS	F	D	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	38%	100%	0%	100%	0%	0%	23%
Vol Thru, %	39%	0%	81%	0%	100%	76%	50%
Vol Right, %	24%	0%	19%	0%	0%	24%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	50	360	70	313	207	260
LT Vol	165	50	0	70	0	0	60
Through Vol	170	0	290	0	313	157	130
RT Vol	105	0	70	0	0	50	70
Lane Flow Rate	463	53	379	74	330	218	274
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	1.181	0.152	1.024	0.197	0.835	0.54	0.725
Departure Headway (Hd)	9.445	11.278	10.561	10.405	9.859	9.681	10.246
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	320	345	347	369	374	356
Service Time	7.145	8.978	8.261	8.105	7.559	7.381	7.946
HCM Lane V/C Ratio	1.19	0.166	1.099	0.213	0.894	0.583	0.77
HCM Control Delay	134.6	16	88.6	15.6	46.7	23.2	35.8
HCM Lane LOS	F	C	F	C	E	C	E
HCM 95th-tile Q	18	0.5	12	0.7	7.6	3.1	5.4

HCM 2010 Signalized Intersection Summary
 26: Garden Hwy & Bogue Rd

Ex Plus Buildout
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	60	190	40	100	80	235	470	20	31	300	250
Future Volume (veh/h)	310	60	190	40	100	80	235	470	20	31	300	250
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		0.98	1.00		0.97
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	1863	1863	1863	1845	1863	1863	1863	1863	1900	1845	1829	1900
Adj Flow Rate, veh/h	341	66	209	44	110	88	258	516	22	34	330	275
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	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, %	2	2	2	3	2	2	2	2	2	3	3	3
Cap, veh/h	387	565	479	66	228	193	306	1498	64	52	522	425
Arrive On Green	0.22	0.30	0.30	0.04	0.12	0.12	0.17	0.43	0.41	0.03	0.29	0.27
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583	1774	3456	147	1757	1796	1461
Grp Volume(v), veh/h	341	66	209	44	110	88	258	264	274	34	319	286
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583	1774	1770	1833	1757	1737	1520
Q Serve(g_s), s	15.2	2.1	8.6	2.0	4.5	4.2	11.5	8.1	8.1	1.6	13.0	13.6
Cycle Q Clear(g_c), s	15.2	2.1	8.6	2.0	4.5	4.2	11.5	8.1	8.1	1.6	13.0	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		0.96
Lane Grp Cap(c), veh/h	387	565	479	66	228	193	306	767	795	52	505	442
V/C Ratio(X)	0.88	0.12	0.44	0.67	0.48	0.45	0.84	0.34	0.34	0.65	0.63	0.65
Avail Cap(c_a), veh/h	664	1646	1398	658	1646	1399	664	1564	1620	658	1535	1343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	20.5	22.8	38.7	33.4	33.2	32.7	15.4	15.4	39.1	25.1	26.1
Incr Delay (d2), s/veh	3.4	0.0	0.2	4.4	0.6	0.6	2.5	0.1	0.1	5.0	0.5	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	7.8	1.1	3.8	1.1	2.4	1.9	5.8	4.0	4.1	0.8	6.3	5.8
LnGrp Delay(d),s/veh	34.2	20.5	23.0	43.1	34.0	33.9	35.1	15.5	15.5	44.2	25.6	26.7
LnGrp LOS	C	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		616			242			796			639	
Approach Delay, s/veh		29.0			35.6			21.9			27.1	
Approach LOS		C			D			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	6.4	39.3	7.0	28.7	18.0	27.7	21.8	14.0				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1), s	13.6	10.1	4.0	10.6	13.5	15.6	17.2	6.5				
Green Ext Time (p_c), s	0.0	5.5	0.0	1.2	0.1	5.5	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				26.7								
HCM 2010 LOS				C								
Notes												

Intersection																
Intersection Delay, s/veh13.5																
Intersection LOS B																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	50	135	5	0	20	170	150	0	10	40	20	0	120	80	60
Future Vol, veh/h	0	50	135	5	0	20	170	150	0	10	40	20	0	120	80	60
Peak Hour Factor	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	63	169	6	0	25	213	188	0	13	50	25	0	150	100	75
Number of Lanes	0	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	13	12.9	10.5	15.3
HCM LOS	B	B	B	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	14%	26%	19%	0%	46%
Vol Thru, %	57%	71%	81%	36%	31%
Vol Right, %	29%	3%	0%	64%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	190	105	235	260
LT Vol	10	50	20	0	120
Through Vol	40	135	85	85	80
RT Vol	20	5	0	150	60
Lane Flow Rate	88	238	131	294	325
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.152	0.397	0.24	0.469	0.527
Departure Headway (Hd)	6.264	6.023	6.579	5.752	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	568	594	543	623	614
Service Time	4.353	4.093	4.343	3.515	3.904
HCM Lane V/C Ratio	0.155	0.401	0.241	0.472	0.529
HCM Control Delay	10.5	13	11.4	13.5	15.3
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	0.5	1.9	0.9	2.5	3.1

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Ex Plus Buildout
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	0	20	0	0	1	20	70	0	0	120	450
Future Volume (veh/h)	320	0	20	0	0	1	20	70	0	0	120	450
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	1863	1863	1863	1900	1863	1900	1863	1827	0	1863	1792	1863
Adj Flow Rate, veh/h	451	0	28	0	0	1	28	99	0	0	169	634
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	0	2	6	2
Cap, veh/h	729	0	325	0	0	36	36	1039	0	3	862	761
Arrive On Green	0.21	0.00	0.21	0.00	0.00	0.01	0.02	0.57	0.00	0.00	0.48	0.48
Sat Flow, veh/h	3548	0	1583	0	0	1579	1774	1827	0	1774	1792	1583
Grp Volume(v), veh/h	451	0	28	0	0	1	28	99	0	0	169	634
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1579	1774	1827	0	1774	1792	1583
Q Serve(g_s), s	6.8	0.0	0.8	0.0	0.0	0.0	0.9	1.5	0.0	0.0	3.2	20.5
Cycle Q Clear(g_c), s	6.8	0.0	0.8	0.0	0.0	0.0	0.9	1.5	0.0	0.0	3.2	20.5
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	729	0	325	0	0	36	36	1039	0	3	862	761
V/C Ratio(X)	0.62	0.00	0.09	0.00	0.00	0.03	0.77	0.10	0.00	0.00	0.20	0.83
Avail Cap(c_a), veh/h	2459	0	1097	0	0	1095	513	1266	0	513	1242	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	0.0	19.0	0.0	0.0	28.7	28.8	5.8	0.0	0.0	8.8	13.3
Incr Delay (d2), s/veh	1.0	0.0	0.1	0.0	0.0	0.4	28.7	0.0	0.0	0.0	0.1	4.2
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	8.4	0.0	0.4	0.0	0.0	0.0	0.7	0.8	0.0	0.0	1.6	9.7
LnGrp Delay(d),s/veh	22.4	0.0	19.1	0.0	0.0	29.1	57.5	5.9	0.0	0.0	8.9	17.5
LnGrp LOS	C		B			C	E	A			A	B
Approach Vol, veh/h		479			1			127			803	
Approach Delay, s/veh		22.2			29.1			17.3			15.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	37.7		16.2	5.2	32.4		5.4				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	0.0	40.0		40.0	17.0	40.0		40.0				
Max Q Clear Time (g_c+1), s	0.0	3.5		8.8	2.9	22.5		2.0				
Green Ext Time (p_c), s	0.0	5.9		2.3	0.0	4.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.1									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Ex Plus Buildout
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	5	90	90	5	160	50	540	50	71	430	60
Future Volume (veh/h)	120	5	90	90	5	160	50	540	50	71	430	60
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		0.97	1.00		0.97
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	1863	1863	1900	1863	1863	1863	1863	1863	1900	1845	1863	1900
Adj Flow Rate, veh/h	140	6	105	105	6	186	58	628	58	83	500	70
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	198	19	324	153	354	300	88	1210	112	122	1211	169
Arrive On Green	0.11	0.22	0.21	0.09	0.19	0.19	0.05	0.37	0.34	0.07	0.39	0.36
Sat Flow, veh/h	1774	86	1504	1774	1863	1578	1774	3269	301	1757	3105	433
Grp Volume(v), veh/h	140	0	111	105	6	186	58	340	346	83	284	286
Grp Sat Flow(s),veh/h/ln	1774	0	1590	1774	1863	1578	1774	1770	1800	1757	1770	1768
Q Serve(g_s), s	4.7	0.0	3.7	3.6	0.2	6.7	2.0	9.3	9.3	2.9	7.2	7.4
Cycle Q Clear(g_c), s	4.7	0.0	3.7	3.6	0.2	6.7	2.0	9.3	9.3	2.9	7.2	7.4
Prop In Lane	1.00		0.95	1.00		1.00	1.00		0.17	1.00		0.24
Lane Grp Cap(c), veh/h	198	0	342	153	354	300	88	655	666	122	690	689
V/C Ratio(X)	0.71	0.00	0.32	0.69	0.02	0.62	0.66	0.52	0.52	0.68	0.41	0.41
Avail Cap(c_a), veh/h	731	0	1169	703	1370	1161	731	1344	1368	724	1344	1343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	20.7	27.5	20.4	23.0	28.9	15.2	15.3	28.1	13.7	13.9
Incr Delay (d2), s/veh	4.6	0.0	0.5	5.4	0.0	2.1	8.0	0.6	0.6	6.4	0.4	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	2.5	0.0	1.7	2.0	0.1	3.1	1.2	4.6	4.8	1.6	3.5	3.6
LnGrp Delay(d),s/veh	31.1	0.0	21.2	32.8	20.4	25.1	36.9	15.8	16.0	34.5	14.1	14.3
LnGrp LOS	C		C	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		251			297			744			653	
Approach Delay, s/veh		26.7			27.7			17.5			16.8	
Approach LOS		C			C			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	26.9	9.3	17.3	7.1	28.1	10.9	15.8				
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5				
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0				
Max Q Clear Time (g_c+1), s	11.3	11.3	5.6	5.7	4.0	9.4	6.7	8.7				
Green Ext Time (p_c), s	0.2	8.3	0.2	1.5	0.1	8.4	0.3	1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			20.0									
HCM 2010 LOS			C									
Notes												

Intersection

Int Delay, s/veh 4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	530	20	170	430	40	100
Future Vol, veh/h	530	20	170	430	40	100
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	624	24	200	506	47	118

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	649
Stage 1	-	-	637
Stage 2	-	-	655
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	6.54
Critical Hdwy Stg 2	-	-	6.54
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	933
Stage 1	-	-	432
Stage 2	-	-	421
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	931
Mov Cap-2 Maneuver	-	-	100
Stage 1	-	-	432
Stage 2	-	-	330

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	28.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	100	666	-	-	931	-
HCM Lane V/C Ratio	0.471	0.177	-	-	0.215	-
HCM Control Delay (s)	69.6	11.6	-	-	9.9	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	2	0.6	-	-	0.8	-

Intersection			
Intersection Delay, s/veh	4.4		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	87	33	185
Demand Flow Rate, veh/h	88	33	188
Vehicles Circulating, veh/h	22	66	11
Vehicles Exiting, veh/h	177	44	88
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.7	4.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	88	33	188
Cap Entry Lane, veh/h	1105	1058	1118
Entry HV Adj Factor	0.989	0.987	0.982
Flow Entry, veh/h	87	33	185
Cap Entry, veh/h	1093	1044	1097
V/C Ratio	0.080	0.031	0.168
Control Delay, s/veh	4.0	3.7	4.8
LOS	A	A	A
95th %tile Queue, veh	0	0	1

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	5	50	90	25	60	15
Future Vol, veh/h	5	50	90	25	60	15
Conflicting Peds, #/hr	0	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	59	106	29	71	18

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	137	0	72
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	6.93
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	3.319
Pot Cap-1 Maneuver	1446	-	976
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1444	-	973
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1444	-	-	-	778	973
HCM Lane V/C Ratio	0.004	-	-	-	0.091	0.018
HCM Control Delay (s)	7.5	0	-	-	10.1	8.8
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1

Intersection				
Intersection Delay, s/veh	4.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	112	154	89	94
Demand Flow Rate, veh/h	114	156	90	96
Vehicles Circulating, veh/h	90	132	126	48
Vehicles Exiting, veh/h	54	84	78	240
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.5	5.2	4.5	4.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	114	156	90	96
Cap Entry Lane, veh/h	1033	990	996	1077
Entry HV Adj Factor	0.986	0.985	0.987	0.982
Flow Entry, veh/h	112	154	89	94
Cap Entry, veh/h	1018	975	983	1058
V/C Ratio	0.110	0.158	0.090	0.089
Control Delay, s/veh	4.5	5.2	4.5	4.2
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	10	30	150	210	40
Future Vol, veh/h	40	10	30	150	210	40
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	12	35	176	247	47

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	522	275	296	0
Stage 1	273	-	-	-
Stage 2	249	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	515	764	1265	-
Stage 1	773	-	-	-
Stage 2	792	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	499	761	1263	-
Mov Cap-2 Maneuver	499	-	-	-
Stage 1	772	-	-	-
Stage 2	769	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1263	-	536	-	-
HCM Lane V/C Ratio	0.028	-	0.11	-	-
HCM Control Delay (s)	7.9	-	12.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection

Int Delay, s/veh 3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	30	100	10	100	120
Future Vol, veh/h	10	30	100	10	100	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	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	33	109	11	109	130

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	462	60	0	0	120	0
Stage 1	114	-	-	-	-	-
Stage 2	348	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	543	993	-	-	1467	-
Stage 1	899	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	500	993	-	-	1467	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	500	993	1467	-
HCM Lane V/C Ratio	-	-	0.022	0.033	0.074	-
HCM Control Delay (s)	-	-	12.4	8.7	7.7	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.2	-

Intersection			
Intersection Delay, s/veh	3.7		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	33	49	54
Demand Flow Rate, veh/h	33	50	55
Vehicles Circulating, veh/h	11	22	22
Vehicles Exiting, veh/h	66	22	50
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.5	3.7	3.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	33	50	55
Cap Entry Lane, veh/h	1118	1105	1105
Entry HV Adj Factor	1.000	0.989	0.978
Flow Entry, veh/h	33	49	54
Cap Entry, veh/h	1118	1093	1081
V/C Ratio	0.030	0.045	0.050
Control Delay, s/veh	3.5	3.7	3.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection

Int Delay, s/veh 4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	60	50	20	20	30
Future Vol, veh/h	20	60	50	20	20	30
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, %	2	2	2	2	2	2
Mvmt Flow	22	65	54	22	22	33

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	141	65	0	0	76	0
Stage 1	65	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	852	999	-	-	1523	-
Stage 1	958	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	839	999	-	-	1523	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.2		0		3
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 954	1523	-
HCM Lane V/C Ratio	-	- 0.091	0.014	-
HCM Control Delay (s)	-	- 9.2	7.4	0
HCM Lane LOS	-	- A	A	A
HCM 95th %tile Q(veh)	-	- 0.3	0	-

Intersection			
Intersection Delay, s/veh	4.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	0	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	119	44
Demand Flow Rate, veh/h	0	121	45
Vehicles Circulating, veh/h	34	11	66
Vehicles Exiting, veh/h	77	56	66
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	4.2	3.8
Approach LOS	-	A	A
Lane	Left	Left	
Designated Moves	LT	TR	
Assumed Moves	LT	TR	
RT Channelized			
Lane Util	1.000	1.000	
Critical Headway, s	5.193	5.193	
Entry Flow, veh/h	121	45	
Cap Entry Lane, veh/h	1118	1058	
Entry HV Adj Factor	0.983	0.985	
Flow Entry, veh/h	119	44	
Cap Entry, veh/h	1098	1042	
V/C Ratio	0.108	0.043	
Control Delay, s/veh	4.2	3.8	
LOS	A	A	
95th %tile Queue, veh	0	0	

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	330	205	62.1%	48.2	6.1	D
	Through	780	558	71.5%	34.1	3.4	C
	Right Turn	430	312	72.5%	21.3	5.5	C
	Subtotal	1,540	1,074	69.8%	33.1	3.8	C
SB	Left Turn	120	114	95.0%	46.9	7.7	D
	Through	650	643	98.9%	44.4	7.3	D
	Right Turn	100	96	95.8%	8.2	3.7	A
	Subtotal	870	853	98.0%	40.6	6.4	D
EB	Left Turn	160	147	91.9%	64.3	9.0	E
	Through	1,090	1,002	91.9%	61.5	13.2	E
	Right Turn	360	306	84.9%	38.5	12.3	D
	Subtotal	1,610	1,454	90.3%	57.0	12.2	E
WB	Left Turn	490	444	90.7%	57.5	11.2	E
	Through	1,100	1,077	97.9%	25.7	2.4	C
	Right Turn	180	185	102.8%	9.1	2.3	A
	Subtotal	1,770	1,706	96.4%	32.4	4.5	C
Total		5,790	5,087	87.9%	41.0	4.3	D

Intersection 2 SR 99/Sunsweet Blvd-I-80 EB On-ramp Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	70	58.6%	26.8	4.7	C
	Through	1,375	949	69.0%	13.5	1.8	B
	Right Turn	10	6	64.6%	6.1	5.4	A
	Subtotal	1,505	1,026	68.2%	14.4	2.0	B
SB	Left Turn	35	24	68.4%	34.9	10.9	C
	Through	1,390	1,287	92.6%	20.6	3.6	C
	Right Turn	75	65	87.1%	11.6	2.1	B
	Subtotal	1,500	1,376	91.7%	20.5	3.5	C
EB	Left Turn	120	129	107.4%	27.5	3.5	C
	Through	10	11	110.2%	25.7	14.3	C
	Right Turn	100	101	101.5%	13.9	3.9	B
	Subtotal	230	241	104.9%	21.9	2.7	C
WB	Left Turn	30	24	81.1%	30.9	3.8	C
	Through	10	9	87.4%	45.0	20.2	D
	Right Turn	20	18	89.3%	9.6	4.9	A
	Subtotal	60	51	84.9%	26.1	4.6	C
Total		3,295	2,694	81.8%	18.4	2.3	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	210	148	70.6%	57.7	5.9	E
	Through	1,275	855	67.0%	58.6	6.4	E
	Right Turn	260	190	72.9%	23.9	5.7	C
	Subtotal	1,745	1,192	68.3%	53.0	6.1	D
SB	Left Turn	170	138	81.4%	76.7	25.9	E
	Through	1,150	946	82.2%	81.6	21.8	F
	Right Turn	200	175	87.6%	45.3	20.1	D
	Subtotal	1,520	1,259	82.9%	76.1	21.7	E
EB	Left Turn	100	85	85.1%	77.0	7.3	E
	Through	470	441	93.9%	41.4	5.3	D
	Right Turn	220	217	98.8%	35.2	12.2	D
	Subtotal	790	744	94.1%	43.6	7.1	D
WB	Left Turn	290	250	86.4%	76.5	23.6	E
	Through	490	473	96.6%	47.3	8.7	D
	Right Turn	130	126	97.0%	36.4	9.2	D
	Subtotal	910	850	93.4%	54.4	12.1	D
Total		4,965	4,045	81.5%	58.8	7.5	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	305	208	68.2%	51.3	3.9	D
	Through	1,405	1,010	71.9%	38.0	4.5	D
	Right Turn	190	152	80.0%	21.9	2.9	C
	Subtotal	1,900	1,370	72.1%	38.3	4.2	D
SB	Left Turn	110	93	84.3%	55.1	7.1	E
	Through	1,200	1,028	85.7%	46.5	5.6	D
	Right Turn	350	273	78.0%	24.4	3.6	C
	Subtotal	1,660	1,393	83.9%	42.9	4.6	D
EB	Left Turn	225	199	88.3%	116.8	45.6	F
	Through	450	366	81.4%	101.0	41.7	F
	Right Turn	280	241	85.9%	20.8	12.0	C
	Subtotal	955	806	84.4%	80.4	32.2	F
WB	Left Turn	220	190	86.5%	107.5	14.1	F
	Through	420	382	90.9%	68.3	11.3	E
	Right Turn	130	102	78.3%	57.9	10.5	E
	Subtotal	770	674	87.5%	77.9	12.1	E
Total		5,285	4,243	80.3%	54.0	7.5	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	55	39	70.5%	26.9	7.4	D
	Through	1,810	1,336	73.8%	6.5	0.5	A
	Right Turn	45	23	51.5%	5.3	1.2	A
	Subtotal	1,910	1,398	73.2%	7.0	0.4	A
SB	Left Turn	55	44	79.5%	18.4	4.5	C
	Through	1,615	1,348	83.5%	8.2	0.5	A
	Right Turn	30	25	83.6%	6.2	2.1	A
	Subtotal	1,700	1,417	83.4%	8.4	0.5	A
EB	Left Turn	9	7	76.0%	76.3	65.2	F
	Through	1	0	38.0%	0.9	2.9	A
	Right Turn	36	35	97.1%	26.0	7.2	D
	Subtotal	46	42	91.7%	33.5	12.1	D
WB	Left Turn	4	2	47.5%	77.9	92.5	F
	Through	2	0	19.0%	25.4	54.8	D
	Right Turn	76	76	100.5%	25.5	4.6	D
	Subtotal	82	79	95.9%	26.7	6.3	D
Total		3,738	2,936	78.5%	8.6	0.4	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	39	78.3%	53.6	11.0	D
	Through	1,750	1,233	70.5%	45.2	11.4	D
	Right Turn	70	44	62.4%	18.0	7.1	B
	Subtotal	1,870	1,316	70.4%	44.6	11.1	D
SB	Left Turn	75	57	76.5%	61.3	9.5	E
	Through	1,535	1,200	78.2%	53.8	13.5	D
	Right Turn	50	39	77.5%	24.0	9.6	C
	Subtotal	1,660	1,297	78.1%	53.2	13.1	D
EB	Left Turn	40	49	121.6%	28.4	5.6	C
	Through	80	81	101.2%	32.4	7.1	C
	Right Turn	50	50	99.6%	16.8	5.5	B
	Subtotal	170	179	105.5%	27.0	5.7	C
WB	Left Turn	120	124	103.2%	29.9	3.9	C
	Through	90	100	111.0%	31.5	7.2	C
	Right Turn	120	129	107.4%	19.7	4.8	B
	Subtotal	330	353	106.9%	26.5	4.6	C
Total		4,030	3,145	78.0%	45.1	7.0	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	101	74	73.7%	57.1	7.0	E
	Through	1,430	1,030	72.0%	62.8	12.9	E
	Right Turn	120	86	71.9%	14.9	6.8	B
	Subtotal	1,651	1,191	72.1%	59.0	12.0	E
SB	Left Turn	250	189	75.5%	53.5	7.8	D
	Through	1,285	1,004	78.1%	29.6	3.2	C
	Right Turn	170	133	78.0%	15.3	1.7	B
	Subtotal	1,705	1,325	77.7%	31.6	3.1	C
EB	Left Turn	150	137	91.5%	55.9	6.8	E
	Through	280	275	98.3%	39.2	10.5	D
	Right Turn	68	49	72.1%	36.8	8.4	D
	Subtotal	498	461	92.6%	43.7	8.4	D
WB	Left Turn	78	74	95.0%	56.9	8.2	E
	Through	300	287	95.6%	45.3	7.9	D
	Right Turn	290	272	93.7%	18.7	3.8	B
	Subtotal	668	633	94.7%	35.3	5.0	D
Total		4,522	3,610	79.8%	42.8	4.0	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	29	73.2%	17.3	4.3	C
	Through	1,620	1,257	77.6%	7.6	0.5	A
	Right Turn	30	23	76.0%	5.7	2.7	A
	Subtotal	1,690	1,309	77.5%	7.8	0.4	A
SB	Left Turn	43	32	74.2%	21.5	6.4	C
	Through	1,348	1,032	76.6%	11.3	1.7	B
	Right Turn	40	33	82.7%	10.5	2.7	B
	Subtotal	1,431	1,097	76.7%	11.6	1.7	B
EB	Left Turn	5	2	30.4%	13.1	22.4	B
	Through	4	3	85.5%	71.5	80.3	F
	Right Turn	3	5	152.0%	5.1	4.7	A
	Subtotal	12	10	79.2%	44.9	39.8	E
WB	Left Turn	9	7	80.2%	38.0	27.6	E
	Through	7	6	92.3%	18.2	19.6	C
	Right Turn	26	19	73.1%	9.1	3.9	A
	Subtotal	42	33	77.8%	18.2	12.2	C
Total		3,175	2,449	77.1%	9.8	0.7	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	175	177	101.2%	58.4	5.0	E
	Through	805	738	91.6%	51.2	5.3	D
	Right Turn	255	258	101.0%	26.3	2.6	C
	Subtotal	1,235	1,172	94.9%	46.8	3.8	D
SB	Left Turn	555	281	50.6%	158.7	22.9	F
	Through	465	353	75.9%	45.6	7.1	D
	Right Turn	340	239	70.4%	22.3	3.1	C
	Subtotal	1,360	873	64.2%	75.6	9.5	E
EB	Left Turn	350	220	62.9%	217.4	48.8	F
	Through	450	405	90.0%	67.6	14.8	E
	Right Turn	180	177	98.6%	53.4	15.6	D
	Subtotal	980	803	81.9%	105.9	18.5	F
WB	Left Turn	135	82	60.8%	61.4	7.4	E
	Through	390	271	69.5%	41.1	3.7	D
	Right Turn	535	349	65.2%	35.4	4.7	D
	Subtotal	1,060	702	66.2%	40.7	4.4	D
Total		4,635	3,550	76.6%	66.2	6.5	E

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	70	99.9%	5.7	1.9	A
	Through	1,120	1,130	100.9%	5.0	0.4	A
	Right Turn	120	124	103.6%	2.8	0.5	A
	Subtotal	1,310	1,324	101.1%	4.8	0.4	A
SB	Left Turn	160	114	71.0%	18.2	5.5	C
	Through	610	465	76.2%	7.0	0.9	A
	Right Turn	10	10	98.8%	13.6	16.0	B
	Subtotal	780	589	75.5%	9.2	1.5	A
EB	Left Turn	15	14	91.2%	93.2	39.2	F
	Through	63	46	72.4%	100.0	46.1	F
	Right Turn	50	51	101.8%	51.5	37.0	F
	Subtotal	128	110	86.1%	75.6	40.2	F
WB	Left Turn	68	49	71.5%	103.3	58.1	F
	Through	26	19	73.1%	94.0	55.5	F
	Right Turn	100	82	81.7%	32.6	28.6	D
	Subtotal	194	149	77.0%	61.8	35.7	F
Total		2,412	2,172	90.1%	13.2	3.3	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	11	106.4%	6.0	3.6	A
	Through	1,280	1,275	99.6%	4.7	0.5	A
	Right Turn	10	13	133.0%	4.1	2.1	A
	Subtotal	1,300	1,299	99.9%	4.7	0.5	A
SB	Left Turn	15	11	76.0%	13.1	9.3	B
	Through	705	549	77.9%	4.2	0.2	A
	Right Turn	8	6	80.8%	0.5	0.5	A
	Subtotal	728	567	77.9%	4.4	0.4	A
EB	Left Turn	5	4	76.0%	12.3	20.2	B
	Through	5	5	91.2%	35.1	21.2	E
	Right Turn	5	7	136.8%	6.4	5.9	A
	Subtotal	15	15	101.3%	19.5	7.3	C
WB	Left Turn	5	4	76.0%	18.1	23.0	C
	Through						
	Right Turn	25	28	111.0%	13.4	6.9	B
	Subtotal	30	32	105.1%	16.7	8.0	C
Total		2,073	1,913	92.3%	4.9	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	3	68.4%	6.2	7.1	A
	Through	1,290	1,255	97.3%	6.1	0.5	A
	Right Turn	5	6	121.6%	5.0	4.1	A
	Subtotal	1,300	1,264	97.3%	6.1	0.5	A
SB	Left Turn	10	8	83.6%	11.9	14.5	B
	Through	695	544	78.3%	0.5	0.1	A
	Right Turn	10	7	72.2%	0.6	1.3	A
	Subtotal	715	560	78.3%	0.7	0.3	A
EB	Left Turn	5	5	91.2%	15.1	16.7	C
	Through	5	8	152.0%	28.7	22.0	D
	Right Turn						
	Subtotal	10	12	121.6%	28.7	16.0	D
WB	Left Turn	5	9	174.8%	16.4	11.9	C
	Through	5	5	106.4%	17.0	14.2	C
	Right Turn	5	2	45.6%	8.9	15.7	A
	Subtotal	15	16	108.9%	22.2	4.4	C
Total		2,040	1,853	90.8%	4.8	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	95.0%	32.3	22.0	C
	Through	1,210	1,183	97.8%	35.4	3.9	D
	Right Turn	20	19	96.9%	20.1	10.1	C
	Subtotal	1,240	1,212	97.8%	35.2	4.0	D
SB	Left Turn	20	18	89.3%	39.4	4.3	D
	Through	650	496	76.2%	23.5	2.3	C
	Right Turn	30	29	95.0%	13.6	4.6	B
	Subtotal	700	542	77.4%	23.6	2.1	C
EB	Left Turn	40	41	103.6%	30.1	3.5	C
	Through	20	27	136.8%	30.7	9.4	C
	Right Turn	5	5	91.2%	4.1	4.9	A
	Subtotal	65	73	112.8%	28.9	4.4	C
WB	Left Turn	10	8	76.0%	17.8	14.8	B
	Through	30	28	93.7%	26.8	9.0	C
	Right Turn	50	41	82.1%	15.0	2.0	B
	Subtotal	90	77	85.3%	20.1	4.9	C
Total		2,095	1,904	90.9%	31.0	2.8	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	90	80	89.1%	31.9	12.3	D
	Through						
	Right Turn	90	98	108.9%	19.7	10.0	C
	Subtotal	180	178	99.0%	25.2	10.5	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	530	451	85.1%	2.0	0.2	A
	Right Turn	120	105	87.1%	0.9	0.2	A
	Subtotal	650	556	85.5%	1.8	0.2	A
WB	Left Turn	60	62	103.9%	9.0	1.5	A
	Through	580	592	102.0%	3.8	0.5	A
	Right Turn						
	Subtotal	640	654	102.2%	4.3	0.6	A
Total		1,470	1,388	94.4%	5.9	1.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	550	209	38.1%	324.9	41.7	F
	Through	10	5	49.4%	362.6	136.8	F
	Right Turn	50	43	85.1%	38.6	30.8	E
	Subtotal	610	257	42.1%	278.4	37.6	F
SB	Left Turn	30	30	98.8%	35.1	19.9	E
	Through	20	17	87.4%	68.2	23.9	F
	Right Turn	40	38	96.0%	27.7	17.7	D
	Subtotal	90	86	95.0%	42.3	13.3	E
EB	Left Turn	80	51	63.2%	3.9	0.7	A
	Through	800	641	80.1%	1.5	0.1	A
	Right Turn	230	177	77.2%	2.1	0.2	A
	Subtotal	1,110	869	78.3%	1.7	0.1	A
WB	Left Turn	110	108	98.5%	10.3	3.4	B
	Through	410	415	101.2%	0.8	0.1	A
	Right Turn	20	18	91.2%	0.2	0.2	A
	Subtotal	540	542	100.3%	2.7	0.8	A
Total		2,350	1,753	74.6%	44.1	5.0	E

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	17	87.4%	2.1	0.3	A
	Through	80	71	88.8%	0.3	0.1	A
	Right Turn						
	Subtotal	100	89	88.5%	0.7	0.1	A
SB	Left Turn						
	Through	60	54	89.3%	0.1	0.1	A
	Right Turn	12	11	91.8%	0.0	0.0	A
	Subtotal	72	65	89.7%	0.1	0.1	A
EB	Left Turn	40	40	98.8%	4.9	0.4	A
	Through						
	Right Turn	40	21	53.2%	2.5	0.6	A
	Subtotal	80	61	76.0%	4.0	0.5	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		252	214	84.9%	1.5	0.4	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout
PM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

























Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	2	45.6%	2.8	4.1	A
	Through	5	4	83.6%	3.8	4.1	A
	Right Turn	5	3	60.8%	1.0	1.3	A
	Subtotal	15	10	63.3%	4.8	3.4	A
SB	Left Turn	20	22	108.3%	5.4	1.1	A
	Through	5	4	83.6%	5.5	3.3	A
	Right Turn	35	30	86.9%	3.1	0.2	A
	Subtotal	60	56	93.7%	4.3	0.4	A
EB	Left Turn	85	75	88.5%	2.1	0.3	A
	Through	170	140	82.5%	0.2	0.1	A
	Right Turn	5	4	76.0%	0.1	0.1	A
	Subtotal	260	219	84.3%	0.8	0.2	A
WB	Left Turn	5	3	53.2%	1.2	1.3	A
	Through	94	87	92.6%	0.2	0.1	A
	Right Turn	10	11	110.2%	0.1	0.1	A
	Subtotal	109	101	92.4%	0.2	0.1	A
Total		444	386	86.9%	1.3	0.2	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	15	7	48.1%	6.4	3.1	A
	Through						
	Right Turn	30	28	93.7%	3.1	0.4	A
	Subtotal	45	35	78.5%	3.7	0.4	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	180	154	85.7%	0.3	0.1	A
	Right Turn	15	10	65.9%	0.0	0.1	A
	Subtotal	195	164	84.2%	0.3	0.1	A
WB	Left Turn	30	33	110.2%	2.3	0.3	A
	Through	94	93	98.6%	0.2	0.2	A
	Right Turn						
	Subtotal	124	126	101.4%	0.7	0.2	A
Total		364	325	89.4%	0.8	0.1	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Ex Plus Buildout
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	160	210	180	150	320	100	560	160	270	760	20
Future Volume (veh/h)	20	160	210	180	150	320	100	560	160	270	760	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		0.99	1.00		0.99	1.00		1.00	1.00		0.97
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	176	231	198	165	352	110	615	176	297	835	22
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	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, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	437	369	304	563	646	150	985	282	412	1400	37
Arrive On Green	0.02	0.23	0.23	0.09	0.30	0.29	0.08	0.36	0.35	0.12	0.40	0.39
Sat Flow, veh/h	1691	1863	1573	3442	1863	1574	1774	2717	776	3442	3520	93
Grp Volume(v), veh/h	22	176	231	198	165	352	110	400	391	297	420	437
Grp Sat Flow(s),veh/h/ln	1691	1863	1573	1721	1863	1574	1774	1770	1724	1721	1770	1843
Q Serve(g_s), s	1.1	6.6	10.8	4.6	5.6	14.0	5.0	15.3	15.4	6.8	15.4	15.4
Cycle Q Clear(g_c), s	1.1	6.6	10.8	4.6	5.6	14.0	5.0	15.3	15.4	6.8	15.4	15.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		0.05
Lane Grp Cap(c), veh/h	35	437	369	304	563	646	150	642	625	412	704	733
V/C Ratio(X)	0.62	0.40	0.63	0.65	0.29	0.55	0.73	0.62	0.63	0.72	0.60	0.60
Avail Cap(c_a), veh/h	628	1621	1369	733	1621	1540	659	1529	1490	1278	1529	1593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	26.6	28.2	36.2	22.0	18.4	36.7	21.6	21.8	34.8	19.5	19.6
Incr Delay (d2), s/veh	6.5	0.6	1.7	0.9	0.3	0.7	2.6	1.0	1.0	0.9	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	3.4	4.9	2.2	2.9	6.1	2.6	7.6	7.5	3.3	7.5	7.8
LnGrp Delay(d),s/veh	46.4	27.2	29.9	37.1	22.2	19.2	39.3	22.6	22.8	35.7	19.8	19.8
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	B	B
Approach Vol, veh/h		429			715			901			1154	
Approach Delay, s/veh		29.6			24.8			24.7			23.9	
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	13.8	33.8	11.2	23.3	10.9	36.7	5.7	28.8				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	8.8	17.4	6.6	12.8	7.0	17.4	3.1	16.0				
Green Ext Time (p_c), s	0.5	11.4	0.2	4.4	0.0	11.4	0.0	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay			25.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Ex Plus Buildout
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	310	50	170	340	250	50	420	110	270	660	240
Future Volume (veh/h)	200	310	50	170	340	250	50	420	110	270	660	240
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		0.98	1.00		0.97	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	215	333	54	183	366	269	54	452	118	290	710	258
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	1037	166	208	625	451	70	717	186	313	1001	364
Arrive On Green	0.14	0.34	0.33	0.12	0.32	0.31	0.04	0.26	0.25	0.18	0.40	0.39
Sat Flow, veh/h	1774	3047	489	1774	1939	1401	1774	2771	717	1774	2531	920
Grp Volume(v), veh/h	215	192	195	183	333	302	54	287	283	290	496	472
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1770	1570	1774	1770	1719	1774	1770	1681
Q Serve(g_s), s	17.8	12.0	12.3	15.1	23.5	24.2	4.5	21.4	21.8	24.0	35.2	35.3
Cycle Q Clear(g_c), s	17.8	12.0	12.3	15.1	23.5	24.2	4.5	21.4	21.8	24.0	35.2	35.3
Prop In Lane	1.00		0.28	1.00		0.89	1.00		0.42	1.00		0.55
Lane Grp Cap(c), veh/h	240	602	601	208	570	506	70	458	445	313	700	665
V/C Ratio(X)	0.90	0.32	0.32	0.88	0.58	0.60	0.77	0.63	0.64	0.93	0.71	0.71
Avail Cap(c_a), veh/h	357	848	846	357	848	752	357	848	824	357	848	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	36.4	36.7	64.8	42.2	43.0	71.0	49.0	49.4	60.5	37.9	38.3
Incr Delay (d2), s/veh	17.6	1.1	1.1	12.1	3.4	4.0	16.1	1.4	1.5	27.7	2.2	2.3
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	9.9	6.0	6.2	8.1	12.0	11.1	2.5	10.6	10.6	14.2	17.5	16.8
LnGrp Delay(d),s/veh	81.0	37.5	37.8	76.9	45.7	47.1	87.1	50.4	50.9	88.2	40.0	40.5
LnGrp LOS	F	D	D	E	D	D	F	D	D	F	D	D
Approach Vol, veh/h		602			818			624			1258	
Approach Delay, s/veh		53.1			53.2			53.8			51.3	
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	30.3	42.6	21.5	54.8	9.9	63.0	24.2	52.1				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+20), s	20.0	23.8	17.1	14.3	6.5	37.3	19.8	26.2				
Green Ext Time (p_c), s	0.3	13.3	0.4	22.6	0.1	12.1	0.4	20.4				
Intersection Summary												
HCM 2010 Ctrl Delay				52.6								
HCM 2010 LOS				D								

Intersection

Int Delay, s/veh 4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	100	100	470	60	110	610
Future Vol, veh/h	100	100	470	60	110	610
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	104	490	63	115	635

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1387	522	0	0	553	0
Stage 1	522	-	-	-	-	-
Stage 2	865	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	158	555	-	-	1017	-
Stage 1	595	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	555	-	-	1017	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	365	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	28		0		1.4
HCM LOS	D				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	359	1017	-
HCM Lane V/C Ratio	-	-	0.58	0.113	-
HCM Control Delay (s)	-	-	28	9	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	3.5	0.4	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Ex Plus Buildout
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	220	50	130	280	110	60	250	100	110	390	130
Future Volume (veh/h)	120	220	50	130	280	110	60	250	100	110	390	130
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		0.98	1.00		0.99	1.00		1.00	1.00		0.97
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	234	53	138	298	117	64	266	106	117	415	138
Adj No. of Lanes	1	1	1	1	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	461	383	177	460	389	100	651	552	165	512	170
Arrive On Green	0.10	0.25	0.25	0.10	0.25	0.25	0.06	0.35	0.35	0.09	0.39	0.38
Sat Flow, veh/h	1774	1863	1545	1774	1863	1574	1774	1863	1579	1774	1327	441
Grp Volume(v), veh/h	128	234	53	138	298	117	64	266	106	117	0	553
Grp Sat Flow(s),veh/h/ln	1774	1863	1545	1774	1863	1574	1774	1863	1579	1774	0	1768
Q Serve(g_s), s	5.3	8.2	2.0	5.8	10.9	4.6	2.7	8.2	3.6	4.9	0.0	21.3
Cycle Q Clear(g_c), s	5.3	8.2	2.0	5.8	10.9	4.6	2.7	8.2	3.6	4.9	0.0	21.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	178	461	383	177	460	389	100	651	552	165	0	682
V/C Ratio(X)	0.72	0.51	0.14	0.78	0.65	0.30	0.64	0.41	0.19	0.71	0.00	0.81
Avail Cap(c_a), veh/h	597	1117	926	597	1117	944	597	1729	1466	597	0	1642
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	33.2	24.6	22.3	33.4	25.7	23.3	35.1	18.8	17.3	33.5	0.0	21.0
Incr Delay (d2), s/veh	4.0	0.6	0.1	5.5	1.1	0.3	4.9	0.3	0.1	4.2	0.0	1.8
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	2.8	4.3	0.9	3.1	5.8	2.0	1.5	4.3	1.6	2.6	0.0	10.6
LnGrp Delay(d),s/veh	37.2	25.3	22.4	39.0	26.8	23.6	40.0	19.1	17.4	37.7	0.0	22.7
LnGrp LOS	D	C	C	D	C	C	D	B	B	D		C
Approach Vol, veh/h		415			553			436			670	
Approach Delay, s/veh		28.6			29.2			21.7			25.3	
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	11.1	30.6	11.6	22.8	8.3	33.3	11.6	22.8				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+I1), s	6.9	10.2	7.8	10.2	4.7	23.3	7.3	12.9				
Green Ext Time (p_c), s	0.2	5.5	0.2	3.2	0.1	5.4	0.2	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			26.2									
HCM 2010 LOS			C									

Intersection																
Intersection Delay, s/veh	38															
Intersection LOS	E															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕			↙	↕	↘		↙	↕	↘			↕	
Traffic Vol, veh/h	0	20	230	30	0	70	250	190	0	50	140	70	0	240	90	30
Future Vol, veh/h	0	20	230	30	0	70	250	190	0	50	140	70	0	240	90	30
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	247	32	0	75	269	204	0	54	151	75	0	258	97	32
Number of Lanes	0	0	1	0	0	1	1	1	0	1	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	1	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	1	3	1
HCM Control Delay	38.4	20.3	15.5	79.2
HCM LOS	E	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	100%	0%	0%	7%	100%	0%	0%	67%
Vol Thru, %	0%	100%	0%	82%	0%	100%	0%	25%
Vol Right, %	0%	0%	100%	11%	0%	0%	100%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	140	70	280	70	250	190	360
LT Vol	50	0	0	20	70	0	0	240
Through Vol	0	140	0	230	0	250	0	90
RT Vol	0	0	70	30	0	0	190	30
Lane Flow Rate	54	151	75	301	75	269	204	387
Geometry Grp	7	7	7	8	7	7	7	8
Degree of Util (X)	0.142	0.376	0.173	0.776	0.187	0.631	0.438	1.008
Departure Headway (Hd)	9.69	9.167	8.435	9.534	9.151	8.631	7.904	9.373
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	373	394	428	382	394	422	458	387
Service Time	7.39	6.867	6.135	7.234	6.851	6.331	5.604	7.096
HCM Lane V/C Ratio	0.145	0.383	0.175	0.788	0.19	0.637	0.445	1
HCM Control Delay	14	17.3	12.9	38.4	13.9	25	16.6	79.2
HCM Lane LOS	B	C	B	E	B	C	C	F
HCM 95th-tile Q	0.5	1.7	0.6	6.5	0.7	4.2	2.2	12.2

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	30	100	10	20	80
Future Vol, veh/h	5	30	100	10	20	80
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	0	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	2	8	2	33	46	7
Mvmt Flow	6	38	127	13	25	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	285	133	0	0	139	0
Stage 1	133	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.28	-	-	4.56	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.372	-	-	2.614	-
Pot Cap-1 Maneuver	705	900	-	-	1214	-
Stage 1	893	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	690	900	-	-	1214	-
Mov Cap-2 Maneuver	690	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	858	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.4		0		1.6
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	690	900	1214	-
HCM Lane V/C Ratio	-	-	0.009	0.042	0.021	-
HCM Control Delay (s)	-	-	10.3	9.2	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	5	5	5	10	10	5	90	5	5	70	5
Future Vol, veh/h	20	5	5	5	10	10	5	90	5	5	70	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	24	6	6	6	12	12	6	106	6	6	82	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	229	221	85	224	221	109	88	0	0	112	0	0
Stage 1	97	97	-	121	121	-	-	-	-	-	-	-
Stage 2	132	124	-	103	100	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	695	678	974	732	657	913	1508	-	-	1478	-	-
Stage 1	874	815	-	883	773	-	-	-	-	-	-	-
Stage 2	837	793	-	903	790	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	672	673	974	718	652	913	1508	-	-	1478	-	-
Mov Cap-2 Maneuver	672	673	-	718	652	-	-	-	-	-	-	-
Stage 1	871	812	-	879	770	-	-	-	-	-	-	-
Stage 2	810	790	-	887	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	10	0.4	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	709	752	1478	-	-
HCM Lane V/C Ratio	0.004	-	-	0.05	0.039	0.004	-	-
HCM Control Delay (s)	7.4	0	-	10.3	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	40.4
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↙	↕	↗		↙	↕	↗		↙	↕	↗
Traffic Vol, veh/h	0	50	320	110	0	40	370	70	0	100	120	50
Future Vol, veh/h	0	50	320	110	0	40	370	70	0	100	120	50
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	340	117	0	43	394	74	0	106	128	53
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	42	67.2	17.5
HCM LOS	E	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	120	50	50	320	110	40	370	70	160	240
LT Vol	100	0	0	50	0	0	40	0	0	160	0
Through Vol	0	120	0	0	320	0	0	370	0	0	240
RT Vol	0	0	50	0	0	110	0	0	70	0	0
Lane Flow Rate	106	128	53	53	340	117	43	394	74	170	255
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.312	0.357	0.139	0.147	0.899	0.285	0.116	1.022	0.179	0.47	0.671
Departure Headway (Hd)	10.7	10.2	9.406	9.929	9.508	8.758	9.851	9.351	8.651	10.057	9.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	338	355	380	362	381	412	363	390	413	361	380
Service Time	8.4	7.9	7.2	7.665	7.233	6.465	7.628	7.128	6.428	7.757	7.257
HCM Lane V/C Ratio	0.314	0.361	0.139	0.146	0.892	0.284	0.118	1.01	0.179	0.471	0.671
HCM Control Delay	18.2	18.5	13.7	14.4	55.6	14.9	13.9	83.1	13.3	21.4	29.7
HCM Lane LOS	C	C	B	B	F	B	B	F	B	C	D
HCM 95th-tile Q	1.3	1.6	0.5	0.5	9.1	1.2	0.4	12.6	0.6	2.4	4.7

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	160	240	70
Future Vol, veh/h	0	160	240	70
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	170	255	74
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	24.5
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Ex Plus Buildout
 PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	230	210	215	730	730	250		
Future Volume (veh/h)	230	210	215	730	730	250		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1827	1776	1863	1863	1863	1863		
Adj Flow Rate, veh/h	245	223	229	777	777	266		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	4	7	2	2	2	2		
Cap, veh/h	677	303	296	2322	1477	661		
Arrive On Green	0.20	0.20	0.17	0.66	0.42	0.42		
Sat Flow, veh/h	3375	1509	1774	3632	3632	1583		
Grp Volume(v), veh/h	245	223	229	777	777	266		
Grp Sat Flow(s),veh/h/ln	1688	1509	1774	1770	1770	1583		
Q Serve(g_s), s	3.5	7.7	6.9	5.4	9.1	6.6		
Cycle Q Clear(g_c), s	3.5	7.7	6.9	5.4	9.1	6.6		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	677	303	296	2322	1477	661		
V/C Ratio(X)	0.36	0.74	0.77	0.33	0.53	0.40		
Avail Cap(c_a), veh/h	2760	1234	814	2983	2983	1334		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.2	20.9	22.2	4.2	12.1	11.4		
Incr Delay (d2), s/veh	0.1	1.3	1.6	0.0	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6	6.3	3.5	2.6	4.4	2.8		
LnGrp Delay(d),s/veh	19.3	22.2	23.8	4.3	12.2	11.5		
LnGrp LOS	B	C	C	A	B	B		
Approach Vol, veh/h	468			1006	1043			
Approach Delay, s/veh	20.7			8.7	12.1			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.6		15.2	13.3	27.3		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		7.4		9.7	8.9	11.1		
Green Ext Time (p_c), s		10.3		0.9	0.1	10.1		
Intersection Summary								
HCM 2010 Ctrl Delay			12.3					
HCM 2010 LOS			B					
Notes								

Intersection																
Intersection Delay, s/veh	98.4															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↵	↵			↵	↵				↕				↕	
Traffic Vol, veh/h	0	110	600	160	0	60	400	60	0	80	90	80	0	70	160	80
Future Vol, veh/h	0	110	600	160	0	60	400	60	0	80	90	80	0	70	160	80
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	113	619	165	0	62	412	62	0	82	93	82	0	72	165	82
Number of Lanes	0	1	1	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	406.9	24.3	30.5	40.9
HCM LOS	F	C	D	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	32%	100%	0%	100%	0%	0%	23%
Vol Thru, %	36%	0%	79%	0%	100%	69%	52%
Vol Right, %	32%	0%	21%	0%	0%	31%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	110	760	60	267	193	310
LT Vol	80	110	0	60	0	0	70
Through Vol	90	0	600	0	267	133	160
RT Vol	80	0	160	0	0	60	80
Lane Flow Rate	258	113	784	62	275	199	320
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.641	0.306	1.964	0.155	0.649	0.459	0.775
Departure Headway (Hd)	10.636	9.704	9.024	10.429	9.902	9.673	10.313
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	343	370	407	346	368	375	355
Service Time	8.336	7.479	6.799	8.129	7.602	7.373	8.013
HCM Lane V/C Ratio	0.752	0.305	1.926	0.179	0.747	0.531	0.901
HCM Control Delay	30.5	16.7	463.4	15	29.2	20.3	40.9
HCM Lane LOS	D	C	F	B	D	C	E
HCM 95th-tile Q	4.2	1.3	53.2	0.5	4.4	2.3	6.3

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Ex Plus Buildout
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	331	120	250	10	90	60	205	330	20	71	350	310
Future Volume (veh/h)	331	120	250	10	90	60	205	330	20	71	350	310
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		0.99	1.00		1.00	1.00		1.00	1.00		0.96
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	1863	1863	1863	1863	1863	1863	1845	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	338	122	255	10	92	61	209	337	20	72	357	316
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	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, %	2	2	2	2	2	2	3	2	2	2	2	2
Cap, veh/h	382	657	553	24	281	239	254	1321	78	103	535	461
Arrive On Green	0.22	0.35	0.35	0.01	0.15	0.15	0.14	0.39	0.37	0.06	0.30	0.28
Sat Flow, veh/h	1774	1863	1567	1774	1863	1583	1757	3396	201	1774	1770	1524
Grp Volume(v), veh/h	338	122	255	10	92	61	209	175	182	72	357	316
Grp Sat Flow(s),veh/h/ln	1774	1863	1567	1774	1863	1583	1757	1770	1827	1774	1770	1524
Q Serve(g_s), s	15.8	3.9	10.8	0.5	3.8	2.9	9.9	5.7	5.8	3.4	15.1	15.8
Cycle Q Clear(g_c), s	15.8	3.9	10.8	0.5	3.8	2.9	9.9	5.7	5.8	3.4	15.1	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	382	657	553	24	281	239	254	689	711	103	535	461
V/C Ratio(X)	0.88	0.19	0.46	0.43	0.33	0.26	0.82	0.25	0.26	0.70	0.67	0.69
Avail Cap(c_a), veh/h	632	1567	1318	632	1567	1332	626	1488	1537	632	1488	1282
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	19.2	21.4	41.9	32.5	32.1	35.5	17.7	17.8	39.6	26.1	27.2
Incr Delay (d2), s/veh	4.8	0.1	0.2	4.5	0.3	0.2	2.5	0.1	0.1	3.2	0.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	2.0	4.7	0.3	2.0	1.3	5.0	2.8	2.9	1.8	7.4	6.7
LnGrp Delay(d),s/veh	37.3	19.2	21.6	46.4	32.7	32.3	38.1	17.8	17.9	42.8	26.6	27.9
LnGrp LOS	D	B	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		715			163			566			745	
Approach Delay, s/veh		28.6			33.4			25.3			28.7	
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	37.3	5.1	34.2	16.4	29.9	22.4	16.9					
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	70.0	30.0	70.0	30.0	70.0	30.0	70.0					
Max Q Clear Time (g_c+1), s	7.8	2.5	12.8	11.9	17.8	17.8	5.8					
Green Ext Time (p_c), s	0.0	4.9	0.0	1.3	0.1	4.9	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			28.2									
HCM 2010 LOS			C									
Notes												

Intersection																
Intersection Delay, s/veh	8.8															
Intersection LOS	A															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	70	120	5	0	10	70	30	0	5	50	5	0	30	40	50
Future Vol, veh/h	0	70	120	5	0	10	70	30	0	5	50	5	0	30	40	50
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	73	125	5	0	10	73	31	0	5	52	5	0	31	42	52
Number of Lanes	0	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	9.4	8.2	8.3	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	8%	36%	22%	0%	25%
Vol Thru, %	83%	62%	78%	54%	33%
Vol Right, %	8%	3%	0%	46%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	195	45	65	120
LT Vol	5	70	10	0	30
Through Vol	50	120	35	35	40
RT Vol	5	5	0	30	50
Lane Flow Rate	63	203	47	68	125
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.084	0.264	0.069	0.091	0.159
Departure Headway (Hd)	4.813	4.673	5.269	4.832	4.57
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	743	768	679	741	784
Service Time	2.852	2.706	3.006	2.568	2.604
HCM Lane V/C Ratio	0.085	0.264	0.069	0.092	0.159
HCM Control Delay	8.3	9.4	8.4	8.1	8.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	1.1	0.2	0.3	0.6

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Ex Plus Buildout
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1	10	0	1	0	20	220	0	1	110	120
Future Volume (veh/h)	120	1	10	0	1	0	20	220	0	1	110	120
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	1863	1863	1863	1900	1863	1900	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	134	0	11	0	1	0	22	244	0	1	122	133
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	657	0	293	0	60	0	35	556	0	7	527	448
Arrive On Green	0.19	0.00	0.19	0.00	0.03	0.00	0.02	0.30	0.00	0.00	0.28	0.28
Sat Flow, veh/h	3548	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	134	0	11	0	1	0	22	244	0	1	122	133
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	1.1	0.0	0.2	0.0	0.0	0.0	0.4	3.5	0.0	0.0	1.7	2.2
Cycle Q Clear(g_c), s	1.1	0.0	0.2	0.0	0.0	0.0	0.4	3.5	0.0	0.0	1.7	2.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	657	0	293	0	60	0	35	556	0	7	527	448
V/C Ratio(X)	0.20	0.00	0.04	0.00	0.02	0.00	0.63	0.44	0.00	0.15	0.23	0.30
Avail Cap(c_a), veh/h	4367	0	1949	0	2293	0	911	2293	0	911	2293	1949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	11.1	0.0	15.6	0.0	16.2	9.4	0.0	16.5	9.2	9.4
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.1	0.0	17.5	0.7	0.0	9.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.0	0.0	0.0	0.4	1.9	0.0	0.0	0.9	1.0
LnGrp Delay(d),s/veh	11.7	0.0	11.2	0.0	15.7	0.0	33.7	10.1	0.0	26.2	9.4	9.8
LnGrp LOS	B		B		B		C	B		C	A	A
Approach Vol, veh/h		145			1			266			256	
Approach Delay, s/veh		11.6			15.7			12.0			9.7	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	13.9		10.2	4.7	13.4		5.1				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	40.0			40.0	17.0	40.0		40.0				
Max Q Clear Time (g_c+1), s	5.5			3.1	2.4	4.2		2.0				
Green Ext Time (p_c), s	0.0	3.4		0.6	0.0	3.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			11.1									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Ex Plus Buildout
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	20	20	120	30	390	40	171	450	110
Future Volume (veh/h)	90	10	20	20	20	120	30	390	40	171	450	110
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		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1863	1761	1900	1863	1863	1863	1863	1861	1900	1863	1863	1900
Adj Flow Rate, veh/h	96	11	21	21	21	128	32	415	43	182	479	117
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	121	231	43	313	265	54	1012	104	253	1200	291
Arrive On Green	0.08	0.22	0.22	0.02	0.17	0.17	0.03	0.31	0.28	0.14	0.43	0.39
Sat Flow, veh/h	1774	539	1029	1774	1863	1575	1774	3236	334	1774	2822	685
Grp Volume(v), veh/h	96	0	32	21	21	128	32	226	232	182	299	297
Grp Sat Flow(s),veh/h/ln	1774	0	1567	1774	1863	1575	1774	1768	1801	1774	1770	1738
Q Serve(g_s), s	2.8	0.0	0.9	0.6	0.5	4.0	1.0	5.4	5.5	5.3	6.3	6.5
Cycle Q Clear(g_c), s	2.8	0.0	0.9	0.6	0.5	4.0	1.0	5.4	5.5	5.3	6.3	6.5
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.19	1.00		0.39
Lane Grp Cap(c), veh/h	143	0	352	43	313	265	54	553	564	253	752	739
V/C Ratio(X)	0.67	0.00	0.09	0.49	0.07	0.48	0.59	0.41	0.41	0.72	0.40	0.40
Avail Cap(c_a), veh/h	836	0	1317	803	1566	1324	836	1535	1564	836	1536	1509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	16.7	26.1	18.9	20.4	25.9	14.7	14.8	22.2	10.8	11.1
Incr Delay (d2), s/veh	5.4	0.0	0.1	8.3	0.1	1.4	9.9	0.5	0.5	3.8	0.3	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	1.6	0.0	0.4	0.4	0.3	1.8	0.6	2.7	2.8	2.8	3.1	3.2
LnGrp Delay(d),s/veh	29.5	0.0	16.9	34.4	19.0	21.7	35.8	15.1	15.3	26.0	11.1	11.5
LnGrp LOS	C		B	C	B	C	D	B	B	C	B	B
Approach Vol, veh/h		128			170			490			778	
Approach Delay, s/veh		26.4			23.0			16.6			14.7	
Approach LOS		C			C			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	11.7	20.9	5.3	16.2	5.6	27.0	8.4	13.1				
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5				
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0				
Max Q Clear Time (g_c+1), s	11.3	7.5	2.6	2.9	3.0	8.5	4.8	6.0				
Green Ext Time (p_c), s	0.4	6.7	0.0	0.8	0.0	6.7	0.2	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								
Notes												

Intersection

Int Delay, s/veh 2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	530	30	160	560	20	170
Future Vol, veh/h	530	30	160	560	20	170
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	564	32	170	596	21	181

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1222
Stage 1	-	-	582
Stage 2	-	-	640
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	975	172
Stage 1	-	-	522
Stage 2	-	-	487
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	973	141
Mov Cap-2 Maneuver	-	-	141
Stage 1	-	-	521
Stage 2	-	-	401

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	141	692	-	-	973	-
HCM Lane V/C Ratio	0.151	0.261	-	-	0.175	-
HCM Control Delay (s)	35	12	-	-	9.5	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	1	-	-	0.6	-

Intersection			
Intersection Delay, s/veh	4.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	174	44	141
Demand Flow Rate, veh/h	177	44	144
Vehicles Circulating, veh/h	44	166	22
Vehicles Exiting, veh/h	122	55	188
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.9	4.2	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	177	44	144
Cap Entry Lane, veh/h	1081	957	1105
Entry HV Adj Factor	0.983	0.990	0.980
Flow Entry, veh/h	174	44	141
Cap Entry, veh/h	1063	948	1083
V/C Ratio	0.164	0.046	0.130
Control Delay, s/veh	4.9	4.2	4.5
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↕↗		↘	↗
Traffic Vol, veh/h	10	70	55	30	40	10
Future Vol, veh/h	10	70	55	30	40	10
Conflicting Peds, #/hr	2	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	74	59	32	43	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	92	0	174
Stage 1	-	-	76
Stage 2	-	-	98
Critical Hdwy	4.13	-	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	2.219	-	3.519
Pot Cap-1 Maneuver	1502	-	807
Stage 1	-	-	939
Stage 2	-	-	925
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1499	-	798
Mov Cap-2 Maneuver	-	-	798
Stage 1	-	-	937
Stage 2	-	-	916

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1499	-	-	-	798	1006
HCM Lane V/C Ratio	0.007	-	-	-	0.053	0.011
HCM Control Delay (s)	7.4	0	-	-	9.8	8.6
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0

Intersection				
Intersection Delay, s/veh	5.2			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	70	128	112	213
Demand Flow Rate, veh/h	72	131	115	217
Vehicles Circulating, veh/h	191	120	180	99
Vehicles Exiting, veh/h	125	175	83	152
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.7	4.9	5.1	5.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	72	131	115	217
Cap Entry Lane, veh/h	933	1002	944	1023
Entry HV Adj Factor	0.978	0.979	0.973	0.982
Flow Entry, veh/h	70	128	112	213
Cap Entry, veh/h	913	981	918	1005
V/C Ratio	0.077	0.131	0.122	0.212
Control Delay, s/veh	4.7	4.9	5.1	5.6
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	1

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	30	20	100	120	70
Future Vol, veh/h	40	30	20	100	120	70
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	32	21	106	128	74

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	318	169	204	0
Stage 1	167	-	-	-
Stage 2	151	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	675	875	1368	-
Stage 1	863	-	-	-
Stage 2	877	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	662	872	1366	-
Mov Cap-2 Maneuver	662	-	-	-
Stage 1	862	-	-	-
Stage 2	862	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1366	-	738	-	-
HCM Lane V/C Ratio	0.016	-	0.101	-	-
HCM Control Delay (s)	7.7	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection

Int Delay, s/veh 3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕			↖
Traffic Vol, veh/h	10	90	130	10	40	100
Future Vol, veh/h	10	90	130	10	40	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	98	141	11	43	109

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	343	76	0	0	152	0
Stage 1	147	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	640	970	-	-	1428	-
Stage 1	866	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	620	970	-	-	1428	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	2.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	620	970	1428	-
HCM Lane V/C Ratio	-	-	0.018	0.101	0.03	-
HCM Control Delay (s)	-	-	10.9	9.1	7.6	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.1	-

Intersection			
Intersection Delay, s/veh	3.8		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	87	38	49
Demand Flow Rate, veh/h	89	38	50
Vehicles Circulating, veh/h	11	61	16
Vehicles Exiting, veh/h	55	39	83
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.7	3.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	89	38	50
Cap Entry Lane, veh/h	1118	1063	1112
Entry HV Adj Factor	0.978	0.989	0.976
Flow Entry, veh/h	87	38	49
Cap Entry, veh/h	1092	1051	1085
V/C Ratio	0.080	0.036	0.045
Control Delay, s/veh	4.0	3.7	3.7
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection

Int Delay, s/veh 4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	40	40	20	70	50
Future Vol, veh/h	20	40	40	20	70	50
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, %	2	2	2	2	2	2
Mvmt Flow	22	43	43	22	76	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	261	54	0	0	65	0
Stage 1	54	-	-	-	-	-
Stage 2	207	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	728	1013	-	-	1537	-
Stage 1	969	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	691	1013	-	-	1537	-
Mov Cap-2 Maneuver	691	-	-	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	786	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.4		0		4.4
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	877	1537	-
HCM Lane V/C Ratio	-	-	0.074	0.05	-
HCM Control Delay (s)	-	-	9.4	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.2	-

Intersection			
Intersection Delay, s/veh	4.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	98	86	65
Demand Flow Rate, veh/h	100	88	66
Vehicles Circulating, veh/h	55	11	44
Vehicles Exiting, veh/h	55	144	55
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.0	3.9
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	100	88	66
Cap Entry Lane, veh/h	1069	1118	1081
Entry HV Adj Factor	0.980	0.979	0.984
Flow Entry, veh/h	98	86	65
Cap Entry, veh/h	1048	1094	1064
V/C Ratio	0.094	0.079	0.061
Control Delay, s/veh	4.3	4.0	3.9
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Queuing and Blocking Report

6/1/2017

Existing Plus Buildout AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	267	426	398	189	214	224	165	311	319	120	302	245
Average Queue (ft)	207	209	242	131	159	210	98	223	220	53	193	144
95th Queue (ft)	319	483	436	207	236	246	170	331	344	134	328	253
Link Distance (ft)		1198	1198	146	146	146		3910	3910			1981
Upstream Blk Time (%)				12	15	46						
Queuing Penalty (veh)				43	56	168						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	24	1							1	0		
Queuing Penalty (veh)	40	4							1	0		

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	254	148
Average Queue (ft)	150	63
95th Queue (ft)	265	126
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Queuing and Blocking Report

Existing Plus Buildout AM Peak Hour

6/1/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	B67	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	T	LT	R	L	T	R	UL	T	T	R
Maximum Queue (ft)	189	65	37	411	100	123	2	14	89	2	4	5
Average Queue (ft)	87	46	7	243	87	51	0	2	39	0	1	1
95th Queue (ft)	200	78	57	466	127	128	3	17	91	3	7	10
Link Distance (ft)	152		754	400			1336			3910	3910	
Upstream Blk Time (%)	10			13								
Queuing Penalty (veh)	0			46								
Storage Bay Dist (ft)		30			75	450		70	450			70
Storage Blk Time (%)	41	11		58	10							
Queuing Penalty (veh)	30	6		123	15							

Queuing and Blocking Report

Existing Plus Buildout PM Peak Hour

6/1/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	275	1090	982	139	187	232	238	325	318	233	475	1230
Average Queue (ft)	264	695	618	82	128	200	150	249	252	126	394	538
95th Queue (ft)	322	1238	1110	150	197	265	252	353	360	268	575	1328
Link Distance (ft)		1198	1198	146	146	146		3916	3916			1981
Upstream Blk Time (%)		10	0	3	5	40						
Queuing Penalty (veh)		0	0	12	19	148						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	73	3							3	0	44	0
Queuing Penalty (veh)	172	10							7	0	107	1

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1030	110
Average Queue (ft)	307	64
95th Queue (ft)	910	113
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report

Existing Plus Buildout PM Peak Hour

6/1/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	B67	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	T	LT	R	L	T	UL	T
Maximum Queue (ft)	218	63	116	211	100	77	5	90	6
Average Queue (ft)	124	40	24	106	63	32	1	38	1
95th Queue (ft)	260	80	142	238	123	80	11	82	12
Link Distance (ft)	185		720	274			1341		3916
Upstream Blk Time (%)	18			6					
Queuing Penalty (veh)	0			13					
Storage Bay Dist (ft)		30			75	450		450	
Storage Blk Time (%)	74	5		37	2				
Queuing Penalty (veh)	39	4		39	2				

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

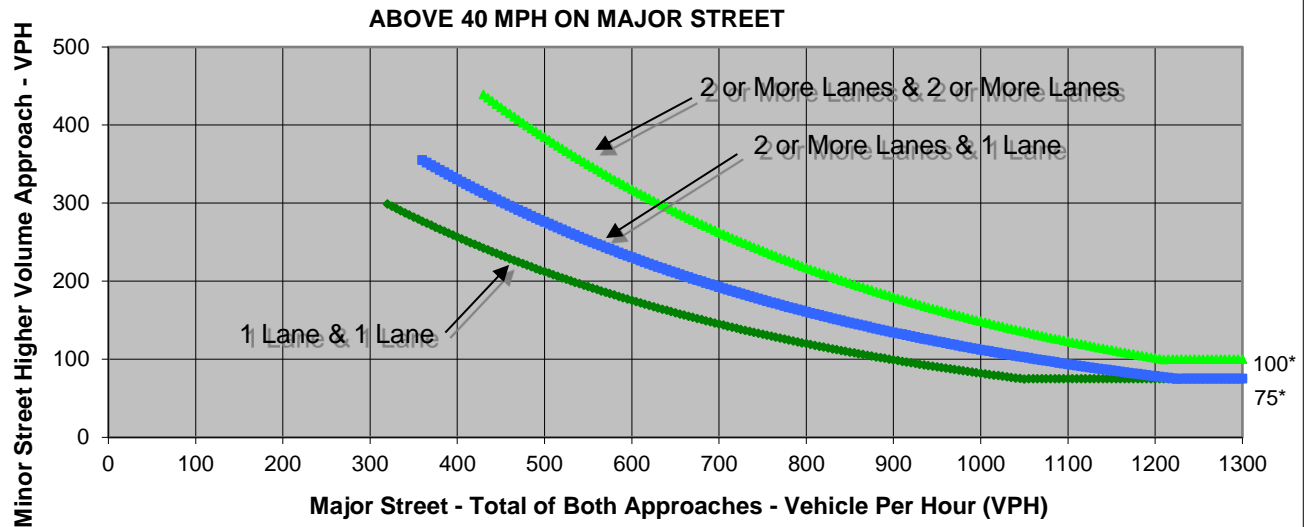
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	3	2
Through	1,710	1,170	5	1
Right	40	30	40	27
Total	1,780	1,250	48	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,030	48	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

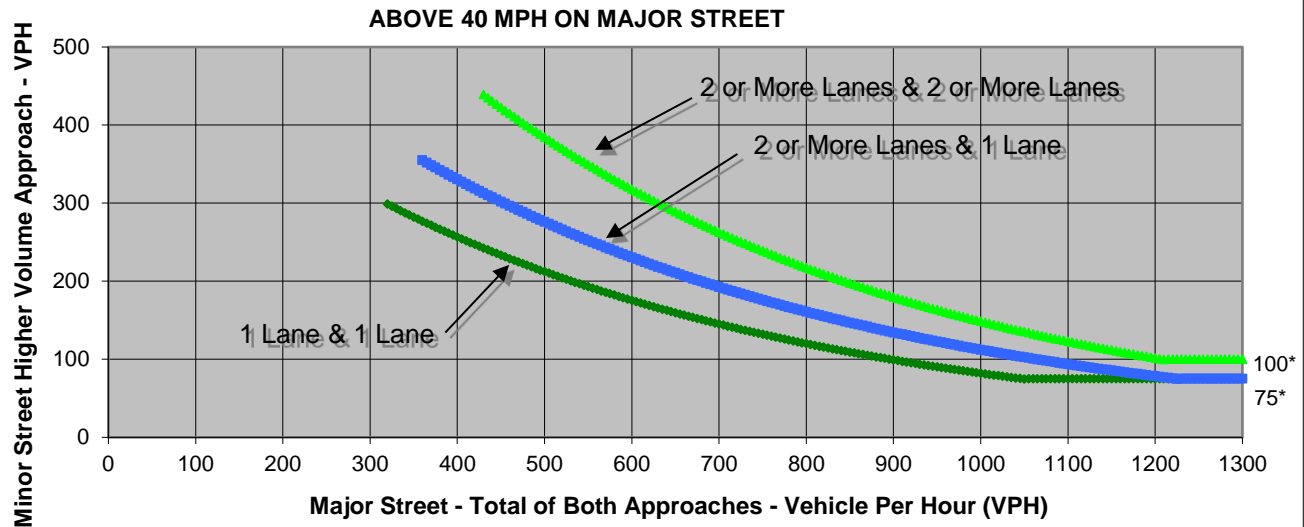
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	16	13
Through	1,360	1,180	4	7
Right	5	10	7	32
Total	1,375	1,220	27	52

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,595	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

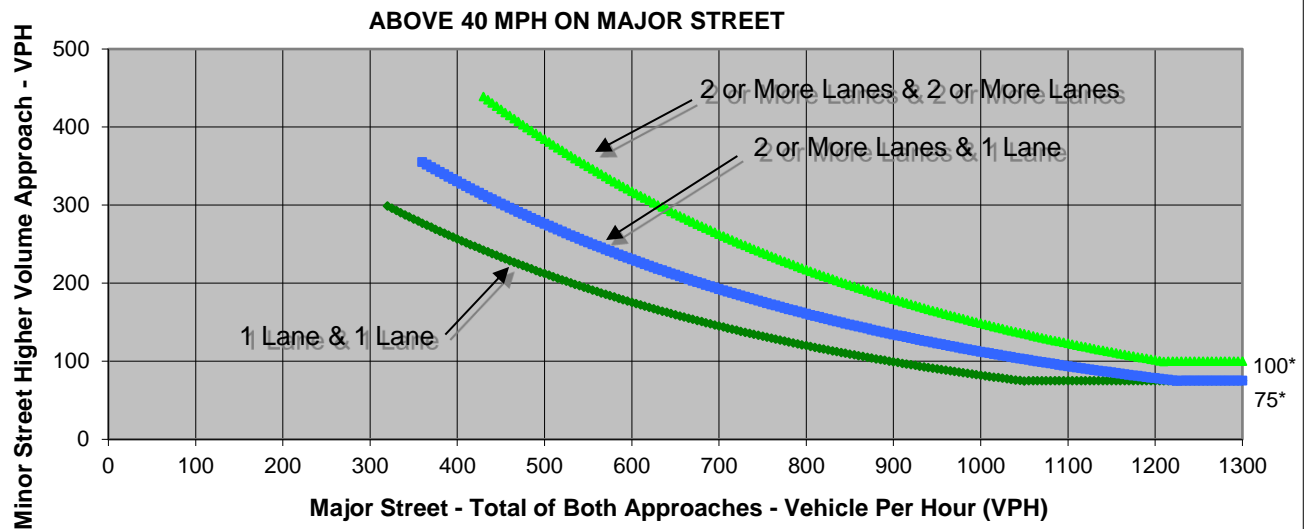
Turn Movement Volumes

	NB	SB	EB	WB
Left	45	130	26	94
Through	660	820	27	42
Right	65	10	67	194
Total	770	960	120	330

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,730	330	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

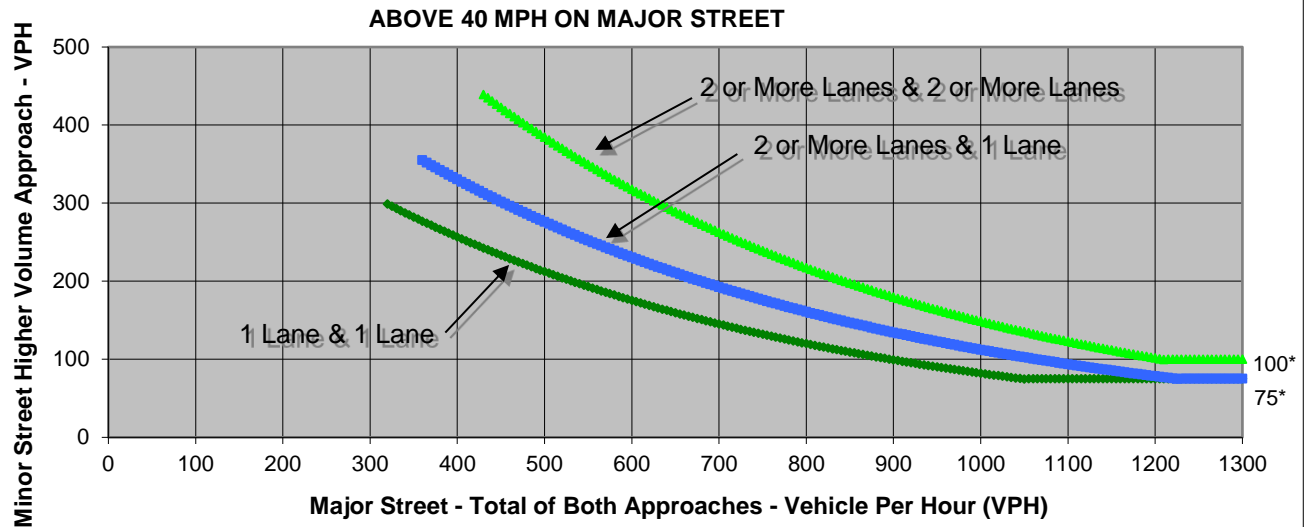
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	26	5	5
Through	745	935	5	5
Right	10	20	10	20
Total	760	981	20	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,741	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

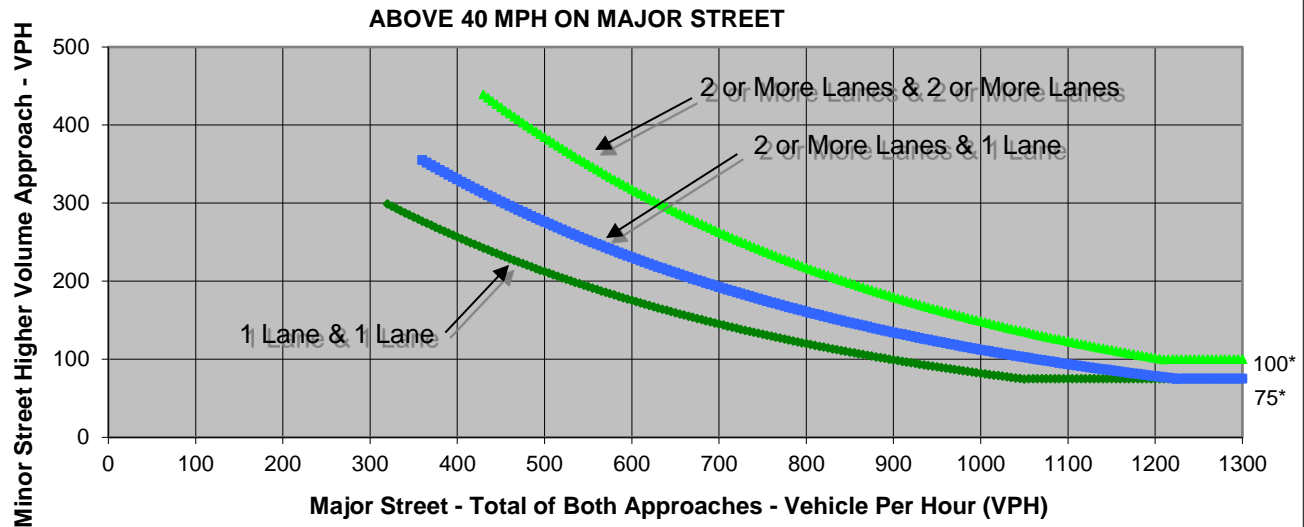
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	0	0
Through	760	935	0	0
Right	10	5	10	0
Total	775	950	10	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,725	10	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Existing Plus Buildout**
 Peak Hour **AM**

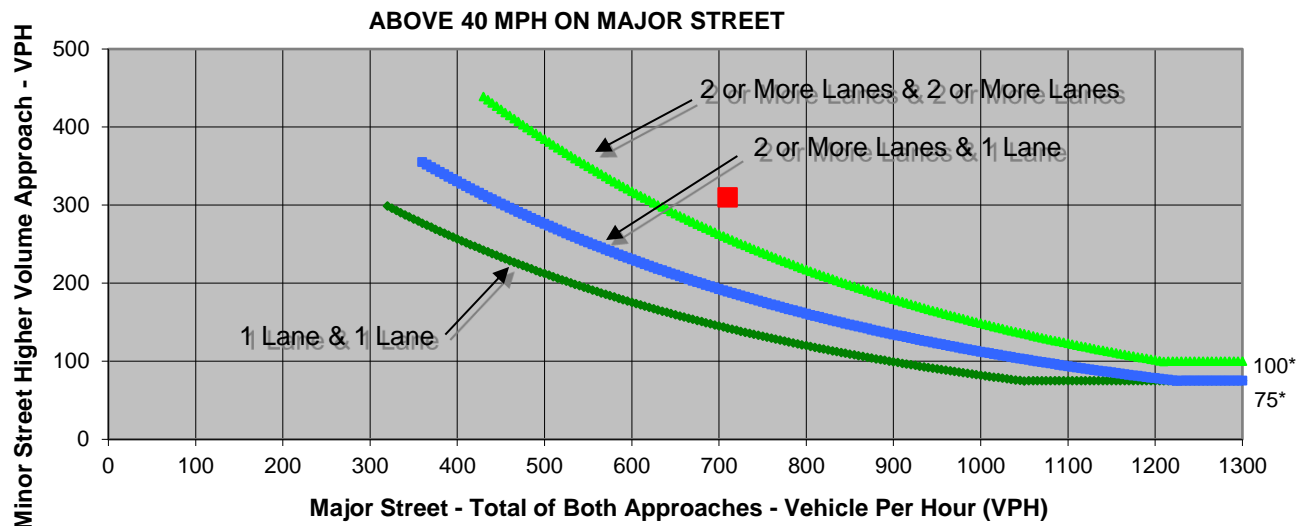
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	150	20	30
Through	80	140	270	200
Right	60	20	70	120
Total	170	310	360	350

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	710	310	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

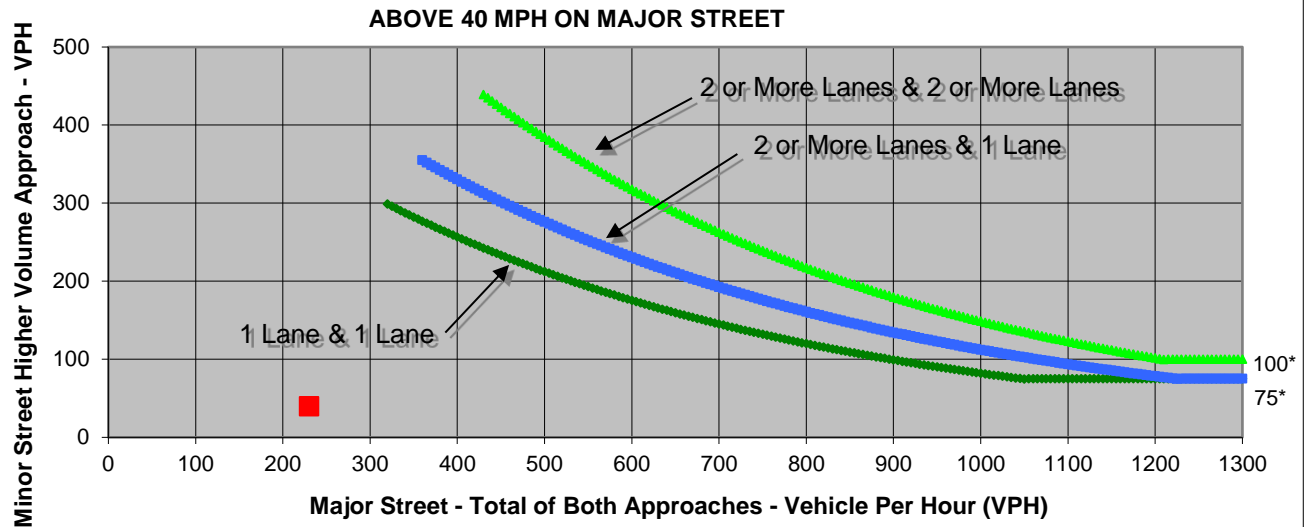
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	5
Through	90	110	0	0
Right	10	0	0	35
Total	100	130	0	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	230	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

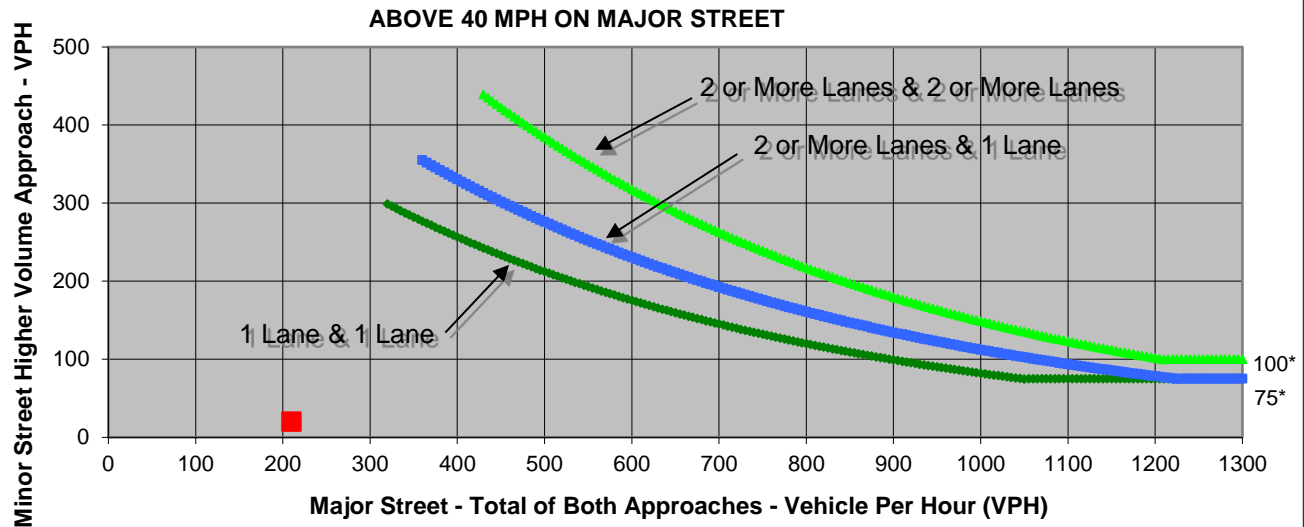
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	5	5	0
Through	90	100	5	5
Right	0	5	10	5
Total	100	110	20	10

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	210	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

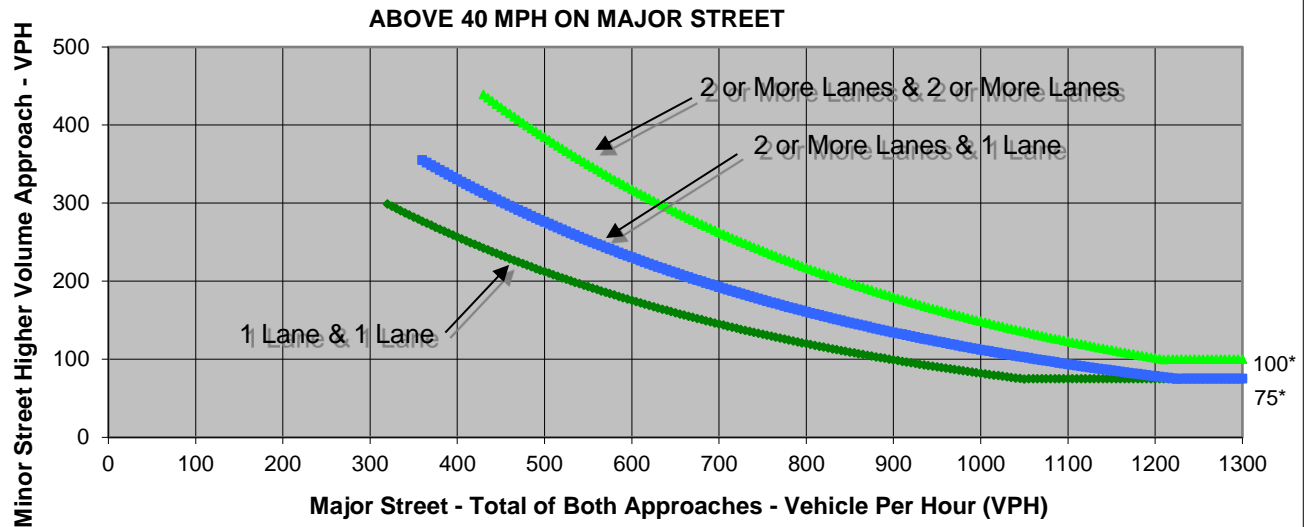
Turn Movement Volumes

	NB	SB	EB	WB
Left	55	55	9	4
Through	1,810	1,615	1	2
Right	45	30	36	76
Total	1,910	1,700	46	82

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	3,610	82	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

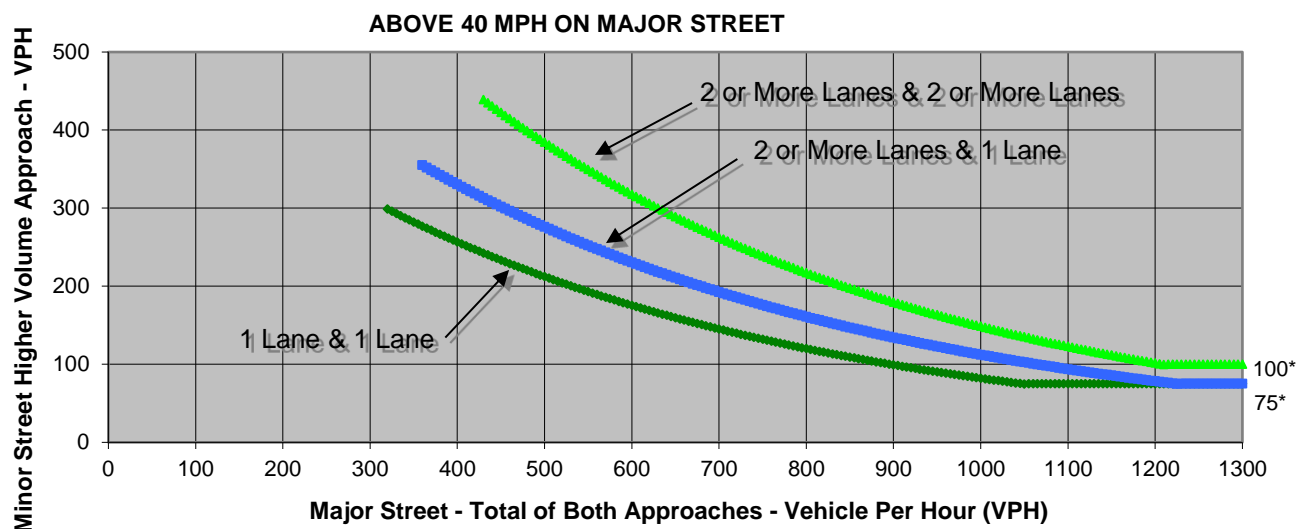
Turn Movement Volumes

	NB	SB	EB	WB
Left	40	43	5	9
Through	1,620	1,348	4	7
Right	30	40	3	26
Total	1,690	1,431	12	42

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,121	42	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

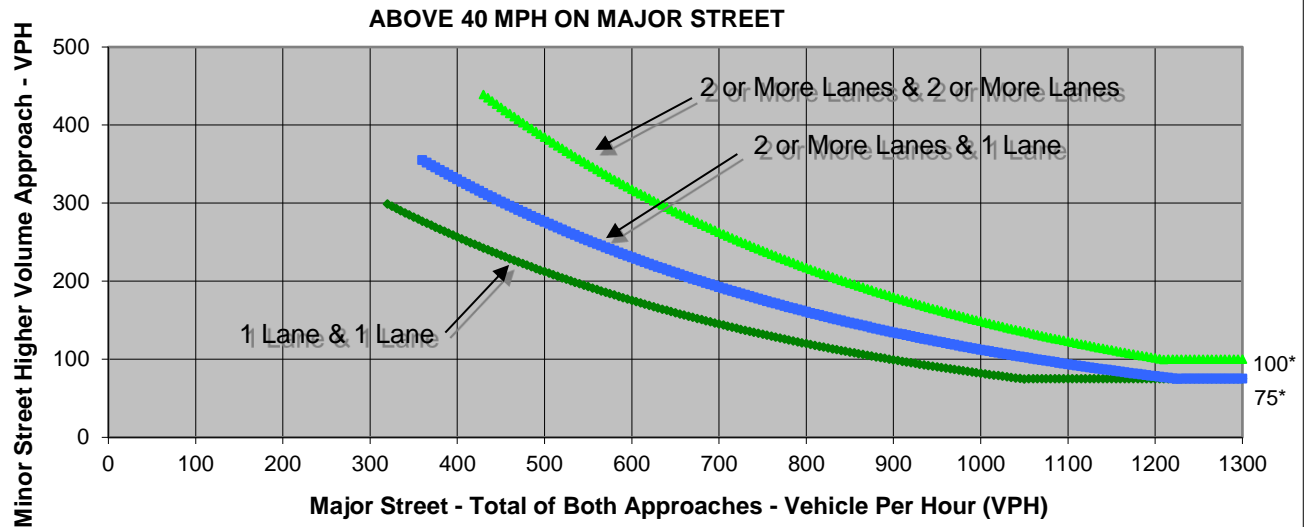
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	160	15	68
Through	1,120	610	63	26
Right	120	10	50	100
Total	1,310	780	128	194

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,090	194	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

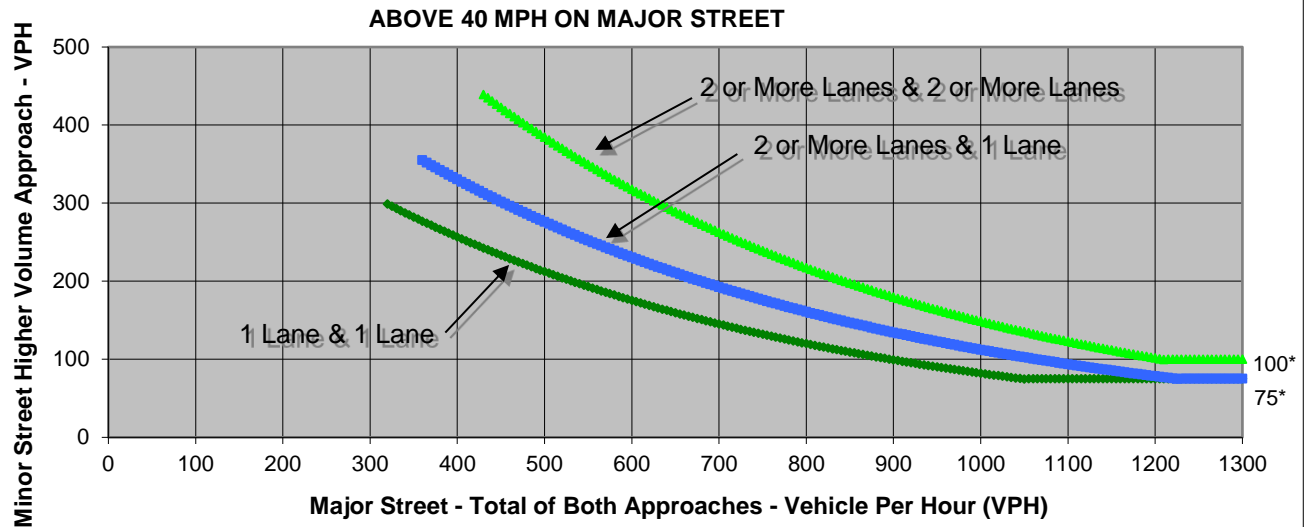
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	15	5	5
Through	1,280	705	5	0
Right	10	8	5	25
Total	1,300	728	15	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,028	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

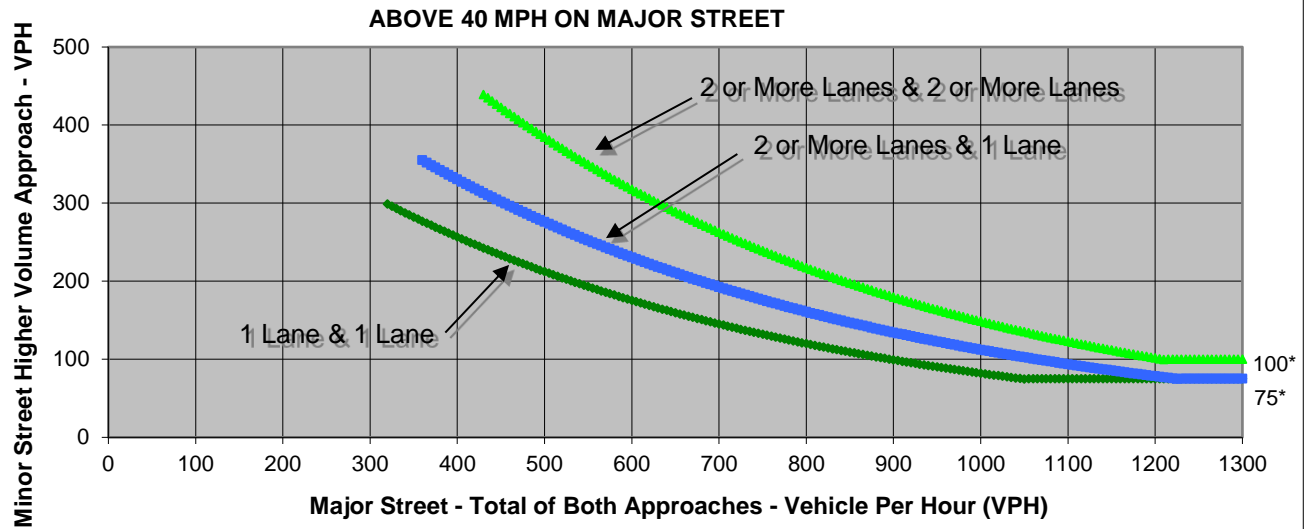
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	5	5
Through	1,290	695	5	5
Right	5	10	0	5
Total	1,300	715	10	15

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,015	15	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street S Walton Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

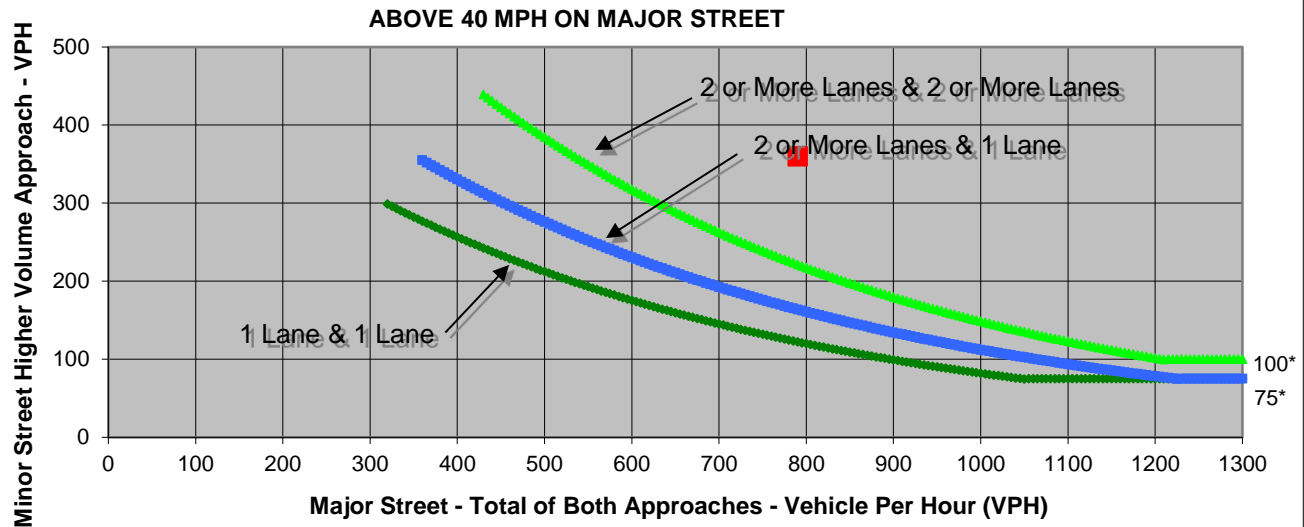
Turn Movement Volumes

	NB	SB	EB	WB
Left	50	240	20	70
Through	140	90	230	250
Right	70	30	30	190
Total	260	360	280	510

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	790	360	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

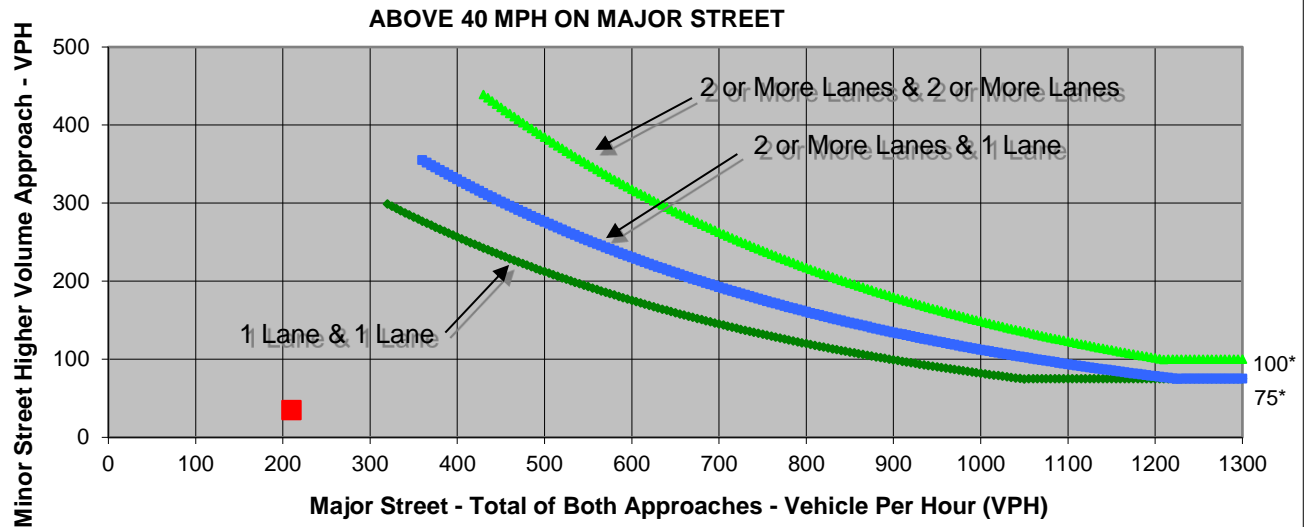
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	5
Through	100	80	0	0
Right	10	0	0	30
Total	110	100	0	35

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	210	35	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

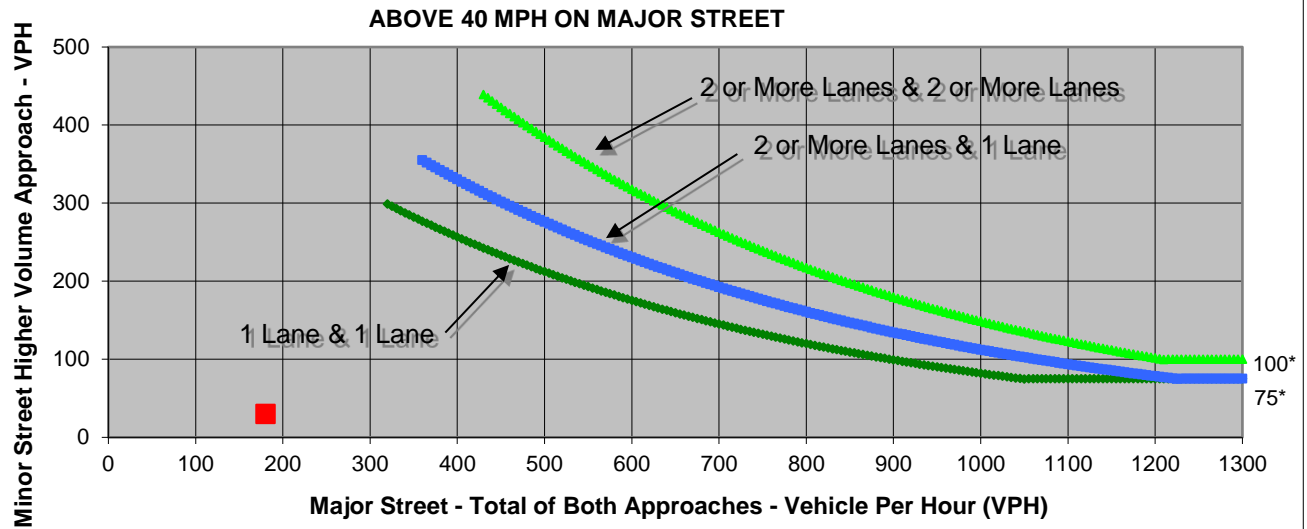
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	5	20	5
Through	90	70	5	10
Right	5	5	5	10
Total	100	80	30	25

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	180	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

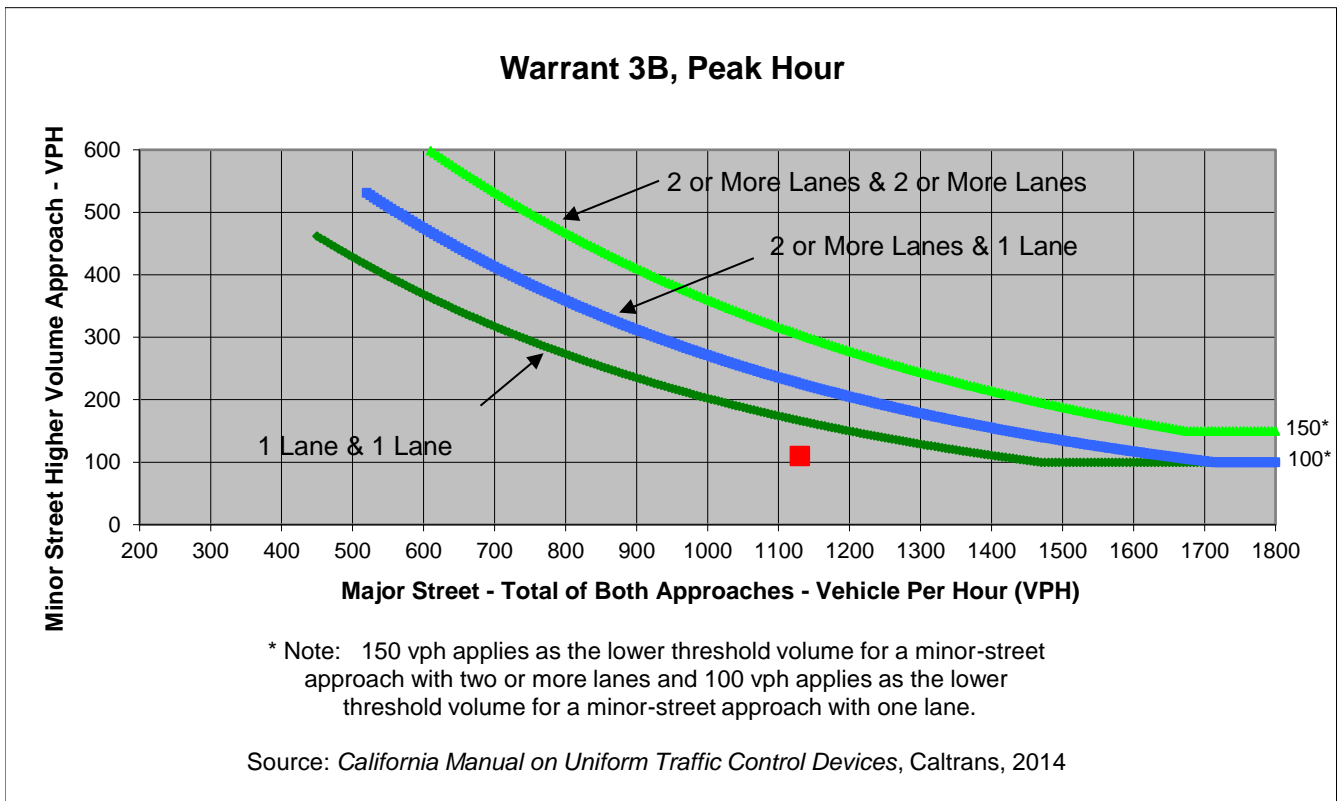
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	30
Through	490	420	0	0
Right	110	0	0	80
Total	600	530	0	110

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	1,130	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Phillips Rd

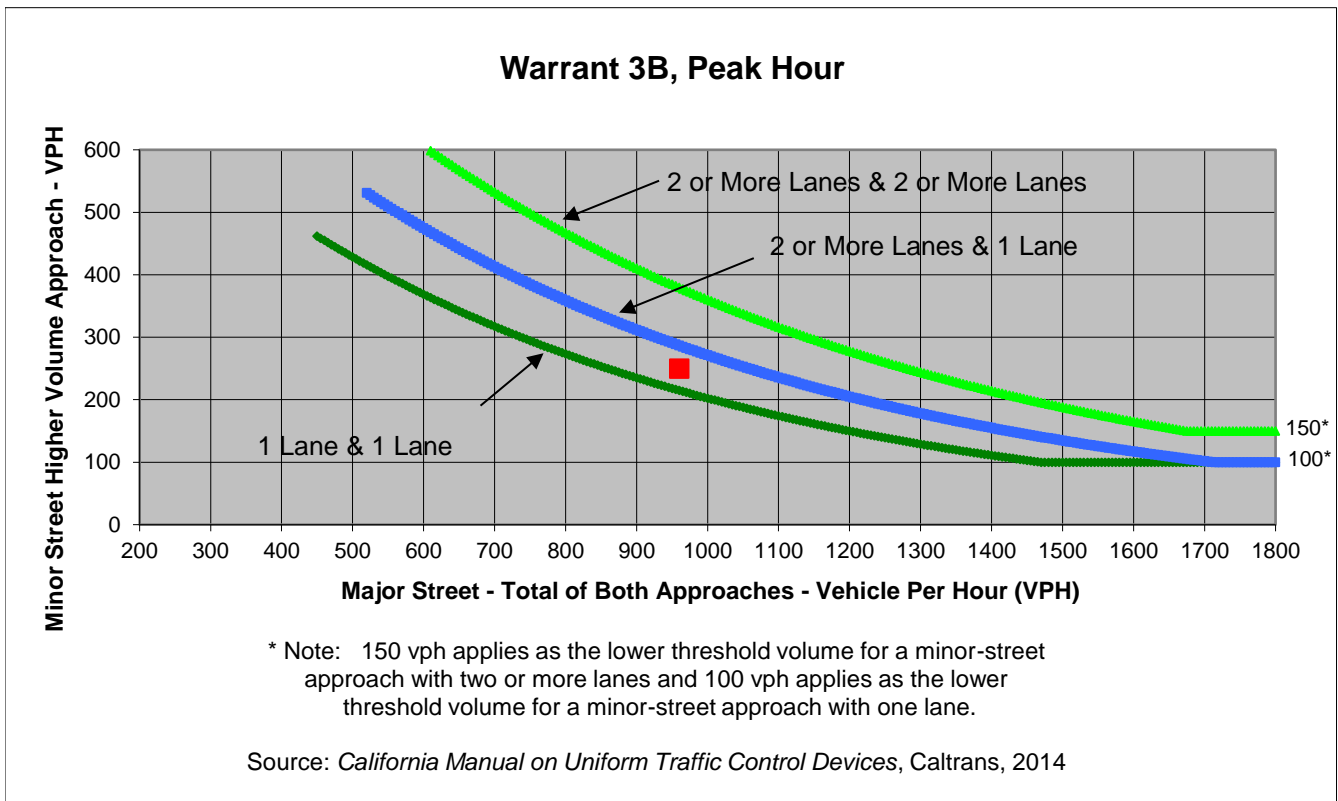
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	80
Through	0	0	410	360
Right	120	0	110	0
Total	250	0	520	440

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	960	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Railroad Ave

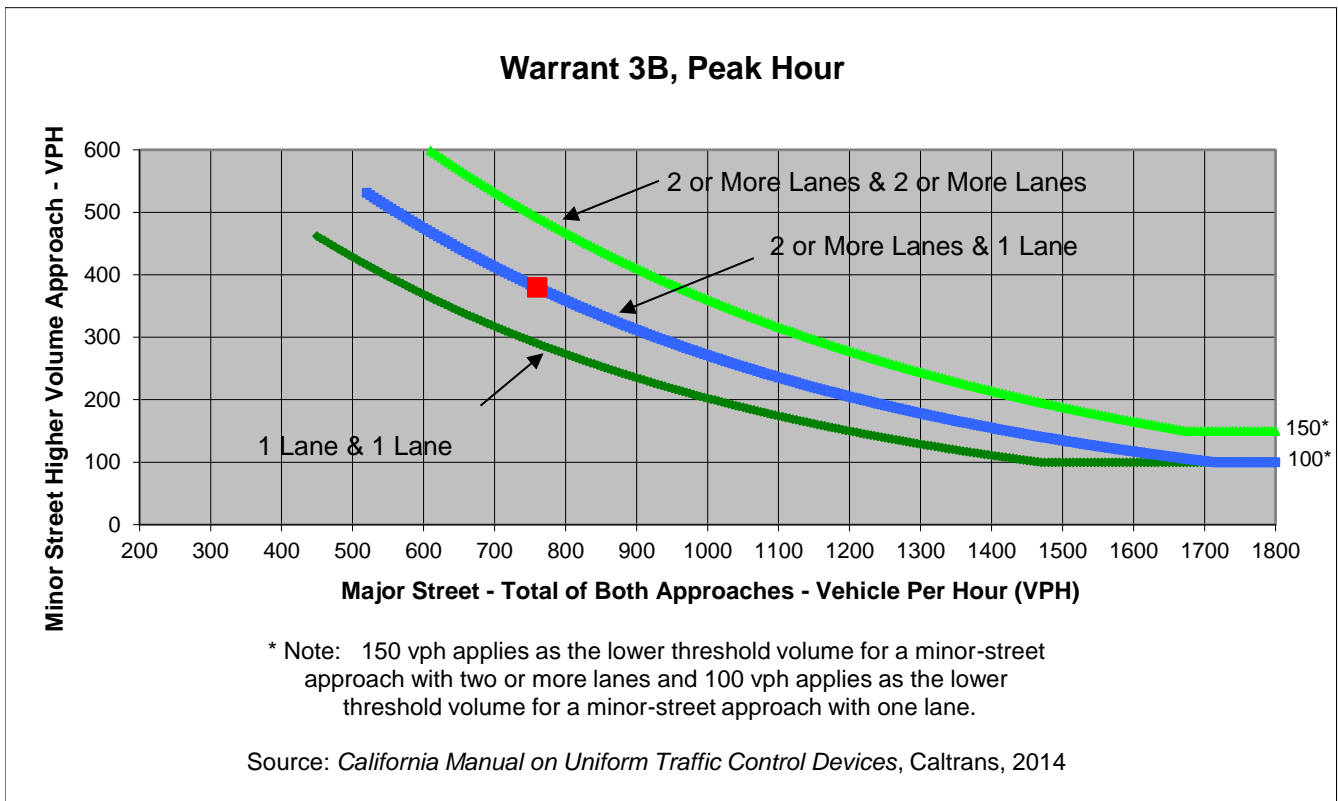
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	140	60	110	30
Through	190	100	300	200
Right	50	50	60	60
Total	380	210	470	290

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	760	380	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

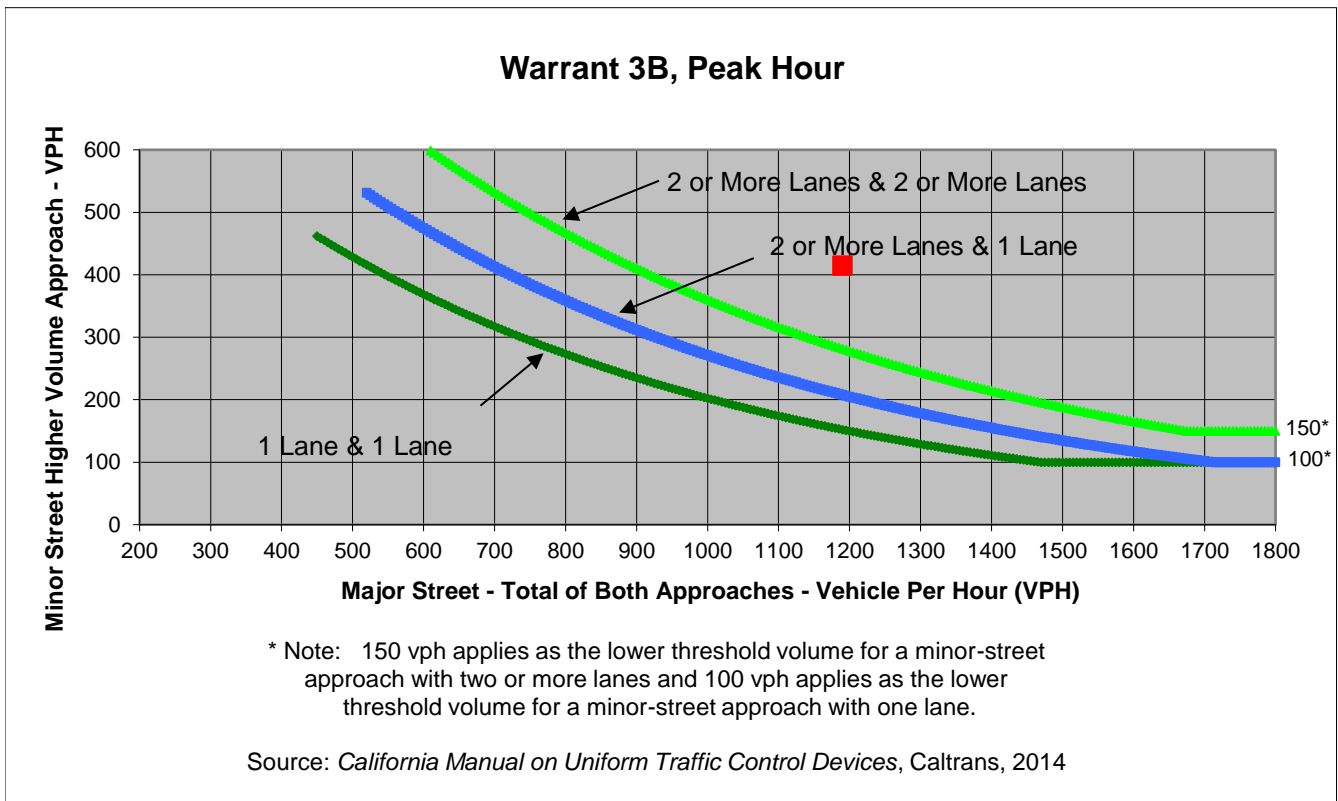
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	375	60	30	95
Through	10	20	330	545
Right	30	60	140	50
Total	415	140	500	690

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,190	415	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

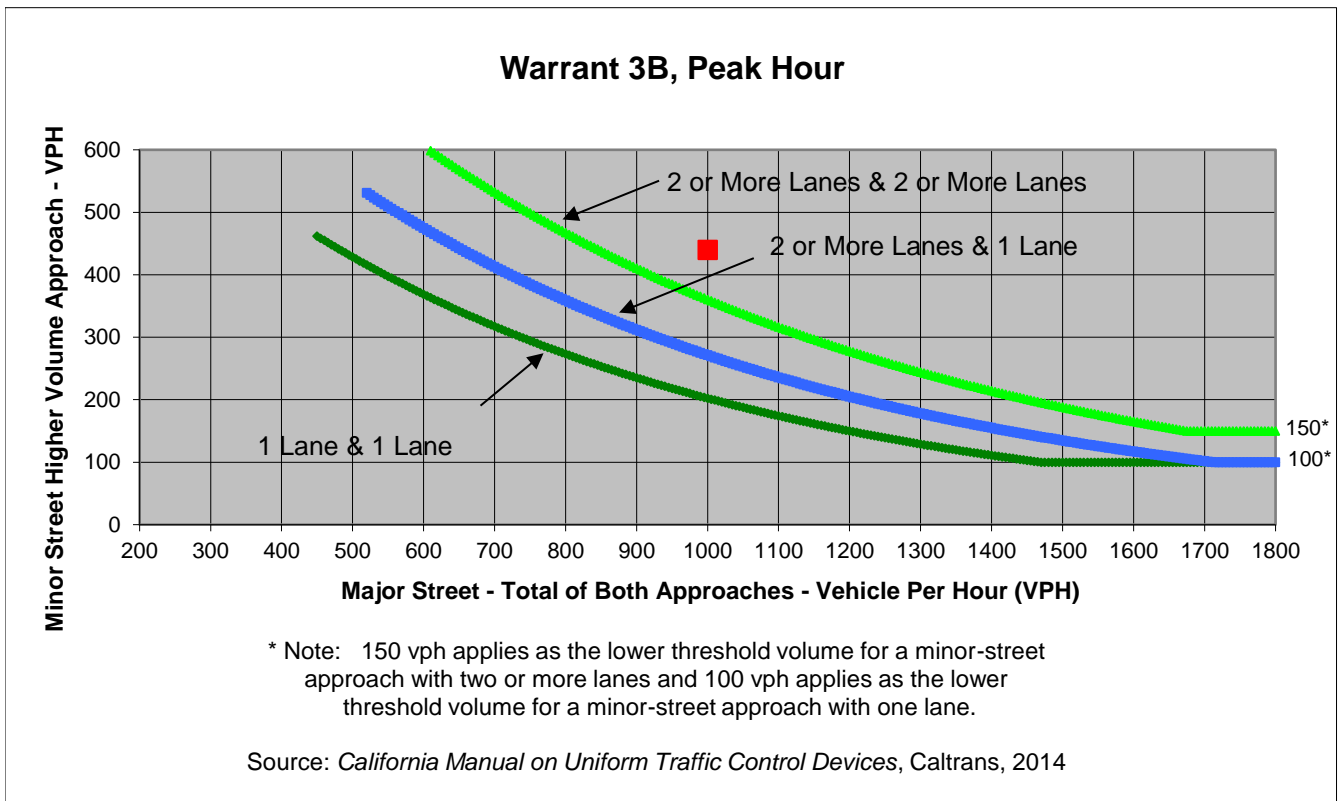
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	165	60	50	70
Through	170	130	290	470
Right	105	70	70	50
Total	440	260	410	590

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,000	440	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Philips Rd
 Minor Street Smith Rd

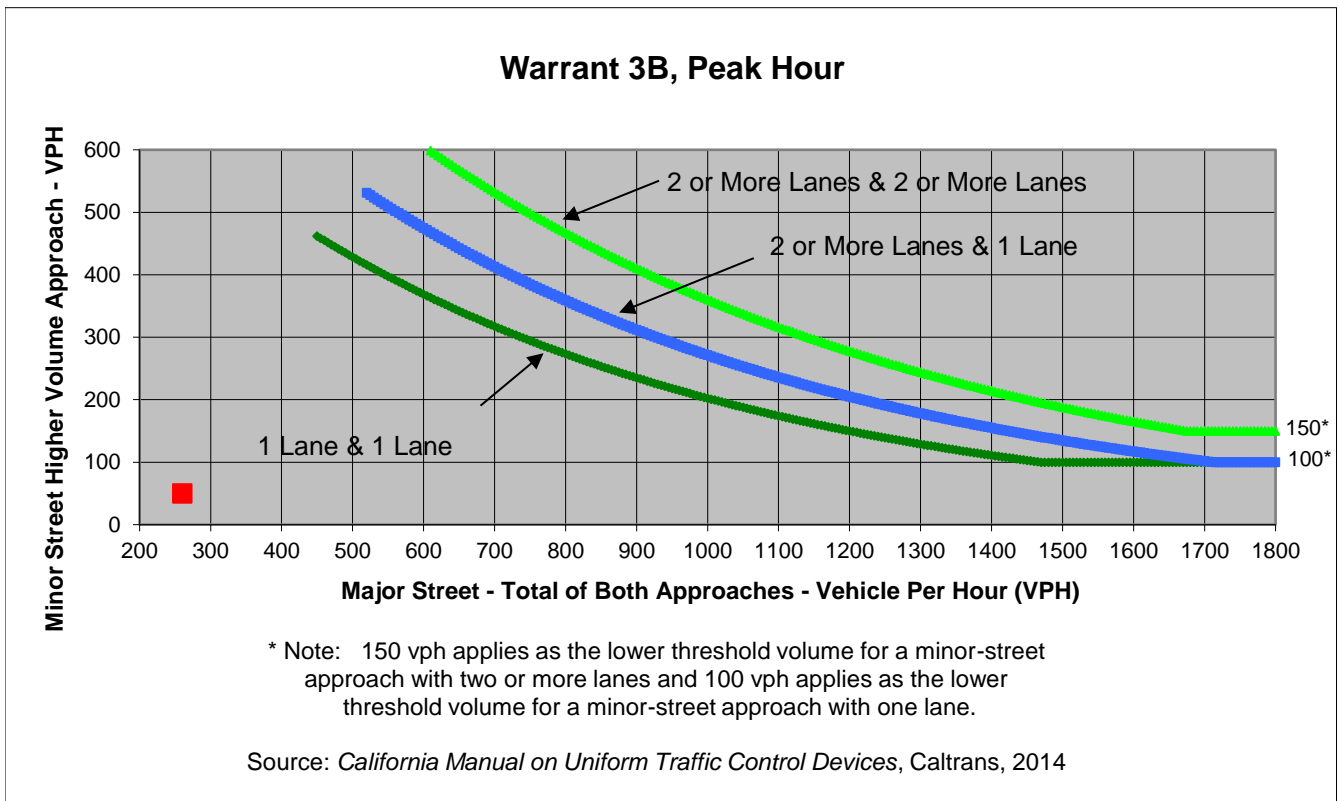
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	30	0
Through	90	110	0	0
Right	0	40	20	0
Total	110	150	50	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Philips Rd	Smith Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	260	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Wallace Dr
 Minor Street Stewart Rd

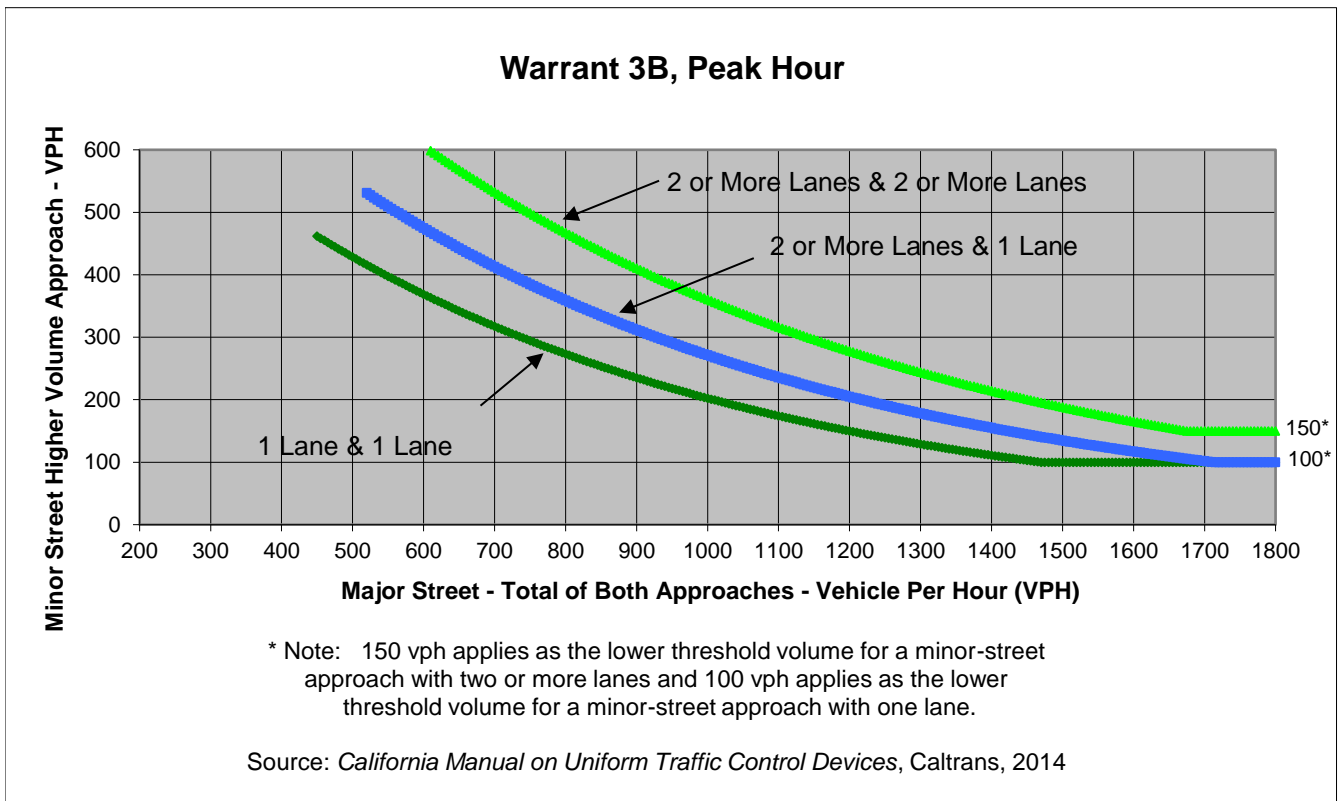
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	40	5
Through	5	5	165	210
Right	10	55	5	10
Total	20	70	210	225

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	90	225	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

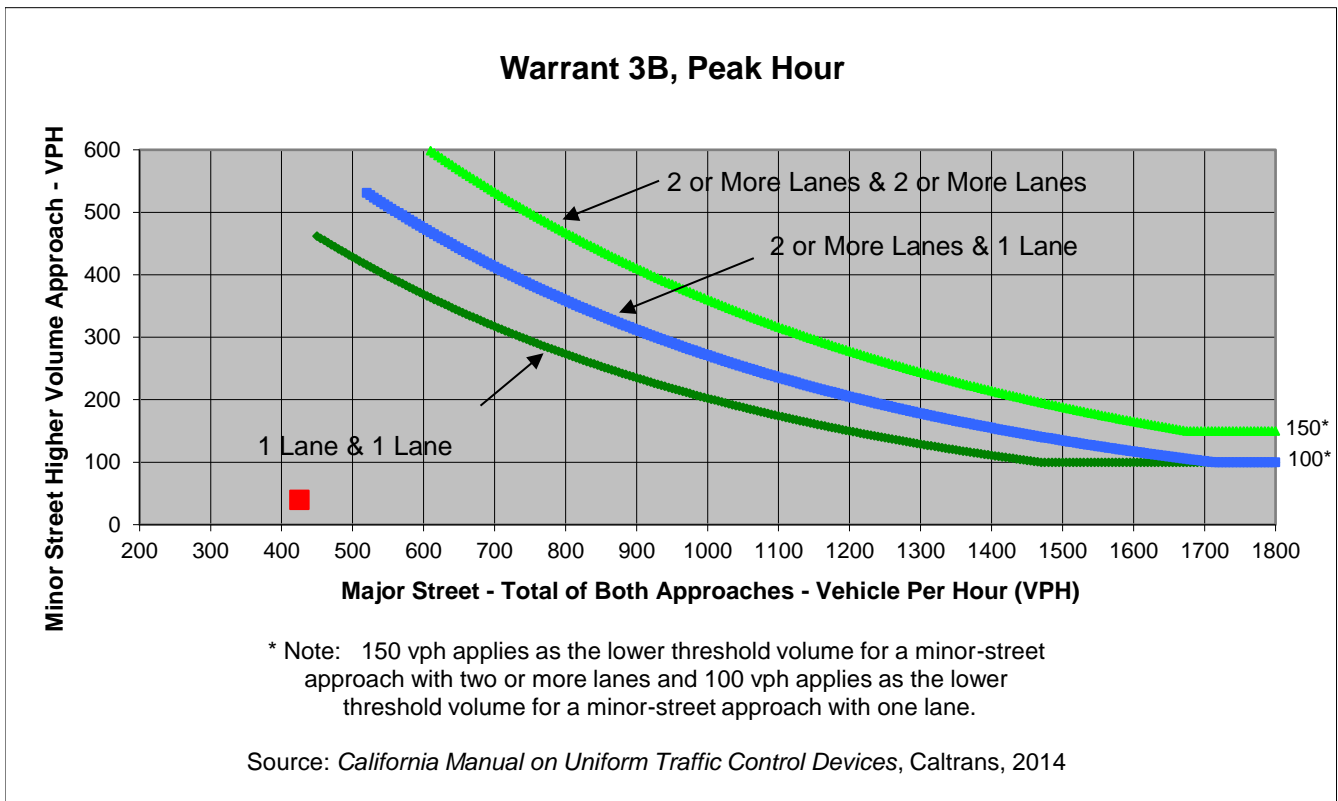
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	25
Through	0	0	165	215
Right	30	0	20	0
Total	40	0	185	240

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	425	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Railroad Ave

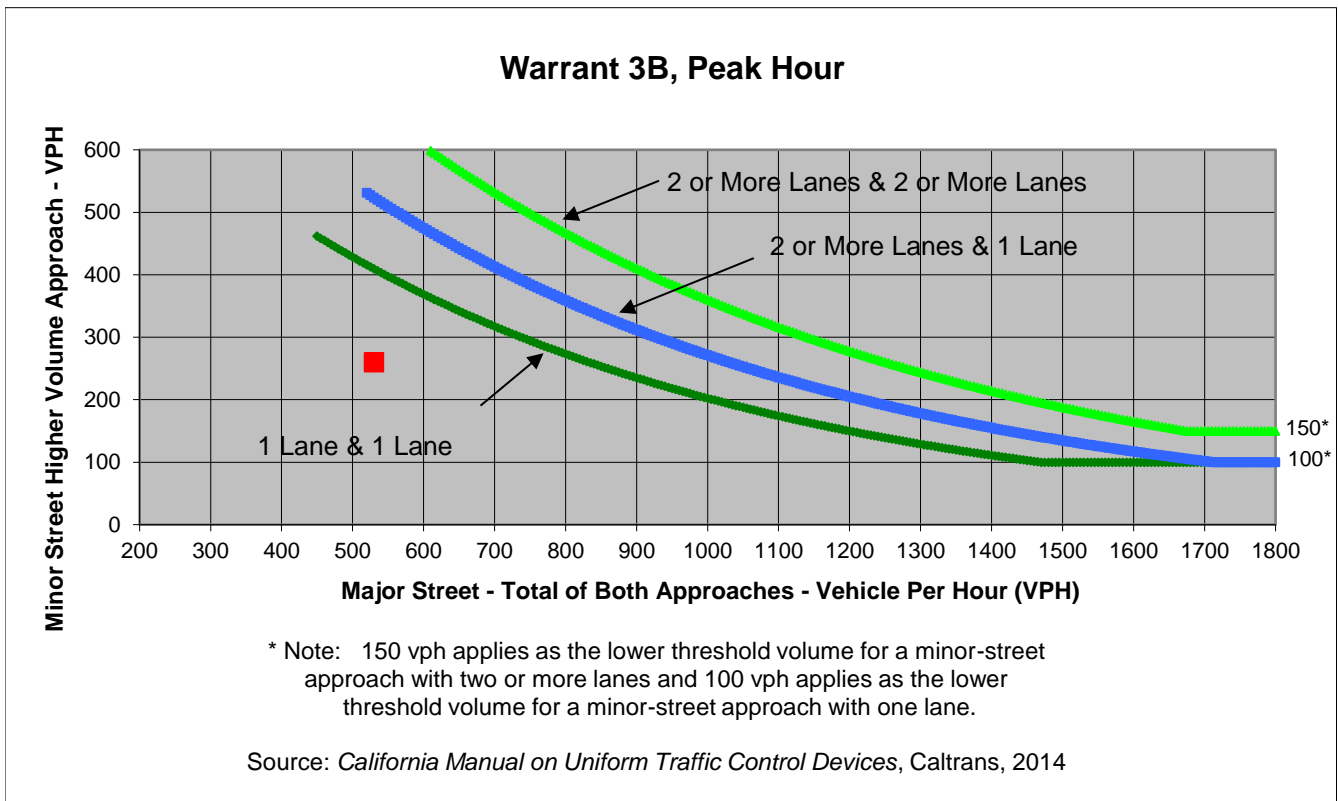
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	120	50	20
Through	40	80	135	170
Right	20	60	5	150
Total	70	260	190	340

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	530	260	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Gilsizer Ranch Wy

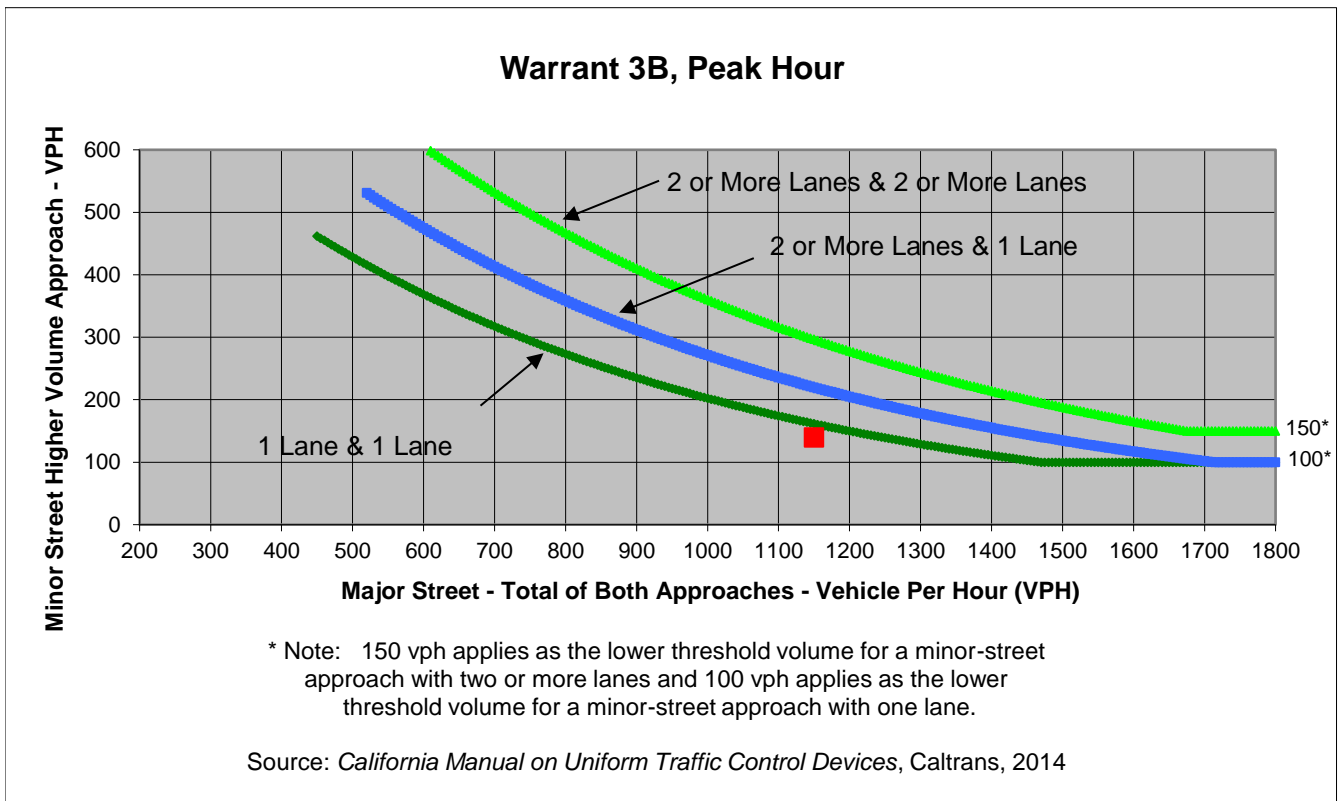
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	40	0	0	170
Through	0	0	530	430
Right	100	0	20	0
Total	140	0	550	600

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,150	140	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd

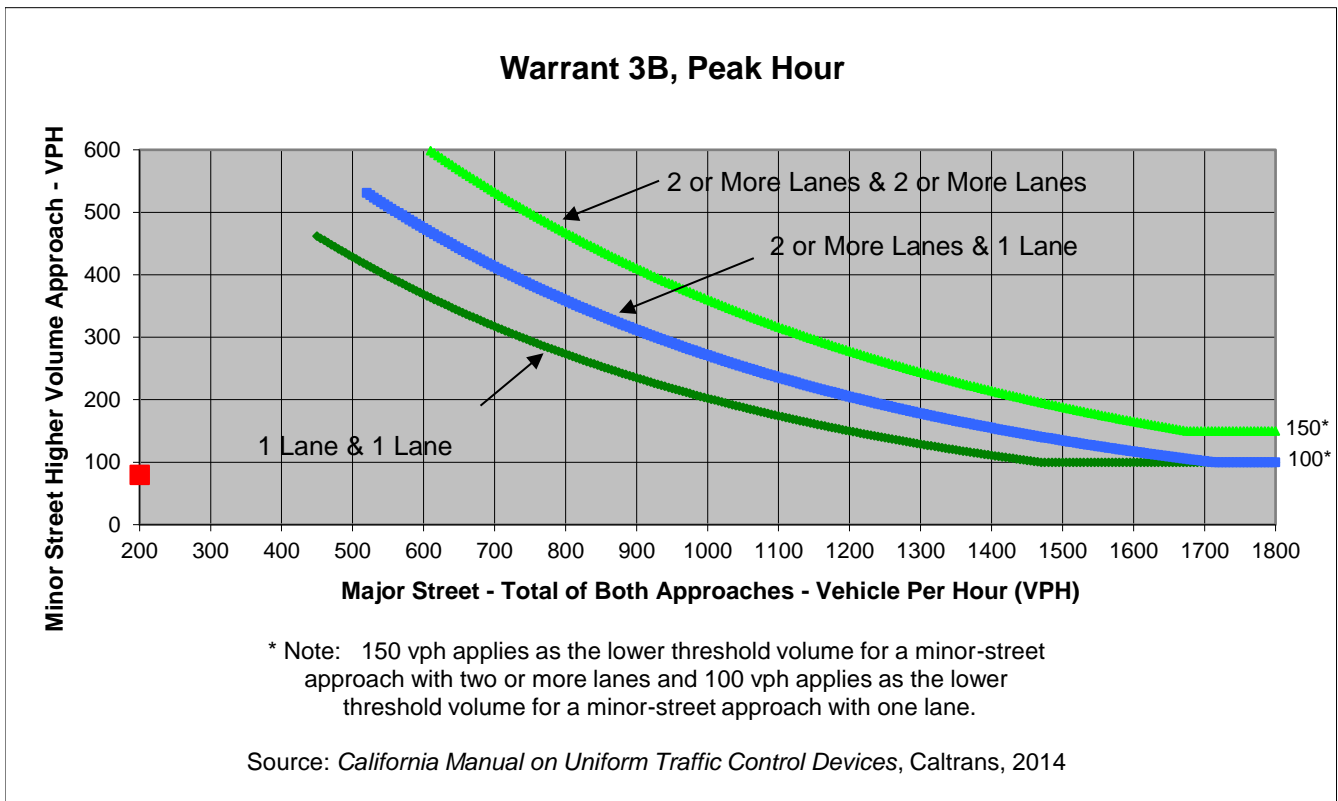
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	60	0
Through	20	20	0	0
Right	0	150	20	0
Total	30	170	80	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	200	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Stewart Rd

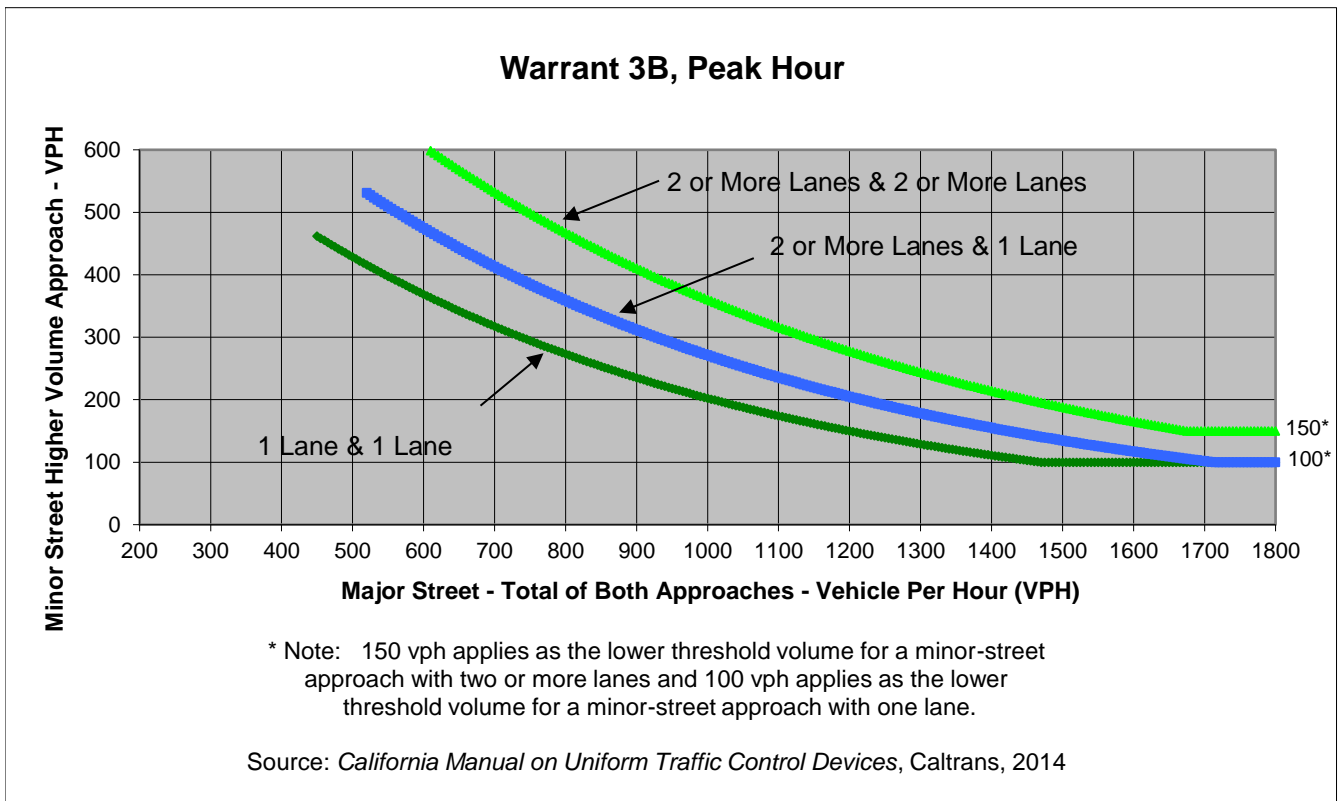
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	60	5	0
Through	0	0	50	90
Right	0	15	0	25
Total	0	75	55	115

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	75	115	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

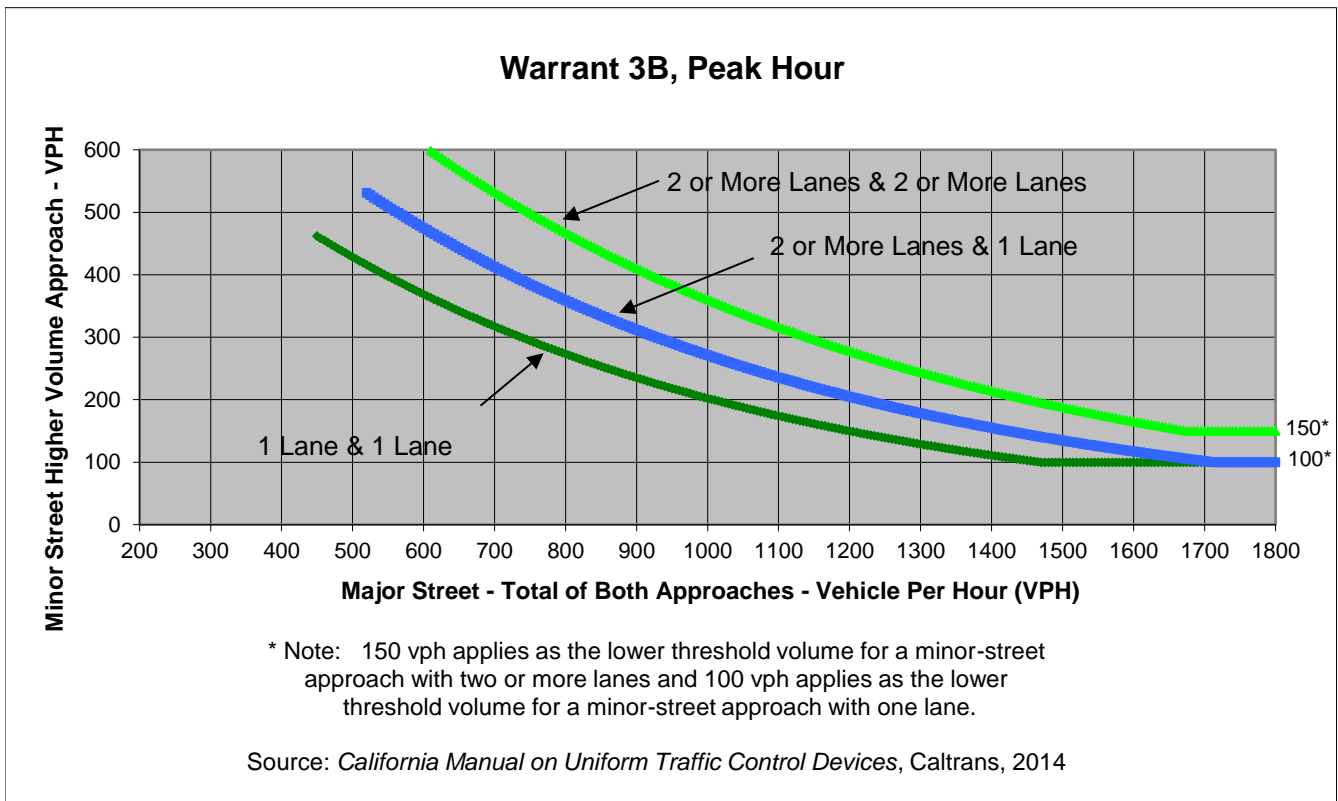
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	50	15
Through	50	30	25	15
Right	15	20	20	100
Total	75	80	95	130

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	155	130	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

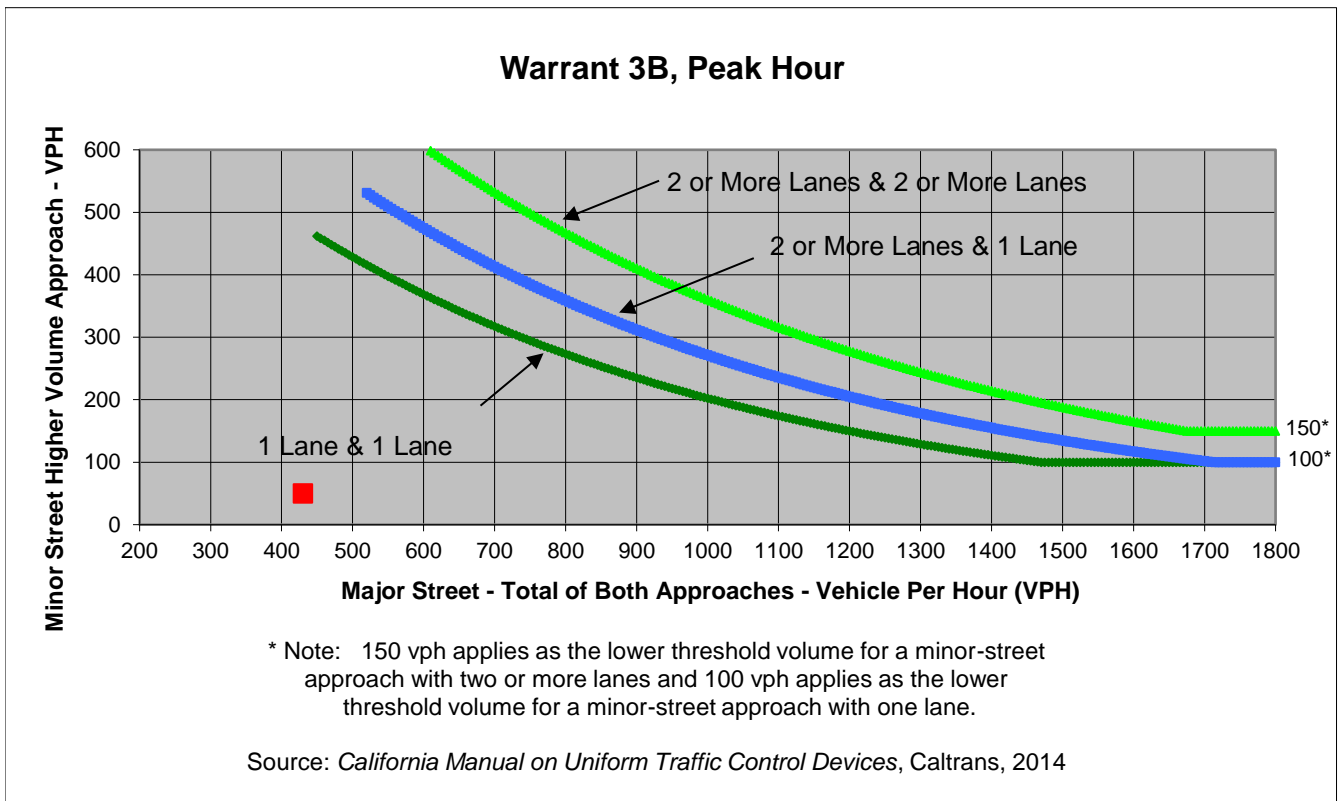
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	0	40	0
Through	150	210	0	0
Right	0	40	10	0
Total	180	250	50	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	430	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Kells Ranch Rd

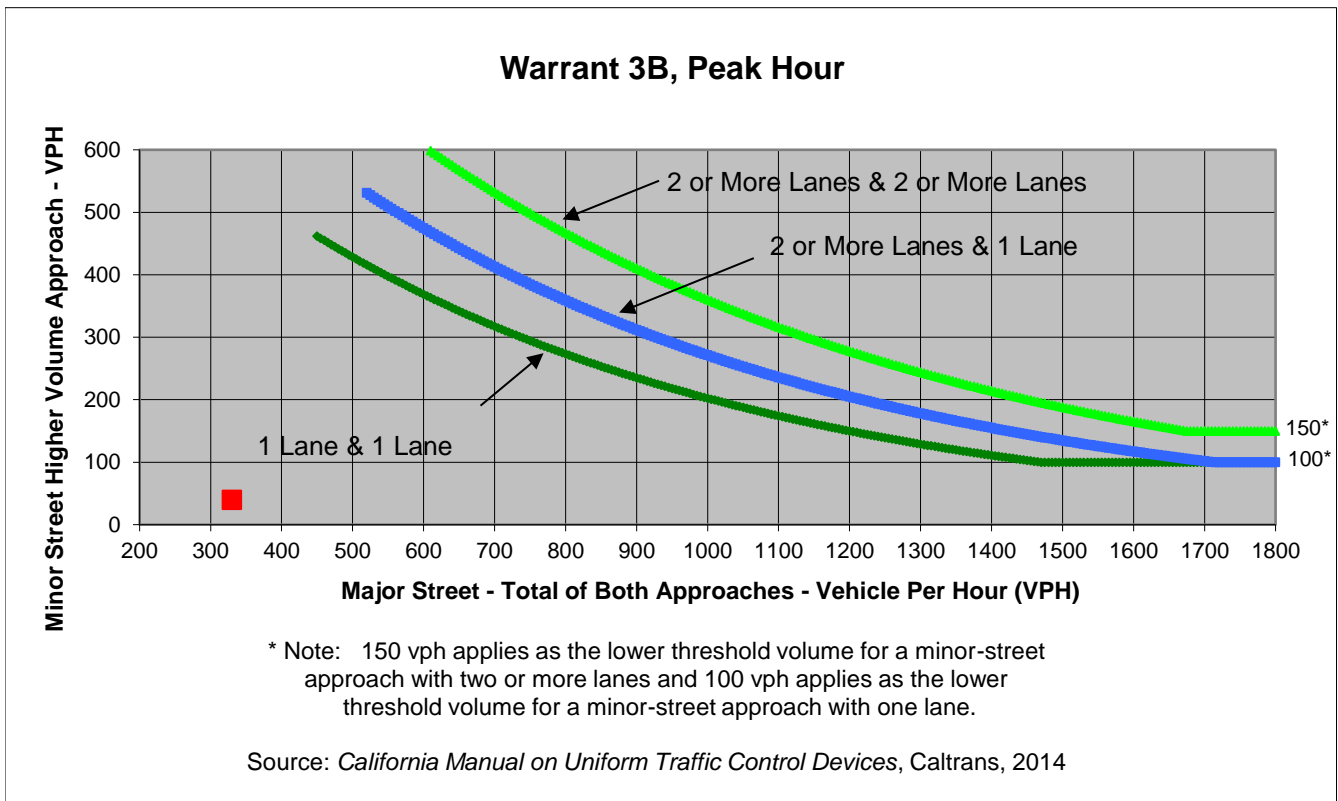
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	10
Through	100	120	0	0
Right	10	0	0	30
Total	110	220	0	40

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	330	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Newkom Ranch Rd

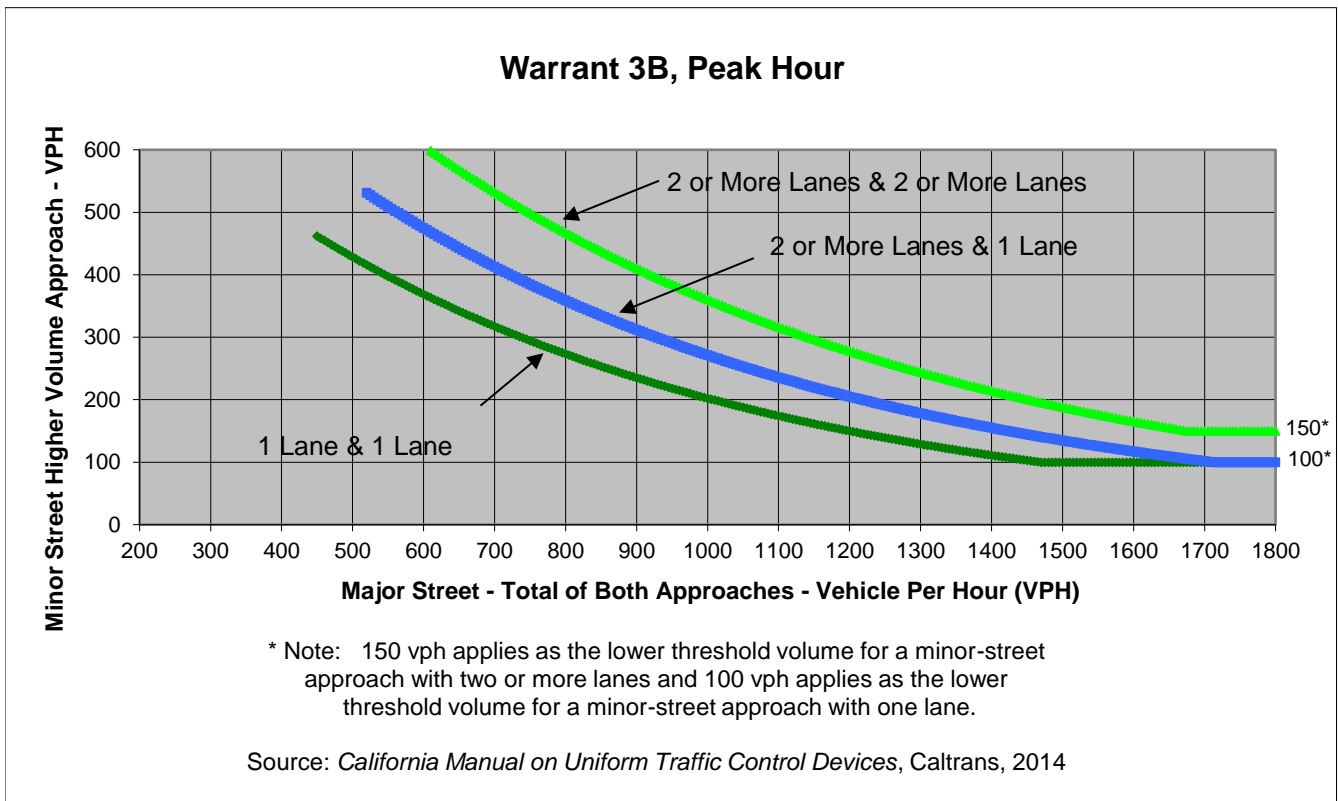
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	20	0
Through	25	10	0	0
Right	0	40	10	0
Total	45	50	30	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	95	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Shangha Bend Rd

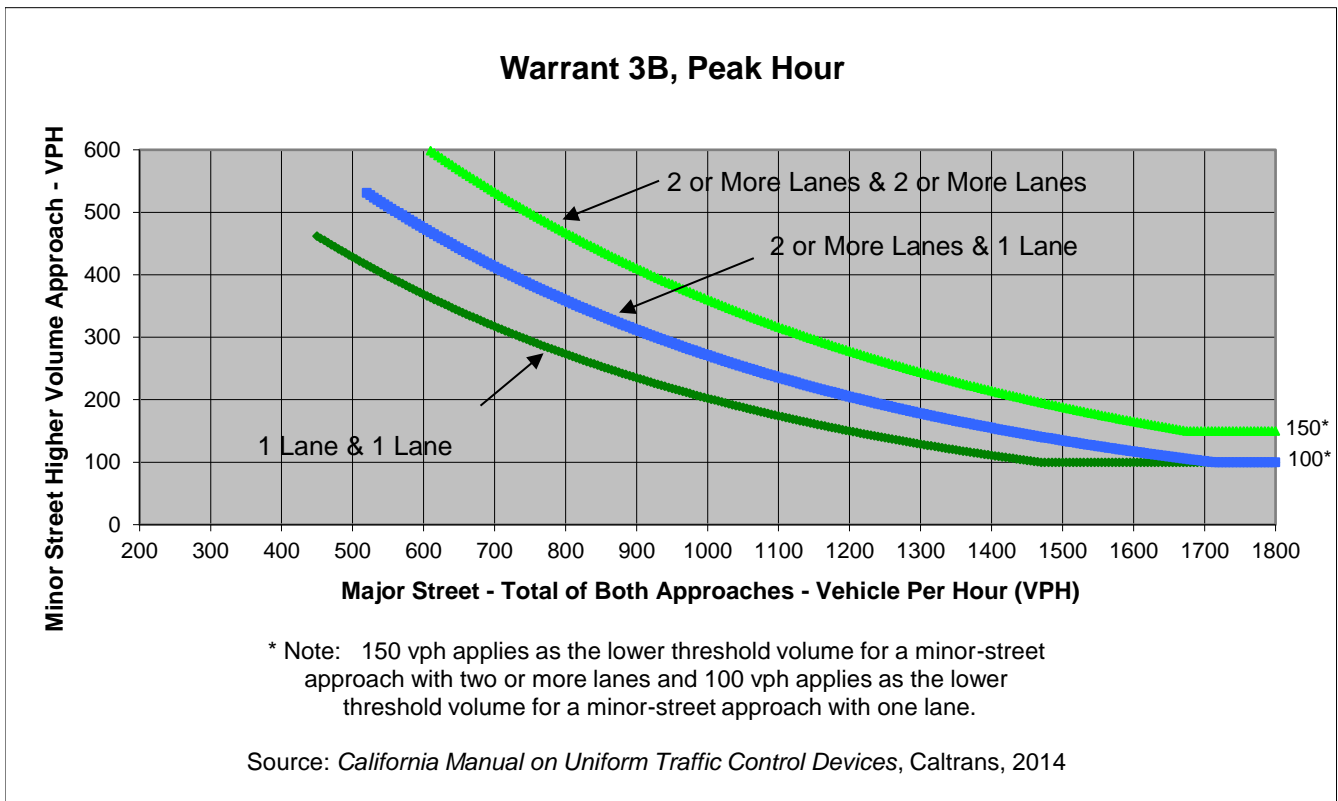
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	20
Through	50	30	0	0
Right	20	0	0	60
Total	70	50	0	80

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Shangha Bend Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	120	80	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			

Major Street Chagaris Ranch Wy
 Minor Street Halprin Ranch Dr

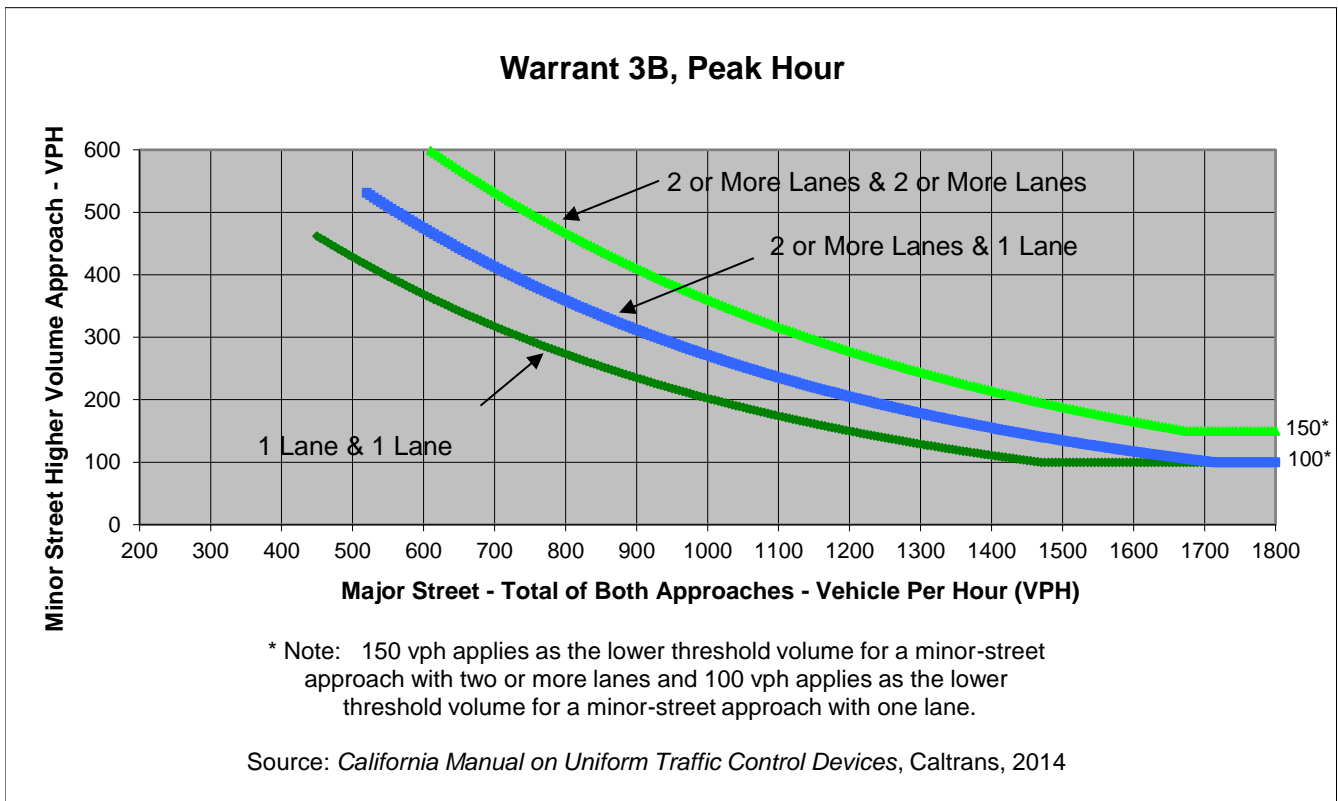
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	0	10	0
Through	50	30	0	0
Right	0	10	20	0
Total	110	40	30	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Halprin Ranch Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	150	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Walton Ave
 Minor Street Richland Rd

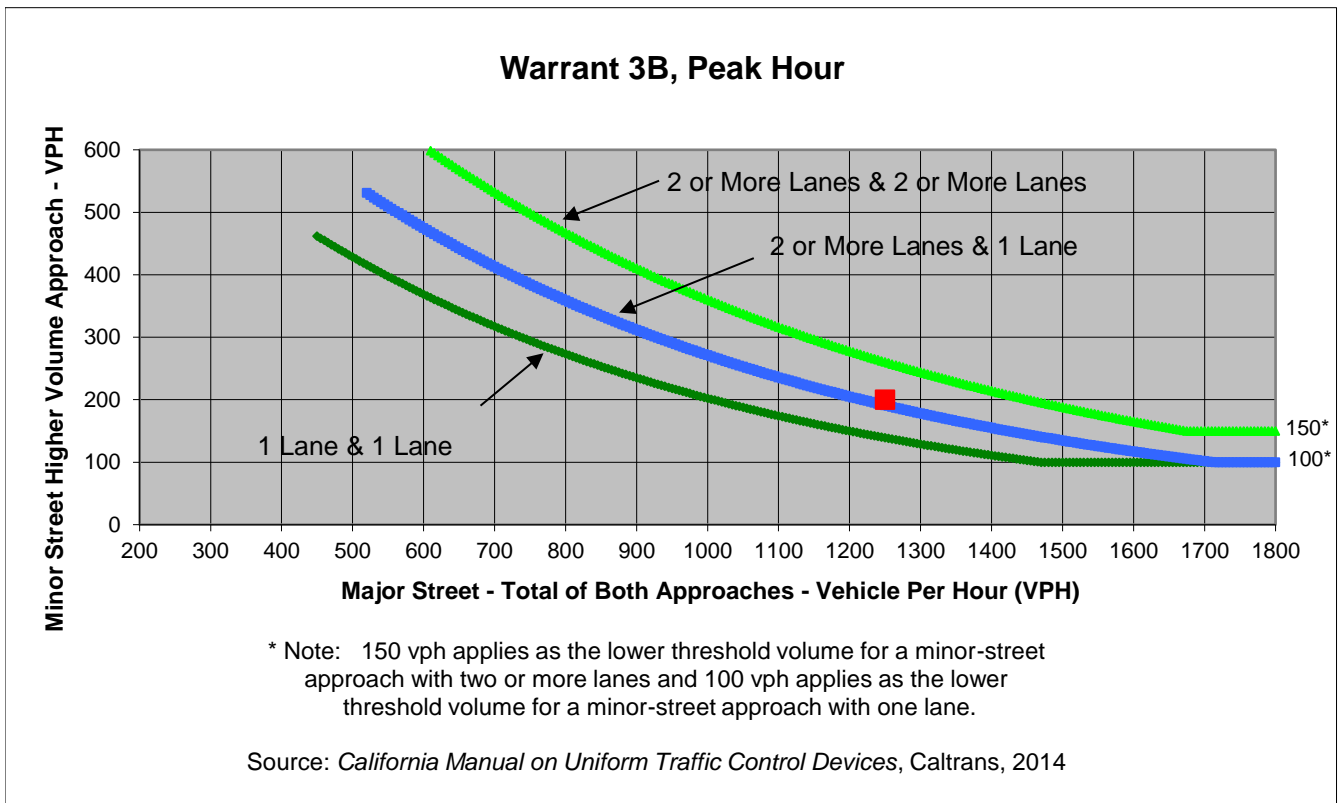
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	100
Through	470	610	0	0
Right	60	0	0	100
Total	530	720	0	200

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,250	200	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

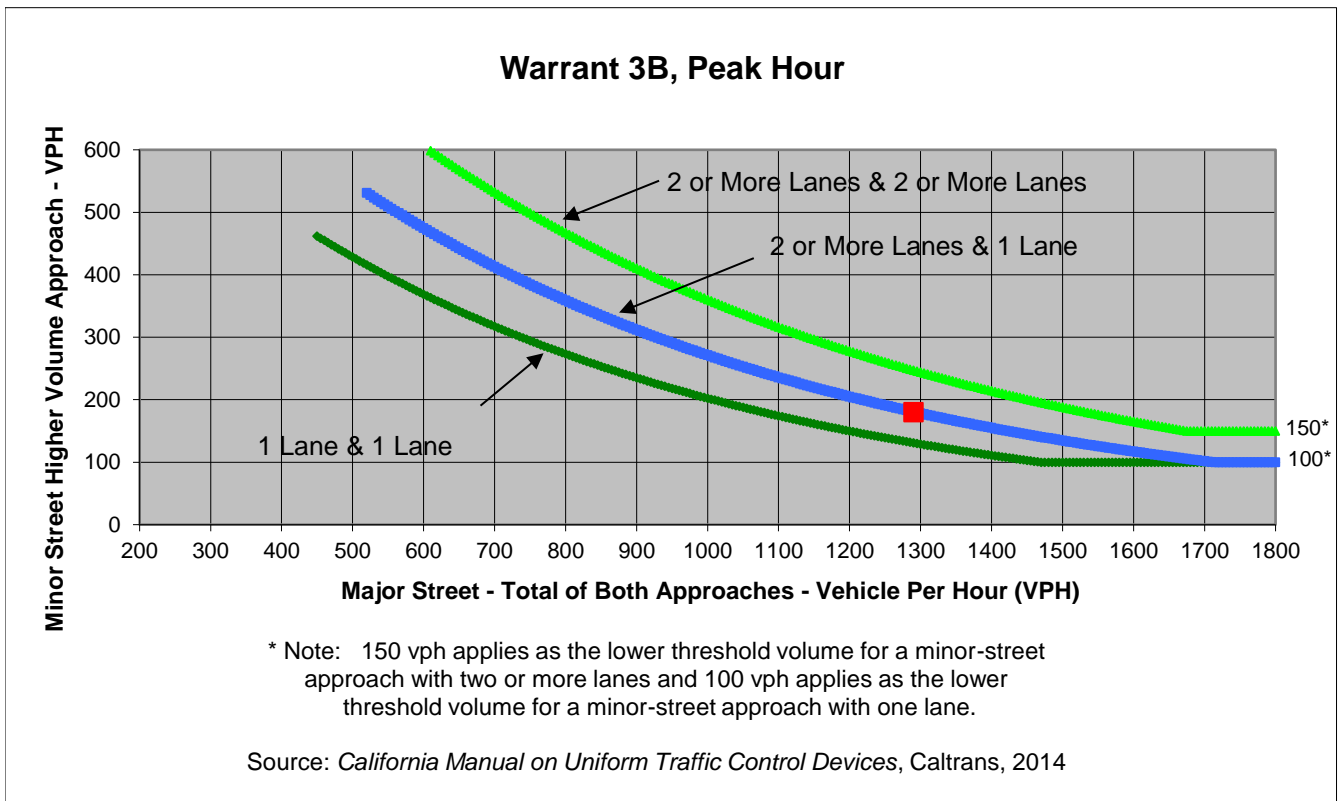
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	0	60
Through	0	0	530	580
Right	90	0	120	0
Total	180	0	650	640

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,290	180	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

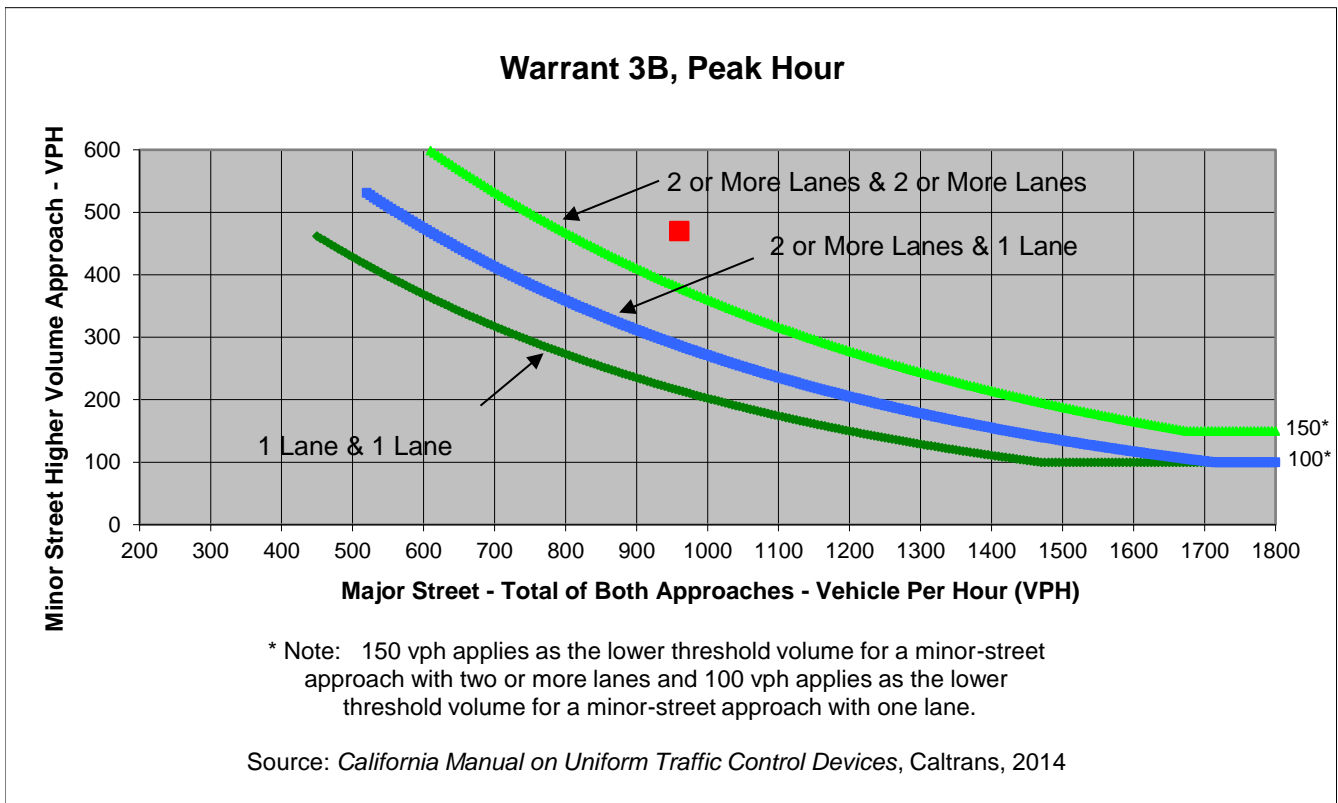
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	160	50	40
Through	120	240	320	370
Right	50	70	110	70
Total	270	470	480	480

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	960	470	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

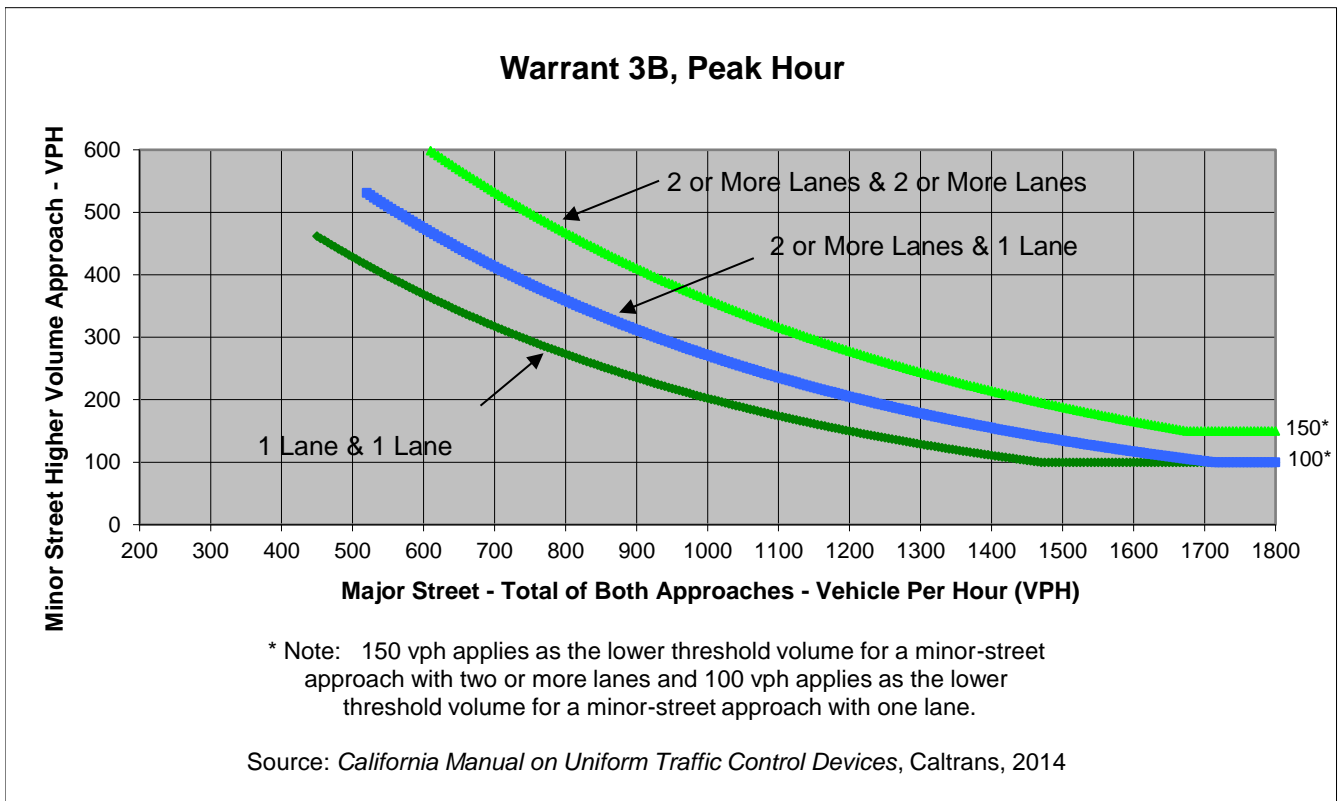
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	550	30	80	110
Through	10	20	800	410
Right	50	40	230	20
Total	610	90	1,110	540

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,650	610	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

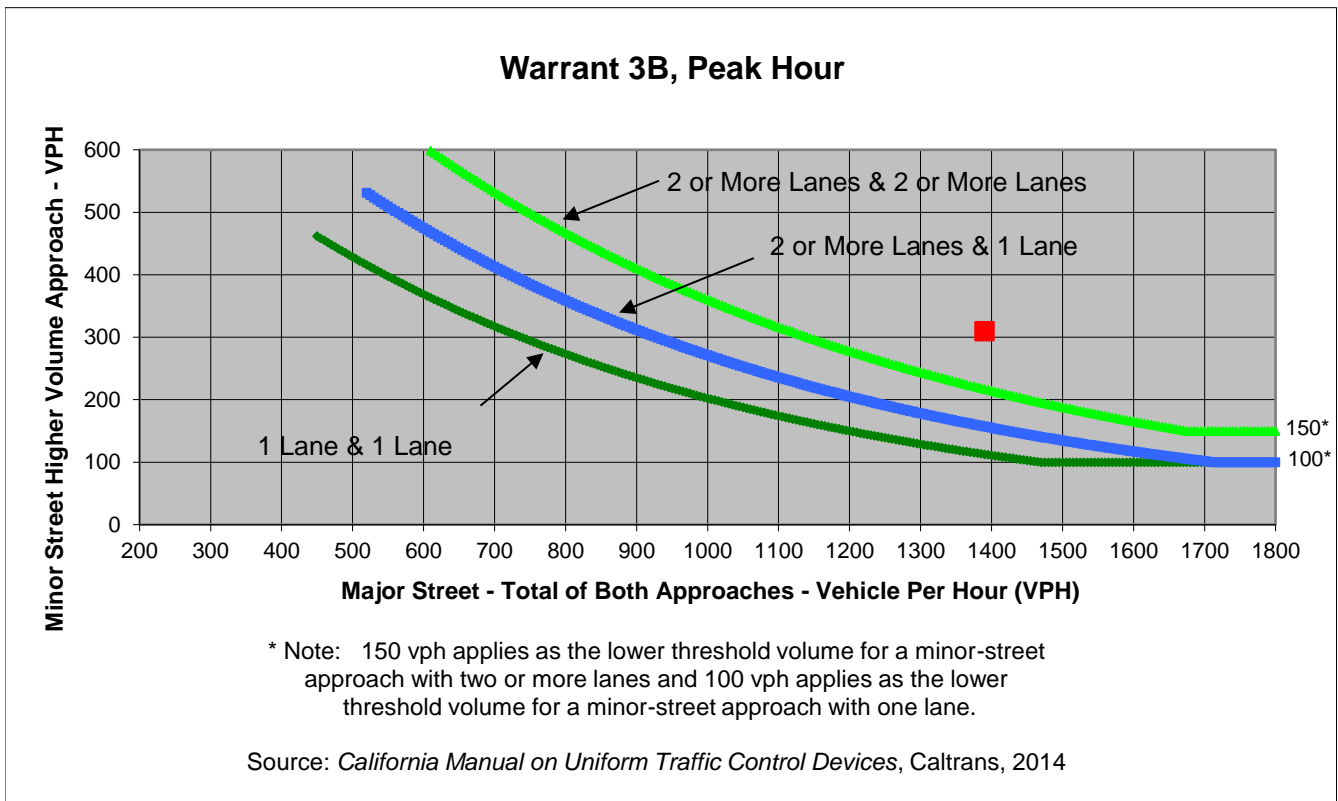
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	70	110	60
Through	90	160	600	400
Right	80	80	160	60
Total	250	310	870	520

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,390	310	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Philips Rd
 Minor Street Smith Rd

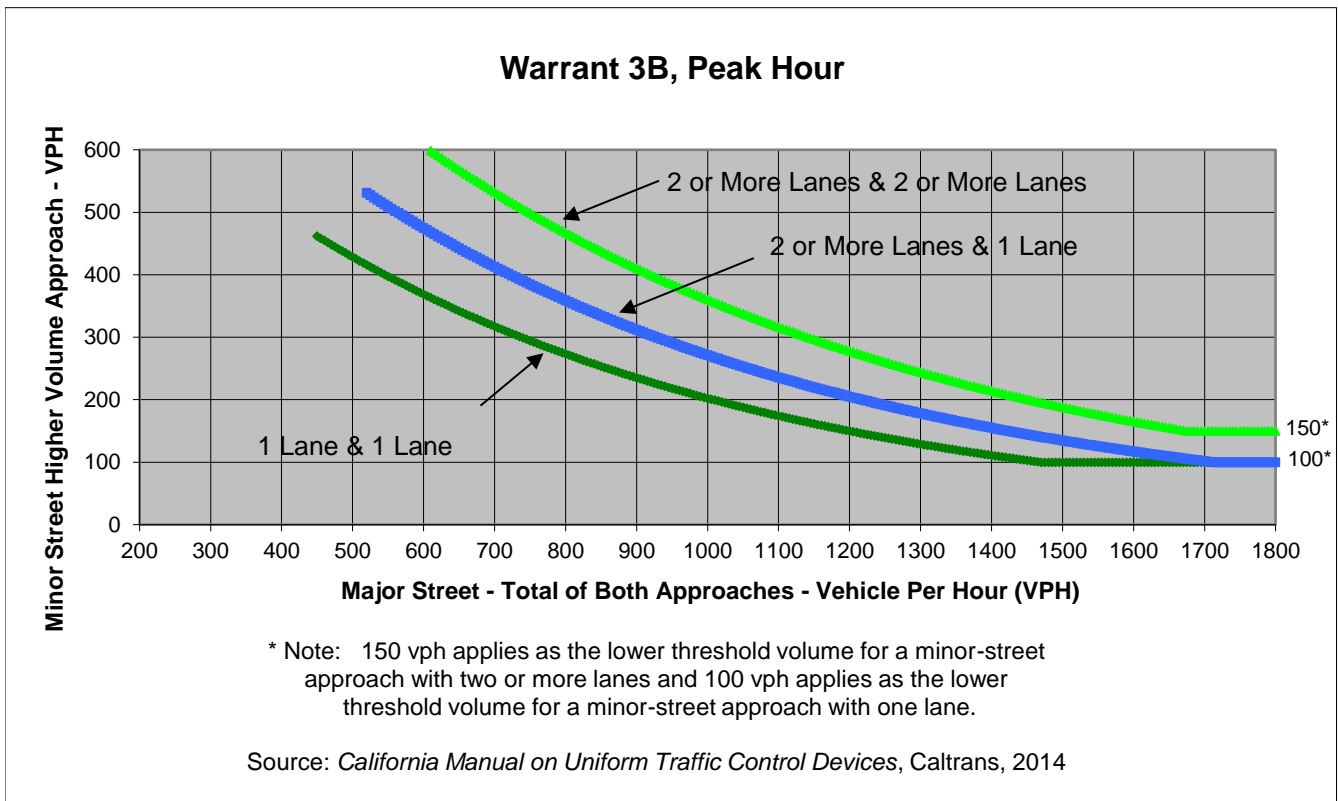
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	80	60	0	0
Right	0	12	40	0
Total	100	72	80	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Philips Rd	Smith Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	172	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Wallace Dr
 Minor Street Stewart Rd

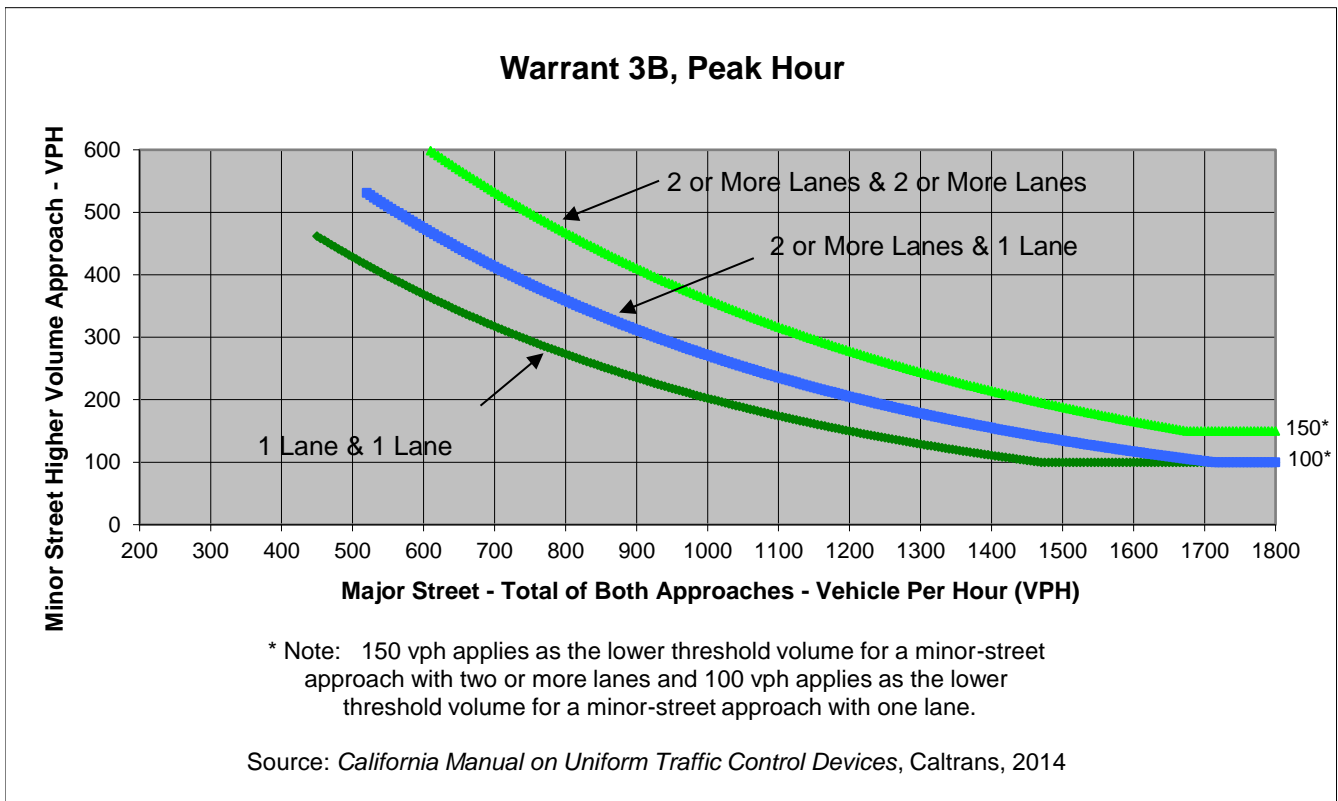
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	85	5
Through	5	5	170	94
Right	5	35	5	10
Total	15	60	260	109

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	75	260	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

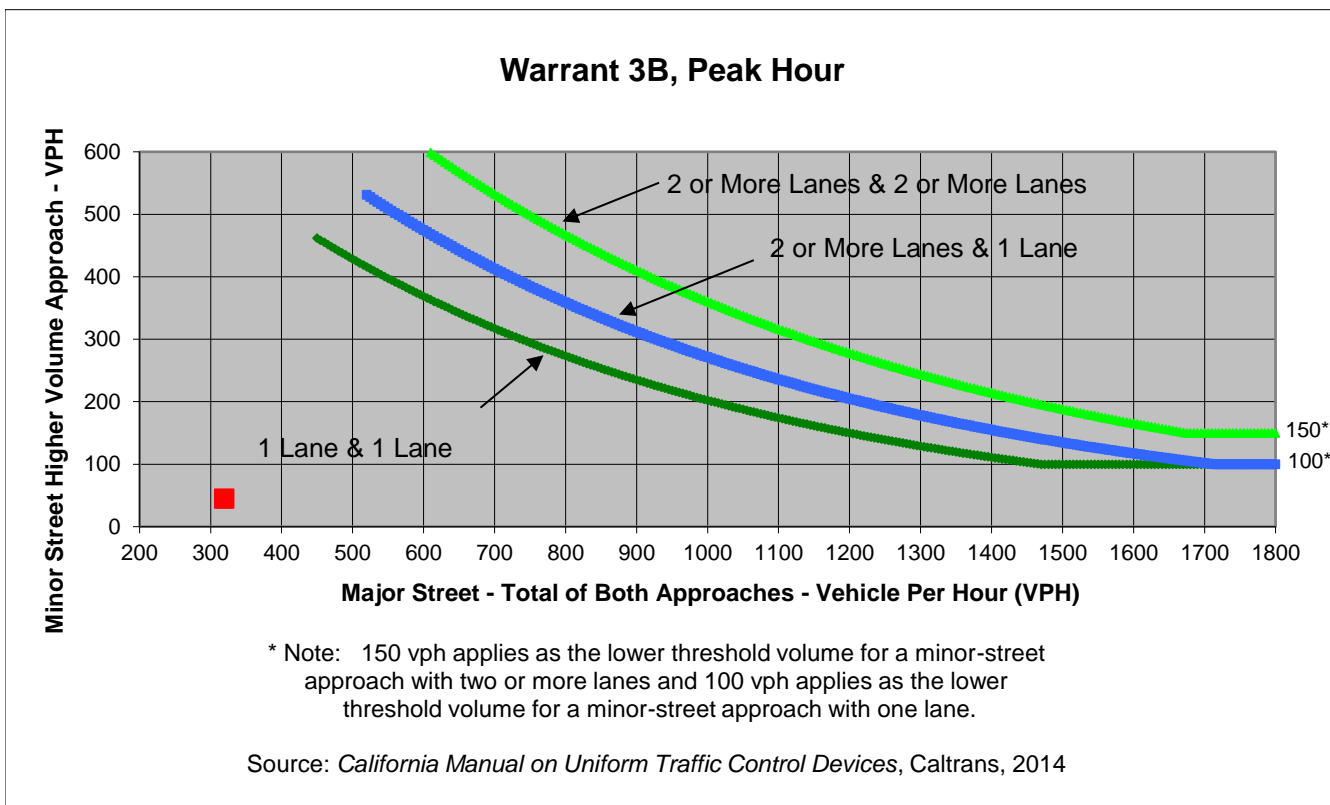
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	0	0	30
Through	0	0	180	94
Right	30	0	15	0
Total	45	0	195	124

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	319	45	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

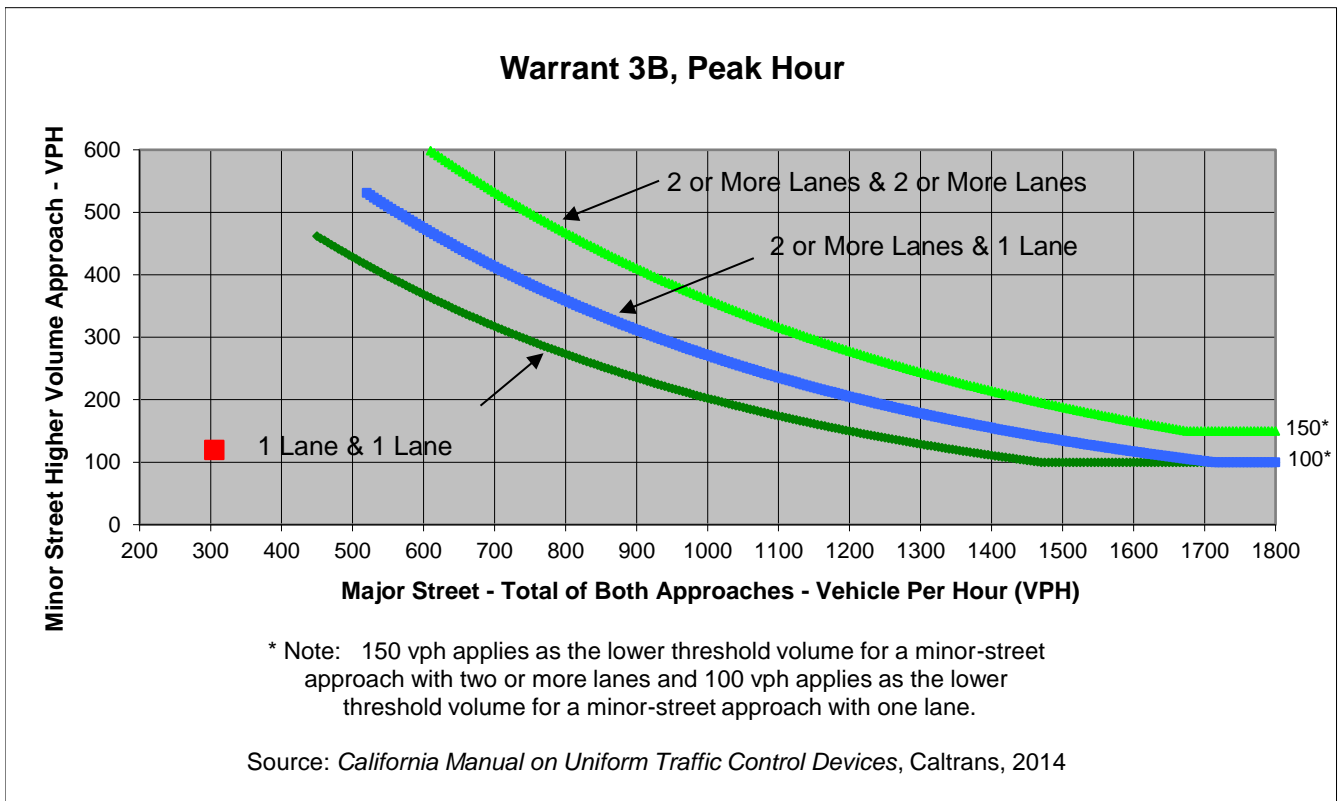
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	30	70	10
Through	50	40	120	70
Right	5	50	5	30
Total	60	120	195	110

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	305	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Gilsizer Ranch Wy

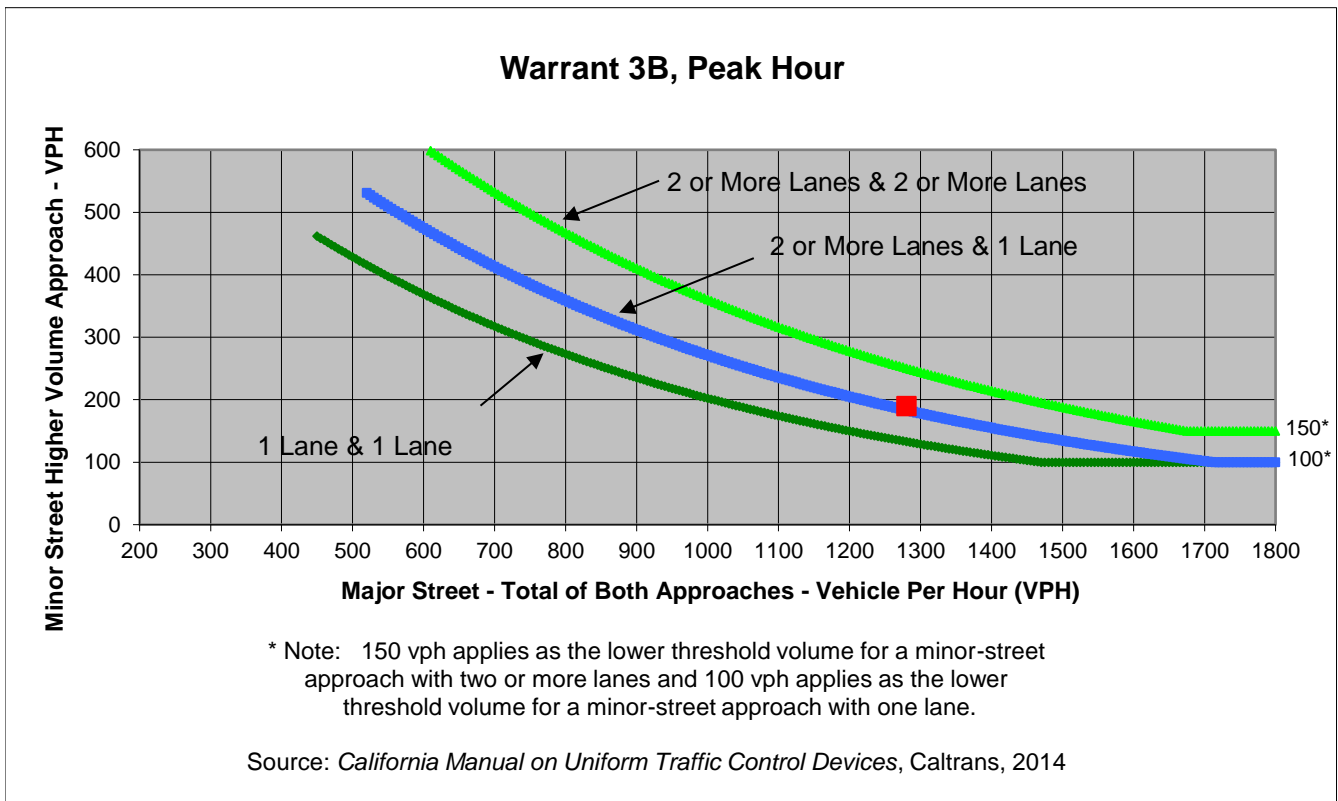
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	160
Through	0	0	530	560
Right	170	0	30	0
Total	190	0	560	720

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,280	190	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd

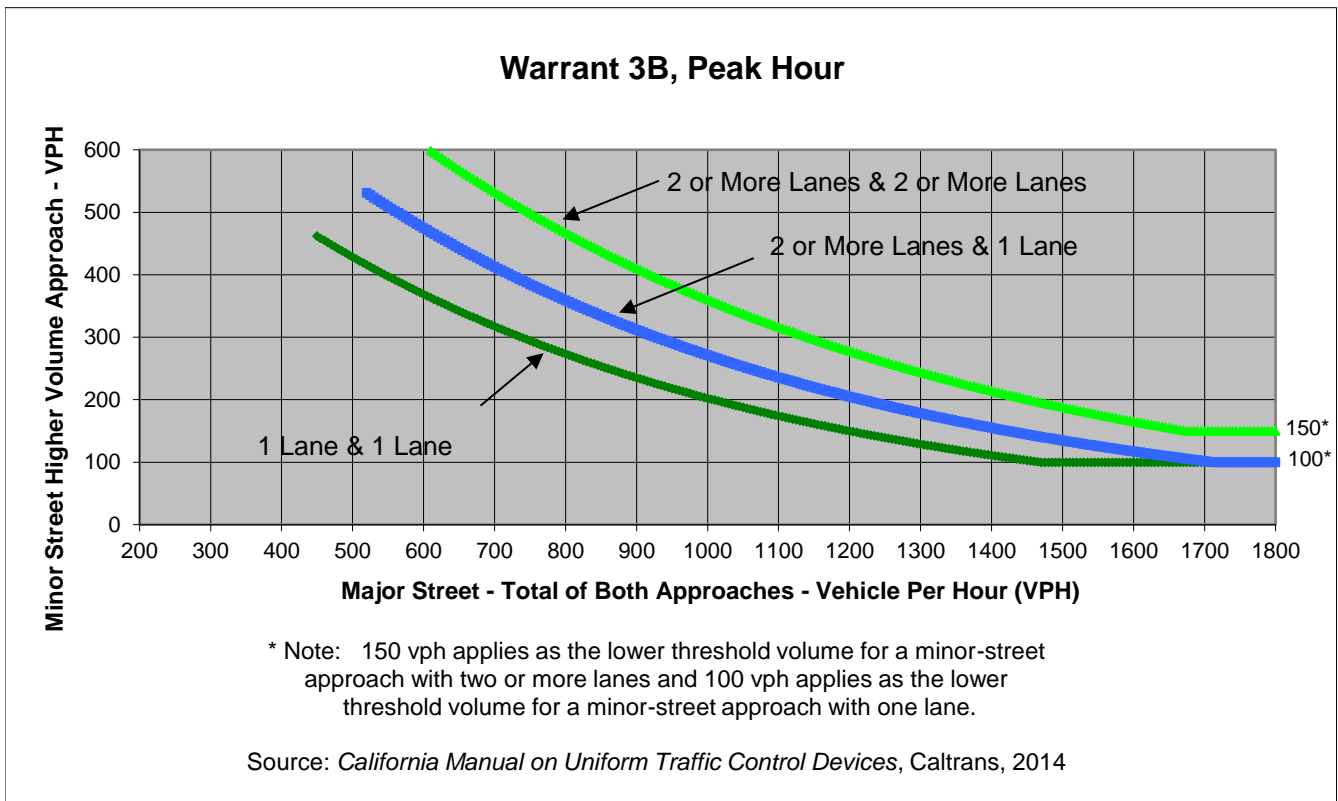
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	150	0
Through	20	40	0	0
Right	0	90	10	0
Total	40	130	160	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	170	160	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Gilsizer Ranch Wy
 Minor Street Stewart Rd

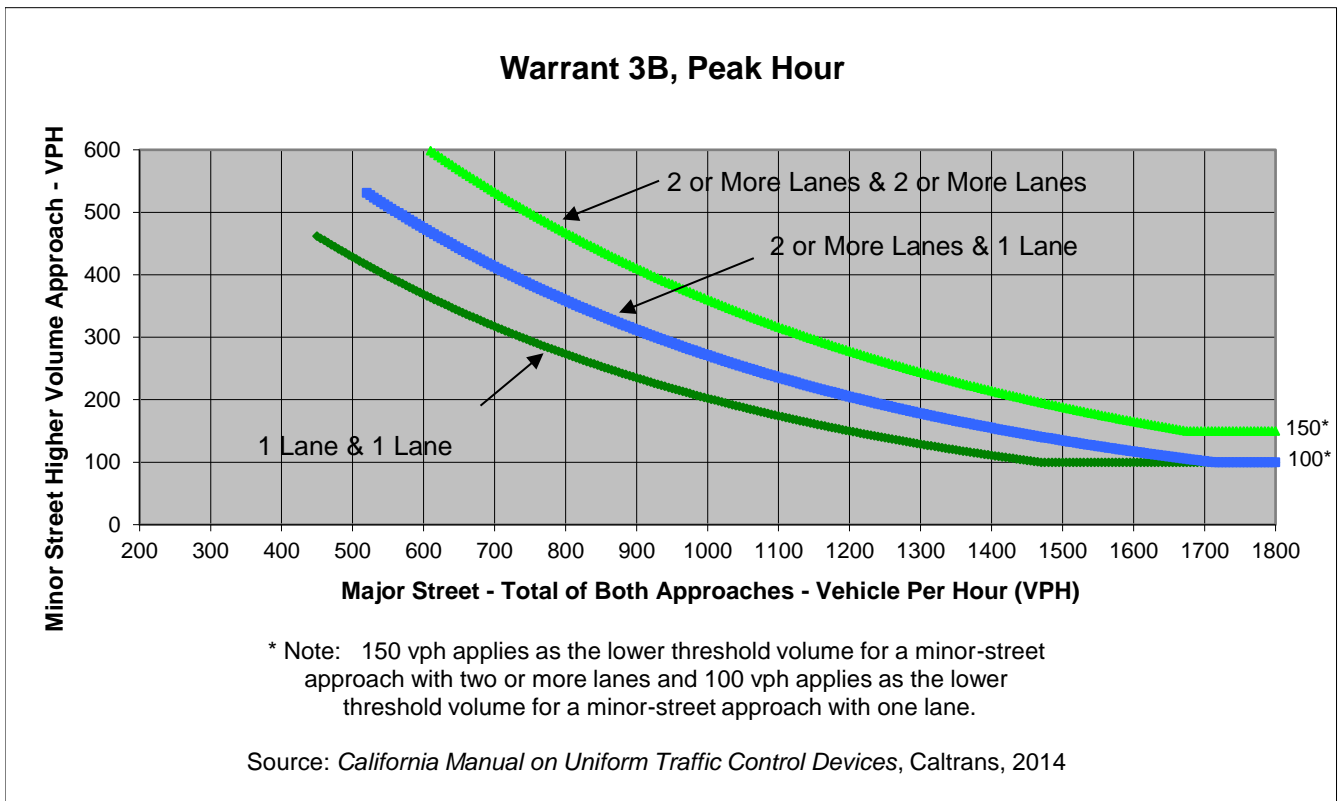
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	10	0
Through	0	0	70	55
Right	0	10	0	30
Total	0	50	80	85

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	50	85	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

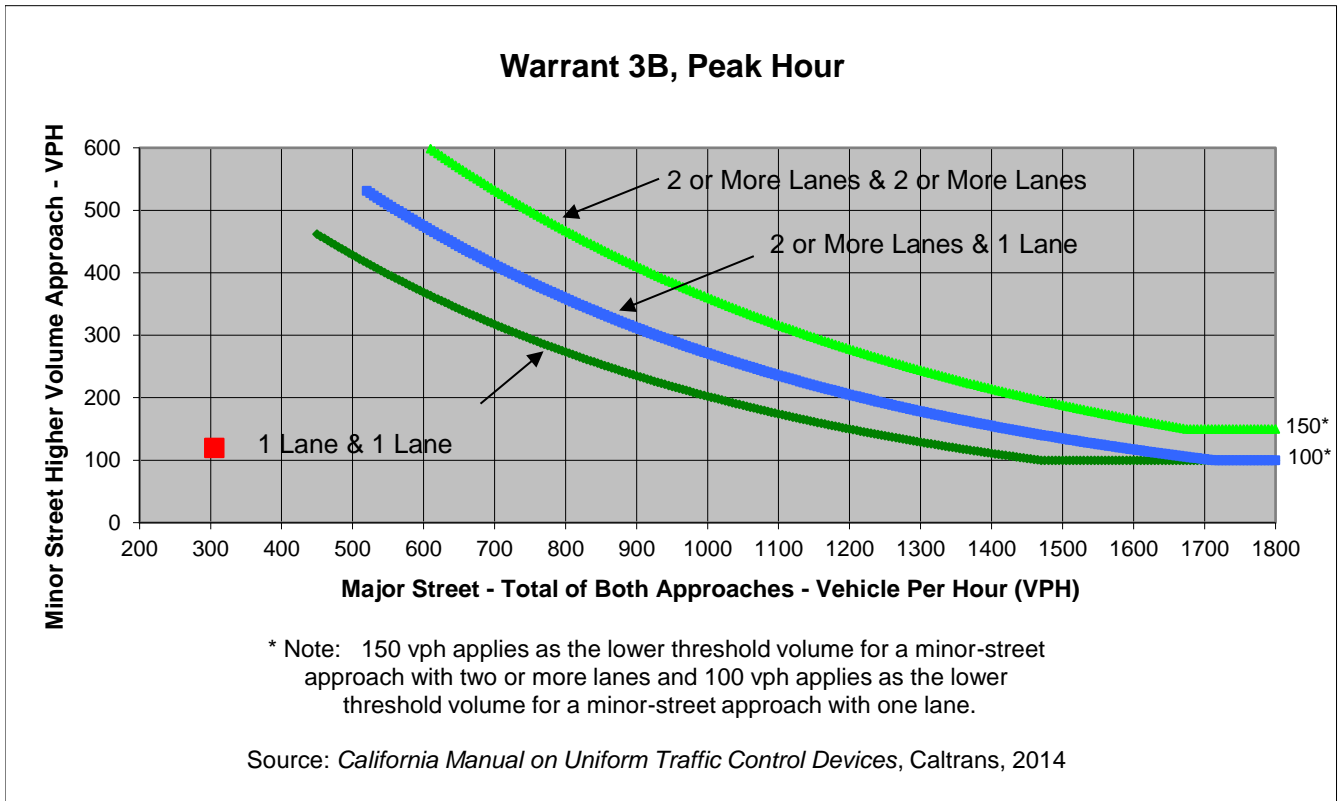
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	110	30	25
Through	50	40	25	35
Right	25	50	10	60
Total	105	200	65	120

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	305	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

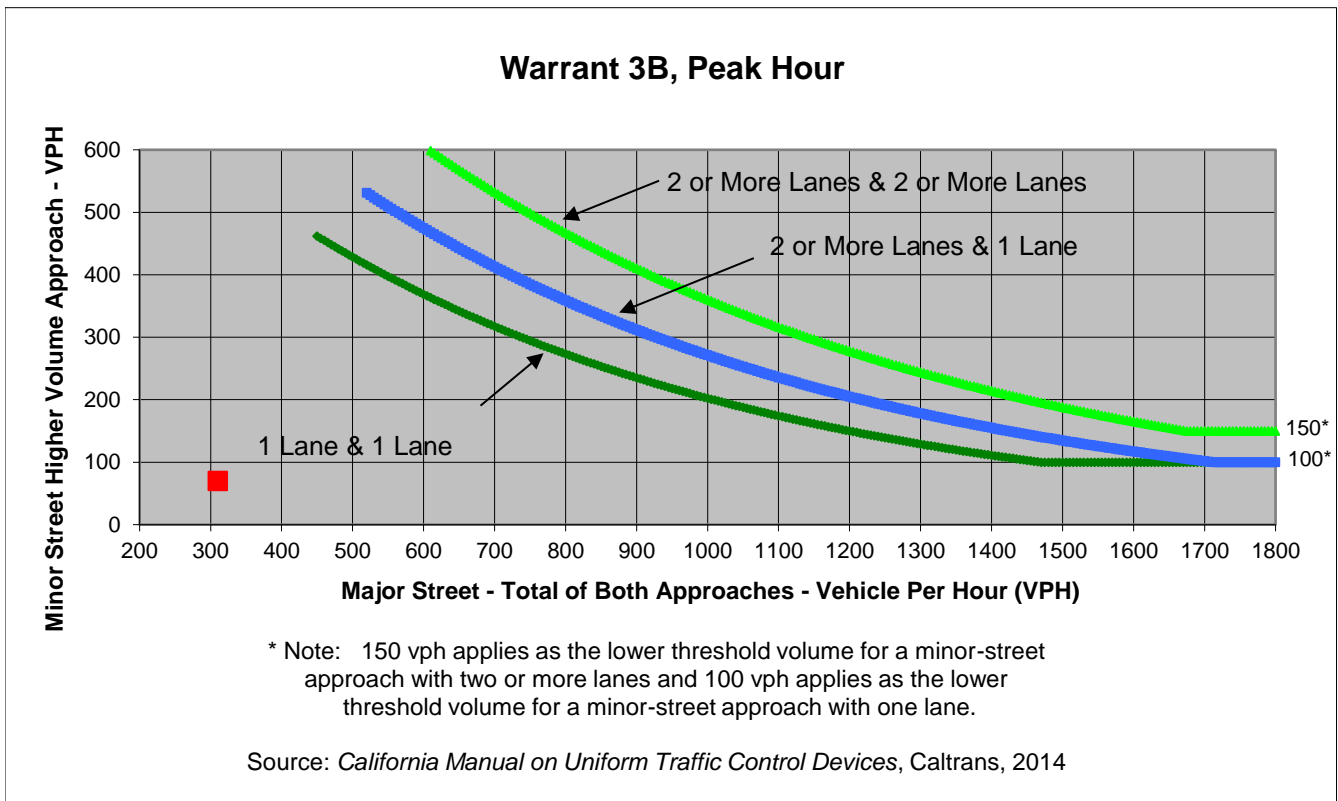
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	100	120	0	0
Right	0	70	30	0
Total	120	190	70	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	310	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Kells Ranch Rd

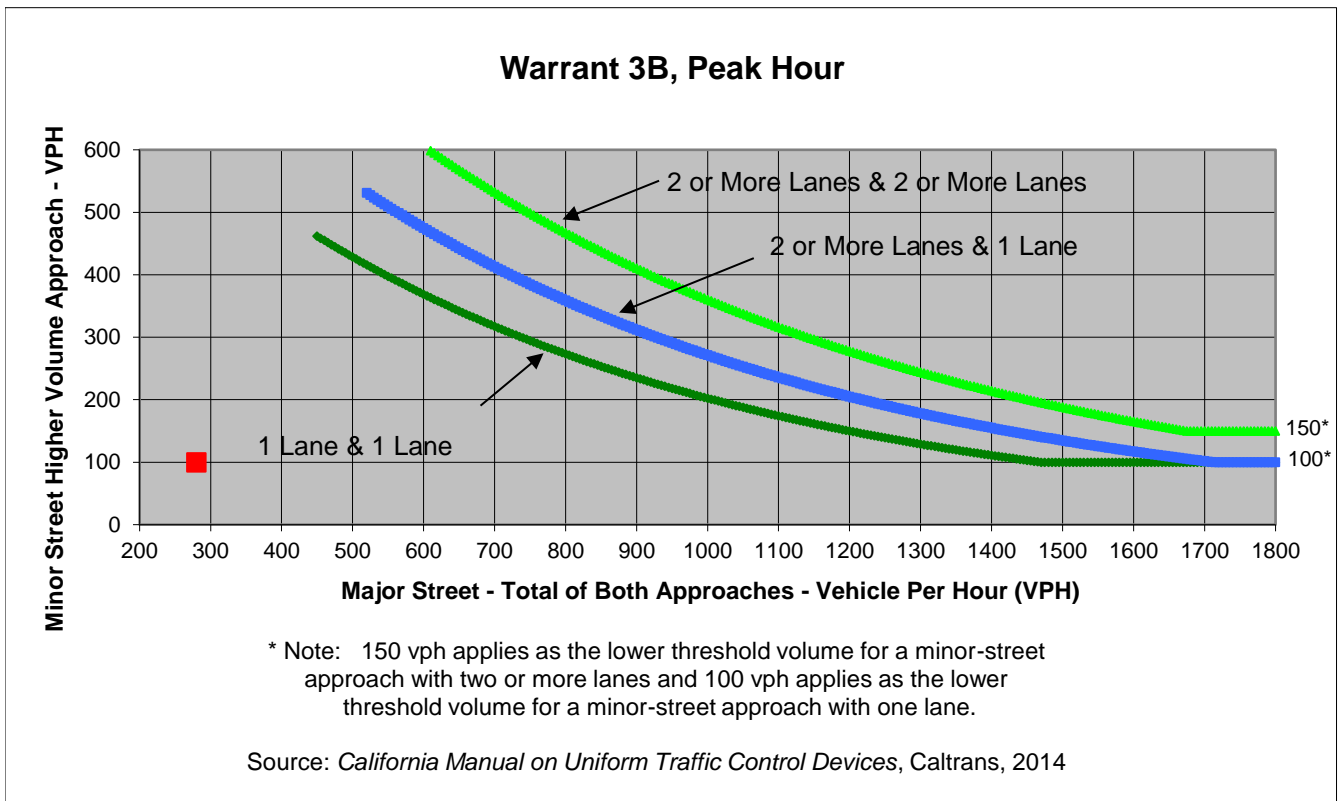
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	0	10
Through	130	100	0	0
Right	10	0	0	90
Total	140	140	0	100

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	280	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Chagaris Ranch Wy
 Minor Street Newkom Ranch Rd

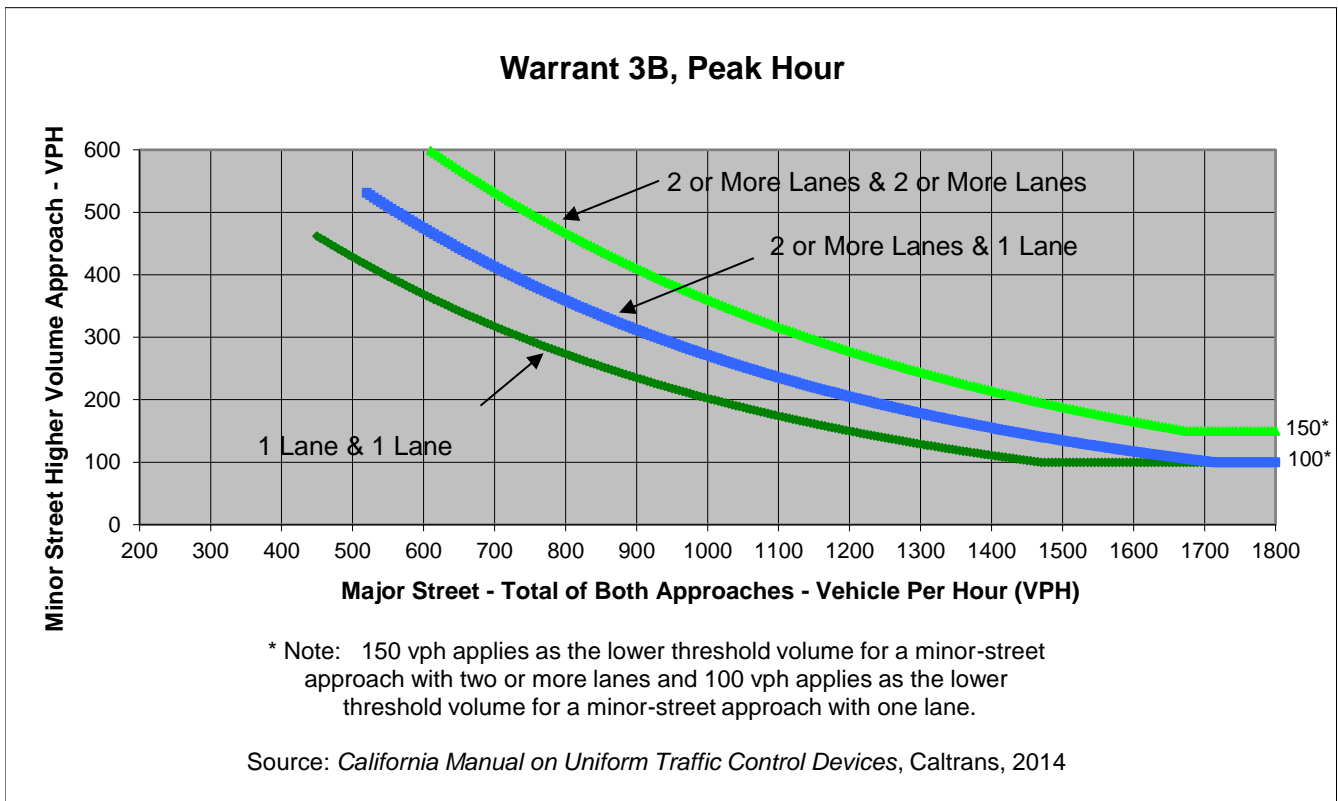
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	0	55	0
Through	20	10	0	0
Right	0	35	25	0
Total	35	45	80	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	80	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Shangha Bend Rd

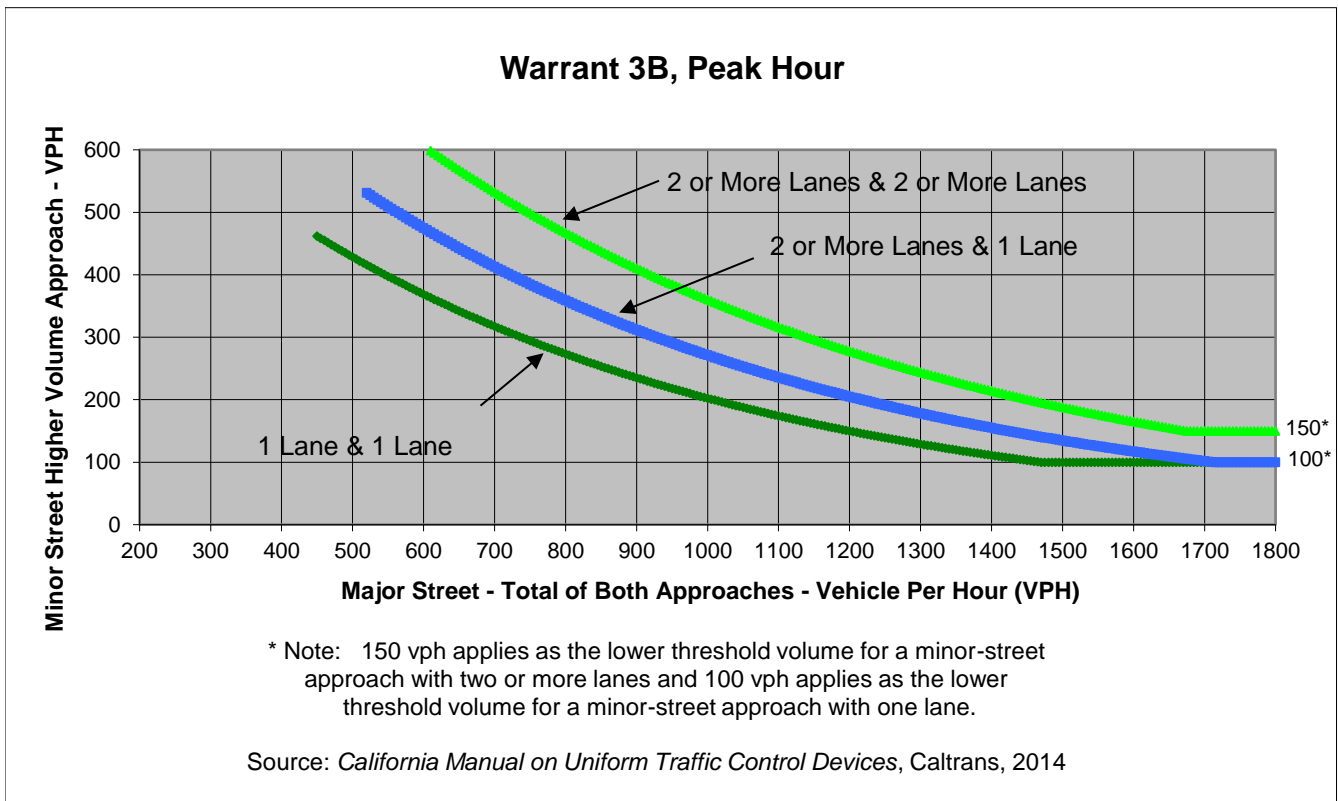
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	70	0	20
Through	40	50	0	0
Right	20	0	0	40
Total	60	120	0	60

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Shangha Bend Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	180	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Halprin Ranch Dr

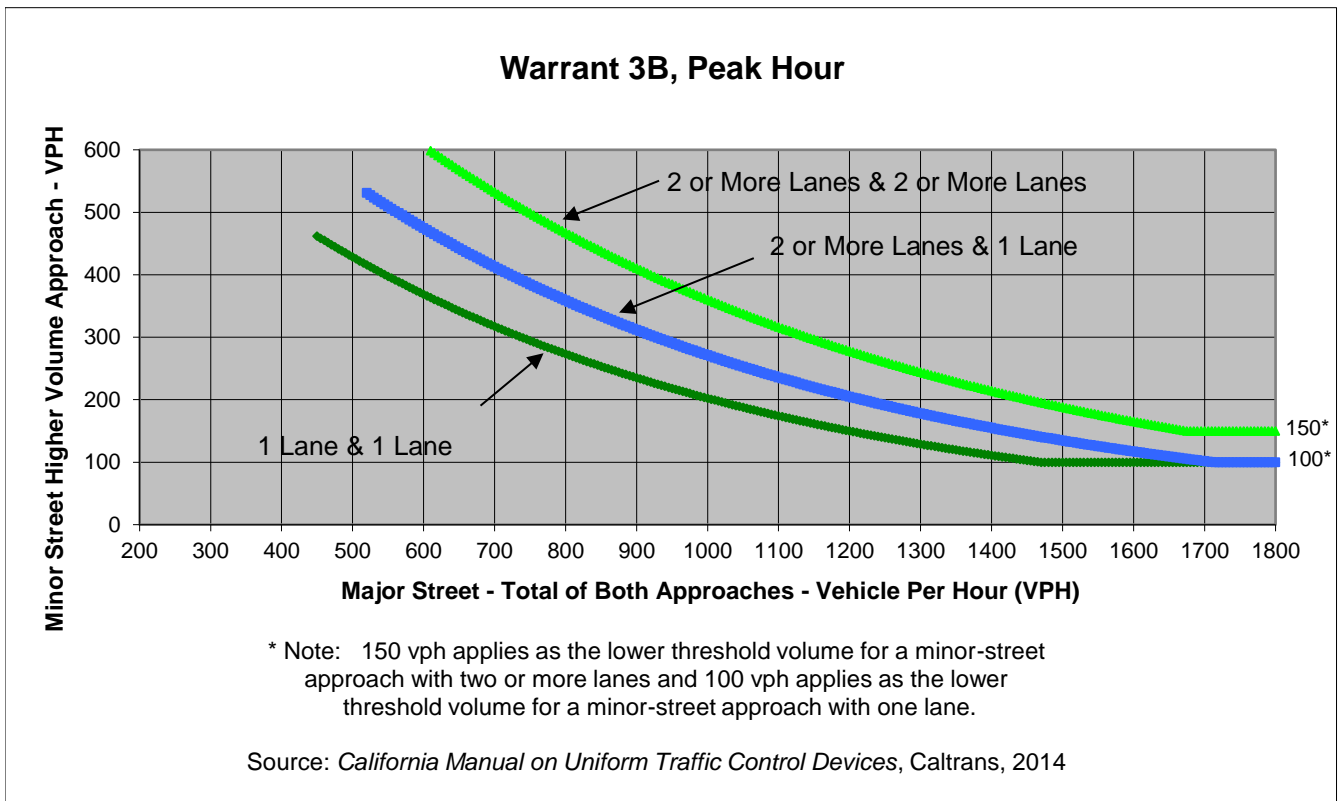
Project Bogue Stewart Master Plan
 Scenario Existing Plus Buildout
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	40	0	10	0
Through	40	50	0	0
Right	0	10	80	0
Total	80	60	90	0

Major Street Direction

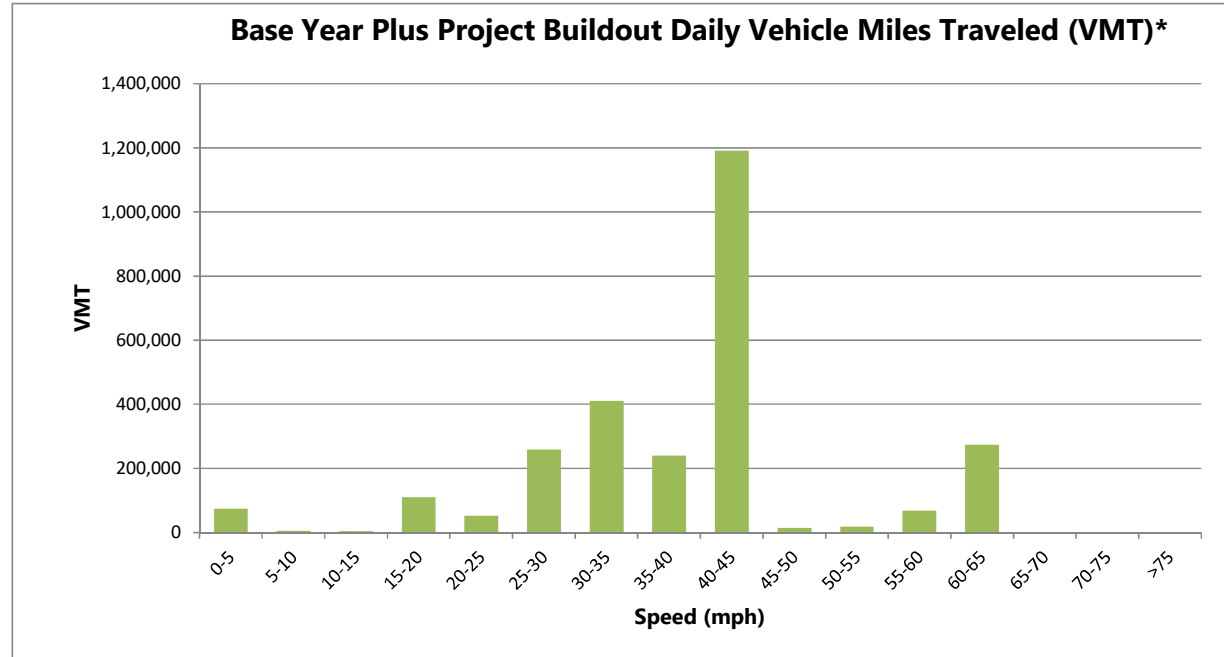
X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Halprin Ranch Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	140	90	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	74,083
>5	<=10	5-10	4,723
>10	<=15	10-15	3,776
>15	<=20	15-20	110,110
>20	<=25	20-25	52,030
>25	<=30	25-30	258,391
>30	<=35	30-35	410,859
>35	<=40	35-40	240,132
>40	<=45	40-45	1,191,425
>45	<=50	45-50	13,952
>50	<=55	50-55	18,189
>55	<=60	55-60	68,022
>60	<=65	60-65	273,345
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			2,719,035



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.3.2:

Existing Conditions Plus
Newkom Ranch / Kells East
Ranch (Phases 1 and 2)

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	300	243	81.1%	41.8	6.7	D
	Through	570	438	76.9%	27.3	4.4	C
	Right Turn	300	225	75.1%	14.5	2.9	B
	Subtotal	1,170	907	77.5%	28.1	2.3	C
SB	Left Turn	130	136	104.5%	42.3	4.6	D
	Through	675	674	99.8%	32.2	3.3	C
	Right Turn	170	174	102.2%	6.2	1.1	A
	Subtotal	975	983	100.9%	29.0	2.7	C
EB	Left Turn	110	102	93.0%	36.6	4.0	D
	Through	710	684	96.4%	27.7	3.8	C
	Right Turn	190	181	95.1%	10.5	2.4	B
	Subtotal	1,010	967	95.8%	25.5	3.4	C
WB	Left Turn	190	173	91.0%	37.9	3.5	D
	Through	810	768	94.9%	25.6	2.6	C
	Right Turn	80	81	101.7%	7.0	2.9	A
	Subtotal	1,080	1,023	94.7%	26.2	2.5	C
Total		4,235	3,880	91.6%	27.2	1.9	C

Intersection 2 SR 99/Sunsweet Blvd-I-80 EB On-ramp Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	56	80.4%	30.4	8.7	C
	Through	1,110	885	79.8%	12.6	1.2	B
	Right Turn	30	23	76.1%	9.9	2.9	A
	Subtotal	1,210	965	79.7%	13.5	1.4	B
SB	Left Turn	35	40	113.6%	26.6	4.2	C
	Through	1,000	982	98.2%	11.6	1.6	B
	Right Turn	20	16	79.1%	8.1	2.7	A
	Subtotal	1,055	1,038	98.4%	12.2	1.6	B
EB	Left Turn	40	36	91.1%	22.3	7.8	C
	Through	10	9	92.0%	22.1	8.8	C
	Right Turn	20	18	92.0%	6.6	2.5	A
	Subtotal	70	64	91.5%	17.8	4.5	B
WB	Left Turn	10	11	114.1%	19.9	7.7	B
	Through	10	9	92.0%	15.5	7.5	B
	Right Turn	5	5	103.0%	5.0	6.3	A
	Subtotal	25	26	103.0%	17.0	4.3	B
Total		2,360	2,092	88.6%	13.0	0.9	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	104	80.1%	54.9	8.6	D
	Through	1,060	853	80.5%	40.7	8.5	D
	Right Turn	270	221	81.9%	18.6	5.2	B
	Subtotal	1,460	1,179	80.7%	37.8	7.5	D
SB	Left Turn	120	108	90.2%	41.5	5.9	D
	Through	850	826	97.2%	25.9	4.0	C
	Right Turn	60	56	92.6%	9.5	1.3	A
	Subtotal	1,030	990	96.1%	26.6	3.8	C
EB	Left Turn	50	44	87.6%	58.2	14.7	E
	Through	300	305	101.6%	31.5	5.6	C
	Right Turn	120	113	93.8%	17.3	4.6	B
	Subtotal	470	461	98.1%	30.7	6.0	C
WB	Left Turn	140	144	102.5%	39.1	6.4	D
	Through	320	307	95.9%	25.4	4.6	C
	Right Turn	100	106	106.0%	18.7	4.4	B
	Subtotal	560	556	99.4%	27.7	4.6	C
Total		3,520	3,186	90.5%	31.5	3.9	C

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	170	141	82.9%	43.2	10.3	D
	Through	1,180	949	80.4%	37.2	5.9	D
	Right Turn	200	176	87.8%	23.9	4.2	C
	Subtotal	1,550	1,266	81.6%	36.1	6.1	D
SB	Left Turn	100	101	100.8%	51.0	9.0	D
	Through	870	820	94.3%	38.1	4.3	D
	Right Turn	140	137	97.5%	14.4	2.0	B
	Subtotal	1,110	1,058	95.3%	36.3	4.1	D
EB	Left Turn	185	176	95.1%	65.9	16.0	E
	Through	390	371	95.0%	48.1	15.8	D
	Right Turn	170	165	97.0%	8.9	1.9	A
	Subtotal	745	711	95.5%	43.4	12.0	D
WB	Left Turn	100	100	100.1%	70.2	7.4	E
	Through	310	313	100.9%	34.3	4.4	C
	Right Turn	100	109	109.3%	22.5	4.2	C
	Subtotal	510	522	102.4%	38.8	5.0	D
Total		3,915	3,557	90.8%	38.0	5.1	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	25	83.4%	14.9	7.8	B
	Through	1,520	1,305	85.9%	6.9	1.0	A
	Right Turn	40	36	90.2%	7.0	1.4	A
	Subtotal	1,590	1,366	85.9%	7.1	1.0	A
SB	Left Turn	50	48	96.4%	22.7	8.8	C
	Through	1,070	1,006	94.0%	7.7	0.6	A
	Right Turn	20	17	84.6%	8.7	5.9	A
	Subtotal	1,140	1,071	94.0%	8.2	0.7	A
EB	Left Turn	3	1	36.8%	6.1	15.0	A
	Through	5	5	95.7%	35.9	26.9	E
	Right Turn	40	39	98.4%	13.9	5.9	B
	Subtotal	48	45	94.3%	16.5	6.3	C
WB	Left Turn	2	1	36.8%	3.7	7.0	A
	Through	1	0	0.0%	0.0	0.0	A
	Right Turn	27	23	84.5%	16.4	7.3	C
	Subtotal	30	24	78.5%	16.4	7.3	C
Total		2,808	2,506	89.2%	7.8	0.6	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	26	65.3%	59.5	16.4	E
	Through	1,420	1,199	84.4%	31.6	8.0	C
	Right Turn	70	64	91.5%	14.2	4.5	B
	Subtotal	1,530	1,289	84.3%	31.2	7.6	C
SB	Left Turn	58	56	97.1%	53.6	10.2	D
	Through	1,040	932	89.6%	31.2	10.0	C
	Right Turn	14	9	65.7%	13.2	4.5	B
	Subtotal	1,112	997	89.7%	32.3	9.5	C
EB	Left Turn	70	71	100.9%	36.6	9.3	D
	Through	110	107	97.4%	36.1	3.9	D
	Right Turn	40	38	94.8%	22.6	8.3	C
	Subtotal	220	216	98.0%	34.0	5.1	C
WB	Left Turn	60	60	99.4%	36.8	9.5	D
	Through	60	53	88.9%	36.6	8.1	D
	Right Turn	100	94	93.8%	22.4	2.9	C
	Subtotal	220	207	94.0%	30.4	5.5	C
Total		3,082	2,709	87.9%	31.8	6.7	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	58	56	96.4%	53.5	10.4	D
	Through	1,040	946	90.9%	42.0	5.7	D
	Right Turn	70	61	87.8%	13.3	2.0	B
	Subtotal	1,168	1,063	91.0%	41.0	5.2	D
SB	Left Turn	130	102	78.4%	45.2	9.6	D
	Through	930	827	89.0%	28.0	7.2	C
	Right Turn	80	70	87.4%	13.5	4.7	B
	Subtotal	1,140	999	87.6%	28.7	6.9	C
EB	Left Turn	250	216	86.3%	70.1	9.7	E
	Through	280	272	97.1%	57.5	12.9	E
	Right Turn	80	75	93.4%	48.7	12.4	D
	Subtotal	610	562	92.2%	61.4	10.6	E
WB	Left Turn	60	53	87.7%	54.0	6.9	D
	Through	180	171	94.9%	42.1	5.4	D
	Right Turn	240	214	89.2%	17.2	2.6	B
	Subtotal	480	438	91.2%	31.4	3.2	C
Total		3,398	3,062	90.1%	39.3	3.8	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	11	114.1%	10.2	6.2	B
	Through	1,120	1,080	96.4%	8.4	0.8	A
	Right Turn	15	19	125.1%	6.8	2.9	A
	Subtotal	1,145	1,110	97.0%	8.4	0.8	A
SB	Left Turn	30	26	88.3%	16.7	4.4	C
	Through	1,030	903	87.7%	10.1	1.2	B
	Right Turn	10	12	117.8%	8.6	5.4	A
	Subtotal	1,070	941	88.0%	10.3	1.2	B
EB	Left Turn	16	14	89.7%	28.0	16.0	D
	Through	4	2	46.0%	24.0	33.2	C
	Right Turn	7	6	84.1%	3.3	2.3	A
	Subtotal	27	22	81.8%	24.0	14.4	C
WB	Left Turn	13	16	121.7%	38.3	17.4	E
	Through	7	6	84.1%	23.7	22.4	C
	Right Turn	32	34	105.8%	8.9	2.1	A
	Subtotal	52	56	106.9%	19.9	8.0	C
Total		2,294	2,129	92.8%	9.7	0.7	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	95	97	102.3%	51.5	6.2	D
	Through	605	580	95.9%	39.6	4.6	D
	Right Turn	95	86	91.0%	14.2	1.6	B
	Subtotal	795	764	96.1%	38.3	3.9	D
SB	Left Turn	255	203	79.7%	62.2	15.3	E
	Through	610	513	84.1%	38.0	4.4	D
	Right Turn	185	149	80.8%	18.4	1.8	B
	Subtotal	1,050	866	82.4%	40.4	5.6	D
EB	Left Turn	175	164	94.0%	43.6	8.8	D
	Through	260	241	92.8%	29.3	3.9	C
	Right Turn	185	174	94.1%	21.8	5.0	C
	Subtotal	620	580	93.5%	31.2	4.5	C
WB	Left Turn	135	123	91.3%	51.2	9.2	D
	Through	250	244	97.7%	33.5	3.5	C
	Right Turn	365	358	98.2%	24.2	4.0	C
	Subtotal	750	726	96.8%	32.1	4.3	C
Total		3,215	2,935	91.3%	36.0	3.7	D

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	25	24	94.2%	7.6	2.6	A
	Through	670	679	101.3%	3.0	0.4	A
	Right Turn	35	40	114.6%	1.3	0.7	A
	Subtotal	730	743	101.7%	3.1	0.4	A
SB	Left Turn	100	92	91.6%	11.4	3.0	B
	Through	820	690	84.1%	8.2	1.7	A
	Right Turn	10	10	99.4%	12.0	4.3	B
	Subtotal	930	791	85.1%	8.6	1.8	A
EB	Left Turn	6	6	92.0%	15.7	10.4	C
	Through	17	21	121.2%	19.8	8.5	C
	Right Turn	27	21	79.1%	7.4	3.3	A
	Subtotal	50	47	94.9%	14.4	4.7	B
WB	Left Turn	34	34	100.7%	26.1	11.1	D
	Through	2	4	202.4%	17.1	24.5	C
	Right Turn	114	107	93.9%	8.7	3.0	A
	Subtotal	150	145	96.9%	13.4	4.8	B
Total		1,860	1,727	92.8%	6.8	0.9	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	6	110.4%	4.3	3.8	A
	Through	705	723	102.6%	2.4	0.3	A
	Right Turn	10	13	125.1%	1.5	1.1	A
	Subtotal	720	742	103.0%	2.4	0.3	A
SB	Left Turn	11	7	63.6%	4.6	5.8	A
	Through	860	724	84.2%	4.5	0.3	A
	Right Turn	10	8	81.0%	0.8	0.6	A
	Subtotal	881	739	83.9%	4.5	0.3	A
EB	Left Turn	5	4	73.6%	19.5	22.3	C
	Through	5	6	125.1%	25.5	21.6	D
	Right Turn	10	10	95.7%	10.2	13.7	B
	Subtotal	20	20	97.5%	19.5	7.3	C
WB	Left Turn	5	3	66.2%	18.0	27.5	C
	Through	5	4	73.6%	17.0	22.6	C
	Right Turn	20	20	97.5%	7.9	3.8	A
	Subtotal	30	26	88.3%	14.4	7.3	B
Total		1,651	1,527	92.5%	3.8	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	4	81.0%	4.0	3.4	A
	Through	710	737	103.8%	3.1	0.4	A
	Right Turn	10	12	121.4%	1.9	1.4	A
	Subtotal	725	753	103.9%	3.1	0.4	A
SB	Left Turn	10	10	99.4%	8.5	5.8	A
	Through	860	705	81.9%	0.7	0.1	A
	Right Turn	5	6	110.4%	0.6	1.1	A
	Subtotal	875	720	82.3%	0.8	0.1	A
EB	Left Turn						
	Through						
	Right Turn	10	13	128.8%	5.2	3.3	A
Subtotal		10	13	128.8%	5.2	3.3	A
WB	Left Turn						
	Through						
	Right Turn	10	11	106.7%	5.8	3.8	A
Subtotal		10	11	106.7%	5.8	3.8	A
Total		1,620	1,497	92.4%	2.0	0.2	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	8	84.6%	26.7	23.1	C
	Through	545	523	96.0%	23.1	1.9	C
	Right Turn	20	18	90.2%	10.4	9.3	B
	Subtotal	575	550	95.6%	22.9	1.9	C
SB	Left Turn	100	83	82.8%	44.8	7.2	D
	Through	750	542	72.2%	28.1	3.0	C
	Right Turn	20	12	58.9%	20.2	8.7	C
	Subtotal	870	636	73.1%	30.2	2.5	C
EB	Left Turn	30	29	96.9%	31.0	11.3	C
	Through	100	103	103.0%	32.1	7.5	C
	Right Turn	5	5	95.7%	16.6	18.5	B
	Subtotal	135	137	101.4%	31.5	7.1	C
WB	Left Turn	30	31	103.0%	36.8	15.2	D
	Through	60	61	102.4%	36.8	7.9	D
	Right Turn	150	153	102.1%	22.8	6.3	C
	Subtotal	240	245	102.3%	27.9	6.5	C
Total		1,820	1,568	86.2%	27.4	1.3	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	117	89.7%	21.1	7.7	C
	Through						
	Right Turn	120	123	102.7%	13.9	4.6	B
	Subtotal	250	240	96.0%	17.4	6.1	C
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	380	350	92.1%	1.6	0.3	A
	Right Turn	110	89	81.3%	0.7	0.4	A
	Subtotal	490	439	89.7%	1.4	0.3	A
WB	Left Turn	80	84	104.4%	7.6	1.7	A
	Through	340	311	91.5%	3.2	0.4	A
	Right Turn						
	Subtotal	420	394	93.9%	4.2	0.5	A
Total		1,160	1,074	92.6%	6.0	1.6	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	265	253	95.4%	64.9	26.2	F
	Through	30	36	120.2%	103.4	61.9	F
	Right Turn	60	52	85.9%	31.3	26.1	D
	Subtotal	355	340	95.9%	63.9	29.3	F
SB	Left Turn	60	54	89.5%	18.1	5.2	C
	Through	30	34	112.9%	27.5	14.6	D
	Right Turn	60	62	103.7%	15.8	10.0	C
	Subtotal	150	150	99.9%	19.1	8.1	C
EB	Left Turn	30	21	68.7%	4.6	3.1	A
	Through	350	302	86.3%	1.0	0.2	A
	Right Turn	70	60	86.2%	1.0	0.3	A
	Subtotal	450	383	85.1%	1.2	0.2	A
WB	Left Turn	125	125	100.4%	4.5	1.4	A
	Through	405	412	101.8%	1.1	0.2	A
	Right Turn	60	60	100.6%	0.6	0.3	A
	Subtotal	590	598	101.4%	1.8	0.4	A
Total		1,545	1,471	95.2%	17.4	5.4	C

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	17	84.6%	2.6	0.9	A
	Through	110	114	103.7%	0.5	0.2	A
	Right Turn						
	Subtotal	130	131	100.8%	0.7	0.3	A
SB	Left Turn						
	Through	120	116	96.9%	0.5	0.4	A
	Right Turn	40	44	109.5%	0.2	0.1	A
	Subtotal	160	160	100.1%	0.4	0.3	A
EB	Left Turn	40	34	85.6%	5.4	0.8	A
	Through						
	Right Turn	20	21	104.9%	2.7	0.6	A
	Subtotal	60	55	92.0%	4.3	0.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		350	346	98.9%	1.2	0.2	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
AM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

























Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	2	44.2%	2.8	2.5	A
	Through	5	3	58.9%	3.1	3.3	A
	Right Turn	10	11	110.4%	2.5	1.1	A
	Subtotal	20	16	81.0%	3.7	1.2	A
SB	Left Turn	20	27	136.2%	5.5	0.7	A
	Through	5	7	147.2%	5.8	3.3	A
	Right Turn	35	35	98.8%	3.1	0.7	A
	Subtotal	60	69	115.3%	4.6	0.5	A
EB	Left Turn	20	17	84.6%	1.9	0.5	A
	Through	125	130	104.2%	0.2	0.1	A
	Right Turn	5	5	103.0%	0.0	0.0	A
	Subtotal	150	152	101.6%	0.4	0.2	A
WB	Left Turn	5	5	95.7%	1.4	0.8	A
	Through	110	109	98.7%	0.2	0.1	A
	Right Turn	15	16	107.9%	0.1	0.2	A
	Subtotal	130	130	99.6%	0.3	0.1	A
Total		360	367	102.0%	1.3	0.2	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	9	92.0%	5.6	1.7	A
	Through						
	Right Turn	30	29	95.7%	2.9	0.3	A
	Subtotal	40	38	94.8%	3.7	0.8	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	125	126	100.7%	0.6	0.2	A
	Right Turn	30	38	125.1%	0.2	0.2	A
	Subtotal	155	163	105.4%	0.5	0.1	A
WB	Left Turn	25	24	95.7%	2.1	0.3	A
	Through	120	118	98.7%	0.2	0.1	A
	Right Turn						
	Subtotal	145	142	98.2%	0.5	0.1	A
Total		340	344	101.1%	0.9	0.1	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Existing Plus Phase I Conditions
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	110	180	120	100	250	120	580	140	190	350	10
Future Volume (veh/h)	10	110	180	120	100	250	120	580	140	190	350	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		0.99	1.00		0.99	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1851	1900
Adj Flow Rate, veh/h	13	139	228	152	127	316	152	734	177	241	443	13
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	28	430	363	258	539	602	199	1079	260	359	1308	38
Arrive On Green	0.02	0.23	0.23	0.07	0.29	0.28	0.11	0.38	0.37	0.11	0.37	0.36
Sat Flow, veh/h	1774	1863	1575	3442	1863	1575	1774	2829	682	3408	3489	102
Grp Volume(v), veh/h	13	139	228	152	127	316	152	459	452	241	223	233
Grp Sat Flow(s),veh/h/ln	1774	1863	1575	1721	1863	1575	1774	1770	1741	1704	1758	1833
Q Serve(g_s), s	0.6	4.8	10.0	3.3	4.0	12.0	6.4	16.7	16.8	5.2	7.0	7.0
Cycle Q Clear(g_c), s	0.6	4.8	10.0	3.3	4.0	12.0	6.4	16.7	16.8	5.2	7.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		0.06
Lane Grp Cap(c), veh/h	28	430	363	258	539	602	199	675	664	359	659	687
V/C Ratio(X)	0.46	0.32	0.63	0.59	0.24	0.52	0.76	0.68	0.68	0.67	0.34	0.34
Avail Cap(c_a), veh/h	702	1728	1461	782	1728	1607	702	1630	1604	1349	1620	1689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	24.6	26.7	34.5	20.9	18.4	33.2	19.9	20.1	33.2	17.2	17.3
Incr Delay (d2), s/veh	4.3	0.4	1.8	0.8	0.2	0.7	2.3	1.2	1.2	0.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	4.5	1.6	2.1	5.3	3.3	8.4	8.3	2.5	3.4	3.6
LnGrp Delay(d),s/veh	41.9	25.1	28.5	35.3	21.1	19.1	35.5	21.1	21.3	34.0	17.4	17.4
LnGrp LOS	D	C	C	D	C	B	D	C	C	C	B	B
Approach Vol, veh/h		380			595			1063			697	
Approach Delay, s/veh		27.7			23.7			23.3			23.1	
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	12.1	33.4	9.8	21.8	12.6	32.9	5.2	26.3				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	7.2	18.8	5.3	12.0	8.4	9.0	2.6	14.0				
Green Ext Time (p_c), s	0.4	9.6	0.2	3.6	0.1	9.7	0.0	3.6				
Intersection Summary												
HCM 2010 Ctrl Delay			23.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Existing Plus Phase I Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	330	40	90	210	190	70	470	150	150	330	210
Future Volume (veh/h)	170	330	40	90	210	190	70	470	150	150	330	210
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1844	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	200	388	47	106	247	224	82	553	176	176	388	247
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	233	1158	139	134	547	476	106	809	257	208	760	478
Arrive On Green	0.13	0.36	0.35	0.08	0.31	0.30	0.06	0.31	0.29	0.12	0.36	0.35
Sat Flow, veh/h	1774	3179	383	1774	1773	1544	1774	2639	837	1774	2088	1312
Grp Volume(v), veh/h	200	215	220	106	244	227	82	370	359	176	328	307
Grp Sat Flow(s),veh/h/ln	1774	1770	1792	1774	1752	1566	1774	1770	1707	1774	1770	1630
Q Serve(g_s), s	12.9	10.3	10.5	6.9	13.1	13.9	5.3	21.5	21.7	11.4	17.0	17.5
Cycle Q Clear(g_c), s	12.9	10.3	10.5	6.9	13.1	13.9	5.3	21.5	21.7	11.4	17.0	17.5
Prop In Lane	1.00		0.21	1.00		0.99	1.00		0.49	1.00		0.80
Lane Grp Cap(c), veh/h	233	645	653	134	540	483	106	542	523	208	645	594
V/C Ratio(X)	0.86	0.33	0.34	0.79	0.45	0.47	0.78	0.68	0.69	0.85	0.51	0.52
Avail Cap(c_a), veh/h	454	1079	1092	454	1068	955	454	1079	1041	454	1079	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.9	27.0	27.1	53.3	32.6	33.4	54.4	35.7	36.1	50.7	29.1	29.7
Incr Delay (d2), s/veh	9.0	1.1	1.1	10.1	2.1	2.6	11.4	1.5	1.6	9.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	5.2	5.4	3.8	6.7	6.3	3.0	10.7	10.4	6.1	8.4	7.9
LnGrp Delay(d),s/veh	58.8	28.1	28.2	63.4	34.7	36.0	65.8	37.2	37.7	59.8	29.7	30.4
LnGrp LOS	E	C	C	E	C	D	E	D	D	E	C	C
Approach Vol, veh/h		635			577			811			811	
Approach Delay, s/veh		37.8			40.5			40.3			36.5	
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	17.8	39.9	12.8	46.7	11.0	46.7	19.4	40.2				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	70.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1/3), s	23.7	23.7	8.9	12.5	7.3	19.5	14.9	15.9				
Green Ext Time (p_c), s	0.4	10.7	0.2	19.1	0.2	10.8	0.5	18.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.7									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	80	470	100	110	380
Future Vol, veh/h	30	80	470	100	110	380
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	43	114	671	143	157	543

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1601	744	0	0	815	0
Stage 1	744	-	-	-	-	-
Stage 2	857	-	-	-	-	-
Critical Hdwy	6.42	6.25	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.345	-	-	2.218	-
Pot Cap-1 Maneuver	117	410	-	-	812	-
Stage 1	470	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	94	410	-	-	812	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	336	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	25.2		0		2.4
HCM LOS	D				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 332	812	-
HCM Lane V/C Ratio	-	- 0.473	0.194	-
HCM Control Delay (s)	-	- 25.2	10.5	-
HCM Lane LOS	-	- D	B	-
HCM 95th %tile Q(veh)	-	- 2.4	0.7	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Existing Plus Phase I Conditions
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	340	50	80	180	100	45	240	170	130	210	60
Future Volume (veh/h)	110	340	50	80	180	100	45	240	170	130	210	60
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		0.88	1.00		1.00	1.00		0.98	1.00		0.99
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	1863	1863	1845	1845	1845	1863	1863	1863	1863	1863	1841	1900
Adj Flow Rate, veh/h	141	436	64	103	231	128	58	308	218	167	269	77
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	3	3	3	2	2	2	2	2	3	3
Cap, veh/h	190	649	478	133	586	502	91	491	407	218	460	132
Arrive On Green	0.11	0.35	0.35	0.08	0.32	0.32	0.05	0.26	0.26	0.12	0.34	0.33
Sat Flow, veh/h	1774	1863	1372	1757	1845	1581	1774	1863	1547	1774	1372	393
Grp Volume(v), veh/h	141	436	64	103	231	128	58	308	218	167	0	346
Grp Sat Flow(s),veh/h/ln	1774	1863	1372	1757	1845	1581	1774	1863	1547	1774	0	1765
Q Serve(g_s), s	6.5	16.8	2.7	4.9	8.3	5.1	2.7	12.3	10.2	7.7	0.0	13.7
Cycle Q Clear(g_c), s	6.5	16.8	2.7	4.9	8.3	5.1	2.7	12.3	10.2	7.7	0.0	13.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	190	649	478	133	586	502	91	491	407	218	0	591
V/C Ratio(X)	0.74	0.67	0.13	0.77	0.39	0.26	0.64	0.63	0.54	0.77	0.00	0.59
Avail Cap(c_a), veh/h	538	1006	741	533	996	854	538	1557	1294	538	0	1476
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	36.6	23.4	18.8	38.3	22.5	21.4	39.3	27.5	26.7	35.9	0.0	23.3
Incr Delay (d2), s/veh	4.3	0.9	0.1	7.0	0.3	0.2	5.5	1.0	0.8	4.2	0.0	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	3.4	8.8	1.0	2.6	4.2	2.2	1.5	6.5	4.5	4.0	0.0	6.8
LnGrp Delay(d),s/veh	40.9	24.3	18.9	45.3	22.8	21.6	44.8	28.4	27.5	40.0	0.0	24.0
LnGrp LOS	D	C	B	D	C	C	D	C	C	D		C
Approach Vol, veh/h		641			462			584			513	
Approach Delay, s/veh		27.4			27.5			29.7			29.2	
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	14.4	26.2	10.4	33.4	8.3	32.3	13.0	30.8				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+I1), s	9.7	14.3	6.9	18.8	4.7	15.7	8.5	10.3				
Green Ext Time (p_c), s	0.3	4.4	0.2	4.1	0.1	4.4	0.2	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay			28.4									
HCM 2010 LOS			C									
Notes												

Intersection																
Intersection Delay, s/veh	14.6															
Intersection LOS	B															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	20	270	50	0	20	180	110	0	30	50	30	0	170	60	20
Future Vol, veh/h	0	20	270	50	0	20	180	110	0	30	50	30	0	170	60	20
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	21	287	53	0	21	191	117	0	32	53	32	0	181	64	21
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.9	14.4	11.2	14.4
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	6%	6%	68%
Vol Thru, %	45%	79%	58%	24%
Vol Right, %	27%	15%	35%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	340	310	250
LT Vol	30	20	20	170
Through Vol	50	270	180	60
RT Vol	30	50	110	20
Lane Flow Rate	117	362	330	266
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.565	0.51	0.456
Departure Headway (Hd)	6.485	5.623	5.562	6.167
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	557	637	640	580
Service Time	4.485	3.718	3.659	4.266
HCM Lane V/C Ratio	0.21	0.568	0.516	0.459
HCM Control Delay	11.2	15.9	14.4	14.4
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.8	3.5	2.9	2.4

Intersection

Int Delay, s/veh 1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	15	90	10	30	100
Future Vol, veh/h	5	15	90	10	30	100
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	89	89	89	89	89	89
Heavy Vehicles, %	2	9	2	60	60	2
Mvmt Flow	6	17	101	11	34	112

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	287	107	0	0	112	0
Stage 1	107	-	-	-	-	-
Stage 2	180	-	-	-	-	-
Critical Hdwy	6.42	6.29	-	-	4.7	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	-	-	2.74	-
Pot Cap-1 Maneuver	703	928	-	-	1184	-
Stage 1	917	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	681	928	-	-	1184	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.3		0		1.9
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	851	1184	-
HCM Lane V/C Ratio	-	-	0.026	0.028	-
HCM Control Delay (s)	-	-	9.3	8.1	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	10	0	5	5	10	90	0	5	100	5
Future Vol, veh/h	5	5	10	0	5	5	10	90	0	5	100	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2
Mvmt Flow	5	5	11	0	5	5	11	98	0	5	109	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	242	111	250	245	98	114	0	0	98	0	0
Stage 1	122	122	-	120	120	-	-	-	-	-	-	-
Stage 2	125	120	-	130	125	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	707	660	942	703	649	958	1475	-	-	1495	-	-
Stage 1	882	795	-	884	787	-	-	-	-	-	-	-
Stage 2	879	796	-	874	783	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	692	652	942	684	641	958	1475	-	-	1495	-	-
Mov Cap-2 Maneuver	692	652	-	684	641	-	-	-	-	-	-	-
Stage 1	875	792	-	877	781	-	-	-	-	-	-	-
Stage 2	861	790	-	855	780	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.8	0.7	0.3
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1475	-	-	784	768	1495	-
HCM Lane V/C Ratio	0.007	-	-	0.028	0.014	0.004	-
HCM Control Delay (s)	7.5	0	-	9.7	9.8	7.4	0
HCM Lane LOS	A	A	-	A	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↙	↕	↗		↙	↕	↗		↙	↕	↗
Traffic Vol, veh/h	0	70	300	50	0	30	200	50	0	110	150	50
Future Vol, veh/h	0	70	300	50	0	30	200	50	0	110	150	50
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	78	333	56	0	33	222	56	0	122	167	56
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	22.1	16.3	14.3
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	150	50	70	300	50	30	200	50	60	100
LT Vol	110	0	0	70	0	0	30	0	0	60	0
Through Vol	0	150	0	0	300	0	0	200	0	0	100
RT Vol	0	0	50	0	0	50	0	0	50	0	0
Lane Flow Rate	122	167	56	78	333	56	33	222	56	67	111
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.285	0.366	0.111	0.174	0.701	0.106	0.078	0.493	0.111	0.16	0.252
Departure Headway (Hd)	8.395	7.895	7.195	8.038	7.572	6.838	8.398	7.983	7.198	8.655	8.155
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	428	455	497	446	477	523	426	451	497	413	439
Service Time	6.159	5.659	4.959	5.798	5.332	4.598	6.163	5.748	4.963	6.425	5.925
HCM Lane V/C Ratio	0.285	0.367	0.113	0.175	0.698	0.107	0.077	0.492	0.113	0.162	0.253
HCM Control Delay	14.5	15.2	10.9	12.5	26.3	10.4	11.9	18.3	10.9	13.1	13.7
HCM Lane LOS	B	C	B	B	D	B	B	C	B	B	B
HCM 95th-tile Q	1.2	1.7	0.4	0.6	5.4	0.4	0.3	2.7	0.4	0.6	1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	60	100	60
Future Vol, veh/h	0	60	100	60
Peak Hour Factor	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	67	111	67
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	12.9
HCM LOS	B

HCM 2010 Signalized Intersection Summary
23: Garden Hwy & Lincoln Rd

Existing Plus Phase I Conditions
AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	280	130	130	740	470	130		
Future Volume (veh/h)	280	130	130	740	470	130		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	318	148	148	841	534	148		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	595	276	255	2270	1406	627		
Arrive On Green	0.17	0.17	0.15	0.64	0.40	0.40		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1562		
Grp Volume(v), veh/h	318	148	148	841	534	148		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1562		
Q Serve(g_s), s	3.7	3.7	3.5	4.9	4.7	2.7		
Cycle Q Clear(g_c), s	3.7	3.7	3.5	4.9	4.7	2.7		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	595	276	255	2270	1406	627		
V/C Ratio(X)	0.53	0.54	0.58	0.37	0.38	0.24		
Avail Cap(c_a), veh/h	3579	1663	1016	3831	3794	1691		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	16.3	16.3	17.2	3.7	9.2	8.6		
Incr Delay (d2), s/veh	0.3	0.6	0.8	0.0	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.7	3.3	1.7	2.3	2.2	1.2		
LnGrp Delay(d),s/veh	16.6	16.9	18.0	3.7	9.2	8.7		
LnGrp LOS	B	B	B	A	A	A		
Approach Vol, veh/h	466			989	682			
Approach Delay, s/veh	16.7			5.8	9.1			
Approach LOS	B			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		31.8		11.6	10.4	21.4		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		6.9		5.7	5.5	6.7		
Green Ext Time (p_c), s		8.4		0.9	0.1	8.4		
Intersection Summary								
HCM 2010 Ctrl Delay			9.3					
HCM 2010 LOS			A					

Intersection																
Intersection Delay, s/veh	57.5															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕	↕			↕				↕	
Traffic Vol, veh/h	0	50	320	40	0	40	460	50	0	55	110	65	0	50	110	70
Future Vol, veh/h	0	50	320	40	0	40	460	50	0	55	110	65	0	50	110	70
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	53	337	42	0	42	484	53	0	58	116	68	0	53	116	74
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	45.7	96.9	21	20.9
HCM LOS	E	F	C	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	24%	12%	8%	0%	22%
Vol Thru, %	48%	78%	92%	0%	48%
Vol Right, %	28%	10%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	410	500	50	230
LT Vol	55	50	40	0	50
Through Vol	110	320	460	0	110
RT Vol	65	40	0	50	70
Lane Flow Rate	242	432	526	53	242
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.54	0.883	1.12	0.101	0.539
Departure Headway (Hd)	8.462	7.722	7.662	6.883	8.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	429	475	474	518	431
Service Time	6.462	5.722	5.438	4.658	6.446
HCM Lane V/C Ratio	0.564	0.909	1.11	0.102	0.561
HCM Control Delay	21	45.7	105.5	10.4	20.9
HCM Lane LOS	C	E	F	B	C
HCM 95th-tile Q	3.1	9.5	17.9	0.3	3.1

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Existing Plus Phase I Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	60	190	40	100	80	221	420	20	35	270	200
Future Volume (veh/h)	250	60	190	40	100	80	221	420	20	35	270	200
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		0.98	1.00		0.97
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	1863	1863	1863	1845	1863	1863	1863	1863	1900	1845	1830	1900
Adj Flow Rate, veh/h	275	66	209	44	110	88	243	462	22	38	297	220
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	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, %	2	2	2	3	2	2	2	2	2	3	3	3
Cap, veh/h	331	528	449	67	252	214	299	1414	67	59	528	379
Arrive On Green	0.19	0.28	0.28	0.04	0.14	0.14	0.17	0.41	0.38	0.03	0.28	0.25
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583	1774	3436	163	1757	1908	1369
Grp Volume(v), veh/h	275	66	209	44	110	88	243	237	247	38	270	247
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583	1774	1770	1830	1757	1738	1539
Q Serve(g_s), s	10.2	1.8	7.5	1.7	3.7	3.5	9.1	6.3	6.3	1.5	9.1	9.7
Cycle Q Clear(g_c), s	10.2	1.8	7.5	1.7	3.7	3.5	9.1	6.3	6.3	1.5	9.1	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.89
Lane Grp Cap(c), veh/h	331	528	449	67	252	214	299	728	753	59	481	426
V/C Ratio(X)	0.83	0.12	0.47	0.66	0.44	0.41	0.81	0.33	0.33	0.65	0.56	0.58
Avail Cap(c_a), veh/h	789	1956	1661	782	1956	1663	789	1858	1922	782	1825	1616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	18.2	20.3	32.5	27.2	27.1	27.5	13.7	13.8	32.7	21.2	22.2
Incr Delay (d2), s/veh	2.1	0.0	0.3	4.1	0.4	0.5	2.1	0.1	0.1	4.4	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.9	3.3	0.9	1.9	1.6	4.6	3.1	3.2	0.8	4.4	4.2
LnGrp Delay(d),s/veh	29.0	18.3	20.6	36.6	27.7	27.6	29.5	13.8	13.9	37.1	21.6	22.7
LnGrp LOS	C	B	C	D	C	C	C	B	B	D	C	C
Approach Vol, veh/h		550			242			727			555	
Approach Delay, s/veh		24.5			29.3			19.1			23.1	
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	6.3	32.2	6.6	23.4	15.5	23.0	16.8	13.3				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1), s	13.5	8.3	3.7	9.5	11.1	11.7	12.2	5.7				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.2	0.1	4.6	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			22.8									
HCM 2010 LOS			C									
Notes												

Intersection																
Intersection Delay, s/veh12.2																
Intersection LOS B																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	40	115	5	0	20	110	150	0	10	30	20	0	110	70	20
Future Vol, veh/h	0	40	115	5	0	20	110	150	0	10	30	20	0	110	70	20
Peak Hour Factor	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	50	144	6	0	25	138	188	0	13	38	25	0	138	88	25
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	13.4	9.5	12.2
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	25%	7%	55%
Vol Thru, %	50%	72%	39%	35%
Vol Right, %	33%	3%	54%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	160	280	200
LT Vol	10	40	20	110
Through Vol	30	115	110	70
RT Vol	20	5	150	20
Lane Flow Rate	75	200	350	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.119	0.303	0.505	0.389
Departure Headway (Hd)	5.712	5.46	5.194	5.601
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	626	658	693	643
Service Time	3.761	3.502	3.23	3.639
HCM Lane V/C Ratio	0.12	0.304	0.505	0.389
HCM Control Delay	9.5	10.9	13.4	12.2
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	1.3	2.9	1.8

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

Existing Plus Phase I Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	0	20	0	0	1	10	70	0	0	120	430
Future Volume (veh/h)	270	0	20	0	0	1	10	70	0	0	120	430
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	1863	1863	1863	1900	1863	1900	1863	1827	0	1863	1792	1863
Adj Flow Rate, veh/h	380	0	28	0	0	1	14	99	0	0	169	606
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	2	2	2	2	2	2	2	4	0	2	6	2
Cap, veh/h	671	0	299	0	0	39	22	1027	0	3	852	753
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.01	0.01	0.56	0.00	0.00	0.48	0.48
Sat Flow, veh/h	3548	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Grp Volume(v), veh/h	380	0	28	0	0	1	14	99	0	0	169	606
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Q Serve(g_s), s	5.2	0.0	0.8	0.0	0.0	0.0	0.4	1.3	0.0	0.0	2.9	17.4
Cycle Q Clear(g_c), s	5.2	0.0	0.8	0.0	0.0	0.0	0.4	1.3	0.0	0.0	2.9	17.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	671	0	299	0	0	39	22	1027	0	3	852	753
V/C Ratio(X)	0.57	0.00	0.09	0.00	0.00	0.03	0.64	0.10	0.00	0.00	0.20	0.81
Avail Cap(c_a), veh/h	2715	0	1211	0	0	1209	566	1398	0	566	1371	1211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	17.9	0.0	0.0	26.0	26.3	5.4	0.0	0.0	8.1	11.9
Incr Delay (d2), s/veh	0.9	0.0	0.2	0.0	0.0	0.3	26.6	0.0	0.0	0.0	0.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.4	0.0	0.0	0.0	0.4	0.7	0.0	0.0	1.5	8.1
LnGrp Delay(d),s/veh	20.6	0.0	18.1	0.0	0.0	26.3	53.0	5.5	0.0	0.0	8.3	14.5
LnGrp LOS	C		B			C	D	A			A	B
Approach Vol, veh/h		408			1			113			775	
Approach Delay, s/veh		20.5			26.3			11.4			13.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0	34.1		14.1	4.7	29.5		5.3				
Change Period (Y+Rc), s	0	4.1		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	0	40.0		40.0	17.0	40.0		40.0				
Max Q Clear Time (g_c+1), s	0	3.3		7.2	2.4	19.4		2.0				
Green Ext Time (p_c), s	0.0	5.7		1.9	0.0	5.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.3									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Existing Plus Phase I Conditions
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	5	80	90	5	160	40	380	50	71	370	60
Future Volume (veh/h)	120	5	80	90	5	160	40	380	50	71	370	60
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		0.97	1.00		0.96
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	1863	1863	1900	1863	1863	1863	1863	1863	1900	1845	1863	1900
Adj Flow Rate, veh/h	140	6	93	105	6	186	47	442	58	83	430	70
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	202	21	333	155	366	310	74	1028	134	124	1081	175
Arrive On Green	0.11	0.22	0.21	0.09	0.20	0.20	0.04	0.33	0.29	0.07	0.36	0.32
Sat Flow, veh/h	1774	96	1495	1774	1863	1578	1774	3138	409	1757	3034	490
Grp Volume(v), veh/h	140	0	99	105	6	186	47	248	252	83	249	251
Grp Sat Flow(s),veh/h/ln	1774	0	1591	1774	1863	1578	1774	1770	1778	1757	1770	1754
Q Serve(g_s), s	4.2	0.0	2.9	3.1	0.1	5.9	1.4	6.0	6.1	2.5	5.8	5.9
Cycle Q Clear(g_c), s	4.2	0.0	2.9	3.1	0.1	5.9	1.4	6.0	6.1	2.5	5.8	5.9
Prop In Lane	1.00		0.94	1.00		1.00	1.00		0.23	1.00		0.28
Lane Grp Cap(c), veh/h	202	0	354	155	366	310	74	580	583	124	631	625
V/C Ratio(X)	0.69	0.00	0.28	0.68	0.02	0.60	0.63	0.43	0.43	0.67	0.40	0.40
Avail Cap(c_a), veh/h	825	0	1321	793	1546	1310	825	1517	1524	817	1517	1504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	17.9	24.3	17.8	20.1	25.8	14.4	14.6	24.9	13.2	13.5
Incr Delay (d2), s/veh	4.3	0.0	0.4	5.1	0.0	1.9	8.6	0.5	0.5	6.1	0.4	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	2.3	0.0	1.3	1.8	0.1	2.7	0.9	3.0	3.0	1.4	2.8	3.0
LnGrp Delay(d),s/veh	27.6	0.0	18.3	29.3	17.8	21.9	34.5	14.9	15.1	31.0	13.6	13.9
LnGrp LOS	C		B	C	B	C	C	B	B	C	B	B
Approach Vol, veh/h		239			297			547			583	
Approach Delay, s/veh		23.8			24.5			16.7			16.2	
Approach LOS		C			C			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	7.9	22.0	8.8	16.2	6.3	23.5	10.2	14.8				
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5				
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0				
Max Q Clear Time (g_c+1), s	11.5	8.1	5.1	4.9	3.4	7.9	6.2	7.9				
Green Ext Time (p_c), s	0.2	6.3	0.2	1.4	0.1	6.3	0.3	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			18.9									
HCM 2010 LOS			B									
Notes												

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↓	↑↑	↓	↓
Traffic Vol, veh/h	490	10	30	320	30	80
Future Vol, veh/h	490	10	30	320	30	80
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	576	12	35	376	35	94

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	845
Stage 1	-	-	584
Stage 2	-	-	261
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	982	302
Stage 1	-	-	521
Stage 2	-	-	759
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	980	290
Mov Cap-2 Maneuver	-	-	290
Stage 1	-	-	520
Stage 2	-	-	731

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	290	696	-	-	980	-
HCM Lane V/C Ratio	0.122	0.135	-	-	0.036	-
HCM Control Delay (s)	19.1	11	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.5	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	0	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	22	43
Demand Flow Rate, veh/h	0	22	44
Vehicles Circulating, veh/h	44	0	0
Vehicles Exiting, veh/h	0	44	22
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.4	3.6
Approach LOS	-	A	A
Lane	Left	Left	
Designated Moves	T	T	
Assumed Moves	T	T	
RT Channelized			
Lane Util	1.000	1.000	
Critical Headway, s	5.193	5.193	
Entry Flow, veh/h	22	44	
Cap Entry Lane, veh/h	1130	1130	
Entry HV Adj Factor	0.980	0.980	
Flow Entry, veh/h	22	43	
Cap Entry, veh/h	1108	1108	
V/C Ratio	0.019	0.039	
Control Delay, s/veh	3.4	3.6	
LOS	A	A	
95th %tile Queue, veh	0	0	

Intersection

Int Delay, s/veh 3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	5	30	20	15	30	5
Future Vol, veh/h	5	30	20	15	30	5
Conflicting Peds, #/hr	0	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	35	24	18	35	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	43	0	83
Stage 1	-	-	34
Stage 2	-	-	49
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1566	-	919
Stage 1	-	-	988
Stage 2	-	-	973
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1563	-	912
Mov Cap-2 Maneuver	-	-	912
Stage 1	-	-	986
Stage 2	-	-	967

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1563	-	-	-	912	1034
HCM Lane V/C Ratio	0.004	-	-	-	0.039	0.006
HCM Control Delay (s)	7.3	0	-	-	9.1	8.5
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection				
Intersection Delay, s/veh	4.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	101	71	83	95
Demand Flow Rate, veh/h	102	72	84	96
Vehicles Circulating, veh/h	78	150	102	18
Vehicles Exiting, veh/h	36	36	78	204
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.4	4.3	4.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	102	72	84	96
Cap Entry Lane, veh/h	1045	973	1020	1110
Entry HV Adj Factor	0.989	0.984	0.983	0.990
Flow Entry, veh/h	101	71	83	95
Cap Entry, veh/h	1033	957	1003	1099
V/C Ratio	0.098	0.074	0.082	0.087
Control Delay, s/veh	4.3	4.4	4.3	4.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	10	10	130	180	20
Future Vol, veh/h	20	10	10	130	180	20
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	12	12	153	212	24

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	404	228	237	0	- 0
Stage 1	226	-	-	-	- -
Stage 2	178	-	-	-	- -
Critical Hdwy	6.42	6.22	4.12	-	- -
Critical Hdwy Stg 1	5.42	-	-	-	- -
Critical Hdwy Stg 2	5.42	-	-	-	- -
Follow-up Hdwy	3.518	3.318	2.218	-	- -
Pot Cap-1 Maneuver	603	811	1330	-	- -
Stage 1	812	-	-	-	- -
Stage 2	853	-	-	-	- -
Platoon blocked, %				-	- -
Mov Cap-1 Maneuver	595	808	1328	-	- -
Mov Cap-2 Maneuver	595	-	-	-	- -
Stage 1	811	-	-	-	- -
Stage 2	843	-	-	-	- -

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1328	-	652	-	-
HCM Lane V/C Ratio	0.009	-	0.054	-	-
HCM Control Delay (s)	7.7	0	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	320	225	70.4%	50.3	6.5	D
	Through	740	550	74.3%	36.0	4.1	D
	Right Turn	420	322	76.6%	22.1	5.0	C
	Subtotal	1,480	1,097	74.1%	35.0	3.4	C
SB	Left Turn	130	128	98.5%	46.8	6.5	D
	Through	630	614	97.5%	38.5	3.5	D
	Right Turn	100	96	96.1%	8.4	2.4	A
	Subtotal	860	838	97.5%	36.4	3.3	D
EB	Left Turn	160	141	88.1%	67.9	12.8	E
	Through	1,090	1,013	92.9%	69.6	11.4	E
	Right Turn	360	338	93.8%	45.9	13.4	D
	Subtotal	1,610	1,492	92.6%	64.2	11.6	E
WB	Left Turn	470	472	100.3%	59.2	6.6	E
	Through	1,080	1,068	98.9%	25.5	2.2	C
	Right Turn	180	181	100.5%	9.2	1.5	A
	Subtotal	1,730	1,720	99.4%	33.1	2.9	C
Total		5,680	5,147	90.6%	43.1	3.5	D

Intersection 2 SR 99/Sunsweet Blvd-I-80 EB On-ramp Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	100	77.2%	30.2	5.6	C
	Through	1,320	978	74.1%	14.6	2.0	B
	Right Turn	10	6	64.6%	8.1	6.3	A
	Subtotal	1,460	1,085	74.3%	16.1	2.0	B
SB	Left Turn	35	32	91.2%	36.9	7.9	D
	Through	1,350	1,307	96.8%	20.6	4.8	C
	Right Turn	75	72	95.8%	12.8	2.8	B
	Subtotal	1,460	1,411	96.6%	20.6	4.6	C
EB	Left Turn	120	121	101.0%	27.6	3.7	C
	Through	10	10	102.6%	25.8	17.3	C
	Right Turn	100	100	100.3%	12.5	2.9	B
	Subtotal	230	232	100.8%	21.1	3.0	C
WB	Left Turn	30	29	97.5%	31.2	9.7	C
	Through	10	11	114.0%	34.5	17.7	C
	Right Turn	20	19	95.0%	11.1	5.5	B
	Subtotal	60	60	99.4%	24.9	6.9	C
Total		3,210	2,787	86.8%	19.0	2.5	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	190	127	66.6%	57.7	11.8	E
	Through	1,220	881	72.2%	53.9	9.6	D
	Right Turn	240	187	77.7%	23.4	7.0	C
	Subtotal	1,650	1,194	72.4%	49.5	9.3	D
SB	Left Turn	160	146	91.2%	69.2	12.8	E
	Through	1,110	994	89.6%	68.2	19.9	E
	Right Turn	210	190	90.5%	34.1	14.8	C
	Subtotal	1,480	1,330	89.9%	63.6	18.5	E
EB	Left Turn	100	97	96.9%	71.6	15.5	E
	Through	450	428	95.2%	37.1	6.9	D
	Right Turn	180	171	95.2%	32.5	7.0	C
	Subtotal	730	697	95.4%	40.8	7.9	D
WB	Left Turn	250	230	91.8%	68.3	17.3	E
	Through	520	495	95.2%	44.8	10.7	D
	Right Turn	140	141	100.7%	35.0	14.6	C
	Subtotal	910	866	95.1%	49.6	11.7	D
Total		4,770	4,087	85.7%	52.5	7.6	D

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	275	207	75.3%	46.9	4.0	D
	Through	1,310	991	75.7%	35.5	4.9	D
	Right Turn	160	125	77.9%	19.4	1.8	B
	Subtotal	1,745	1,323	75.8%	35.8	4.3	D
SB	Left Turn	110	87	79.5%	53.6	11.0	D
	Through	1,140	983	86.2%	41.6	6.5	D
	Right Turn	290	264	91.1%	21.3	4.2	C
	Subtotal	1,540	1,334	86.6%	38.3	5.8	D
EB	Left Turn	225	209	92.9%	76.1	24.9	E
	Through	420	383	91.2%	65.3	25.4	E
	Right Turn	230	238	103.3%	12.6	2.1	B
	Subtotal	875	830	94.8%	52.7	17.8	D
WB	Left Turn	140	120	85.8%	72.6	15.5	E
	Through	420	397	94.5%	40.0	8.9	D
	Right Turn	130	135	103.5%	27.4	9.0	C
	Subtotal	690	652	94.4%	43.6	8.8	D
Total		4,850	4,139	85.3%	41.2	5.0	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	55	49	89.8%	24.8	6.1	C
	Through	1,655	1,298	78.5%	6.0	0.4	A
	Right Turn	40	33	81.7%	5.6	1.0	A
	Subtotal	1,750	1,381	78.9%	6.7	0.5	A
SB	Left Turn	55	46	82.9%	19.4	5.1	C
	Through	1,425	1,267	88.9%	8.3	0.9	A
	Right Turn	30	28	93.7%	8.6	2.3	A
	Subtotal	1,510	1,341	88.8%	8.7	0.9	A
EB	Left Turn	9	8	92.9%	74.7	33.6	F
	Through	1	0	38.0%	36.1	88.3	E
	Right Turn	36	33	92.9%	21.3	7.7	C
	Subtotal	46	42	91.7%	33.7	10.5	D
WB	Left Turn	4	3	76.0%	37.8	48.9	E
	Through	2	1	57.0%	23.6	53.1	C
	Right Turn	76	87	114.5%	23.3	11.2	C
	Subtotal	82	91	111.2%	26.0	13.2	D
Total		3,388	2,855	84.3%	8.6	0.5	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	34	68.4%	45.5	10.0	D
	Through	1,590	1,244	78.2%	39.0	15.9	D
	Right Turn	70	59	84.1%	16.7	9.1	B
	Subtotal	1,710	1,337	78.2%	38.2	15.3	D
SB	Left Turn	75	67	88.7%	44.2	10.3	D
	Through	1,345	1,151	85.6%	32.0	7.0	C
	Right Turn	50	44	88.9%	14.6	2.4	B
	Subtotal	1,470	1,262	85.8%	32.1	6.7	C
EB	Left Turn	40	36	90.3%	29.4	4.9	C
	Through	80	68	85.0%	34.5	6.1	C
	Right Turn	50	47	94.2%	15.3	4.5	B
	Subtotal	170	151	89.0%	27.0	3.5	C
WB	Left Turn	90	87	96.7%	27.1	4.0	C
	Through	90	100	110.6%	27.2	4.1	C
	Right Turn	120	108	90.3%	17.4	1.6	B
	Subtotal	300	295	98.3%	23.7	2.3	C
Total		3,650	3,045	83.4%	33.7	7.1	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	101	92	91.0%	57.4	8.9	E
	Through	1,270	995	78.3%	64.1	16.6	E
	Right Turn	110	92	83.9%	16.8	8.6	B
	Subtotal	1,481	1,179	79.6%	60.1	15.1	E
SB	Left Turn	246	202	82.2%	48.3	6.9	D
	Through	1,072	924	86.2%	28.8	4.2	C
	Right Turn	167	136	81.5%	14.4	2.9	B
	Subtotal	1,485	1,262	85.0%	30.5	3.6	C
EB	Left Turn	150	150	99.8%	58.0	12.5	E
	Through	280	265	94.6%	37.8	7.9	D
	Right Turn	68	73	106.7%	30.4	9.5	C
	Subtotal	498	487	97.8%	42.9	9.2	D
WB	Left Turn	60	59	97.5%	55.7	8.0	E
	Through	300	283	94.5%	43.0	4.2	D
	Right Turn	290	273	94.1%	18.1	3.9	B
	Subtotal	650	615	94.6%	33.2	3.5	C
Total		4,114	3,544	86.1%	42.5	5.5	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	31	77.9%	13.7	4.8	B
	Through	1,450	1,278	88.2%	8.1	0.4	A
	Right Turn	20	16	81.7%	7.9	2.9	A
	Subtotal	1,510	1,326	87.8%	8.2	0.5	A
SB	Left Turn	42	34	81.4%	26.2	7.8	D
	Through	1,118	946	84.6%	11.0	1.3	B
	Right Turn	40	34	85.5%	10.6	2.4	B
	Subtotal	1,200	1,015	84.6%	11.5	1.4	B
EB	Left Turn	5	3	53.2%	25.6	34.4	D
	Through	4	5	114.0%	27.7	23.9	D
	Right Turn	3	3	88.7%	12.4	16.6	B
	Subtotal	12	10	82.3%	27.4	19.7	D
WB	Left Turn	9	8	92.9%	97.2	71.7	F
	Through	7	13	190.0%	49.3	23.6	E
	Right Turn	26	27	102.3%	11.7	3.0	B
	Subtotal	42	48	114.9%	31.2	11.5	D
Total		2,764	2,399	86.8%	10.3	0.5	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	175	171	97.9%	56.5	9.9	E
	Through	765	720	94.1%	46.3	5.3	D
	Right Turn	225	217	96.3%	22.6	2.8	C
	Subtotal	1,165	1,108	95.1%	43.2	2.9	D
SB	Left Turn	425	249	58.5%	127.8	22.0	F
	Through	455	371	81.6%	42.9	6.5	D
	Right Turn	250	207	82.7%	20.5	2.6	C
	Subtotal	1,130	827	73.1%	63.1	9.2	E
EB	Left Turn	260	234	89.9%	107.8	32.9	F
	Through	380	371	97.7%	36.5	5.2	D
	Right Turn	120	127	105.5%	28.1	9.4	C
	Subtotal	760	732	96.3%	58.4	14.8	E
WB	Left Turn	115	92	80.3%	59.9	8.4	E
	Through	350	276	78.9%	40.6	5.8	D
	Right Turn	485	348	71.8%	34.3	7.4	C
	Subtotal	950	717	75.4%	40.2	5.6	D
Total		4,005	3,382	84.5%	50.6	3.7	D

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	91.2%	5.6	3.5	A
	Through	1,120	1,133	101.2%	3.8	0.5	A
	Right Turn	50	53	105.6%	1.9	0.7	A
	Subtotal	1,190	1,204	101.2%	3.7	0.5	A
SB	Left Turn	40	42	104.5%	17.6	4.5	C
	Through	640	529	82.7%	7.8	1.3	A
	Right Turn	10	8	83.6%	9.2	11.1	A
	Subtotal	690	580	84.0%	8.5	1.2	A
EB	Left Turn	5	8	152.0%	21.7	27.8	C
	Through	8	8	99.8%	29.5	19.6	D
	Right Turn	15	15	98.8%	7.2	5.3	A
	Subtotal	28	30	108.6%	19.7	8.7	C
WB	Left Turn	28	29	103.1%	32.2	7.4	D
	Through	6	9	145.7%	23.1	18.0	C
	Right Turn	40	42	104.5%	13.3	4.1	B
	Subtotal	74	79	107.3%	21.1	3.3	C
Total		1,982	1,894	95.5%	6.2	0.6	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	98.8%	5.3	7.1	A
	Through	1,160	1,169	100.8%	4.8	0.4	A
	Right Turn	10	12	121.6%	3.5	2.0	A
	Subtotal	1,180	1,191	101.0%	4.8	0.4	A
SB	Left Turn	15	13	88.7%	14.5	11.5	B
	Through	660	542	82.0%	4.1	0.3	A
	Right Turn	8	6	80.8%	0.2	0.3	A
	Subtotal	683	561	82.2%	4.3	0.5	A
EB	Left Turn	5	2	45.6%	20.6	28.8	C
	Through	5	4	83.6%	21.3	23.8	C
	Right Turn	5	5	98.8%	6.6	7.9	A
	Subtotal	15	11	76.0%	21.8	16.1	C
WB	Left Turn	5	6	114.0%	19.3	19.0	C
	Through						
	Right Turn	25	20	80.6%	12.1	5.9	B
	Subtotal	30	26	86.1%	16.3	4.7	C
Total		1,908	1,790	93.8%	5.0	0.3	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	3	68.4%	4.5	5.4	A
	Through	1,170	1,141	97.5%	5.6	0.6	A
	Right Turn	5	3	53.2%	5.3	4.9	A
	Subtotal	1,180	1,147	97.2%	5.6	0.6	A
SB	Left Turn	10	10	98.8%	15.2	13.0	C
	Through	655	530	81.0%	0.6	0.1	A
	Right Turn	5	1	22.8%	0.5	1.5	A
	Subtotal	670	542	80.8%	0.9	0.3	A
EB	Left Turn	5	5	98.8%	20.7	17.3	C
	Through	5	8	152.0%	26.2	21.1	D
	Right Turn						
	Subtotal	10	13	125.4%	30.4	17.2	D
WB	Left Turn	5	5	98.8%	12.1	10.6	B
	Through	5	6	121.6%	23.5	21.7	C
	Right Turn	5	5	98.8%	7.1	8.1	A
	Subtotal	15	16	106.4%	17.2	8.6	C
Total		1,875	1,717	91.6%	4.4	0.5	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	6	64.6%	45.0	26.4	D
	Through	1,110	1,097	98.9%	32.8	5.6	C
	Right Turn	20	19	93.1%	27.0	11.4	C
	Subtotal	1,140	1,123	98.5%	32.8	5.6	C
SB	Left Turn	20	16	77.9%	43.8	19.8	D
	Through	610	490	80.4%	25.2	4.4	C
	Right Turn	30	24	78.5%	12.1	3.6	B
	Subtotal	660	529	80.2%	25.2	4.0	C
EB	Left Turn	30	30	98.8%	27.7	12.4	C
	Through	20	21	104.5%	32.7	14.4	C
	Right Turn	5	5	106.4%	11.4	14.9	B
	Subtotal	55	56	101.6%	26.1	7.7	C
WB	Left Turn	10	9	91.2%	35.2	17.2	D
	Through	30	32	105.1%	28.6	12.6	C
	Right Turn	40	40	98.8%	15.3	5.4	B
	Subtotal	80	80	100.2%	22.2	6.1	C
Total		1,935	1,788	92.4%	29.9	3.5	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	90	91	101.3%	31.8	18.8	D
	Through						
	Right Turn	90	85	94.2%	22.5	14.8	C
	Subtotal	180	176	97.7%	27.5	17.0	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	520	465	89.4%	2.1	0.4	A
	Right Turn	120	98	82.0%	0.8	0.3	A
	Subtotal	640	563	88.0%	1.9	0.4	A
WB	Left Turn	60	58	96.9%	10.2	2.4	B
	Through	560	540	96.4%	3.8	0.3	A
	Right Turn						
	Subtotal	620	598	96.4%	4.4	0.4	A
Total		1,440	1,337	92.8%	6.4	2.5	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	490	246	50.2%	248.1	73.1	F
	Through	10	5	53.2%	266.4	188.5	F
	Right Turn	70	34	48.9%	208.2	104.7	F
	Subtotal	570	285	50.1%	242.1	76.9	F
SB	Left Turn	30	27	89.9%	39.4	19.7	E
	Through	20	18	89.3%	80.1	41.7	F
	Right Turn	40	38	94.1%	33.9	28.8	D
	Subtotal	90	82	91.6%	44.1	23.7	E
EB	Left Turn	80	76	95.0%	3.9	1.1	A
	Through	620	523	84.4%	1.5	0.2	A
	Right Turn	190	143	75.4%	1.6	0.3	A
	Subtotal	890	743	83.4%	1.7	0.2	A
WB	Left Turn	160	148	92.4%	8.3	1.6	A
	Through	350	357	101.9%	1.0	0.2	A
	Right Turn	20	26	131.1%	0.3	0.3	A
	Subtotal	530	531	100.2%	3.0	0.9	A
Total		2,080	1,641	78.9%	44.2	8.2	E

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	27	136.8%	2.1	0.3	A
	Through	80	83	103.6%	0.5	0.2	A
	Right Turn						
	Subtotal	100	110	110.2%	0.9	0.2	A
SB	Left Turn						
	Through	60	59	98.2%	0.1	0.1	A
	Right Turn	12	13	107.7%	0.0	0.0	A
	Subtotal	72	72	99.8%	0.1	0.1	A
EB	Left Turn	40	32	79.8%	5.0	0.6	A
	Through						
	Right Turn	30	26	87.4%	2.3	0.3	A
	Subtotal	70	58	83.1%	3.8	0.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		242	240	99.2%	1.4	0.2	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2
PM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

























Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	5	5	98.8%	3.4	2.4	A
	Through	5	5	106.4%	3.8	2.6	A
	Right Turn	5	6	114.0%	2.1	1.2	A
	Subtotal	15	16	106.4%	4.4	0.8	A
SB	Left Turn	10	8	76.0%	4.4	2.3	A
	Through	5	4	83.6%	3.9	3.8	A
	Right Turn	25	24	95.8%	2.6	0.9	A
	Subtotal	40	36	89.3%	3.7	0.7	A
EB	Left Turn	35	33	94.5%	1.9	0.6	A
	Through	60	63	105.1%	0.2	0.2	A
	Right Turn	5	6	114.0%	0.0	0.1	A
	Subtotal	100	102	101.8%	0.8	0.3	A
WB	Left Turn	5	2	38.0%	0.9	1.0	A
	Through	44	52	118.3%	0.3	0.1	A
	Right Turn	10	10	98.8%	0.3	0.3	A
	Subtotal	59	64	108.2%	0.4	0.1	A
Total		214	217	101.6%	1.4	0.3	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	15	19	124.1%	3.9	1.5	A
	Through						
	Right Turn	30	25	83.6%	2.8	0.3	A
	Subtotal	45	44	97.1%	3.5	0.4	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	60	60	100.1%	0.4	0.2	A
	Right Turn	15	18	119.1%	0.2	0.2	A
	Subtotal	75	78	103.9%	0.3	0.1	A
WB	Left Turn	30	38	127.9%	1.9	0.2	A
	Through	44	44	99.3%	0.2	0.1	A
	Right Turn						
	Subtotal	74	82	110.9%	1.0	0.2	A
Total		194	204	105.0%	1.3	0.2	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Existing Plus Phase I Conditions
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	150	210	230	150	310	100	540	160	310	690	20
Future Volume (veh/h)	20	150	210	230	150	310	100	540	160	310	690	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		0.99	1.00		0.99	1.00		1.00	1.00		0.97
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	165	231	253	165	341	110	593	176	341	758	22
Adj No. of Lanes	1	1	1	2	1	1	1	2	0	2	2	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, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	429	363	358	585	684	149	928	275	454	1378	40
Arrive On Green	0.02	0.23	0.23	0.10	0.31	0.30	0.08	0.34	0.33	0.13	0.39	0.38
Sat Flow, veh/h	1691	1863	1573	3442	1863	1574	1774	2693	797	3442	3509	102
Grp Volume(v), veh/h	22	165	231	253	165	341	110	389	380	341	382	398
Grp Sat Flow(s),veh/h/ln	1691	1863	1573	1721	1863	1574	1774	1770	1720	1721	1770	1841
Q Serve(g_s), s	1.1	6.3	11.2	6.0	5.7	13.3	5.1	15.7	15.8	8.1	14.2	14.2
Cycle Q Clear(g_c), s	1.1	6.3	11.2	6.0	5.7	13.3	5.1	15.7	15.8	8.1	14.2	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.06
Lane Grp Cap(c), veh/h	35	429	363	358	585	684	149	610	593	454	695	723
V/C Ratio(X)	0.63	0.38	0.64	0.71	0.28	0.50	0.74	0.64	0.64	0.75	0.55	0.55
Avail Cap(c_a), veh/h	608	1571	1327	710	1571	1518	638	1482	1441	1238	1482	1542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	27.5	29.4	36.7	21.9	17.3	37.9	23.3	23.6	35.5	19.9	20.0
Incr Delay (d2), s/veh	6.7	0.6	1.9	1.0	0.3	0.6	2.6	1.1	1.2	1.0	0.3	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	0.6	3.3	5.1	2.9	2.9	5.8	2.6	7.8	7.7	3.9	6.9	7.2
LnGrp Delay(d),s/veh	47.9	28.1	31.3	37.7	22.2	17.9	40.6	24.4	24.7	36.4	20.2	20.2
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		418			759			879			1121	
Approach Delay, s/veh		30.9			25.4			26.6			25.1	
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	15.2	33.2	12.8	23.5	11.1	37.3	5.8	30.6				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	30.0	70.0	17.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+I1), s	10.1	17.8	8.0	13.2	7.1	16.2	3.1	15.3				
Green Ext Time (p_c), s	0.6	10.4	0.3	4.3	0.0	10.4	0.0	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay			26.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Existing Plus Phase I Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	310	50	170	340	230	50	430	110	220	660	250
Future Volume (veh/h)	190	310	50	170	340	230	50	430	110	220	660	250
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		0.98	1.00		0.97	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	204	333	54	183	366	247	54	462	118	237	710	269
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1040	167	211	664	440	70	760	192	265	955	362
Arrive On Green	0.13	0.34	0.33	0.12	0.33	0.32	0.04	0.27	0.26	0.15	0.38	0.37
Sat Flow, veh/h	1774	3047	489	1774	2017	1337	1774	2786	706	1774	2498	947
Grp Volume(v), veh/h	204	192	195	183	320	293	54	292	288	237	503	476
Grp Sat Flow(s),veh/h/ln	1774	1770	1766	1774	1770	1584	1774	1770	1722	1774	1770	1675
Q Serve(g_s), s	15.3	10.9	11.2	13.8	20.1	20.8	4.1	19.5	19.9	17.8	33.3	33.4
Cycle Q Clear(g_c), s	15.3	10.9	11.2	13.8	20.1	20.8	4.1	19.5	19.9	17.8	33.3	33.4
Prop In Lane	1.00		0.28	1.00		0.84	1.00		0.41	1.00		0.56
Lane Grp Cap(c), veh/h	232	604	603	211	583	522	70	483	470	265	677	641
V/C Ratio(X)	0.88	0.32	0.32	0.87	0.55	0.56	0.77	0.61	0.61	0.89	0.74	0.74
Avail Cap(c_a), veh/h	392	931	929	392	931	833	392	931	906	392	931	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	33.1	33.3	58.8	37.3	38.1	64.6	43.1	43.5	56.8	36.2	36.6
Incr Delay (d2), s/veh	11.6	1.1	1.1	10.3	2.9	3.4	15.9	1.2	1.3	16.3	2.1	2.2
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	8.3	5.5	5.6	7.4	10.3	9.6	2.3	9.7	9.6	10.0	16.6	15.9
LnGrp Delay(d),s/veh	69.6	34.2	34.4	69.1	40.2	41.5	80.5	44.3	44.8	73.1	38.3	38.8
LnGrp LOS	E	C	C	E	D	D	F	D	D	E	D	D
Approach Vol, veh/h		591			796			634			1216	
Approach Delay, s/veh		46.5			47.3			47.6			45.3	
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	34.3	41.1	20.2	50.4	9.4	56.0	21.8	48.8				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	70.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0				
Max Q Clear Time (g_c+1.9), s	19.8	21.9	15.8	13.2	6.1	35.4	17.3	22.8				
Green Ext Time (p_c), s	0.5	13.7	0.4	22.0	0.1	12.5	0.4	20.5				
Intersection Summary												
HCM 2010 Ctrl Delay			46.5									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	100	470	60	110	600
Future Vol, veh/h	80	100	470	60	110	600
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	104	490	63	115	625

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1376	522	0	0	553	0
Stage 1	522	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	160	555	-	-	1017	-
Stage 1	595	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	142	555	-	-	1017	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	370	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	23.7		0		1.4
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	376	1017
HCM Lane V/C Ratio	-	-	0.499	0.113
HCM Control Delay (s)	-	-	23.7	9
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	2.7	0.4

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Existing Plus Phase I Conditions
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	220	40	130	270	120	30	250	100	120	330	130
Future Volume (veh/h)	120	220	40	130	270	120	30	250	100	120	330	130
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		0.98	1.00		0.99	1.00		1.00	1.00		0.97
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	128	234	43	138	287	128	32	266	106	128	351	138
Adj No. of Lanes	1	1	1	1	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	474	393	179	471	398	75	567	480	181	459	180
Arrive On Green	0.10	0.25	0.25	0.10	0.25	0.25	0.04	0.30	0.30	0.10	0.36	0.36
Sat Flow, veh/h	1774	1863	1546	1774	1863	1574	1774	1863	1578	1774	1261	496
Grp Volume(v), veh/h	128	234	43	138	287	128	32	266	106	128	0	489
Grp Sat Flow(s),veh/h/ln	1774	1863	1546	1774	1863	1574	1774	1863	1578	1774	0	1756
Q Serve(g_s), s	4.7	7.2	1.4	5.1	9.1	4.4	1.2	7.8	3.4	4.7	0.0	16.5
Cycle Q Clear(g_c), s	4.7	7.2	1.4	5.1	9.1	4.4	1.2	7.8	3.4	4.7	0.0	16.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	181	474	393	179	471	398	75	567	480	181	0	639
V/C Ratio(X)	0.71	0.49	0.11	0.77	0.61	0.32	0.43	0.47	0.22	0.71	0.00	0.76
Avail Cap(c_a), veh/h	677	1266	1050	677	1266	1069	677	1959	1660	677	0	1847
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	29.1	21.3	19.2	29.4	22.1	20.4	31.3	19.0	17.4	29.1	0.0	18.9
Incr Delay (d2), s/veh	3.7	0.6	0.1	5.2	0.9	0.3	2.8	0.4	0.2	3.7	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.8	0.6	2.7	4.8	2.0	0.6	4.1	1.5	2.5	0.0	8.1
LnGrp Delay(d),s/veh	32.9	21.9	19.3	34.6	23.1	20.7	34.1	19.4	17.6	32.9	0.0	20.3
LnGrp LOS	C	C	B	C	C	C	C	B	B	C		C
Approach Vol, veh/h		405			553			404			617	
Approach Delay, s/veh		25.1			25.4			20.1			22.9	
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	10.9	24.4	10.8	21.1	6.8	28.4	10.9	21.0				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	70.0	25.6	45.0	25.0	70.0	25.0	45.0				
Max Q Clear Time (g_c+I1), s	6.7	9.8	7.1	9.2	3.2	18.5	6.7	11.1				
Green Ext Time (p_c), s	0.2	4.9	0.2	3.2	0.0	4.9	0.2	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			23.5									
HCM 2010 LOS			C									

Intersection																
Intersection Delay, s/veh27.8																
Intersection LOS D																




Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	20	200	20	0	40	240	220	0	30	70	50	0	210	60	30
Future Vol, veh/h	0	20	200	20	0	40	240	220	0	30	70	50	0	210	60	30
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	215	22	0	43	258	237	0	32	75	54	0	226	65	32
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.6	41.2	13.9	21.4
HCM LOS	C	E	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	8%	8%	70%
Vol Thru, %	47%	83%	48%	20%
Vol Right, %	33%	8%	44%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	240	500	300
LT Vol	30	20	40	210
Through Vol	70	200	240	60
RT Vol	50	20	220	30
Lane Flow Rate	161	258	538	323
Geometry Grp	1	1	1	1
Degree of Util (X)	0.329	0.495	0.899	0.632
Departure Headway (Hd)	7.341	6.909	6.14	7.057
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	490	521	597	516
Service Time	5.375	4.945	4.14	5.057
HCM Lane V/C Ratio	0.329	0.495	0.901	0.626
HCM Control Delay	13.9	16.6	41.2	21.4
HCM Lane LOS	B	C	E	C
HCM 95th-tile Q	1.4	2.7	10.8	4.3

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	30	100	10	20	80
Future Vol, veh/h	5	30	100	10	20	80
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	79	79	79	79	79	79
Heavy Vehicles, %	2	8	2	33	46	7
Mvmt Flow	6	38	127	13	25	101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	285	133	0	0	139	0
Stage 1	133	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.42	6.28	-	-	4.56	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.372	-	-	2.614	-
Pot Cap-1 Maneuver	705	900	-	-	1214	-
Stage 1	893	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	689	900	-	-	1214	-
Mov Cap-2 Maneuver	689	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.4		0		1.6
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	862	1214	-
HCM Lane V/C Ratio	-	-	0.051	0.021	-
HCM Control Delay (s)	-	-	9.4	8	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	5	5	5	10	10	5	90	5	5	70	5
Future Vol, veh/h	10	5	5	5	10	10	5	90	5	5	70	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	12	6	6	6	12	12	6	106	6	6	82	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	229	221	85	224	221	109	88	0	0	112	0	0
Stage 1	97	97	-	121	121	-	-	-	-	-	-	-
Stage 2	132	124	-	103	100	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	695	678	974	732	657	913	1508	-	-	1478	-	-
Stage 1	874	815	-	883	773	-	-	-	-	-	-	-
Stage 2	837	793	-	903	790	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	672	673	974	718	652	913	1508	-	-	1478	-	-
Mov Cap-2 Maneuver	672	673	-	718	652	-	-	-	-	-	-	-
Stage 1	871	812	-	879	770	-	-	-	-	-	-	-
Stage 2	810	790	-	887	787	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10	0.4	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1508	-	-	729	752	1478	-	-
HCM Lane V/C Ratio	0.004	-	-	0.032	0.039	0.004	-	-
HCM Control Delay (s)	7.4	0	-	10.1	10	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	26.6
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↘	↗	↗		↘	↗	↘		↘	↗	↗
Traffic Vol, veh/h	0	50	320	100	0	40	370	70	0	80	100	50
Future Vol, veh/h	0	50	320	100	0	40	370	70	0	80	100	50
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	340	106	0	43	394	74	0	85	106	53
Number of Lanes	0	1	1	1	0	1	1	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	27.6	38.6	14.3
HCM LOS	D	E	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	100	50	50	320	100	40	370	70	90	120
LT Vol	80	0	0	50	0	0	40	0	0	90	0
Through Vol	0	100	0	0	320	0	0	370	0	0	120
RT Vol	0	0	50	0	0	100	0	0	70	0	0
Lane Flow Rate	85	106	53	53	340	106	43	394	74	96	128
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.223	0.265	0.122	0.128	0.781	0.221	0.101	0.879	0.152	0.248	0.312
Departure Headway (Hd)	9.452	8.952	8.252	8.687	8.255	7.487	8.661	8.161	7.461	9.309	8.809
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	402	436	414	439	482	416	449	483	388	410
Service Time	7.181	6.681	5.981	6.4	5.968	5.2	6.361	5.861	5.161	7.026	6.526
HCM Lane V/C Ratio	0.223	0.264	0.122	0.128	0.774	0.22	0.103	0.878	0.153	0.247	0.312
HCM Control Delay	14.9	14.9	12.1	12.7	34.7	12.3	12.3	46.6	11.5	15.1	15.5
HCM Lane LOS	B	B	B	B	D	B	B	E	B	C	C
HCM 95th-tile Q	0.8	1.1	0.4	0.4	6.8	0.8	0.3	9.2	0.5	1	1.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	90	120	70
Future Vol, veh/h	0	90	120	70
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	128	74
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.6
HCM LOS	B

HCM 2010 Signalized Intersection Summary
23: Garden Hwy & Lincoln Rd

Existing Plus Phase I Conditions
PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↖↗	↗	↖	↑↑	↑↑	↗		
Traffic Volume (veh/h)	230	180	215	600	670	250		
Future Volume (veh/h)	230	180	215	600	670	250		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1827	1776	1863	1863	1863	1863		
Adj Flow Rate, veh/h	245	191	229	638	713	266		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	4	7	2	2	2	2		
Cap, veh/h	628	281	302	2309	1421	636		
Arrive On Green	0.19	0.19	0.17	0.65	0.40	0.40		
Sat Flow, veh/h	3375	1509	1774	3632	3632	1583		
Grp Volume(v), veh/h	245	191	229	638	713	266		
Grp Sat Flow(s),veh/h/ln	1688	1509	1774	1770	1770	1583		
Q Serve(g_s), s	3.2	5.8	6.1	3.8	7.5	6.0		
Cycle Q Clear(g_c), s	3.2	5.8	6.1	3.8	7.5	6.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	628	281	302	2309	1421	636		
V/C Ratio(X)	0.39	0.68	0.76	0.28	0.50	0.42		
Avail Cap(c_a), veh/h	3105	1388	916	3356	3356	1501		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.7	18.8	19.6	3.7	11.1	10.7		
Incr Delay (d2), s/veh	0.1	1.1	1.5	0.0	0.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	4.8	3.1	1.8	3.6	2.6		
LnGrp Delay(d),s/veh	17.8	19.9	21.1	3.7	11.2	10.8		
LnGrp LOS	B	B	C	A	B	B		
Approach Vol, veh/h	436			867	979			
Approach Delay, s/veh	18.7			8.3	11.1			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		36.3		13.2	12.4	23.9		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		45.0		45.0	25.0	45.0		
Max Q Clear Time (g_c+I1), s		5.8		7.8	8.1	9.5		
Green Ext Time (p_c), s		8.5		0.8	0.1	8.4		
Intersection Summary								
HCM 2010 Ctrl Delay			11.5					
HCM 2010 LOS			B					
Notes								

Intersection																
Intersection Delay, s/veh	76.4															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↔				↔	↔			↔				↔	
Traffic Vol, veh/h	0	110	560	20	0	40	410	50	0	20	60	40	0	50	50	70
Future Vol, veh/h	0	110	560	20	0	40	410	50	0	20	60	40	0	50	50	70
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	113	577	21	0	41	423	52	0	21	62	41	0	52	52	72
Number of Lanes	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	132.9	34.4	13.8	15
HCM LOS	F	D	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	16%	9%	0%	29%
Vol Thru, %	50%	81%	91%	0%	29%
Vol Right, %	33%	3%	0%	100%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	690	450	50	170
LT Vol	20	110	40	0	50
Through Vol	60	560	410	0	50
RT Vol	40	20	0	50	70
Lane Flow Rate	124	711	464	52	175
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.257	1.214	0.848	0.084	0.352
Departure Headway (Hd)	8.074	6.144	6.935	6.172	7.79
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	448	590	524	584	464
Service Time	6.074	4.207	4.635	3.872	5.79
HCM Lane V/C Ratio	0.277	1.205	0.885	0.089	0.377
HCM Control Delay	13.8	132.9	37.2	9.4	15
HCM Lane LOS	B	F	E	A	B
HCM 95th-tile Q	1	25.8	8.8	0.3	1.6

HCM 2010 Signalized Intersection Summary
 26: Garden Hwy & Bogue Rd

Existing Plus Phase I Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	120	250	10	90	60	195	300	20	71	290	270
Future Volume (veh/h)	231	120	250	10	90	60	195	300	20	71	290	270
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		0.99	1.00		1.00	1.00		1.00	1.00		0.96
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	1863	1863	1863	1863	1863	1863	1845	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	236	122	255	10	92	61	199	306	20	72	296	276
Adj No. of Lanes	1	1	1	1	1	1	1	2	0	1	2	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, %	2	2	2	2	2	2	3	2	2	2	2	2
Cap, veh/h	290	599	503	26	321	273	252	1276	83	104	520	447
Arrive On Green	0.16	0.32	0.32	0.01	0.17	0.17	0.14	0.38	0.35	0.06	0.29	0.27
Sat Flow, veh/h	1774	1863	1566	1774	1863	1583	1757	3374	219	1774	1770	1522
Grp Volume(v), veh/h	236	122	255	10	92	61	199	160	166	72	296	276
Grp Sat Flow(s),veh/h/ln	1774	1863	1566	1774	1863	1583	1757	1770	1824	1774	1770	1522
Q Serve(g_s), s	9.0	3.4	9.3	0.4	3.0	2.3	7.7	4.4	4.4	2.8	10.0	11.2
Cycle Q Clear(g_c), s	9.0	3.4	9.3	0.4	3.0	2.3	7.7	4.4	4.4	2.8	10.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	290	599	503	26	321	273	252	669	690	104	520	447
V/C Ratio(X)	0.81	0.20	0.51	0.38	0.29	0.22	0.79	0.24	0.24	0.69	0.57	0.62
Avail Cap(c_a), veh/h	767	1902	1599	767	1902	1617	760	1807	1862	767	1807	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	17.4	19.4	34.4	25.4	25.1	29.2	15.0	15.1	32.5	21.1	22.4
Incr Delay (d2), s/veh	2.1	0.1	0.3	3.4	0.2	0.2	2.1	0.1	0.1	3.0	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	1.7	4.1	0.2	1.6	1.0	3.9	2.1	2.2	1.5	4.9	4.7
LnGrp Delay(d),s/veh	30.6	17.4	19.7	37.8	25.6	25.3	31.3	15.1	15.2	35.5	21.5	22.9
LnGrp LOS	C	B	B	D	C	C	C	B	B	D	C	C
Approach Vol, veh/h		613			163			525			644	
Approach Delay, s/veh		23.4			26.2			21.2			23.7	
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	30.7	5.0	26.7	14.1	24.7	15.5	16.2					
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	70.0	30.0	70.0	30.0	70.0	30.0	70.0					
Max Q Clear Time (g_c+1), s	14.8	6.4	2.4	11.3	9.7	13.2	11.0	5.0				
Green Ext Time (p_c), s	0.0	4.1	0.0	1.3	0.1	4.1	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			23.2									
HCM 2010 LOS			C									
Notes												

Intersection																
Intersection Delay, s/veh	7.8															
Intersection LOS	A															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	30	40	5	0	10	40	30	0	5	50	5	0	30	40	30
Future Vol, veh/h	0	30	40	5	0	10	40	30	0	5	50	5	0	30	40	30
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	31	42	5	0	10	42	31	0	5	52	5	0	31	42	31
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

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

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	40%	12%	30%
Vol Thru, %	83%	53%	50%	40%
Vol Right, %	8%	7%	38%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	75	80	100
LT Vol	5	30	10	30
Through Vol	50	40	40	40
RT Vol	5	5	30	30
Lane Flow Rate	63	78	83	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.096	0.097	0.123
Departure Headway (Hd)	4.376	4.436	4.194	4.246
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	822	810	858	848
Service Time	2.386	2.448	2.206	2.256
HCM Lane V/C Ratio	0.077	0.096	0.097	0.123
HCM Control Delay	7.7	7.9	7.7	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.3	0.4

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Existing Plus Phase I Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1	10	0	1	0	20	220	0	1	110	70
Future Volume (veh/h)	70	1	10	0	1	0	20	220	0	1	110	70
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	1863	1863	1863	1900	1863	1900	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	79	0	11	0	1	0	22	244	0	1	122	78
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	543	0	242	0	63	0	35	561	0	7	531	451
Arrive On Green	0.15	0.00	0.15	0.00	0.03	0.00	0.02	0.30	0.00	0.00	0.29	0.29
Sat Flow, veh/h	3548	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	79	0	11	0	1	0	22	244	0	1	122	78
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	0.6	0.0	0.2	0.0	0.0	0.0	0.4	3.3	0.0	0.0	1.6	1.2
Cycle Q Clear(g_c), s	0.6	0.0	0.2	0.0	0.0	0.0	0.4	3.3	0.0	0.0	1.6	1.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	0	242	0	63	0	35	561	0	7	531	451
V/C Ratio(X)	0.15	0.00	0.05	0.00	0.02	0.00	0.62	0.44	0.00	0.14	0.23	0.17
Avail Cap(c_a), veh/h	4622	0	2063	0	2427	0	964	2427	0	964	2427	2063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	11.4	0.0	14.7	0.0	15.3	8.8	0.0	15.6	8.6	8.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.1	0.0	16.7	0.6	0.0	8.8	0.3	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	0.3	0.0	0.1	0.0	0.0	0.0	0.3	1.8	0.0	0.0	0.9	0.5
LnGrp Delay(d),s/veh	11.7	0.0	11.5	0.0	14.8	0.0	32.0	9.5	0.0	24.4	8.9	8.7
LnGrp LOS	B		B		B		C	A		C	A	A
Approach Vol, veh/h		90			1			266			201	
Approach Delay, s/veh		11.7			14.8			11.4			8.9	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	13.5		8.8	4.6	13.0		5.1				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	40.0			40.0	17.0	40.0		40.0				
Max Q Clear Time (g_c+1), s	5.3			2.6	2.4	3.6		2.0				
Green Ext Time (p_c), s	0.0	3.2		0.4	0.0	3.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			10.5									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Existing Plus Phase I Conditions
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	10	20	20	20	120	30	300	40	171	260	120
Future Volume (veh/h)	90	10	20	20	20	120	30	300	40	171	260	120
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		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1863	1761	1900	1863	1863	1863	1863	1861	1900	1863	1863	1900
Adj Flow Rate, veh/h	96	11	21	21	21	128	32	319	43	182	277	128
Adj No. of Lanes	1	1	0	1	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	123	235	45	322	272	56	859	115	257	918	413
Arrive On Green	0.08	0.23	0.22	0.03	0.17	0.17	0.03	0.27	0.23	0.15	0.39	0.35
Sat Flow, veh/h	1774	539	1029	1774	1863	1575	1774	3134	419	1774	2371	1066
Grp Volume(v), veh/h	96	0	32	21	21	128	32	179	183	182	205	200
Grp Sat Flow(s),veh/h/ln	1774	0	1568	1774	1863	1575	1774	1768	1786	1774	1770	1667
Q Serve(g_s), s	2.6	0.0	0.8	0.6	0.5	3.6	0.9	4.0	4.1	4.8	3.9	4.2
Cycle Q Clear(g_c), s	2.6	0.0	0.8	0.6	0.5	3.6	0.9	4.0	4.1	4.8	3.9	4.2
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.23	1.00		0.64
Lane Grp Cap(c), veh/h	145	0	359	45	322	272	56	484	489	257	685	646
V/C Ratio(X)	0.66	0.00	0.09	0.47	0.07	0.47	0.57	0.37	0.37	0.71	0.30	0.31
Avail Cap(c_a), veh/h	924	0	1457	888	1731	1464	924	1697	1714	924	1699	1600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	15.0	23.5	16.9	18.2	23.4	14.4	14.6	19.9	10.4	10.9
Incr Delay (d2), s/veh	5.1	0.0	0.1	7.3	0.1	1.3	8.6	0.5	0.5	3.6	0.2	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	1.5	0.0	0.4	0.4	0.2	1.6	0.6	2.0	2.1	2.6	1.9	2.0
LnGrp Delay(d),s/veh	27.0	0.0	15.1	30.8	17.0	19.5	32.0	14.8	15.1	23.5	10.6	11.2
LnGrp LOS	C		B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		128			170			394			587	
Approach Delay, s/veh		24.0			20.6			16.3			14.8	
Approach LOS		C			C			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	11.1	17.4	5.2	15.2	5.6	23.0	8.0	12.5				
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5				
Max Green Setting (Gmax), s	25.0	45.0	24.0	45.0	25.0	45.0	25.0	45.0				
Max Q Clear Time (g_c+1), s	10.8	6.1	2.6	2.8	2.9	6.2	4.6	5.6				
Green Ext Time (p_c), s	0.4	4.6	0.0	0.8	0.0	4.6	0.2	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				17.0								
HCM 2010 LOS				B								
Notes												

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	450	30	90	540	20	50
Future Vol, veh/h	450	30	90	540	20	50
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	479	32	96	574	21	53

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	513
Stage 1	-	-	497
Stage 2	-	-	481
Critical Hdwy	-	-	4.14
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	-	2.22
Pot Cap-1 Maneuver	-	-	1049
Stage 1	-	-	577
Stage 2	-	-	588
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1047
Mov Cap-2 Maneuver	-	-	225
Stage 1	-	-	576
Stage 2	-	-	533

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	225	738	-	-	1047	-
HCM Lane V/C Ratio	0.095	0.072	-	-	0.091	-
HCM Control Delay (s)	22.7	10.3	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0.3	-

Intersection			
Intersection Delay, s/veh	3.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	0	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	33	54
Demand Flow Rate, veh/h	0	34	55
Vehicles Circulating, veh/h	55	0	0
Vehicles Exiting, veh/h	0	55	34
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.5	3.7
Approach LOS	-	A	A
Lane	Left	Left	
Designated Moves	T	T	
Assumed Moves	T	T	
RT Channelized			
Lane Util	1.000	1.000	
Critical Headway, s	5.193	5.193	
Entry Flow, veh/h	34	55	
Cap Entry Lane, veh/h	1130	1130	
Entry HV Adj Factor	0.980	0.980	
Flow Entry, veh/h	33	54	
Cap Entry, veh/h	1108	1108	
V/C Ratio	0.030	0.049	
Control Delay, s/veh	3.5	3.7	
LOS	A	A	
95th %tile Queue, veh	0	0	

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	5	20	25	15	20	5
Future Vol, veh/h	5	20	25	15	20	5
Conflicting Peds, #/hr	2	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	21	27	16	21	5

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	45	0	71
Stage 1	-	-	37
Stage 2	-	-	34
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1563	-	933
Stage 1	-	-	985
Stage 2	-	-	988
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1560	-	927
Mov Cap-2 Maneuver	-	-	927
Stage 1	-	-	983
Stage 2	-	-	983

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1560	-	-	-	927	1030
HCM Lane V/C Ratio	0.003	-	-	-	0.023	0.005
HCM Control Delay (s)	7.3	0	-	-	9	8.5
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection				
Intersection Delay, s/veh	4.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	48	42	79	191
Demand Flow Rate, veh/h	49	43	80	194
Vehicles Circulating, veh/h	134	108	92	31
Vehicles Exiting, veh/h	91	64	91	120
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.0	4.2	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	49	43	80	194
Cap Entry Lane, veh/h	988	1014	1031	1095
Entry HV Adj Factor	0.978	0.974	0.987	0.982
Flow Entry, veh/h	48	42	79	191
Cap Entry, veh/h	966	988	1017	1076
V/C Ratio	0.050	0.042	0.078	0.177
Control Delay, s/veh	4.2	4.0	4.2	5.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	1

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	20	10	80	90	20
Future Vol, veh/h	10	20	10	80	90	20
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	21	11	85	96	21

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	216	110	119	0	0
Stage 1	108	-	-	-	-
Stage 2	108	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	772	943	1469	-	-
Stage 1	916	-	-	-	-
Stage 2	916	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	763	940	1467	-	-
Mov Cap-2 Maneuver	763	-	-	-	-
Stage 1	914	-	-	-	-
Stage 2	907	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	873	-	-
HCM Lane V/C Ratio	0.007	-	0.037	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	200	185	252	166	156	224	167	288	302	126	273	205
Average Queue (ft)	139	76	148	107	101	177	95	203	201	48	179	123
95th Queue (ft)	240	178	264	187	171	258	170	321	318	135	288	227
Link Distance (ft)		1198	1198	146	146	146		3915	3915			1981
Upstream Blk Time (%)				5	2	19						
Queuing Penalty (veh)				14	6	53						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	2	0							1	0		
Queuing Penalty (veh)	3	0							1	0		

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	220	86
Average Queue (ft)	129	47
95th Queue (ft)	237	86
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report Existing Plus

Phase 1 and 2 Intersection: AM Peak Hour

6/2/2017

10:Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	LT	R	LT	R	L	R	UL
Maximum Queue (ft)	50	62	83	72	60	3	60
Average Queue (ft)	23	35	32	39	16	0	25
95th Queue (ft)	57	75	108	77	55	4	59
Link Distance (ft)	961		506				
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		30		75	450	70	450
Storage Blk Time (%)	15	6	1	1			
Queuing Penalty (veh)	4	1	2	1			

Queuing and Blocking Report

Existing Plus Phase 1 and 2 PM Peak Hour

6/2/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	265	442	420	123	182	224	211	311	335	262	474	755
Average Queue (ft)	240	262	238	76	121	195	133	238	242	115	353	305
95th Queue (ft)	321	527	422	130	183	256	224	356	362	278	575	764
Link Distance (ft)		1198	1198	146	146	146		3915	3915			1981
Upstream Blk Time (%)				1	4	34						
Queuing Penalty (veh)				4	15	114						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	38	0							2	0	28	0
Queuing Penalty (veh)	76	0							6	1	66	0

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	470	104
Average Queue (ft)	170	61
95th Queue (ft)	463	113
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
 Existing Plus Phase 1 and 2 PM Peak Hour

6/2/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	L	UL
Maximum Queue (ft)	28	48	45	46	48	44
Average Queue (ft)	11	17	20	21	11	16
95th Queue (ft)	33	51	49	46	42	41
Link Distance (ft)	961		495			
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		30		75	450	450
Storage Blk Time (%)	8	1	0	0		
Queuing Penalty (veh)	1	0	0	0		

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

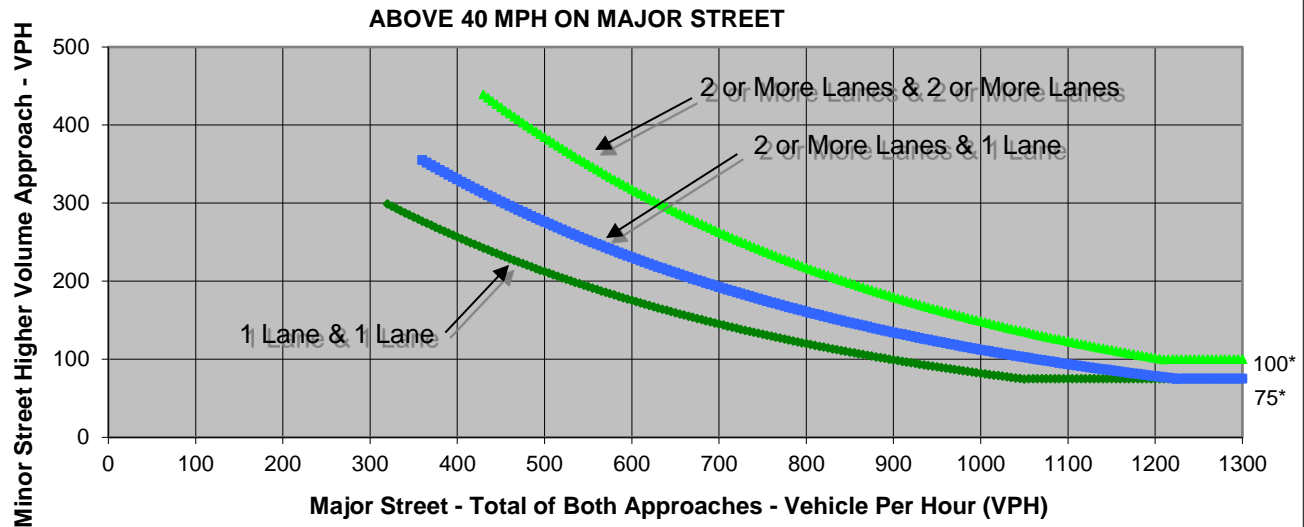
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	3	2
Through	1,520	1,070	5	1
Right	40	20	40	27
Total	1,590	1,140	48	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,730	48	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

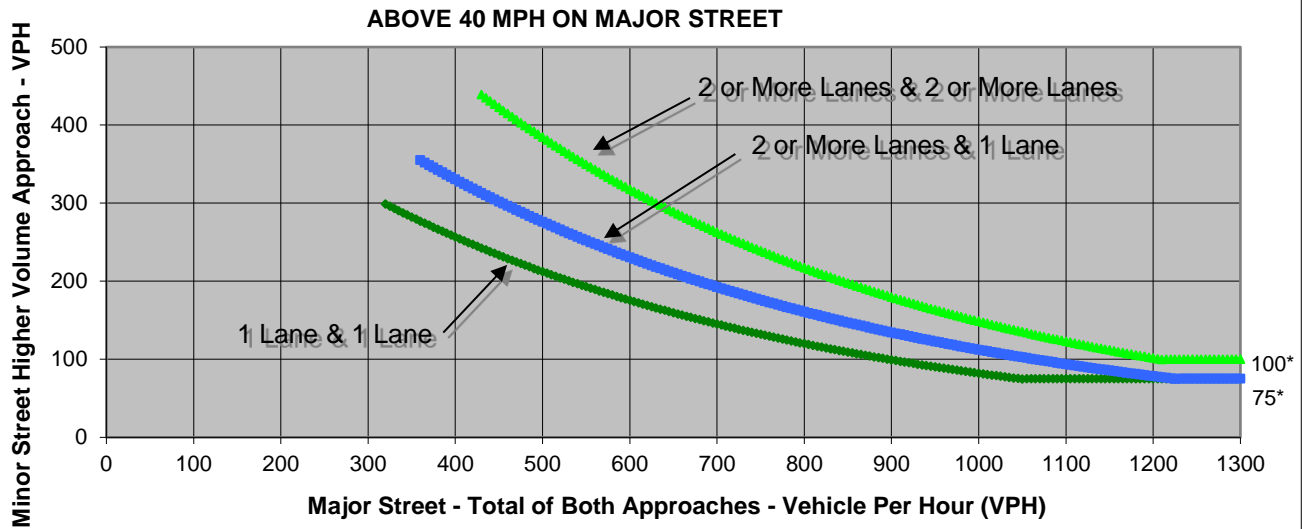
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	16	13
Through	1,120	1,030	4	7
Right	15	10	7	32
Total	1,145	1,070	27	52

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,215	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

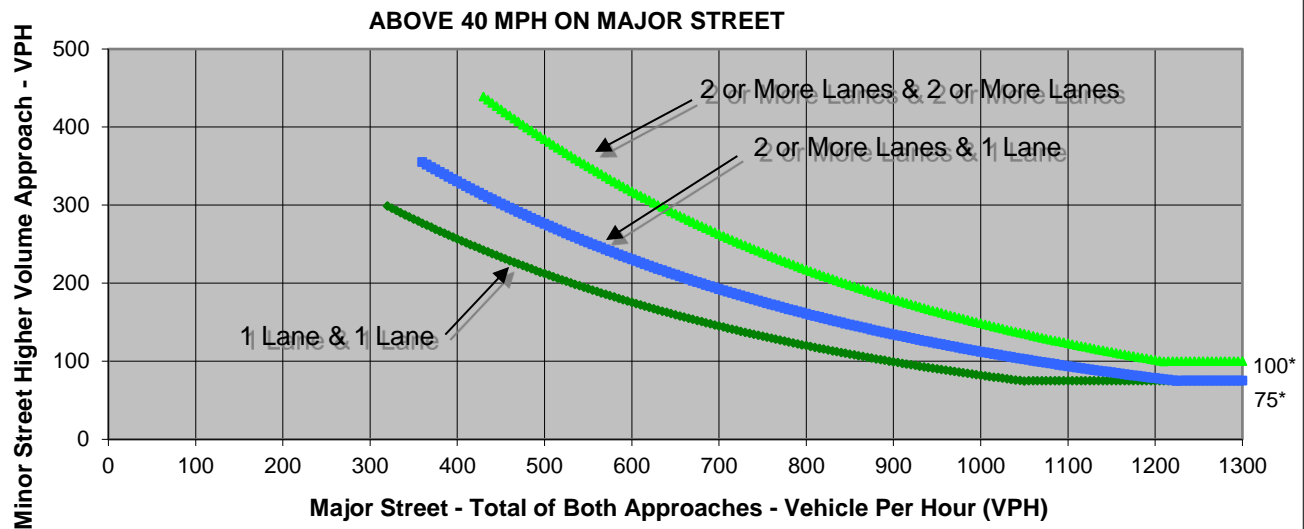
Turn Movement Volumes

	NB	SB	EB	WB
Left	25	100	6	34
Through	670	820	17	2
Right	35	10	27	114
Total	730	930	50	150

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,660	150	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

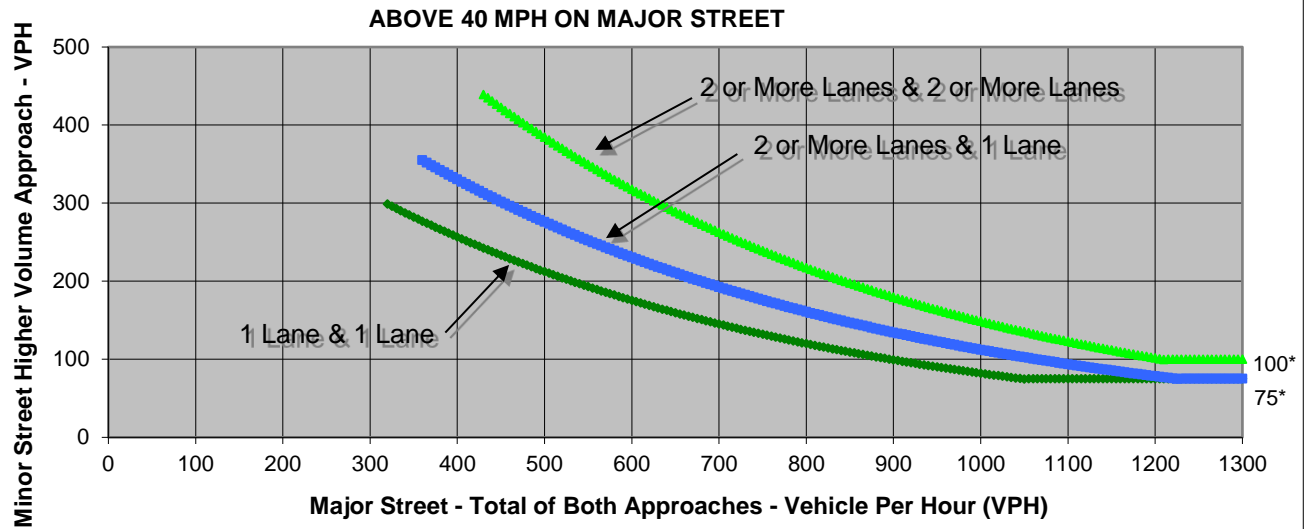
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	11	5	5
Through	705	860	5	5
Right	10	10	10	20
Total	720	881	20	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,601	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

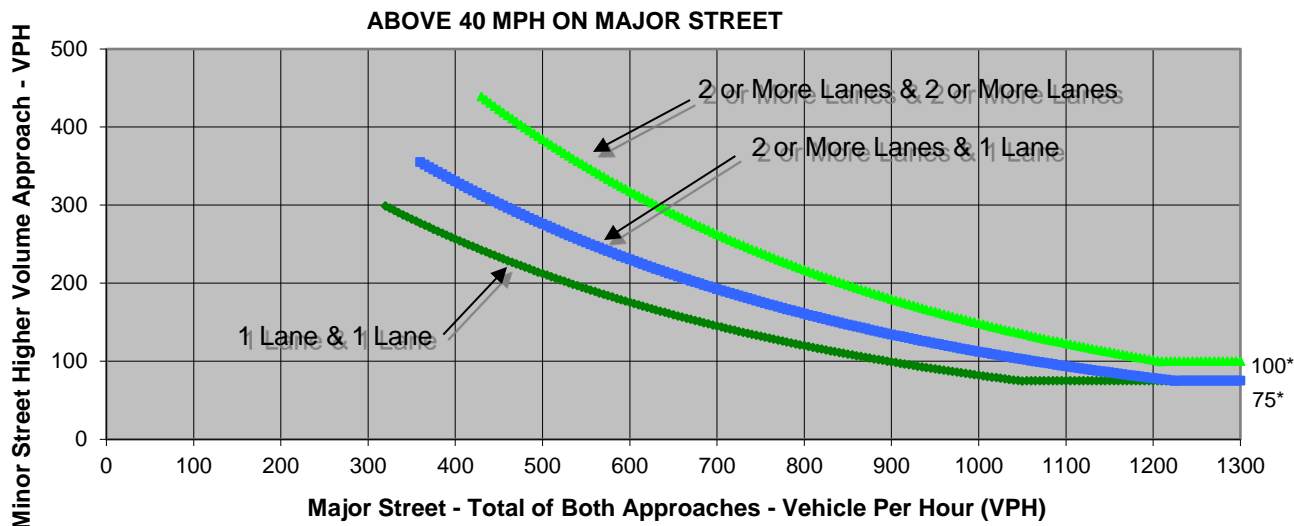
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	0	0
Through	710	860	0	0
Right	10	5	10	10
Total	725	875	10	10

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,600	10	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street S Walton Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

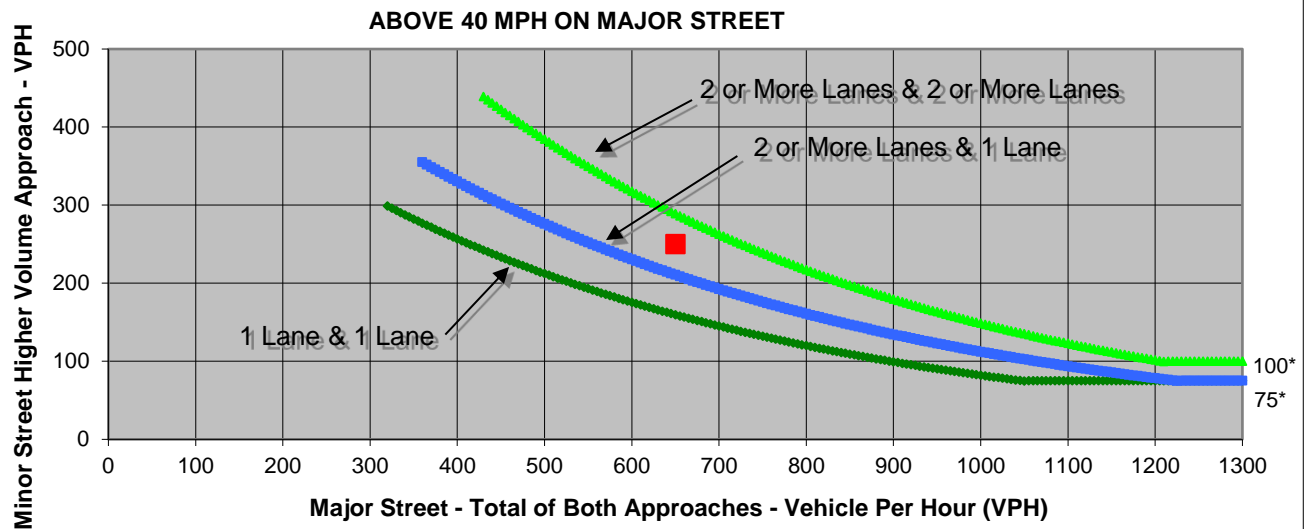
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	170	20	20
Through	50	60	270	180
Right	30	20	50	110
Total	110	250	340	310

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	650	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

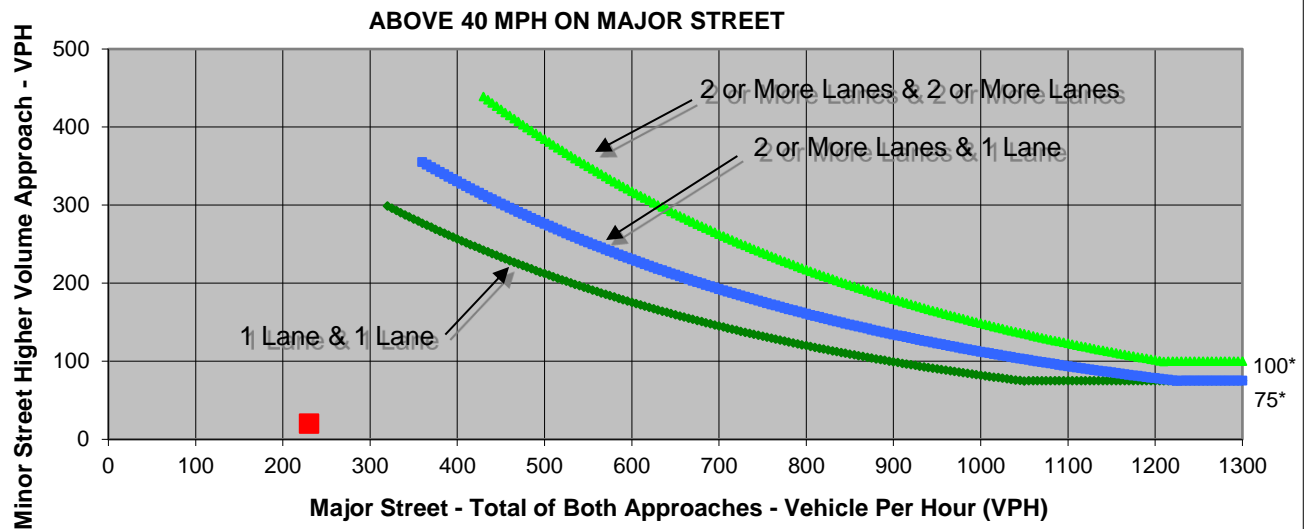
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	0	5
Through	90	100	0	0
Right	10	0	0	15
Total	100	130	0	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	230	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

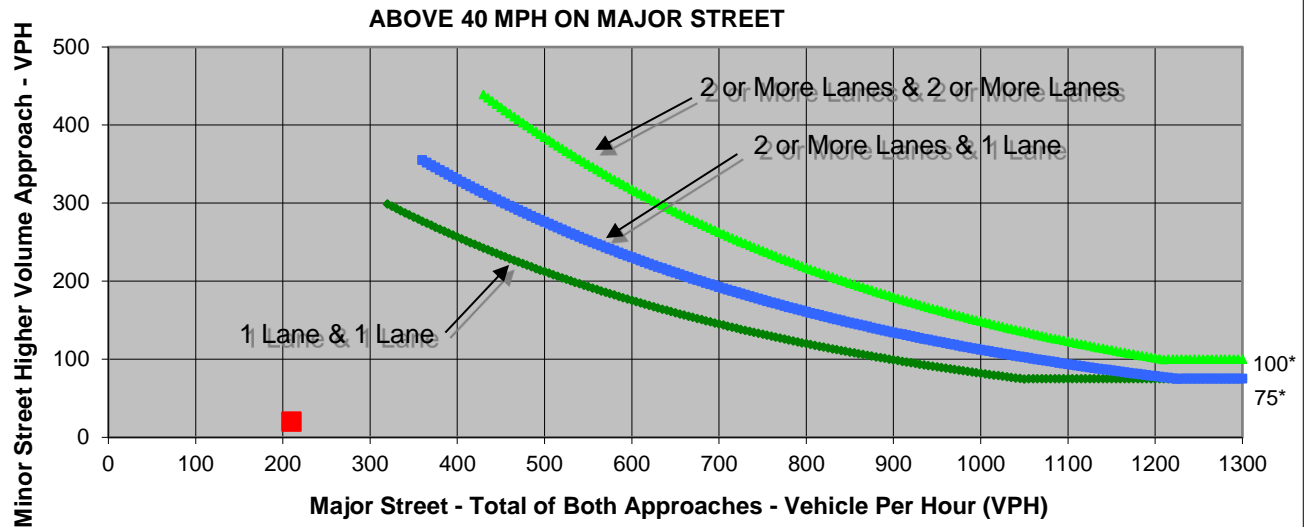
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	5	5	0
Through	90	100	5	5
Right	0	5	10	5
Total	100	110	20	10

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	210	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

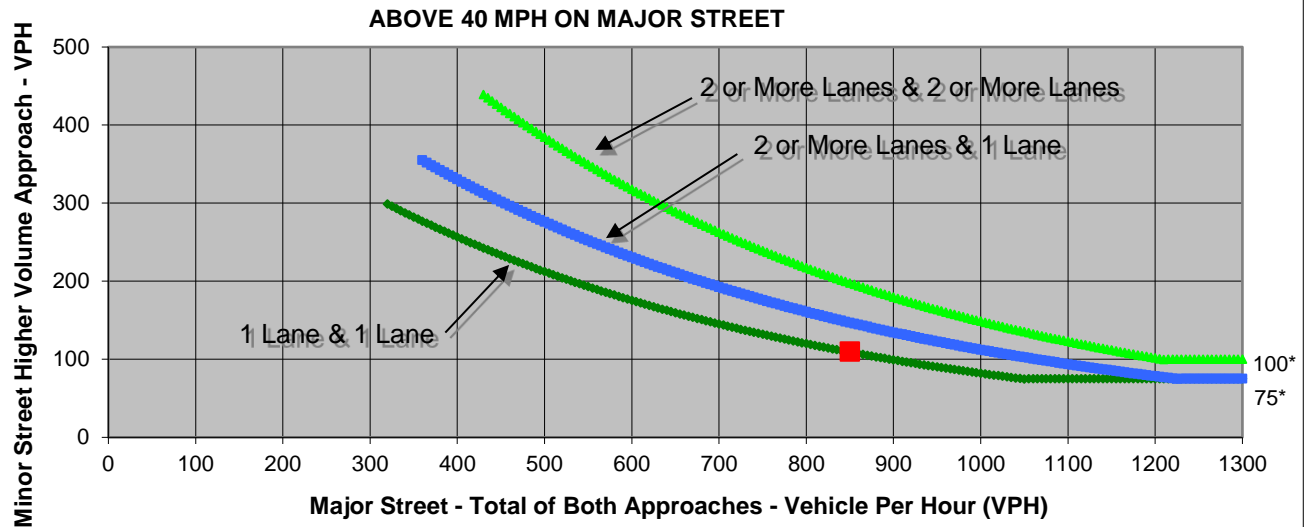
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	0	0	30
Through	0	0	490	320
Right	80	0	10	0
Total	110	0	500	350

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	850	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

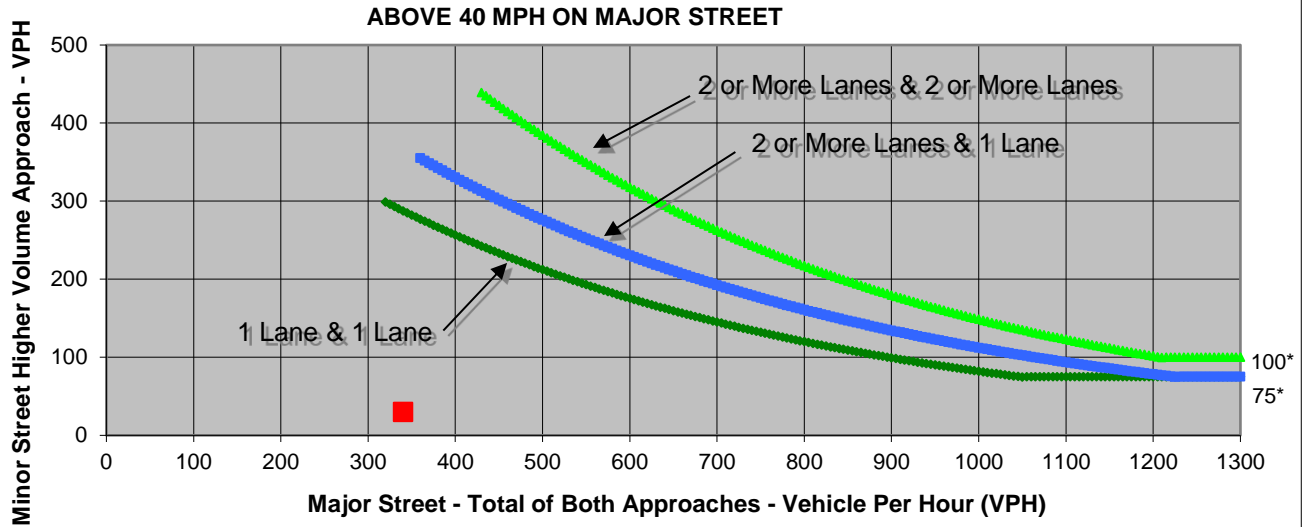
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	20	0
Through	130	180	0	0
Right	0	20	10	0
Total	140	200	30	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	340	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

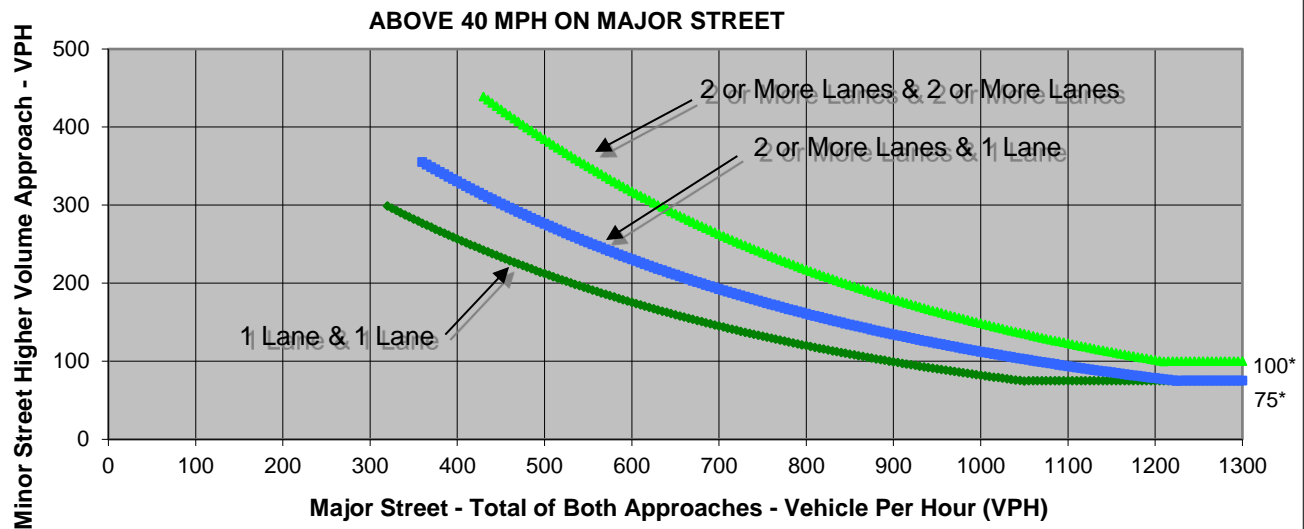
Turn Movement Volumes

	NB	SB	EB	WB
Left	55	55	9	4
Through	1,655	1,425	1	2
Right	40	30	36	76
Total	1,750	1,510	46	82

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,260	82	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

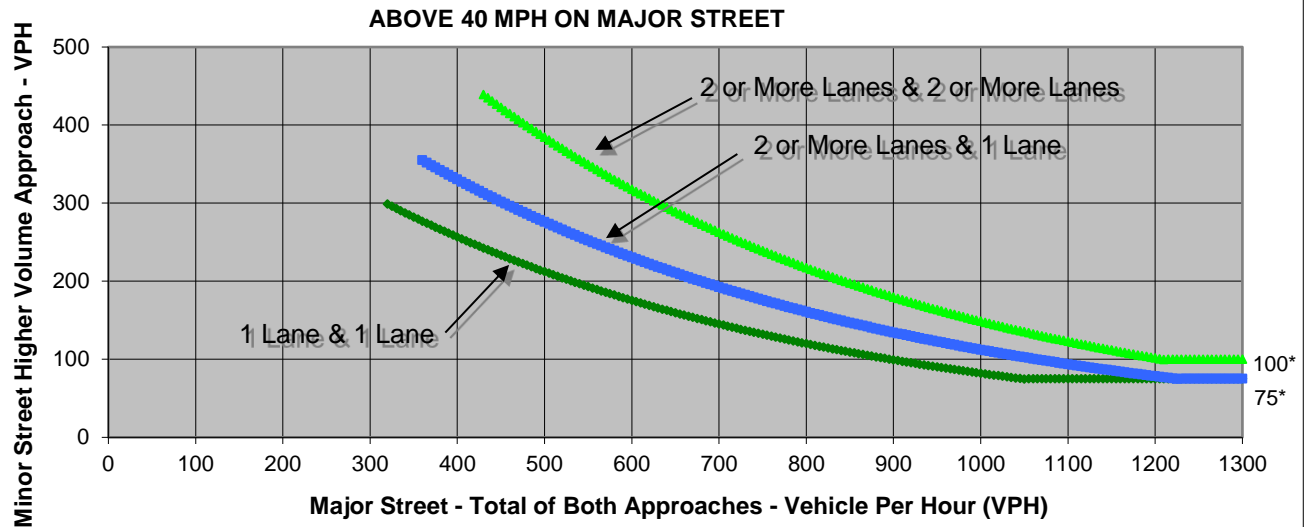
Turn Movement Volumes

	NB	SB	EB	WB
Left	40	42	5	9
Through	1,450	1,118	4	7
Right	20	40	3	26
Total	1,510	1,200	12	42

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,710	42	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

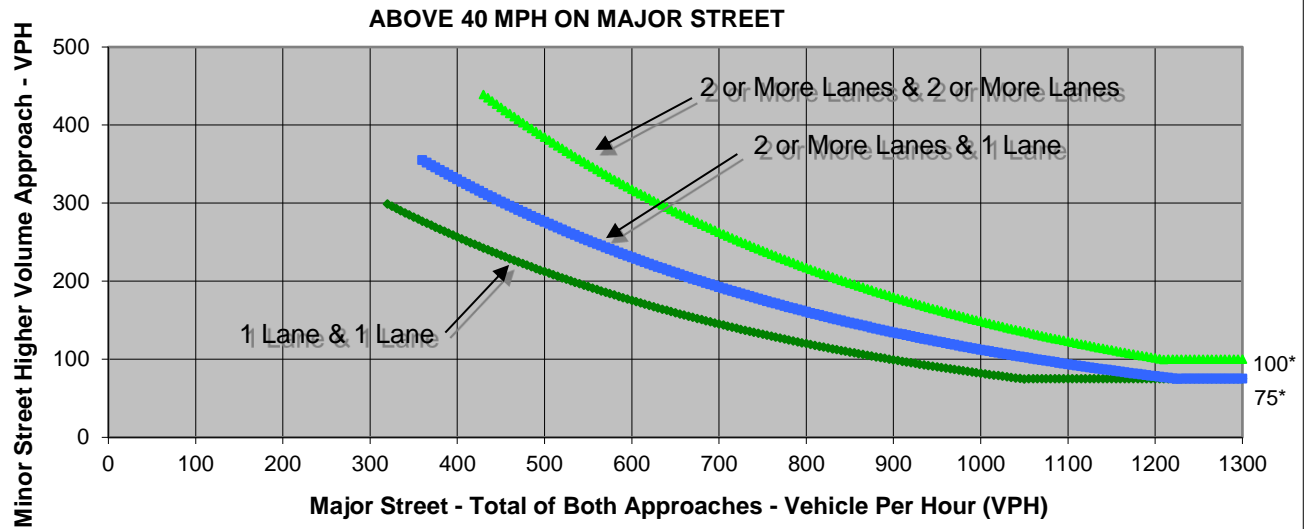
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	40	5	28
Through	1,120	640	8	6
Right	50	10	15	40
Total	1,190	690	28	74

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,880	74	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

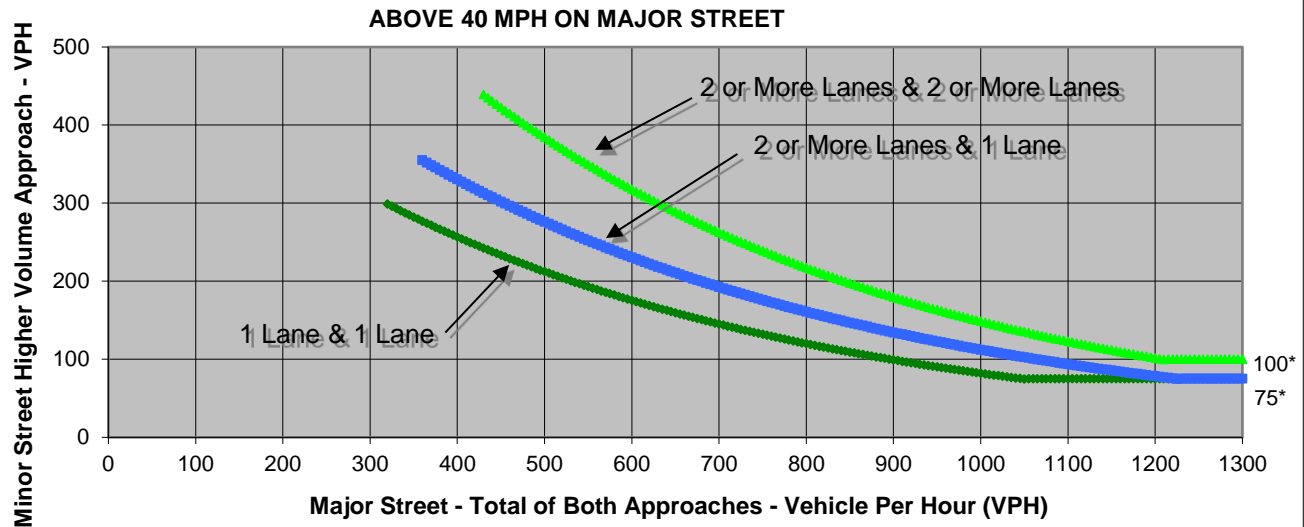
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	15	5	5
Through	1,160	660	5	0
Right	10	8	5	25
Total	1,180	683	15	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,863	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

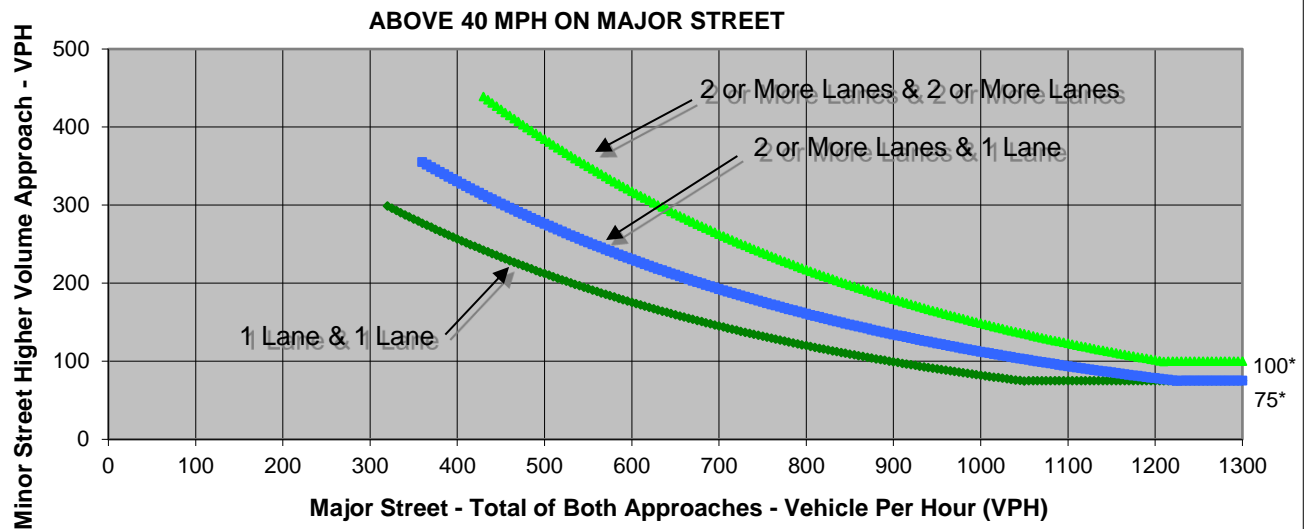
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	5	5
Through	1,170	655	5	5
Right	5	5	0	5
Total	1,180	670	10	15

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,850	15	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Existing Plus Phase 1 and 2**
 Peak Hour **PM**

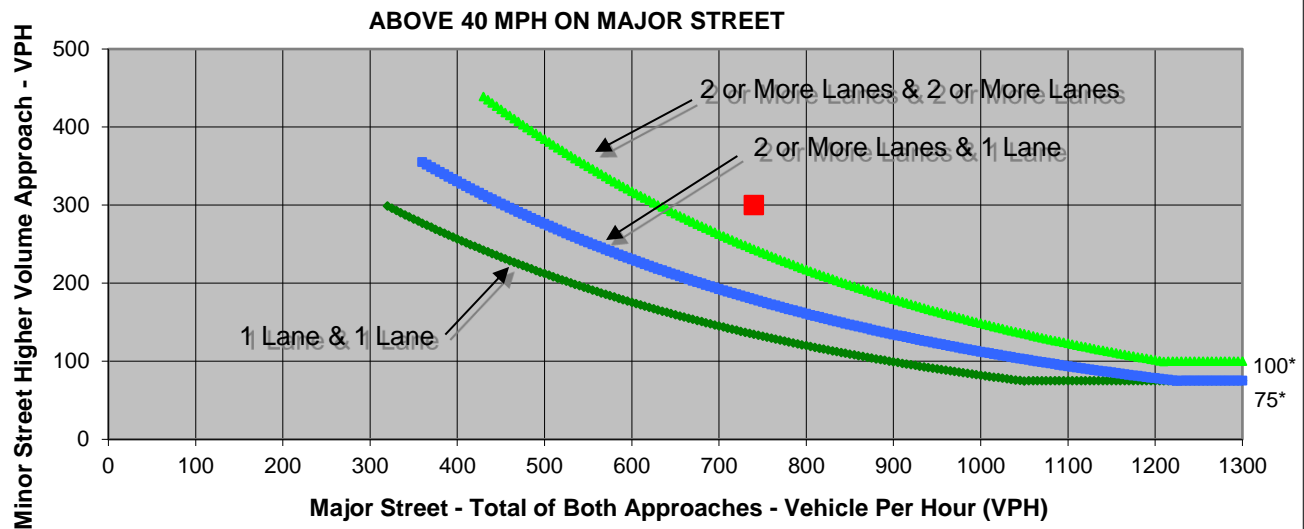
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	210	20	40
Through	70	60	200	240
Right	50	30	20	220
Total	150	300	240	500

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	740	300	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

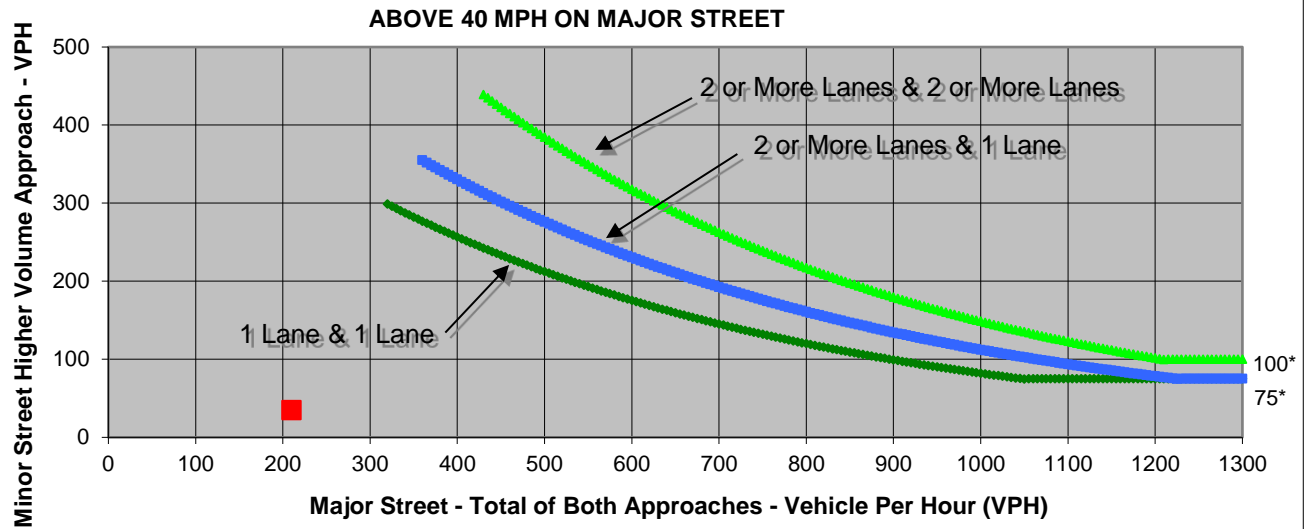
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	5
Through	100	80	0	0
Right	10	0	0	30
Total	110	100	0	35

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	210	35	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

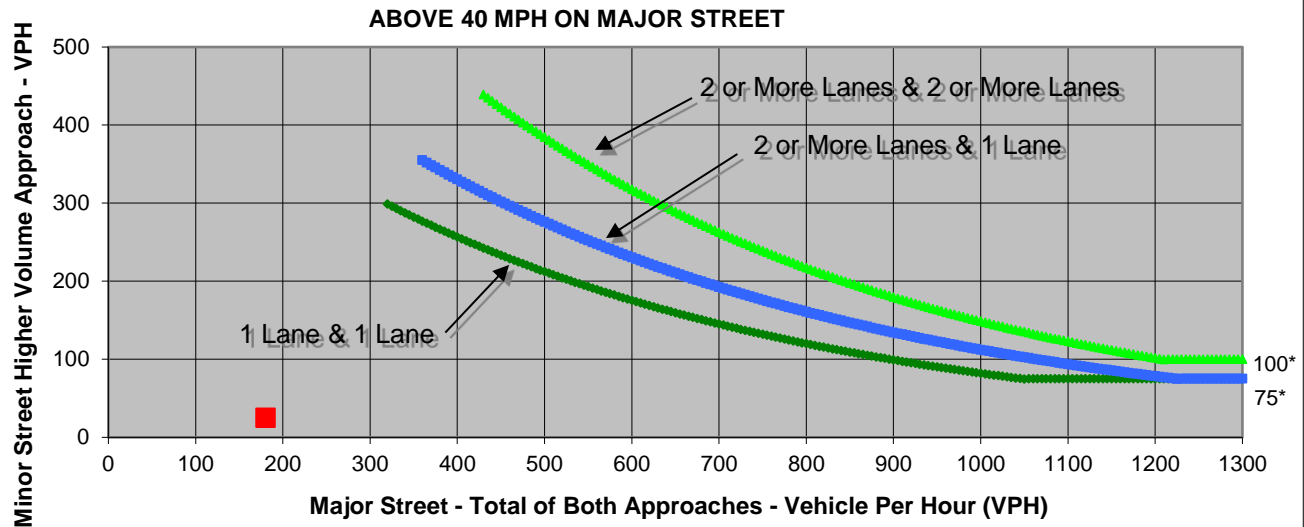
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	5	10	5
Through	90	70	5	10
Right	5	5	5	10
Total	100	80	20	25

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	180	25	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

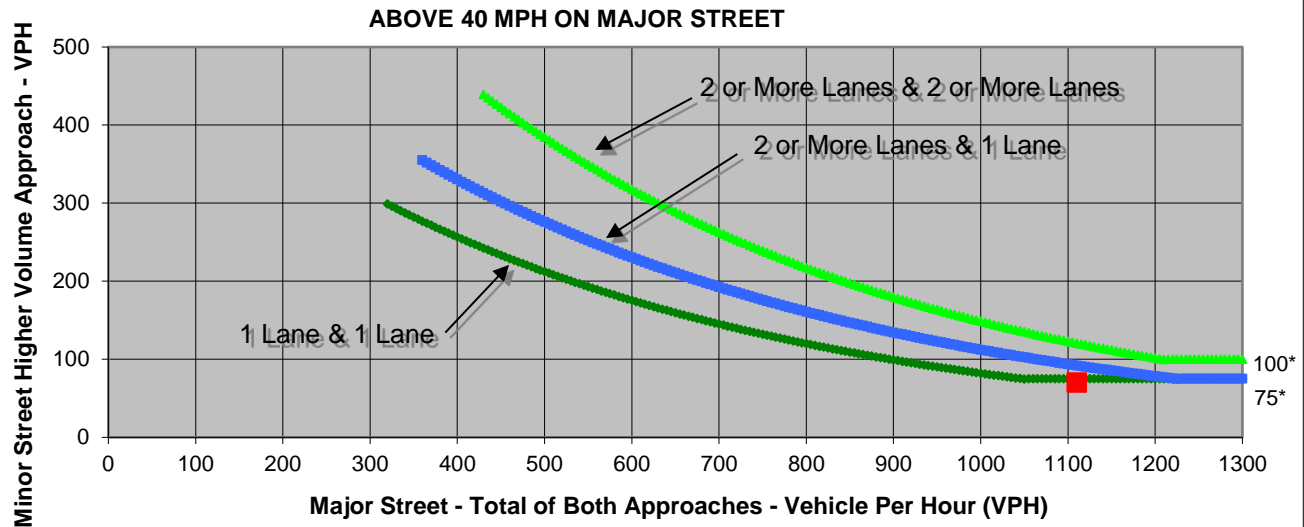
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	90
Through	0	0	450	540
Right	50	0	30	0
Total	70	0	480	630

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,110	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

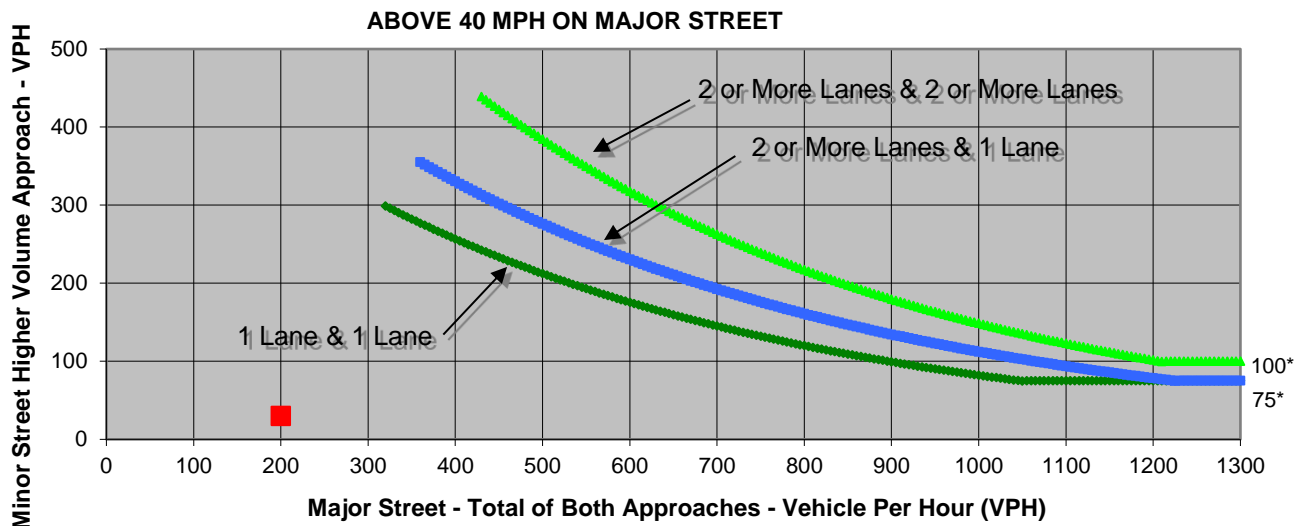
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	10	0
Through	80	90	0	0
Right	0	20	20	0
Total	90	110	30	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	200	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

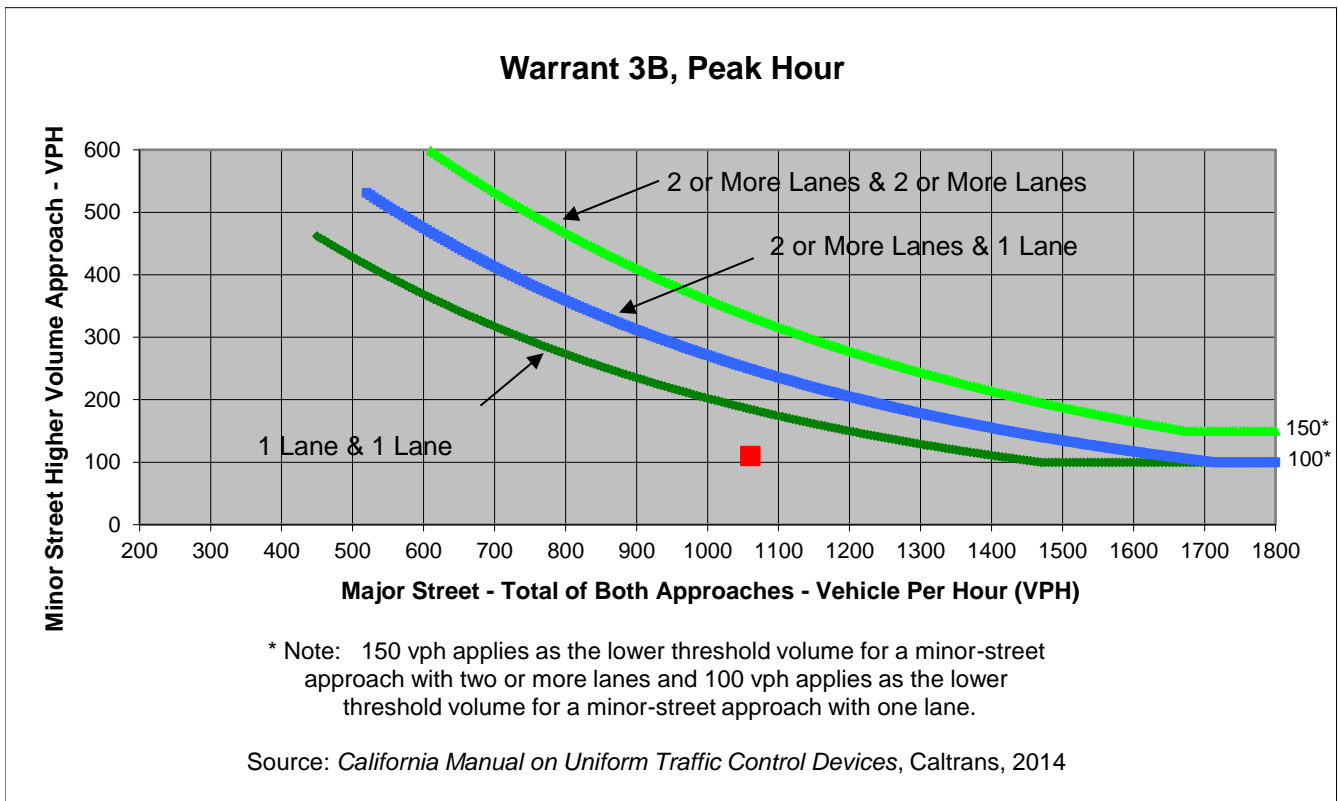
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	30
Through	470	380	0	0
Right	100	0	0	80
Total	570	490	0	110

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	1,060	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Phillips Rd

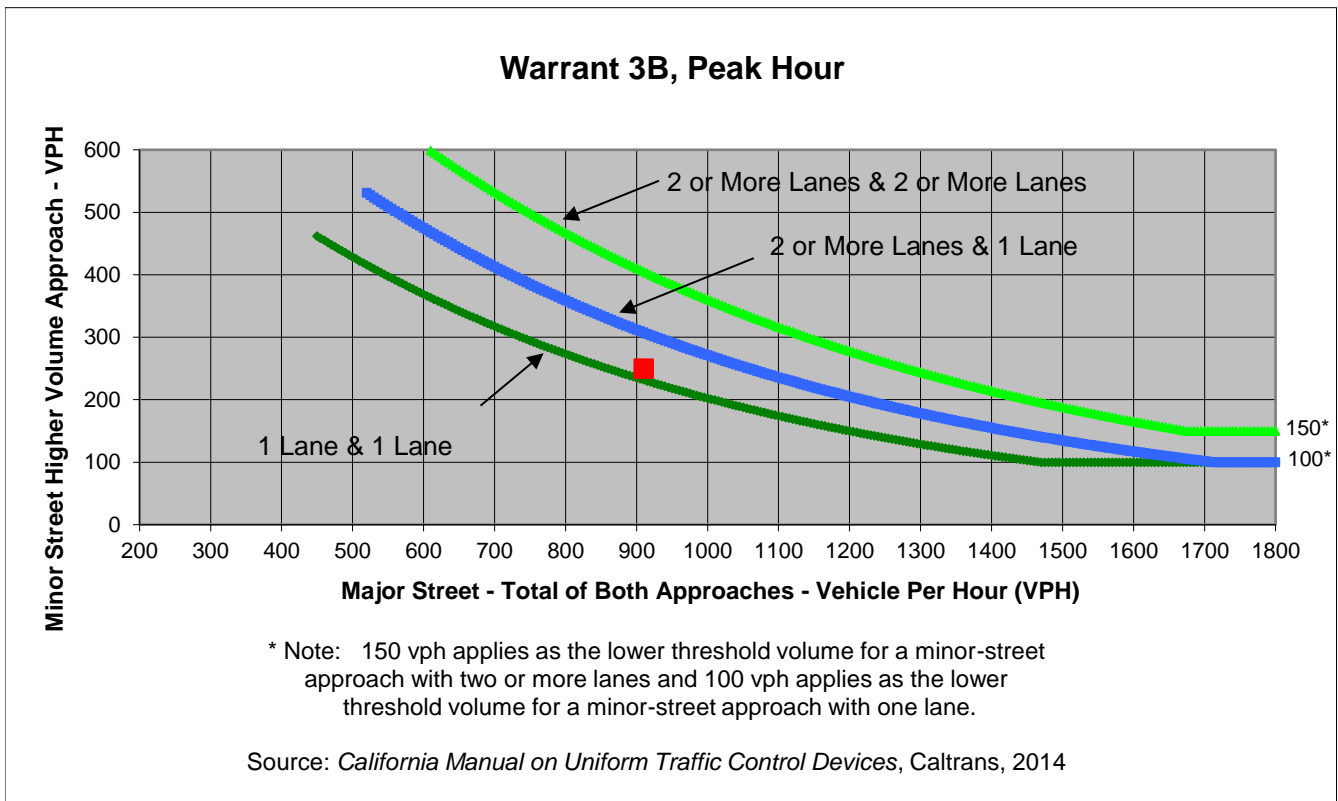
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	80
Through	0	0	380	340
Right	120	0	110	0
Total	250	0	490	420

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	910	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

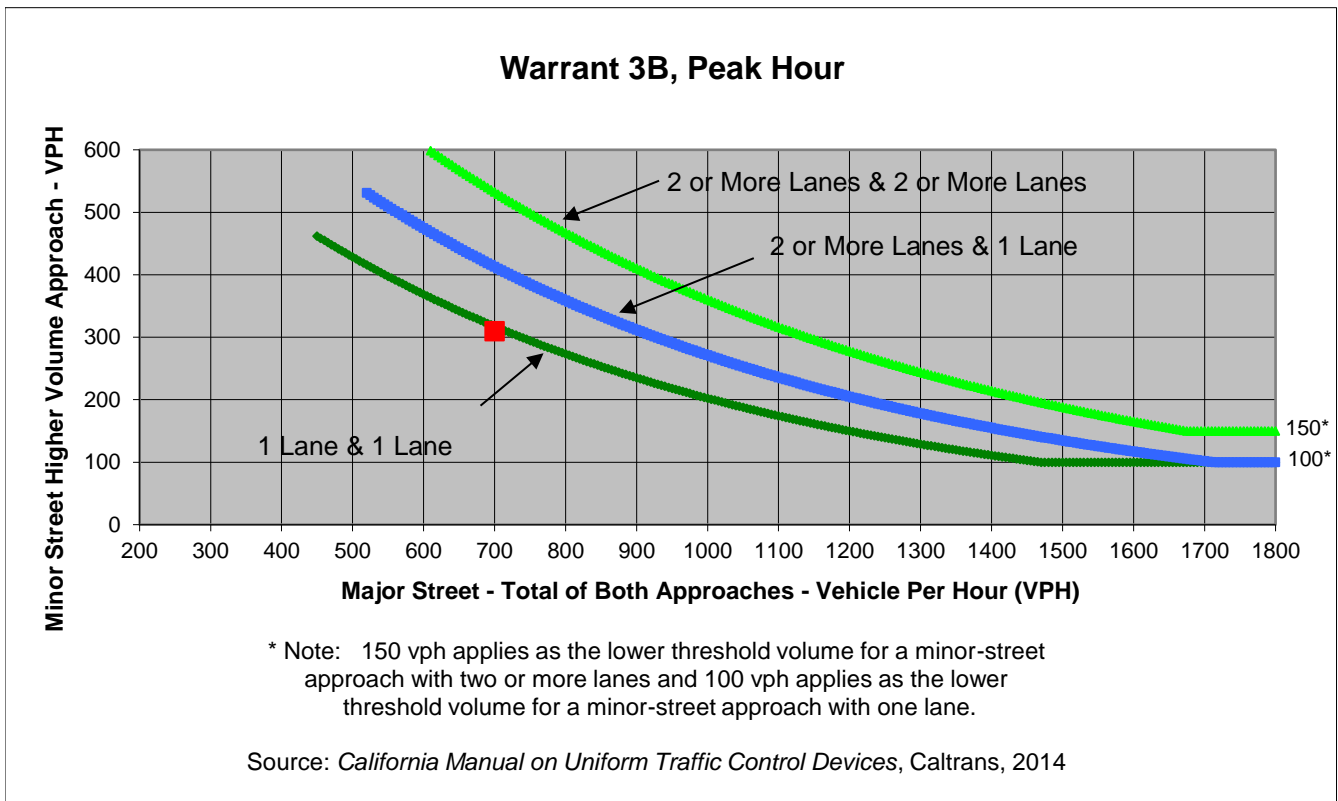
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	110	60	70	30
Through	150	100	300	200
Right	50	60	50	50
Total	310	220	420	280

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	700	310	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Phillips Rd

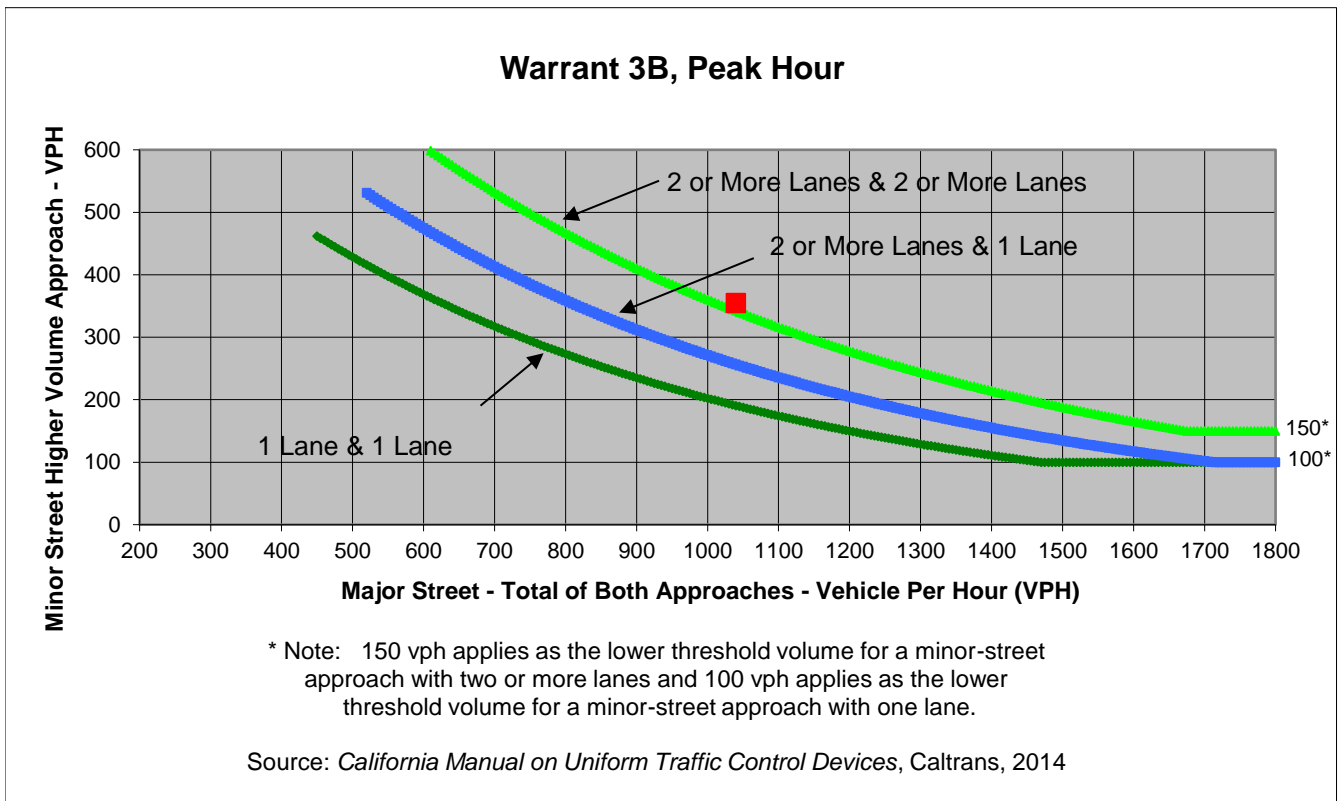
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	265	60	30	125
Through	30	30	350	405
Right	60	60	70	60
Total	355	150	450	590

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Phillips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,040	355	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

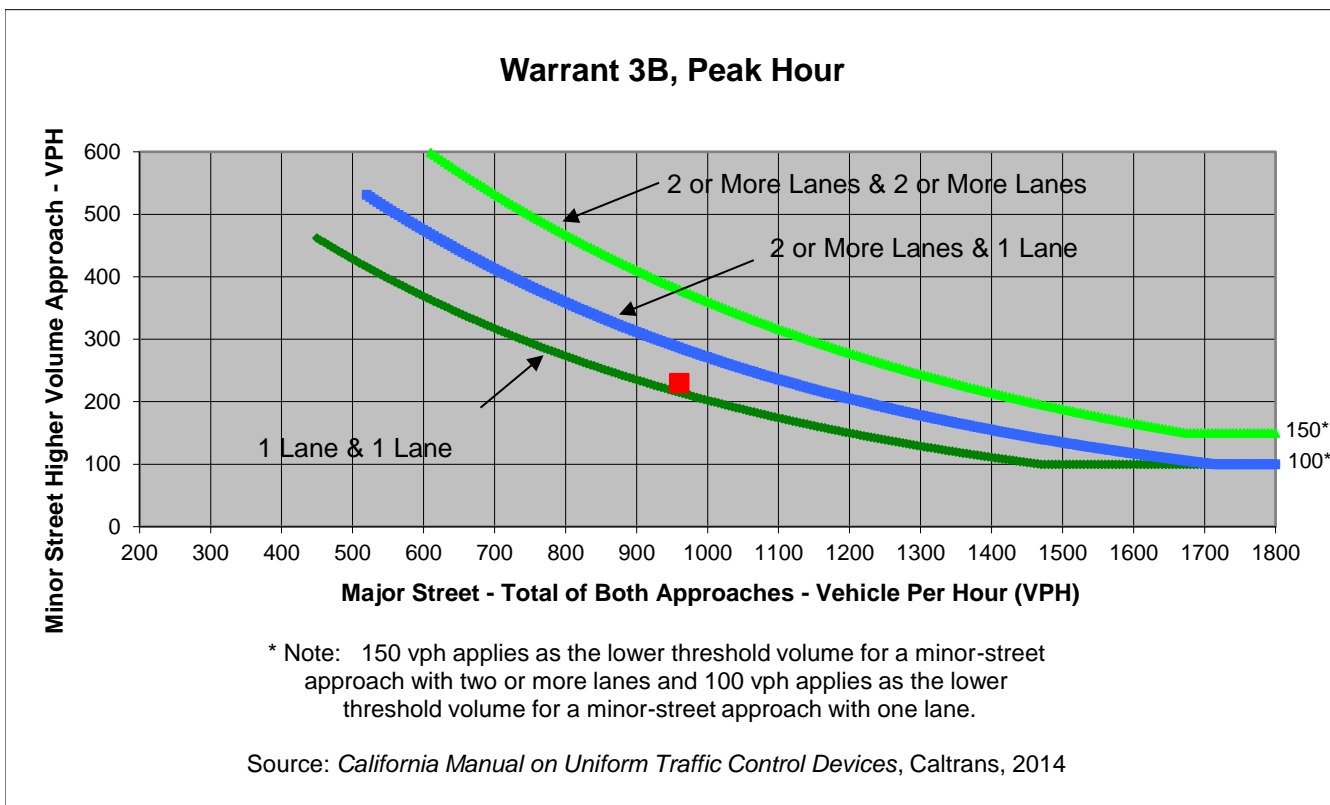
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	55	50	50	40
Through	110	110	320	460
Right	65	70	40	50
Total	230	230	410	550

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	960	230	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Smith Rd

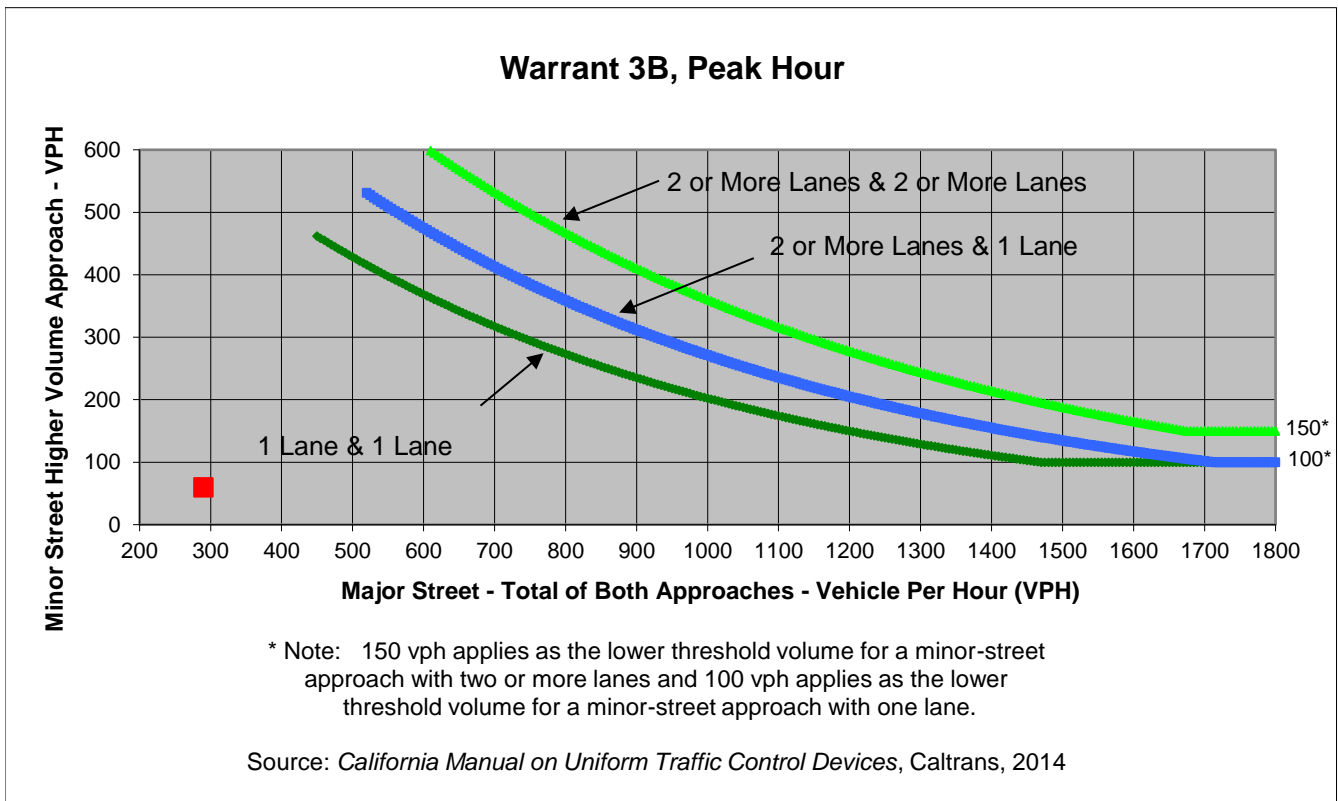
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	110	120	0	0
Right	0	40	20	0
Total	130	160	60	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Smith Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	290	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Wallace Dr
 Minor Street Stewart Rd

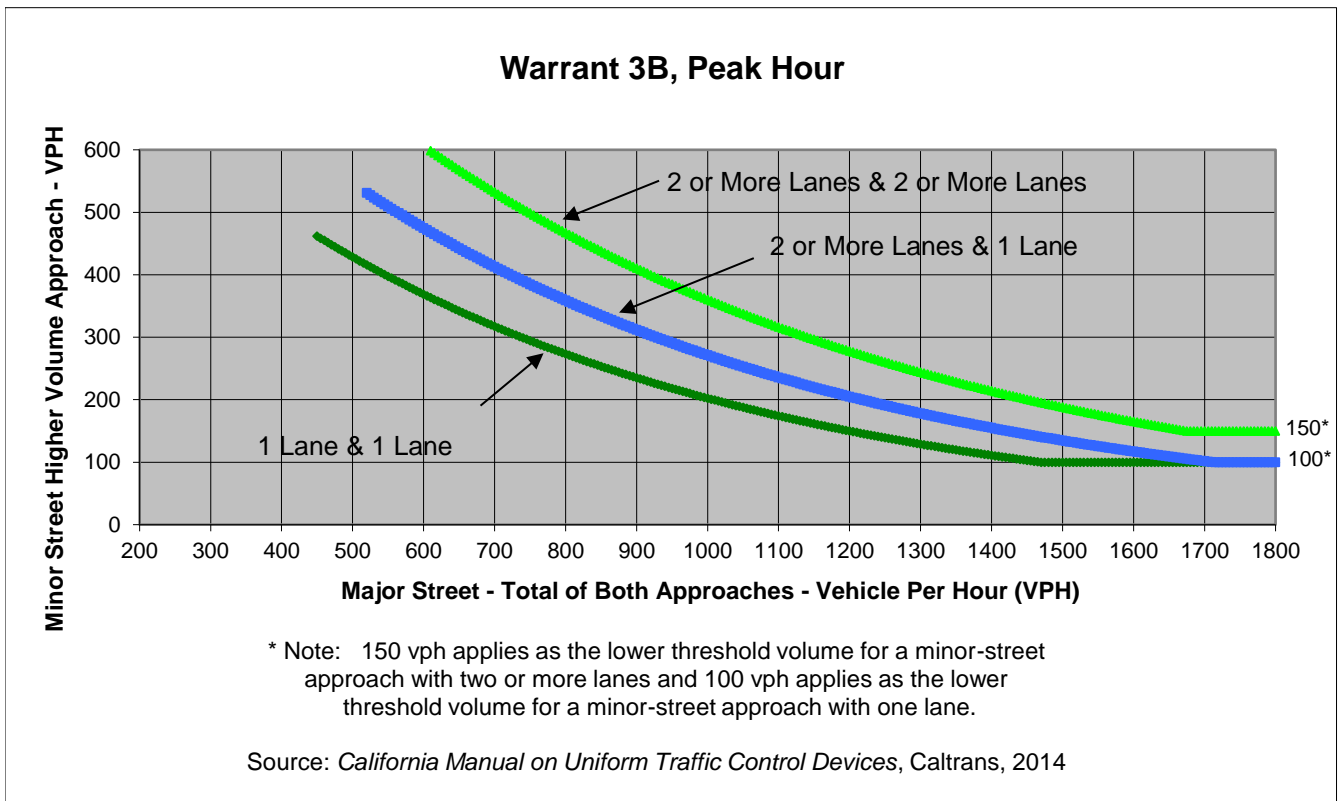
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	20	5
Through	5	5	125	110
Right	10	35	5	15
Total	20	60	150	130

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	80	150	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Muir Rd

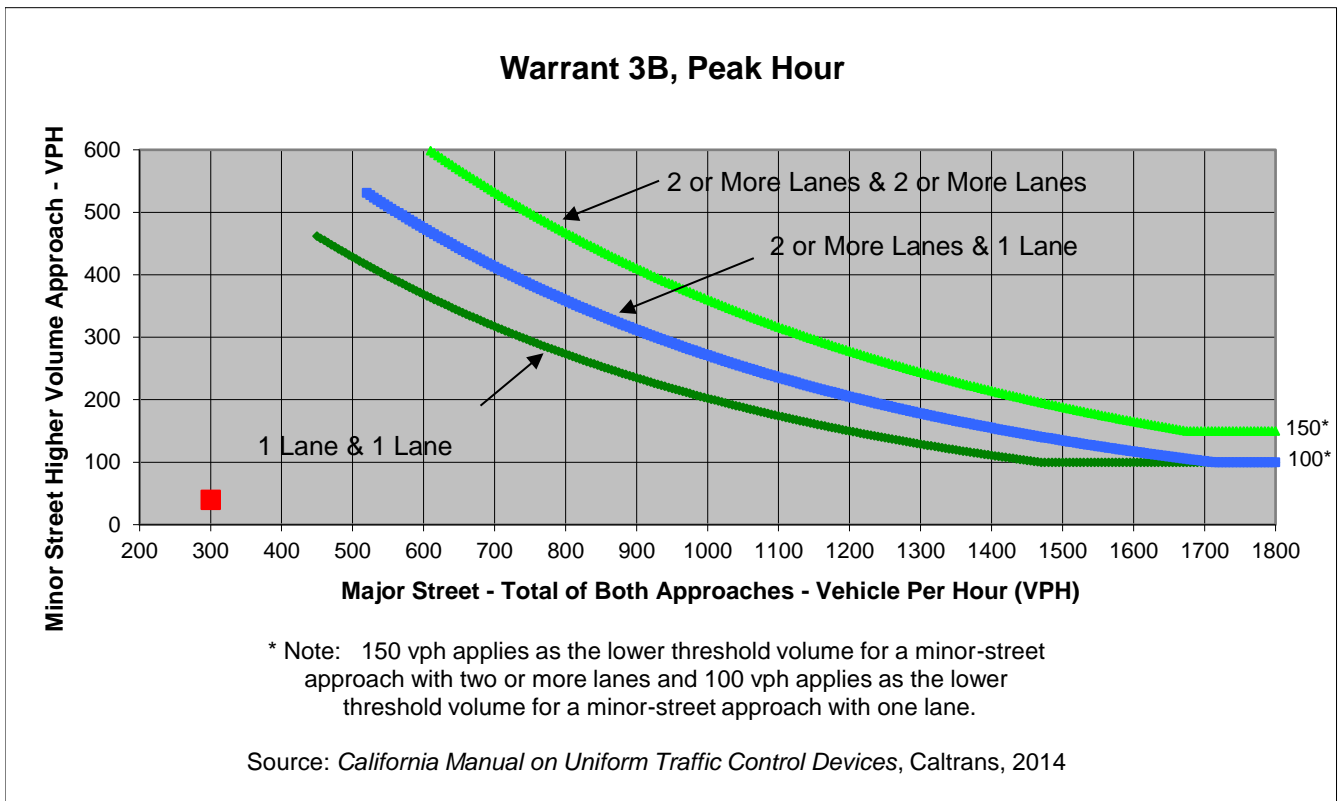
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	25
Through	0	0	125	120
Right	30	0	30	0
Total	40	0	155	145

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	300	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

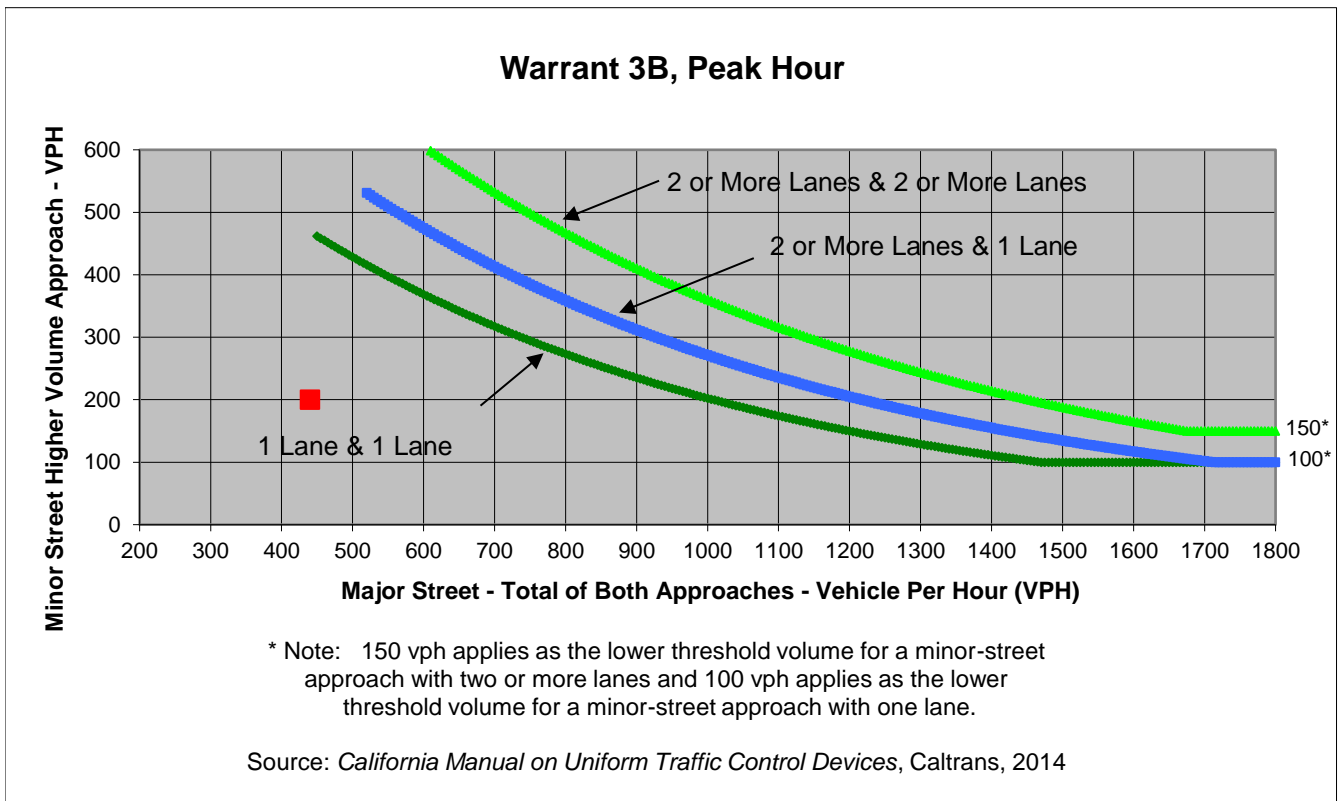
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	110	40	20
Through	30	70	115	110
Right	20	20	5	150
Total	60	200	160	280

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	440	200	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Drive (DNE)

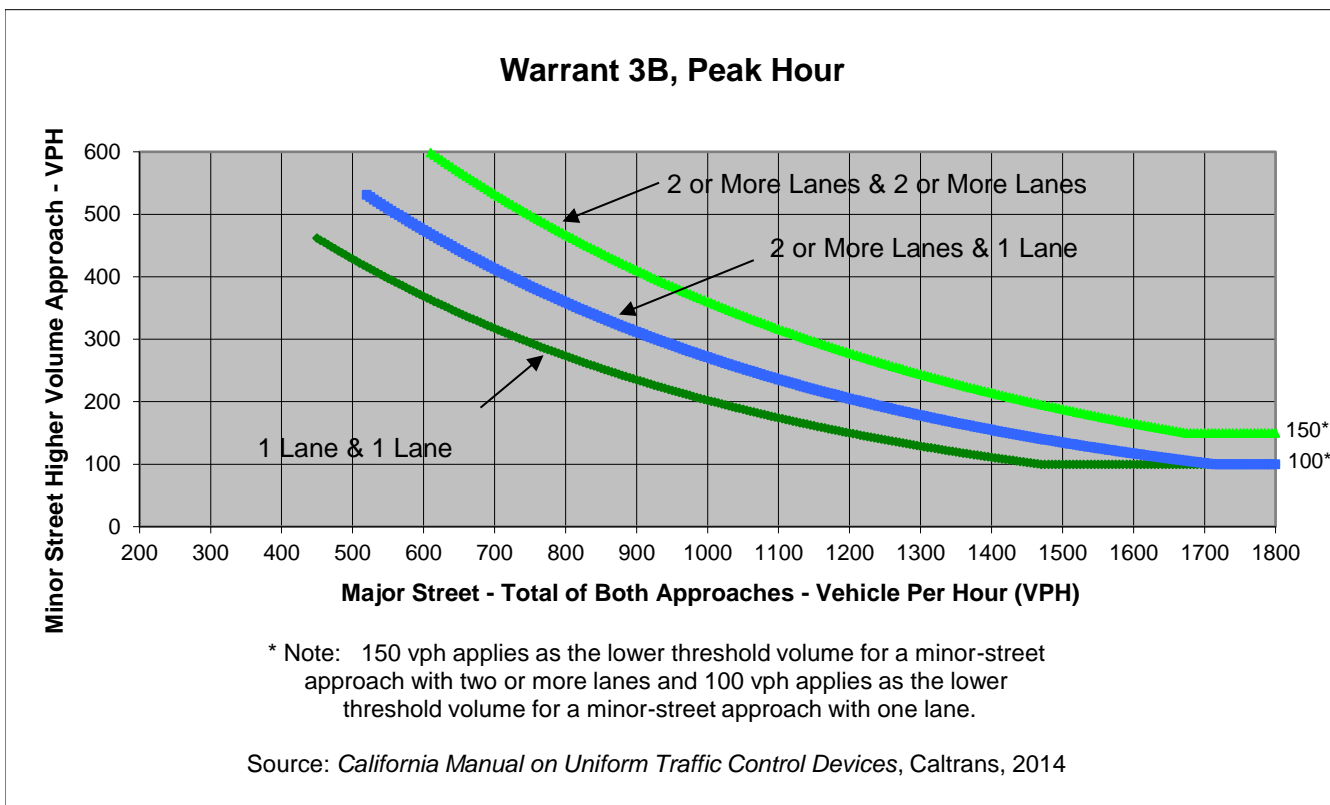
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	40	20	0	0
Right	0	0	0	0
Total	40	20	0	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Drive (DNE)	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	60	0	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			



Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

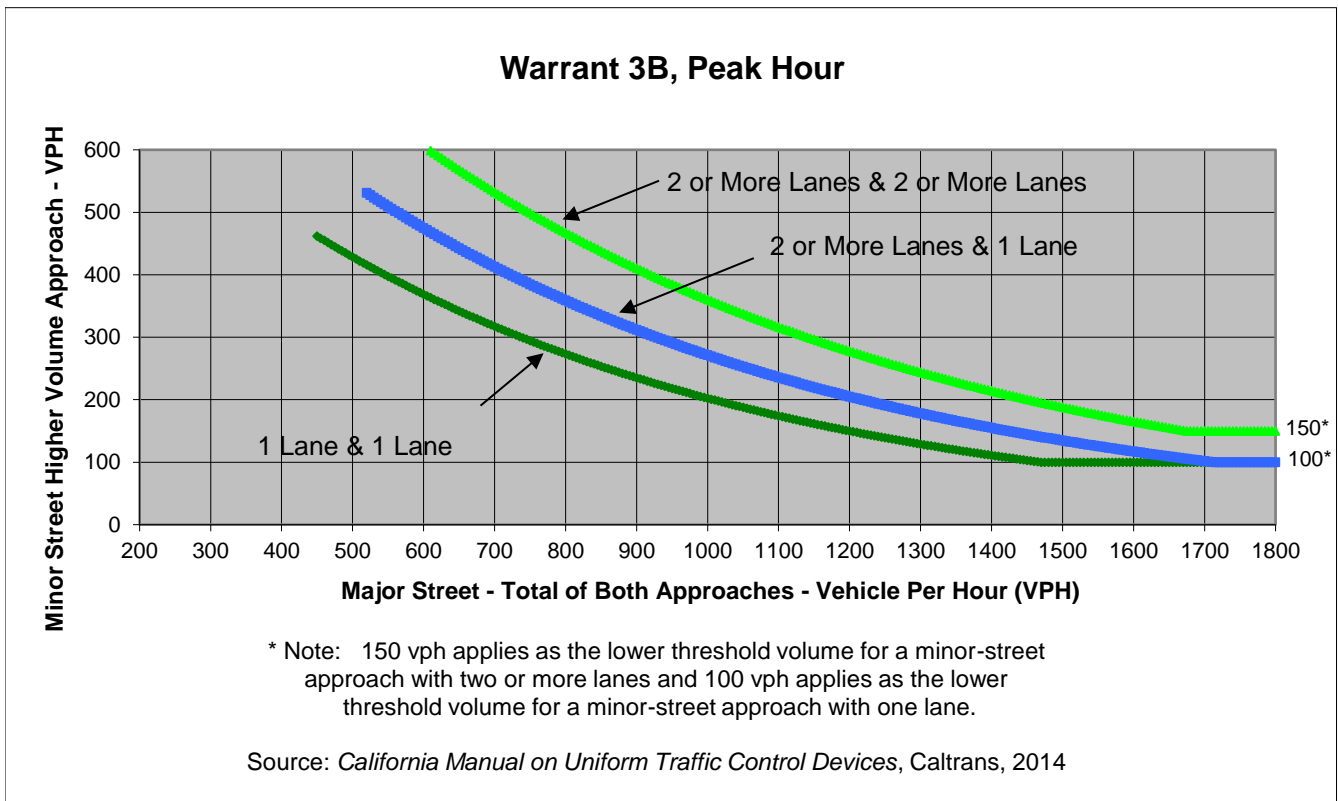
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	5	0
Through	0	0	30	20
Right	0	5	0	15
Total	0	35	35	35

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	70	35	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

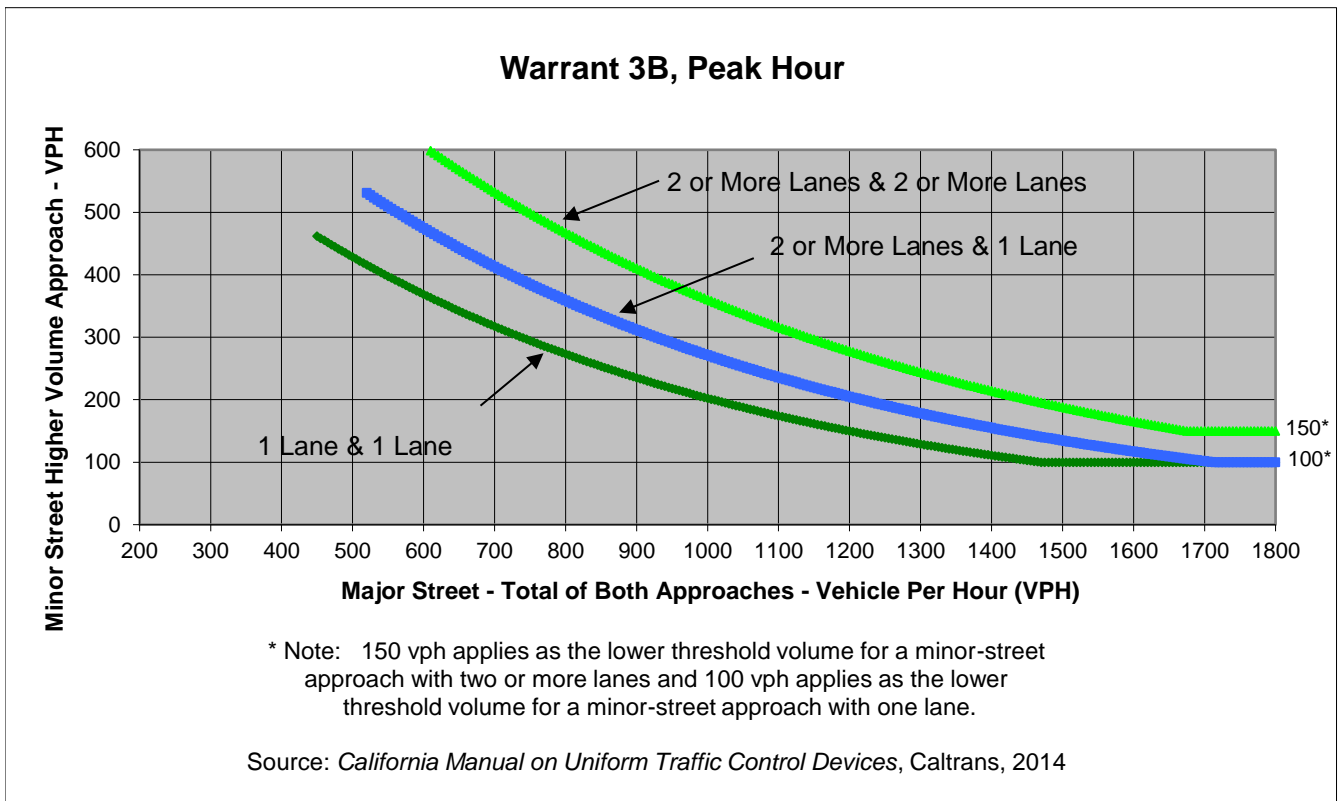
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	20	60	5
Through	60	40	5	5
Right	5	20	20	50
Total	70	80	85	60

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	150	85	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

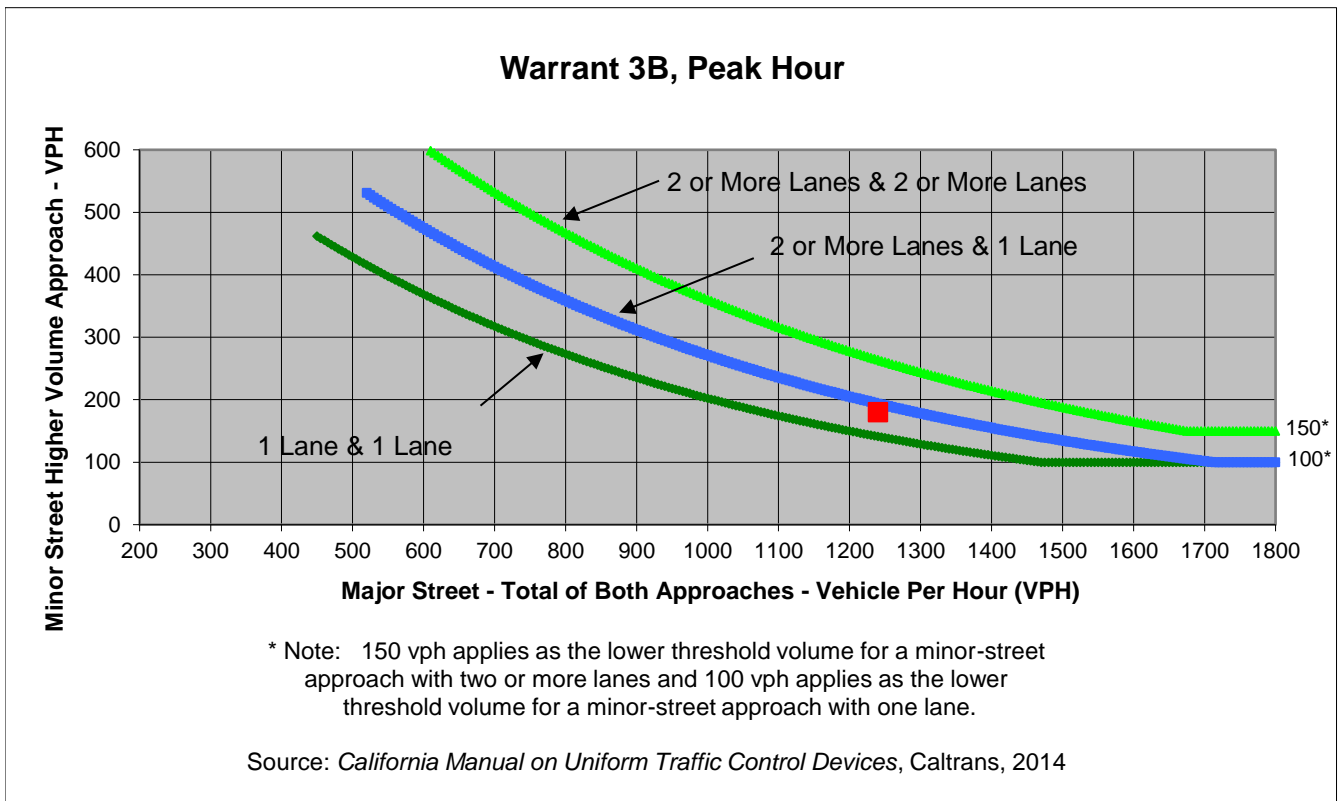
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	110	0	80
Through	470	600	0	0
Right	60	0	0	100
Total	530	710	0	180

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,240	180	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

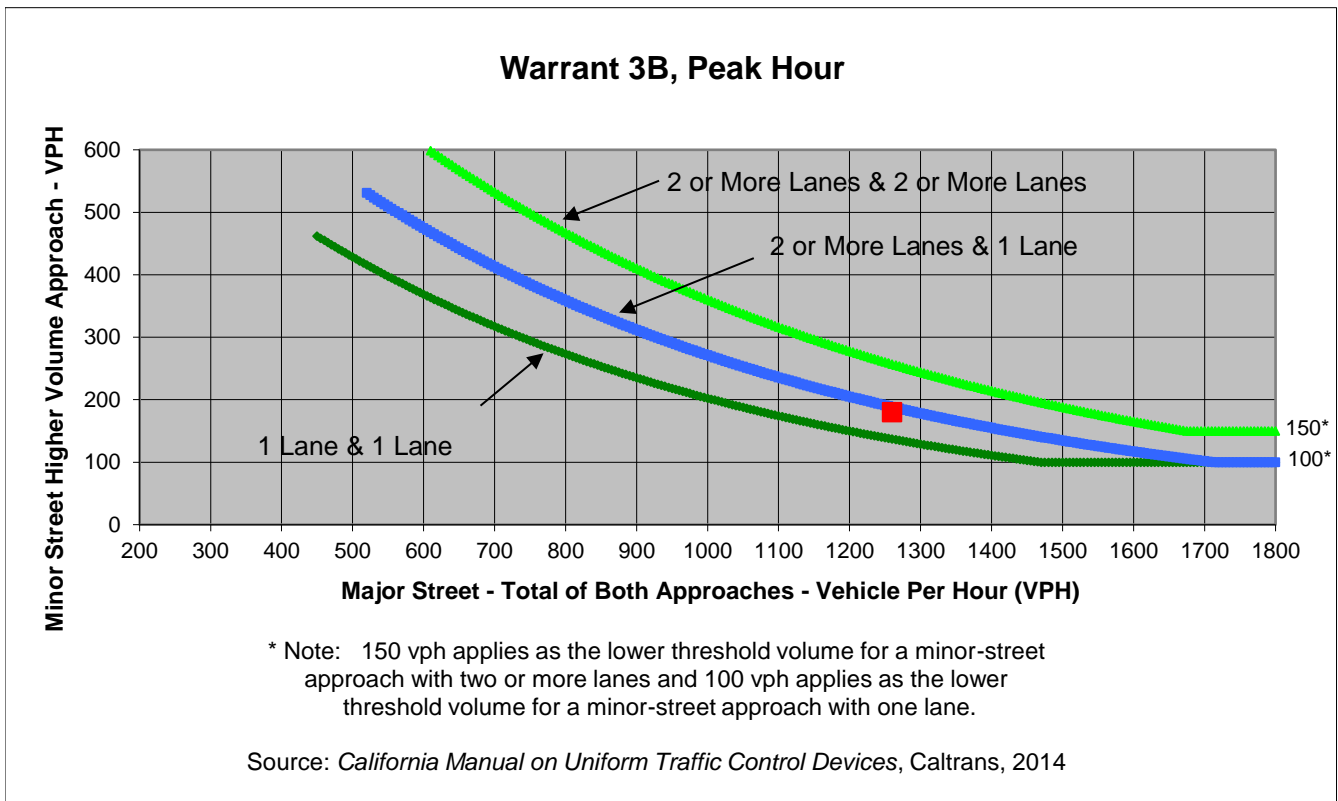
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	0	60
Through	0	0	520	560
Right	90	0	120	0
Total	180	0	640	620

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,260	180	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

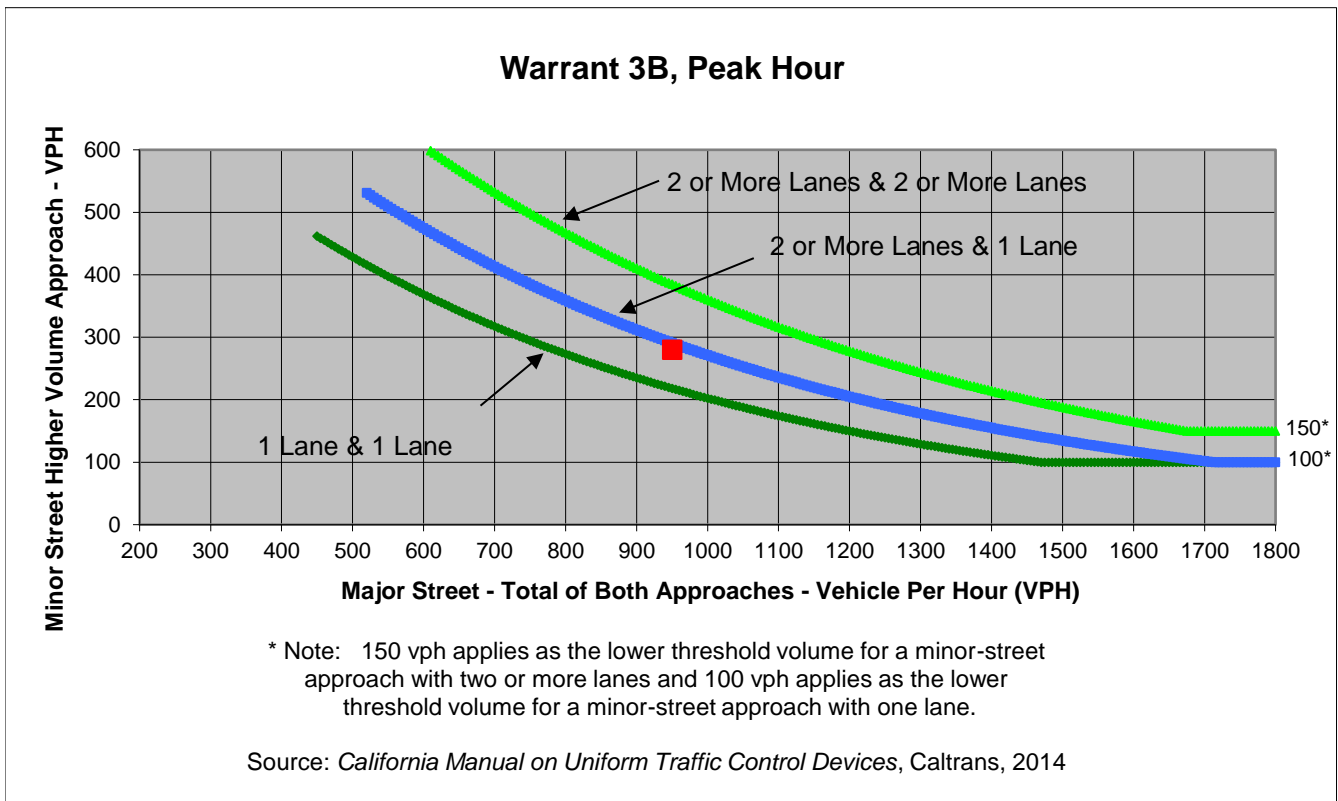
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	90	50	40
Through	100	120	320	370
Right	50	70	100	70
Total	230	280	470	480

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	950	280	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

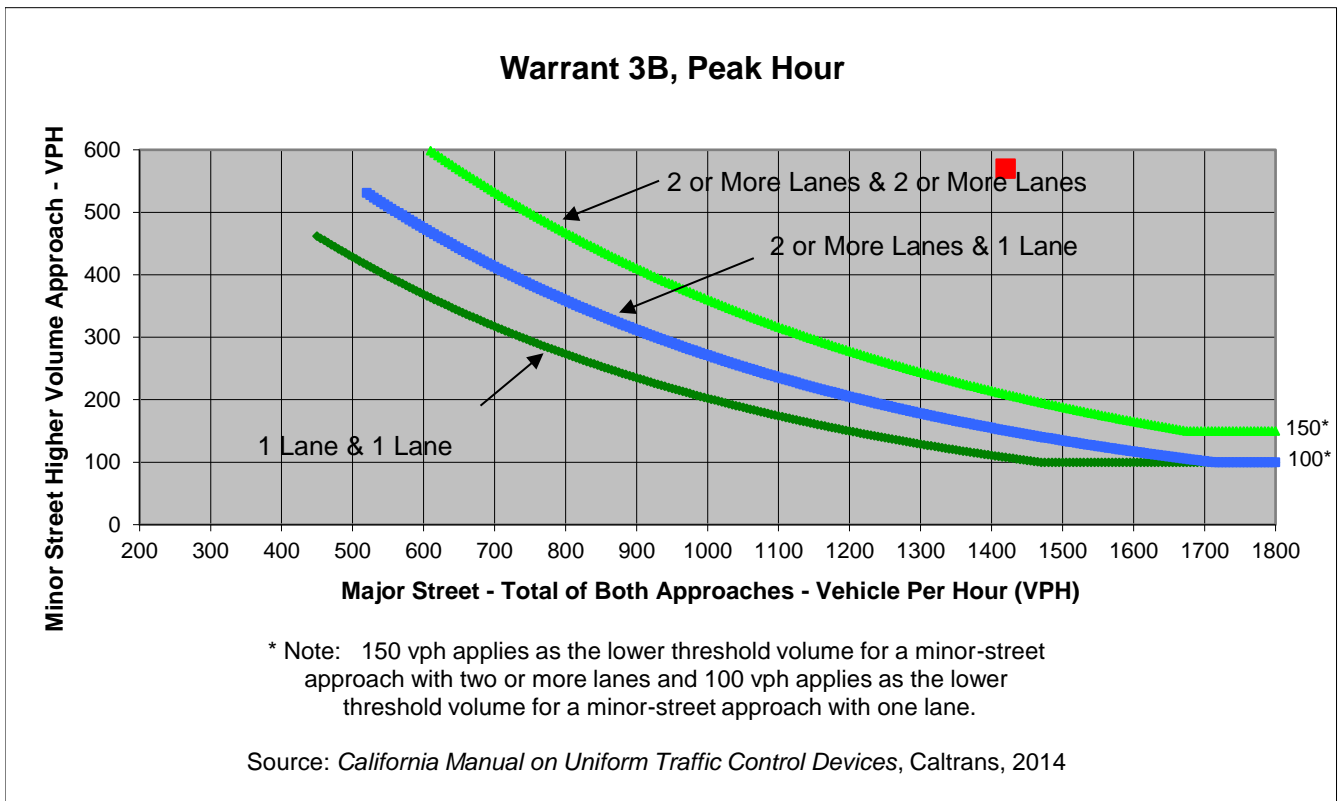
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	490	30	80	160
Through	10	20	620	350
Right	70	40	190	20
Total	570	90	890	530

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,420	570	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

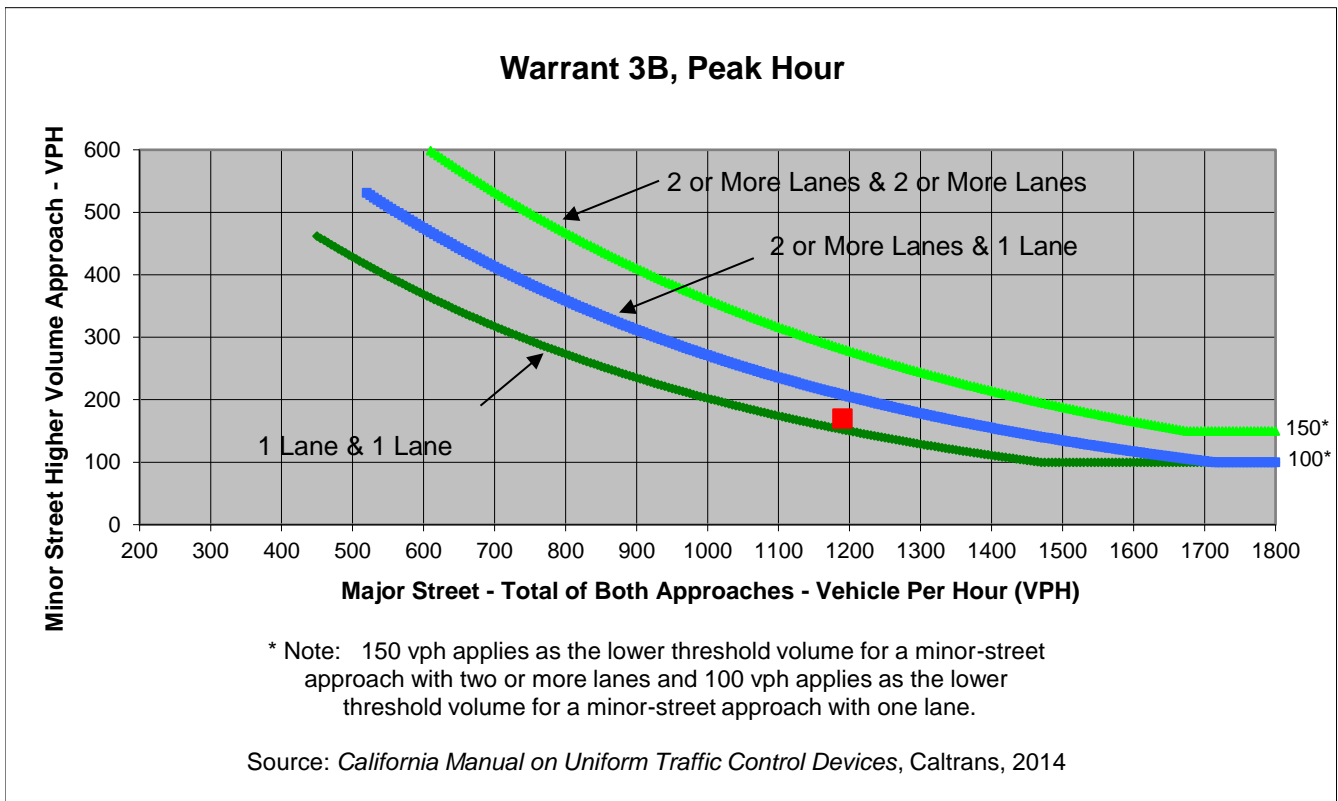
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	50	110	40
Through	60	50	560	410
Right	40	70	20	50
Total	120	170	690	500

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,190	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Philips Rd
 Minor Street Smith Rd

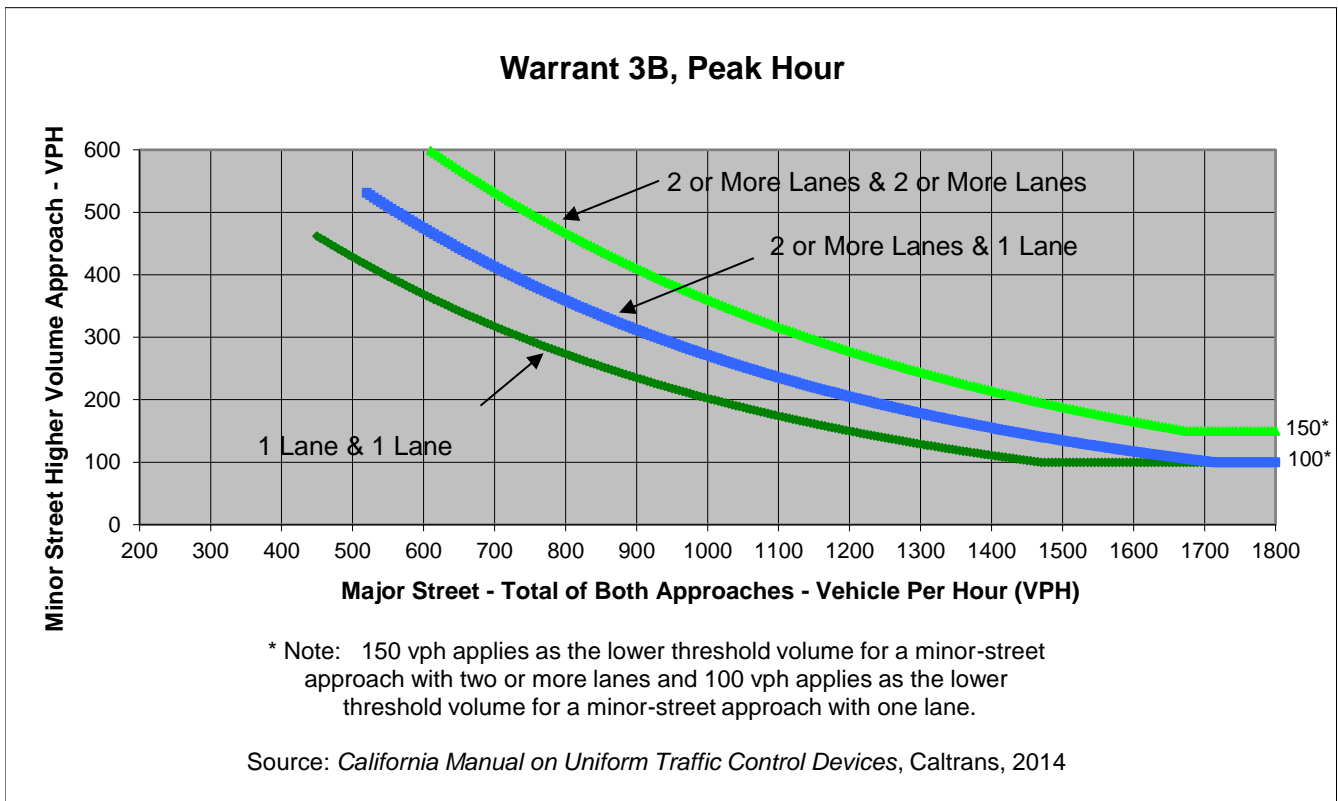
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	80	60	0	0
Right	0	12	30	0
Total	100	72	70	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Philips Rd	Smith Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	172	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Wallace Dr
 Minor Street Stewart Rd

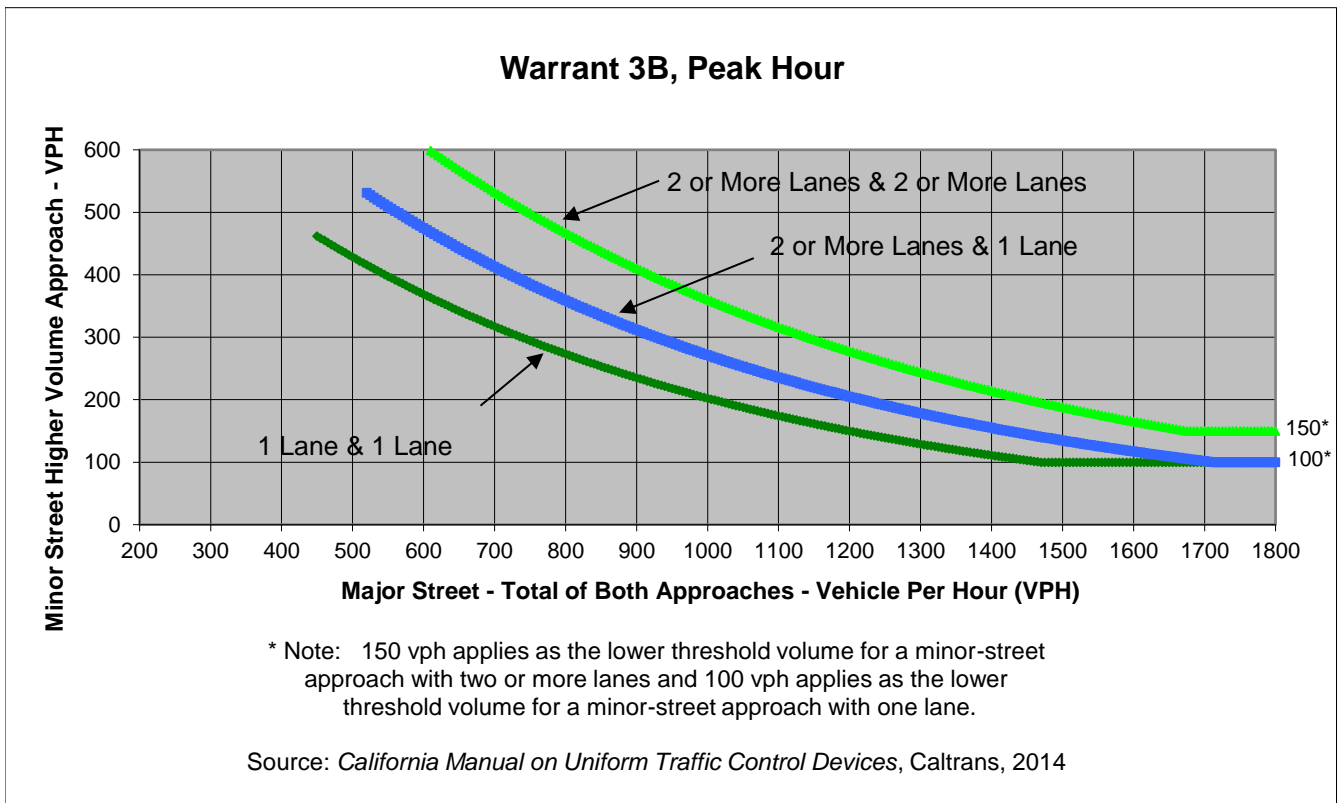
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	10	35	5
Through	5	5	60	44
Right	5	25	5	10
Total	15	40	100	59

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Wallace Dr	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	55	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

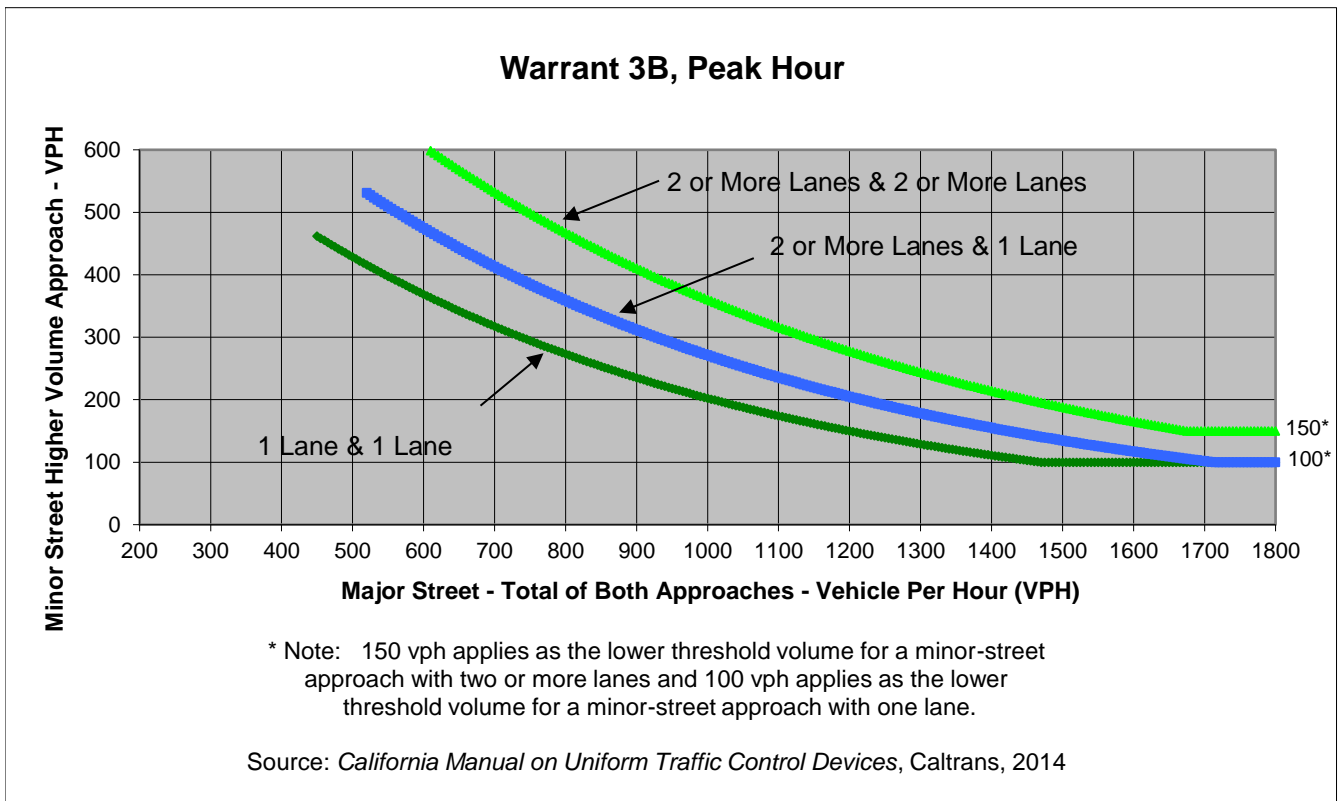
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	0	0	30
Through	0	0	60	44
Right	30	0	15	0
Total	45	0	75	74

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	149	45	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

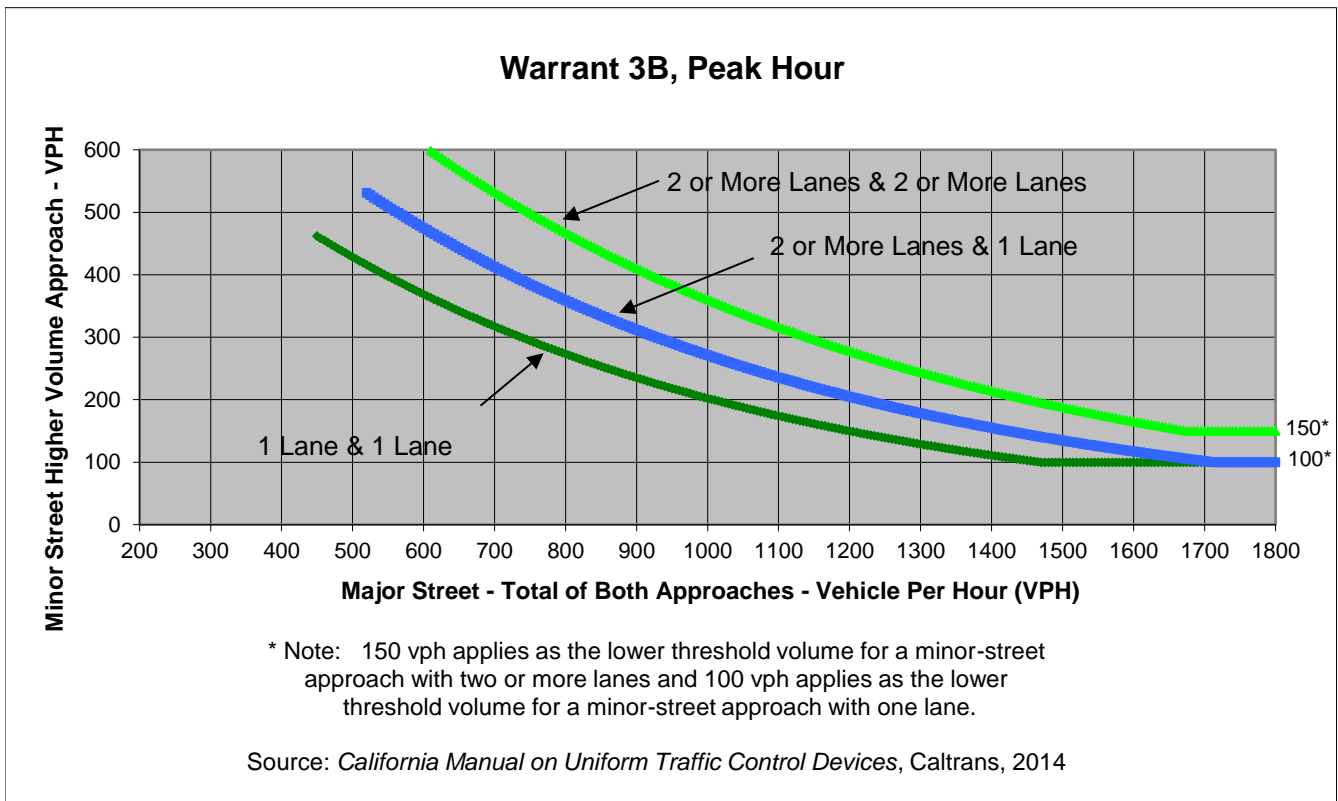
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	5	30	30	10
Through	50	40	40	40
Right	5	30	5	30
Total	60	100	75	80

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	155	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd (DNE)

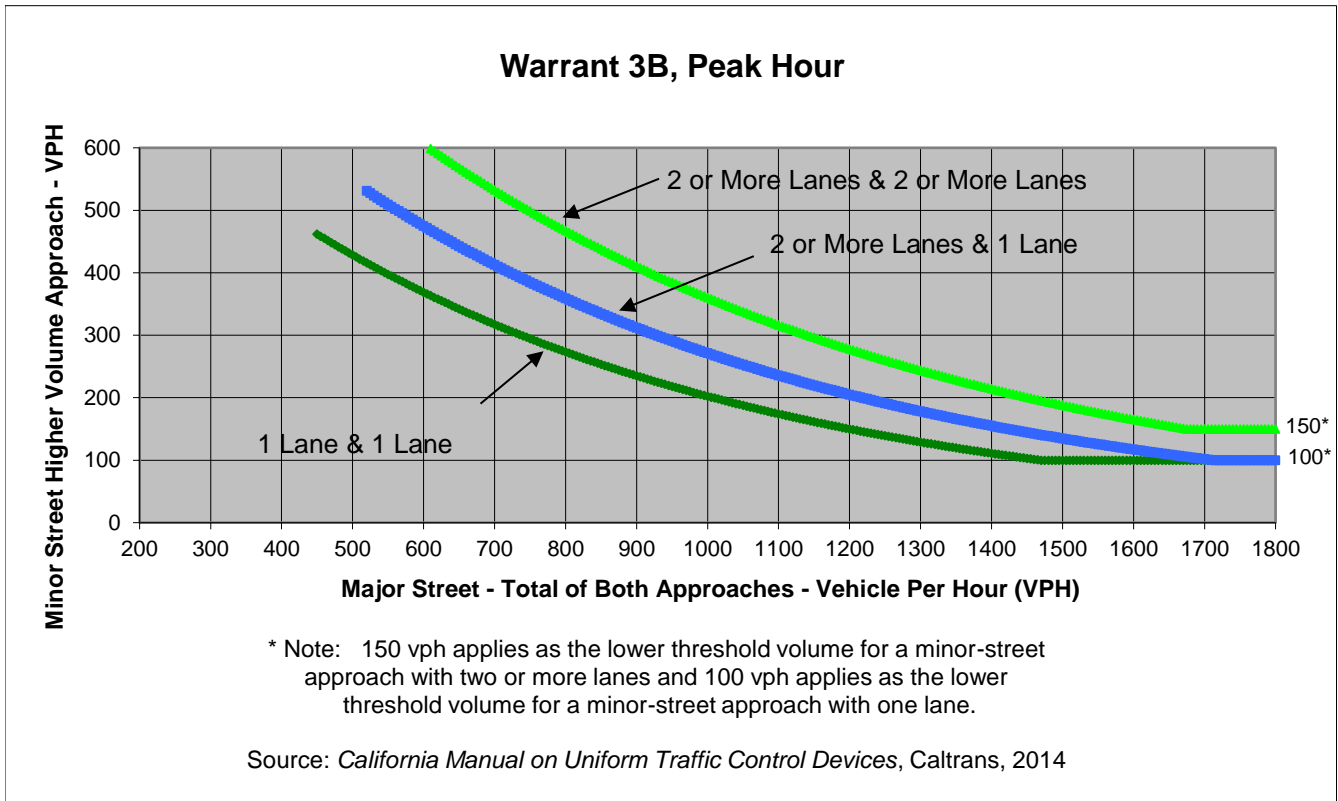
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	30	50	0	0
Right	0	0	0	0
Total	30	50	0	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd (DNE)	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	80	0	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

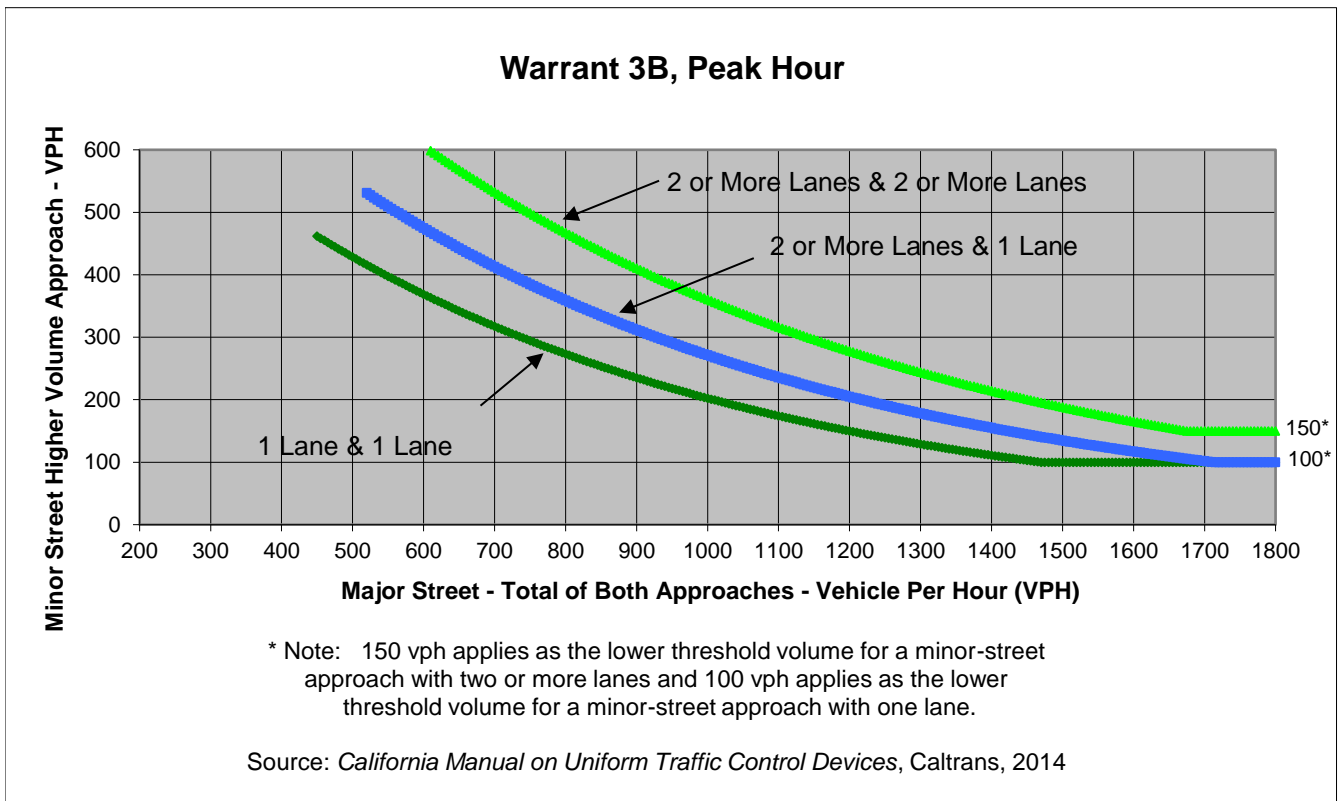
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	5	0
Through	0	0	20	25
Right	0	5	0	15
Total	0	25	25	40

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	65	25	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

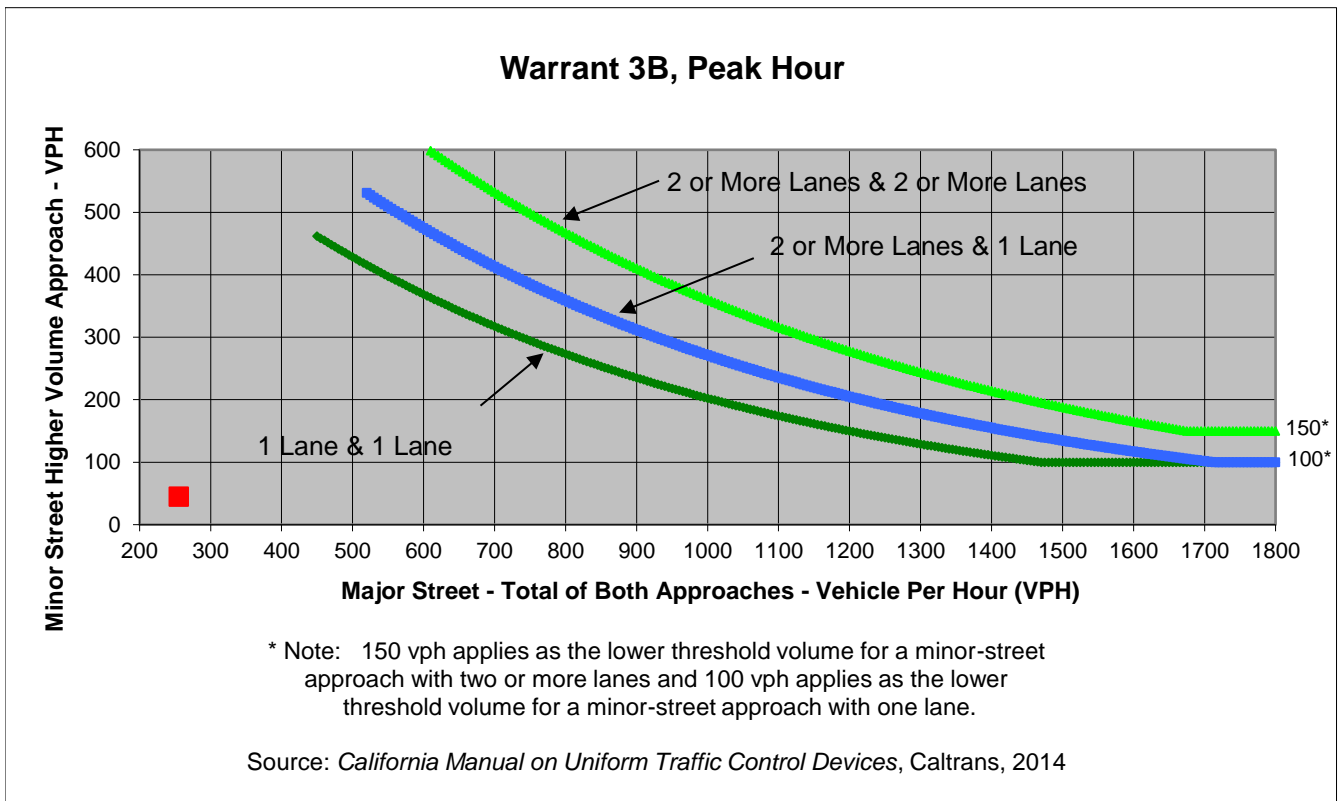
Project Bogue Stewart Master Plan
 Scenario Existing Plus Phase 1 and 2
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	50	30	5
Through	50	70	5	5
Right	5	60	10	30
Total	75	180	45	40

Major Street Direction

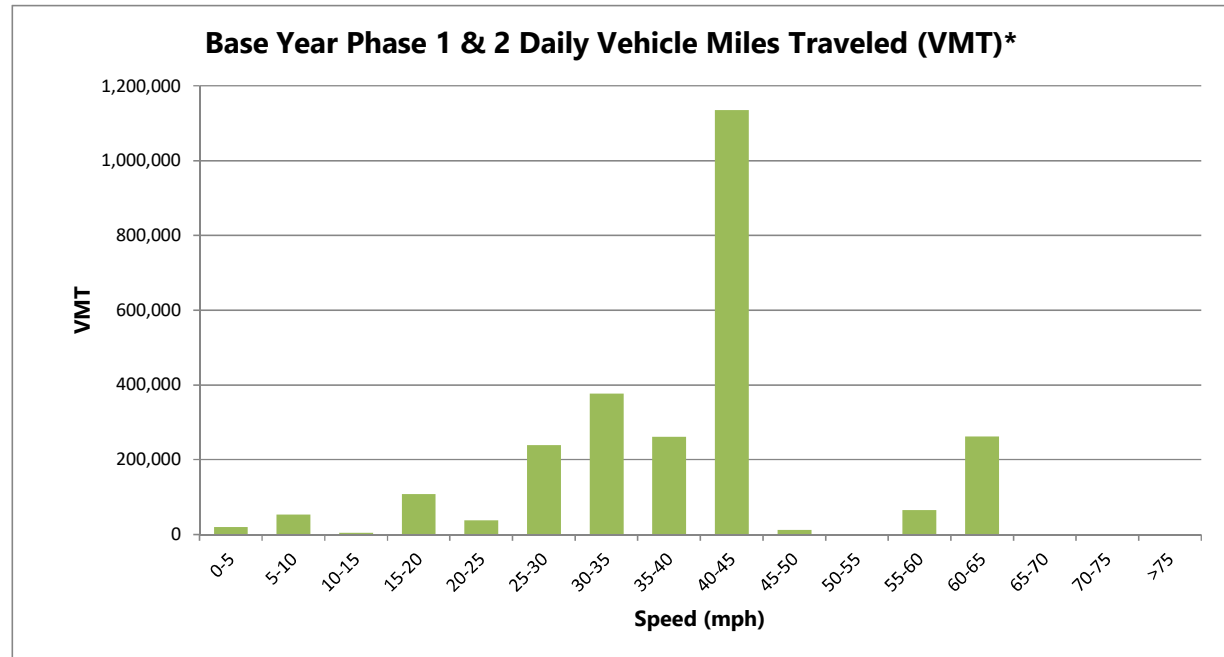
X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	255	45	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	20,135
>5	<=10	5-10	53,492
>10	<=15	10-15	4,794
>15	<=20	15-20	108,082
>20	<=25	20-25	38,210
>25	<=30	25-30	238,548
>30	<=35	30-35	376,509
>35	<=40	35-40	261,159
>40	<=45	40-45	1,134,560
>45	<=50	45-50	12,352
>50	<=55	50-55	0
>55	<=60	55-60	64,982
>60	<=65	60-65	261,876
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			2,574,700



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.4.1:

Existing Conditions

Plus Bogue Stewart Master Plan with Mitigations

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout with Mitigations
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	135	118	87.2%	79.0	11.6	E
	Through	645	647	100.3%	76.7	11.2	E
	Right Turn	105	97	92.2%	46.6	6.9	D
	Subtotal	885	861	97.3%	73.7	10.1	E
SB	Left Turn	285	238	83.4%	54.3	6.1	D
	Through	610	499	81.8%	38.7	4.8	D
	Right Turn	305	254	83.4%	22.6	3.9	C
	Subtotal	1,200	991	82.6%	38.4	3.3	D
EB	Left Turn	225	225	100.1%	50.3	5.4	D
	Through	310	285	91.9%	33.3	9.9	C
	Right Turn	185	173	93.7%	31.8	15.6	C
	Subtotal	720	683	94.9%	38.7	9.0	D
WB	Left Turn	165	157	95.0%	54.3	9.3	D
	Through	340	332	97.5%	41.2	4.6	D
	Right Turn	505	466	92.2%	24.3	2.7	C
	Subtotal	1,010	954	94.4%	35.1	3.8	D
Total		3,815	3,490	91.5%	46.4	4.4	D

Intersection 10 SR 99/Stewarts Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	45	49	109.6%	40.9	14.1	D
	Through	660	655	99.3%	24.5	4.4	C
	Right Turn	65	68	105.3%	10.5	2.0	B
	Subtotal	770	773	100.4%	24.4	4.2	C
SB	Left Turn	130	100	77.0%	37.8	5.6	D
	Through	820	669	81.6%	24.9	4.4	C
	Right Turn	10	8	81.0%	18.2	7.4	B
	Subtotal	960	777	81.0%	26.5	4.3	C
EB	Left Turn	26	23	89.2%	24.8	9.1	C
	Through	27	27	100.9%	27.4	7.4	C
	Right Turn	67	68	101.6%	10.5	2.6	B
	Subtotal	120	118	98.7%	17.7	4.2	B
WB	Left Turn	94	86	92.0%	29.6	3.0	C
	Through	42	40	95.5%	28.4	6.9	C
	Right Turn	194	194	99.8%	11.4	2.8	B
	Subtotal	330	320	97.0%	18.6	1.9	B
Total		2,180	1,989	91.2%	23.8	2.7	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout with Mitigations
AM Peak Hour

Intersection 24
























Phillips Rd/Bogue Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	375	346	92.1%	60.0	22.3	E
	Through	10	7	66.2%	59.8	41.6	E
	Right Turn	30	32	106.7%	2.8	0.7	A
	Subtotal	415	384	92.6%	55.0	19.7	E
SB	Left Turn	60	64	106.1%	35.3	4.3	D
	Through	20	17	84.6%	21.2	8.5	C
	Right Turn	60	54	89.5%	9.8	1.6	A
	Subtotal	140	134	95.9%	22.9	2.7	C
EB	Left Turn	30	26	88.3%	49.5	9.0	D
	Through	330	289	87.4%	20.5	1.9	C
	Right Turn	140	128	91.5%	13.5	2.9	B
	Subtotal	500	443	88.6%	20.2	2.2	C
WB	Left Turn	95	84	88.7%	39.2	4.5	D
	Through	545	550	100.9%	18.8	2.0	B
	Right Turn	50	60	120.7%	12.1	3.8	B
	Subtotal	690	695	100.7%	20.7	1.4	C
Total		1,745	1,656	94.9%	28.5	3.9	C

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Ex Plus Buildout with Mitigations
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	270	70	30	200	120	30	80	60	150	140	20
Future Volume (veh/h)	20	270	70	30	200	120	30	80	60	150	140	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	1863	1848	1900	1863	1863	1810	1827	1827	1863	1863	1820	1900
Adj Flow Rate, veh/h	21	287	74	32	213	128	32	85	64	160	149	21
Adj No. of Lanes	1	1	0	1	1	1	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, %	2	2	2	2	2	5	4	4	2	2	4	4
Cap, veh/h	27	396	102	39	533	440	38	267	231	204	374	53
Arrive On Green	0.02	0.28	0.28	0.02	0.29	0.29	0.02	0.15	0.15	0.12	0.24	0.24
Sat Flow, veh/h	1774	1418	366	1774	1863	1538	1740	1827	1583	1774	1562	220
Grp Volume(v), veh/h	21	0	361	32	213	128	32	85	64	160	0	170
Grp Sat Flow(s),veh/h/ln	1774	0	1783	1774	1863	1538	1740	1827	1583	1774	0	1782
Q Serve(g_s), s	0.6	0.0	8.8	0.9	4.4	3.1	0.9	2.0	1.7	4.2	0.0	3.8
Cycle Q Clear(g_c), s	0.6	0.0	8.8	0.9	4.4	3.1	0.9	2.0	1.7	4.2	0.0	3.8
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	27	0	498	39	533	440	38	267	231	204	0	426
V/C Ratio(X)	0.78	0.00	0.72	0.83	0.40	0.29	0.85	0.32	0.28	0.78	0.00	0.40
Avail Cap(c_a), veh/h	129	0	781	129	815	673	210	952	825	351	0	1066
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	15.6	23.4	13.8	13.3	23.4	18.3	18.2	20.6	0.0	15.3
Incr Delay (d2), s/veh	15.9	0.0	2.0	15.3	0.5	0.4	17.0	0.7	0.6	2.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.6	0.6	2.3	1.4	0.6	1.0	0.8	2.2	0.0	2.0
LnGrp Delay(d),s/veh	39.5	0.0	17.6	38.7	14.3	13.7	40.4	19.0	18.9	23.1	0.0	15.9
LnGrp LOS	D		B	D	B	B	D	B	B	C		B
Approach Vol, veh/h		382			373			181			330	
Approach Delay, s/veh		18.8			16.2			22.8			19.4	
Approach LOS		B			B			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	10.0	13.0	5.5	19.4	5.5	17.5	5.2	19.7				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	9.5	25.0	3.5	21.0	5.8	28.7	3.5	21.0				
Max Q Clear Time (g_c+I1), s	6.2	4.0	2.9	10.8	2.9	5.8	2.6	6.4				
Green Ext Time (p_c), s	0.1	1.4	0.0	2.6	0.0	1.4	0.0	3.1				
Intersection Summary												
HCM 2010 Ctrl Delay			18.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
22: Railroad Ave & Lincoln Rd

Ex Plus Buildout with Mitigations
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	300	60	30	200	60	140	190	50	60	100	50
Future Volume (veh/h)	110	300	60	30	200	60	140	190	50	60	100	50
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		0.99	1.00		0.99	1.00		1.00	1.00		0.98
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	1863	1827	1863	1863	1776	1863	1863	1863	1863	1863	1863	1810
Adj Flow Rate, veh/h	122	333	67	33	222	67	156	211	56	67	111	56
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	4	2	2	7	2	2	2	2	2	2	5
Cap, veh/h	156	527	451	40	397	351	199	438	371	83	316	256
Arrive On Green	0.09	0.29	0.29	0.02	0.22	0.22	0.11	0.24	0.24	0.05	0.17	0.17
Sat Flow, veh/h	1774	1827	1564	1774	1776	1569	1774	1863	1577	1774	1863	1506
Grp Volume(v), veh/h	122	333	67	33	222	67	156	211	56	67	111	56
Grp Sat Flow(s),veh/h/ln	1774	1827	1564	1774	1776	1569	1774	1863	1577	1774	1863	1506
Q Serve(g_s), s	3.0	7.2	1.4	0.8	5.0	1.6	3.9	4.4	1.3	1.7	2.4	1.4
Cycle Q Clear(g_c), s	3.0	7.2	1.4	0.8	5.0	1.6	3.9	4.4	1.3	1.7	2.4	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	527	451	40	397	351	199	438	371	83	316	256
V/C Ratio(X)	0.78	0.63	0.15	0.83	0.56	0.19	0.78	0.48	0.15	0.81	0.35	0.22
Avail Cap(c_a), veh/h	228	861	737	137	746	659	290	820	694	271	799	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	14.0	12.0	22.0	15.6	14.2	19.5	14.9	13.7	21.4	16.6	16.2
Incr Delay (d2), s/veh	5.8	0.5	0.1	32.7	1.2	0.3	4.7	0.8	0.2	6.9	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.7	0.6	0.8	2.6	0.7	2.1	2.3	0.6	1.0	1.3	0.6
LnGrp Delay(d),s/veh	26.0	14.5	12.0	54.7	16.8	14.5	24.2	15.7	13.9	28.2	17.2	16.6
LnGrp LOS	C	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		522			322			423			234	
Approach Delay, s/veh		16.8			20.2			18.6			20.2	
Approach LOS		B			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	6.7	15.2	5.6	17.6	9.7	12.3	8.6	14.7				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	19.9	3.5	21.3	7.4	19.4	5.8	19.0					
Max Q Clear Time (g_c+1), s	6.4	2.8	9.2	5.9	4.4	5.0	7.0					
Green Ext Time (p_c), s	0.0	1.9	0.0	2.5	0.0	1.9	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

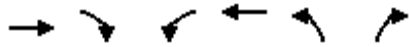
Ex Plus Buildout with Mitigations
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	290	70	70	470	50	165	170	105	60	130	70
Future Volume (veh/h)	50	290	70	70	470	50	165	170	105	60	130	70
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	1827	1859	1900	1845	1863	1900	1863	1863	1900	1863	1851	1900
Adj Flow Rate, veh/h	53	305	74	74	495	53	174	179	111	63	137	74
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	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, %	4	2	2	3	2	2	2	2	2	2	3	3
Cap, veh/h	64	409	99	93	964	103	222	299	186	79	224	121
Arrive On Green	0.04	0.28	0.28	0.05	0.30	0.30	0.12	0.28	0.28	0.04	0.20	0.20
Sat Flow, veh/h	1740	1446	351	1757	3227	344	1774	1077	668	1774	1132	611
Grp Volume(v), veh/h	53	0	379	74	271	277	174	0	290	63	0	211
Grp Sat Flow(s),veh/h/ln	1740	0	1797	1757	1770	1801	1774	0	1745	1774	0	1743
Q Serve(g_s), s	1.6	0.0	10.3	2.2	6.8	6.9	5.1	0.0	7.7	1.9	0.0	5.9
Cycle Q Clear(g_c), s	1.6	0.0	10.3	2.2	6.8	6.9	5.1	0.0	7.7	1.9	0.0	5.9
Prop In Lane	1.00		0.20	1.00		0.19	1.00		0.38	1.00		0.35
Lane Grp Cap(c), veh/h	64	0	508	93	529	538	222	0	485	79	0	344
V/C Ratio(X)	0.82	0.00	0.75	0.80	0.51	0.52	0.79	0.00	0.60	0.80	0.00	0.61
Avail Cap(c_a), veh/h	145	0	614	176	635	646	343	0	840	227	0	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	0.0	17.5	25.2	15.6	15.6	22.9	0.0	16.8	25.5	0.0	19.7
Incr Delay (d2), s/veh	22.2	0.0	4.0	14.2	0.8	0.8	6.4	0.0	1.2	16.6	0.0	1.8
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	1.2	0.0	5.6	1.4	3.4	3.5	2.9	0.0	3.9	1.3	0.0	3.0
LnGrp Delay(d),s/veh	47.9	0.0	21.5	39.4	16.4	16.4	29.2	0.0	18.0	42.1	0.0	21.5
LnGrp LOS	D		C	D	B	B	C		B	D		C
Approach Vol, veh/h		432			622			464			274	
Approach Delay, s/veh		24.8			19.1			22.2			26.2	
Approach LOS		C			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	7.0	19.6	7.4	19.8	11.3	15.2	6.6	20.7				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.9	5.4	18.4	10.4	22.4	4.5	19.3					
Max Q Clear Time (g_c+1), s	9.7	4.2	12.3	7.1	7.9	3.6	8.9					
Green Ext Time (p_c), s	0.0	2.8	0.0	2.9	0.1	2.7	0.0	4.2				
Intersection Summary												
HCM 2010 Ctrl Delay			22.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Ex Plus Buildout with Mitigations
 AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	530	20	170	430	40	100		
Future Volume (veh/h)	530	20	170	430	40	100		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	624	24	200	506	47	118		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	1523	59	356	1551	710	634		
Arrive On Green	0.44	0.44	0.44	0.44	0.40	0.40		
Sat Flow, veh/h	3568	134	779	3632	1774	1583		
Grp Volume(v), veh/h	318	330	200	506	47	118		
Grp Sat Flow(s),veh/h/ln	1770	1839	779	1770	1774	1583		
Q Serve(g_s), s	8.0	8.0	15.4	6.1	1.1	3.1		
Cycle Q Clear(g_c), s	8.0	8.0	23.4	6.1	1.1	3.1		
Prop In Lane		0.07	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	775	806	356	1551	710	634		
V/C Ratio(X)	0.41	0.41	0.56	0.33	0.07	0.19		
Avail Cap(c_a), veh/h	817	849	375	1633	710	634		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.5	12.5	20.5	12.0	12.0	12.6		
Incr Delay (d2), s/veh	0.3	0.3	1.7	0.1	0.2	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.1	3.4	3.0	0.6	1.5		
LnGrp Delay(d),s/veh	12.8	12.8	22.2	12.1	12.2	13.3		
LnGrp LOS	B	B	C	B	B	B		
Approach Vol, veh/h	648			706	165			
Approach Delay, s/veh	12.8			15.0	13.0			
Approach LOS	B			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		30.5		34.5				34.5
Change Period (Y+Rc), s		4.5		6.0				6.0
Max Green Setting (Gmax), s		24.5		30.0				30.0
Max Q Clear Time (g_c+I1), s		5.1		10.0				25.4
Green Ext Time (p_c), s		0.4		8.8				3.1
Intersection Summary								
HCM 2010 Ctrl Delay			13.8					
HCM 2010 LOS			B					

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout with Mitigation
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	175	163	93.2%	88.5	12.6	F
	Through	805	739	91.9%	83.3	8.7	F
	Right Turn	255	236	92.7%	56.9	11.1	E
	Subtotal	1,235	1,139	92.2%	78.5	8.8	E
SB	Left Turn	555	414	74.6%	62.7	5.0	E
	Through	465	367	78.9%	46.6	3.5	D
	Right Turn	340	249	73.3%	22.4	2.9	C
	Subtotal	1,360	1,030	75.7%	47.2	2.6	D
EB	Left Turn	350	339	96.8%	56.8	8.0	E
	Through	450	436	96.9%	38.3	4.7	D
	Right Turn	180	177	98.6%	35.0	10.3	C
	Subtotal	980	952	97.2%	44.3	5.7	D
WB	Left Turn	135	125	92.6%	73.2	11.5	E
	Through	390	365	93.6%	53.7	12.2	D
	Right Turn	535	510	95.3%	32.9	6.9	C
	Subtotal	1,060	1,000	94.4%	45.6	9.8	D
Total		4,635	4,121	88.9%	54.9	4.6	D

Intersection 10 SR 99/Stewarts Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	63	90.1%	53.5	8.1	D
	Through	1,120	1,098	98.1%	22.4	4.8	C
	Right Turn	120	112	93.7%	14.2	5.1	B
	Subtotal	1,310	1,274	97.2%	23.3	4.3	C
SB	Left Turn	160	116	72.2%	48.1	8.4	D
	Through	610	485	79.5%	15.8	3.2	B
	Right Turn	10	8	79.8%	14.4	11.8	B
	Subtotal	780	608	78.0%	21.9	3.2	C
EB	Left Turn	15	13	88.7%	35.6	17.1	D
	Through	63	60	94.7%	39.2	10.1	D
	Right Turn	50	54	107.2%	13.6	6.9	B
	Subtotal	128	127	98.9%	28.8	6.8	C
WB	Left Turn	68	67	97.8%	36.1	5.3	D
	Through	26	18	70.2%	41.5	14.4	D
	Right Turn	100	83	83.2%	13.9	2.9	B
	Subtotal	194	168	86.6%	25.5	5.1	C
Total		2,412	2,177	90.2%	23.5	2.9	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Buildout with Mitigation
PM Peak Hour

Intersection 24
























Phillips Rd/Bogue Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	550	506	92.0%	70.2	65.4	E
	Through	10	10	95.0%	61.2	58.2	E
	Right Turn	50	40	80.6%	17.8	40.4	B
	Subtotal	610	556	91.1%	66.2	62.6	E
SB	Left Turn	30	35	117.8%	40.5	13.6	D
	Through	20	21	104.5%	29.7	7.3	C
	Right Turn	40	33	81.7%	9.9	3.8	A
	Subtotal	90	89	98.8%	26.2	6.1	C
EB	Left Turn	80	54	67.5%	45.1	8.3	D
	Through	800	693	86.6%	31.7	5.2	C
	Right Turn	230	211	91.7%	32.2	8.6	C
	Subtotal	1,110	958	86.3%	32.6	5.7	C
WB	Left Turn	110	106	96.7%	50.3	10.4	D
	Through	410	434	105.9%	19.6	2.3	B
	Right Turn	20	20	100.7%	12.7	8.3	B
	Subtotal	540	561	103.9%	25.3	2.8	C
Total		2,350	2,163	92.1%	36.2	6.7	D

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Ex Plus Buildout w Mitigations
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	230	30	70	250	190	50	140	70	240	90	30
Future Volume (veh/h)	20	230	30	70	250	190	50	140	70	240	90	30
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		0.98	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1840	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	22	247	32	75	269	204	54	151	75	258	97	32
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	377	49	95	511	434	66	264	224	313	375	124
Arrive On Green	0.02	0.24	0.24	0.05	0.27	0.27	0.04	0.14	0.14	0.18	0.28	0.28
Sat Flow, veh/h	1774	1592	206	1774	1863	1583	1774	1863	1583	1774	1334	440
Grp Volume(v), veh/h	22	0	279	75	269	204	54	151	75	258	0	129
Grp Sat Flow(s),veh/h/ln	1774	0	1798	1774	1863	1583	1774	1863	1583	1774	0	1774
Q Serve(g_s), s	0.7	0.0	7.5	2.2	6.6	5.8	1.6	4.1	2.3	7.5	0.0	3.0
Cycle Q Clear(g_c), s	0.7	0.0	7.5	2.2	6.6	5.8	1.6	4.1	2.3	7.5	0.0	3.0
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	28	0	426	95	511	434	66	264	224	313	0	498
V/C Ratio(X)	0.79	0.00	0.66	0.79	0.53	0.47	0.81	0.57	0.33	0.82	0.00	0.26
Avail Cap(c_a), veh/h	179	0	805	182	837	712	232	868	738	480	0	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	18.5	25.1	16.5	16.2	25.6	21.5	20.7	21.3	0.0	15.0
Incr Delay (d2), s/veh	16.9	0.0	1.7	5.5	0.8	0.8	8.6	2.0	0.9	3.8	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	0.4	0.0	3.9	1.2	3.5	2.6	0.9	2.2	1.1	4.0	0.0	1.5
LnGrp Delay(d),s/veh	43.2	0.0	20.2	30.6	17.3	17.0	34.2	23.4	21.6	25.1	0.0	15.2
LnGrp LOS	D		C	C	B	B	C	C	C	C		B
Approach Vol, veh/h		301			548			280			387	
Approach Delay, s/veh		21.9			19.0			25.0			21.8	
Approach LOS		C			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	14.0	13.6	7.4	18.7	6.5	21.1	5.3	20.7				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	14.5	25.0	5.5	24.0	7.0	32.5	5.4	24.1				
Max Q Clear Time (g_c+I1), s	9.5	6.1	4.2	9.5	3.6	5.0	2.7	8.6				
Green Ext Time (p_c), s	0.2	1.5	0.0	3.2	0.0	1.7	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 22: Railroad Ave & Lincoln Rd

Ex Plus Buildout w Mitigations
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	320	110	40	370	70	100	120	50	160	240	70
Future Volume (veh/h)	50	320	110	40	370	70	100	120	50	160	240	70
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		0.99	1.00		0.99	1.00		1.00	1.00		0.98
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	1863	1792	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	53	340	117	43	394	74	106	128	53	170	255	74
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	551	481	51	559	469	136	324	275	217	409	342
Arrive On Green	0.04	0.31	0.31	0.03	0.30	0.30	0.08	0.17	0.17	0.12	0.22	0.22
Sat Flow, veh/h	1774	1792	1563	1774	1863	1562	1774	1863	1579	1774	1863	1555
Grp Volume(v), veh/h	53	340	117	43	394	74	106	128	53	170	255	74
Grp Sat Flow(s),veh/h/ln	1774	1792	1563	1774	1863	1562	1774	1863	1579	1774	1863	1555
Q Serve(g_s), s	1.5	8.1	2.8	1.2	9.4	1.7	2.9	3.1	1.4	4.7	6.2	2.0
Cycle Q Clear(g_c), s	1.5	8.1	2.8	1.2	9.4	1.7	2.9	3.1	1.4	4.7	6.2	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	551	481	51	559	469	136	324	275	217	409	342
V/C Ratio(X)	0.82	0.62	0.24	0.84	0.70	0.16	0.78	0.40	0.19	0.78	0.62	0.22
Avail Cap(c_a), veh/h	120	680	593	120	706	592	244	736	624	333	829	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	14.8	13.0	24.2	15.6	12.9	22.7	18.4	17.7	21.3	17.7	16.0
Incr Delay (d2), s/veh	22.0	1.1	0.3	28.6	2.3	0.2	9.2	0.8	0.3	6.5	1.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.1	1.2	1.0	5.2	0.8	1.8	1.6	0.6	2.7	3.4	0.9
LnGrp Delay(d),s/veh	46.0	16.0	13.2	52.8	17.9	13.0	32.0	19.1	18.0	27.8	19.2	16.3
LnGrp LOS	D	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		510			511			287			499	
Approach Delay, s/veh		18.5			20.1			23.7			21.7	
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	10.7	13.3	6.0	20.0	8.4	15.6	6.4	19.6				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	19.8	3.4	19.0	6.9	22.3	3.4	19.0					
Max Q Clear Time (g_c+1), s	5.1	3.2	10.1	4.9	8.2	3.5	11.4					
Green Ext Time (p_c), s	0.1	2.3	0.0	3.5	0.0	2.3	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			20.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

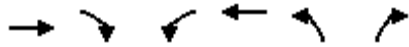
Ex Plus Buildout w Mitigations
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	600	160	60	400	60	80	90	80	70	160	80
Future Volume (veh/h)	110	600	160	60	400	60	80	90	80	70	160	80
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		0.97	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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	113	619	165	62	412	62	82	93	82	72	165	82
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	669	178	79	1342	201	105	174	153	92	218	108
Arrive On Green	0.08	0.47	0.47	0.04	0.43	0.43	0.06	0.19	0.19	0.05	0.19	0.19
Sat Flow, veh/h	1774	1418	378	1774	3089	462	1774	900	794	1774	1175	584
Grp Volume(v), veh/h	113	0	784	62	235	239	82	0	175	72	0	247
Grp Sat Flow(s),veh/h/ln	1774	0	1796	1774	1770	1781	1774	0	1694	1774	0	1760
Q Serve(g_s), s	4.8	0.0	31.5	2.7	6.7	6.8	3.5	0.0	7.2	3.1	0.0	10.2
Cycle Q Clear(g_c), s	4.8	0.0	31.5	2.7	6.7	6.8	3.5	0.0	7.2	3.1	0.0	10.2
Prop In Lane	1.00		0.21	1.00		0.26	1.00		0.47	1.00		0.33
Lane Grp Cap(c), veh/h	145	0	847	79	769	774	105	0	327	92	0	326
V/C Ratio(X)	0.78	0.00	0.93	0.79	0.31	0.31	0.78	0.00	0.54	0.78	0.00	0.76
Avail Cap(c_a), veh/h	286	0	919	104	769	774	127	0	500	115	0	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	19.1	36.4	14.2	14.2	35.7	0.0	28.0	36.1	0.0	29.7
Incr Delay (d2), s/veh	8.6	0.0	14.2	24.6	0.2	0.2	22.3	0.0	1.4	23.3	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	18.8	1.8	3.3	3.4	2.4	0.0	3.5	2.1	0.0	5.3
LnGrp Delay(d),s/veh	43.3	0.0	33.3	61.0	14.4	14.4	58.0	0.0	29.3	59.4	0.0	33.3
LnGrp LOS	D		C	E	B	B	E		C	E		C
Approach Vol, veh/h		897			536			257			319	
Approach Delay, s/veh		34.5			19.8			38.5			39.2	
Approach LOS		C			B			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	8.6	19.4	8.0	40.9	9.2	18.9	10.9	38.1				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	22.7	4.5	39.4	5.5	22.2	12.4	31.5					
Max Q Clear Time (g_c+1), s	9.2	4.7	33.5	5.5	12.2	6.8	8.8					
Green Ext Time (p_c), s	0.0	2.1	0.0	2.8	0.0	1.8	0.1	9.6				
Intersection Summary												
HCM 2010 Ctrl Delay			31.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Ex Plus Buildout w Mitigations
 PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	530	30	160	560	20	170		
Future Volume (veh/h)	530	30	160	560	20	170		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	564	32	170	596	21	181		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	1849	105	589	1922	325	290		
Arrive On Green	0.54	0.54	0.54	0.54	0.18	0.18		
Sat Flow, veh/h	3498	193	818	3632	1774	1583		
Grp Volume(v), veh/h	293	303	170	596	21	181		
Grp Sat Flow(s),veh/h/ln	1770	1828	818	1770	1774	1583		
Q Serve(g_s), s	3.0	3.0	4.7	3.0	0.3	3.5		
Cycle Q Clear(g_c), s	3.0	3.0	7.7	3.0	0.3	3.5		
Prop In Lane		0.11	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	961	993	589	1922	325	290		
V/C Ratio(X)	0.30	0.31	0.29	0.31	0.06	0.62		
Avail Cap(c_a), veh/h	1425	1473	803	2851	1321	1179		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.1	4.1	6.2	4.1	11.1	12.4		
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.1	0.1	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4	1.5	1.1	1.4	0.2	1.7		
LnGrp Delay(d),s/veh	4.3	4.3	6.5	4.2	11.2	14.6		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h	596			766	202			
Approach Delay, s/veh	4.3			4.7	14.2			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		10.5		22.4				22.4
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		24.5		26.5				26.5
Max Q Clear Time (g_c+I1), s		5.5		5.0				9.7
Green Ext Time (p_c), s		0.6		9.1				8.0
Intersection Summary								
HCM 2010 Ctrl Delay			5.8					
HCM 2010 LOS			A					

Queuing and Blocking Report
Existing Plus Buildout with Mitigations

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	TR	L	L	T	R	L	T	T	R
Maximum Queue (ft)	158	196	278	377	149	134	220	222	173	353	377	255
Average Queue (ft)	83	128	126	236	86	71	183	179	104	242	245	82
95th Queue (ft)	172	205	312	429	157	132	255	266	186	389	402	248
Link Distance (ft)			1192	1192	142	142	142	142		3904	3904	
Upstream Blk Time (%)					2	1	26	22				
Queuing Penalty (veh)					5	3	72	59				
Storage Bay Dist (ft)	250	250							450			300
Storage Blk Time (%)		0	1							0	4	0
Queuing Penalty (veh)		0	1							0	5	0

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	139	161	212	222	143
Average Queue (ft)	67	100	130	130	65
95th Queue (ft)	145	174	210	228	145
Link Distance (ft)			1973	1973	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	500	500			300
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				1	0

Queuing and Blocking Report Existing Plus

Buildout with Mitigations

AM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	UL	T	T	R
Maximum Queue (ft)	135	65	210	99	161	255	284	94	124	245	260	39
Average Queue (ft)	64	48	97	78	83	163	173	33	73	126	139	7
95th Queue (ft)	138	77	208	121	185	282	300	92	134	259	265	41
Link Distance (ft)	152		400			1336	1336			3904	3904	
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	0											
Storage Bay Dist (ft)		30		75	450			70	450			70
Storage Blk Time (%)	23	8	16	6			28	0			23	0
Queuing Penalty (veh)	16	5	34	9			20	0			2	0

Queuing and Blocking Report

Existing Plus Buildout with Mitigations

PM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	TR	L	L	T	R	L	T	T	R
Maximum Queue (ft)	214	240	305	395	104	91	222	227	261	401	428	294
Average Queue (ft)	148	176	177	280	71	61	204	191	164	290	302	164
95th Queue (ft)	226	249	345	436	110	99	247	260	281	450	482	356
Link Distance (ft)			1192	1192	142	142	142	142		3910	3910	
Upstream Blk Time (%)							47	27				
Queuing Penalty (veh)							131	76				
Storage Bay Dist (ft)	250	250							450			300
Storage Blk Time (%)	0	0	1							1	10	0
Queuing Penalty (veh)	0	1	3							1	26	0

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	263	290	198	190	130
Average Queue (ft)	165	196	121	118	67
95th Queue (ft)	270	304	223	211	133
Link Distance (ft)			1973	1973	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	500	500			300
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Queuing and Blocking Report

Existing Plus Buildout with Mitigations

PM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	B67	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	LT	R	L	T	T	R	UL	T	T
Maximum Queue (ft)	177	60	12	134	95	199	297	336	87	158	168	184
Average Queue (ft)	79	40	1	68	48	84	164	190	38	89	83	98
95th Queue (ft)	173	76	21	130	101	202	321	360	94	165	177	194
Link Distance (ft)	185		720	274			1341	1341			3910	3910
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	0											
Storage Bay Dist (ft)		30			75	450			70	450		
Storage Blk Time (%)	48	3		14	1	0	0	26	0			15
Queuing Penalty (veh)	25	2		15	1	0	0	32	1			2

Intersection: 10: Stewart Rd & SR 99

Movement	SB
Directions Served	R
Maximum Queue (ft)	25
Average Queue (ft)	6
95th Queue (ft)	41
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

APPENDIX G.4.2:

Existing Conditions

Plus Newkom Ranch / Kells East Ranch

(Phases 1 and 2) with Mitigations

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2 with Mitigations
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	95	96	100.7%	48.7	10.4	D
	Through	605	556	92.0%	40.4	3.0	D
	Right Turn	95	86	90.3%	15.6	2.8	B
	Subtotal	795	738	92.8%	38.9	3.5	D
SB	Left Turn	255	212	83.0%	56.3	5.9	E
	Through	610	508	83.3%	38.2	4.1	D
	Right Turn	185	167	90.1%	22.9	3.5	C
	Subtotal	1,050	887	84.4%	39.7	2.5	D
EB	Left Turn	175	158	90.4%	42.9	4.8	D
	Through	260	262	100.9%	31.8	3.0	C
	Right Turn	185	172	93.1%	22.3	3.6	C
	Subtotal	620	593	95.6%	31.9	2.4	C
WB	Left Turn	135	147	109.0%	64.4	4.8	E
	Through	250	253	101.3%	51.7	4.6	D
	Right Turn	365	335	91.8%	31.8	2.1	C
	Subtotal	750	736	98.1%	45.2	3.2	D
Total		3,215	2,953	91.8%	39.3	1.4	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2 with Mitigations
AM Peak Hour

Intersection 24 Phillips Rd/Bogue Rd Signal






















Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	265	236	88.9%	52.1	34.5	D
	Through	30	25	84.6%	59.3	53.9	E
	Right Turn	60	55	92.0%	20.3	39.4	C
	Subtotal	355	316	89.0%	47.0	36.6	D
SB	Left Turn	60	61	101.2%	36.3	5.6	D
	Through	30	30	100.6%	12.5	8.2	B
	Right Turn	60	67	111.0%	7.3	3.0	A
	Subtotal	150	158	105.0%	19.6	3.2	B
EB	Left Turn	30	27	90.8%	34.3	8.3	C
	Through	350	322	91.9%	22.9	2.8	C
	Right Turn	70	59	83.6%	16.4	6.6	B
	Subtotal	450	407	90.5%	22.6	3.2	C
WB	Left Turn	125	124	99.2%	35.3	5.4	D
	Through	405	400	98.9%	18.5	1.1	B
	Right Turn	60	70	116.5%	10.4	2.8	B
	Subtotal	590	594	100.7%	21.0	1.8	C
Total		1,545	1,475	95.5%	25.9	4.9	C

Intersection 27 Phillips Rd/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	20	18	88.3%	2.8	1.0	A
	Through	110	114	104.0%	0.5	0.2	A
	Right Turn						
	Subtotal	130	132	101.6%	0.8	0.3	A
SB	Left Turn						
	Through	120	128	106.7%	0.4	0.2	A
	Right Turn	40	45	111.3%	0.2	0.1	A
	Subtotal	160	173	107.9%	0.4	0.1	A
EB	Left Turn	40	40	99.4%	5.0	0.8	A
	Through						
	Right Turn	20	18	90.2%	2.3	1.2	A
	Subtotal	60	58	96.3%	4.3	0.3	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		350	362	103.6%	1.2	0.2	A

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

Existing Plus Phase 1 and 2 Conditions
with Mitigations: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	320	40	40	460	50	55	110	65	50	110	70
Future Volume (veh/h)	50	320	40	40	460	50	55	110	65	50	110	70
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	1827	1861	1900	1845	1863	1863	1863	1863	1900	1863	1852	1900
Adj Flow Rate, veh/h	53	337	42	42	484	53	58	116	68	53	116	74
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	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, %	4	2	2	3	2	2	2	2	2	2	3	3
Cap, veh/h	63	580	72	49	650	552	71	207	121	64	194	124
Arrive On Green	0.04	0.36	0.36	0.03	0.35	0.35	0.04	0.19	0.19	0.04	0.18	0.18
Sat Flow, veh/h	1740	1623	202	1757	1863	1581	1774	1102	646	1774	1058	675
Grp Volume(v), veh/h	53	0	379	42	484	53	58	0	184	53	0	190
Grp Sat Flow(s),veh/h/ln	1740	0	1825	1757	1863	1581	1774	0	1749	1774	0	1733
Q Serve(g_s), s	1.4	0.0	7.9	1.1	10.8	1.1	1.5	0.0	4.5	1.4	0.0	4.7
Cycle Q Clear(g_c), s	1.4	0.0	7.9	1.1	10.8	1.1	1.5	0.0	4.5	1.4	0.0	4.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.37	1.00		0.39
Lane Grp Cap(c), veh/h	63	0	652	49	650	552	71	0	328	64	0	318
V/C Ratio(X)	0.84	0.00	0.58	0.85	0.74	0.10	0.82	0.00	0.56	0.83	0.00	0.60
Avail Cap(c_a), veh/h	159	0	806	183	846	718	169	0	798	166	0	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	12.3	22.8	13.5	10.3	22.4	0.0	17.4	22.6	0.0	17.6
Incr Delay (d2), s/veh	23.7	0.0	0.8	30.9	2.6	0.1	19.9	0.0	1.5	22.4	0.0	1.8
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	1.1	0.0	4.0	1.0	6.0	0.5	1.1	0.0	2.3	1.1	0.0	2.4
LnGrp Delay(d),s/veh	46.2	0.0	13.1	53.6	16.1	10.4	42.4	0.0	18.9	45.0	0.0	19.4
LnGrp LOS	D		B	D	B	B	D		B	D		B
Approach Vol, veh/h		432			579			242			243	
Approach Delay, s/veh		17.2			18.3			24.5			25.0	
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	6.3	13.4	5.9	21.4	6.5	13.3	6.3	21.0				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	4.4	21.5	4.9	20.8	4.5	21.4	4.3	21.4				
Max Q Clear Time (g_c+I1), s	3.4	6.5	3.1	9.9	3.5	6.7	3.4	12.8				
Green Ext Time (p_c), s	0.0	1.9	0.0	4.3	0.0	1.9	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			20.0									
HCM 2010 LOS			C									

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2 with Mitigations
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	175	166	94.7%	61.6	7.1	E
	Through	765	714	93.3%	61.0	9.7	E
	Right Turn	225	233	103.7%	30.9	6.7	C
	Subtotal	1,165	1,113	95.5%	54.8	7.2	D
SB	Left Turn	425	357	84.0%	61.3	6.9	E
	Through	455	352	77.3%	44.7	4.7	D
	Right Turn	250	195	78.1%	26.5	2.1	C
	Subtotal	1,130	904	80.0%	47.3	3.0	D
EB	Left Turn	260	267	102.6%	52.3	10.2	D
	Through	380	379	99.7%	32.7	4.0	C
	Right Turn	120	112	93.1%	26.0	3.9	C
	Subtotal	760	757	99.7%	38.8	5.4	D
WB	Left Turn	115	107	92.9%	78.0	16.8	E
	Through	350	334	95.4%	67.2	11.3	E
	Right Turn	485	482	99.4%	42.8	9.2	D
	Subtotal	950	923	97.2%	55.8	10.5	E
Total		4,005	3,697	92.3%	49.9	3.7	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Existing Plus Phase 1 and 2 with Mitigations
PM Peak Hour

Intersection 24






















Phillips Rd/Bogue Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	490	477	97.4%	36.9	7.2	D
	Through	10	9	87.4%	36.9	21.3	D
	Right Turn	70	56	80.3%	10.8	3.8	B
	Subtotal	570	542	95.1%	34.2	6.6	C
SB	Left Turn	30	34	112.7%	36.4	7.5	D
	Through	20	17	85.5%	22.4	10.2	C
	Right Turn	40	43	107.4%	10.5	5.4	B
	Subtotal	90	94	104.3%	22.2	7.2	C
EB	Left Turn	80	69	86.5%	42.5	6.4	D
	Through	620	583	94.0%	28.5	5.5	C
	Right Turn	190	177	93.0%	27.0	6.8	C
	Subtotal	890	829	93.1%	29.3	5.7	C
WB	Left Turn	160	164	102.6%	41.2	9.7	D
	Through	350	357	102.1%	18.1	5.1	B
	Right Turn	20	22	108.3%	9.1	8.0	A
	Subtotal	530	543	102.5%	24.8	5.2	C
Total		2,080	2,008	96.5%	29.0	4.7	C

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

Existing Plus Phase 1 and 2
with Mitigations: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	560	20	40	410	50	20	60	40	50	50	70
Future Volume (veh/h)	110	560	20	40	410	50	20	60	40	50	50	70
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		0.97	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	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	113	577	21	41	423	52	21	62	41	52	52	72
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	741	27	49	671	571	27	153	101	63	119	165
Arrive On Green	0.08	0.42	0.42	0.03	0.36	0.36	0.02	0.15	0.15	0.04	0.17	0.17
Sat Flow, veh/h	1774	1786	65	1774	1863	1583	1774	1033	683	1774	709	981
Grp Volume(v), veh/h	113	0	598	41	423	52	21	0	103	52	0	124
Grp Sat Flow(s),veh/h/ln	1774	0	1851	1774	1863	1583	1774	0	1715	1774	0	1690
Q Serve(g_s), s	3.1	0.0	13.7	1.1	9.2	1.1	0.6	0.0	2.7	1.4	0.0	3.2
Cycle Q Clear(g_c), s	3.1	0.0	13.7	1.1	9.2	1.1	0.6	0.0	2.7	1.4	0.0	3.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.40	1.00		0.58
Lane Grp Cap(c), veh/h	145	0	768	49	671	571	27	0	254	63	0	285
V/C Ratio(X)	0.78	0.00	0.78	0.84	0.63	0.09	0.78	0.00	0.41	0.82	0.00	0.44
Avail Cap(c_a), veh/h	270	0	955	159	844	717	126	0	746	195	0	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	12.4	23.8	13.0	10.4	24.2	0.0	19.0	23.6	0.0	18.4
Incr Delay (d2), s/veh	8.6	0.0	3.3	30.4	1.0	0.1	36.9	0.0	1.0	22.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	7.7	1.0	4.9	0.5	0.6	0.0	1.3	1.1	0.0	1.6
LnGrp Delay(d),s/veh	30.7	0.0	15.7	54.2	14.0	10.5	61.1	0.0	20.0	45.9	0.0	19.4
LnGrp LOS	C		B	D	B	B	E		C	D		B
Approach Vol, veh/h		711			516			124				176
Approach Delay, s/veh		18.1			16.9			27.0				27.2
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	6.4	11.9	5.9	25.0	5.3	12.9	8.6	22.3				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	5.4	21.4	4.4	25.4	3.5	23.3	7.5	22.3				
Max Q Clear Time (g_c+I1), s	3.4	4.7	3.1	15.7	2.6	5.2	5.1	11.2				
Green Ext Time (p_c), s	0.0	1.1	0.0	4.7	0.0	1.2	0.1	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			19.5									
HCM 2010 LOS			B									

Queuing and Blocking Report
 Existing Plus Phase 1 and 2 with Mitigations

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	R	L	T	T	R	L	L
Maximum Queue (ft)	217	163	218	180	198	178	139	287	302	98	126	164
Average Queue (ft)	126	86	145	113	142	94	82	193	192	38	60	96
95th Queue (ft)	216	161	235	190	223	173	143	302	304	76	129	172
Link Distance (ft)		1192	1192	140	140	140		3915	3915			
Upstream Blk Time (%)				10	13	3						
Queuing Penalty (veh)				26	36	9						
Storage Bay Dist (ft)	250						450			300	500	500
Storage Blk Time (%)	0								2			
Queuing Penalty (veh)	0								2			

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	212	246	129
Average Queue (ft)	121	141	53
95th Queue (ft)	237	277	151
Link Distance (ft)	1980	1980	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			300
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		1	0

Queuing and Blocking Report

Existing Plus Phase 1 and 2 with Mitigations

AM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	L	T	R	UL	T
Maximum Queue (ft)	41	54	49	72	58	2	9	46	4
Average Queue (ft)	16	23	25	39	17	0	1	23	1
95th Queue (ft)	47	61	50	71	64	4	16	53	6
Link Distance (ft)	961		506			1341			3915
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		30		75	450		70	450	
Storage Blk Time (%)	10	3		1					
Queuing Penalty (veh)	3	1		1					

Queuing and Blocking Report
 Existing Plus Phase 1 and 2 with Mitigations

PM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	R	L	T	T	R	L	L
Maximum Queue (ft)	265	276	279	166	211	216	261	411	436	305	240	256
Average Queue (ft)	206	143	185	107	196	166	154	307	312	162	126	162
95th Queue (ft)	293	309	298	186	235	245	277	431	478	347	240	273
Link Distance (ft)		1192	1192	140	140	140		3915	3915			
Upstream Blk Time (%)				9	39	19						
Queuing Penalty (veh)				31	131	64						
Storage Bay Dist (ft)	250						450			300	500	500
Storage Blk Time (%)	6	0						1	12	0		
Queuing Penalty (veh)	12	0						2	27	1		

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	214	198	186
Average Queue (ft)	108	108	76
95th Queue (ft)	224	194	188
Link Distance (ft)	1980	1980	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			300
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Queuing and Blocking Report

Existing Plus Phase 1 and 2 with Mitigations

PM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	L	T	UL	T
Maximum Queue (ft)	28	42	52	54	35	2	39	6
Average Queue (ft)	9	13	23	23	8	0	13	1
95th Queue (ft)	29	45	53	58	35	5	39	10
Link Distance (ft)	961		495			1341		3915
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		30		75	450		450	
Storage Blk Time (%)	7	1	1	0				
Queuing Penalty (veh)	1	0	0	0				

APPENDIX G.5:

Cumulative Conditions No Project

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 1 **SR 99/SR 20** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	400	235	58.8%	54.4	6.3	D
	Through	870	544	62.5%	34.7	7.8	C
	Right Turn	280	175	62.6%	20.2	4.0	C
	Subtotal	1,550	954	61.6%	37.0	3.8	D
SB	Left Turn	690	554	80.3%	109.5	23.9	F
	Through	1,120	989	88.3%	83.5	23.0	F
	Right Turn	170	153	90.1%	47.7	19.7	D
	Subtotal	1,980	1,696	85.6%	88.8	23.0	F
EB	Left Turn	110	100	90.7%	53.7	14.5	D
	Through	860	844	98.2%	55.7	19.2	E
	Right Turn	410	386	94.2%	37.2	18.7	D
	Subtotal	1,380	1,330	96.4%	50.2	18.7	D
WB	Left Turn	225	215	95.7%	53.8	5.2	D
	Through	810	817	100.9%	37.5	2.9	D
	Right Turn	210	201	95.5%	11.3	2.8	B
	Subtotal	1,245	1,233	99.0%	36.1	2.1	D
Total		6,155	5,213	84.7%	57.0	8.9	E

Intersection 2 **SR 99/Sunsweet Blvd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	67	56.1%	60.5	11.8	E
	Through	1,195	648	54.3%	86.5	16.3	F
	Right Turn	60	31	51.5%	75.9	17.4	E
	Subtotal	1,375	747	54.3%	83.8	15.3	F
SB	Left Turn	635	531	83.7%	58.6	9.0	E
	Through	1,100	979	89.0%	44.9	5.4	D
	Right Turn	20	16	81.0%	24.2	12.0	C
	Subtotal	1,755	1,527	87.0%	49.6	6.4	D
EB	Left Turn	105	101	96.0%	50.8	7.0	D
	Through	110	113	102.7%	51.3	6.6	D
	Right Turn	130	128	98.8%	16.8	3.6	B
	Subtotal	345	342	99.2%	38.4	4.5	D
WB	Left Turn	110	120	109.1%	50.9	7.7	D
	Through	250	255	101.9%	41.8	5.2	D
	Right Turn	235	237	100.8%	26.8	6.9	C
	Subtotal	595	612	102.8%	37.9	3.6	D
Total		4,070	3,227	79.3%	54.0	5.1	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	72	60.4%	56.6	13.0	E
	Through	1,150	708	61.6%	42.3	11.3	D
	Right Turn	250	157	62.9%	16.8	2.4	B
	Subtotal	1,520	938	61.7%	39.3	9.0	D
SB	Left Turn	150	127	84.4%	56.3	12.9	E
	Through	1,090	969	88.9%	47.2	8.5	D
	Right Turn	100	93	93.1%	23.2	5.8	C
	Subtotal	1,340	1,189	88.7%	46.3	8.6	D
EB	Left Turn	55	38	68.9%	100.0	30.5	F
	Through	810	708	87.4%	79.6	29.4	E
	Right Turn	140	117	83.9%	85.7	30.6	F
	Subtotal	1,005	863	85.9%	81.5	29.4	F
WB	Left Turn	245	154	62.9%	185.4	57.9	F
	Through	320	301	94.0%	31.1	9.4	C
	Right Turn	170	160	94.4%	26.2	10.4	C
	Subtotal	735	615	83.7%	69.3	16.9	E
Total		4,600	3,605	78.4%	56.8	7.2	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	160	110	68.5%	73.8	7.1	E
	Through	1,170	764	65.3%	85.7	8.5	F
	Right Turn	390	255	65.5%	58.7	7.0	E
	Subtotal	1,720	1,129	65.6%	78.4	7.6	E
SB	Left Turn	120	93	77.3%	50.6	11.2	D
	Through	865	703	81.3%	40.1	11.0	D
	Right Turn	490	412	84.1%	27.9	10.3	C
	Subtotal	1,475	1,208	81.9%	36.7	9.7	D
EB	Left Turn	245	141	57.7%	194.3	32.3	F
	Through	910	574	63.1%	174.4	22.5	F
	Right Turn	155	135	86.9%	63.0	18.8	E
	Subtotal	1,310	850	64.9%	159.9	21.5	F
WB	Left Turn	225	146	64.9%	160.9	42.0	F
	Through	430	320	74.4%	107.7	40.1	F
	Right Turn	110	77	70.3%	94.5	38.0	F
	Subtotal	765	543	71.0%	120.5	41.3	F
Total		5,270	3,730	70.8%	89.1	8.7	F

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	21	69.9%	26.2	12.9	D
	Through	1,670	1,340	80.2%	7.9	1.0	A
	Right Turn	40	30	75.4%	6.7	2.0	A
	Subtotal	1,740	1,391	79.9%	8.1	1.1	A
SB	Left Turn	60	44	73.6%	25.0	9.5	C
	Through	1,165	904	77.6%	7.2	0.6	A
	Right Turn	20	17	84.6%	6.0	2.2	A
	Subtotal	1,245	965	77.5%	8.0	1.0	A
EB	Left Turn	10	7	73.6%	52.1	50.8	F
	Through	10	7	69.9%	95.4	54.3	F
	Right Turn	30	32	105.5%	17.9	9.9	C
	Subtotal	50	46	92.0%	37.5	21.3	E
WB	Left Turn	10	11	110.4%	82.2	42.1	F
	Through	10	10	95.7%	91.4	67.0	F
	Right Turn	40	32	80.0%	50.8	26.6	F
	Subtotal	60	53	87.7%	64.2	29.2	F
Total		3,095	2,455	79.3%	9.9	1.0	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	20	65.0%	49.4	9.1	D
	Through	1,520	1,205	79.3%	36.6	4.9	D
	Right Turn	65	51	78.1%	17.3	5.0	B
	Subtotal	1,615	1,275	79.0%	36.0	4.8	D
SB	Left Turn	110	81	73.9%	64.4	9.1	E
	Through	1,065	779	73.1%	33.5	9.0	C
	Right Turn	30	25	83.4%	12.7	1.6	B
	Subtotal	1,205	885	73.4%	35.8	8.6	D
EB	Left Turn	90	87	96.5%	63.7	21.8	E
	Through	110	101	91.7%	59.4	20.9	E
	Right Turn	85	88	103.0%	43.2	17.8	D
	Subtotal	285	275	96.6%	55.4	19.2	E
WB	Left Turn	75	78	104.0%	47.6	11.3	D
	Through	60	54	90.2%	50.8	14.1	D
	Right Turn	130	113	87.2%	30.8	11.8	C
	Subtotal	265	245	92.6%	40.6	11.3	D
Total		3,370	2,681	79.6%	38.3	5.3	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	220	177	80.5%	73.3	14.6	E
	Through	1,060	863	81.4%	75.4	20.0	E
	Right Turn	145	120	83.0%	34.5	7.1	C
	Subtotal	1,425	1,161	81.5%	70.8	17.1	E
SB	Left Turn	135	96	71.4%	45.0	9.7	D
	Through	1,010	687	68.0%	45.2	11.4	D
	Right Turn	80	54	67.2%	17.2	6.8	B
	Subtotal	1,225	837	68.3%	43.4	10.3	D
EB	Left Turn	285	260	91.3%	70.1	12.4	E
	Through	710	729	102.6%	35.5	8.7	D
	Right Turn	345	336	97.3%	22.5	6.1	C
	Subtotal	1,340	1,324	98.8%	39.1	7.0	D
WB	Left Turn	130	121	93.4%	49.7	10.5	D
	Through	510	506	99.3%	34.4	2.6	C
	Right Turn	270	269	99.5%	13.8	2.3	B
	Subtotal	910	896	98.5%	30.4	2.8	C
Total		4,900	4,218	86.1%	46.9	7.6	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	18	90.2%	17.7	7.4	C
	Through	1,305	1,235	94.7%	12.0	1.3	B
	Right Turn	20	17	86.5%	12.0	3.4	B
	Subtotal	1,345	1,271	94.5%	12.1	1.3	B
SB	Left Turn	40	31	77.3%	18.4	7.2	C
	Through	1,385	1,055	76.2%	9.3	1.6	A
	Right Turn	60	38	63.2%	10.4	3.3	B
	Subtotal	1,485	1,124	75.7%	9.7	1.7	A
EB	Left Turn	80	54	67.6%	138.2	58.5	F
	Through	10	6	62.6%	121.1	106.0	F
	Right Turn	30	22	73.6%	92.9	71.1	F
	Subtotal	120	82	68.7%	125.1	61.5	F
WB	Left Turn	20	18	88.3%	85.8	53.5	F
	Through	10	8	81.0%	107.5	108.7	F
	Right Turn	40	36	89.2%	23.2	22.9	C
	Subtotal	70	61	87.8%	50.8	42.1	F
Total		3,020	2,539	84.1%	15.5	2.5	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	180	175	97.1%	77.0	17.1	E
	Through	1,035	987	95.4%	38.1	4.1	D
	Right Turn	90	82	91.2%	22.2	3.9	C
	Subtotal	1,305	1,244	95.3%	42.8	5.1	D
SB	Left Turn	90	67	74.0%	59.0	9.9	E
	Through	1,265	897	70.9%	47.6	5.9	D
	Right Turn	80	56	69.5%	25.1	4.3	C
	Subtotal	1,435	1,019	71.0%	47.1	5.9	D
EB	Left Turn	100	91	90.5%	68.7	13.0	E
	Through	230	220	95.7%	41.5	8.4	D
	Right Turn	285	277	97.2%	21.5	5.9	C
	Subtotal	615	588	95.6%	36.3	7.3	D
WB	Left Turn	140	129	92.0%	43.3	5.9	D
	Through	230	231	100.3%	29.4	3.4	C
	Right Turn	210	210	100.1%	18.4	2.7	B
	Subtotal	580	570	98.2%	28.6	2.8	C
Total		3,935	3,420	86.9%	40.7	2.3	D

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	8	84.6%	13.4	9.3	B
	Through	1,175	1,136	96.7%	4.4	0.5	A
	Right Turn	30	31	104.3%	3.3	0.9	A
	Subtotal	1,215	1,175	96.7%	4.5	0.5	A
SB	Left Turn	105	76	72.2%	22.1	6.5	C
	Through	1,565	1,155	73.8%	12.3	1.2	B
	Right Turn	20	14	71.8%	21.0	5.9	C
	Subtotal	1,690	1,245	73.7%	13.0	1.1	B
EB	Left Turn	10	11	106.7%	70.0	54.9	F
	Through	10	7	69.9%	70.3	51.5	F
	Right Turn	10	9	92.0%	46.3	86.6	E
	Subtotal	30	27	89.5%	52.9	38.8	F
WB	Left Turn	20	21	104.9%	74.4	33.2	F
	Through	10	8	81.0%	85.6	74.8	F
	Right Turn	115	107	93.4%	39.1	35.4	E
	Subtotal	145	137	94.2%	46.5	35.9	E
Total		3,080	2,584	83.9%	11.3	2.3	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	8	77.3%	14.8	12.5	B
	Through	1,185	1,178	99.4%	4.7	0.7	A
	Right Turn	10	11	114.1%	5.0	3.7	A
	Subtotal	1,205	1,197	99.4%	4.8	0.7	A
SB	Left Turn	20	13	64.4%	16.0	13.1	C
	Through	1,565	1,146	73.2%	5.8	0.3	A
	Right Turn	10	10	99.4%	1.5	1.1	A
	Subtotal	1,595	1,169	73.3%	5.9	0.3	A
EB	Left Turn	10	4	44.2%	105.3	142.8	F
	Through	10	6	55.2%	69.1	54.6	F
	Right Turn	10	9	92.0%	15.3	9.5	C
	Subtotal	30	19	63.8%	49.5	28.2	E
WB	Left Turn	10	8	81.0%	111.4	87.2	F
	Through	10	9	88.3%	86.2	67.9	F
	Right Turn	20	17	82.8%	38.1	39.7	E
	Subtotal	40	33	83.7%	70.7	52.6	F
Total		2,870	2,419	84.3%	6.5	1.0	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	103.0%	16.3	6.8	C
	Through	1,195	1,209	101.2%	4.6	0.3	A
	Right Turn	10	7	69.9%	3.9	2.9	A
	Subtotal	1,215	1,226	100.9%	4.7	0.3	A
SB	Left Turn	10	7	66.2%	12.6	15.3	B
	Through	1,565	1,150	73.5%	1.1	0.2	A
	Right Turn	10	6	58.9%	1.5	1.4	A
	Subtotal	1,585	1,163	73.3%	1.2	0.2	A
EB	Left Turn						
	Through						
	Right Turn	10	11	114.1%	10.4	9.8	B
	Subtotal	10	11	114.1%	10.4	9.8	B
WB	Left Turn	10	11	106.7%	29.6	28.4	D
	Through						
	Right Turn	10	10	95.7%	7.1	4.6	A
	Subtotal	20	20	101.2%	18.5	12.0	C
Total		2,830	2,420	85.5%	3.1	0.2	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	10	99.4%	51.5	21.5	D
	Through	1,045	985	94.2%	23.1	2.0	C
	Right Turn	20	17	86.5%	20.2	3.8	C
	Subtotal	1,075	1,012	94.1%	23.3	1.9	C
SB	Left Turn	80	63	78.7%	62.0	8.9	E
	Through	1,485	998	67.2%	26.5	2.8	C
	Right Turn	20	13	66.2%	23.4	7.3	C
	Subtotal	1,585	1,074	67.8%	28.5	2.5	C
EB	Left Turn	30	30	100.6%	33.2	8.2	C
	Through	100	109	109.3%	35.0	7.4	D
	Right Turn	10	12	117.8%	26.5	15.5	C
	Subtotal	140	151	108.0%	33.9	6.2	C
WB	Left Turn	30	34	112.9%	43.2	16.3	D
	Through	60	63	104.9%	39.9	6.7	D
	Right Turn	140	141	100.7%	29.1	7.8	C
	Subtotal	230	238	103.4%	33.9	7.5	C
Total		3,030	2,475	81.7%	27.3	1.7	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	126	97.1%	61.6	20.1	F
	Through						
	Right Turn	120	97	80.7%	56.5	25.2	F
	Subtotal	250	223	89.2%	59.2	22.4	F
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	840	803	95.6%	1.3	0.1	A
	Right Turn	140	130	92.5%	1.3	0.4	A
	Subtotal	980	933	95.2%	1.3	0.1	A
WB	Left Turn	80	78	97.1%	10.3	2.6	B
	Through	460	461	100.2%	1.2	0.2	A
	Right Turn						
	Subtotal	540	538	99.7%	2.5	0.5	A
Total		1,770	1,694	95.7%	9.3	2.8	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	60	58	96.3%	16.9	4.4	C
	Through						
	Right Turn	60	57	94.5%	8.8	2.9	A
	Subtotal	120	114	95.4%	13.2	3.7	B
EB	Left Turn	30	28	94.5%	6.3	1.0	A
	Through	350	311	89.0%	3.0	0.5	A
	Right Turn						
	Subtotal	380	340	89.4%	3.3	0.6	A
WB	Left Turn	5	3	66.2%	3.0	2.5	A
	Through	480	488	101.7%	1.5	0.4	A
	Right Turn	60	65	107.9%	0.6	0.2	A
	Subtotal	545	556	102.1%	1.4	0.4	A
Total		1,045	1,011	96.7%	3.4	0.6	A

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	23	115.9%	2.9	1.0	A
	Through	80	88	109.9%	0.6	0.2	A
	Right Turn						
	Subtotal	100	111	111.1%	1.0	0.2	A
SB	Left Turn						
	Through	90	92	102.2%	0.4	0.2	A
	Right Turn	40	33	83.7%	0.1	0.2	A
	Subtotal	130	125	96.5%	0.3	0.2	A
EB	Left Turn	30	23	76.1%	6.0	1.2	A
	Through						
	Right Turn	20	15	77.3%	3.9	1.0	A
	Subtotal	50	38	76.5%	5.2	1.1	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		280	275	98.2%	1.3	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
AM Peak Hour

Intersection 28

Wallace Dr/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	7	73.6%	5.2	3.2	A
	Through						
	Right Turn	10	12	121.4%	2.6	0.4	A
	Subtotal	20	20	97.5%	3.5	0.9	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	130	110	84.6%	1.0	0.3	A
	Right Turn	10	8	81.0%	0.8	0.3	A
	Subtotal	140	118	84.4%	1.0	0.3	A
WB	Left Turn	10	8	81.0%	2.1	0.8	A
	Through	135	138	102.5%	0.4	0.2	A
	Right Turn						
	Subtotal	145	146	101.0%	0.5	0.2	A
Total		305	284	93.1%	1.0	0.1	A

Intersection 29

























Muir Rd/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	8	84.6%	5.5	1.9	A
	Through						
	Right Turn	30	29	96.9%	3.1	0.8	A
	Subtotal	40	38	93.8%	3.7	0.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	130	106	81.8%	0.5	0.3	A
	Right Turn	10	9	88.3%	0.3	0.2	A
	Subtotal	140	115	82.3%	0.5	0.3	A
WB	Left Turn	20	18	90.2%	2.5	0.7	A
	Through	135	139	102.8%	0.3	0.1	A
	Right Turn						
	Subtotal	155	157	101.1%	0.5	0.1	A
Total		335	309	92.4%	0.9	0.2	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative No Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	750	270	120	420	250	180	570	140	180	350	10
Future Volume (veh/h)	160	750	270	120	420	250	180	570	140	180	350	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1851	1900
Adj Flow Rate, veh/h	174	815	293	130	457	272	196	620	152	196	380	11
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	218	1352	603	223	1147	629	360	793	194	295	556	16
Arrive On Green	0.12	0.38	0.38	0.06	0.32	0.31	0.20	0.28	0.27	0.09	0.16	0.15
Sat Flow, veh/h	1774	3539	1578	3442	3539	1576	1774	2819	690	3408	3491	101
Grp Volume(v), veh/h	174	815	293	130	457	272	196	389	383	196	191	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1578	1721	1770	1576	1774	1770	1739	1704	1758	1833
Q Serve(g_s), s	8.2	16.0	5.6	3.2	8.7	10.8	8.6	17.5	17.6	4.8	8.9	8.9
Cycle Q Clear(g_c), s	8.2	16.0	5.6	3.2	8.7	10.8	8.6	17.5	17.6	4.8	8.9	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.06
Lane Grp Cap(c), veh/h	218	1352	603	223	1147	629	360	498	489	295	280	292
V/C Ratio(X)	0.80	0.60	0.49	0.58	0.40	0.43	0.54	0.78	0.78	0.66	0.68	0.69
Avail Cap(c_a), veh/h	246	1597	712	757	1884	958	360	696	684	671	712	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	21.4	4.2	39.3	22.7	18.9	30.8	28.6	28.8	38.2	34.3	34.3
Incr Delay (d2), s/veh	13.1	0.5	0.6	0.9	0.2	0.5	1.0	3.8	4.0	1.0	1.1	1.1
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	4.8	7.9	4.3	1.5	4.3	4.8	4.3	9.1	9.0	2.3	4.4	4.6
LnGrp Delay(d),s/veh	50.0	21.9	4.8	40.2	22.9	19.3	31.8	32.4	32.8	39.2	35.4	35.4
LnGrp LOS	D	C	A	D	C	B	C	C	C	D	D	D
Approach Vol, veh/h		1282			859			968			587	
Approach Delay, s/veh		21.8			24.4			32.4			36.7	
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	11.5	28.3	9.6	37.0	22.0	17.8	14.6	32.0				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	5.0	* 5	4.5	5.5				
Max Green Setting (Gmax), s	16.5	33.0	18.5	37.5	15.5	* 34	11.5	44.5				
Max Q Clear Time (g_c+I1), s	6.8	19.6	5.2	18.0	10.6	10.9	10.2	12.8				
Green Ext Time (p_c), s	0.2	3.5	0.2	10.7	2.1	1.4	0.0	13.7				
Intersection Summary												
HCM 2010 Ctrl Delay			27.5									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative No Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	950	190	180	590	190	240	460	150	160	310	210
Future Volume (veh/h)	170	950	190	180	590	190	240	460	150	160	310	210
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1836	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	1033	207	196	641	207	261	500	163	174	337	228
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	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, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	163	1176	235	193	1081	349	223	634	205	205	473	313
Arrive On Green	0.09	0.40	0.39	0.11	0.42	0.40	0.13	0.24	0.23	0.12	0.23	0.22
Sat Flow, veh/h	1774	2937	587	1774	2593	837	1774	2622	850	1774	2039	1352
Grp Volume(v), veh/h	185	621	619	196	431	417	261	336	327	174	292	273
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1774	1744	1686	1774	1770	1702	1774	1770	1622
Q Serve(g_s), s	11.0	38.8	39.1	13.0	22.9	23.1	15.0	21.3	21.6	11.5	18.1	18.7
Cycle Q Clear(g_c), s	11.0	38.8	39.1	13.0	22.9	23.1	15.0	21.3	21.6	11.5	18.1	18.7
Prop In Lane	1.00		0.33	1.00		0.50	1.00		0.50	1.00		0.83
Lane Grp Cap(c), veh/h	163	708	702	193	727	703	223	428	412	205	410	376
V/C Ratio(X)	1.13	0.88	0.88	1.02	0.59	0.59	1.17	0.79	0.79	0.85	0.71	0.73
Avail Cap(c_a), veh/h	163	710	704	193	729	705	223	428	412	371	562	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	33.1	33.5	53.3	27.0	27.3	52.3	42.4	42.9	51.9	42.3	43.1
Incr Delay (d2), s/veh	110.9	13.7	14.2	69.1	2.9	3.0	115.0	9.4	10.2	9.5	2.6	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	21.7	21.7	10.0	11.6	11.3	14.4	11.5	11.3	6.2	9.1	8.7
LnGrp Delay(d),s/veh	165.2	46.9	47.7	122.6	29.9	30.4	167.3	51.8	53.1	61.3	44.8	46.3
LnGrp LOS	F	D	D	F	C	C	F	D	D	E	D	D
Approach Vol, veh/h		1425			1044			924			739	
Approach Delay, s/veh		62.6			47.5			84.9			49.3	
Approach LOS		E			D			F			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	7.8	32.9	17.0	51.9	19.0	31.7	15.0	53.9				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	25.0	26.5	13.0	46.5	15.0	36.5	11.0	48.5				
Max Q Clear Time (g_c+1), s	13.5	23.6	15.0	41.1	17.0	20.7	13.0	25.1				
Green Ext Time (p_c), s	0.3	1.9	0.0	5.3	0.0	5.5	0.0	22.0				
Intersection Summary												
HCM 2010 Ctrl Delay				61.4								
HCM 2010 LOS				E								

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	70	570	100	100	600
Future Vol, veh/h	40	70	570	100	100	600
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	43	76	620	109	109	652
























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1218	365	0	0	729	0
Stage 1	675	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.84	7	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.35	-	-	2.22	-
Pot Cap-1 Maneuver	173	623	-	-	871	-
Stage 1	467	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	151	622	-	-	871	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	16.4		0		1.4
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 435	871	-
HCM Lane V/C Ratio	-	- 0.275	0.125	-
HCM Control Delay (s)	-	- 16.4	9.7	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 1.1	0.4	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Cumulative No Project
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	140	670	50	80	310	410	5	40	230	170	490	180
Future Volume (veh/h)	140	670	50	80	310	410	5	40	230	170	490	180
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		1.00		1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1863		1863	1863	1863	1863	1845
Adj Flow Rate, veh/h	152	728	54	87	337	446		43	250	185	533	196
Adj No. of Lanes	1	2	1	1	2	1		1	2	1	1	2
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
Percent Heavy Veh, %	2	2	3	3	3	2		2	2	2	2	3
Cap, veh/h	162	1076	436	109	962	434		65	642	282	566	1626
Arrive On Green	0.09	0.30	0.30	0.06	0.27	0.27		0.04	0.18	0.18	0.32	0.46
Sat Flow, veh/h	1774	3539	1433	1757	3505	1582		1774	3539	1552	1774	3505
Grp Volume(v), veh/h	152	728	54	87	337	446		43	250	185	533	196
Grp Sat Flow(s),veh/h/ln	1774	1770	1433	1757	1752	1582		1774	1770	1552	1774	1752
Q Serve(g_s), s	10.2	21.7	3.3	5.9	9.3	33.0		2.9	7.5	13.3	35.1	3.8
Cycle Q Clear(g_c), s	10.2	21.7	3.3	5.9	9.3	33.0		2.9	7.5	13.3	35.1	3.8
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	162	1076	436	109	962	434		65	642	282	566	1626
V/C Ratio(X)	0.94	0.68	0.12	0.80	0.35	1.03		0.66	0.39	0.66	0.94	0.12
Avail Cap(c_a), veh/h	162	1076	436	161	962	434		310	972	426	620	1626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	36.6	30.2	55.6	35.0	43.6		57.1	43.3	45.7	39.8	18.3
Incr Delay (d2), s/veh	51.7	1.6	0.1	12.9	0.2	50.2		8.2	0.3	1.9	21.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	10.9	1.3	3.2	4.5	20.4		1.6	3.7	5.9	20.6	1.9
LnGrp Delay(d),s/veh	106.0	38.2	30.3	68.5	35.1	93.8		65.3	43.6	47.6	61.3	18.3
LnGrp LOS	F	D	C	E	D	F		E	D	D	E	B
Approach Vol, veh/h		934			870				478			827
Approach Delay, s/veh		48.8			68.6				47.1			46.1
Approach LOS		D			E				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	42.4	25.8	11.5	40.5	8.4	59.8	15.0	37.0				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	41.4	32.4	11.0	32.4	20.4	53.4	10.4	32.4				
Max Q Clear Time (g_c+I1), s	37.1	15.3	7.9	23.7	4.9	6.4	12.2	35.0				
Green Ext Time (p_c), s	0.6	1.8	0.0	4.9	0.0	3.4	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			53.3									
HCM 2010 LOS			D									
Notes												

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	90
Future Volume (veh/h)	90
Number	16
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.99
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1827
Adj Flow Rate, veh/h	98
Adj No. of Lanes	1
Peak Hour Factor	0.92
Percent Heavy Veh, %	4
Cap, veh/h	709
Arrive On Green	0.46
Sat Flow, veh/h	1544
Grp Volume(v), veh/h	98
Grp Sat Flow(s),veh/h/ln	1544
Q Serve(g_s), s	4.4
Cycle Q Clear(g_c), s	4.4
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	709
V/C Ratio(X)	0.14
Avail Cap(c_a), veh/h	709
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	18.8
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.9
LnGrp Delay(d),s/veh	18.8
LnGrp LOS	B
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Intersection

Intersection Delay, s/veh 51.1

Intersection LOS F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕			↕	↕			↕	↕	
Traffic Vol, veh/h	0	30	490	50	0	30	340	70	0	30	50	40	0	110	60	30
Future Vol, veh/h	0	30	490	50	0	30	340	70	0	30	50	40	0	110	60	30
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	33	533	54	0	33	370	76	0	33	54	43	0	120	65	33
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	84.7	34.7	13.2	14.1
HCM LOS	F	D	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	5%	7%	100%	0%
Vol Thru, %	0%	56%	86%	77%	0%	67%
Vol Right, %	0%	44%	9%	16%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	90	570	440	110	90
LT Vol	30	0	30	30	110	0
Through Vol	0	50	490	340	0	60
RT Vol	0	40	50	70	0	30
Lane Flow Rate	33	98	620	478	120	98
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.08	0.219	1.078	0.838	0.284	0.213
Departure Headway (Hd)	9.186	8.34	6.264	6.531	8.821	8.093
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	392	433	582	560	410	446
Service Time	6.886	6.04	4.264	4.531	6.521	5.793
HCM Lane V/C Ratio	0.084	0.226	1.065	0.854	0.293	0.22
HCM Control Delay	12.7	13.4	84.7	34.7	15	13
HCM Lane LOS	B	B	F	D	B	B
HCM 95th-tile Q	0.3	0.8	18.3	8.7	1.2	0.8

Intersection

Int Delay, s/veh 2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	20	90	10	30	100
Future Vol, veh/h	10	20	90	10	30	100
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, %	2	9	2	60	60	2
Mvmt Flow	11	22	98	11	33	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	277	103	0	0	109	0
Stage 1	103	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.42	6.29	-	-	4.7	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	-	-	2.74	-
Pot Cap-1 Maneuver	713	933	-	-	1188	-
Stage 1	921	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	692	933	-	-	1188	-
Mov Cap-2 Maneuver	692	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	830	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.5		0		1.9
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	836	1188
HCM Lane V/C Ratio	-	-	0.039	0.027
HCM Control Delay (s)	-	-	9.5	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection													
Int Delay, s/veh	2.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕			↕				↕	
Traffic Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10	
Future Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None	
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2	
Mvmt Flow	11	11	11	0	11	11	11	98	0	11	109	11	
Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	266	256	114	267	261	98	120	0	0	98	0	0	
Stage 1	136	136	-	120	120	-	-	-	-	-	-	-	
Stage 2	130	120	-	147	141	-	-	-	-	-	-	-	
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-	
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	687	648	939	686	635	958	1468	-	-	1495	-	-	
Stage 1	867	784	-	884	787	-	-	-	-	-	-	-	
Stage 2	874	796	-	856	771	-	-	-	-	-	-	-	
Platoon blocked, %													
Mov Cap-1 Maneuver	662	638	939	661	625	958	1468	-	-	1495	-	-	
Mov Cap-2 Maneuver	662	638	-	661	625	-	-	-	-	-	-	-	
Stage 1	860	778	-	877	781	-	-	-	-	-	-	-	
Stage 2	845	790	-	828	765	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	10.2			9.9			0.7			0.6			
HCM LOS	B			A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1468	-	-	724	756	1495	-	-					
HCM Lane V/C Ratio	0.007	-	-	0.045	0.029	0.007	-	-					
HCM Control Delay (s)	7.5	0	-	10.2	9.9	7.4	0	-					
HCM Lane LOS	A	A	-	B	A	A	A	-					
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-					

Intersection	
Intersection Delay, s/veh	77.8
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↙	↕				↕	↘		↙	↕	↘
Traffic Vol, veh/h	0	70	840	50	0	30	260	50	0	110	140	90
Future Vol, veh/h	0	70	840	50	0	30	260	50	0	110	140	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	76	913	54	0	33	283	54	0	120	152	98
Number of Lanes	0	1	2	0	0	0	2	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	133.2	18.6	17.1
HCM LOS	F	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	26%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	85%	74%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	15%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	140	90	70	560	330	117	173	50	60	90
LT Vol	110	0	0	70	0	0	30	0	0	60	0
Through Vol	0	140	0	0	560	280	87	173	0	0	90
RT Vol	0	0	90	0	0	50	0	0	50	0	0
Lane Flow Rate	120	152	98	76	609	359	127	188	54	65	98
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.323	0.391	0.233	0.182	1.375	0.796	0.329	0.486	0.129	0.185	0.264
Departure Headway (Hd)	10.161	9.661	8.961	8.599	8.133	7.993	9.71	9.667	8.882	10.652	10.152
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	356	374	403	417	450	452	373	375	406	339	356
Service Time	7.861	7.361	6.661	6.365	5.899	5.758	7.41	7.367	6.582	8.352	7.852
HCM Lane V/C Ratio	0.337	0.406	0.243	0.182	1.353	0.794	0.34	0.501	0.133	0.192	0.275
HCM Control Delay	17.6	18.4	14.4	13.3	205.7	35.5	17.1	21.2	12.9	15.8	16.5
HCM Lane LOS	C	C	B	B	F	E	C	C	B	C	C
HCM 95th-tile Q	1.4	1.8	0.9	0.7	28.5	7.2	1.4	2.6	0.4	0.7	1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	60	90	50
Future Vol, veh/h	0	60	90	50
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	65	98	54
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	15.6
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Cumulative No Project
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	690	320	130	890	600	250		
Future Volume (veh/h)	690	320	130	890	600	250		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	750	348	141	967	652	272		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	969	450	207	2035	1347	600		
Arrive On Green	0.28	0.28	0.12	0.57	0.38	0.38		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1562		
Grp Volume(v), veh/h	750	348	141	967	652	272		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1562		
Q Serve(g_s), s	11.5	11.5	4.5	9.1	8.0	7.4		
Cycle Q Clear(g_c), s	11.5	11.5	4.5	9.1	8.0	7.4		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	969	450	207	2035	1347	600		
V/C Ratio(X)	0.77	0.77	0.68	0.48	0.48	0.45		
Avail Cap(c_a), veh/h	1679	780	758	3984	2158	961		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.7	18.7	24.0	7.1	13.2	13.1		
Incr Delay (d2), s/veh	0.5	1.1	1.5	0.1	0.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.4	9.5	2.2	4.3	3.8	3.2		
LnGrp Delay(d),s/veh	19.2	19.7	25.4	7.1	13.3	13.3		
LnGrp LOS	B	B	C	A	B	B		
Approach Vol, veh/h	1098			1108	924			
Approach Delay, s/veh	19.4			9.5	13.3			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		36.7		20.2	10.8	25.8		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		62.0		27.4	24.4	33.0		
Max Q Clear Time (g_c+I1), s		11.1		13.5	6.5	10.0		
Green Ext Time (p_c), s		11.6		2.1	0.1	9.5		
Intersection Summary								
HCM 2010 Ctrl Delay			14.1					
HCM 2010 LOS			B					

Intersection																
Intersection Delay, s/veh 49.3																
Intersection LOS E																

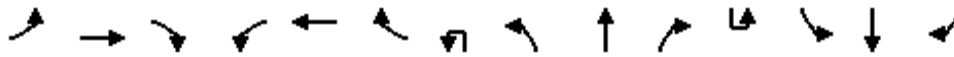
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↖	↗			↖	↗	↖			↕				↕	
Traffic Vol, veh/h	0	40	320	40	0	50	430	50	0	60	110	60	0	60	110	50
Future Vol, veh/h	0	40	320	40	0	50	430	50	0	60	110	60	0	60	110	50
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	43	344	43	0	54	462	54	0	65	118	65	0	65	118	54
Number of Lanes	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	54	67.2	24.4	23.6
HCM LOS	F	F	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	26%	100%	0%	100%	0%	0%	27%
Vol Thru, %	48%	0%	89%	0%	100%	0%	50%
Vol Right, %	26%	0%	11%	0%	0%	100%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	40	360	50	430	50	220
LT Vol	60	40	0	50	0	0	60
Through Vol	110	0	320	0	430	0	110
RT Vol	60	0	40	0	0	50	50
Lane Flow Rate	247	43	387	54	462	54	237
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.602	0.111	0.929	0.128	1.034	0.109	0.581
Departure Headway (Hd)	8.978	9.489	8.848	8.587	8.051	7.325	9.054
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	406	380	414	420	453	492	402
Service Time	6.678	7.189	6.548	6.287	5.751	5.025	6.754
HCM Lane V/C Ratio	0.608	0.113	0.935	0.129	1.02	0.11	0.59
HCM Control Delay	24.4	13.4	58.5	12.5	80.1	10.9	23.6
HCM Lane LOS	C	B	F	B	F	B	C
HCM 95th-tile Q	3.8	0.4	10.2	0.4	14.2	0.4	3.6

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative No Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	300	50	200	40	90	80	5	210	420	20	5	30	320	210
Future Volume (veh/h)	300	50	200	40	90	80	5	210	420	20	5	30	320	210
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1847	1831	1900
Adj Flow Rate, veh/h	326	54	217	43	98	87		228	457	22		33	348	228
Adj No. of Lanes	1	1	1	1	1	1		1	2	0		1	2	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, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	376	563	478	65	238	202		279	1413	68		52	570	365
Arrive On Green	0.21	0.30	0.30	0.04	0.13	0.13		0.16	0.41	0.38		0.03	0.28	0.26
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583		1774	3434	165		1759	2009	1288
Grp Volume(v), veh/h	326	54	217	43	98	87		228	235	244		33	300	276
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583		1774	1770	1829		1759	1739	1558
Q Serve(g_s), s	12.9	1.5	8.1	1.8	3.5	3.7		9.0	6.6	6.6		1.4	10.9	11.4
Cycle Q Clear(g_c), s	12.9	1.5	8.1	1.8	3.5	3.7		9.0	6.6	6.6		1.4	10.9	11.4
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.09		1.00		0.83
Lane Grp Cap(c), veh/h	376	563	478	65	238	202		279	728	753		52	493	442
V/C Ratio(X)	0.87	0.10	0.45	0.66	0.41	0.43		0.82	0.32	0.32		0.64	0.61	0.62
Avail Cap(c_a), veh/h	390	1177	1000	169	947	805		292	1070	1106		169	932	835
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	1.00	1.00
Uniform Delay (d), s/veh	27.7	18.2	20.5	34.6	29.2	29.3		29.7	14.5	14.6		35.0	22.6	23.5
Incr Delay (d2), s/veh	17.1	0.0	0.3	4.3	0.4	0.5		14.6	0.1	0.1		4.8	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.8	3.5	0.9	1.9	1.6		5.6	3.2	3.4		0.7	5.2	5.0
LnGrp Delay(d),s/veh	44.8	18.3	20.8	38.9	29.7	29.9		44.3	14.6	14.7		39.8	23.0	24.0
LnGrp LOS	D	B	C	D	C	C		D	B	B		D	C	C
Approach Vol, veh/h		597			228				707				609	
Approach Delay, s/veh		33.7			31.5				24.2				24.4	
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	6.1	34.0	6.7	26.0	15.4	24.6	19.4	13.3						
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0						
Max Green Setting (Gmax), s	6.5	42.0	6.5	44.0	11.5	37.0	15.5	35.0						
Max Q Clear Time (g_c+13), s	13.4	8.6	3.8	10.1	11.0	13.4	14.9	5.7						
Green Ext Time (p_c), s	0.0	4.8	0.0	1.1	0.0	4.6	0.0	1.1						
Intersection Summary														
HCM 2010 Ctrl Delay				27.7										
HCM 2010 LOS				C										
Notes														

Intersection																
Intersection Delay, s/veh 11.3																
Intersection LOS B																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	30	120	10	0	20	120	150	0	10	40	20	0	110	90	20
Future Vol, veh/h	0	30	120	10	0	20	120	150	0	10	40	20	0	110	90	20
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	33	130	11	0	22	130	163	0	11	43	22	0	120	98	22
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	12.2	9.3	11.5
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	19%	7%	50%
Vol Thru, %	57%	75%	41%	41%
Vol Right, %	29%	6%	52%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	160	290	220
LT Vol	10	30	20	110
Through Vol	40	120	120	90
RT Vol	20	10	150	20
Lane Flow Rate	76	174	315	239
Geometry Grp	1	1	1	1
Degree of Util (X)	0.116	0.256	0.449	0.359
Departure Headway (Hd)	5.5	5.306	5.123	5.412
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	651	677	706	665
Service Time	3.541	3.339	3.123	3.445
HCM Lane V/C Ratio	0.117	0.257	0.446	0.359
HCM Control Delay	9.3	10.2	12.2	11.5
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	1	2.3	1.6

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Cumulative No Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	0	10	0	0	10	10	100	0	0	170	440
Future Volume (veh/h)	270	0	10	0	0	10	10	100	0	0	170	440
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	1863	1863	1863	1900	1863	1900	1863	1827	0	1863	1792	1863
Adj Flow Rate, veh/h	293	0	11	0	0	11	11	109	0	0	185	478
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	4	0	2	6	2
Cap, veh/h	618	0	276	0	0	73	19	938	0	4	742	656
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.02	0.01	0.51	0.00	0.00	0.41	0.41
Sat Flow, veh/h	3548	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Grp Volume(v), veh/h	293	0	11	0	0	11	11	109	0	0	185	478
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Q Serve(g_s), s	3.4	0.0	0.3	0.0	0.0	0.3	0.3	1.4	0.0	0.0	3.0	11.4
Cycle Q Clear(g_c), s	3.4	0.0	0.3	0.0	0.0	0.3	0.3	1.4	0.0	0.0	3.0	11.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	618	0	276	0	0	73	19	938	0	4	742	656
V/C Ratio(X)	0.47	0.00	0.04	0.00	0.00	0.15	0.58	0.12	0.00	0.00	0.25	0.73
Avail Cap(c_a), veh/h	1811	0	808	0	0	1052	315	1338	0	315	1312	1159
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	0.0	15.5	0.0	0.0	21.1	22.2	5.7	0.0	0.0	8.6	11.1
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.0	0.0	1.1	24.4	0.1	0.0	0.0	0.2	1.9
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	1.7	0.0	0.1	0.0	0.0	0.2	0.3	0.7	0.0	0.0	1.5	5.3
LnGrp Delay(d),s/veh	17.4	0.0	15.6	0.0	0.0	22.3	46.6	5.7	0.0	0.0	8.8	13.0
LnGrp LOS	B		B			C	D	A			A	B
Approach Vol, veh/h		304			11			120			663	
Approach Delay, s/veh		17.4			22.3			9.5			11.8	
Approach LOS		B			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	27.1		11.8	4.5	22.7		6.1				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	32.0		22.0	7.9	32.0		29.0				
Max Q Clear Time (g_c+10), s	3	3.4		5.4	2.3	13.4		2.3				
Green Ext Time (p_c), s	0.0	4.8		1.2	0.0	4.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.2									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Cumulative No Project
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations														
Traffic Volume (veh/h)	120	10	90	100	10	160	40	380	50	5	90	420	60	
Future Volume (veh/h)	120	10	90	100	10	160	40	380	50	5	90	420	60	
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		0.97		1.00		0.96	
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	1863	1863	1900	1863	1863	1863	1863	1863	1900		1846	1863	1900	
Adj Flow Rate, veh/h	130	11	98	109	11	174	43	413	54		98	457	65	
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	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, %	2	2	2	2	2	2	2	2	2		3	2	2	
Cap, veh/h	185	34	299	157	359	304	68	1005	131		141	1122	159	
Arrive On Green	0.10	0.21	0.20	0.09	0.19	0.19	0.04	0.32	0.28		0.08	0.36	0.32	
Sat Flow, veh/h	1774	162	1439	1774	1863	1578	1774	3140	408		1758	3098	438	
Grp Volume(v), veh/h	130	0	109	109	11	174	43	232	235		98	260	262	
Grp Sat Flow(s),veh/h/ln	1774	0	1601	1774	1863	1578	1774	1770	1778		1758	1770	1766	
Q Serve(g_s), s	3.7	0.0	3.1	3.2	0.3	5.3	1.3	5.4	5.5		2.9	5.8	5.9	
Cycle Q Clear(g_c), s	3.7	0.0	3.1	3.2	0.3	5.3	1.3	5.4	5.5		2.9	5.8	5.9	
Prop In Lane	1.00		0.90	1.00		1.00	1.00		0.23		1.00		0.25	
Lane Grp Cap(c), veh/h	185	0	333	157	359	304	68	567	569		141	641	639	
V/C Ratio(X)	0.70	0.00	0.33	0.69	0.03	0.57	0.63	0.41	0.41		0.69	0.41	0.41	
Avail Cap(c_a), veh/h	369	0	1243	336	1375	1165	269	1172	1178		266	1172	1170	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Uniform Delay (d), s/veh	22.9	0.0	18.0	23.4	17.3	19.4	25.0	14.0	14.3		23.7	12.6	12.8	
Incr Delay (d2), s/veh	4.8	0.0	0.6	5.4	0.0	1.7	9.2	0.5	0.5		6.0	0.4	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	2.1	0.0	1.4	1.8	0.1	2.4	0.8	2.7	2.8		1.6	2.9	2.9	
LnGrp Delay(d),s/veh	27.7	0.0	18.6	28.8	17.4	21.1	34.2	14.5	14.7		29.6	13.0	13.3	
LnGrp LOS	C		B	C	B	C	C	B	B		C	B	B	
Approach Vol, veh/h		239			294			510				620		
Approach Delay, s/veh		23.5			23.8			16.3				15.7		
Approach LOS		C			C			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	8.2	20.9	8.7	15.0	6.0	23.1	9.5	14.2						
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5						
Max Green Setting (Gmax), s	7.5	33.0	9.5	40.5	7.5	33.0	10.5	38.5						
Max Q Clear Time (g_c+14), s	14.5	7.5	5.2	5.1	3.3	7.9	5.7	7.3						
Green Ext Time (p_c), s	0.0	5.8	0.1	1.4	0.0	5.8	0.1	1.4						
Intersection Summary														
HCM 2010 Ctrl Delay			18.4											
HCM 2010 LOS			B											
Notes														

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	700	427	61.0%	75.9	14.4	E
	Through	1,000	657	65.7%	43.7	5.9	D
	Right Turn	380	261	68.6%	20.7	3.6	C
	Subtotal	2,080	1,345	64.7%	49.4	7.1	D
SB	Left Turn	440	363	82.6%	112.5	21.4	F
	Through	925	825	89.2%	102.0	14.0	F
	Right Turn	100	85	84.7%	49.1	17.2	D
	Subtotal	1,465	1,273	86.9%	101.6	15.3	F
EB	Left Turn	230	163	70.7%	167.3	32.0	F
	Through	1,090	691	63.4%	189.7	37.1	F
	Right Turn	365	239	65.5%	172.9	41.7	F
	Subtotal	1,685	1,093	64.8%	182.5	36.9	F
WB	Left Turn	690	589	85.3%	104.0	26.3	F
	Through	1,080	1,030	95.4%	51.9	10.9	D
	Right Turn	700	651	93.0%	52.2	18.9	D
	Subtotal	2,470	2,270	91.9%	65.7	11.8	E
Total		7,700	5,981	77.7%	90.7	5.6	F

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	600	338	56.3%	41.5	5.8	D
	Through	1,465	852	58.1%	33.8	5.0	C
	Right Turn	50	25	50.9%	16.1	4.6	B
	Subtotal	2,115	1,215	57.4%	35.6	5.1	D
SB	Left Turn	515	260	50.5%	209.9	40.4	F
	Through	1,385	957	69.1%	86.1	24.2	F
	Right Turn	80	66	82.7%	52.2	26.8	D
	Subtotal	1,980	1,284	64.8%	109.8	26.2	F
EB	Left Turn	120	125	104.2%	45.1	9.5	D
	Through	180	175	97.1%	38.2	5.4	D
	Right Turn	105	96	91.2%	12.5	3.2	B
	Subtotal	405	396	97.7%	34.1	3.3	C
WB	Left Turn	280	220	78.6%	131.2	40.6	F
	Through	150	163	108.7%	32.7	2.5	C
	Right Turn	470	444	94.4%	49.1	17.3	D
	Subtotal	900	827	91.9%	67.9	12.4	E
Total		5,400	3,721	68.9%	68.0	8.4	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	170	91	53.4%	53.1	7.0	D
	Through	1,550	867	55.9%	37.9	5.2	D
	Right Turn	210	117	55.9%	15.8	3.4	B
	Subtotal	1,930	1,075	55.7%	36.8	4.4	D
SB	Left Turn	160	96	60.1%	62.4	17.2	E
	Through	1,130	841	74.5%	35.9	2.3	D
	Right Turn	480	359	74.7%	18.9	2.5	B
	Subtotal	1,770	1,296	73.2%	33.2	2.8	C
EB	Left Turn	100	93	93.5%	98.9	12.3	F
	Through	790	756	95.7%	52.0	13.3	D
	Right Turn	185	167	90.4%	51.3	17.6	D
	Subtotal	1,075	1,017	94.6%	56.2	13.4	E
WB	Left Turn	245	158	64.5%	191.4	81.2	F
	Through	770	499	64.7%	161.0	63.2	F
	Right Turn	465	318	68.4%	151.3	52.7	F
	Subtotal	1,480	975	65.9%	163.3	62.8	F
Total		6,255	4,363	69.8%	67.3	12.4	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	250	158	63.2%	80.6	12.7	F
	Through	1,430	868	60.7%	84.7	18.5	F
	Right Turn	230	163	70.7%	53.7	15.2	D
	Subtotal	1,910	1,189	62.2%	80.0	16.6	E
SB	Left Turn	110	73	66.0%	52.7	4.5	D
	Through	980	693	70.7%	43.9	4.8	D
	Right Turn	470	365	77.7%	28.2	4.0	C
	Subtotal	1,560	1,131	72.5%	39.4	3.6	D
EB	Left Turn	245	228	93.1%	67.9	5.8	E
	Through	930	941	101.1%	36.9	2.5	D
	Right Turn	210	203	96.4%	29.4	4.3	C
	Subtotal	1,385	1,371	99.0%	41.0	1.8	D
WB	Left Turn	360	215	59.9%	176.3	46.2	F
	Through	960	554	57.7%	171.4	39.9	F
	Right Turn	270	174	64.6%	399.5	28.8	F
	Subtotal	1,590	943	59.3%	172.8	41.0	F
Total		6,445	4,459	69.2%	72.9	5.8	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	45	41	92.0%	20.1	10.2	C
	Through	1,790	1,359	75.9%	6.0	0.7	A
	Right Turn	30	23	77.3%	7.4	3.5	A
	Subtotal	1,865	1,424	76.3%	6.4	0.8	A
SB	Left Turn	75	59	78.0%	21.3	5.6	C
	Through	1,440	1,013	70.4%	7.1	0.2	A
	Right Turn	35	31	89.0%	6.0	1.5	A
	Subtotal	1,550	1,103	71.2%	7.8	0.4	A
EB	Left Turn	10	8	83.6%	71.5	37.4	F
	Through	10	9	87.4%	76.7	35.4	F
	Right Turn	30	32	105.1%	16.9	5.5	C
	Subtotal	50	49	97.3%	38.8	16.5	E
WB	Left Turn	10	7	68.4%	51.1	38.6	F
	Through	10	11	114.0%	118.3	80.7	F
	Right Turn	105	92	87.2%	74.3	59.0	F
	Subtotal	125	110	87.9%	78.9	60.2	F
Total		3,590	2,685	74.8%	10.3	2.1	B

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	35	86.5%	50.8	15.0	D
	Through	1,615	1,178	73.0%	42.2	13.2	D
	Right Turn	60	47	77.9%	18.3	9.1	B
	Subtotal	1,715	1,260	73.5%	41.5	13.1	D
SB	Left Turn	90	65	72.2%	46.3	9.1	D
	Through	1,340	925	69.0%	27.7	5.7	C
	Right Turn	55	45	82.2%	12.2	1.6	B
	Subtotal	1,485	1,035	69.7%	28.2	5.1	C
EB	Left Turn	50	51	101.1%	31.8	5.0	C
	Through	80	70	87.4%	29.1	2.9	C
	Right Turn	30	35	116.5%	11.2	4.6	B
	Subtotal	160	155	97.1%	25.9	2.8	C
WB	Left Turn	65	56	85.9%	30.5	13.3	C
	Through	90	86	95.4%	27.3	5.9	C
	Right Turn	200	197	98.4%	18.5	5.3	B
	Subtotal	355	339	95.4%	22.6	5.9	C
Total		3,715	2,788	75.1%	33.3	7.2	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	300	251	83.7%	73.2	9.3	E
	Through	1,250	987	78.9%	67.3	10.5	E
	Right Turn	240	197	82.2%	32.8	2.4	C
	Subtotal	1,790	1,435	80.2%	63.7	7.3	E
SB	Left Turn	275	173	63.0%	49.3	13.7	D
	Through	970	651	67.1%	34.6	6.9	C
	Right Turn	190	142	74.6%	16.4	3.2	B
	Subtotal	1,435	966	67.3%	34.5	6.5	C
EB	Left Turn	160	130	81.2%	64.3	16.7	E
	Through	690	639	92.6%	49.9	16.7	D
	Right Turn	295	264	89.7%	32.3	18.9	C
	Subtotal	1,145	1,034	90.3%	47.3	17.0	D
WB	Left Turn	130	116	88.9%	69.0	13.6	E
	Through	780	721	92.5%	55.9	12.5	E
	Right Turn	305	285	93.4%	27.9	10.7	C
	Subtotal	1,215	1,122	92.3%	50.3	12.2	D
Total		5,585	4,557	81.6%	50.5	6.4	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	60	50	83.0%	19.2	7.3	C
	Through	1,680	1,479	88.1%	12.5	0.8	B
	Right Turn	20	21	104.5%	12.0	1.4	B
	Subtotal	1,760	1,550	88.1%	12.6	0.9	B
SB	Left Turn	55	39	71.2%	24.2	6.9	C
	Through	1,200	865	72.1%	8.3	0.8	A
	Right Turn	140	107	76.3%	8.4	1.5	A
	Subtotal	1,395	1,011	72.5%	8.9	0.8	A
EB	Left Turn	60	48	80.4%	167.3	74.4	F
	Through	10	10	95.0%	105.8	75.7	F
	Right Turn	20	11	57.0%	91.0	69.2	F
	Subtotal	90	69	76.8%	148.4	76.5	F
WB	Left Turn	10	8	76.0%	100.6	87.6	F
	Through	20	19	93.1%	114.7	39.2	F
	Right Turn	50	46	92.0%	38.1	26.8	E
	Subtotal	80	72	90.3%	69.5	43.3	F
Total		3,325	2,702	81.3%	16.1	2.5	C

SimTraffic Post-Processor
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Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	330	291	88.1%	69.7	11.0	E
	Through	1,470	1,264	86.0%	68.0	7.3	E
	Right Turn	180	153	85.1%	46.5	10.1	D
	Subtotal	1,980	1,708	86.3%	66.4	7.4	E
SB	Left Turn	200	133	66.5%	57.7	8.1	E
	Through	935	624	66.8%	40.9	4.7	D
	Right Turn	95	71	74.8%	20.3	3.6	C
	Subtotal	1,230	828	67.3%	42.0	3.8	D
EB	Left Turn	70	72	102.6%	63.1	9.9	E
	Through	240	245	102.0%	37.4	2.8	D
	Right Turn	195	195	100.2%	12.9	2.8	B
	Subtotal	505	512	101.4%	31.7	3.1	C
WB	Left Turn	90	78	86.1%	46.7	6.8	D
	Through	210	228	108.4%	30.2	3.9	C
	Right Turn	220	221	100.4%	20.5	3.3	C
	Subtotal	520	526	101.1%	28.5	3.6	C
Total		4,235	3,574	84.4%	50.2	4.0	D

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	13	125.4%	8.8	6.9	A
	Through	1,920	1,874	97.6%	4.0	0.4	A
	Right Turn	40	40	98.8%	2.5	0.6	A
	Subtotal	1,970	1,926	97.8%	4.0	0.4	A
SB	Left Turn	40	27	67.5%	45.9	11.6	E
	Through	1,170	844	72.1%	10.1	1.1	B
	Right Turn	10	9	91.2%	10.9	8.1	B
	Subtotal	1,220	880	72.1%	11.2	1.1	B
EB	Left Turn	10	5	45.6%	74.1	87.9	F
	Through	10	8	76.0%	156.2	102.4	F
	Right Turn	10	7	68.4%	54.3	73.0	F
	Subtotal	30	19	63.3%	104.2	55.9	F
WB	Left Turn	10	8	83.6%	217.3	165.6	F
	Through	10	8	76.0%	228.9	246.4	F
	Right Turn	50	43	85.9%	82.5	60.4	F
	Subtotal	70	59	84.1%	99.8	57.7	F
Total		3,290	2,884	87.7%	8.6	1.9	A

SimTraffic Post-Processor
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Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	17	83.6%	24.6	19.5	C
	Through	1,930	1,905	98.7%	5.3	0.7	A
	Right Turn	10	9	87.4%	2.7	1.8	A
	Subtotal	1,960	1,930	98.5%	5.4	0.7	A
SB	Left Turn	20	6	32.3%	17.1	14.5	C
	Through	1,160	842	72.6%	5.0	0.2	A
	Right Turn	10	6	64.6%	1.2	1.0	A
	Subtotal	1,190	855	71.8%	5.1	0.2	A
EB	Left Turn	10	6	60.8%	106.7	83.4	F
	Through	10	6	57.0%	135.5	105.3	F
	Right Turn	10	11	110.2%	8.1	6.8	A
	Subtotal	30	23	76.0%	68.1	29.6	F
WB	Left Turn	10	8	76.0%	123.8	63.3	F
	Through						
	Right Turn	30	32	106.4%	34.4	12.4	D
	Subtotal	40	40	98.8%	52.0	18.5	F
Total		3,220	2,847	88.4%	6.4	0.6	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	98.8%	6.3	3.3	A
	Through	1,940	1,943	100.2%	5.1	0.4	A
	Right Turn	10	11	106.4%	4.4	1.6	A
	Subtotal	1,960	1,963	100.2%	5.1	0.4	A
SB	Left Turn	10	7	68.4%	16.3	18.7	C
	Through	1,160	823	71.0%	1.0	0.1	A
	Right Turn	10	7	72.2%	2.4	2.5	A
	Subtotal	1,180	837	70.9%	1.2	0.3	A
EB	Left Turn	10	10	95.0%	87.7	50.5	F
	Through	10	8	83.6%	131.2	62.8	F
	Right Turn						
	Subtotal	20	18	89.3%	108.4	50.0	F
WB	Left Turn	10	7	72.2%	66.1	30.9	F
	Through	10	8	76.0%	75.0	80.8	F
	Right Turn	10	9	87.4%	40.6	19.4	E
	Subtotal	30	24	78.5%	63.0	25.3	F
Total		3,190	2,842	89.1%	5.1	0.5	A

SimTraffic Post-Processor
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Bogue Stewart Master Plan
Cumulative No Project
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Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	13	125.4%	55.1	10.2	E
	Through	1,890	1,900	100.5%	16.7	2.0	B
	Right Turn	20	19	96.9%	17.0	9.1	B
	Subtotal	1,920	1,932	100.6%	17.0	2.1	B
SB	Left Turn	20	14	72.2%	44.8	10.1	D
	Through	1,120	771	68.8%	13.0	1.6	B
	Right Turn	30	21	68.4%	10.9	1.4	B
	Subtotal	1,170	806	68.9%	13.5	1.6	B
EB	Left Turn	30	26	87.4%	31.8	13.5	C
	Through	20	19	96.9%	36.3	14.6	D
	Right Turn	10	8	76.0%	11.2	6.1	B
	Subtotal	60	53	88.7%	29.5	11.8	C
WB	Left Turn	10	8	76.0%	25.7	20.5	C
	Through	30	28	92.5%	31.1	8.5	C
	Right Turn	40	40	99.8%	22.1	8.8	C
	Subtotal	80	75	94.1%	26.5	7.2	C
Total		3,230	2,866	88.7%	16.4	1.6	B

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	100	87	87.4%	71.7	34.1	F
	Through						
	Right Turn	80	72	89.8%	54.9	32.5	F
	Subtotal	180	159	88.5%	64.1	33.1	F
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	830	704	84.8%	0.8	0.1	A
	Right Turn	110	84	76.0%	1.0	0.3	A
	Subtotal	940	787	83.8%	0.8	0.1	A
WB	Left Turn	70	74	105.3%	12.0	4.2	B
	Through	1,000	1,001	100.1%	4.5	4.3	A
	Right Turn						
	Subtotal	1,070	1,075	100.5%	5.0	4.3	A
Total		2,190	2,022	92.3%	7.8	4.0	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
SB	Left Turn	30	28	92.5%	14.2	8.7	B
	Through						
	Right Turn	40	38	96.0%	6.5	3.9	A
	Subtotal	70	66	94.5%	9.7	5.4	A
EB	Left Turn	60	55	91.8%	6.1	0.5	A
	Through	540	453	84.0%	3.3	0.6	A
	Right Turn						
	Subtotal	600	508	84.7%	3.6	0.5	A
WB	Left Turn						
	Through	400	415	103.7%	0.8	0.2	A
	Right Turn	20	21	106.4%	0.2	0.2	A
	Subtotal	420	436	103.9%	0.7	0.1	A
Total		1,090	1,011	92.7%	2.7	0.4	A

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	104.5%	2.4	0.5	A
	Through	60	52	87.4%	0.6	0.2	A
	Right Turn						
	Subtotal	80	73	91.7%	1.1	0.3	A
SB	Left Turn						
	Through	50	51	101.8%	0.3	0.3	A
	Right Turn	30	31	103.9%	0.2	0.2	A
	Subtotal	80	82	102.6%	0.3	0.2	A
EB	Left Turn	30	21	70.9%	5.6	0.7	A
	Through						
	Right Turn	40	36	91.2%	3.6	0.4	A
	Subtotal	70	58	82.5%	4.3	0.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		230	213	92.7%	1.7	0.4	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative No Project
PM Peak Hour

Intersection 28 Wallace Dr/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	12	121.6%	4.7	0.6	A
	Through						
	Right Turn	10	11	110.2%	2.2	0.8	A
	Subtotal	20	23	115.9%	3.7	0.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	70	55	79.3%	0.9	0.5	A
	Right Turn	10	9	91.2%	0.9	0.6	A
	Subtotal	80	65	80.8%	0.9	0.5	A
WB	Left Turn	10	7	68.4%	1.8	1.0	A
	Through	60	62	103.9%	0.7	0.5	A
	Right Turn						
	Subtotal	70	69	98.8%	0.9	0.5	A
Total		170	157	92.3%	1.3	0.4	A

Intersection 29 Muir Rd/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	17	85.5%	4.7	0.8	A
	Through						
	Right Turn	30	32	105.1%	2.7	0.3	A
	Subtotal	50	49	97.3%	3.3	0.4	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	70	58	83.1%	0.4	0.3	A
	Right Turn	10	8	83.6%	0.3	0.3	A
	Subtotal	80	67	83.1%	0.4	0.3	A
WB	Left Turn	30	35	116.5%	2.0	0.5	A
	Through	50	53	105.6%	0.5	0.4	A
	Right Turn						
	Subtotal	80	88	109.7%	1.1	0.4	A
Total		210	203	96.6%	1.4	0.3	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative No Project
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	650	330	230	1100	300	210	530	160	300	680	90
Future Volume (veh/h)	170	650	330	230	1100	300	210	530	160	300	680	90
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		0.99	1.00		1.00	1.00		0.98
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	707	359	250	1196	326	228	576	174	326	739	98
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	1275	568	310	1260	737	225	747	225	383	811	107
Arrive On Green	0.09	0.36	0.36	0.09	0.36	0.36	0.13	0.28	0.28	0.11	0.26	0.26
Sat Flow, veh/h	1691	3539	1577	3442	3539	1575	1774	2680	807	3442	3133	415
Grp Volume(v), veh/h	185	707	359	250	1196	326	228	380	370	326	417	420
Grp Sat Flow(s),veh/h/ln	1691	1770	1577	1721	1770	1575	1774	1770	1718	1721	1770	1779
Q Serve(g_s), s	11.5	19.5	15.3	8.7	40.1	17.0	15.5	24.0	24.2	11.3	27.9	27.9
Cycle Q Clear(g_c), s	11.5	19.5	15.3	8.7	40.1	17.0	15.5	24.0	24.2	11.3	27.9	27.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.23
Lane Grp Cap(c), veh/h	159	1275	568	310	1260	737	225	493	479	383	458	460
V/C Ratio(X)	1.16	0.55	0.63	0.81	0.95	0.44	1.01	0.77	0.77	0.85	0.91	0.91
Avail Cap(c_a), veh/h	159	1275	568	522	1291	751	225	493	479	466	493	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	31.2	14.4	54.5	38.2	21.8	53.2	40.4	40.4	53.2	43.9	43.9
Incr Delay (d2), s/veh	120.9	0.5	2.3	1.9	14.5	0.4	62.9	7.3	7.7	10.5	19.4	19.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	9.6	7.0	4.2	22.1	7.4	11.5	12.7	12.4	5.9	16.1	16.3
LnGrp Delay(d),s/veh	176.2	31.7	16.6	56.4	52.7	22.3	116.2	47.7	48.1	63.7	63.3	63.4
LnGrp LOS	F	C	B	E	D	C	F	D	D	E	E	E
Approach Vol, veh/h		1251			1772			978			1163	
Approach Delay, s/veh		48.8			47.6			63.8			63.4	
Approach LOS		D			D			E			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	18.1	39.0	15.5	49.4	20.5	36.6	16.0	48.9				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	5.0	* 5	4.5	5.5				
Max Green Setting (Gmax), s	16.5	33.0	18.5	37.5	15.5	* 34	11.5	44.5				
Max Q Clear Time (g_c+I1), s	13.3	26.2	10.7	21.5	17.5	29.9	13.5	42.1				
Green Ext Time (p_c), s	0.2	2.6	0.3	12.8	0.0	1.4	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			54.5									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative No Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	800	200	180	1050	230	230	400	110	210	630	250
Future Volume (veh/h)	190	800	200	180	1050	230	230	400	110	210	630	250
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		0.98	1.00		0.98	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	207	870	217	196	1141	250	250	435	120	228	685	272
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	1001	249	177	1074	233	205	689	188	256	691	274
Arrive On Green	0.08	0.36	0.36	0.10	0.37	0.37	0.12	0.25	0.25	0.14	0.28	0.28
Sat Flow, veh/h	1774	2797	697	1774	2878	626	1774	2736	747	1774	2460	977
Grp Volume(v), veh/h	207	550	537	196	698	693	250	280	275	228	493	464
Grp Sat Flow(s),veh/h/ln	1774	1770	1725	1774	1770	1734	1774	1770	1713	1774	1770	1667
Q Serve(g_s), s	11.0	37.7	37.7	13.0	48.5	48.5	15.0	18.3	18.6	16.4	36.1	36.1
Cycle Q Clear(g_c), s	11.0	37.7	37.7	13.0	48.5	48.5	15.0	18.3	18.6	16.4	36.1	36.1
Prop In Lane	1.00		0.40	1.00		0.36	1.00		0.44	1.00		0.59
Lane Grp Cap(c), veh/h	150	633	617	177	660	647	205	446	432	256	497	468
V/C Ratio(X)	1.38	0.87	0.87	1.10	1.06	1.07	1.22	0.63	0.64	0.89	0.99	0.99
Avail Cap(c_a), veh/h	150	633	617	177	660	647	205	446	432	341	497	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.5	38.9	38.9	58.5	40.8	40.8	57.5	43.2	43.3	54.6	46.6	46.6
Incr Delay (d2), s/veh	206.6	14.3	14.7	98.4	51.2	56.0	135.3	2.8	3.1	19.7	38.1	39.4
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	4.0	20.9	20.4	11.2	33.0	33.2	15.0	9.3	9.2	9.4	22.9	21.8
LnGrp Delay(d),s/veh	266.1	53.3	53.7	156.9	91.9	96.7	192.8	46.0	46.4	74.4	84.7	86.0
LnGrp LOS	F	D	D	F	F	F	F	D	D	E	F	F
Approach Vol, veh/h		1294			1587			805			1185	
Approach Delay, s/veh		87.5			102.0			91.7			83.2	
Approach LOS		F			F			F			F	
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	32.7	38.3	17.0	52.0	19.0	42.0	15.0	54.0				
Change Period (Y+Rc), s	4.0	5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	25.0	26.5	13.0	46.5	15.0	36.5	11.0	48.5				
Max Q Clear Time (g_c+1/3), s	11.4	20.6	15.0	39.7	17.0	38.1	13.0	50.5				
Green Ext Time (p_c), s	0.3	4.0	0.0	6.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				91.9								
HCM 2010 LOS				F								

Intersection

Int Delay, s/veh 2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	80	90	670	60	100	810
Future Vol, veh/h	80	90	670	60	100	810
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	94	698	63	104	844

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1360	381	0	0	761	0
Stage 1	730	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	140	617	-	-	847	-
Stage 1	438	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	123	616	-	-	847	-
Mov Cap-2 Maneuver	255	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	432	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	23.3		0		1.1
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 370	847	-
HCM Lane V/C Ratio	-	- 0.479	0.123	-
HCM Control Delay (s)	-	- 23.3	9.8	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 2.5	0.4	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Cumulative No Project
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	410	30	130	680	460	40	190	100	500	290	160
Future Volume (veh/h)	150	410	30	130	680	460	40	190	100	500	290	160
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		0.99	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	160	436	32	138	723	489	43	202	106	532	309	170
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	1044	461	165	1025	457	58	478	213	563	1486	653
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.03	0.14	0.14	0.32	0.42	0.42
Sat Flow, veh/h	1774	3539	1564	1774	3539	1578	1774	3539	1576	1774	3539	1555
Grp Volume(v), veh/h	160	436	32	138	723	489	43	202	106	532	309	170
Grp Sat Flow(s),veh/h/ln	1774	1770	1564	1774	1770	1578	1774	1770	1576	1774	1770	1555
Q Serve(g_s), s	10.1	11.1	1.6	8.6	20.4	32.4	2.7	5.9	7.0	32.7	6.2	8.0
Cycle Q Clear(g_c), s	10.1	11.1	1.6	8.6	20.4	32.4	2.7	5.9	7.0	32.7	6.2	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	1044	461	165	1025	457	58	478	213	563	1486	653
V/C Ratio(X)	0.97	0.42	0.07	0.83	0.71	1.07	0.74	0.42	0.50	0.94	0.21	0.26
Avail Cap(c_a), veh/h	165	1044	461	175	1025	457	324	1025	457	657	1690	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.6	31.7	28.4	49.9	35.4	39.7	53.6	44.4	44.8	37.2	20.6	21.1
Incr Delay (d2), s/veh	60.8	0.2	0.0	26.4	2.1	61.8	12.4	0.4	1.3	20.3	0.1	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	7.7	5.4	0.7	5.4	10.2	21.9	1.5	2.9	3.1	19.1	3.1	3.4
LnGrp Delay(d),s/veh	111.3	31.9	28.4	76.2	37.5	101.5	66.0	44.8	46.2	57.5	20.7	21.3
LnGrp LOS	F	C	C	E	D	F	E	D	D	E	C	C
Approach Vol, veh/h		628			1350			351			1011	
Approach Delay, s/veh		52.0			64.7			47.8			40.2	
Approach LOS		D			E			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	40.1	19.7	14.4	37.6	8.3	51.5	15.0	37.0				
Change Period (Y+Rc), s	4.6	4.6	4.0	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	41.4	32.4	11.0	32.4	20.4	53.4	10.4	32.4				
Max Q Clear Time (g_c+I1), s	34.7	9.0	10.6	13.1	4.7	10.0	12.1	34.4				
Green Ext Time (p_c), s	0.8	3.5	0.0	8.4	0.0	3.8	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			53.1									
HCM 2010 LOS			D									

Intersection																
Intersection Delay, s/veh 53.6																
Intersection LOS F																




Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕			↗	↘			↗	↘	
Traffic Vol, veh/h	0	20	290	20	0	40	460	100	0	30	70	50	0	130	60	30
Future Vol, veh/h	0	20	290	20	0	40	460	100	0	30	70	50	0	130	60	30
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	315	22	0	43	500	109	0	33	76	54	0	141	65	33
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	21.6	95.6	13.6	14.4
HCM LOS	C	F	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	6%	7%	100%	0%
Vol Thru, %	0%	58%	88%	77%	0%	67%
Vol Right, %	0%	42%	6%	17%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	120	330	600	130	90
LT Vol	30	0	20	40	130	0
Through Vol	0	70	290	460	0	60
RT Vol	0	50	20	100	0	30
Lane Flow Rate	33	130	359	652	141	98
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.077	0.278	0.648	1.113	0.323	0.204
Departure Headway (Hd)	8.956	8.131	6.835	6.144	8.703	7.94
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	402	445	531	593	415	455
Service Time	6.656	5.831	4.835	4.144	6.403	5.64
HCM Lane V/C Ratio	0.082	0.292	0.676	1.099	0.34	0.215
HCM Control Delay	12.4	13.9	21.6	95.6	15.5	12.7
HCM Lane LOS	B	B	C	F	C	B
HCM 95th-tile Q	0.2	1.1	4.6	20.3	1.4	0.8

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	30	100	10	20	80
Future Vol, veh/h	0	30	100	10	20	80
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, %	2	8	2	33	46	7
Mvmt Flow	0	33	109	11	22	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	244	114	0	0	120	0
Stage 1	114	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	6.42	6.28	-	-	4.56	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.372	-	-	2.614	-
Pot Cap-1 Maneuver	744	923	-	-	1235	-
Stage 1	911	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	730	923	-	-	1235	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	879	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9		0		1.6
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	923	1235
HCM Lane V/C Ratio	-	-	0.035	0.018
HCM Control Delay (s)	-	-	9	8
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Future Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	11	11	11	11	11	11	11	98	11	11	76	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	239	233	82	239	234	103	87	0	0	109	0	0
Stage 1	103	103	-	125	125	-	-	-	-	-	-	-
Stage 2	136	130	-	114	109	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	685	667	978	715	646	920	1509	-	-	1481	-	-
Stage 1	867	810	-	879	770	-	-	-	-	-	-	-
Stage 2	833	789	-	891	782	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	660	656	978	690	636	920	1509	-	-	1481	-	-
Mov Cap-2 Maneuver	660	656	-	690	636	-	-	-	-	-	-	-
Stage 1	860	804	-	872	764	-	-	-	-	-	-	-
Stage 2	805	783	-	862	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.2	0.7	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1509	-	-	739	730	1481	-
HCM Lane V/C Ratio	0.007	-	-	0.044	0.045	0.007	-
HCM Control Delay (s)	7.4	0	-	10.1	10.2	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection	
Intersection Delay, s/veh	158
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔↔	↔		↔	↔↔			↔	↔	↔
Traffic Vol, veh/h	0	50	630	100	0	90	950	70	0	90	100	50
Future Vol, veh/h	0	50	630	100	0	90	950	70	0	90	100	50
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	670	106	0	96	1011	74	0	96	106	53
Number of Lanes	0	0	2	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	102.3	259	20.7
HCM LOS	F	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	19%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	81%	100%	0%	0%	100%	82%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	18%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	100	50	260	420	100	90	633	387	90	110
LT Vol	90	0	0	50	0	0	90	0	0	90	0
Through Vol	0	100	0	210	420	0	0	633	317	0	110
RT Vol	0	0	50	0	0	100	0	0	70	0	0
Lane Flow Rate	96	106	53	277	447	106	96	674	411	96	117
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.322	0.343	0.161	0.769	1.239	0.273	0.268	1.792	1.08	0.32	0.375
Departure Headway (Hd)	13.064	12.564	11.864	10.581	10.553	9.785	10.287	9.787	9.66	13.025	12.525
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	277	288	304	346	349	369	351	377	378	278	289
Service Time	10.764	10.264	9.564	8.281	8.253	7.485	7.987	7.487	7.36	10.725	10.225
HCM Lane V/C Ratio	0.347	0.368	0.174	0.801	1.281	0.287	0.274	1.788	1.087	0.345	0.405
HCM Control Delay	21.8	21.7	16.8	41.1	160.7	16.1	16.7	389.8	101.2	21.7	22.5
HCM Lane LOS	C	C	C	E	F	C	C	F	F	C	C
HCM 95th-tile Q	1.3	1.5	0.6	6.1	18.7	1.1	1.1	42.3	14.3	1.3	1.7

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↙	↑	↗
Traffic Vol, veh/h	0	90	110	60
Future Vol, veh/h	0	90	110	60
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	117	64
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	21
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Cumulative No Project
 PM Peak Hour



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR	
Lane Configurations	↖↗	↗		↖	↑↑	↑↑	↗	
Traffic Volume (veh/h)	500	200	5	460	770	880	660	
Future Volume (veh/h)	500	200	5	460	770	880	660	
Number	7	14		5	2	6	16	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1827	1776		1863	1863	1863	1863	
Adj Flow Rate, veh/h	538	215		495	828	946	710	
Adj No. of Lanes	2	1		1	2	2	1	
Peak Hour Factor	0.93	0.93		0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	4	7		2	2	2	2	
Cap, veh/h	642	287		483	2447	1303	583	
Arrive On Green	0.19	0.19		0.27	0.69	0.37	0.37	
Sat Flow, veh/h	3375	1509		1774	3632	3632	1583	
Grp Volume(v), veh/h	538	215		495	828	946	710	
Grp Sat Flow(s),veh/h/ln	1688	1509		1774	1770	1770	1583	
Q Serve(g_s), s	13.8	12.1		24.4	8.4	20.7	33.0	
Cycle Q Clear(g_c), s	13.8	12.1		24.4	8.4	20.7	33.0	
Prop In Lane	1.00	1.00		1.00			1.00	
Lane Grp Cap(c), veh/h	642	287		483	2447	1303	583	
V/C Ratio(X)	0.84	0.75		1.03	0.34	0.73	1.22	
Avail Cap(c_a), veh/h	1032	461		483	2447	1303	583	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.0	34.3		32.6	5.6	24.4	28.3	
Incr Delay (d2), s/veh	1.7	1.5		47.6	0.0	1.8	113.2	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	6.6	9.8		18.2	4.0	10.4	32.6	
LnGrp Delay(d),s/veh	36.7	35.8		80.2	5.6	26.2	141.5	
LnGrp LOS	D	D		F	A	C	F	
Approach Vol, veh/h	753				1323	1656		
Approach Delay, s/veh	36.4				33.5	75.7		
Approach LOS	D				C	E		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		68.0		21.7	29.0	39.0		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		62.0		27.4	24.4	33.0		
Max Q Clear Time (g_c+I1), s		10.4		15.8	26.4	35.0		
Green Ext Time (p_c), s		16.3		1.3	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			52.8					
HCM 2010 LOS			D					
Notes								

Intersection																
Intersection Delay, s/veh	34.8															
Intersection LOS	D															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↖	↗			↖	↗	↖			↕				↕	
Traffic Vol, veh/h	0	80	450	20	0	40	380	50	0	20	60	50	0	60	50	40
Future Vol, veh/h	0	80	450	20	0	40	380	50	0	20	60	50	0	60	50	40
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	83	469	21	0	42	396	52	0	21	63	52	0	63	52	42
Number of Lanes	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	54.2	24	14.1	15.1
HCM LOS	F	C	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	15%	100%	0%	100%	0%	0%	40%
Vol Thru, %	46%	0%	96%	0%	100%	0%	33%
Vol Right, %	38%	0%	4%	0%	0%	100%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	80	470	40	380	50	150
LT Vol	20	80	0	40	0	0	60
Through Vol	60	0	450	0	380	0	50
RT Vol	50	0	20	0	0	50	40
Lane Flow Rate	135	83	490	42	396	52	156
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.299	0.179	0.977	0.085	0.749	0.088	0.35
Departure Headway (Hd)	7.951	7.725	7.183	7.328	6.816	6.1	8.064
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	464	504	488	530	585	445
Service Time	5.72	5.482	4.939	5.085	4.573	3.856	5.832
HCM Lane V/C Ratio	0.299	0.179	0.972	0.086	0.747	0.089	0.351
HCM Control Delay	14.1	12.2	61.4	10.8	27.3	9.4	15.1
HCM Lane LOS	B	B	F	B	D	A	C
HCM 95th-tile Q	1.2	0.6	12.8	0.3	6.4	0.3	1.5

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative No Project
PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	5	250	90	210	10	70	60	5	170	350	20	5	70	300	330
Future Volume (veh/h)	5	250	90	210	10	70	60	5	170	350	20	5	70	300	330
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		0.99	1.00		1.00		1.00		1.00		1.00		0.96
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		1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900
Adj Flow Rate, veh/h		255	92	214	10	71	61		173	357	20		71	306	337
Adj No. of Lanes		1	1	1	1	1	1		1	2	0		1	2	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, %		2	2	2	2	2	2		3	2	2		2	2	2
Cap, veh/h		295	552	463	13	256	218		210	1250	70		91	528	455
Arrive On Green		0.17	0.30	0.30	0.01	0.14	0.14		0.12	0.37	0.37		0.05	0.30	0.30
Sat Flow, veh/h		1774	1863	1564	1774	1863	1583		1757	3408	190		1774	1770	1526
Grp Volume(v), veh/h		255	92	214	10	71	61		173	185	192		71	306	337
Grp Sat Flow(s),veh/h/ln		1774	1863	1564	1774	1863	1583		1757	1770	1829		1774	1770	1526
Q Serve(g_s), s		10.6	2.8	8.4	0.4	2.6	2.6		7.3	5.6	5.6		3.0	11.1	15.0
Cycle Q Clear(g_c), s		10.6	2.8	8.4	0.4	2.6	2.6		7.3	5.6	5.6		3.0	11.1	15.0
Prop In Lane		1.00		1.00	1.00		1.00		1.00		0.10		1.00		1.00
Lane Grp Cap(c), veh/h		295	552	463	13	256	218		210	649	671		91	528	455
V/C Ratio(X)		0.86	0.17	0.46	0.75	0.28	0.28		0.82	0.28	0.29		0.78	0.58	0.74
Avail Cap(c_a), veh/h		365	1087	912	153	864	735		268	985	1018		153	868	748
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh		30.6	19.6	21.6	37.4	29.2	29.2		32.4	16.9	16.9		35.4	22.5	23.8
Incr Delay (d2), s/veh		14.1	0.1	0.3	26.2	0.2	0.3		12.0	0.1	0.1		5.4	0.4	0.9
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		6.3	1.4	3.7	0.3	1.3	1.2		4.2	2.7	2.8		1.6	5.4	6.4
LnGrp Delay(d),s/veh		44.8	19.7	21.9	63.6	29.4	29.4		44.5	17.0	17.0		40.8	22.8	24.7
LnGrp LOS		D	B	C	E	C	C		D	B	B		D	C	C
Approach Vol, veh/h			561			142				550				714	
Approach Delay, s/veh			31.9			31.8				25.6				25.5	
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	8.4	33.7	5.1	28.3	13.5	28.5	17.0	16.4							
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0							
Max Green Setting (Gmax), s	6.5	42.0	6.5	44.0	11.5	37.0	15.5	35.0							
Max Q Clear Time (g_c+15), s	7.6	7.6	2.4	10.4	9.3	17.0	12.6	4.6							
Green Ext Time (p_c), s	0.0	4.8	0.0	1.1	0.0	4.4	0.0	1.1							
Intersection Summary															
HCM 2010 Ctrl Delay			27.8												
HCM 2010 LOS			C												
Notes															

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	30	60	10	0	10	40	30	0	10	60	10	0	30	40	30
Future Vol, veh/h	0	30	60	10	0	10	40	30	0	10	60	10	0	30	40	30
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	31	63	10	0	10	42	31	0	10	63	10	0	31	42	31
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.8	7.9	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	30%	12%	30%
Vol Thru, %	75%	60%	50%	40%
Vol Right, %	12%	10%	38%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	100	80	100
LT Vol	10	30	10	30
Through Vol	60	60	40	40
RT Vol	10	10	30	30
Lane Flow Rate	83	104	83	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.102	0.129	0.099	0.125
Departure Headway (Hd)	4.424	4.449	4.276	4.332
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	812	808	840	829
Service Time	2.44	2.464	2.291	2.348
HCM Lane V/C Ratio	0.102	0.129	0.099	0.125
HCM Control Delay	7.9	8.1	7.8	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	0.3	0.4

HCM 2010 Signalized Intersection Summary
 31: Garden Hwy & Stewart Rd

Cumulative No Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	10	0	10	0	10	270	0	10	140	70
Future Volume (veh/h)	100	10	10	0	10	0	10	270	0	10	140	70
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	1863	1863	1863	1900	1863	1900	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	117	0	11	0	11	0	11	293	0	11	152	76
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	502	0	224	0	38	0	15	542	0	15	542	461
Arrive On Green	0.14	0.00	0.14	0.00	0.02	0.00	0.01	0.29	0.00	0.01	0.29	0.29
Sat Flow, veh/h	3548	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	117	0	11	0	11	0	11	293	0	11	152	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	1.0	0.0	0.2	0.0	0.2	0.0	0.2	4.7	0.0	0.2	2.2	1.3
Cycle Q Clear(g_c), s	1.0	0.0	0.2	0.0	0.2	0.0	0.2	4.7	0.0	0.2	2.2	1.3
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	502	0	224	0	38	0	15	542	0	15	542	461
V/C Ratio(X)	0.23	0.00	0.05	0.00	0.29	0.00	0.71	0.54	0.00	0.71	0.28	0.16
Avail Cap(c_a), veh/h	2201	0	982	0	1523	0	395	1680	0	395	1680	1428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	13.2	0.0	17.1	0.0	17.5	10.6	0.0	17.5	9.7	9.4
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.0	5.0	0.0	46.3	1.0	0.0	46.3	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.0	0.2	0.0	0.3	2.5	0.0	0.3	1.2	0.6
LnGrp Delay(d),s/veh	13.8	0.0	13.3	0.0	22.2	0.0	63.8	11.6	0.0	63.8	10.0	9.6
LnGrp LOS	B		B		C		E	B		E	B	A
Approach Vol, veh/h		128			11			304			239	
Approach Delay, s/veh		13.8			22.2			13.5			12.4	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.4	15.3		10.0	4.4	15.3		5.7				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	32.0		22.0	7.9	32.0		29.0				
Max Q Clear Time (g_c+1/2), s	12.2	6.7		3.0	2.2	4.2		2.2				
Green Ext Time (p_c), s	0.0	3.6		0.4	0.0	3.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.3									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 32: Garden Hwy & Shanghai Bend Rd

Cumulative No Project
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	90	10	30	30	20	130	40	320	50	5	170	280	120
Future Volume (veh/h)	90	10	30	30	20	130	40	320	50	5	170	280	120
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		0.99	1.00		0.99	1.00		1.00		1.00		0.99
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	1863	1748	1900	1863	1863	1863	1863	1860	1900		1863	1863	1900
Adj Flow Rate, veh/h	96	11	32	32	21	138	43	340	53		181	298	128
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2		2	2	2
Cap, veh/h	124	86	251	38	319	270	51	745	115		227	830	348
Arrive On Green	0.07	0.22	0.22	0.02	0.17	0.17	0.03	0.24	0.24		0.13	0.34	0.34
Sat Flow, veh/h	1774	392	1141	1774	1863	1575	1774	3069	474		1774	2427	1018
Grp Volume(v), veh/h	96	0	43	32	21	138	43	194	199		181	215	211
Grp Sat Flow(s),veh/h/ln	1774	0	1534	1774	1863	1575	1774	1767	1776		1774	1770	1676
Q Serve(g_s), s	2.7	0.0	1.1	0.9	0.5	4.0	1.2	4.7	4.8		5.0	4.6	4.8
Cycle Q Clear(g_c), s	2.7	0.0	1.1	0.9	0.5	4.0	1.2	4.7	4.8		5.0	4.6	4.8
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.27		1.00		0.61
Lane Grp Cap(c), veh/h	124	0	337	38	319	270	51	429	431		227	605	573
V/C Ratio(X)	0.77	0.00	0.13	0.84	0.07	0.51	0.84	0.45	0.46		0.80	0.36	0.37
Avail Cap(c_a), veh/h	370	0	1235	335	1426	1205	264	1159	1165		264	1161	1099
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	15.7	24.5	17.5	18.9	24.3	16.2	16.2		21.3	12.4	12.5
Incr Delay (d2), s/veh	9.7	0.0	0.2	35.6	0.1	1.5	27.9	0.7	0.8		13.6	0.4	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	1.6	0.0	0.5	0.8	0.3	1.8	1.0	2.4	2.4		3.3	2.3	2.2
LnGrp Delay(d),s/veh	32.7	0.0	15.9	60.1	17.6	20.4	52.2	17.0	17.0		34.9	12.8	12.9
LnGrp LOS	C		B	E	B	C	D	B	B		C	B	B
Approach Vol, veh/h		139			191			436				607	
Approach Delay, s/veh		27.5			26.8			20.5				19.4	
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	0.9	18.2	5.6	15.6	6.0	23.2	8.0	13.1					
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5					
Max Green Setting (Gmax), s	5	33.0	9.5	40.5	7.5	33.0	10.5	38.5					
Max Q Clear Time (g_c+11), s	5	6.8	2.9	3.1	3.2	6.8	4.7	6.0					
Green Ext Time (p_c), s	0.0	4.7	0.0	0.9	0.0	4.7	0.1	0.9					
Intersection Summary													
HCM 2010 Ctrl Delay			21.6										
HCM 2010 LOS			C										
Notes													

SimTraffic Post-Processor
 Average Results from 10 Runs
 Queue Length

Bogue Stewart Master Plan
 Cumulative No Project
 AM Peak Hour

Intersection 9

SR 99/Bogue Rd

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	100	100	11	125	8	125	1	25%	0%
	Through	1,200	225	80	400	178	425	223	26%	0%
	Right Turn	225	150	38	250	50	225	3	1%	0%
NB	Left Turn	475	175	42	275	54	275	63	0%	0%
	Through	3,925	250	36	375	60	375	83	4%	0%
	Right Turn	325	50	31	175	118	225	146	0%	0%
SB	Left Turn	475	75	19	125	33	125	32	0%	0%
	Through	2,000	275	49	425	82	400	66	8%	0%
	Right Turn	325	75	44	200	139	225	137	0%	0%
WB	Left Turn	75	100	16	150	19	150	13	0%	34%
	Through	150	125	16	125	17	125	17	0%	0%
	Right Turn	150	125	21	150	31	150	29	0%	2%

SimTraffic Post-Processor
 Average Results from 10 Runs
 Queue Length

Bogue Stewart Master Plan
 Cumulative No Project
 AM Peak Hour

Intersection 10

SR 99/Stewarts Rd

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left/Through	975	50	23	75	35	75	38	33%	0%
	Right Turn	50	25	10	50	23	75	21	2%	0%
NB	Left Turn	475	25	11	50	27	50	20	0%	0%
	Through	1,350	25	1	25	7	25	10	0%	0%
	Right Turn	75	25	1	25	3	25	4	0%	0%
SB	U/Left Turns	475	50	14	75	30	75	26	0%	0%
	Through	3,925	25	2	25	11	25	16	0%	0%
	Right Turn	75	25	0	25	0	25	0	0%	0%
WB	Left/Through	500	100	50	200	93	200	82	44%	0%
	Right Turn	50	50	5	75	7	75	5	22%	0%

Queuing and Blocking Report

Cumulative No Project PM Peak Hour

8/2/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	L	T
Maximum Queue (ft)	105	226	225	93	131	132	474	845	860	325	225	242
Average Queue (ft)	64	139	68	70	103	87	358	544	546	158	128	125
95th Queue (ft)	111	233	174	96	170	144	485	858	866	398	220	237
Link Distance (ft)		1198		59	59	59		3916	3916			1977
Upstream Blk Time (%)				12	34	20						
Queuing Penalty (veh)				22	63	36						
Storage Bay Dist (ft)	80		200				450			300	450	
Storage Blk Time (%)	7	32	0				0	15	32	0		
Queuing Penalty (veh)	32	89	0				1	53	60	1		

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	281	65
Average Queue (ft)	146	42
95th Queue (ft)	226	67
Link Distance (ft)	1977	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report

Cumulative No Project PM Peak Hour

8/2/2017

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	L	UL
Maximum Queue (ft)	28	36	140	55	62	48
Average Queue (ft)	11	11	50	42	9	21
95th Queue (ft)	31	34	138	67	44	55
Link Distance (ft)	961		494			
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		30		30	450	450
Storage Blk Time (%)	17	1	55	10		
Queuing Penalty (veh)	2	0	29	2		

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

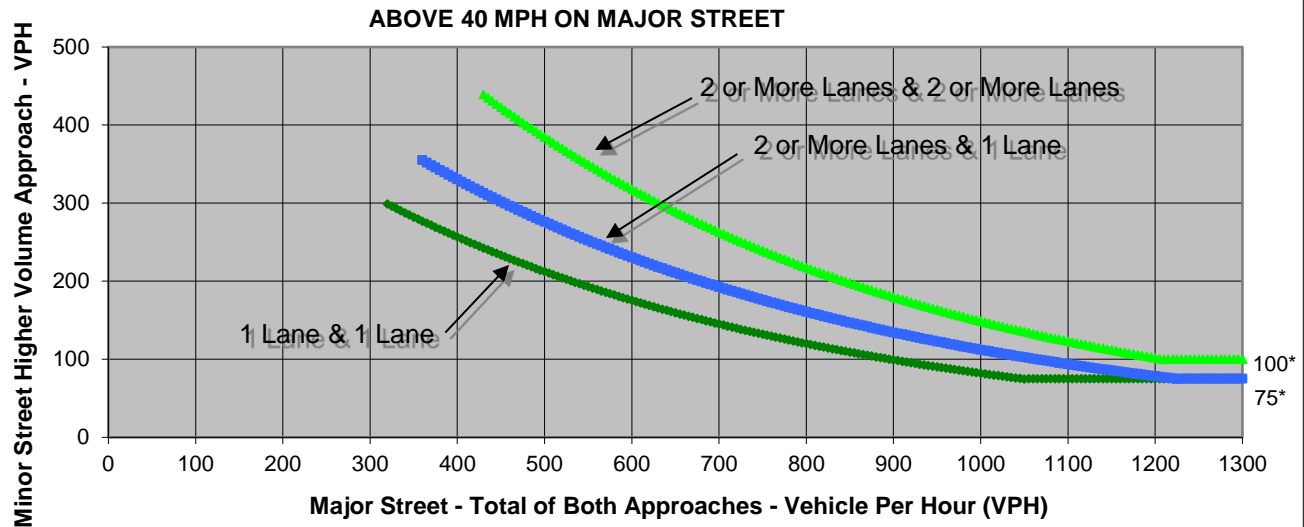
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	60	10	10
Through	1,670	1,165	10	10
Right	40	20	30	40
Total	1,740	1,245	50	60

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,985	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

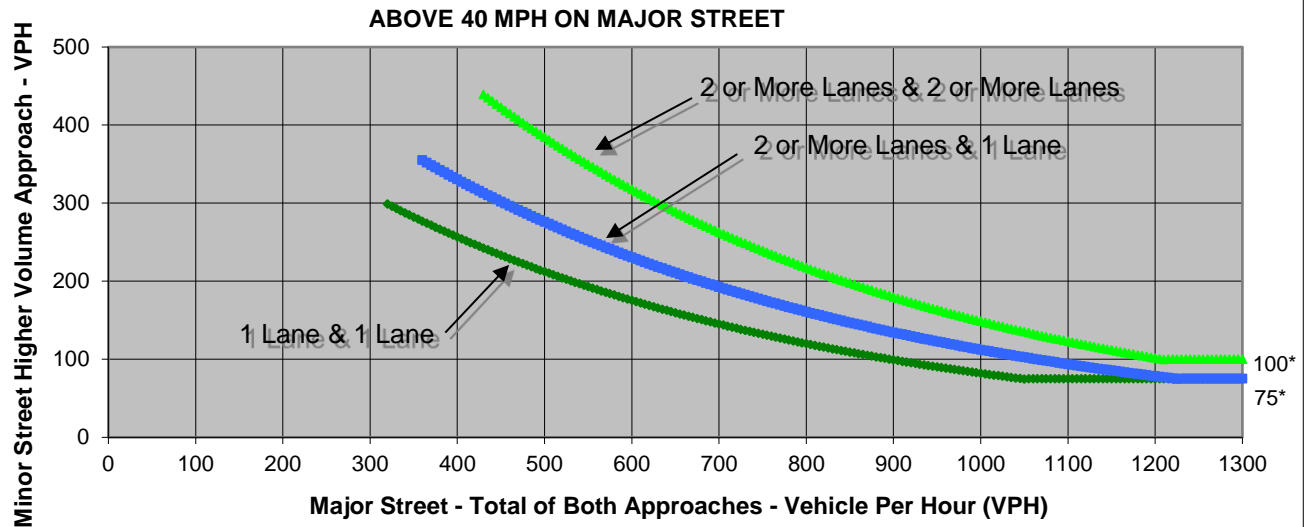
Turn Movement Volumes

	NB	SB	EB	WB
Left	45	75	10	10
Through	1,790	1,440	10	10
Right	30	35	30	105
Total	1,865	1,550	50	125

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,415	125	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

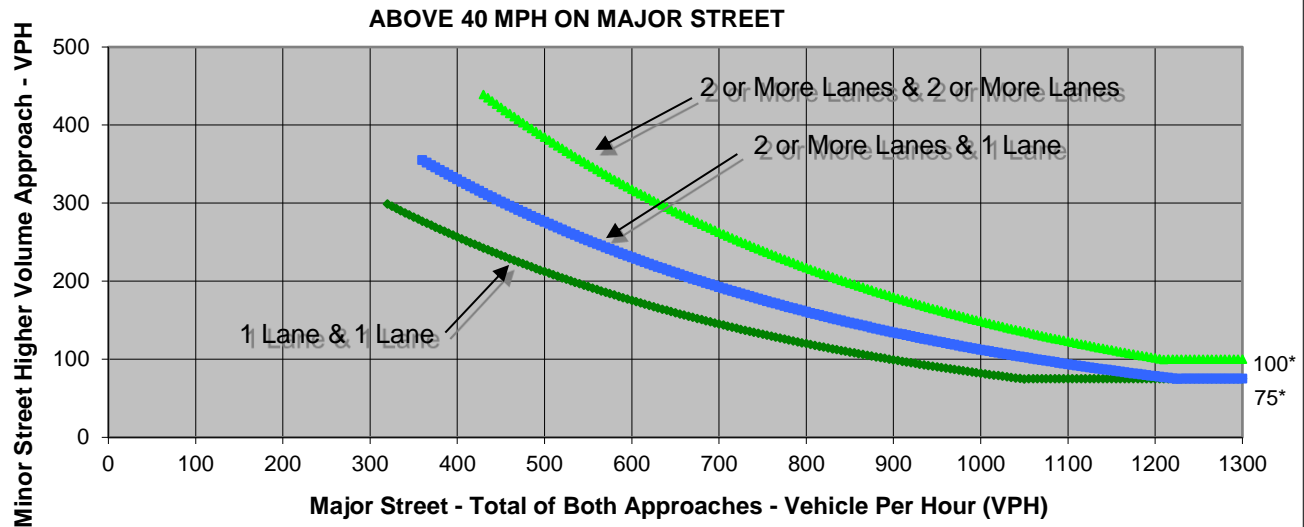
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	40	80	20
Through	1,305	1,385	10	10
Right	20	60	30	40
Total	1,345	1,485	120	70

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,830	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

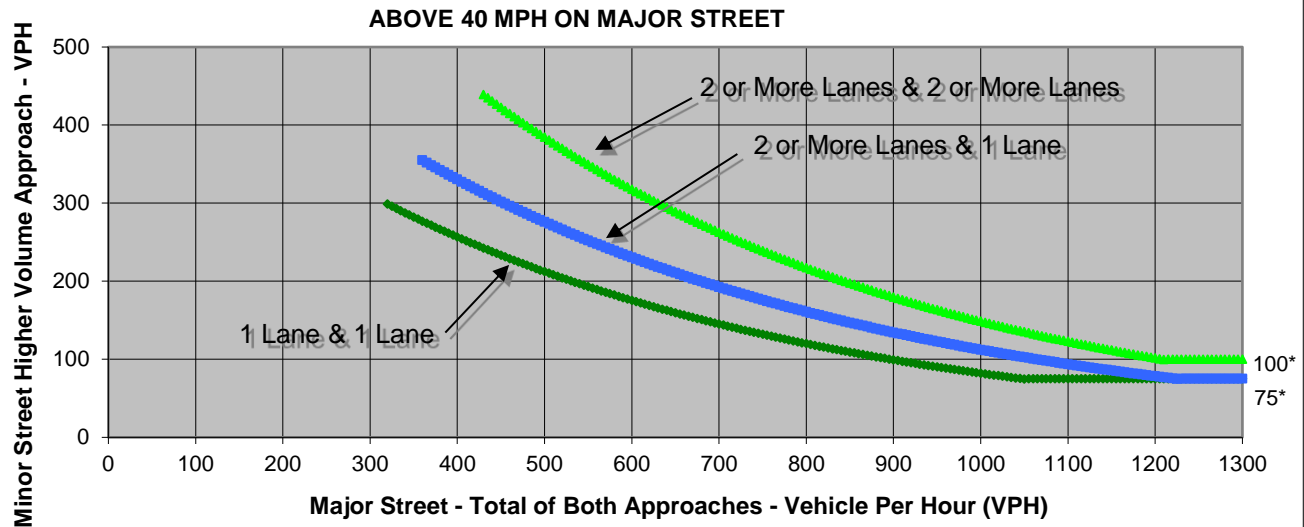
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	55	60	10
Through	1,680	1,200	10	20
Right	20	140	20	50
Total	1,760	1,395	90	80

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,155	90	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

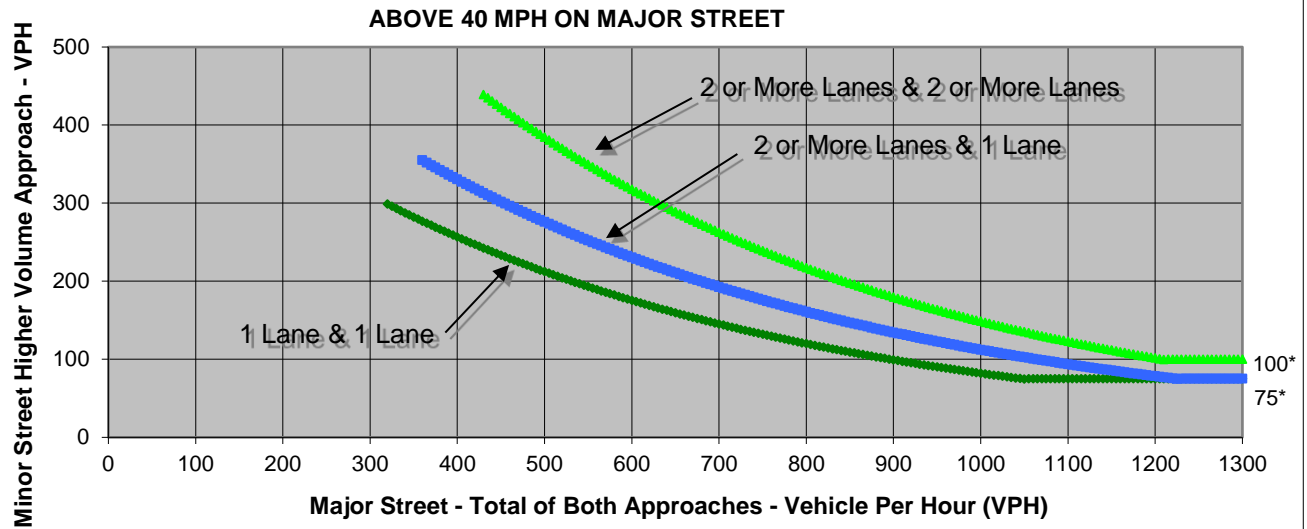
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	105	10	20
Through	1,175	1,565	10	10
Right	30	20	10	115
Total	1,215	1,690	30	145

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,905	145	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

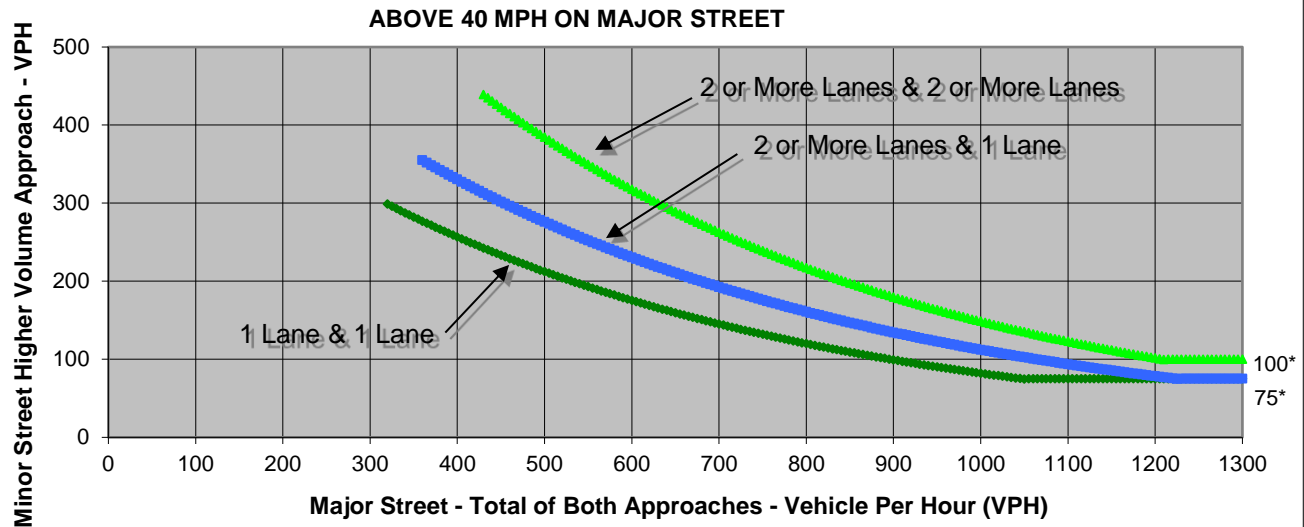
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	40	10	10
Through	1,920	1,170	10	10
Right	40	10	10	50
Total	1,970	1,220	30	70

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,190	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

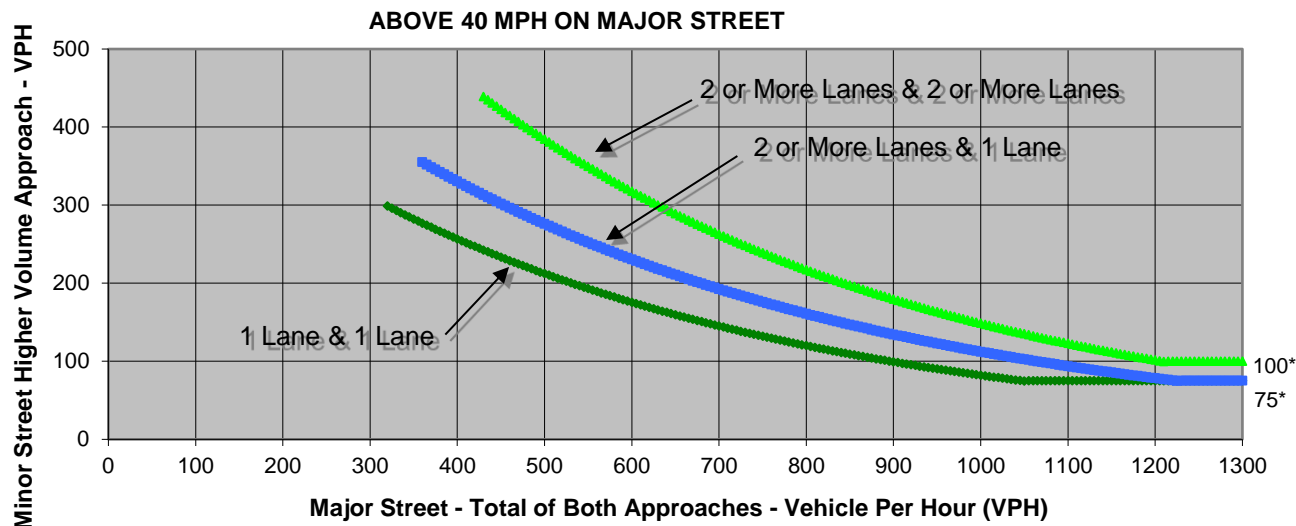
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	10	10
Through	1,185	1,565	10	10
Right	10	10	10	20
Total	1,205	1,595	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,800	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

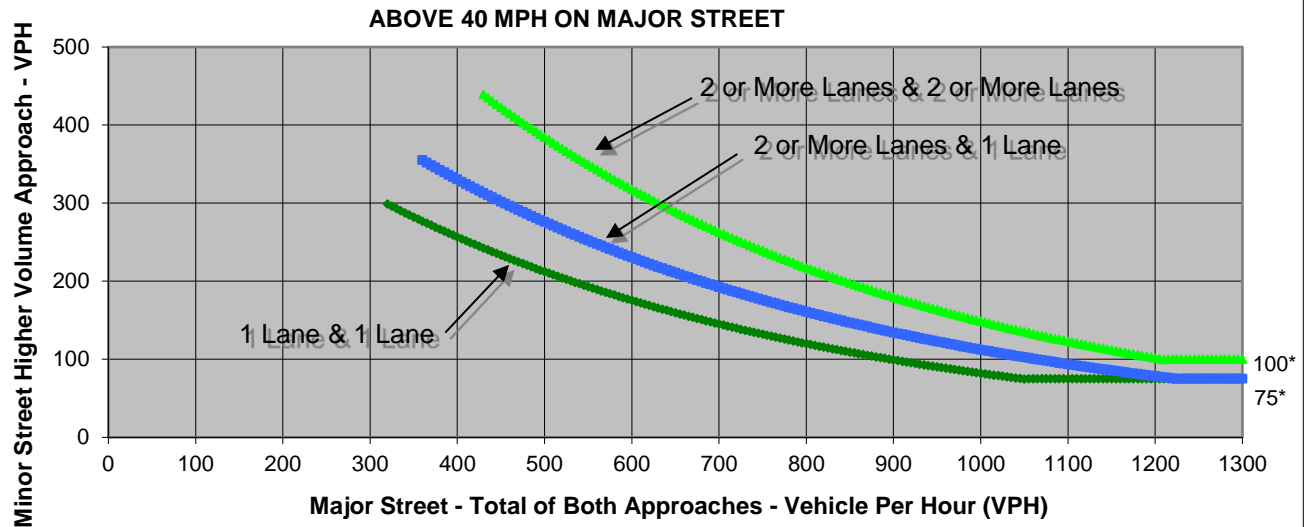
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	20	10	10
Through	1,930	1,160	10	0
Right	10	10	10	30
Total	1,960	1,190	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,150	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

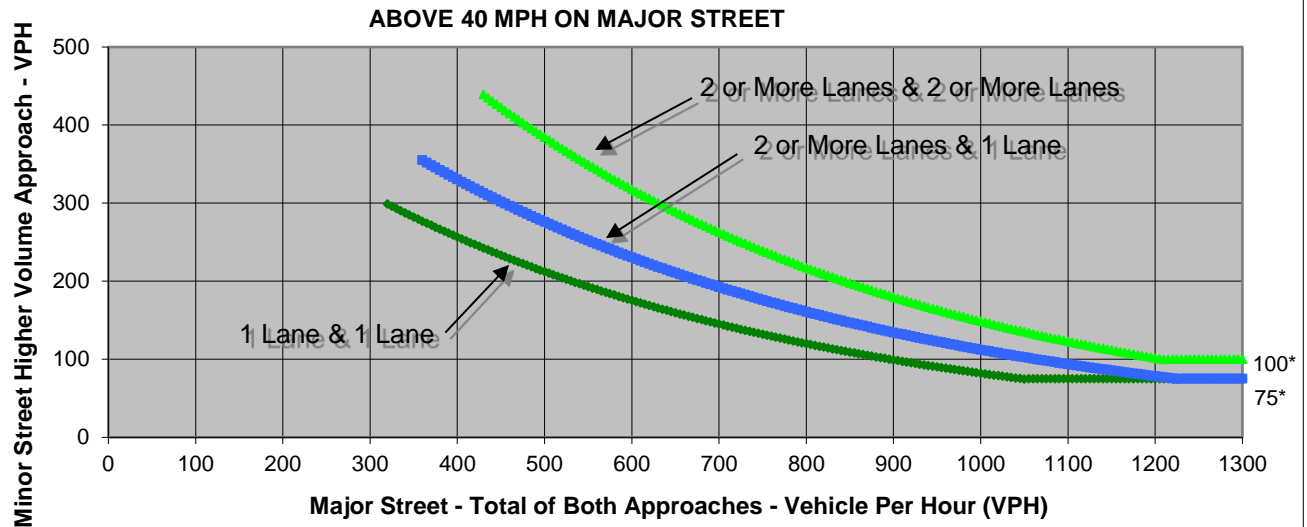
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	0	10
Through	1,195	1,565	0	0
Right	10	10	10	10
Total	1,215	1,585	10	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,800	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

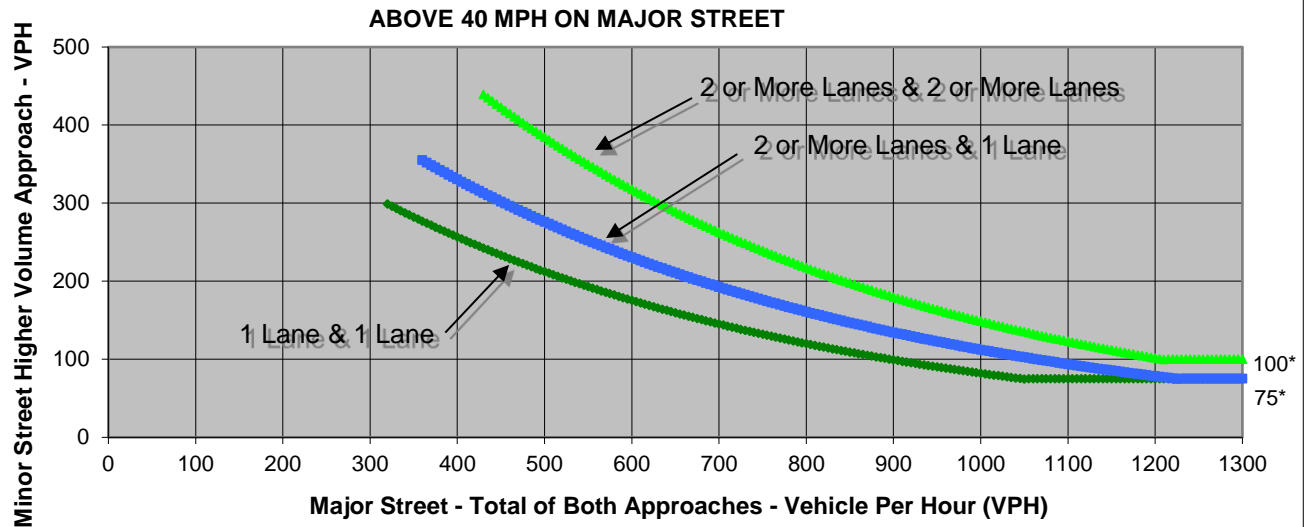
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	1,940	1,160	10	10
Right	10	10	0	10
Total	1,960	1,180	20	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,140	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Walton Ave
 Minor Street Richland Rd

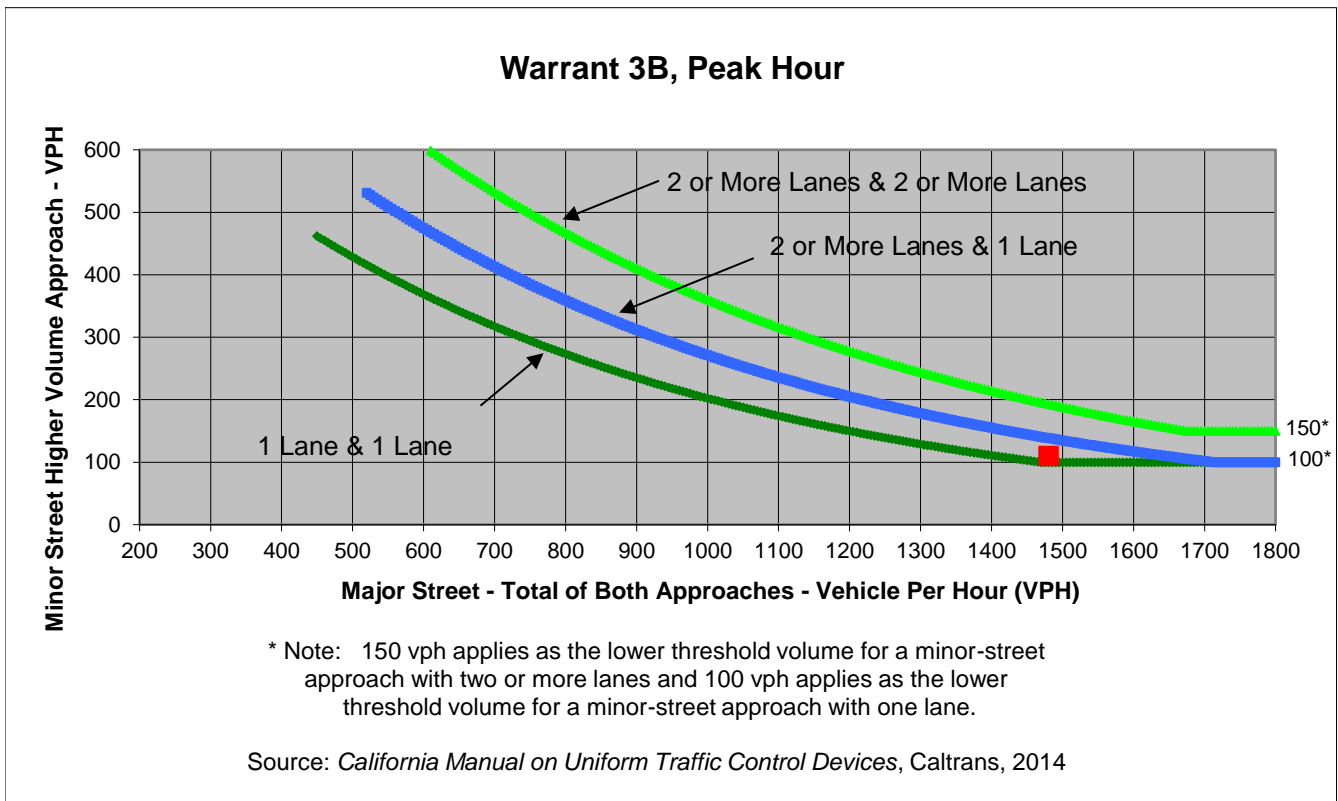
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	40
Through	620	660	0	0
Right	100	0	0	70
Total	720	760	0	110

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,480	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

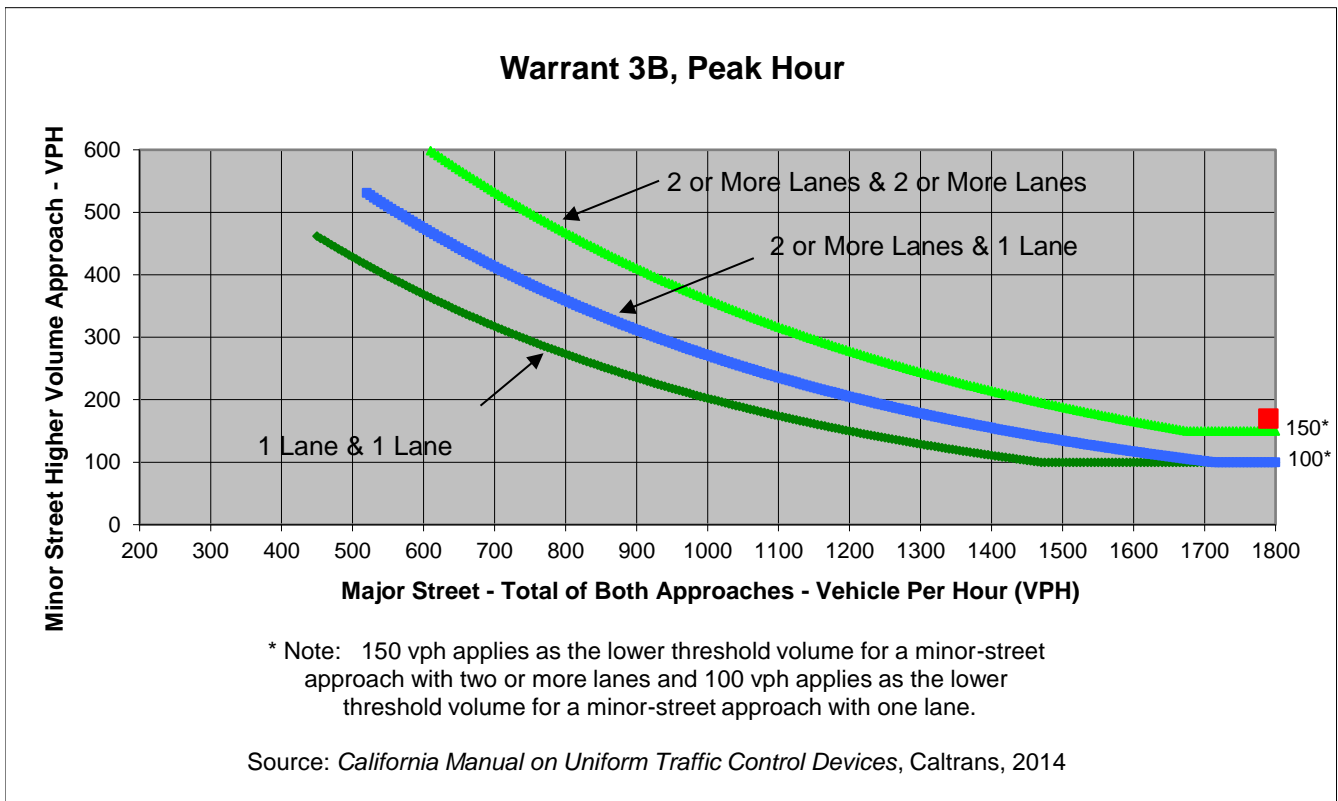
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	80
Through	760	870	0	0
Right	60	0	0	90
Total	820	970	0	170

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,790	170	
* Note: Traffic Volume for Major Street is Total Volume of Both Approaches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative No Project**
 Peak Hour **AM Peak Hour**

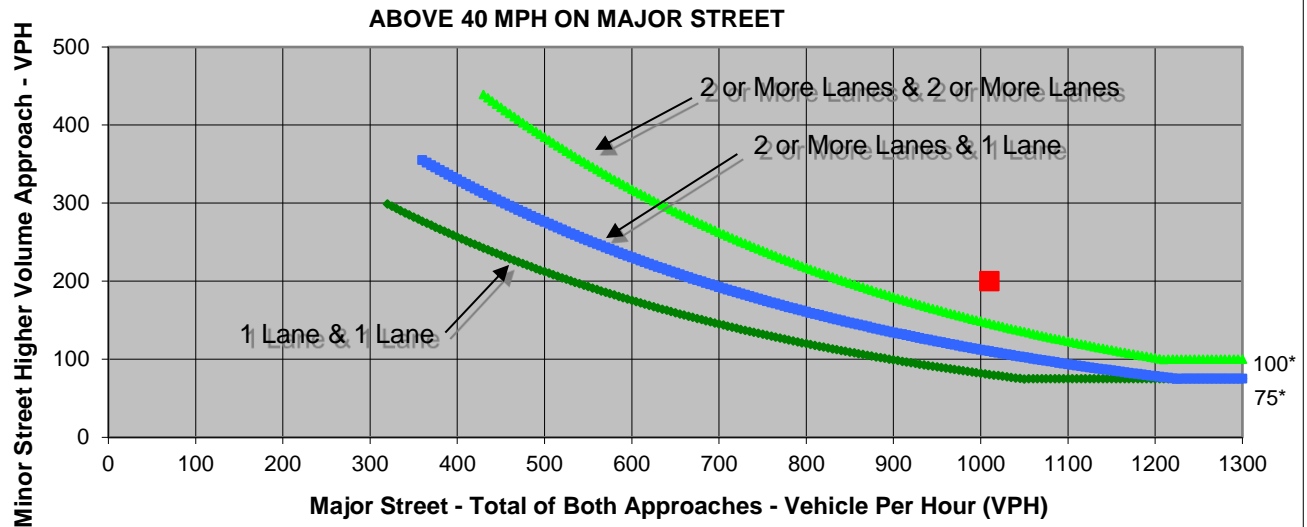
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	110	30	30
Through	50	60	490	340
Right	40	30	50	70
Total	120	200	570	440

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,010	200	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street S Walton Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

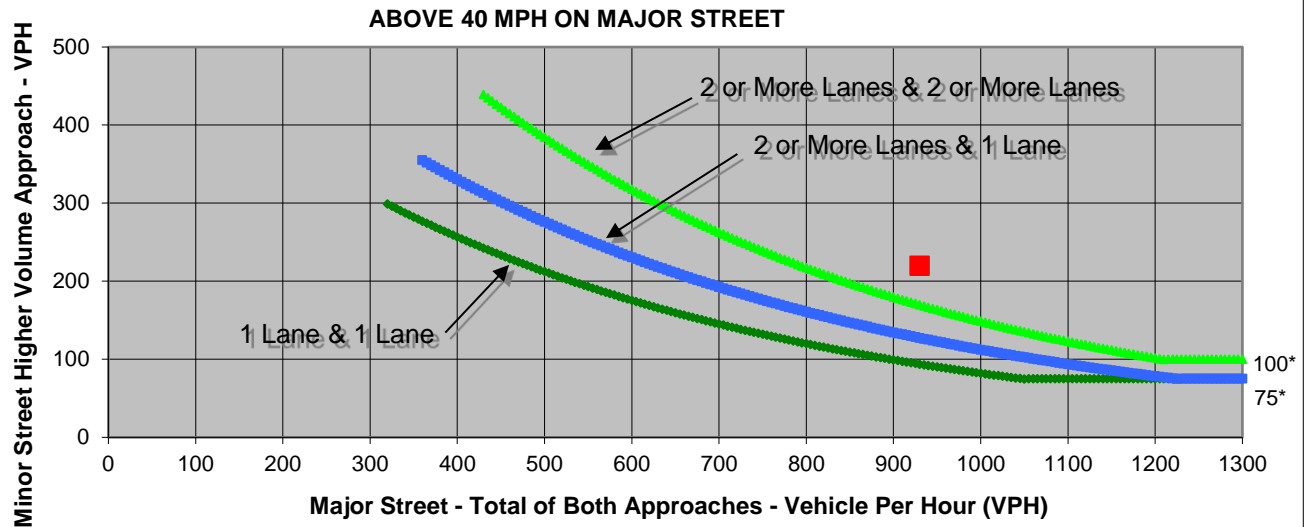
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	130	20	40
Through	70	60	290	460
Right	50	30	20	100
Total	150	220	330	600

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	930	220	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

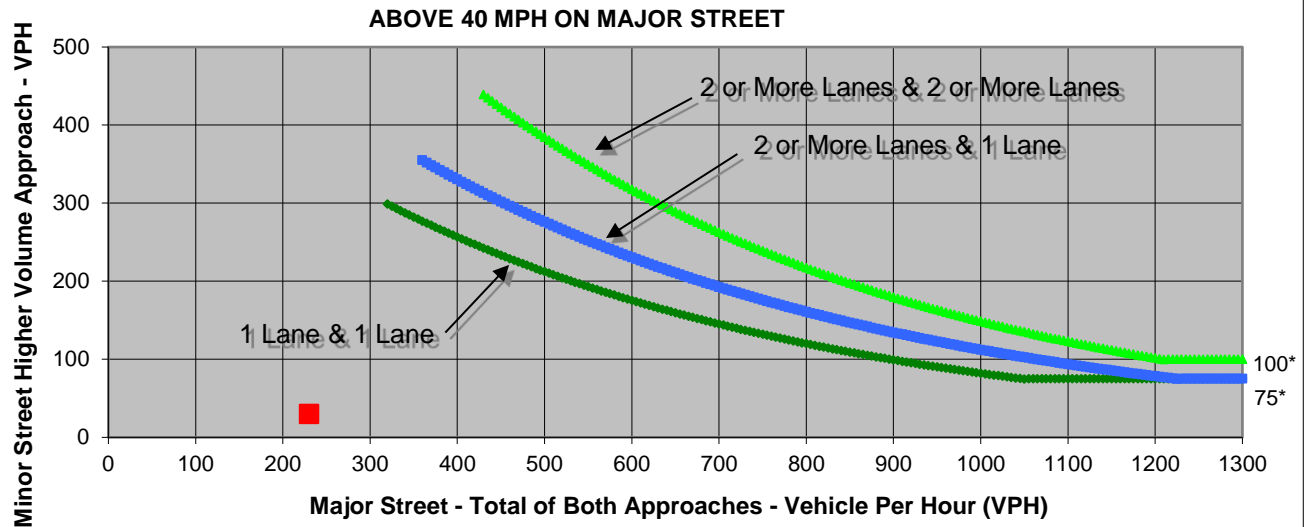
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	0	10
Through	90	100	0	0
Right	10	0	0	20
Total	100	130	0	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	230	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

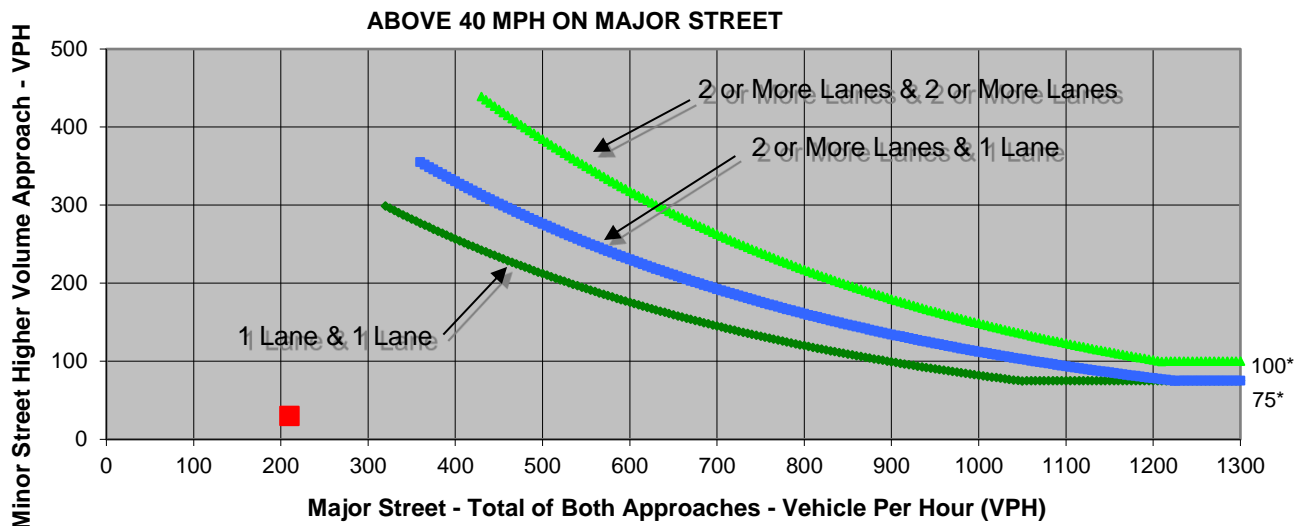
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	0
Through	100	80	0	0
Right	10	0	0	30
Total	110	100	0	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	210	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

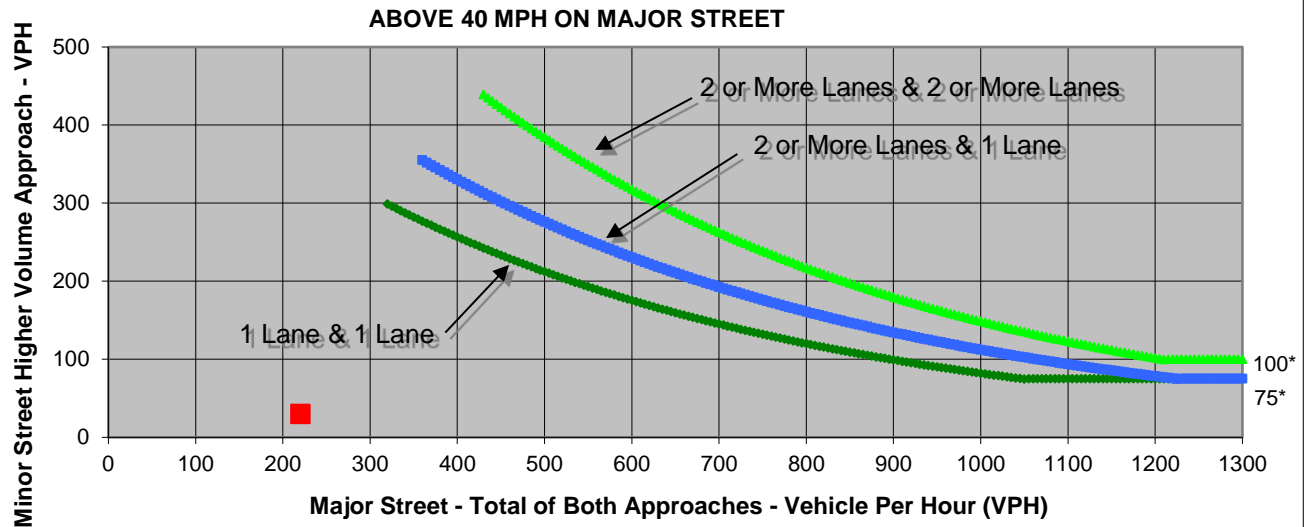
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	0
Through	90	100	10	10
Right	0	10	10	10
Total	100	120	30	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	220	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

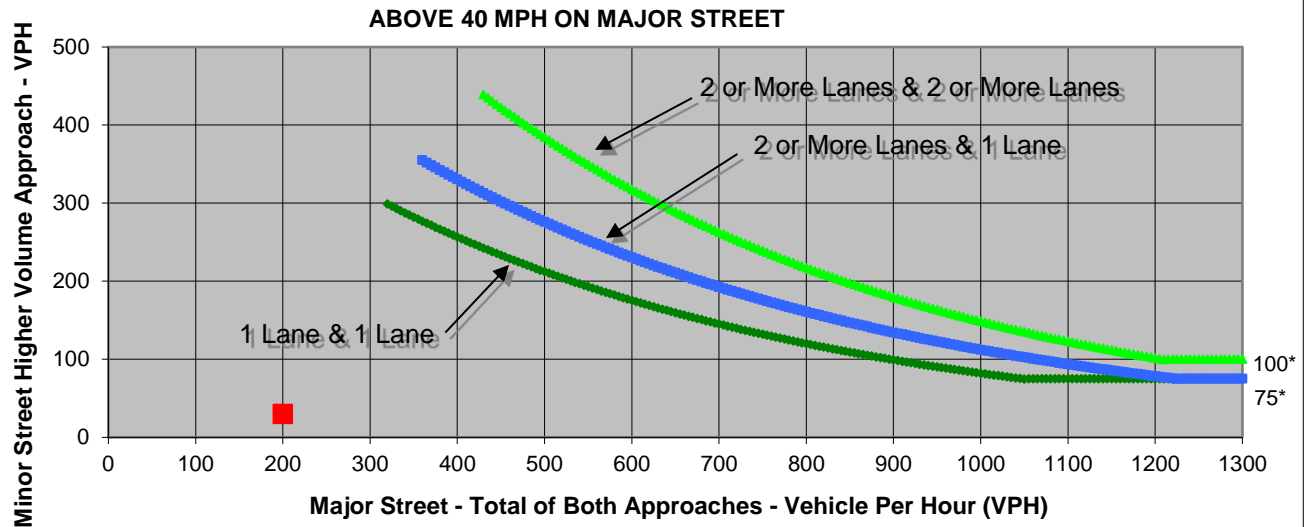
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	90	70	10	10
Right	10	10	10	10
Total	110	90	30	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	200	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

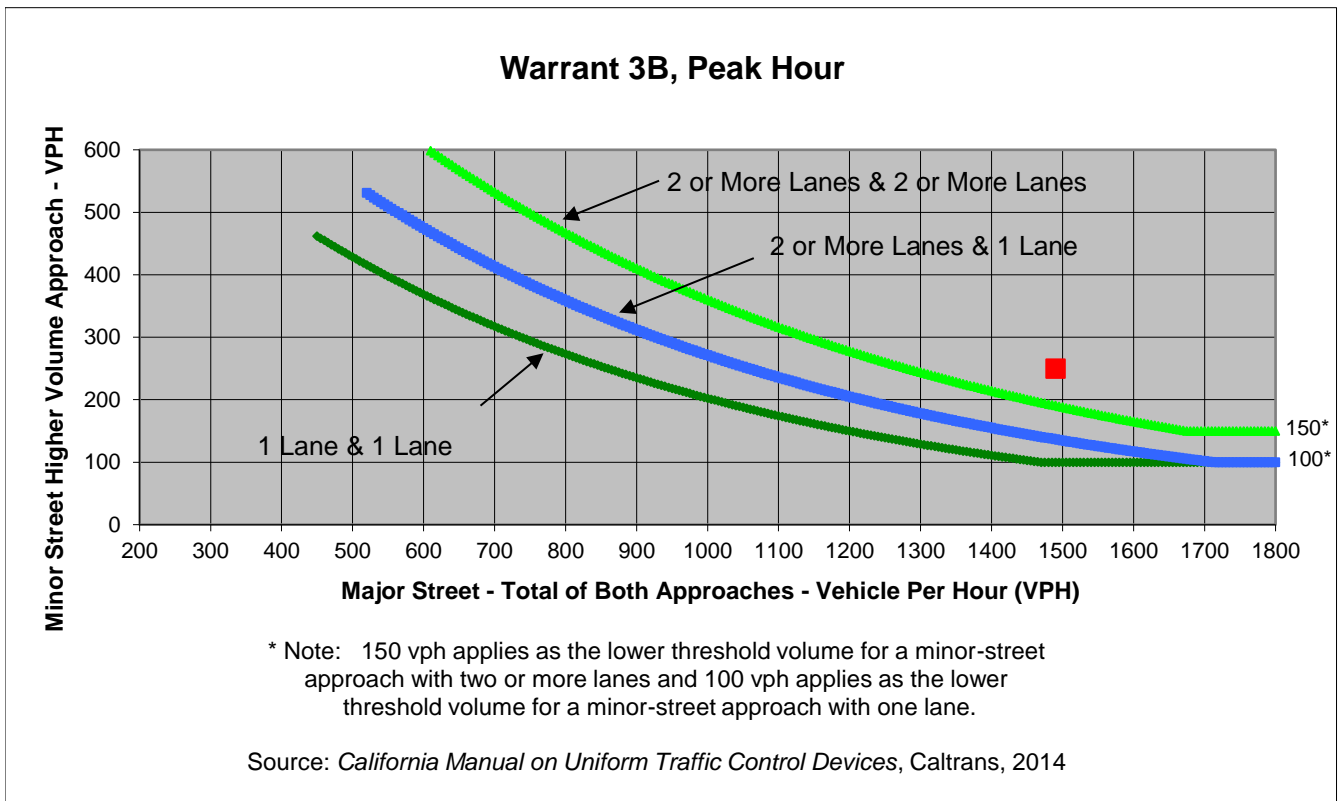
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	80
Through	0	0	820	460
Right	120	0	130	0
Total	250	0	950	540

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,490	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Phillips Rd

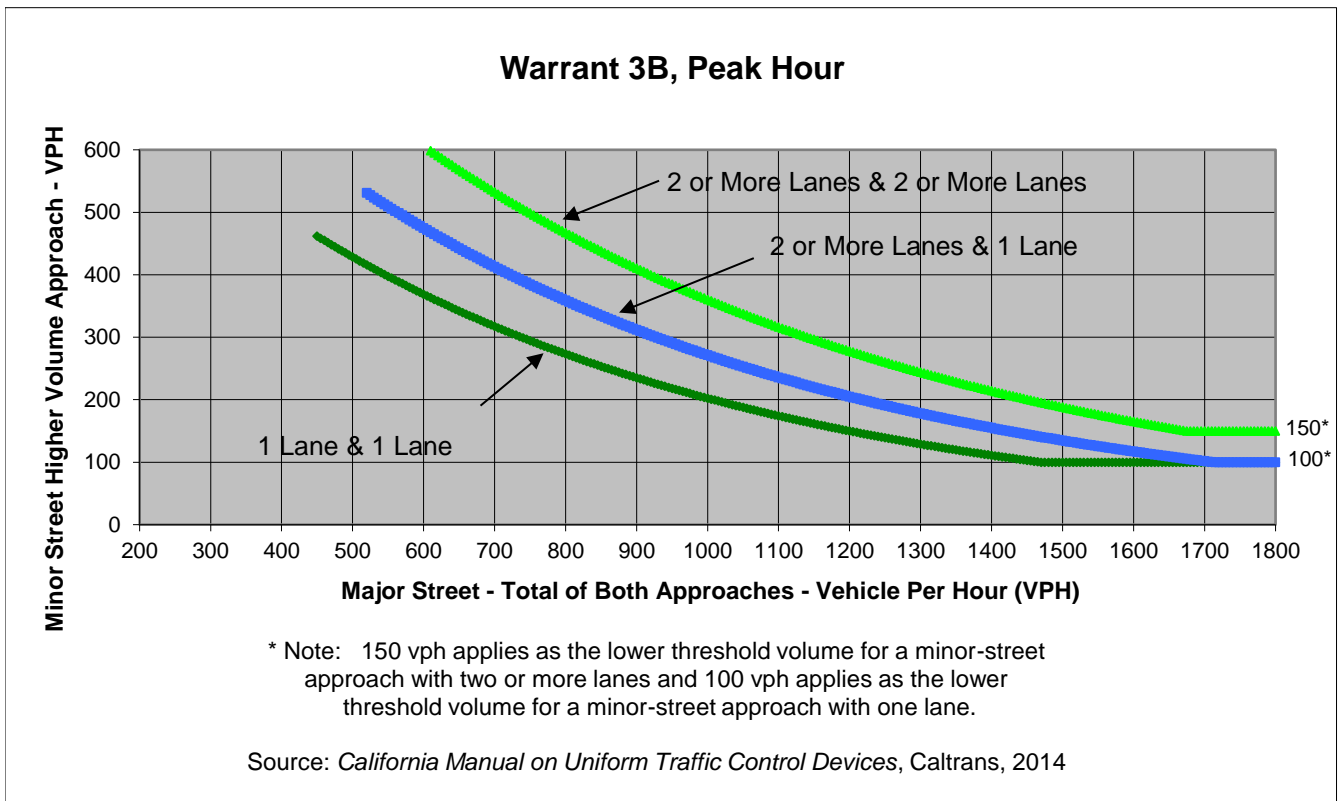
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	0	0	70
Through	0	0	820	1,000
Right	90	0	110	0
Total	190	0	930	1,070

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	2,000	190	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Railroad Ave

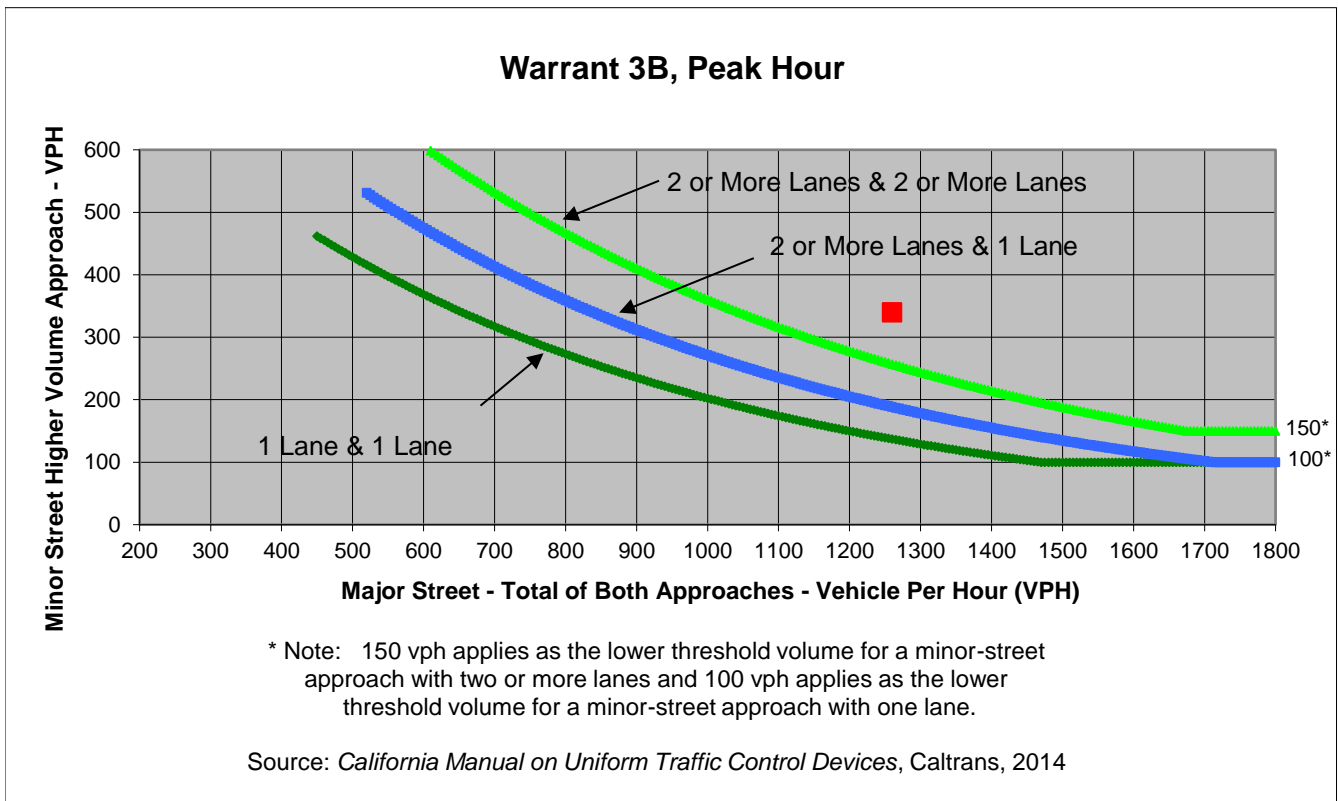
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	110	60	70	40
Through	140	90	800	250
Right	90	50	50	50
Total	340	200	920	340

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,260	340	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

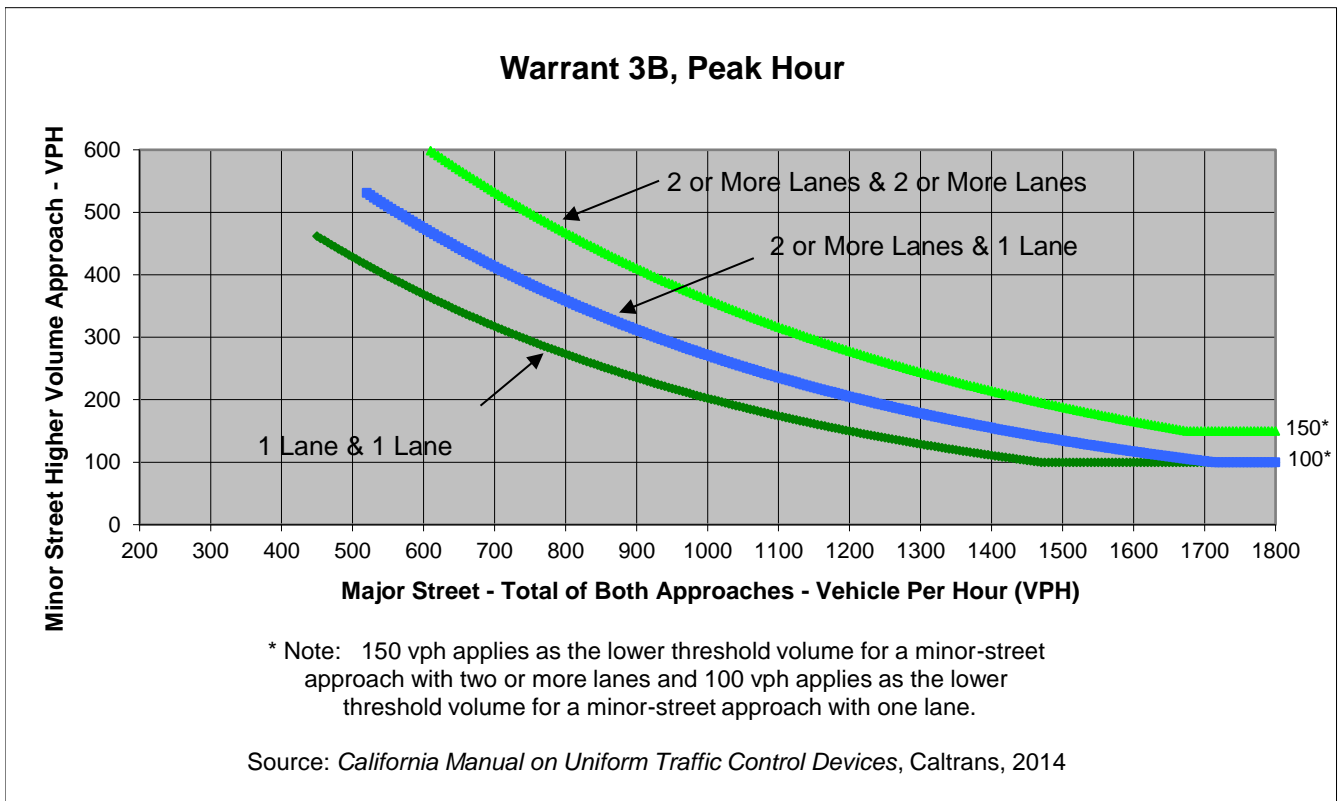
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	90	90	50	90
Through	100	110	590	910
Right	50	60	100	70
Total	240	260	740	1,070

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,810	260	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Philips Rd

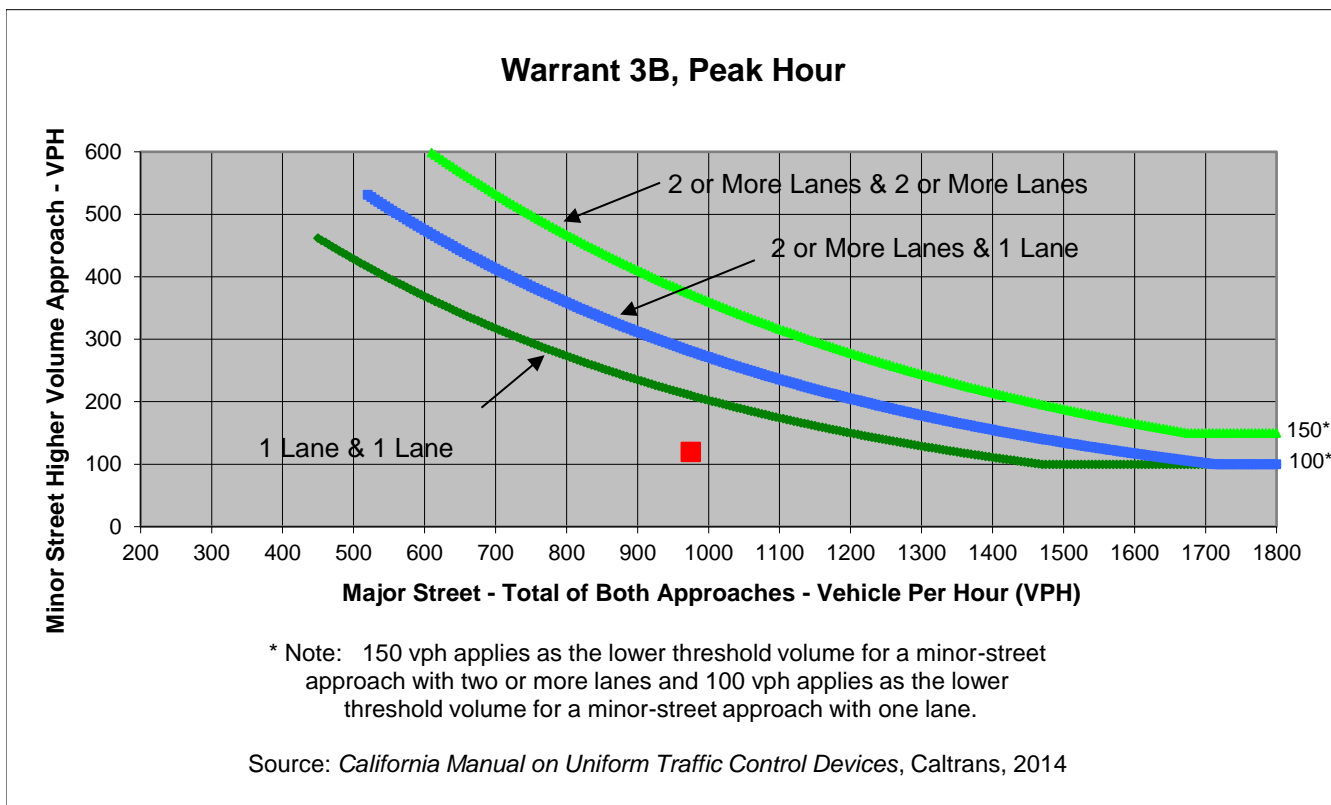
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	60	30	0
Through	0	0	390	495
Right	0	60	0	60
Total	0	120	420	555

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	975	120	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			



Major Street Bogue Rd
 Minor Street Philips Rd

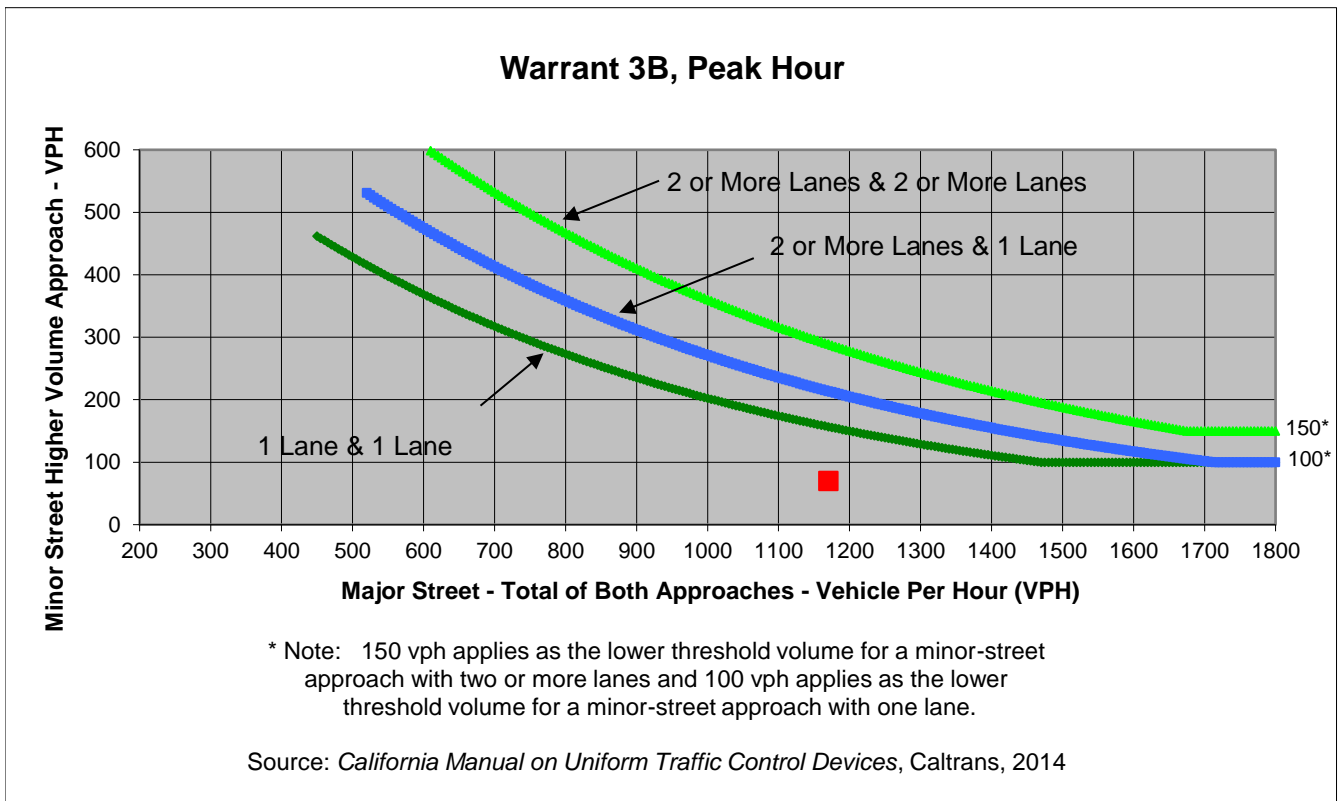
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	80	0
Through	0	0	690	380
Right	0	40	0	20
Total	0	70	770	400

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,170	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

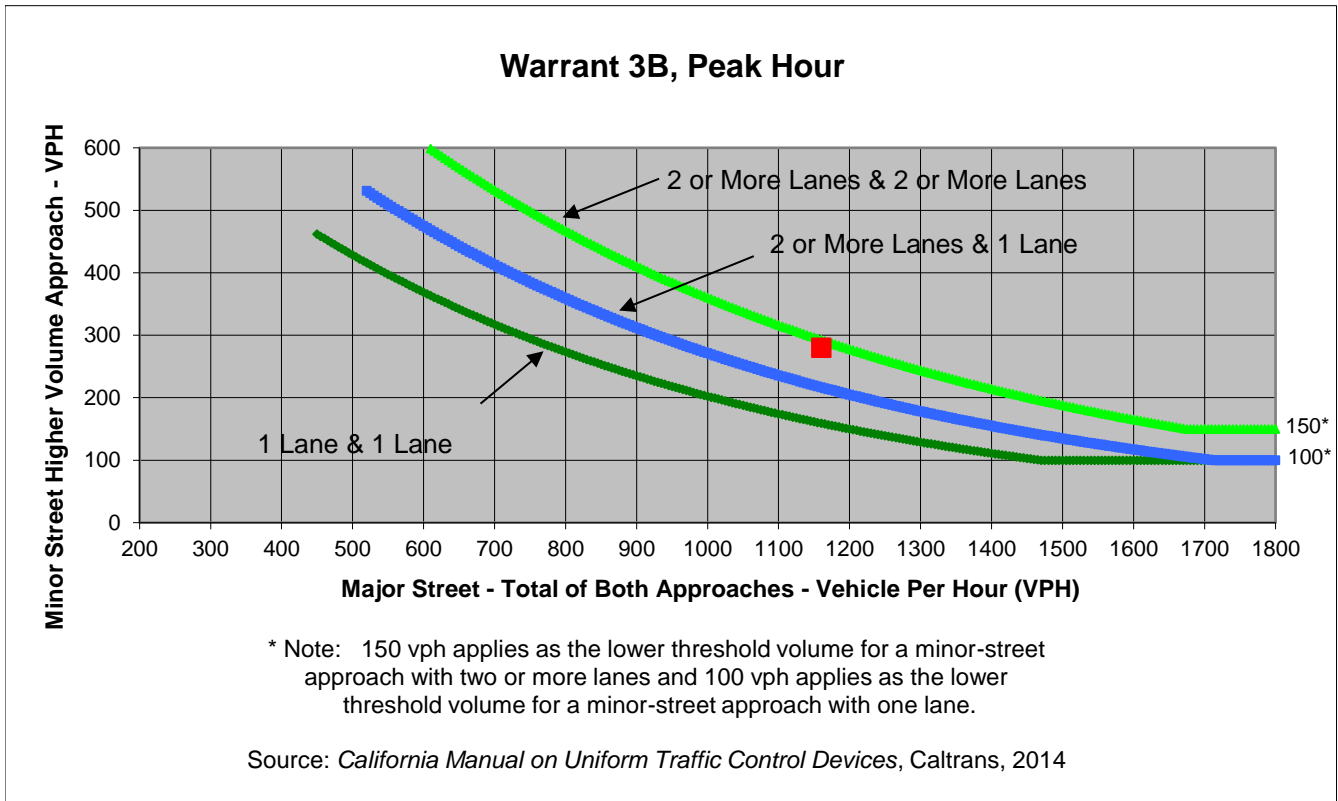
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	60	50	80
Through	110	110	400	540
Right	110	70	40	50
Total	280	240	490	670

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,160	280	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

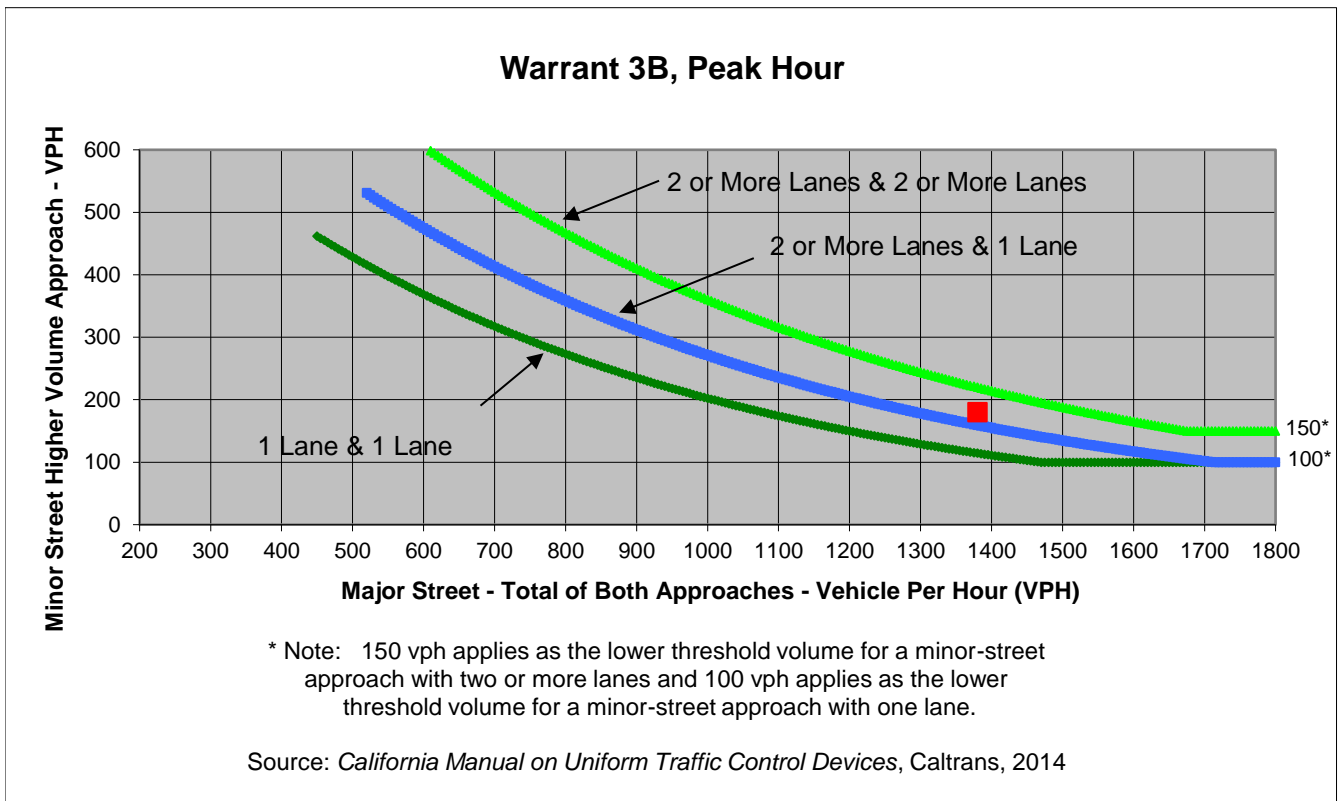
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	60	110	100
Through	70	60	600	500
Right	90	60	20	50
Total	180	180	730	650

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,380	180	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

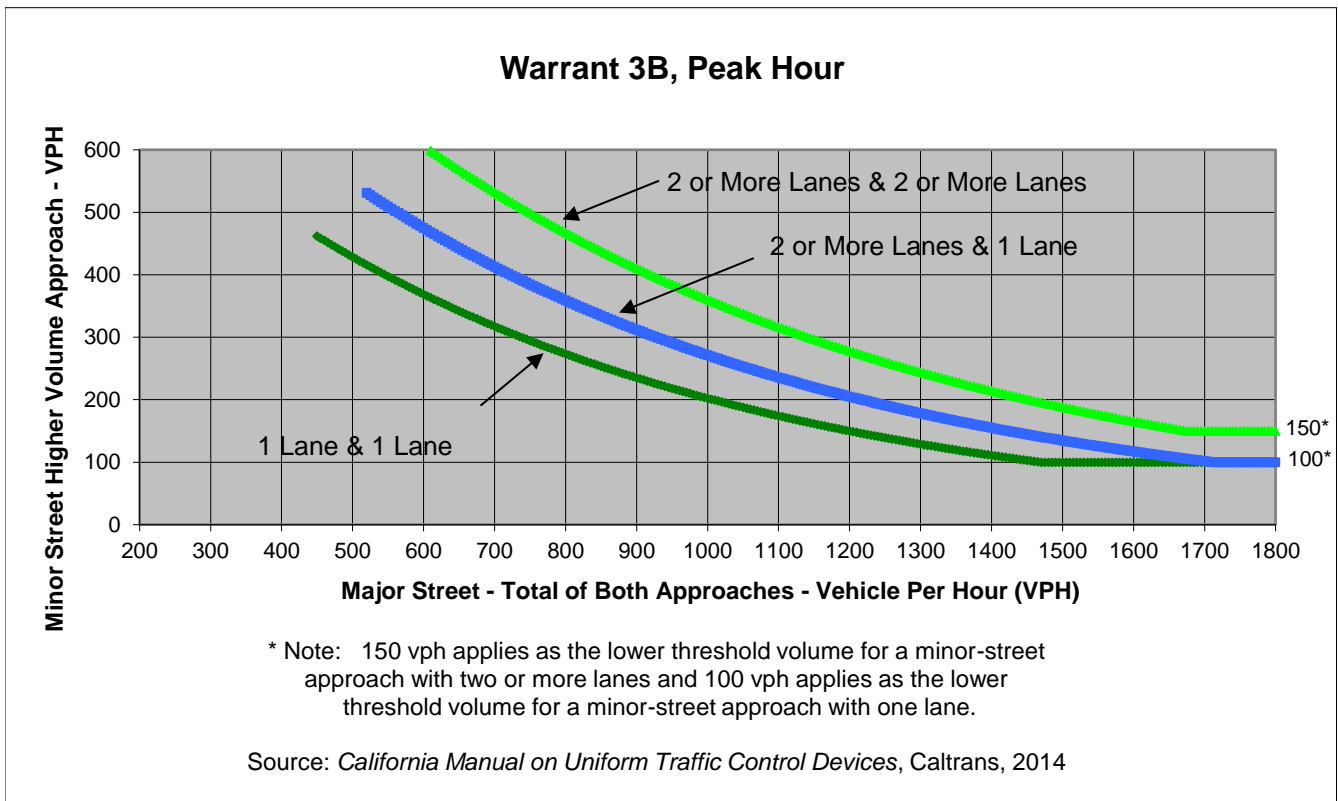
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	110	120	0	0
Right	0	50	20	0
Total	130	170	60	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	60	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

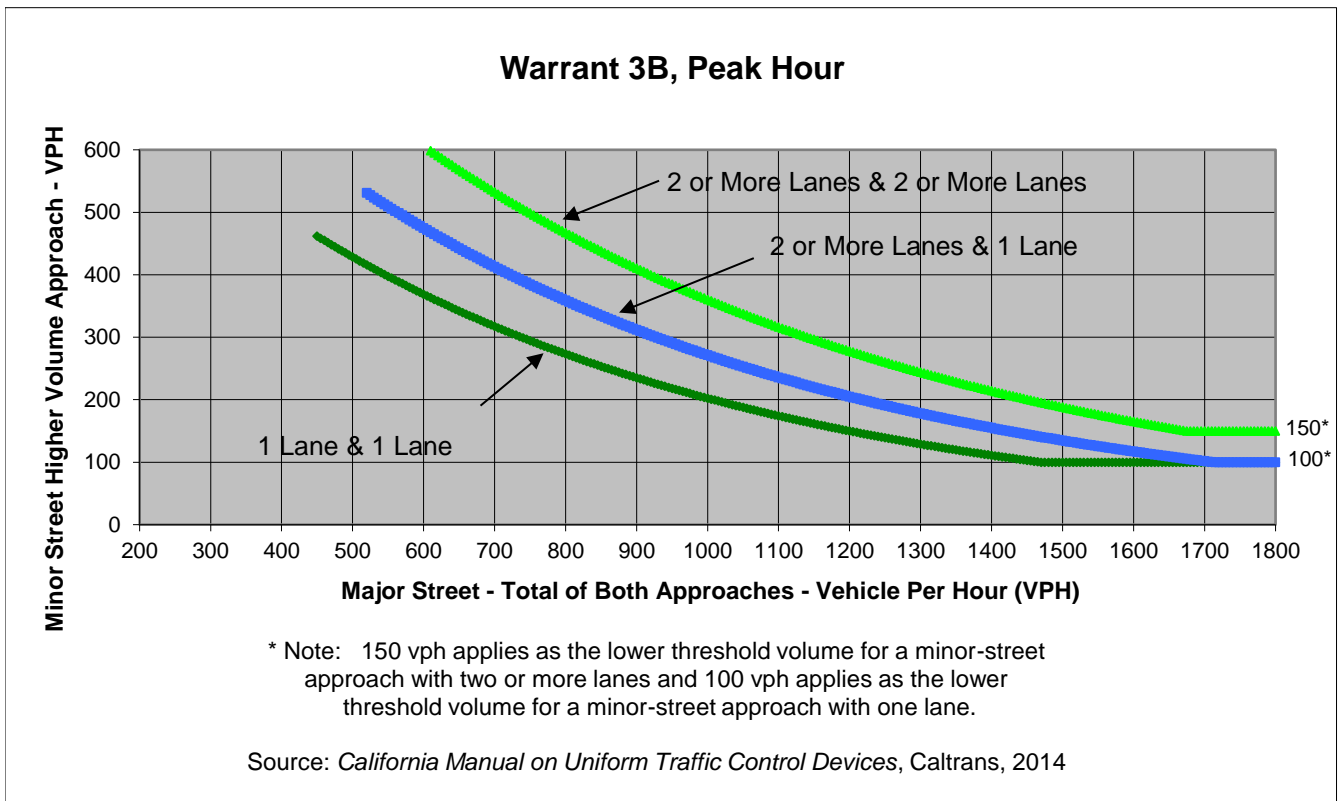
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	30	0
Through	90	70	0	0
Right	0	40	40	0
Total	110	110	70	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	70	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Wallace Dr

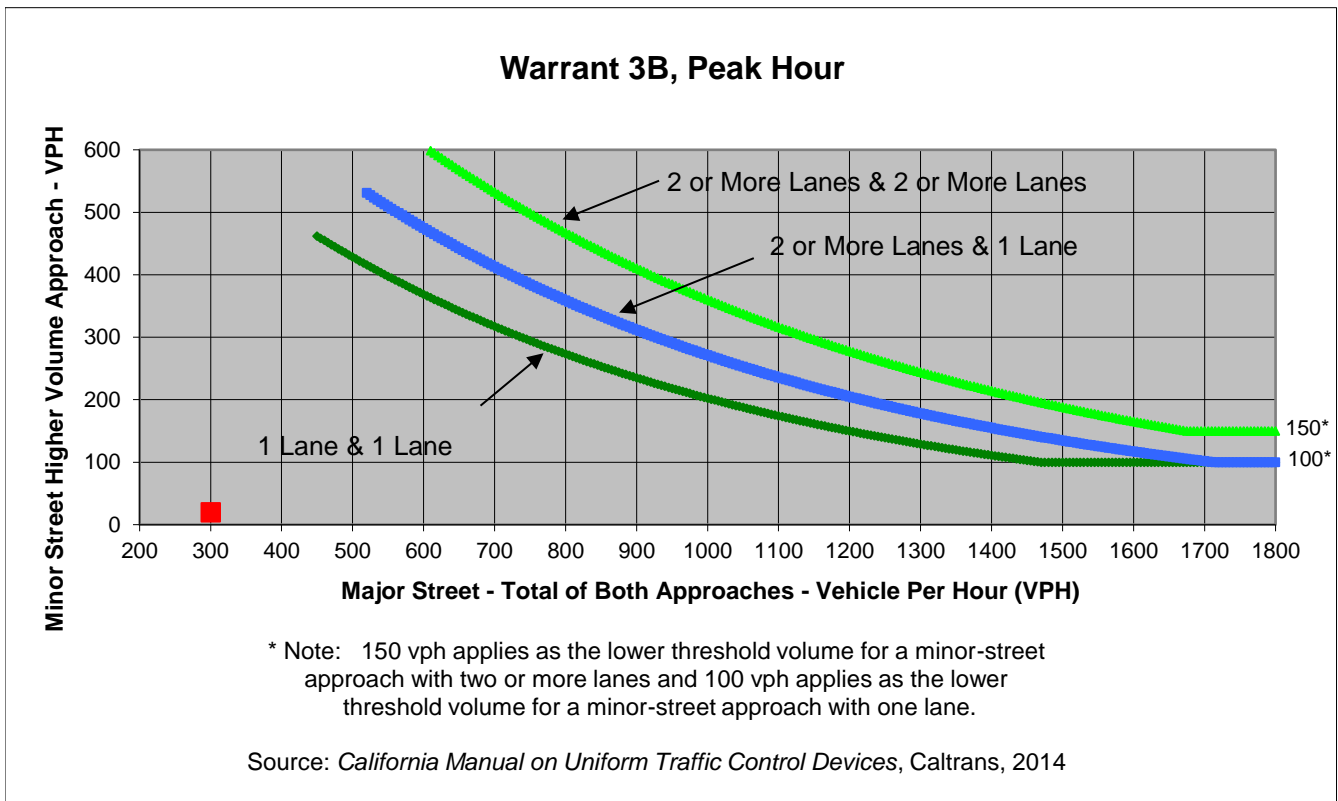
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	0	0	150	130
Right	10	0	10	0
Total	20	0	160	140

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	300	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Wallace Dr

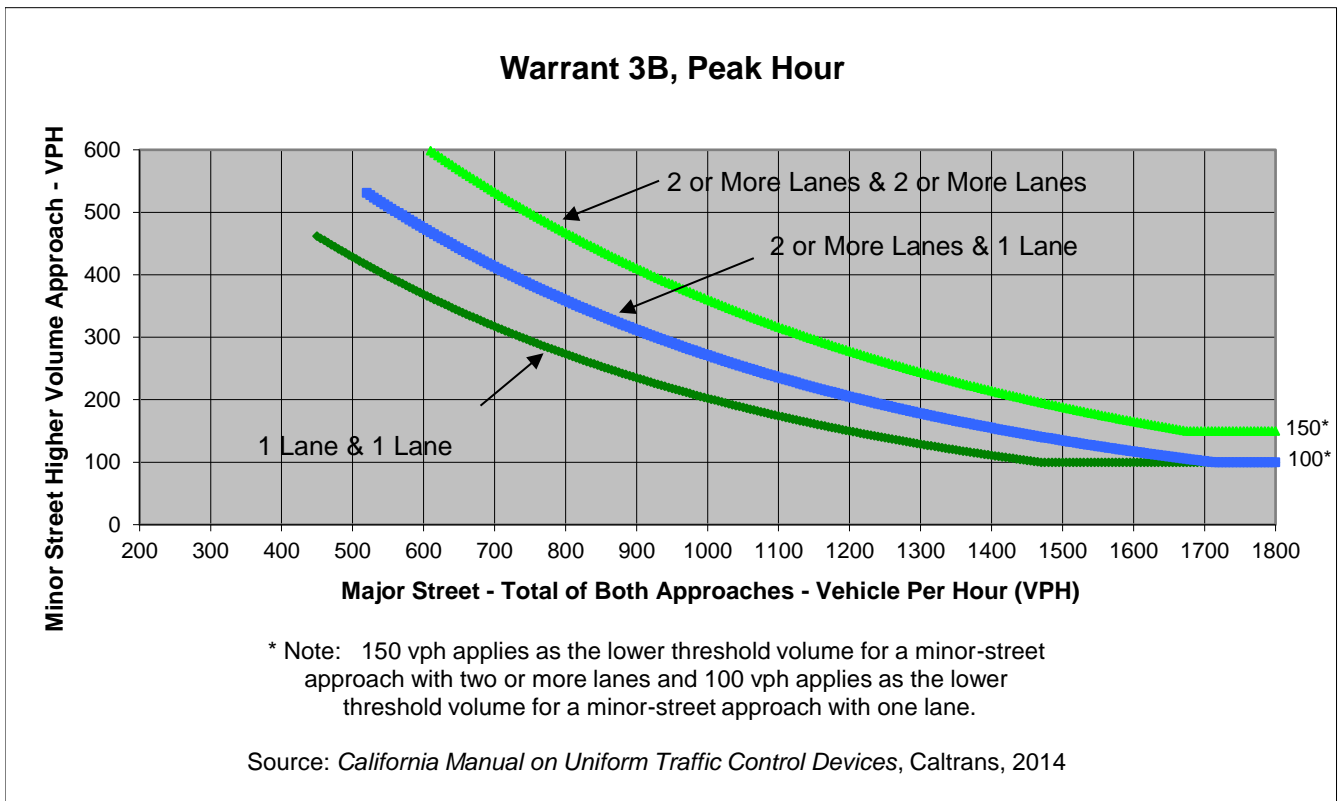
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	0	0	80	60
Right	10	0	10	0
Total	20	0	90	70

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	160	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

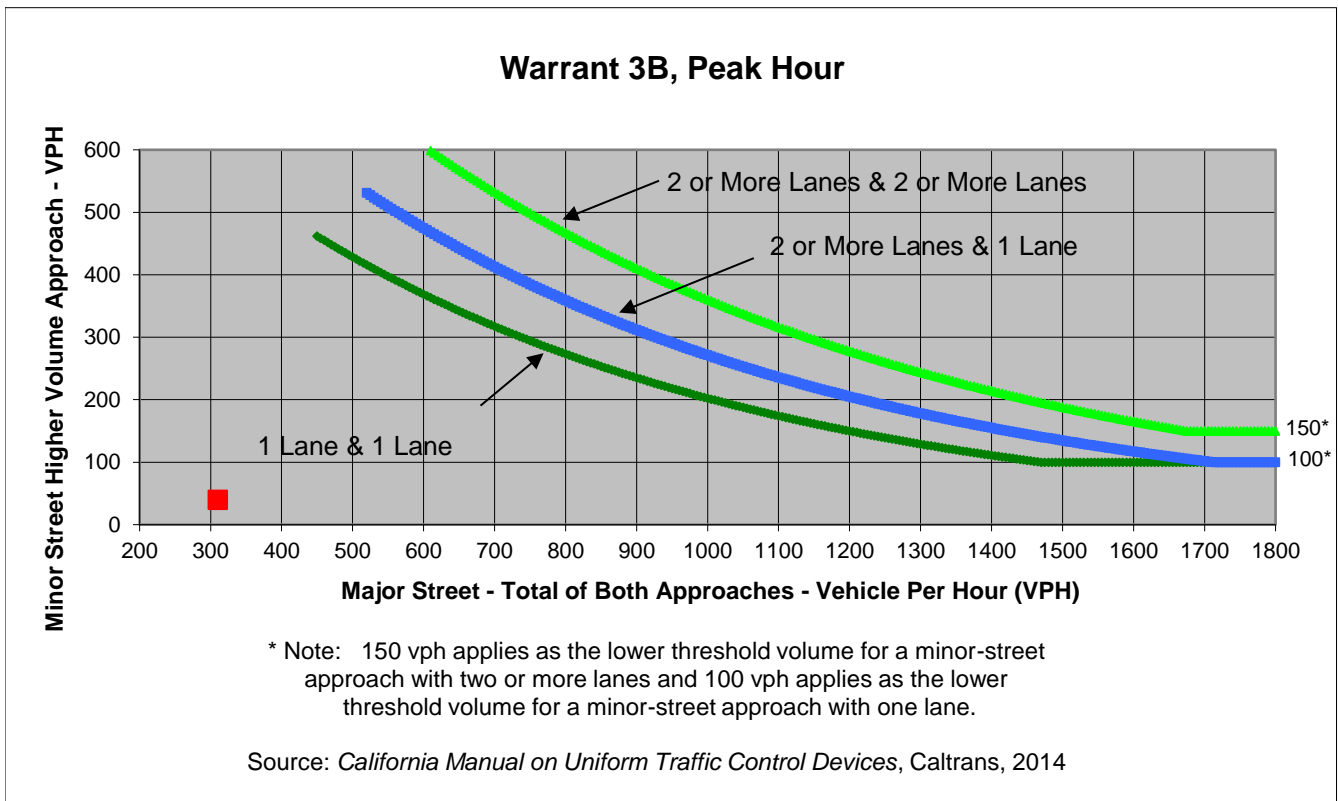
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	20
Through	0	0	140	130
Right	30	0	20	0
Total	40	0	160	150

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	310	40	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			

Major Street Stewart Rd
 Minor Street Muir Rd

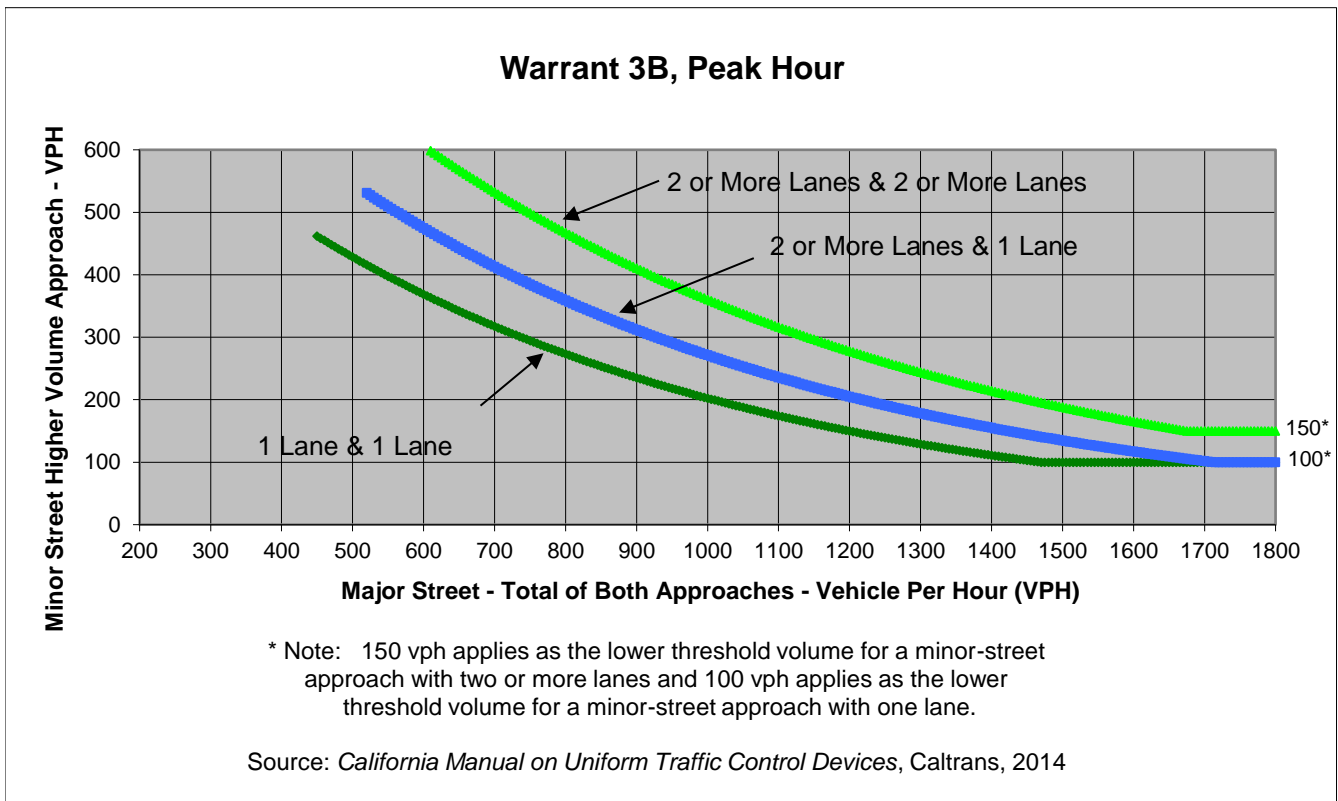
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	30
Through	0	0	70	50
Right	30	0	20	0
Total	50	0	90	80

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	170	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

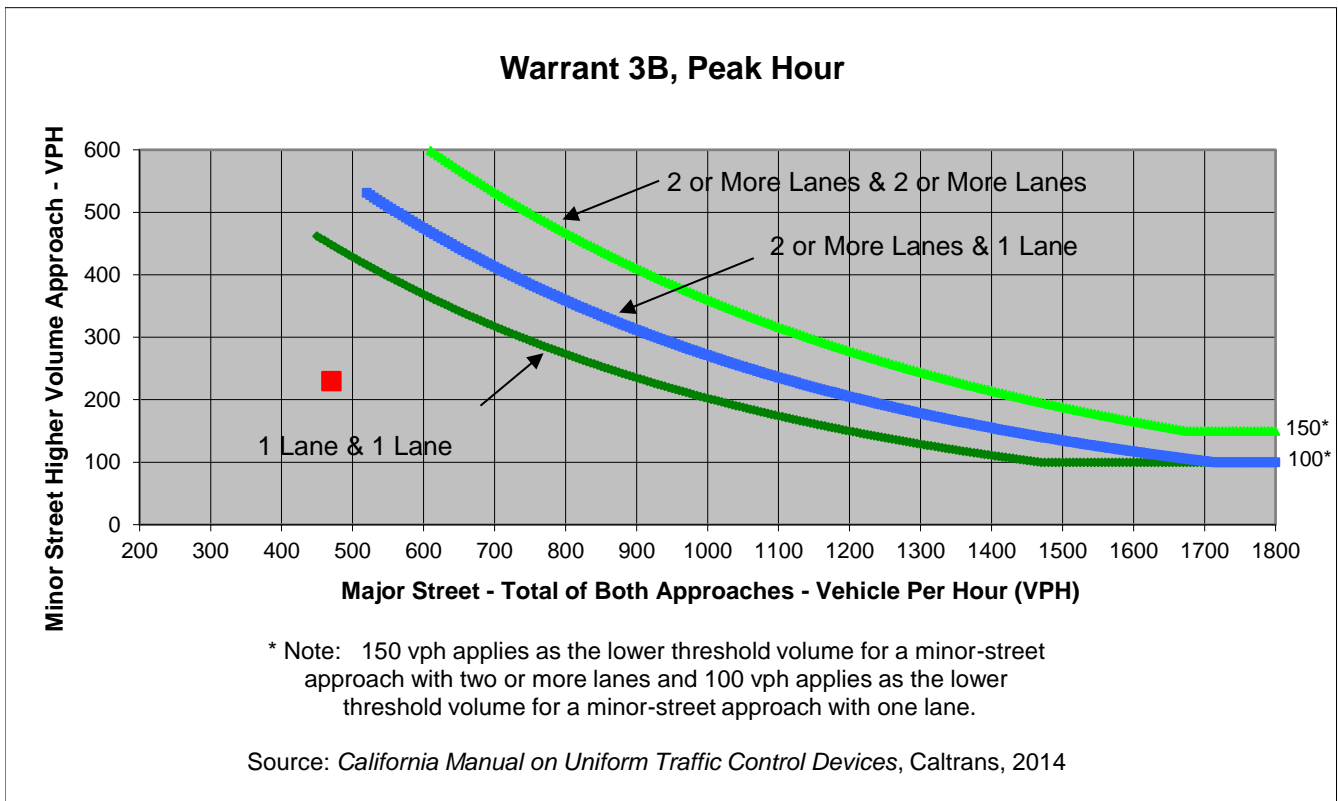
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	110	40	20
Through	40	100	130	120
Right	20	20	10	150
Total	70	230	180	290

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	470	230	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

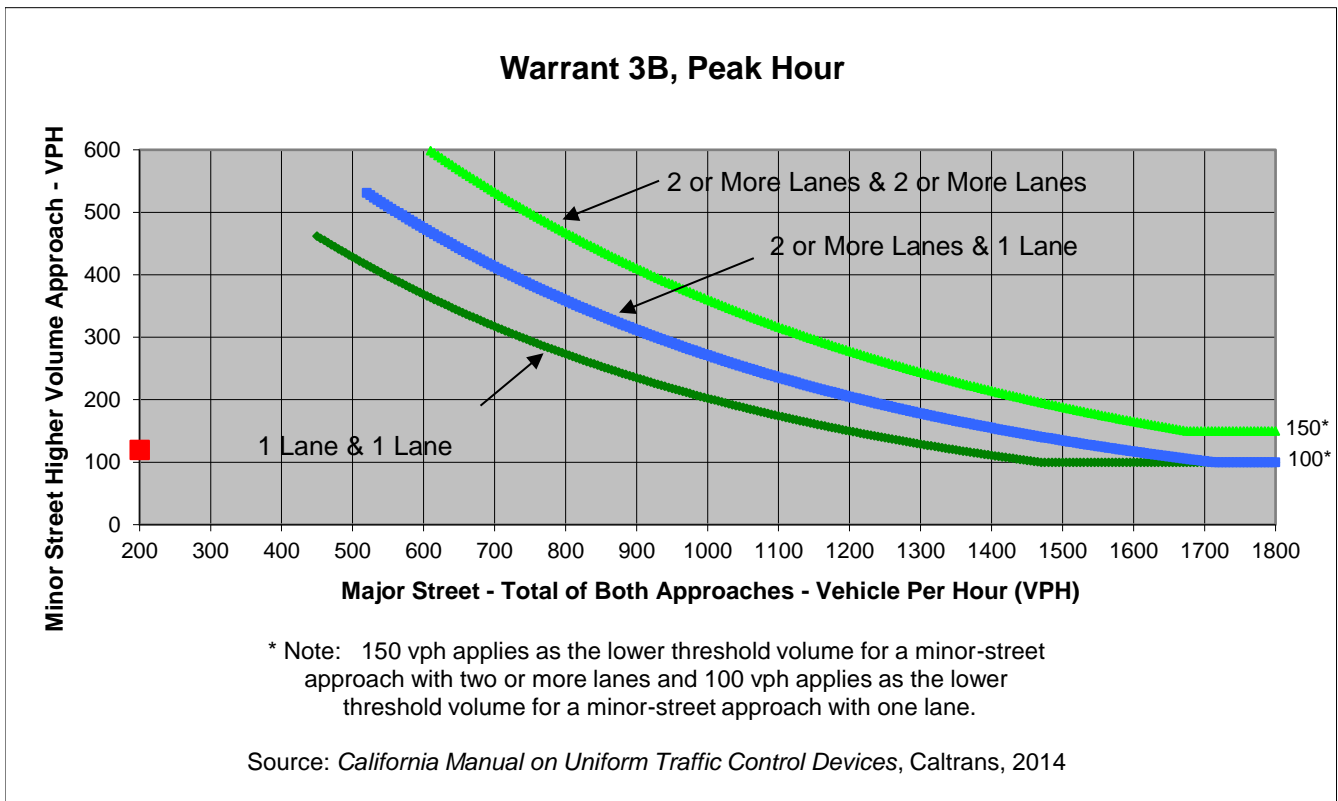
Project Bogue Stewart Master Plan
 Scenario Cumulative No Project
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	30	10
Through	60	50	70	50
Right	10	40	10	30
Total	80	120	110	90

Major Street Direction

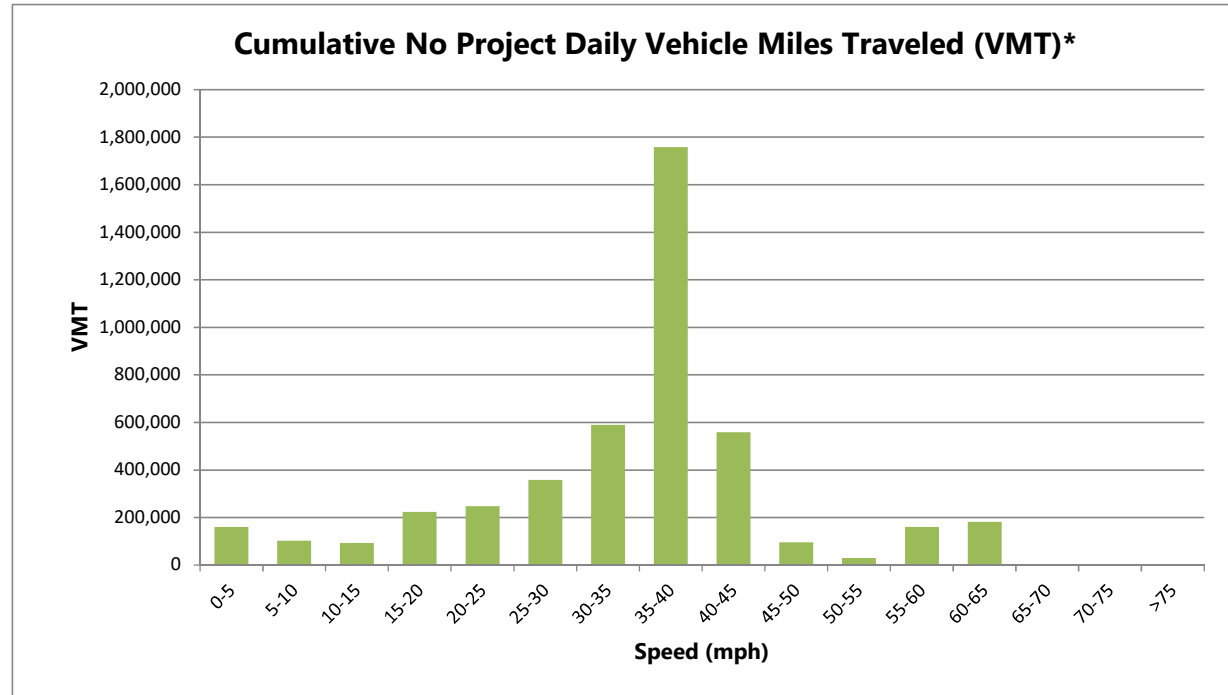
	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	200	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	160,307
>5	<=10	5-10	101,894
>10	<=15	10-15	92,099
>15	<=20	15-20	223,382
>20	<=25	20-25	247,064
>25	<=30	25-30	357,467
>30	<=35	30-35	589,292
>35	<=40	35-40	1,758,069
>40	<=45	40-45	557,679
>45	<=50	45-50	94,519
>50	<=55	50-55	29,521
>55	<=60	55-60	159,960
>60	<=65	60-65	181,659
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			4,552,912



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.6.1:

Cumulative Conditions Plus

Bogue Stewart Master Plan Buildout

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	360	221	61.3%	60.2	6.2	E
	Through	930	572	61.5%	38.9	3.9	D
	Right Turn	280	180	64.4%	28.2	4.8	C
	Subtotal	1,570	973	62.0%	41.7	2.5	D
SB	Left Turn	690	542	78.5%	133.5	11.1	F
	Through	1,260	1,068	84.8%	103.2	12.2	F
	Right Turn	170	147	86.4%	70.9	11.3	E
	Subtotal	2,120	1,757	82.9%	109.8	11.2	F
EB	Left Turn	110	102	92.7%	102.7	27.1	F
	Through	920	814	88.5%	90.8	11.5	F
	Right Turn	350	302	86.2%	67.8	14.3	E
	Subtotal	1,380	1,218	88.3%	86.4	13.2	F
WB	Left Turn	240	252	105.2%	69.5	20.6	E
	Through	810	790	97.6%	36.4	1.6	D
	Right Turn	200	197	98.3%	11.6	2.0	B
	Subtotal	1,250	1,239	99.2%	39.5	5.5	D
Total		6,320	5,188	82.1%	74.6	5.4	E

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	59	45.3%	90.7	21.0	F
	Through	1,240	694	55.9%	80.5	17.7	F
	Right Turn	60	28	46.0%	69.6	29.1	E
	Subtotal	1,430	780	54.6%	80.8	18.0	F
SB	Left Turn	605	486	80.3%	52.7	9.8	D
	Through	1,225	1,069	87.3%	28.8	4.4	C
	Right Turn	20	21	106.7%	17.3	3.1	B
	Subtotal	1,850	1,577	85.2%	36.1	6.0	D
EB	Left Turn	115	118	102.4%	58.4	8.8	E
	Through	130	119	91.7%	52.6	6.3	D
	Right Turn	100	100	99.7%	19.3	5.2	B
	Subtotal	345	337	97.6%	44.8	5.6	D
WB	Left Turn	130	125	96.5%	50.5	11.0	D
	Through	260	259	99.5%	46.7	6.8	D
	Right Turn	200	201	100.3%	31.4	6.6	C
	Subtotal	590	585	99.1%	42.4	4.2	D
Total		4,215	3,278	77.8%	48.6	5.5	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	64	53.4%	59.2	9.1	E
	Through	1,215	722	59.5%	47.0	9.8	D
	Right Turn	250	151	60.5%	19.6	5.2	B
	Subtotal	1,585	938	59.2%	43.5	8.0	D
SB	Left Turn	120	105	87.1%	46.9	7.9	D
	Through	1,205	1,045	86.7%	40.8	5.7	D
	Right Turn	130	117	89.7%	17.7	3.5	B
	Subtotal	1,455	1,266	87.0%	39.1	5.4	D
EB	Left Turn	50	40	81.0%	102.4	20.8	F
	Through	840	744	88.6%	65.9	18.1	E
	Right Turn	110	104	94.3%	69.4	15.0	E
	Subtotal	1,000	889	88.9%	68.0	16.9	E
WB	Left Turn	275	176	64.1%	197.2	49.4	F
	Through	320	311	97.3%	40.2	9.1	D
	Right Turn	165	169	102.1%	34.2	10.4	C
	Subtotal	760	656	86.3%	81.3	15.6	F
Total		4,800	3,748	78.1%	54.3	5.4	D

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	165	119	72.0%	73.3	12.4	E
	Through	1,260	813	64.5%	71.9	14.4	E
	Right Turn	430	258	60.1%	58.7	15.7	E
	Subtotal	1,855	1,190	64.2%	69.2	14.1	E
SB	Left Turn	100	76	75.8%	55.4	13.4	E
	Through	1,000	798	79.8%	50.3	10.8	D
	Right Turn	490	375	76.5%	26.8	5.4	C
	Subtotal	1,590	1,248	78.5%	43.7	7.9	D
EB	Left Turn	215	122	56.8%	174.5	33.9	F
	Through	930	604	64.9%	162.4	18.4	F
	Right Turn	155	134	86.7%	55.9	7.2	E
	Subtotal	1,300	860	66.2%	147.7	18.2	F
WB	Left Turn	270	143	52.9%	187.5	38.1	F
	Through	440	299	68.0%	146.9	38.2	F
	Right Turn	115	67	57.9%	132.3	37.3	F
	Subtotal	825	509	61.6%	156.7	37.3	F
Total		5,570	3,807	68.4%	90.1	7.1	F

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	35	21	58.9%	23.4	7.8	C
	Through	1,810	1,366	75.5%	7.5	0.8	A
	Right Turn	45	28	61.3%	7.5	2.5	A
	Subtotal	1,890	1,415	74.8%	7.8	0.7	A
SB	Left Turn	60	40	67.5%	32.2	6.7	D
	Through	1,345	1,022	76.0%	8.3	0.6	A
	Right Turn	20	18	88.3%	9.5	2.8	A
	Subtotal	1,425	1,080	75.8%	9.3	0.5	A
EB	Left Turn	10	8	84.6%	87.6	58.8	F
	Through	10	6	62.6%	45.3	44.9	E
	Right Turn	30	35	115.3%	23.0	14.2	C
	Subtotal	50	49	98.6%	38.1	17.7	E
WB	Left Turn	10	7	66.2%	106.0	77.5	F
	Through	10	7	66.2%	91.8	103.3	F
	Right Turn	35	24	68.3%	51.2	32.6	F
	Subtotal	55	37	67.6%	72.1	61.9	F
Total		3,420	2,581	75.5%	9.7	0.8	A

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	17	43.2%	61.6	13.5	E
	Through	1,680	1,246	74.2%	36.5	4.7	D
	Right Turn	80	64	79.6%	16.9	3.5	B
	Subtotal	1,800	1,327	73.7%	35.9	4.6	D
SB	Left Turn	110	76	68.9%	77.8	15.0	E
	Through	1,245	894	71.8%	40.5	7.7	D
	Right Turn	30	23	76.1%	16.8	4.8	B
	Subtotal	1,385	993	71.7%	42.9	7.3	D
EB	Left Turn	90	86	95.7%	47.9	5.9	D
	Through	110	91	83.0%	53.7	13.0	D
	Right Turn	50	47	93.5%	39.8	13.7	D
	Subtotal	250	224	89.6%	49.0	9.4	D
WB	Left Turn	85	72	84.9%	54.7	10.7	D
	Through	60	60	100.6%	47.0	8.2	D
	Right Turn	120	120	100.0%	34.9	10.0	C
	Subtotal	265	252	95.3%	43.6	8.7	D
Total		3,700	2,796	75.6%	40.1	3.8	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	255	176	69.0%	90.3	27.7	F
	Through	1,265	961	76.0%	69.5	11.1	E
	Right Turn	170	118	69.3%	31.4	5.4	C
	Subtotal	1,690	1,255	74.2%	68.9	10.9	E
SB	Left Turn	130	87	66.8%	51.2	8.6	D
	Through	1,170	746	63.8%	50.5	8.9	D
	Right Turn	80	60	75.4%	18.6	4.6	B
	Subtotal	1,380	894	64.7%	48.5	7.6	D
EB	Left Turn	275	217	79.0%	106.0	42.4	F
	Through	660	623	94.3%	51.3	15.4	D
	Right Turn	240	229	95.2%	37.3	20.7	D
	Subtotal	1,175	1,068	90.9%	59.6	21.9	E
WB	Left Turn	160	169	105.8%	53.0	8.7	D
	Through	490	462	94.3%	34.6	1.8	C
	Right Turn	260	257	98.9%	17.9	3.8	B
	Subtotal	910	888	97.6%	33.5	3.1	C
Total		5,155	4,105	79.6%	54.3	5.3	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	30	24	79.7%	18.2	9.1	C
	Through	1,580	1,310	82.9%	11.3	0.7	B
	Right Turn	20	18	88.3%	9.7	3.2	A
	Subtotal	1,630	1,351	82.9%	11.4	0.7	B
SB	Left Turn	30	19	63.8%	21.5	10.2	C
	Through	1,490	1,066	71.6%	10.7	1.3	B
	Right Turn	50	34	67.7%	12.1	3.3	B
	Subtotal	1,570	1,119	71.3%	10.9	1.3	B
EB	Left Turn	65	40	61.1%	164.3	84.2	F
	Through	10	7	73.6%	147.1	96.5	F
	Right Turn	40	26	64.4%	82.8	53.3	F
	Subtotal	115	73	63.4%	130.7	67.6	F
WB	Left Turn	30	15	49.1%	169.8	109.6	F
	Through	10	7	69.9%	144.5	62.1	F
	Right Turn	45	36	81.0%	76.0	75.0	F
	Subtotal	85	58	68.4%	102.6	69.6	F
Total		3,400	2,601	76.5%	16.1	2.1	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	255	212	83.3%	72.1	9.4	E
	Through	955	818	85.6%	69.7	11.5	E
	Right Turn	125	102	81.3%	39.9	12.6	D
	Subtotal	1,335	1,132	84.8%	67.6	10.3	E
SB	Left Turn	285	185	64.9%	69.3	6.8	E
	Through	990	659	66.6%	54.4	5.4	D
	Right Turn	285	189	66.2%	24.1	2.9	C
	Subtotal	1,560	1,033	66.2%	51.6	4.5	D
EB	Left Turn	205	163	79.7%	89.8	18.3	F
	Through	370	298	80.7%	93.9	22.4	F
	Right Turn	445	306	68.7%	140.6	33.0	F
	Subtotal	1,020	768	75.3%	111.9	23.7	F
WB	Left Turn	195	181	92.7%	70.6	14.2	E
	Through	420	376	89.5%	43.3	4.3	D
	Right Turn	470	398	84.6%	42.5	6.4	D
	Subtotal	1,085	955	88.0%	48.4	6.0	D
Total		5,000	3,887	77.7%	67.2	5.2	E

Intersection 10 SR 99/Stewarts Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	40	35	87.4%	29.5	10.4	D
	Through	1,090	1,057	97.0%	13.6	1.2	B
	Right Turn	70	67	95.7%	11.9	1.7	B
	Subtotal	1,200	1,159	96.6%	14.0	1.3	B
SB	Left Turn	135	94	69.8%	30.1	5.8	D
	Through	1,475	1,024	69.4%	10.8	1.5	B
	Right Turn	20	15	75.4%	14.7	4.4	B
	Subtotal	1,630	1,133	69.5%	12.5	1.8	B
EB	Left Turn	20	10	51.5%	287.6	310.2	F
	Through	20	25	127.0%	191.0	217.2	F
	Right Turn	60	30	50.3%	199.5	304.9	F
	Subtotal	100	66	65.9%	202.8	255.9	F
WB	Left Turn	110	41	37.5%	472.3	195.2	F
	Through	30	11	36.8%	467.5	225.9	F
	Right Turn	220	98	44.7%	352.7	167.2	F
	Subtotal	360	151	41.8%	389.4	170.3	F
Total		3,290	2,508	76.2%	35.7	4.8	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	8	77.3%	22.5	13.3	C
	Through	1,170	1,154	98.7%	9.2	0.8	A
	Right Turn	10	8	81.0%	7.6	2.2	A
	Subtotal	1,190	1,170	98.3%	9.2	0.8	A
SB	Left Turn	20	8	42.3%	26.8	13.8	D
	Through	1,615	1,066	66.0%	16.2	1.7	C
	Right Turn	10	4	40.5%	12.7	2.3	B
	Subtotal	1,645	1,079	65.6%	16.3	1.6	C
EB	Left Turn	10	5	47.8%	67.0	90.8	F
	Through	10	8	77.3%	49.6	39.8	E
	Right Turn	10	7	73.6%	15.5	8.4	C
	Subtotal	30	20	66.2%	39.4	16.1	E
WB	Left Turn	10	8	84.6%	49.5	43.5	E
	Through	10	9	88.3%	55.3	39.9	F
	Right Turn	20	20	101.2%	21.3	17.3	C
	Subtotal	40	38	93.8%	38.3	23.5	E
Total		2,905	2,307	79.4%	13.3	0.7	B

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	8	84.6%	10.5	6.1	B
	Through	1,180	1,180	100.0%	4.9	0.6	A
	Right Turn	10	8	84.6%	4.4	2.8	A
	Subtotal	1,200	1,197	99.7%	5.0	0.6	A
SB	Left Turn	10	3	29.4%	26.6	18.9	D
	Through	1,615	1,043	64.6%	17.1	1.7	C
	Right Turn	10	7	69.9%	18.1	2.0	C
	Subtotal	1,635	1,052	64.4%	17.2	1.7	C
EB	Left Turn						
	Through						
	Right Turn	10	7	69.9%	5.5	3.5	A
	Subtotal	10	7	69.9%	5.5	3.5	A
WB	Left Turn	10	6	62.6%	19.5	20.1	C
	Through						
	Right Turn	10	10	95.7%	10.4	9.1	B
	Subtotal	20	16	79.1%	18.7	14.4	C
Total		2,865	2,272	79.3%	10.7	1.0	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	10	99.4%	50.3	26.4	D
	Through	1,035	961	92.8%	26.0	2.9	C
	Right Turn	20	27	134.3%	25.1	7.3	C
	Subtotal	1,065	998	93.7%	26.2	2.9	C
SB	Left Turn	80	44	54.7%	61.8	10.8	E
	Through	1,535	930	60.6%	34.2	2.9	C
	Right Turn	20	11	55.2%	28.8	14.5	C
	Subtotal	1,635	985	60.2%	35.4	2.7	D
EB	Left Turn	30	27	90.8%	33.0	13.6	C
	Through	100	97	96.8%	34.4	3.7	C
	Right Turn	10	11	106.7%	14.8	11.9	B
	Subtotal	140	135	96.2%	32.9	4.2	C
WB	Left Turn	30	35	116.5%	35.1	11.0	D
	Through	60	61	102.4%	34.5	9.8	C
	Right Turn	135	138	101.9%	27.1	9.1	C
	Subtotal	225	234	104.0%	30.2	8.7	C
Total		3,065	2,351	76.7%	31.0	2.3	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	130	99.9%	38.3	19.9	E
	Through						
	Right Turn	120	109	90.8%	28.4	24.0	D
	Subtotal	250	239	95.5%	33.8	21.7	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	810	694	85.7%	3.6	0.2	A
	Right Turn	130	114	87.8%	3.6	0.2	A
	Subtotal	940	808	86.0%	3.6	0.2	A
WB	Left Turn	80	75	94.3%	10.7	2.1	B
	Through	470	477	101.4%	3.1	0.6	A
	Right Turn						
	Subtotal	550	552	100.4%	4.1	0.7	A
Total		1,740	1,599	91.9%	8.5	3.8	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	335	284	84.9%	119.7	51.1	F
	Through	10	7	73.6%	123.9	109.7	F
	Right Turn	10	8	81.0%	2.7	1.3	A
	Subtotal	355	300	84.5%	117.0	50.0	F
SB	Left Turn	60	51	84.6%	26.3	11.9	D
	Through	20	18	92.0%	53.6	22.6	F
	Right Turn	60	60	100.0%	18.5	8.8	C
	Subtotal	140	129	92.3%	26.5	8.0	D
EB	Left Turn	30	21	68.7%	8.3	5.2	A
	Through	450	340	75.5%	3.0	0.2	A
	Right Turn	120	98	81.6%	3.5	0.5	A
	Subtotal	600	458	76.4%	3.4	0.5	A
WB	Left Turn	105	96	91.5%	5.7	1.9	A
	Through	635	608	95.7%	1.2	0.2	A
	Right Turn	60	58	96.3%	0.6	0.3	A
	Subtotal	800	762	95.2%	1.7	0.2	A
Total		1,895	1,649	87.0%	24.2	6.8	C

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	11	57.0%	2.4	0.8	A
	Through	90	80	89.1%	0.7	0.3	A
	Right Turn						
	Subtotal	110	92	83.3%	0.9	0.3	A
SB	Left Turn						
	Through	110	103	93.7%	0.6	0.3	A
	Right Turn	50	49	97.9%	0.3	0.2	A
	Subtotal	160	152	95.0%	0.5	0.3	A
EB	Left Turn	30	21	68.7%	5.9	1.1	A
	Through						
	Right Turn	20	18	90.2%	3.8	0.8	A
	Subtotal	50	39	77.3%	4.7	0.7	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		320	282	88.2%	1.2	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 28

Wallace Dr/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	7	73.6%	34.4	44.5	D
	Through						
	Right Turn	10	8	84.6%	2.4	1.0	A
	Subtotal	20	16	79.1%	26.8	41.4	D
SB	Left Turn	10	13	132.5%	6.4	2.3	A
	Through						
	Right Turn	40	36	91.1%	22.7	29.1	C
	Subtotal	50	50	99.4%	16.8	18.0	C
EB	Left Turn	20	12	58.9%	4.3	3.0	A
	Through	170	137	80.5%	1.0	0.3	A
	Right Turn	10	10	103.0%	0.7	0.2	A
	Subtotal	200	159	79.5%	1.2	0.4	A
WB	Left Turn	10	8	77.3%	10.0	15.6	A
	Through	220	184	83.5%	33.0	43.6	D
	Right Turn	10	9	92.0%	15.7	29.1	C
	Subtotal	240	201	83.6%	31.5	42.1	D
Total		510	425	83.3%	15.7	17.9	C

Intersection 29

























Muir Rd/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	99.4%	14.1	25.1	B
	Through						
	Right Turn	30	29	98.1%	3.7	2.4	A
	Subtotal	40	39	98.4%	6.2	5.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	180	144	80.1%	0.6	0.3	A
	Right Turn	10	7	66.2%	0.4	0.3	A
	Subtotal	190	151	79.4%	0.6	0.3	A
WB	Left Turn	20	19	95.7%	6.4	9.9	A
	Through	230	217	94.4%	8.1	16.2	A
	Right Turn						
	Subtotal	250	236	94.5%	8.0	15.6	A
Total		480	427	88.9%	4.7	7.9	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative Plus Project Buildout
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	750	270	120	430	250	180	570	140	180	350	10
Future Volume (veh/h)	170	750	270	120	430	250	180	570	140	180	350	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		0.99	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1851	1900
Adj Flow Rate, veh/h	185	815	293	130	467	272	196	620	152	196	380	11
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	276	1154	514	232	795	475	387	847	207	308	580	17
Arrive On Green	0.16	0.33	0.33	0.07	0.22	0.21	0.22	0.30	0.29	0.09	0.17	0.15
Sat Flow, veh/h	1774	3539	1578	3442	3539	1572	1774	2819	690	3408	3491	101
Grp Volume(v), veh/h	185	815	293	130	467	272	196	389	383	196	191	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1578	1721	1770	1572	1774	1770	1739	1704	1758	1833
Q Serve(g_s), s	7.3	15.0	5.1	2.7	8.7	5.4	7.2	14.6	14.7	4.1	7.5	7.6
Cycle Q Clear(g_c), s	7.3	15.0	5.1	2.7	8.7	5.4	7.2	14.6	14.7	4.1	7.5	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.06
Lane Grp Cap(c), veh/h	276	1154	514	232	795	475	387	531	522	308	292	304
V/C Ratio(X)	0.67	0.71	0.57	0.56	0.59	0.57	0.51	0.73	0.73	0.64	0.65	0.66
Avail Cap(c_a), veh/h	311	1384	617	650	1432	758	387	883	868	643	830	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	21.9	4.1	33.5	25.7	7.5	25.5	23.3	23.5	32.5	28.9	29.0
Incr Delay (d2), s/veh	3.3	1.3	1.0	0.8	0.7	1.1	0.4	2.0	2.0	0.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.5	4.0	1.3	4.4	2.7	3.6	7.4	7.3	2.0	3.7	3.9
LnGrp Delay(d),s/veh	32.8	23.2	5.1	34.3	26.4	8.6	25.9	25.2	25.5	33.4	29.9	29.9
LnGrp LOS	C	C	A	C	C	A	C	C	C	C	C	C
Approach Vol, veh/h		1293			869			968			587	
Approach Delay, s/veh		20.5			22.0			25.5			31.0	
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	10.7	26.3	9.0	28.2	20.7	16.3	16.5	20.7				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	5.0	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	13.5	36.0	13.5	27.5	15.5	* 34	12.5	* 29				
Max Q Clear Time (g_c+I1), s	6.1	16.7	4.7	17.0	9.2	9.6	9.3	10.7				
Green Ext Time (p_c), s	0.2	4.4	0.1	4.9	2.5	1.4	2.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			23.8									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative Plus Project Buildout
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	920	240	180	580	190	270	460	150	140	310	210
Future Volume (veh/h)	170	920	240	180	580	190	270	460	150	140	310	210
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1836	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	1000	261	196	630	207	293	500	163	152	337	228
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	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, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	212	1078	280	220	1014	333	276	596	193	220	423	280
Arrive On Green	0.12	0.39	0.38	0.12	0.39	0.38	0.16	0.23	0.22	0.12	0.21	0.20
Sat Flow, veh/h	1774	2777	722	1774	2581	847	1774	2622	850	1774	2039	1352
Grp Volume(v), veh/h	185	636	625	196	425	412	293	337	326	152	292	273
Grp Sat Flow(s),veh/h/ln	1774	1770	1729	1774	1744	1684	1774	1770	1702	1774	1770	1622
Q Serve(g_s), s	13.2	44.1	44.5	14.0	25.1	25.3	20.0	23.3	23.6	10.5	20.1	20.7
Cycle Q Clear(g_c), s	13.2	44.1	44.5	14.0	25.1	25.3	20.0	23.3	23.6	10.5	20.1	20.7
Prop In Lane	1.00		0.42	1.00		0.50	1.00		0.50	1.00		0.83
Lane Grp Cap(c), veh/h	212	687	671	220	685	662	276	403	387	220	367	336
V/C Ratio(X)	0.87	0.93	0.93	0.89	0.62	0.62	1.06	0.84	0.84	0.69	0.79	0.81
Avail Cap(c_a), veh/h	263	703	687	221	685	662	276	469	451	249	441	404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	37.5	38.0	55.3	31.3	31.6	54.2	47.3	47.8	53.9	48.3	49.1
Incr Delay (d2), s/veh	22.7	19.7	20.9	32.6	3.5	3.7	70.9	11.1	12.1	6.8	8.2	10.3
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	7.8	25.3	25.1	8.9	12.7	12.5	15.2	12.6	12.4	5.6	10.6	10.2
LnGrp Delay(d),s/veh	78.3	57.2	58.9	87.9	34.8	35.3	125.1	58.4	59.9	60.7	56.5	59.4
LnGrp LOS	E	E	E	F	C	D	F	E	E	E	E	E
Approach Vol, veh/h		1446			1033			956			717	
Approach Delay, s/veh		60.6			45.1			79.4			58.5	
Approach LOS		E			D			E			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	31.4	33.2	20.0	53.8	24.0	30.6	19.3	54.5				
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	33.0	* 33	16.0	49.5	20.0	30.5	19.0	46.5				
Max Q Clear Time (g_c+1), s	11.5	25.6	16.0	46.5	22.0	22.7	15.2	27.3				
Green Ext Time (p_c), s	1.9	2.1	0.0	1.8	0.0	2.4	0.2	18.2				
Intersection Summary												
HCM 2010 Ctrl Delay				60.7								
HCM 2010 LOS				E								
Notes												

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	40	70	660	100	100	710
Future Vol, veh/h	40	70	660	100	100	710
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	43	76	717	109	109	772
























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1376	414	0	0	827	0
Stage 1	773	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Critical Hdwy	6.84	7	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.35	-	-	2.22	-
Pot Cap-1 Maneuver	136	579	-	-	800	-
Stage 1	416	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	579	-	-	800	-
Mov Cap-2 Maneuver	249	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	440	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	18.2		0		1.3
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 391	800	-
HCM Lane V/C Ratio	-	- 0.306	0.136	-
HCM Control Delay (s)	-	- 18.2	10.2	-
HCM Lane LOS	-	- C	B	-
HCM 95th %tile Q(veh)	-	- 1.3	0.5	-

HCM 2010 Signalized Intersection Summary
17: S Walton Ave & Lincoln Rd

Cumulative Plus Project Buildout
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	140	610	80	80	310	430	5	40	230	170	380	270
Future Volume (veh/h)	140	610	80	80	310	430	5	40	230	170	380	270
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		1.00		1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1863		1863	1863	1863	1863	1845
Adj Flow Rate, veh/h	152	663	87	87	337	467		43	250	185	413	293
Adj No. of Lanes	1	2	1	1	2	1		1	2	1	1	2
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
Percent Heavy Veh, %	2	2	3	3	3	2		2	2	2	2	3
Cap, veh/h	194	1074	435	142	984	444		74	660	290	458	1414
Arrive On Green	0.11	0.30	0.30	0.08	0.28	0.28		0.04	0.19	0.19	0.26	0.40
Sat Flow, veh/h	1774	3539	1433	1757	3505	1582		1774	3539	1553	1774	3505
Grp Volume(v), veh/h	152	663	87	87	337	467		43	250	185	413	293
Grp Sat Flow(s),veh/h/ln	1774	1770	1433	1757	1752	1582		1774	1770	1553	1774	1752
Q Serve(g_s), s	8.1	15.6	3.5	4.6	7.4	13.9		2.3	6.0	8.3	21.8	5.3
Cycle Q Clear(g_c), s	8.1	15.6	3.5	4.6	7.4	13.9		2.3	6.0	8.3	21.8	5.3
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	194	1074	435	142	984	444		74	660	290	458	1414
V/C Ratio(X)	0.78	0.62	0.20	0.61	0.34	1.05		0.58	0.38	0.64	0.90	0.21
Avail Cap(c_a), veh/h	219	1277	517	163	1156	522		494	1204	528	585	1414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	29.0	16.2	43.1	27.8	9.0		45.7	34.5	22.0	34.8	18.8
Incr Delay (d2), s/veh	14.2	0.5	0.2	4.3	0.2	53.0		5.3	0.3	1.7	13.8	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
%ile BackOfQ(50%),veh/ln	4.7	7.6	1.4	2.4	3.6	12.5		1.2	2.9	3.7	12.4	2.6
LnGrp Delay(d),s/veh	56.3	29.5	16.4	47.4	27.9	62.0		51.0	34.8	23.7	48.6	18.9
LnGrp LOS	E	C	B	D	C	F		D	C	C	D	B
Approach Vol, veh/h		902			891				478			804
Approach Delay, s/veh		32.7			47.7				32.0			32.9
Approach LOS		C			D				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	29.1	22.1	12.4	33.4	8.0	43.1	14.6	31.2				
Change Period (Y+Rc), s	4.6	4.6	4.6	* 4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	31.4	32.4	9.0	* 34	26.4	37.4	11.4	31.4				
Max Q Clear Time (g_c+I1), s	23.8	10.3	6.6	17.6	4.3	7.3	10.1	15.9				
Green Ext Time (p_c), s	0.6	2.7	0.1	3.8	0.1	3.9	0.1	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			37.0									
HCM 2010 LOS			D									
Notes												

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	90
Future Volume (veh/h)	90
Number	16
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.99
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1827
Adj Flow Rate, veh/h	98
Adj No. of Lanes	1
Peak Hour Factor	0.92
Percent Heavy Veh, %	4
Cap, veh/h	613
Arrive On Green	0.40
Sat Flow, veh/h	1542
Grp Volume(v), veh/h	98
Grp Sat Flow(s),veh/h/ln	1542
Q Serve(g_s), s	2.7
Cycle Q Clear(g_c), s	2.7
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	613
V/C Ratio(X)	0.16
Avail Cap(c_a), veh/h	613
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	8.5
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.1
LnGrp Delay(d),s/veh	8.6
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Intersection																
Intersection Delay, s/veh 190.3																
Intersection LOS F																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕			↕	↕	↕		↕	↕	↕		↕	↕	
Traffic Vol, veh/h	0	30	580	110	0	40	450	120	0	50	80	60	0	180	130	20
Future Vol, veh/h	0	30	580	110	0	40	450	120	0	50	80	60	0	180	130	20
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	32	617	117	0	43	479	128	0	53	85	64	0	191	138	21
Number of Lanes	0	0	1	0	0	1	1	1	0	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	412.8	71.4	17.6	24.3
HCM LOS	F	F	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	4%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	81%	0%	100%	0%	0%	87%
Vol Right, %	0%	0%	100%	15%	0%	0%	100%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	80	60	720	40	450	120	180	150
LT Vol	50	0	0	30	40	0	0	180	0
Through Vol	0	80	0	580	0	450	0	0	130
RT Vol	0	0	60	110	0	0	120	0	20
Lane Flow Rate	53	85	64	766	43	479	128	191	160
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.155	0.236	0.164	1.85	0.1	1.054	0.258	0.522	0.41
Departure Headway (Hd)	12.688	12.15	11.359	8.958	9.826	9.299	8.615	11.793	11.192
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	285	298	318	414	367	393	420	308	324
Service Time	10.388	9.85	9.059	6.658	7.526	6.999	6.315	9.493	8.892
HCM Lane V/C Ratio	0.186	0.285	0.201	1.85	0.117	1.219	0.305	0.62	0.494
HCM Control Delay	17.7	18.6	16.3	412.8	13.6	91.7	14.3	26.7	21.5
HCM Lane LOS	C	C	C	F	B	F	B	D	C
HCM 95th-tile Q	0.5	0.9	0.6	48.5	0.3	13.7	1	2.8	1.9

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↔		↖	↗
Traffic Vol, veh/h	10	20	90	10	30	110
Future Vol, veh/h	10	20	90	10	30	110
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	0	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	9	2	60	60	2
Mvmt Flow	11	22	98	11	33	120

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	288	103	0	0	109	0
Stage 1	103	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.29	-	-	4.7	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	-	-	2.74	-
Pot Cap-1 Maneuver	702	933	-	-	1188	-
Stage 1	921	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	683	933	-	-	1188	-
Mov Cap-2 Maneuver	683	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.5		0		1.7
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	683	933	1188	-
HCM Lane V/C Ratio	-	-	0.016	0.023	0.027	-
HCM Control Delay (s)	-	-	10.4	9	8.1	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10
Future Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	0	11	11	11	98	0	11	109	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	266	256	114	267	261	98	120	0	0	98	0	0
Stage 1	136	136	-	120	120	-	-	-	-	-	-	-
Stage 2	130	120	-	147	141	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	687	648	939	686	635	958	1468	-	-	1495	-	-
Stage 1	867	784	-	884	787	-	-	-	-	-	-	-
Stage 2	874	796	-	856	771	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	662	638	939	661	625	958	1468	-	-	1495	-	-
Mov Cap-2 Maneuver	662	638	-	661	625	-	-	-	-	-	-	-
Stage 1	860	778	-	877	781	-	-	-	-	-	-	-
Stage 2	845	790	-	828	765	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.9	0.7	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	724	756	1495	-	-
HCM Lane V/C Ratio	0.007	-	-	0.045	0.029	0.007	-	-
HCM Control Delay (s)	7.5	0	-	10.2	9.9	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	69.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↙	↕				↕	↙		↙	↕	↙
Traffic Vol, veh/h	0	70	790	60	0	40	280	50	0	130	140	90
Future Vol, veh/h	0	70	790	60	0	40	280	50	0	130	140	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	76	859	65	0	43	304	54	0	141	152	98
Number of Lanes	0	1	2	0	0	0	2	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	120.6	19.9	17.9
HCM LOS	F	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	30%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	81%	70%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	19%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	140	90	70	527	323	133	187	50	60	90
LT Vol	130	0	0	70	0	0	40	0	0	60	0
Through Vol	0	140	0	0	527	263	93	187	0	0	90
RT Vol	0	0	90	0	0	60	0	0	50	0	0
Lane Flow Rate	141	152	98	76	572	351	145	203	54	65	98
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.387	0.396	0.236	0.186	1.326	0.798	0.381	0.53	0.13	0.188	0.269
Departure Headway (Hd)	10.262	9.762	9.062	8.807	8.341	8.177	9.811	9.746	8.961	10.827	10.327
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	353	371	399	406	435	443	370	373	403	333	350
Service Time	7.962	7.462	6.762	6.582	6.116	5.952	7.511	7.446	6.661	8.527	8.027
HCM Lane V/C Ratio	0.399	0.41	0.246	0.187	1.315	0.792	0.392	0.544	0.134	0.195	0.28
HCM Control Delay	19.3	18.7	14.5	13.6	186.5	36.4	18.4	22.9	13	16	16.8
HCM Lane LOS	C	C	B	B	F	E	C	C	B	C	C
HCM 95th-tile Q	1.8	1.8	0.9	0.7	25.7	7.2	1.7	3	0.4	0.7	1.1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↑	↗
Traffic Vol, veh/h	0	60	90	50
Future Vol, veh/h	0	60	90	50
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	65	98	54
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	15.8
HCM LOS	C

HCM 2010 Signalized Intersection Summary
23: Garden Hwy & Lincoln Rd

Cumulative Plus Project Buildout
AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	650	310	130	1130	760	260		
Future Volume (veh/h)	650	310	130	1130	760	260		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	707	337	141	1228	826	283		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	918	427	192	2136	1501	669		
Arrive On Green	0.27	0.27	0.11	0.60	0.43	0.43		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1562		
Grp Volume(v), veh/h	707	337	141	1228	826	283		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1562		
Q Serve(g_s), s	12.0	12.4	5.0	13.3	11.1	8.0		
Cycle Q Clear(g_c), s	12.0	12.4	5.0	13.3	11.1	8.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	918	427	192	2136	1501	669		
V/C Ratio(X)	0.77	0.79	0.73	0.57	0.55	0.42		
Avail Cap(c_a), veh/h	1515	704	547	3316	1948	868		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	21.2	21.3	27.1	7.6	13.5	12.6		
Incr Delay (d2), s/veh	0.5	1.3	2.0	0.1	0.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.7	10.3	2.5	6.3	5.3	3.4		
LnGrp Delay(d),s/veh	21.7	22.6	29.1	7.7	13.6	12.7		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	1044			1369	1109			
Approach Delay, s/veh	22.0			9.9	13.4			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		42.0		21.0	11.0	31.0		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		57.0		27.4	19.4	33.0		
Max Q Clear Time (g_c+I1), s		15.3		14.4	7.0	13.1		
Green Ext Time (p_c), s		16.5		1.9	0.0	11.7		
Intersection Summary								
HCM 2010 Ctrl Delay			14.6					
HCM 2010 LOS			B					

Intersection																
Intersection Delay, s/veh	16.5															
Intersection LOS	F															

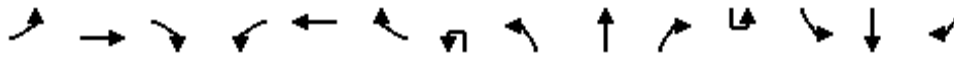
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷			↶	↷				↕				↕	
Traffic Vol, veh/h	0	50	400	80	0	90	570	50	0	160	140	140	0	60	120	70
Future Vol, veh/h	0	50	400	80	0	90	570	50	0	160	140	140	0	60	120	70
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	53	421	84	0	95	600	53	0	168	147	147	0	63	126	74
Number of Lanes	0	1	1	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	213.3	56.8	141.5	36.8
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	36%	100%	0%	100%	0%	0%	24%
Vol Thru, %	32%	0%	83%	0%	100%	79%	48%
Vol Right, %	32%	0%	17%	0%	0%	21%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	50	480	90	380	240	250
LT Vol	160	50	0	90	0	0	60
Through Vol	140	0	400	0	380	190	120
RT Vol	140	0	80	0	0	50	70
Lane Flow Rate	463	53	505	95	400	253	263
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	1.192	0.157	1.419	0.252	1.006	0.625	0.707
Departure Headway (Hd)	10.139	11.597	10.9	11.091	10.542	10.388	11.172
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	361	311	339	326	348	351	326
Service Time	7.839	9.297	8.6	8.791	8.242	8.088	8.872
HCM Lane V/C Ratio	1.283	0.17	1.49	0.291	1.149	0.721	0.807
HCM Control Delay	141.5	16.4	233.8	17.5	83.7	28.9	36.8
HCM Lane LOS	F	C	F	C	F	D	E
HCM 95th-tile Q	17.6	0.5	24.5	1	11.5	4	5.1

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative Plus Project Buildout
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	530	50	200	40	90	80	5	240	480	20	5	30	350	370
Future Volume (veh/h)	530	50	200	40	90	80	5	240	480	20	5	30	350	370
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1847	1826	1900
Adj Flow Rate, veh/h	576	54	217	43	98	87		261	522	22		33	380	402
Adj No. of Lanes	1	1	1	1	1	1		1	2	0		1	2	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, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	601	746	634	62	181	154		245	1406	59		49	514	447
Arrive On Green	0.34	0.40	0.40	0.04	0.10	0.10		0.14	0.41	0.39		0.03	0.30	0.28
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583		1774	3458	145		1759	1735	1509
Grp Volume(v), veh/h	576	54	217	43	98	87		261	267	277		33	380	402
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583		1774	1770	1833		1759	1735	1509
Q Serve(g_s), s	39.1	2.2	11.7	3.0	6.2	6.5		17.0	13.0	13.0		2.3	24.3	31.6
Cycle Q Clear(g_c), s	39.1	2.2	11.7	3.0	6.2	6.5		17.0	13.0	13.0		2.3	24.3	31.6
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.08		1.00		1.00
Lane Grp Cap(c), veh/h	601	746	634	62	181	154		245	720	746		49	514	447
V/C Ratio(X)	0.96	0.07	0.34	0.69	0.54	0.57		1.06	0.37	0.37		0.68	0.74	0.90
Avail Cap(c_a), veh/h	606	1075	913	114	560	476		245	720	746		186	536	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	22.8	25.6	58.7	52.9	53.1		53.0	25.5	25.6		59.3	39.0	42.5
Incr Delay (d2), s/veh	26.3	0.0	0.1	5.1	0.9	1.2		75.7	0.1	0.1		6.0	4.5	19.0
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	23.6	1.1	5.1	1.5	3.2	2.9		13.5	6.3	6.6		1.2	12.2	15.5
LnGrp Delay(d),s/veh	66.2	22.8	25.7	63.8	53.9	54.3		128.7	25.6	25.7		65.3	43.5	61.6
LnGrp LOS	E	C	C	E	D	D		F	C	C		E	D	E
Approach Vol, veh/h		847			228				805				815	
Approach Delay, s/veh		53.1			55.9				59.1				53.3	
Approach LOS		D			E				E				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	7.4	54.0	8.3	53.3	21.0	40.4	45.7	16.0						
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0						
Max Green Setting (Gmax), s	2.5	40.0	7.5	69.0	16.5	36.0	41.5	35.0						
Max Q Clear Time (g_c+14), s	14.3	15.0	5.0	13.7	19.0	33.6	41.1	8.5						
Green Ext Time (p_c), s	0.0	6.3	0.0	1.1	0.0	0.9	0.0	1.1						
Intersection Summary														
HCM 2010 Ctrl Delay			55.2											
HCM 2010 LOS			E											
Notes														

Intersection																
Intersection Delay, s/veh 12.2																
Intersection LOS B																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	60	150	10	0	20	170	150	0	10	40	20	0	120	90	60
Future Vol, veh/h	0	60	150	10	0	20	170	150	0	10	40	20	0	120	90	60
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	65	163	11	0	22	185	163	0	11	43	22	0	130	98	65
Number of Lanes	0	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	12.3	11.6	9.9	13.5
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	14%	27%	19%	0%	44%
Vol Thru, %	57%	68%	81%	36%	33%
Vol Right, %	29%	5%	0%	64%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	220	105	235	270
LT Vol	10	60	20	0	120
Through Vol	40	150	85	85	90
RT Vol	20	10	0	150	60
Lane Flow Rate	76	239	114	255	293
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.127	0.381	0.202	0.394	0.461
Departure Headway (Hd)	5.992	5.738	6.385	5.559	5.651
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	596	627	562	646	637
Service Time	4.057	3.79	4.134	3.308	3.698
HCM Lane V/C Ratio	0.128	0.381	0.203	0.395	0.46
HCM Control Delay	9.9	12.3	10.8	11.9	13.5
HCM Lane LOS	A	B	B	B	B
HCM 95th-tile Q	0.4	1.8	0.7	1.9	2.4

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

Cumulative Plus Project Buildout
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	0	20	0	0	10	20	100	0	0	170	460
Future Volume (veh/h)	330	0	20	0	0	10	20	100	0	0	170	460
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	1863	1863	1863	1900	1863	1900	1863	1827	0	1863	1792	1863
Adj Flow Rate, veh/h	359	0	22	0	0	11	22	109	0	0	185	500
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	4	0	2	6	2
Cap, veh/h	617	0	275	0	0	71	32	959	0	4	756	668
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.02	0.02	0.53	0.00	0.00	0.42	0.42
Sat Flow, veh/h	3548	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Grp Volume(v), veh/h	359	0	22	0	0	11	22	109	0	0	185	500
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Q Serve(g_s), s	4.4	0.0	0.5	0.0	0.0	0.3	0.6	1.4	0.0	0.0	3.1	12.5
Cycle Q Clear(g_c), s	4.4	0.0	0.5	0.0	0.0	0.3	0.6	1.4	0.0	0.0	3.1	12.5
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	617	0	275	0	0	71	32	959	0	4	756	668
V/C Ratio(X)	0.58	0.00	0.08	0.00	0.00	0.15	0.69	0.11	0.00	0.00	0.24	0.75
Avail Cap(c_a), veh/h	983	0	439	0	0	1010	302	1284	0	302	1260	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	16.2	0.0	0.0	22.0	22.9	5.6	0.0	0.0	8.7	11.5
Incr Delay (d2), s/veh	1.1	0.0	0.1	0.0	0.0	1.2	22.8	0.1	0.0	0.0	0.2	2.1
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	2.2	0.0	0.2	0.0	0.0	0.2	0.5	0.7	0.0	0.0	1.6	5.8
LnGrp Delay(d),s/veh	18.9	0.0	16.4	0.0	0.0	23.2	45.8	5.7	0.0	0.0	8.9	13.5
LnGrp LOS	B		B			C	D	A			A	B
Approach Vol, veh/h		381			11			131			685	
Approach Delay, s/veh		18.7			23.2			12.4			12.3	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	28.7		12.2	4.8	23.8		6.1				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	32.0		12.0	7.9	32.0		29.0				
Max Q Clear Time (g_c+10), s	3	3.4		6.4	2.6	14.5		2.3				
Green Ext Time (p_c), s	0.0	4.9		0.9	0.0	4.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.4									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Cumulative Plus Project Buildout
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations														
Traffic Volume (veh/h)	120	10	90	100	10	160	50	550	50	5	80	480	60	
Future Volume (veh/h)	120	10	90	100	10	160	50	550	50	5	80	480	60	
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		0.97		1.00		0.97	
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	1863	1863	1900	1863	1863	1863	1863	1863	1900		1846	1863	1900	
Adj Flow Rate, veh/h	130	11	98	109	11	174	54	598	54		87	522	65	
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	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, %	2	2	2	2	2	2	2	2	2		3	2	2	
Cap, veh/h	184	33	291	156	347	294	82	1184	107		126	1220	151	
Arrive On Green	0.10	0.20	0.19	0.09	0.19	0.19	0.05	0.36	0.33		0.07	0.39	0.35	
Sat Flow, veh/h	1774	162	1439	1774	1863	1578	1774	3276	295		1758	3155	391	
Grp Volume(v), veh/h	130	0	109	109	11	174	54	322	330		87	292	295	
Grp Sat Flow(s),veh/h/ln	1774	0	1601	1774	1863	1578	1774	1770	1802		1758	1770	1777	
Q Serve(g_s), s	4.1	0.0	3.4	3.4	0.3	5.8	1.7	8.2	8.3		2.8	7.0	7.1	
Cycle Q Clear(g_c), s	4.1	0.0	3.4	3.4	0.3	5.8	1.7	8.2	8.3		2.8	7.0	7.1	
Prop In Lane	1.00		0.90	1.00		1.00	1.00		0.16		1.00		0.22	
Lane Grp Cap(c), veh/h	184	0	324	156	347	294	82	639	651		126	684	687	
V/C Ratio(X)	0.71	0.00	0.34	0.70	0.03	0.59	0.66	0.50	0.51		0.69	0.43	0.43	
Avail Cap(c_a), veh/h	399	0	1136	307	1225	1038	276	1042	1060		274	1042	1046	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Uniform Delay (d), s/veh	25.1	0.0	19.9	25.6	19.2	21.5	27.1	14.4	14.6		26.2	13.0	13.2	
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.6	0.0	1.9	8.6	0.6	0.6		6.6	0.4	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	2.2	0.0	1.5	1.9	0.1	2.7	1.0	4.1	4.2		1.6	3.5	3.6	
LnGrp Delay(d),s/veh	30.0	0.0	20.5	31.2	19.3	23.4	35.7	15.0	15.2		32.7	13.4	13.6	
LnGrp LOS	C		C	C	B	C	D	B	B		C	B	B	
Approach Vol, veh/h		239			294			706				674		
Approach Delay, s/veh		25.7			26.1			16.7				16.0		
Approach LOS		C			C			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	8.1	24.9	9.1	15.7	6.7	26.3	10.0	14.8						
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5						
Max Green Setting (Gmax), s	30.5	32.0	9.5	40.5	8.5	32.0	12.5	37.5						
Max Q Clear Time (g_c+14), s	14.8	10.3	5.4	5.4	3.7	9.1	6.1	7.8						
Green Ext Time (p_c), s	0.0	7.2	0.1	1.4	0.0	7.4	0.2	1.4						
Intersection Summary														
HCM 2010 Ctrl Delay			19.0											
HCM 2010 LOS			B											
Notes														

Intersection

Int Delay, s/veh 3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	850	20	140	640	40	100
Future Vol, veh/h	850	20	140	640	40	100
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	924	22	152	696	43	109

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1591
Stage 1	-	-	937
Stage 2	-	-	654
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	720	98
Stage 1	-	-	342
Stage 2	-	-	479
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	719	77
Mov Cap-2 Maneuver	-	-	77
Stage 1	-	-	341
Stage 2	-	-	377

Approach	EB	WB	NB
HCM Control Delay, s	0	2	38.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	77	532	-	-	719	-
HCM Lane V/C Ratio	0.565	0.204	-	-	0.212	-
HCM Control Delay (s)	100.3	13.5	-	-	11.3	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	2.5	0.8	-	-	0.8	-

Intersection			
Intersection Delay, s/veh	4.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	87	33	152
Demand Flow Rate, veh/h	88	33	155
Vehicles Circulating, veh/h	22	66	11
Vehicles Exiting, veh/h	144	44	88
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.7	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	88	33	155
Cap Entry Lane, veh/h	1105	1058	1118
Entry HV Adj Factor	0.989	0.987	0.978
Flow Entry, veh/h	87	33	152
Cap Entry, veh/h	1093	1044	1093
V/C Ratio	0.080	0.031	0.139
Control Delay, s/veh	4.0	3.7	4.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection

Int Delay, s/veh 2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↕↗		↖	↗
Traffic Vol, veh/h	0	50	70	20	50	10
Future Vol, veh/h	0	50	70	20	50	10
Conflicting Peds, #/hr	0	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	76	22	54	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	100	0	53
Stage 1	-	-	89
Stage 2	-	-	56
Critical Hdwy	4.13	-	6.93
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	2.219	-	3.319
Pot Cap-1 Maneuver	1492	-	1004
Stage 1	-	-	925
Stage 2	-	-	966
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1490	-	1001
Mov Cap-2 Maneuver	-	-	837
Stage 1	-	-	923
Stage 2	-	-	964

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1490	-	-	-	837	1001
HCM Lane V/C Ratio	-	-	-	-	0.065	0.011
HCM Control Delay (s)	0	-	-	-	9.6	8.6
HCM Lane LOS	A	-	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0

Intersection				
Intersection Delay, s/veh	4.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	76	120	65	88
Demand Flow Rate, veh/h	77	122	66	90
Vehicles Circulating, veh/h	79	99	100	33
Vehicles Exiting, veh/h	44	67	56	188
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.7	4.1	4.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	77	122	66	90
Cap Entry Lane, veh/h	1044	1023	1022	1093
Entry HV Adj Factor	0.981	0.982	0.987	0.981
Flow Entry, veh/h	76	120	65	88
Cap Entry, veh/h	1024	1005	1009	1073
V/C Ratio	0.074	0.119	0.065	0.082
Control Delay, s/veh	4.2	4.7	4.1	4.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	10	30	140	220	30
Future Vol, veh/h	60	10	30	140	220	30
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	11	33	152	239	33

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	476	259	274	0
Stage 1	257	-	-	-
Stage 2	219	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	548	780	1289	-
Stage 1	786	-	-	-
Stage 2	817	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	532	777	1287	-
Mov Cap-2 Maneuver	532	-	-	-
Stage 1	785	-	-	-
Stage 2	795	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1287	-	557	-	-
HCM Lane V/C Ratio	0.025	-	0.137	-	-
HCM Control Delay (s)	7.9	-	12.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Intersection

Int Delay, s/veh 3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	40	100	10	130	120
Future Vol, veh/h	10	40	100	10	130	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	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	43	109	11	141	130

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	527	60	0	0	120	0
Stage 1	114	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	496	993	-	-	1467	-
Stage 1	899	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	444	993	-	-	1467	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.7		0		4
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	444	993	1467	-
HCM Lane V/C Ratio	-	-	0.024	0.044	0.096	-
HCM Control Delay (s)	-	-	13.3	8.8	7.7	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.3	-

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	22	22	44
Demand Flow Rate, veh/h	22	22	45
Vehicles Circulating, veh/h	11	22	0
Vehicles Exiting, veh/h	34	11	44
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.5	3.6
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	22	22	45
Cap Entry Lane, veh/h	1118	1105	1130
Entry HV Adj Factor	1.000	0.980	0.973
Flow Entry, veh/h	22	22	44
Cap Entry, veh/h	1118	1084	1099
V/C Ratio	0.020	0.020	0.040
Control Delay, s/veh	3.4	3.5	3.6
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	50	80	20	20	30
Future Vol, veh/h	30	50	80	20	20	30
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, %	2	2	2	2	2	2
Mvmt Flow	33	54	87	22	22	33
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	174	98	0	0	109	0
Stage 1	98	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	816	958	-	-	1481	-
Stage 1	926	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	804	958	-	-	1481	-
Mov Cap-2 Maneuver	804	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.5	0		3		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	894	1481	-	
HCM Lane V/C Ratio	-	-	0.097	0.015	-	
HCM Control Delay (s)	-	-	9.5	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0	-	

Intersection			
Intersection Delay, s/veh	4.2		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	44	141	44
Demand Flow Rate, veh/h	44	144	45
Vehicles Circulating, veh/h	34	22	55
Vehicles Exiting, veh/h	66	56	111
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	4.5	3.8
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	44	144	45
Cap Entry Lane, veh/h	1092	1105	1069
Entry HV Adj Factor	1.000	0.981	0.985
Flow Entry, veh/h	44	141	44
Cap Entry, veh/h	1092	1084	1054
V/C Ratio	0.040	0.130	0.042
Control Delay, s/veh	3.6	4.5	3.8
LOS	A	A	A
95th %tile Queue, veh	0	0	0

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Master Plan Buildout
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	710	404	56.9%	72.4	11.7	E
	Through	1,070	650	60.8%	48.8	4.1	D
	Right Turn	380	226	59.4%	24.1	3.1	C
	Subtotal	2,160	1,280	59.3%	52.0	5.6	D
SB	Left Turn	460	381	82.9%	126.8	22.9	F
	Through	930	779	83.7%	99.3	24.0	F
	Right Turn	100	89	88.9%	47.8	17.7	D
	Subtotal	1,490	1,249	83.8%	104.1	19.9	F
EB	Left Turn	260	171	65.6%	170.9	30.9	F
	Through	1,090	736	67.5%	184.5	24.6	F
	Right Turn	365	268	73.3%	164.8	25.7	F
	Subtotal	1,715	1,174	68.4%	177.9	25.1	F
WB	Left Turn	700	602	85.9%	109.8	26.1	F
	Through	1,080	1,062	98.3%	47.3	8.6	D
	Right Turn	670	643	95.9%	46.5	12.9	D
	Subtotal	2,450	2,306	94.1%	63.5	10.9	E
Total		7,815	6,009	76.9%	91.7	7.6	F

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	480	249	51.9%	86.7	16.3	F
	Through	1,550	817	52.7%	88.2	22.5	F
	Right Turn	60	35	58.9%	65.6	27.0	E
	Subtotal	2,090	1,102	52.7%	87.1	21.0	F
SB	Left Turn	505	404	80.1%	86.5	16.9	F
	Through	1,380	1,112	80.6%	53.4	11.5	D
	Right Turn	110	82	74.3%	34.4	12.1	C
	Subtotal	1,995	1,598	80.1%	61.0	12.5	E
EB	Left Turn	120	118	98.2%	52.8	5.7	D
	Through	190	190	100.2%	43.0	6.0	D
	Right Turn	105	104	99.2%	16.2	4.2	B
	Subtotal	415	412	99.3%	39.0	4.5	D
WB	Left Turn	220	141	64.1%	185.4	62.3	F
	Through	150	155	103.6%	35.8	3.8	D
	Right Turn	465	440	94.6%	34.8	11.0	C
	Subtotal	835	736	88.2%	63.4	12.6	E
Total		5,335	3,849	72.1%	66.5	6.4	E

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	170	94	55.2%	67.8	10.4	E
	Through	1,640	1,022	62.3%	47.7	8.9	D
	Right Turn	210	127	60.6%	19.2	6.5	B
	Subtotal	2,020	1,243	61.6%	46.3	8.3	D
SB	Left Turn	160	115	72.0%	59.2	11.9	E
	Through	1,165	920	79.0%	33.9	5.8	C
	Right Turn	380	319	83.9%	18.7	3.1	B
	Subtotal	1,705	1,354	79.4%	32.5	5.6	C
EB	Left Turn	100	87	87.0%	132.7	34.1	F
	Through	790	647	81.9%	80.3	22.4	F
	Right Turn	170	146	86.1%	82.2	26.4	F
	Subtotal	1,060	880	83.0%	85.7	22.8	F
WB	Left Turn	230	133	58.0%	223.4	32.8	F
	Through	850	532	62.5%	173.8	21.5	F
	Right Turn	350	228	65.3%	167.4	16.1	F
	Subtotal	1,430	893	62.5%	179.7	20.8	F
Total		6,215	4,371	70.3%	77.2	4.3	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	250	162	64.8%	60.8	7.0	E
	Through	1,560	942	60.4%	66.2	9.7	E
	Right Turn	270	170	62.9%	42.6	8.9	D
	Subtotal	2,080	1,274	61.2%	62.4	8.9	E
SB	Left Turn	110	68	62.2%	51.5	8.1	D
	Through	985	728	74.0%	42.2	5.6	D
	Right Turn	470	360	76.6%	23.4	3.7	C
	Subtotal	1,565	1,157	73.9%	37.1	4.6	D
EB	Left Turn	245	258	105.5%	66.2	13.1	E
	Through	930	890	95.7%	40.9	7.5	D
	Right Turn	210	213	101.3%	30.0	7.2	C
	Subtotal	1,385	1,361	98.3%	44.0	8.4	D
WB	Left Turn	400	212	53.1%	199.8	45.5	F
	Through	930	758	81.6%	79.8	25.1	E
	Right Turn	230	178	77.5%	74.7	22.2	E
	Subtotal	1,560	1,149	73.7%	100.8	18.3	F
Total		6,590	4,941	75.0%	60.4	5.0	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Master Plan Buildout
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	45	32	71.8%	21.6	7.4	C
	Through	1,960	1,372	70.0%	7.3	1.1	A
	Right Turn	30	17	58.3%	7.1	2.3	A
	Subtotal	2,035	1,422	69.9%	7.6	1.1	A
SB	Left Turn	55	41	74.6%	24.6	7.5	C
	Through	1,510	1,070	70.9%	7.4	0.7	A
	Right Turn	30	22	72.2%	6.2	1.9	A
	Subtotal	1,595	1,133	71.0%	8.0	0.9	A
EB	Left Turn	10	7	72.2%	97.9	66.6	F
	Through	10	9	87.4%	91.5	57.1	F
	Right Turn	35	30	86.9%	14.7	6.5	B
	Subtotal	55	46	84.3%	41.1	16.8	E
WB	Left Turn	10	11	106.4%	98.6	43.8	F
	Through	10	6	64.6%	111.8	72.2	F
	Right Turn	105	90	85.4%	75.6	40.2	F
	Subtotal	125	107	85.4%	79.6	38.5	F
Total		3,810	2,708	71.1%	11.2	2.3	B

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	34	67.6%	48.1	10.8	D
	Through	1,805	1,248	69.2%	28.9	5.3	C
	Right Turn	120	93	77.9%	14.7	3.0	B
	Subtotal	1,975	1,376	69.7%	28.4	5.2	C
SB	Left Turn	80	54	67.9%	75.9	15.7	E
	Through	1,430	952	66.6%	41.2	7.9	D
	Right Turn	50	30	60.0%	13.9	3.4	B
	Subtotal	1,560	1,037	66.5%	42.2	7.9	D
EB	Left Turn	45	42	92.9%	44.3	10.2	D
	Through	90	96	106.4%	41.0	7.6	D
	Right Turn	40	37	92.2%	23.3	9.4	C
	Subtotal	175	174	99.7%	37.7	6.9	D
WB	Left Turn	130	115	88.3%	66.0	21.5	E
	Through	90	78	87.0%	69.5	21.9	E
	Right Turn	185	160	86.7%	53.6	20.8	D
	Subtotal	405	353	87.3%	61.2	20.6	E
Total		4,115	2,940	71.4%	37.8	5.8	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Master Plan Buildout
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	220	150	68.4%	71.3	6.1	E
	Through	1,520	1,066	70.1%	54.5	4.6	D
	Right Turn	290	207	71.4%	26.2	3.1	C
	Subtotal	2,030	1,423	70.1%	52.2	4.0	D
SB	Left Turn	250	175	69.9%	65.5	14.3	E
	Through	1,180	763	64.6%	34.9	6.4	C
	Right Turn	170	113	66.4%	17.3	4.5	B
	Subtotal	1,600	1,050	65.6%	38.2	6.6	D
EB	Left Turn	155	87	56.1%	155.9	24.8	F
	Through	660	424	64.3%	143.9	17.3	F
	Right Turn	230	162	70.5%	111.5	17.4	F
	Subtotal	1,045	673	64.4%	137.7	16.6	F
WB	Left Turn	170	152	89.4%	96.7	30.8	F
	Through	740	690	93.3%	50.7	5.7	D
	Right Turn	300	281	93.6%	30.5	4.0	C
	Subtotal	1,210	1,123	92.8%	52.2	4.8	D
Total		5,885	4,270	72.6%	62.2	3.9	E

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	55	78.2%	17.2	5.0	C
	Through	1,940	1,422	73.3%	11.3	0.9	B
	Right Turn	30	25	82.3%	11.6	2.5	B
	Subtotal	2,040	1,501	73.6%	11.5	0.9	B
SB	Left Turn	50	33	66.9%	25.6	6.5	D
	Through	1,430	947	66.2%	9.9	1.5	A
	Right Turn	100	68	67.6%	10.1	2.6	B
	Subtotal	1,580	1,048	66.3%	10.5	1.5	B
EB	Left Turn	50	34	68.4%	124.1	54.6	F
	Through	10	3	34.2%	107.5	104.6	F
	Right Turn	30	25	83.6%	32.5	23.5	D
	Subtotal	90	63	69.7%	84.6	32.2	F
WB	Left Turn	20	15	76.0%	120.7	76.3	F
	Through	20	17	83.6%	104.7	37.4	F
	Right Turn	40	35	88.4%	49.2	37.9	E
	Subtotal	80	67	84.1%	81.4	43.8	F
Total		3,790	2,679	70.7%	14.5	1.9	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Master Plan Buildout
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	520	394	75.8%	124.9	23.9	F
	Through	1,180	886	75.1%	116.3	19.1	F
	Right Turn	295	242	82.2%	79.5	20.2	E
	Subtotal	1,995	1,523	76.3%	112.7	18.5	F
SB	Left Turn	525	291	55.4%	82.3	13.3	F
	Through	685	421	61.4%	58.4	7.0	E
	Right Turn	270	185	68.5%	22.1	3.1	C
	Subtotal	1,480	897	60.6%	58.7	7.6	E
EB	Left Turn	320	240	75.1%	138.7	40.1	F
	Through	460	392	85.2%	84.3	27.5	F
	Right Turn	390	316	81.1%	96.6	21.3	F
	Subtotal	1,170	948	81.0%	102.5	27.3	F
WB	Left Turn	155	109	70.6%	82.6	8.6	F
	Through	450	311	69.1%	61.2	9.8	E
	Right Turn	540	368	68.2%	57.9	13.6	E
	Subtotal	1,145	789	68.9%	62.7	9.7	E
Total		5,790	4,156	71.8%	88.9	8.3	F

Intersection 10 SR 99/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	67	95.5%	9.8	2.4	A
	Through	1,880	1,864	99.1%	6.1	0.6	A
	Right Turn	140	142	101.2%	4.0	0.5	A
	Subtotal	2,090	2,072	99.1%	6.1	0.6	A
SB	Left Turn	160	76	47.3%	118.5	63.4	F
	Through	1,060	717	67.6%	8.9	1.3	A
	Right Turn	10	10	98.8%	7.3	8.4	A
	Subtotal	1,230	802	65.2%	18.4	4.9	C
EB	Left Turn	10	1	11.4%	618.7	349.2	F
	Through	40	9	21.9%	627.6	232.0	F
	Right Turn	40	8	20.9%	577.2	275.2	F
	Subtotal	90	18	20.3%	541.7	216.6	F
WB	Left Turn	70	5	6.5%	879.4	374.5	F
	Through	20	2	11.4%	779.7	416.0	F
	Right Turn	105	26	25.0%	579.1	278.7	F
	Subtotal	195	33	17.0%	618.6	263.4	F
Total		3,605	2,926	81.2%	18.2	3.2	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Master Plan Buildout
PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	95.0%	11.7	7.9	B
	Through	2,050	2,033	99.2%	5.7	0.7	A
	Right Turn	10	11	114.0%	2.9	1.5	A
	Subtotal	2,080	2,064	99.2%	5.7	0.7	A
SB	Left Turn	20	11	53.2%	22.1	18.2	C
	Through	1,140	716	62.8%	4.5	0.3	A
	Right Turn	10	6	60.8%	0.5	0.7	A
	Subtotal	1,170	733	62.6%	4.8	0.5	A
EB	Left Turn	10	6	60.8%	216.4	127.4	F
	Through	10	7	68.4%	221.6	118.5	F
	Right Turn	10	8	79.8%	40.4	50.3	E
	Subtotal	30	21	69.7%	165.0	94.7	F
WB	Left Turn	10	7	72.2%	157.6	97.1	F
	Through						
	Right Turn	30	28	93.7%	59.1	30.3	F
	Subtotal	40	35	88.4%	75.9	29.9	F
Total		3,320	2,853	85.9%	7.4	1.2	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	14	140.6%	9.9	5.1	A
	Through	2,060	2,065	100.2%	6.5	0.6	A
	Right Turn	10	13	133.0%	7.3	2.7	A
	Subtotal	2,080	2,092	100.6%	6.5	0.6	A
SB	Left Turn	10	6	64.6%	55.1	46.2	F
	Through	1,140	690	60.5%	0.7	0.1	A
	Right Turn	10	10	98.8%	1.2	1.3	A
	Subtotal	1,160	706	60.9%	1.2	0.4	A
EB	Left Turn	10	10	95.0%	106.8	74.2	F
	Through	10	10	98.8%	135.3	175.0	F
	Right Turn						
	Subtotal	20	19	96.9%	116.9	105.0	F
WB	Left Turn	10	7	68.4%	130.8	72.7	F
	Through	10	11	114.0%	109.1	58.8	F
	Right Turn	10	6	64.6%	31.7	30.6	D
	Subtotal	30	25	82.3%	95.4	38.4	F
Total		3,290	2,842	86.4%	6.7	1.2	A

Intersection 13 **SR 99/Barry Rd** **Signal**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	8	76.0%	53.8	29.5	D
	Through	2,010	1,995	99.3%	24.5	6.1	C
	Right Turn	20	25	125.4%	24.8	11.9	C
	Subtotal	2,040	2,028	99.4%	24.6	6.2	C
SB	Left Turn	20	9	45.6%	57.2	22.3	E
	Through	1,100	660	60.0%	18.9	2.5	B
	Right Turn	30	16	51.9%	18.9	4.4	B
	Subtotal	1,150	685	59.5%	19.5	2.6	B
EB	Left Turn	30	33	111.5%	30.0	8.2	C
	Through	20	22	108.3%	32.2	12.2	C
	Right Turn	10	11	106.4%	9.7	6.1	A
	Subtotal	60	66	109.6%	27.7	6.1	C
WB	Left Turn	10	8	76.0%	18.9	17.4	B
	Through	30	34	112.7%	33.0	8.4	C
	Right Turn	40	39	97.9%	27.2	9.2	C
	Subtotal	80	81	100.7%	29.2	6.6	C
Total		3,330	2,859	85.8%	23.7	4.8	C

Intersection 21 **Phillips Rd/Lincoln Rd** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	100	97	96.5%	30.5	5.4	D
	Through						
	Right Turn	90	90	99.6%	21.7	9.2	C
	Subtotal	190	186	98.0%	26.2	6.6	D
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	830	549	66.2%	3.0	0.2	A
	Right Turn	110	78	71.2%	3.0	0.3	A
	Subtotal	940	628	66.8%	3.0	0.2	A
WB	Left Turn	70	65	92.8%	10.7	2.6	B
	Through	1,000	980	98.0%	5.2	0.6	A
	Right Turn						
	Subtotal	1,070	1,045	97.7%	5.6	0.7	A
Total		2,200	1,859	84.5%	6.8	0.8	A

Intersection 24 Phillips Rd/Bogue Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	540	244	45.1%	278.2	52.5	F
	Through	10	8	76.0%	225.5	109.4	F
	Right Turn	10	10	95.0%	20.1	19.5	C
	Subtotal	560	261	46.6%	267.5	47.5	F
SB	Left Turn	30	30	98.8%	39.7	13.7	E
	Through	30	28	92.5%	64.8	16.8	F
	Right Turn	40	38	95.0%	35.6	14.9	E
	Subtotal	100	95	95.4%	45.9	14.0	E
EB	Left Turn	80	53	66.0%	9.5	11.4	A
	Through	840	591	70.4%	5.0	6.6	A
	Right Turn	180	122	68.0%	4.2	3.8	A
	Subtotal	1,100	766	69.7%	5.2	6.4	A
WB	Left Turn	110	116	105.4%	11.3	8.6	B
	Through	480	472	98.4%	1.0	0.2	A
	Right Turn	20	21	104.5%	0.3	0.3	A
	Subtotal	610	609	99.9%	2.8	1.4	A
Total		2,370	1,732	73.1%	45.3	6.3	E

Intersection 27 Phillips Rd/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	11	53.2%	2.0	0.5	A
	Through	90	70	77.3%	0.3	0.3	A
	Right Turn						
	Subtotal	110	80	72.9%	0.5	0.3	A
SB	Left Turn						
	Through	70	78	110.7%	0.6	0.2	A
	Right Turn	50	52	104.1%	0.3	0.1	A
	Subtotal	120	130	108.0%	0.5	0.1	A
EB	Left Turn	30	20	65.9%	5.2	1.0	A
	Through						
	Right Turn	40	28	69.4%	3.3	0.5	A
	Subtotal	70	48	67.9%	4.1	0.6	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		300	257	85.8%	1.2	0.2	A

Intersection 28 **Wallace Dr/Stewart Rd** **Side-street Stop**

























Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	95.0%	17.5	36.8	C
	Through						
	Right Turn	10	8	76.0%	7.1	10.3	A
	Subtotal	20	17	85.5%	10.5	16.4	B
SB	Left Turn	20	18	91.2%	5.8	1.6	A
	Through						
	Right Turn	30	25	82.3%	5.7	8.4	A
	Subtotal	50	43	85.9%	5.8	4.9	A
EB	Left Turn	60	35	58.9%	1.7	0.7	A
	Through	180	119	66.3%	0.3	0.2	A
	Right Turn	10	6	64.6%	0.3	0.4	A
	Subtotal	250	161	64.4%	0.7	0.2	A
WB	Left Turn	10	13	133.0%	2.0	1.0	A
	Through	100	90	90.1%	8.9	17.5	A
	Right Turn	10	10	102.6%	0.2	0.2	A
	Subtotal	120	114	94.7%	7.0	12.9	A
Total		440	335	76.1%	3.9	4.6	A

Intersection 29 **Muir Rd/Stewart Rd** **Side-street Stop**

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	21	102.6%	4.9	0.9	A
	Through						
	Right Turn	30	35	115.3%	3.0	0.5	A
	Subtotal	50	55	110.2%	3.7	0.6	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	190	130	68.6%	0.7	0.3	A
	Right Turn	20	16	79.8%	0.5	0.1	A
	Subtotal	210	146	69.7%	0.7	0.2	A
WB	Left Turn	30	28	93.7%	2.2	0.4	A
	Through	100	102	102.2%	0.2	0.1	A
	Right Turn						
	Subtotal	130	130	100.3%	0.6	0.1	A
Total		390	332	85.1%	1.2	0.2	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative Plus Project Buildout
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	680	310	230	1070	300	220	530	160	300	680	90
Future Volume (veh/h)	150	680	310	230	1070	300	220	530	160	300	680	90
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		0.99	1.00		1.00	1.00		0.98
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	163	739	337	250	1163	326	239	576	174	326	739	98
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	1208	538	328	1101	659	260	806	243	400	834	111
Arrive On Green	0.12	0.34	0.34	0.10	0.31	0.30	0.15	0.30	0.29	0.12	0.27	0.26
Sat Flow, veh/h	1691	3539	1576	3442	3539	1574	1774	2680	808	3442	3133	415
Grp Volume(v), veh/h	163	739	337	250	1163	326	239	380	370	326	417	420
Grp Sat Flow(s),veh/h/ln	1691	1770	1576	1721	1770	1574	1774	1770	1718	1721	1770	1779
Q Serve(g_s), s	10.3	19.0	12.1	7.7	34.0	9.5	14.5	20.9	21.0	10.1	24.7	24.8
Cycle Q Clear(g_c), s	10.3	19.0	12.1	7.7	34.0	9.5	14.5	20.9	21.0	10.1	24.7	24.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.23
Lane Grp Cap(c), veh/h	197	1208	538	328	1101	659	260	532	517	400	471	473
V/C Ratio(X)	0.83	0.61	0.63	0.76	1.06	0.49	0.92	0.71	0.72	0.81	0.89	0.89
Avail Cap(c_a), veh/h	201	1208	538	441	1101	659	260	534	519	441	502	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	30.0	11.5	48.2	37.7	9.3	46.0	34.0	34.3	47.1	38.5	38.7
Incr Delay (d2), s/veh	22.2	0.9	2.3	3.5	43.4	0.6	34.7	4.5	4.7	9.3	15.7	15.7
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	6.0	9.4	6.9	3.8	23.1	4.2	9.6	10.9	10.7	5.3	14.1	14.2
LnGrp Delay(d),s/veh	69.4	30.9	13.8	51.7	81.0	9.9	80.8	38.5	39.0	56.4	54.2	54.4
LnGrp LOS	E	C	B	D	F	A	F	D	D	E	D	D
Approach Vol, veh/h		1239			1739			989			1163	
Approach Delay, s/veh		31.3			63.5			48.9			54.9	
Approach LOS		C			E			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	16.7	36.9	14.4	41.3	20.5	33.1	17.7	38.0				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	5.0	* 5	5.5	* 5.5				
Max Green Setting (Gmax), s	13.5	32.0	13.5	31.5	15.5	* 30	12.5	* 33				
Max Q Clear Time (g_c+I1), s	12.1	23.0	9.7	21.0	16.5	26.8	12.3	36.0				
Green Ext Time (p_c), s	0.1	3.1	0.2	4.7	0.0	1.2	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			51.0									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative Plus Project Buildout
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	780	230	210	1020	230	260	430	140	210	630	250
Future Volume (veh/h)	190	780	230	210	1020	230	260	430	140	210	630	250
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		0.98	1.00		0.97	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	204	839	247	226	1097	247	280	462	151	226	677	269
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	922	271	212	955	214	265	566	183	338	661	262
Arrive On Green	0.13	0.34	0.33	0.12	0.33	0.32	0.15	0.22	0.21	0.19	0.27	0.26
Sat Flow, veh/h	1774	2686	790	1774	2859	640	1774	2614	847	1774	2459	977
Grp Volume(v), veh/h	204	553	533	226	676	668	280	311	302	226	487	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1706	1774	1770	1730	1774	1770	1692	1774	1770	1666
Q Serve(g_s), s	15.2	40.0	40.1	16.0	44.7	44.7	20.0	22.4	22.8	15.8	36.0	36.0
Cycle Q Clear(g_c), s	15.2	40.0	40.1	16.0	44.7	44.7	20.0	22.4	22.8	15.8	36.0	36.0
Prop In Lane	1.00		0.46	1.00		0.37	1.00		0.50	1.00		0.59
Lane Grp Cap(c), veh/h	229	608	586	212	591	578	265	383	366	338	475	448
V/C Ratio(X)	0.89	0.91	0.91	1.07	1.14	1.16	1.06	0.81	0.82	0.67	1.02	1.02
Avail Cap(c_a), veh/h	252	621	598	212	591	578	265	502	480	338	475	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	42.0	42.4	59.0	44.6	44.9	57.0	49.9	50.4	50.3	49.0	49.4
Incr Delay (d2), s/veh	28.9	19.3	19.9	80.7	83.7	88.7	71.3	7.6	8.7	5.0	47.8	49.1
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	9.3	22.7	22.1	12.6	35.6	35.6	15.0	11.8	11.5	8.3	23.9	22.6
LnGrp Delay(d),s/veh	86.3	61.3	62.3	139.7	128.3	133.6	128.3	57.6	59.1	55.4	96.8	98.5
LnGrp LOS	F	E	E	F	F	F	F	E	E	E	F	F
Approach Vol, veh/h		1290			1570			893			1172	
Approach Delay, s/veh		65.7			132.2			80.3			89.5	
Approach LOS		E			F			F			F	
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	31.0	33.0	20.0	50.0	24.0	40.0	21.3	48.7				
Change Period (Y+Rc), s	5.5	* 5.5	4.0	5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	37.0	* 37	16.0	45.5	20.0	34.5	19.0	42.5				
Max Q Clear Time (g_c+11), s	11.7	24.8	18.0	42.1	22.0	38.0	17.2	46.7				
Green Ext Time (p_c), s	0.1	2.7	0.0	2.4	0.0	0.0	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				95.2								
HCM 2010 LOS				F								
Notes												

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		↑	↑↑
Traffic Vol, veh/h	80	90	820	60	100	960
Future Vol, veh/h	80	90	820	60	100	960
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	94	854	63	104	1000

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1594	459	0	0	918	0
Stage 1	886	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	98	549	-	-	739	-
Stage 1	363	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	84	549	-	-	739	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	386	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	30.8		0		1
HCM LOS	D				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	311	739
HCM Lane V/C Ratio	-	-	0.569	0.141
HCM Control Delay (s)	-	-	30.8	10.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	3.3	0.5

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Cumulative Plus Project Buildout
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	400	50	130	630	340	120	340	100	440	330	170
Future Volume (veh/h)	150	400	50	130	630	340	120	340	100	440	330	170
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		0.98	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	160	426	53	138	670	362	128	362	106	468	351	181
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	683	300	297	896	400	170	658	294	509	1334	576
Arrive On Green	0.11	0.19	0.19	0.17	0.25	0.25	0.10	0.19	0.19	0.29	0.38	0.37
Sat Flow, veh/h	1774	3539	1554	1774	3539	1578	1774	3539	1578	1774	3539	1554
Grp Volume(v), veh/h	160	426	53	138	670	362	128	362	106	468	351	181
Grp Sat Flow(s),veh/h/ln	1774	1770	1554	1774	1770	1578	1774	1770	1578	1774	1770	1554
Q Serve(g_s), s	8.7	11.0	2.2	7.0	17.3	10.9	7.0	9.2	3.9	25.4	6.8	5.6
Cycle Q Clear(g_c), s	8.7	11.0	2.2	7.0	17.3	10.9	7.0	9.2	3.9	25.4	6.8	5.6
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	201	683	300	297	896	400	170	658	294	509	1334	576
V/C Ratio(X)	0.80	0.62	0.18	0.46	0.75	0.91	0.75	0.55	0.36	0.92	0.26	0.31
Avail Cap(c_a), veh/h	214	1246	547	297	1139	508	482	1175	524	571	1353	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	36.8	19.7	37.4	34.2	8.7	43.8	36.7	16.0	34.4	21.4	10.4
Incr Delay (d2), s/veh	17.2	0.7	0.2	0.8	1.8	16.2	4.9	0.5	0.6	18.7	0.1	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	5.2	5.5	1.2	3.5	8.7	9.0	3.6	4.6	2.4	15.1	3.3	3.1
LnGrp Delay(d),s/veh	60.1	37.5	19.9	38.2	36.0	25.0	48.8	37.2	16.6	53.0	21.5	10.6
LnGrp LOS	E	D	B	D	D	C	D	D	B	D	C	B
Approach Vol, veh/h		639			1170			596			1000	
Approach Delay, s/veh		41.7			32.8			36.0			34.3	
Approach LOS		D			C			D			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	32.5	22.5	21.2	23.2	13.5	41.5	15.2	29.2				
Change Period (Y+Rc), s	4.6	4.6	4.6	* 4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	31.4	32.4	9.0	* 34	26.4	37.4	11.4	31.4				
Max Q Clear Time (g_c+I1), s	27.4	11.2	9.0	13.0	9.0	8.8	10.7	19.3				
Green Ext Time (p_c), s	0.5	4.8	0.0	2.4	0.2	5.1	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			35.5									
HCM 2010 LOS			D									
Notes												

Intersection																
Intersection Delay, s/veh150.3																
Intersection LOS F																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕			↙	↘	↗		↙	↘	↗		↙	↘	
Traffic Vol, veh/h	0	20	420	50	0	50	530	320	0	80	160	60	0	290	110	30
Future Vol, veh/h	0	20	420	50	0	50	530	320	0	80	160	60	0	290	110	30
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	452	54	0	54	570	344	0	86	172	65	0	312	118	32
Number of Lanes	0	0	1	0	0	1	1	1	0	1	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	291.7	157.5	25.2	61.3
HCM LOS	F	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	4%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	86%	0%	100%	0%	0%	79%
Vol Right, %	0%	0%	100%	10%	0%	0%	100%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	160	60	490	50	530	320	290	140
LT Vol	80	0	0	20	50	0	0	290	0
Through Vol	0	160	0	420	0	530	0	0	110
RT Vol	0	0	60	50	0	0	320	0	30
Lane Flow Rate	86	172	65	527	54	570	344	312	151
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.277	0.53	0.186	1.554	0.143	1.441	0.803	0.948	0.431
Departure Headway (Hd)	13.677	13.138	12.384	11.282	10.865	10.334	9.591	12.974	12.271
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	264	277	292	327	332	359	382	281	295
Service Time	11.377	10.838	10.084	8.982	8.565	8.034	7.291	10.674	9.971
HCM Lane V/C Ratio	0.326	0.621	0.223	1.612	0.163	1.588	0.901	1.11	0.512
HCM Control Delay	21.5	29.7	17.9	291.7	15.4	240.9	41.7	79.3	24
HCM Lane LOS	C	D	C	F	C	F	E	F	C
HCM 95th-tile Q	1.1	2.9	0.7	28.6	0.5	26.3	7	9.1	2.1

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔		↔	↔
Traffic Vol, veh/h	0	30	100	10	20	80
Future Vol, veh/h	0	30	100	10	20	80
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	0	-	-	0	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	8	2	33	46	7
Mvmt Flow	0	33	109	11	22	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	244	114	0	0	120	0
Stage 1	114	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	7.12	6.28	-	-	4.56	-
Critical Hdwy Stg 1	6.12	-	-	-	-	-
Critical Hdwy Stg 2	6.12	-	-	-	-	-
Follow-up Hdwy	3.518	3.372	-	-	2.614	-
Pot Cap-1 Maneuver	710	923	-	-	1235	-
Stage 1	891	-	-	-	-	-
Stage 2	874	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	700	923	-	-	1235	-
Mov Cap-2 Maneuver	700	-	-	-	-	-
Stage 1	891	-	-	-	-	-
Stage 2	858	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9		0		1.6
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	923	1235	-
HCM Lane V/C Ratio	-	-	-	0.035	0.018	-
HCM Control Delay (s)	-	-	0	9	8	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0.1	0.1	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Future Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	11	11	11	11	11	11	11	98	11	11	76	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	239	233	82	239	234	103	87	0	0	109	0	0
Stage 1	103	103	-	125	125	-	-	-	-	-	-	-
Stage 2	136	130	-	114	109	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	685	667	978	715	646	920	1509	-	-	1481	-	-
Stage 1	867	810	-	879	770	-	-	-	-	-	-	-
Stage 2	833	789	-	891	782	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	660	656	978	690	636	920	1509	-	-	1481	-	-
Mov Cap-2 Maneuver	660	656	-	690	636	-	-	-	-	-	-	-
Stage 1	860	804	-	872	764	-	-	-	-	-	-	-
Stage 2	805	783	-	862	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.2	0.7	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1509	-	-	739	730	1481	-	-
HCM Lane V/C Ratio	0.007	-	-	0.044	0.045	0.007	-	-
HCM Control Delay (s)	7.4	0	-	10.1	10.2	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	143.6
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔↔	↔		↔	↔↔			↔	↔	↔
Traffic Vol, veh/h	0	50	590	150	0	120	880	70	0	110	100	50
Future Vol, veh/h	0	50	590	150	0	120	880	70	0	110	100	50
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	628	160	0	128	936	74	0	117	106	53
Number of Lanes	0	0	2	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	95.1	242.1	22.6
HCM LOS	F	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	20%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	80%	100%	0%	0%	100%	81%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	19%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	100	50	247	393	150	120	587	363	90	150
LT Vol	110	0	0	50	0	0	120	0	0	90	0
Through Vol	0	100	0	197	393	0	0	587	293	0	150
RT Vol	0	0	50	0	0	150	0	0	70	0	0
Lane Flow Rate	117	106	53	262	418	160	128	624	387	96	160
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.409	0.357	0.168	0.769	1.222	0.432	0.376	1.754	1.072	0.331	0.53
Departure Headway (Hd)	13.389	12.889	12.189	11.111	11.078	10.31	10.832	10.332	10.197	13.346	12.846
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	270	281	296	328	331	351	334	356	359	271	282
Service Time	11.089	10.589	9.889	8.811	8.778	8.01	8.532	8.032	7.897	11.046	10.546
HCM Lane V/C Ratio	0.433	0.377	0.179	0.799	1.263	0.456	0.383	1.753	1.078	0.354	0.567
HCM Control Delay	25.1	22.6	17.3	42.7	156.4	20.6	19.9	374.9	101.1	22.5	29.2
HCM Lane LOS	D	C	C	E	F	C	C	F	F	C	D
HCM 95th-tile Q	1.9	1.6	0.6	6.1	17.5	2.1	1.7	38.8	13.6	1.4	2.9

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↙	↑	↗
Traffic Vol, veh/h	0	90	150	60
Future Vol, veh/h	0	90	150	60
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	160	64
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	24.9
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Cumulative Plus Project Buildout
 PM Peak Hour



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR	
Lane Configurations	↖↗	↗		↖	↑↑	↑↑	↗	
Traffic Volume (veh/h)	490	180	5	430	990	1030	640	
Future Volume (veh/h)	490	180	5	430	990	1030	640	
Number	7	14		5	2	6	16	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1827	1776		1863	1863	1863	1863	
Adj Flow Rate, veh/h	521	191		457	1053	1096	681	
Adj No. of Lanes	2	1		1	2	2	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	4	7		2	2	2	2	
Cap, veh/h	654	292		427	2513	1491	667	
Arrive On Green	0.19	0.19		0.24	0.71	0.42	0.42	
Sat Flow, veh/h	3375	1509		1774	3632	3632	1583	
Grp Volume(v), veh/h	521	191		457	1053	1096	681	
Grp Sat Flow(s),veh/h/ln	1688	1509		1774	1770	1770	1583	
Q Serve(g_s), s	12.2	9.7		20.0	10.2	21.6	35.0	
Cycle Q Clear(g_c), s	12.2	9.7		20.0	10.2	21.6	35.0	
Prop In Lane	1.00	1.00		1.00			1.00	
Lane Grp Cap(c), veh/h	654	292		427	2513	1491	667	
V/C Ratio(X)	0.80	0.65		1.07	0.42	0.74	1.02	
Avail Cap(c_a), veh/h	1138	509		427	2513	1491	667	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	31.9	30.9		31.5	5.0	20.2	24.0	
Incr Delay (d2), s/veh	0.9	0.9		63.5	0.0	1.7	40.3	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.8	8.0		17.3	4.8	10.9	22.7	
LnGrp Delay(d),s/veh	32.8	31.9		95.1	5.0	21.9	64.3	
LnGrp LOS	C	C		F	A	C	F	
Approach Vol, veh/h	712				1510	1777		
Approach Delay, s/veh	32.5				32.3	38.1		
Approach LOS	C				C	D		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		63.0		20.1	24.0	39.0		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		57.0		27.4	19.4	33.0		
Max Q Clear Time (g_c+I1), s		12.2		14.2	22.0	37.0		
Green Ext Time (p_c), s		20.7		1.3	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			34.9					
HCM 2010 LOS			C					
Notes								

Intersection																
Intersection Delay, s/veh	217.5															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷			↶	↷				↕				↕	
Traffic Vol, veh/h	0	110	640	130	0	90	470	60	0	70	80	100	0	70	170	90
Future Vol, veh/h	0	110	640	130	0	90	470	60	0	70	80	100	0	70	170	90
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	113	660	134	0	93	485	62	0	72	82	103	0	72	175	93
Number of Lanes	0	1	1	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	463.3	31.6	32.9	51.4
HCM LOS	F	D	D	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	28%	100%	0%	100%	0%	0%	21%
Vol Thru, %	32%	0%	83%	0%	100%	72%	52%
Vol Right, %	40%	0%	17%	0%	0%	28%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	110	770	90	313	217	330
LT Vol	70	110	0	90	0	0	70
Through Vol	80	0	640	0	313	157	170
RT Vol	100	0	130	0	0	60	90
Lane Flow Rate	258	113	794	93	323	223	340
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.66	0.321	2.104	0.237	0.78	0.527	0.846
Departure Headway (Hd)	11.086	10.196	9.544	10.823	10.294	10.089	10.694
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	327	352	389	334	355	360	340
Service Time	8.786	7.989	7.336	8.523	7.994	7.789	8.394
HCM Lane V/C Ratio	0.789	0.321	2.041	0.278	0.91	0.619	1
HCM Control Delay	32.9	17.8	526.9	16.9	41.4	23.5	51.4
HCM Lane LOS	D	C	F	C	E	C	F
HCM 95th-tile Q	4.4	1.4	56.8	0.9	6.4	2.9	7.6

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative Plus Project Buildout
PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations															
Traffic Volume (veh/h)	5	490	90	210	10	70	60	5	190	400	20	5	70	400	510
Future Volume (veh/h)	5	490	90	210	10	70	60	5	190	400	20	5	70	400	510
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		0.99	1.00		1.00		1.00		1.00		1.00		0.96
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		1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900
Adj Flow Rate, veh/h		500	92	214	10	71	61		194	408	20		71	408	520
Adj No. of Lanes		1	1	1	1	1	1		1	2	0		1	2	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, %		2	2	2	2	2	2		3	2	2		2	2	2
Cap, veh/h		529	758	639	20	224	190		227	1348	66		98	564	486
Arrive On Green		0.30	0.41	0.41	0.01	0.12	0.12		0.13	0.39	0.38		0.06	0.32	0.30
Sat Flow, veh/h		1774	1863	1569	1774	1863	1583		1757	3435	168		1774	1770	1526
Grp Volume(v), veh/h		500	92	214	10	71	61		194	210	218		71	408	520
Grp Sat Flow(s),veh/h/ln		1774	1863	1569	1774	1863	1583		1757	1770	1833		1774	1770	1526
Q Serve(g_s), s		32.9	3.7	11.2	0.7	4.2	4.2		12.9	9.7	9.8		4.7	24.4	38.0
Cycle Q Clear(g_c), s		32.9	3.7	11.2	0.7	4.2	4.2		12.9	9.7	9.8		4.7	24.4	38.0
Prop In Lane		1.00		1.00	1.00		1.00		1.00		0.09		1.00		1.00
Lane Grp Cap(c), veh/h		529	758	639	20	224	190		227	695	719		98	564	486
V/C Ratio(X)		0.95	0.12	0.34	0.50	0.32	0.32		0.86	0.30	0.30		0.73	0.72	1.07
Avail Cap(c_a), veh/h		625	1109	934	119	578	491		250	695	719		193	564	486
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh		40.9	22.1	24.3	58.6	48.0	48.0		50.9	25.0	25.1		55.5	36.0	41.6
Incr Delay (d2), s/veh		20.5	0.0	0.1	7.0	0.3	0.4		20.9	0.1	0.1		3.8	4.0	60.7
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		19.1	1.9	4.9	0.4	2.2	1.9		7.6	4.8	5.0		2.4	12.5	24.1
LnGrp Delay(d),s/veh		61.4	22.1	24.4	65.6	48.3	48.4		71.7	25.1	25.1		59.3	40.0	102.3
LnGrp LOS		E	C	C	E	D	D		E	C	C		E	D	F
Approach Vol, veh/h			806			142				622				999	
Approach Delay, s/veh			47.1			49.5				39.6				73.8	
Approach LOS			D			D				D				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	4.5	50.8	5.3	52.5	19.4	42.0	39.5	18.3							
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0							
Max Green Setting (Gmax), s	4.5	40.0	7.5	69.0	16.5	36.0	41.5	35.0							
Max Q Clear Time (g_c+10), s	4.5	11.8	2.7	13.2	14.9	40.0	34.9	6.2							
Green Ext Time (p_c), s	0.0	7.0	0.0	1.1	0.0	0.0	0.2	1.1							
Intersection Summary															
HCM 2010 Ctrl Delay			55.8												
HCM 2010 LOS			E												
Notes															

Intersection																
Intersection Delay, s/veh	9.2															
Intersection LOS	A															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	80	130	10	0	10	80	30	0	10	60	10	0	30	50	70
Future Vol, veh/h	0	80	130	10	0	10	80	30	0	10	60	10	0	30	50	70
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	83	135	10	0	10	83	31	0	10	63	10	0	31	52	73
Number of Lanes	0	0	1	0	0	0	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10	8.5	8.6	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	12%	36%	20%	0%	20%
Vol Thru, %	75%	59%	80%	57%	33%
Vol Right, %	12%	5%	0%	43%	47%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	220	50	70	150
LT Vol	10	80	10	0	30
Through Vol	60	130	40	40	50
RT Vol	10	10	0	30	70
Lane Flow Rate	83	229	52	73	156
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.114	0.306	0.079	0.102	0.202
Departure Headway (Hd)	4.942	4.811	5.426	5.023	4.662
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	722	745	658	710	767
Service Time	2.999	2.858	3.179	2.776	2.711
HCM Lane V/C Ratio	0.115	0.307	0.079	0.103	0.203
HCM Control Delay	8.6	10	8.6	8.4	8.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	1.3	0.3	0.3	0.8

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

Cumulative Plus Project Buildout
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	10	20	0	10	0	20	270	0	10	130	130
Future Volume (veh/h)	140	10	20	0	10	0	20	270	0	10	130	130
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	1863	1863	1863	1900	1863	1900	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	160	0	22	0	11	0	22	293	0	11	141	141
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	669	0	298	0	89	0	34	587	0	20	573	487
Arrive On Green	0.19	0.00	0.19	0.00	0.05	0.00	0.02	0.32	0.00	0.01	0.31	0.31
Sat Flow, veh/h	3548	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	160	0	22	0	11	0	22	293	0	11	141	141
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	1.4	0.0	0.4	0.0	0.2	0.0	0.5	4.7	0.0	0.2	2.1	2.5
Cycle Q Clear(g_c), s	1.4	0.0	0.4	0.0	0.2	0.0	0.5	4.7	0.0	0.2	2.1	2.5
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	0	298	0	89	0	34	587	0	20	573	487
V/C Ratio(X)	0.24	0.00	0.07	0.00	0.12	0.00	0.65	0.50	0.00	0.54	0.25	0.29
Avail Cap(c_a), veh/h	1260	0	562	0	1527	0	388	1680	0	388	1680	1428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	12.2	0.0	16.7	0.0	17.8	10.2	0.0	18.0	9.5	9.6
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.7	0.0	18.8	0.8	0.0	20.8	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.2	0.0	0.1	0.0	0.4	2.5	0.0	0.2	1.1	1.1
LnGrp Delay(d),s/veh	12.8	0.0	12.3	0.0	17.4	0.0	36.6	11.0	0.0	38.8	9.8	10.0
LnGrp LOS	B		B		B		D	B		D	A	B
Approach Vol, veh/h		182			11			315			293	
Approach Delay, s/veh		12.8			17.4			12.8			11.0	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.4	15.5		10.9	4.7	15.3		5.7				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	32.0		12.0	7.9	32.0		29.0				
Max Q Clear Time (g_c+1), s	12.2	6.7		3.4	2.5	4.5		2.2				
Green Ext Time (p_c), s	0.0	3.9		0.4	0.0	3.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Cumulative Plus Project Buildout
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	90	10	20	30	20	120	30	420	50	5	170	470	120
Future Volume (veh/h)	90	10	20	30	20	120	30	420	50	5	170	470	120
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		0.99	1.00		0.99	1.00		1.00		1.00		0.99
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	1863	1761	1900	1863	1863	1863	1863	1861	1900		1863	1863	1900
Adj Flow Rate, veh/h	96	11	21	32	21	128	32	447	53		181	500	128
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2		2	2	2
Cap, veh/h	141	117	224	54	314	265	54	1023	121		242	1193	304
Arrive On Green	0.08	0.22	0.21	0.03	0.17	0.17	0.03	0.32	0.28		0.14	0.43	0.39
Sat Flow, veh/h	1774	539	1028	1774	1863	1575	1774	3186	376		1774	2792	711
Grp Volume(v), veh/h	96	0	32	32	21	128	32	247	253		181	316	312
Grp Sat Flow(s),veh/h/ln	1774	0	1567	1774	1863	1575	1774	1768	1794		1774	1770	1733
Q Serve(g_s), s	2.9	0.0	0.9	1.0	0.5	4.0	1.0	6.0	6.1		5.3	6.8	7.0
Cycle Q Clear(g_c), s	2.9	0.0	0.9	1.0	0.5	4.0	1.0	6.0	6.1		5.3	6.8	7.0
Prop In Lane	1.00		0.66	1.00		1.00	1.00		0.21		1.00		0.41
Lane Grp Cap(c), veh/h	141	0	341	54	314	265	54	568	576		242	756	740
V/C Ratio(X)	0.68	0.00	0.09	0.59	0.07	0.48	0.59	0.44	0.44		0.75	0.42	0.42
Avail Cap(c_a), veh/h	425	0	1183	327	1304	1102	294	1107	1123		294	1108	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	17.1	26.0	19.0	20.4	26.0	14.5	14.7		22.6	10.8	11.2
Incr Delay (d2), s/veh	5.7	0.0	0.1	10.0	0.1	1.4	10.0	0.5	0.5		8.2	0.4	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	1.6	0.0	0.4	0.6	0.3	1.8	0.6	3.0	3.1		3.2	3.3	3.3
LnGrp Delay(d),s/veh	30.0	0.0	17.2	36.0	19.1	21.8	36.0	15.1	15.3		30.8	11.2	11.6
LnGrp LOS	C		B	D	B	C	D	B	B		C	B	B
Approach Vol, veh/h		128			181			532				809	
Approach Delay, s/veh		26.8			24.0			16.4				15.7	
Approach LOS		C			C			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	1.4	21.4	5.6	15.8	5.6	27.2	8.3	13.2					
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5					
Max Green Setting (Gmax), s	32.0	32.0	9.5	40.5	8.5	32.0	12.5	37.5					
Max Q Clear Time (g_c+1), s	8.1	8.1	3.0	2.9	3.0	9.0	4.9	6.0					
Green Ext Time (p_c), s	0.1	6.7	0.0	0.8	0.0	6.6	0.1	0.7					

Intersection Summary

HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Notes

Intersection

Int Delay, s/veh 2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	760	30	150	950	20	150
Future Vol, veh/h	760	30	150	950	20	150
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	809	32	160	1011	21	160

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	842	1652
Stage 1	-	-	826
Stage 2	-	-	826
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	789	89
Stage 1	-	-	390
Stage 2	-	-	390
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	788	71
Mov Cap-2 Maneuver	-	-	71
Stage 1	-	-	389
Stage 2	-	-	310

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	71	577	-	-	788	-
HCM Lane V/C Ratio	0.3	0.277	-	-	0.203	-
HCM Control Delay (s)	76.1	13.6	-	-	10.7	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	1.1	1.1	-	-	0.8	-

Intersection			
Intersection Delay, s/veh	4.5		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	141	55	141
Demand Flow Rate, veh/h	144	56	144
Vehicles Circulating, veh/h	44	133	22
Vehicles Exiting, veh/h	122	55	167
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.6	4.2	4.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	144	56	144
Cap Entry Lane, veh/h	1081	989	1105
Entry HV Adj Factor	0.979	0.988	0.980
Flow Entry, veh/h	141	55	141
Cap Entry, veh/h	1059	977	1083
V/C Ratio	0.133	0.057	0.130
Control Delay, s/veh	4.6	4.2	4.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↕↗		↘	↗
Traffic Vol, veh/h	10	60	60	40	20	10
Future Vol, veh/h	10	60	60	40	20	10
Conflicting Peds, #/hr	2	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	64	64	43	21	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	108	0	57
Stage 1	-	-	87
Stage 2	-	-	87
Critical Hdwy	4.13	-	6.93
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	2.219	-	3.319
Pot Cap-1 Maneuver	1482	-	998
Stage 1	-	-	927
Stage 2	-	-	936
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1480	-	995
Mov Cap-2 Maneuver	-	-	798
Stage 1	-	-	925
Stage 2	-	-	927

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1480	-	-	-	798	995
HCM Lane V/C Ratio	0.007	-	-	-	0.027	0.011
HCM Control Delay (s)	7.5	0	-	-	9.6	8.7
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection				
Intersection Delay, s/veh	4.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	53	106	95	182
Demand Flow Rate, veh/h	53	108	96	186
Vehicles Circulating, veh/h	163	96	140	75
Vehicles Exiting, veh/h	98	140	76	129
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.3	4.5	4.6	5.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	53	108	96	186
Cap Entry Lane, veh/h	960	1027	982	1048
Entry HV Adj Factor	0.992	0.985	0.989	0.979
Flow Entry, veh/h	53	106	95	182
Cap Entry, veh/h	952	1011	971	1026
V/C Ratio	0.055	0.105	0.098	0.177
Control Delay, s/veh	4.3	4.5	4.6	5.2
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	1

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	30	20	110	130	80
Future Vol, veh/h	50	30	20	110	130	80
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	32	21	117	138	85

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	345	185	225	0
Stage 1	183	-	-	-
Stage 2	162	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	652	857	1344	-
Stage 1	848	-	-	-
Stage 2	867	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	640	854	1342	-
Mov Cap-2 Maneuver	640	-	-	-
Stage 1	847	-	-	-
Stage 2	852	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1342	-	706	-	-
HCM Lane V/C Ratio	0.016	-	0.121	-	-
HCM Control Delay (s)	7.7	-	10.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection

Int Delay, s/veh 3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	120	130	10	40	100
Future Vol, veh/h	10	120	130	10	40	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	130	141	11	43	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	343	76	0	0	152	0
Stage 1	147	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.63	6.93	-	-	4.13	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	640	970	-	-	1428	-
Stage 1	866	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	620	970	-	-	1428	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	809	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.4		0		2.2
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	620	970	1428	-
HCM Lane V/C Ratio	-	-	0.018	0.134	0.03	-
HCM Control Delay (s)	-	-	10.9	9.3	7.6	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.5	0.1	-

Intersection			
Intersection Delay, s/veh	3.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	33	11	44
Demand Flow Rate, veh/h	34	11	44
Vehicles Circulating, veh/h	22	34	0
Vehicles Exiting, veh/h	22	22	45
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.4	3.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	34	11	44
Cap Entry Lane, veh/h	1105	1092	1130
Entry HV Adj Factor	0.971	0.980	0.990
Flow Entry, veh/h	33	11	44
Cap Entry, veh/h	1073	1071	1119
V/C Ratio	0.031	0.010	0.039
Control Delay, s/veh	3.6	3.4	3.5
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Intersection

Int Delay, s/veh 3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	30	50	30	50	90
Future Vol, veh/h	20	30	50	30	50	90
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, %	2	2	2	2	2	2
Mvmt Flow	22	33	54	33	54	98

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	278	71	0	0	87	0
Stage 1	71	-	-	-	-	-
Stage 2	207	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	712	991	-	-	1509	-
Stage 1	952	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	685	991	-	-	1509	-
Mov Cap-2 Maneuver	685	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	797	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.6		0		2.7
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	841	1509
HCM Lane V/C Ratio	-	-	0.065	0.036
HCM Control Delay (s)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection			
Intersection Delay, s/veh	4.1		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	76	87	109
Demand Flow Rate, veh/h	77	89	111
Vehicles Circulating, veh/h	89	11	34
Vehicles Exiting, veh/h	56	155	66
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.0	4.2
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	77	89	111
Cap Entry Lane, veh/h	1034	1118	1092
Entry HV Adj Factor	0.987	0.977	0.984
Flow Entry, veh/h	76	87	109
Cap Entry, veh/h	1020	1091	1075
V/C Ratio	0.074	0.080	0.102
Control Delay, s/veh	4.2	4.0	4.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

SimTraffic Post-Processor
Average Results from 10 Runs
Queue Length

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 9

SR 99/Bogue Rd

Signal

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left Turn	275	200	30	300	42	275	4	7%	0%
	Through	5,050	675	180	1,275	314	1,275	312	7%	0%
	Through/Right	5,050	825	178	1,400	337	1,400	325	0%	0%
NB	Left Turn	475	225	56	375	131	375	111	0%	0%
	Through	3,925	400	73	575	144	550	129	20%	0%
	Right Turn	325	150	45	350	111	325	74	0%	0%
SB	Left Turn	475	175	35	300	63	300	48	0%	0%
	Through	2,000	250	36	400	79	400	83	6%	0%
	Right Turn	325	125	38	250	101	325	73	0%	0%
WB	Left Turn	150	175	36	225	34	200	26	0%	25%
	Through	225	225	38	275	42	300	37	0%	8%
	Through/Right	225	275	21	325	24	300	17	0%	27%

SimTraffic Post-Processor
Average Results from 10 Runs
Queue Length

Bogue Stewart Master Plan
Cumulative Plus Buildout
AM Peak Hour

Intersection 10

SR 99/Stewarts Rd

Side-street Stop

Direction	Lane Group	Storage (ft)	Average Queue (ft)		95th Queue (ft)		Maximum Queue (ft)		Block Time	
			Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Pocket	Upstream
EB	Left/Through	200	125	50	200	53	200	41	53%	24%
	Right Turn	50	50	13	75	10	75	4	18%	0%
NB	Left Turn	475	50	17	100	30	100	32	0%	0%
	Through	475	25	0	25	0	25	0	0%	0%
	Right Turn	75	25	5	25	18	25	22	0%	0%
SB	U/Left Turns	475	75	17	125	32	125	29	0%	0%
	Through	3,925	25	3	25	15	25	20	0%	0%
	Right Turn	75	25	4	25	16	25	18	0%	0%
WB	Left/Through	425	375	24	525	39	425	5	85%	55%
	Right Turn	100	75	16	150	14	125	0	9%	0%

Queuing and Blocking Report

Cumulative Plus Project Buildout Intersection PM Peak Hour

8/2/2017

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	275	1070	1115	169	218	234	475	1312	1323	325	418	428
Average Queue (ft)	258	609	668	110	164	214	427	717	726	266	295	210
95th Queue (ft)	318	1184	1220	185	245	245	558	1305	1310	437	484	451
Link Distance (ft)		5038	5038	146	146	146		3916	3916			1981
Upstream Blk Time (%)				9	18	58						
Queuing Penalty (veh)				37	73	232						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	55	3					19	18	40	0	7	
Queuing Penalty (veh)	132	11					119	98	125	2	26	

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	366	139
Average Queue (ft)	175	64
95th Queue (ft)	303	148
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)	1	0
Queuing Penalty (veh)	2	0

Queuing and Blocking Report

Cumulative Plus Project Buildout Intersection: PM Peak Hour

8/2/2017

10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	LT	R	L	T	R	UL	T
Maximum Queue (ft)	206	42	280	94	83	2	17	221	70
Average Queue (ft)	174	10	229	29	39	0	2	114	9
95th Queue (ft)	252	44	358	99	88	5	15	254	100
Link Distance (ft)	197		274			1341			3916
Upstream Blk Time (%)	58		63						
Queuing Penalty (veh)	55		130						
Storage Bay Dist (ft)		30		75	450		70	450	
Storage Blk Time (%)	95	2	85	4					
Queuing Penalty (veh)	40	1	94	4					

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

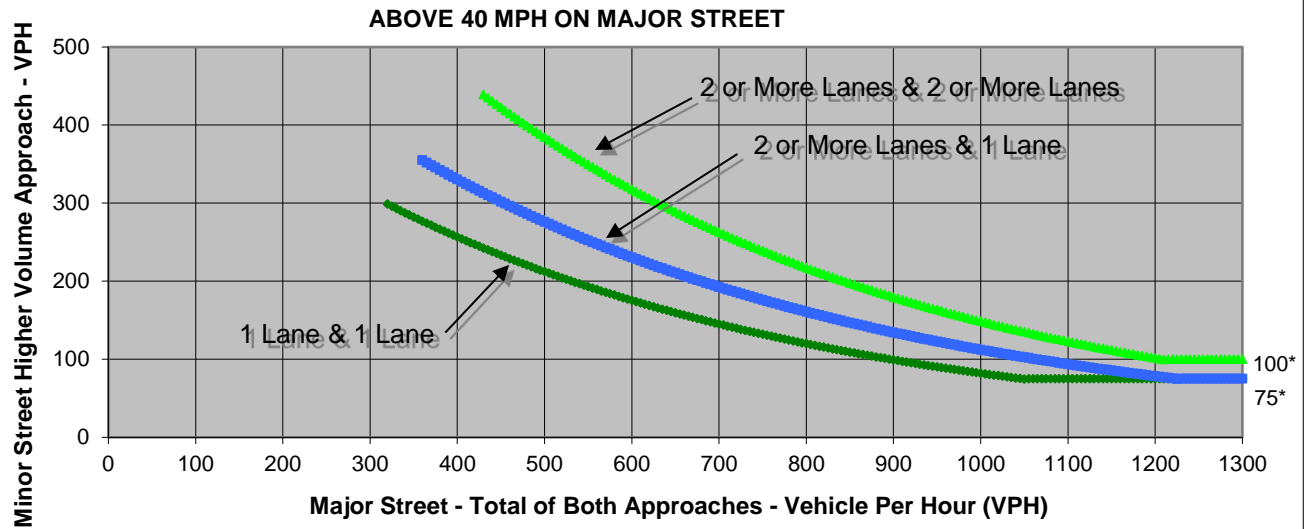
Turn Movement Volumes

	NB	SB	EB	WB
Left	35	60	10	10
Through	1,810	1,345	10	10
Right	45	20	30	35
Total	1,890	1,425	50	55

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	3,315	55	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **SR 99**
 Minor Street **Hunn Rd**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **PM Peak Hour**

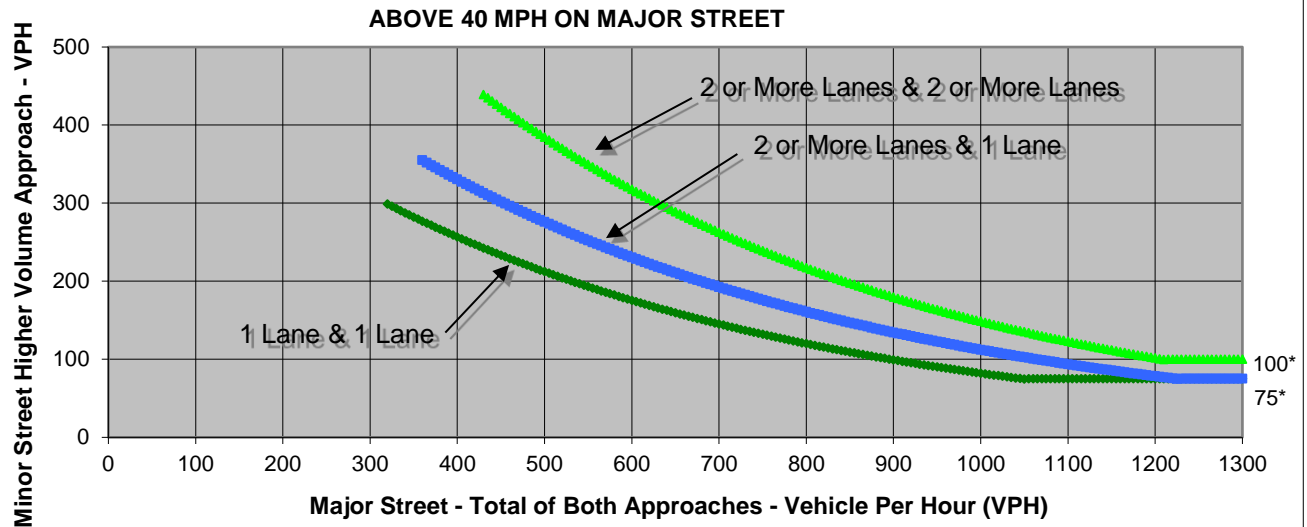
Turn Movement Volumes

	NB	SB	EB	WB
Left	45	55	10	10
Through	1,960	1,510	10	10
Right	30	30	35	105
Total	2,035	1,595	55	125

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,630	125	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **SR 99**
 Minor Street **Smith Rd**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **AM Peak Hour**

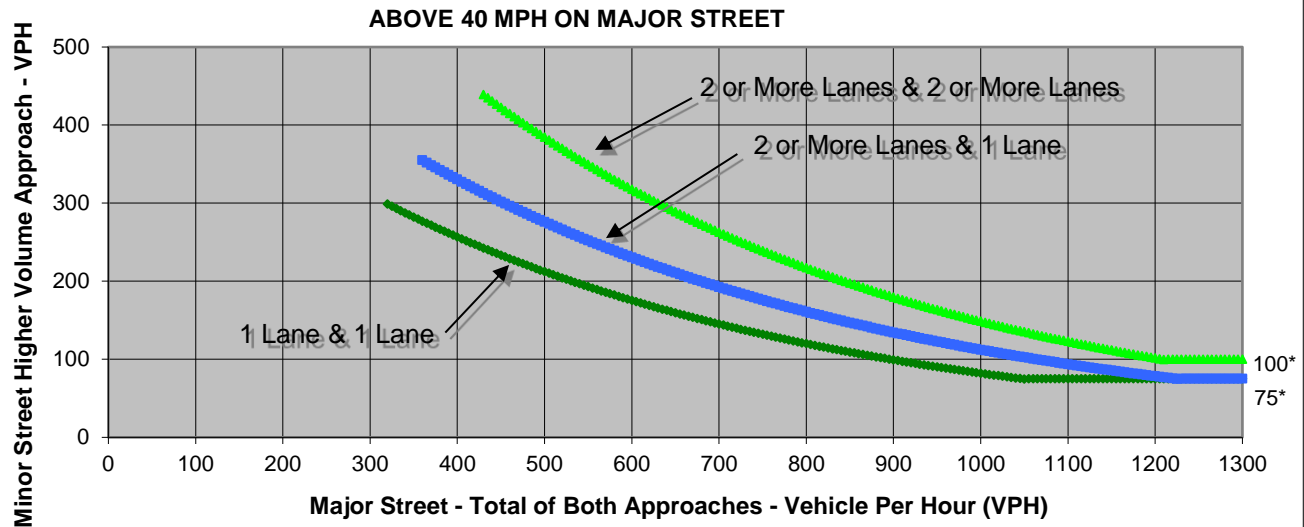
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	30	65	30
Through	1,580	1,490	10	10
Right	20	50	40	45
Total	1,630	1,570	115	85

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,200	115	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

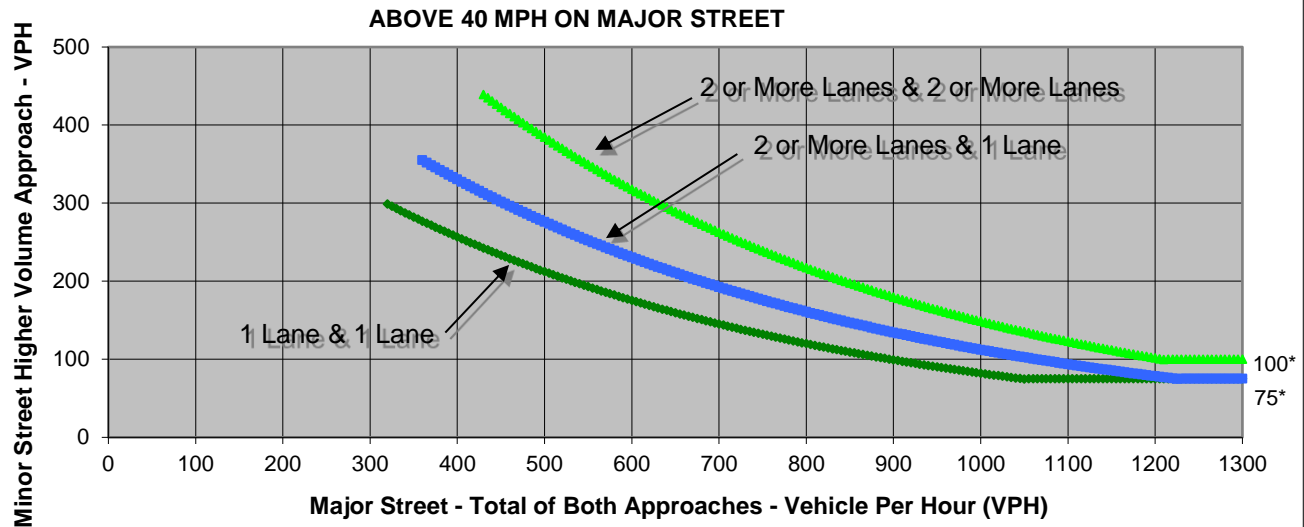
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	50	50	20
Through	1,940	1,430	10	20
Right	30	100	30	40
Total	2,040	1,580	90	80

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,620	90	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

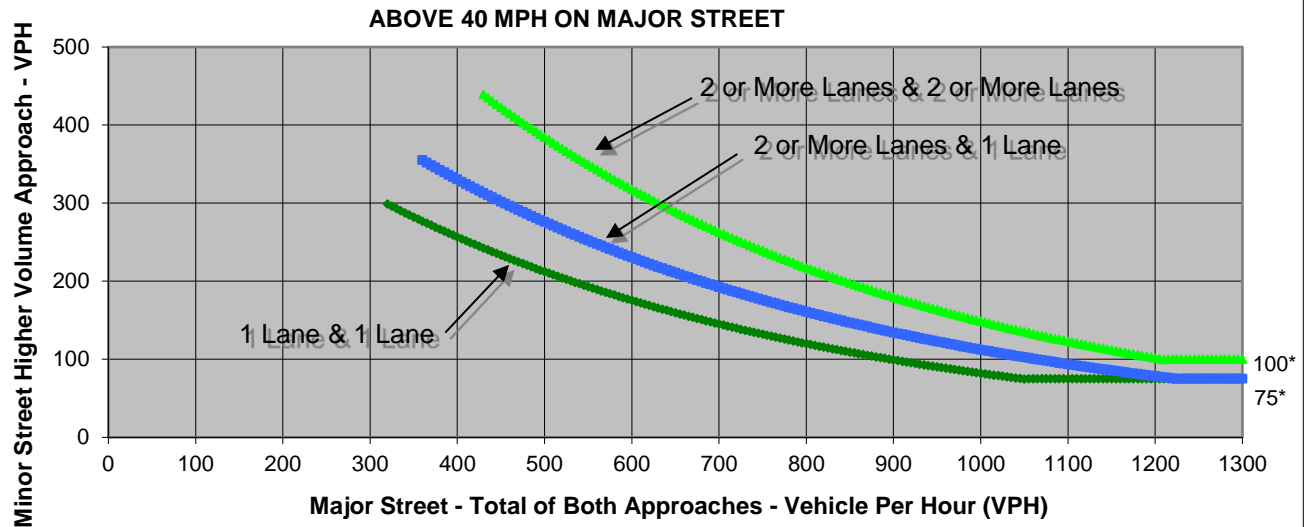
Turn Movement Volumes

	NB	SB	EB	WB
Left	40	135	20	110
Through	1,090	1,475	20	30
Right	70	20	60	220
Total	1,200	1,630	100	360

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	2,830	360	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

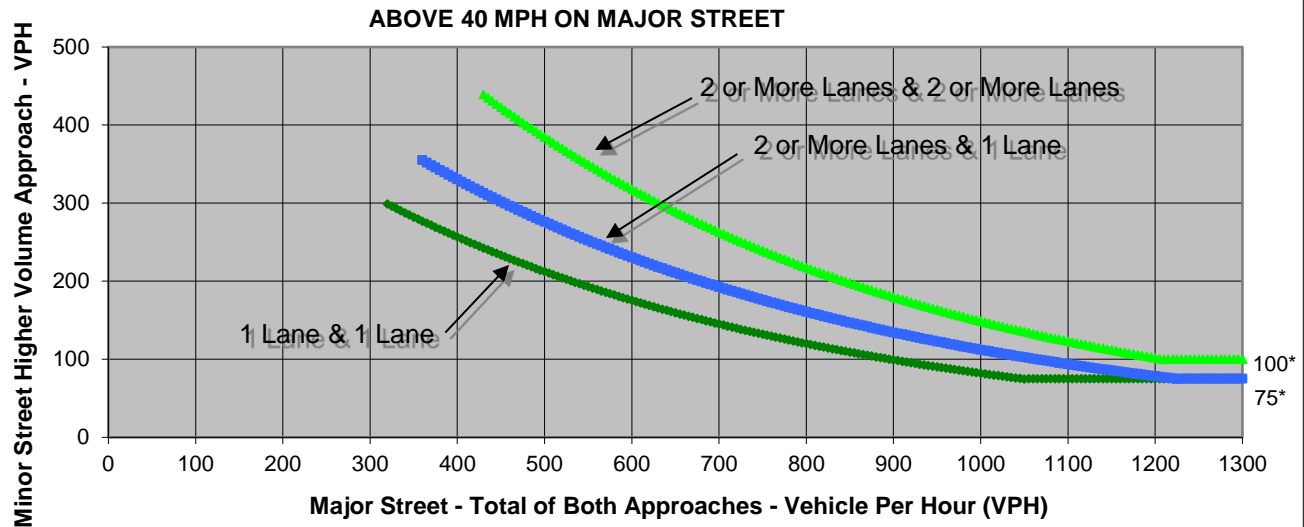
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	160	10	70
Through	1,880	1,060	40	20
Right	140	10	40	105
Total	2,090	1,230	90	195

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,320	195	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

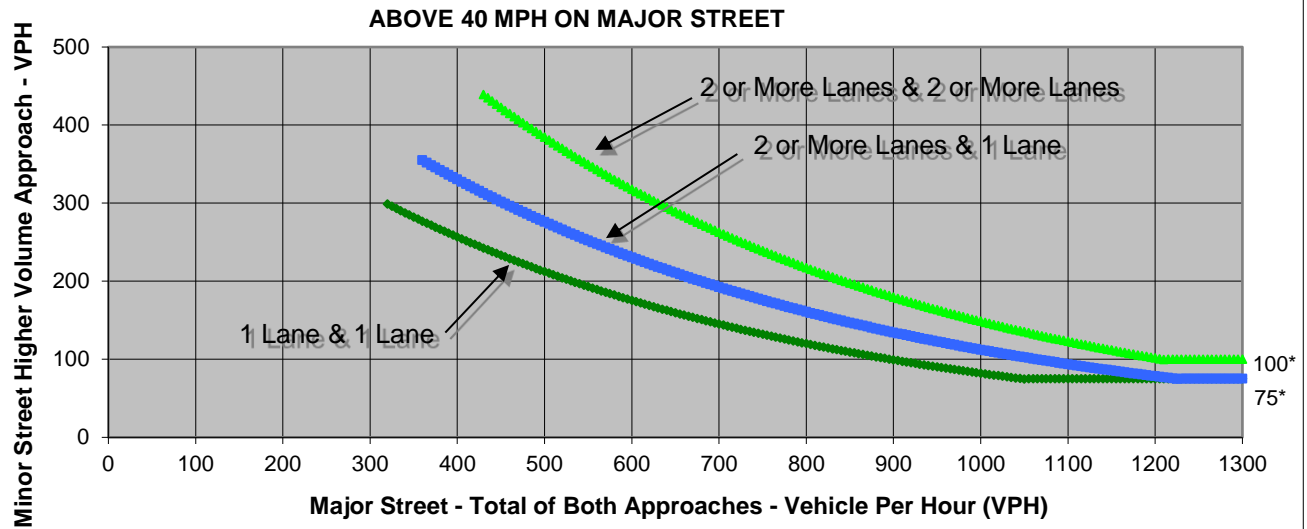
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	10	10
Through	1,170	1,615	10	10
Right	10	10	10	20
Total	1,190	1,645	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,835	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

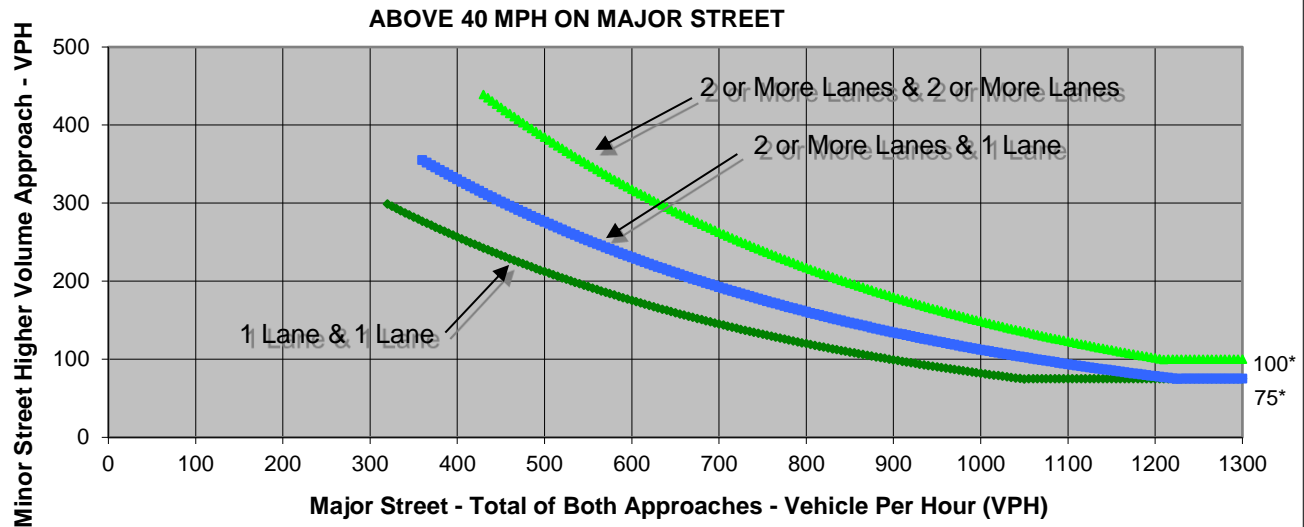
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	20	10	10
Through	2,050	1,140	10	0
Right	10	10	10	30
Total	2,080	1,170	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	3,250	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **SR 99**
 Minor Street **Walnut Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **AM Peak Hour**

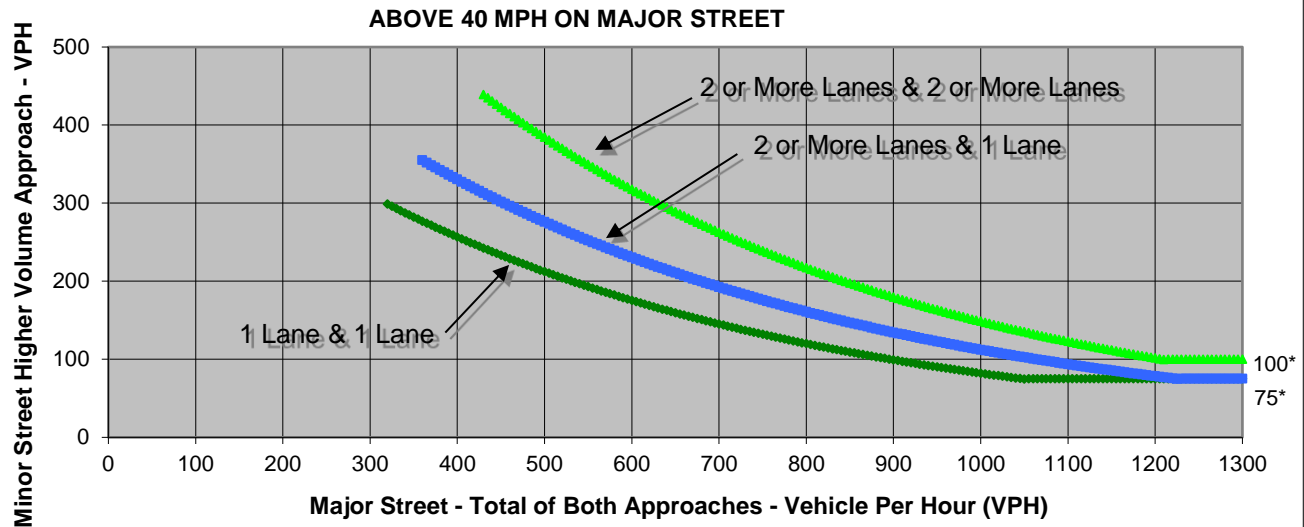
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	0	10
Through	1,180	1,615	0	0
Right	10	10	10	10
Total	1,200	1,635	10	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,835	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

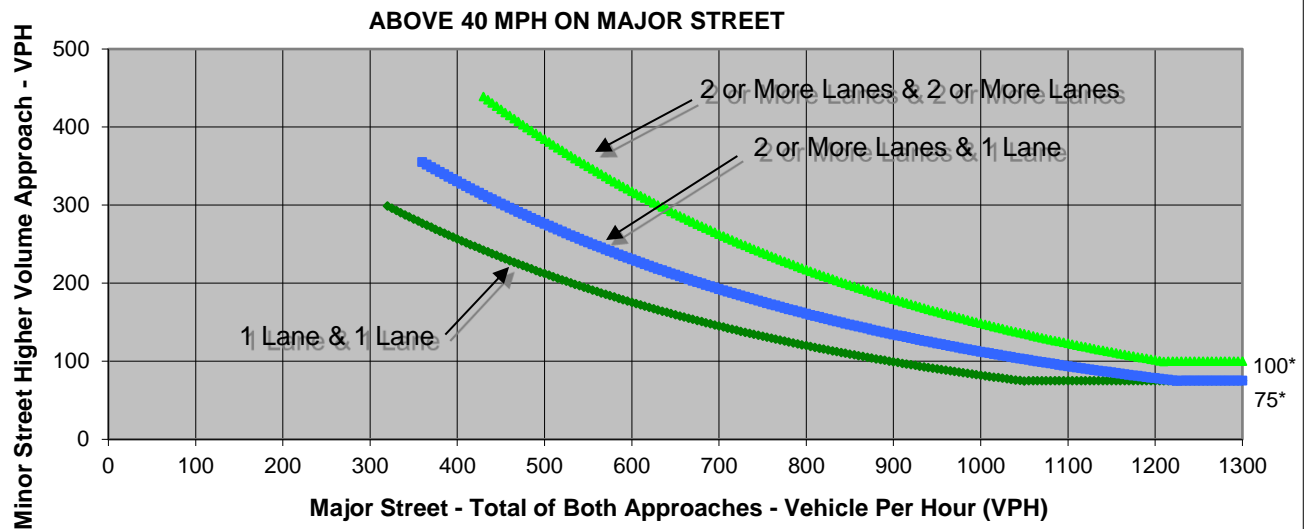
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	2,060	1,140	10	10
Right	10	10	0	10
Total	2,080	1,160	20	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	3,240	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

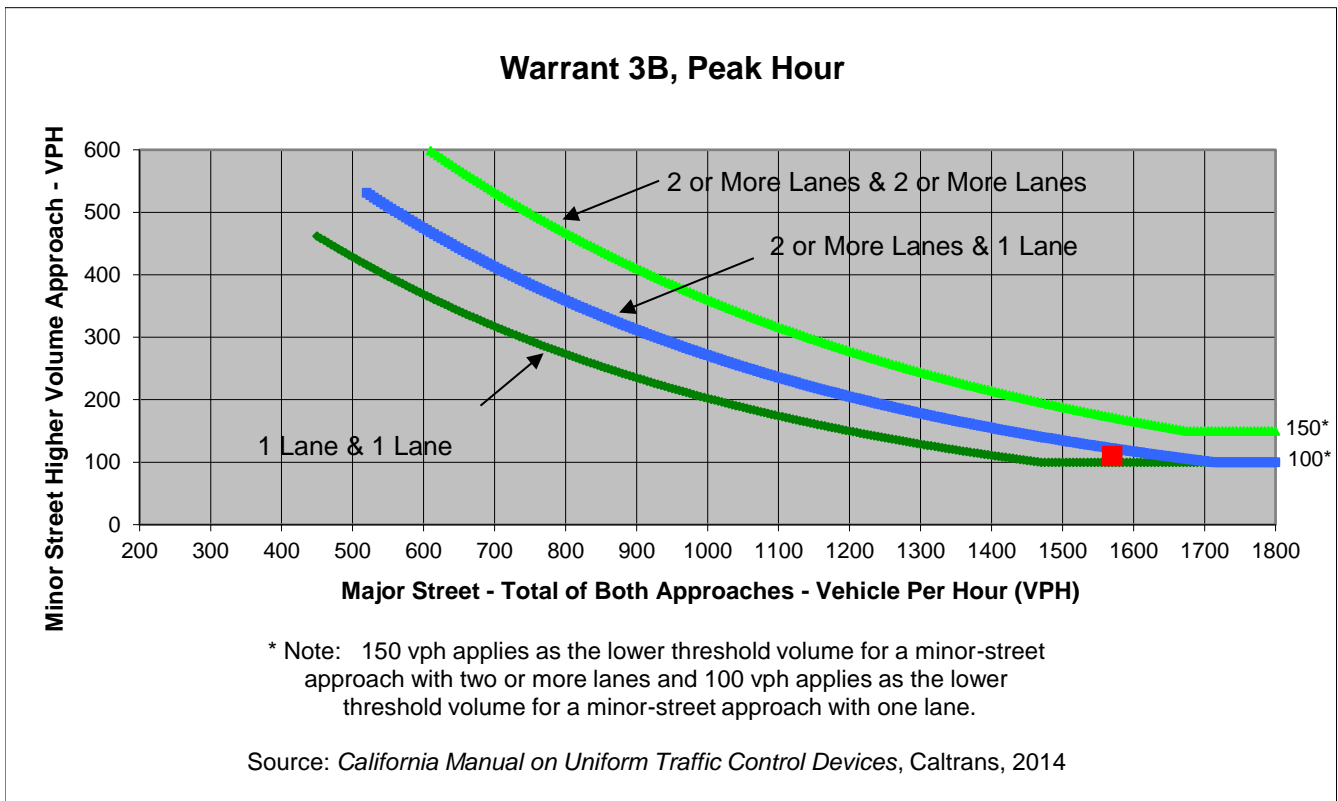
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	40
Through	660	710	0	0
Right	100	0	0	70
Total	760	810	0	110

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,570	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Walton Ave
 Minor Street Richland Rd

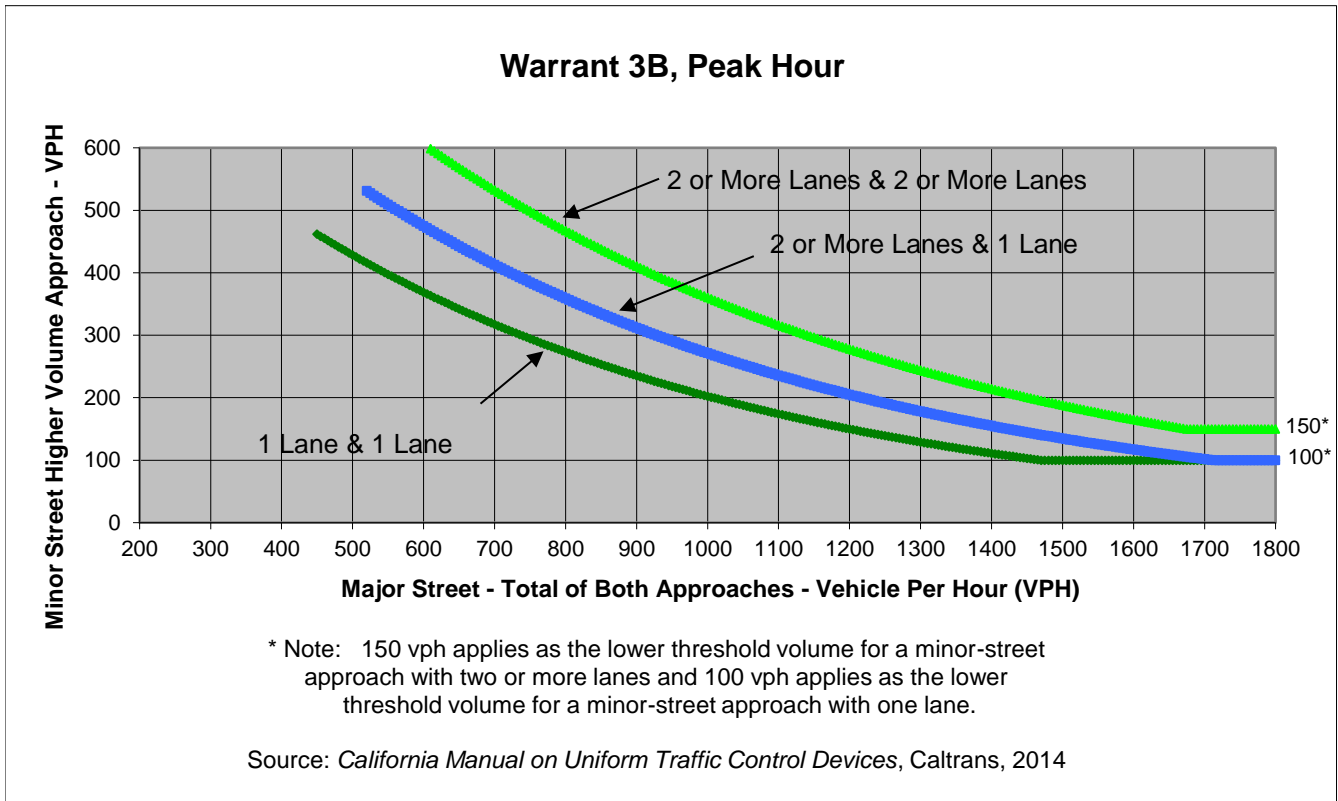
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	80
Through	820	960	0	0
Right	60	0	0	90
Total	880	1,060	0	170

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,940	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **AM Peak Hour**

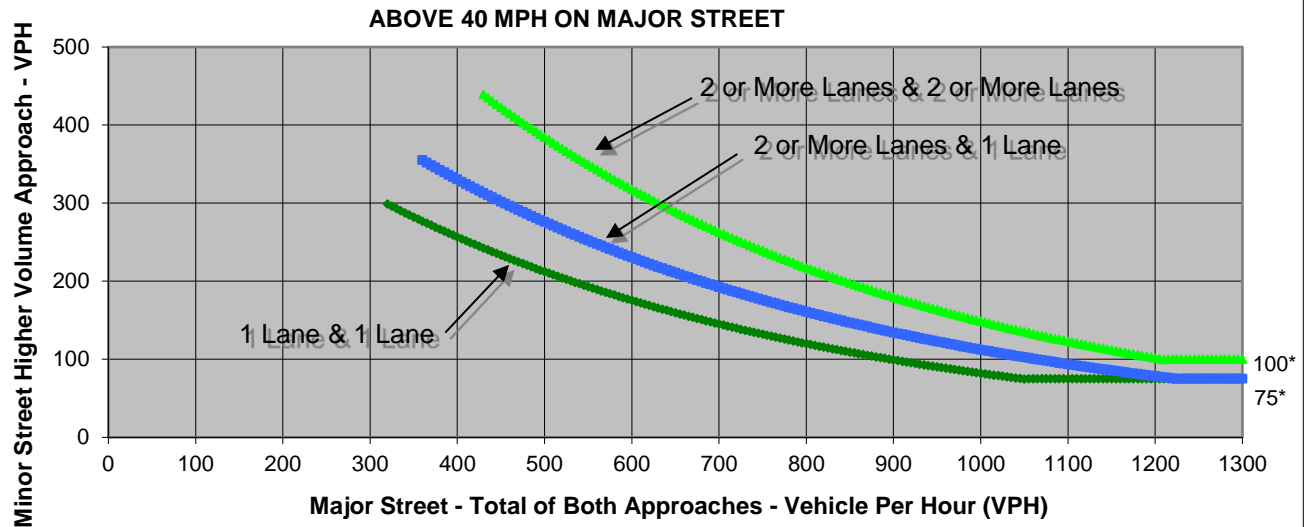
Turn Movement Volumes

	NB	SB	EB	WB
Left	50	180	30	40
Through	80	130	580	450
Right	60	20	110	120
Total	190	330	720	610

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,330	330	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **PM Peak Hour**

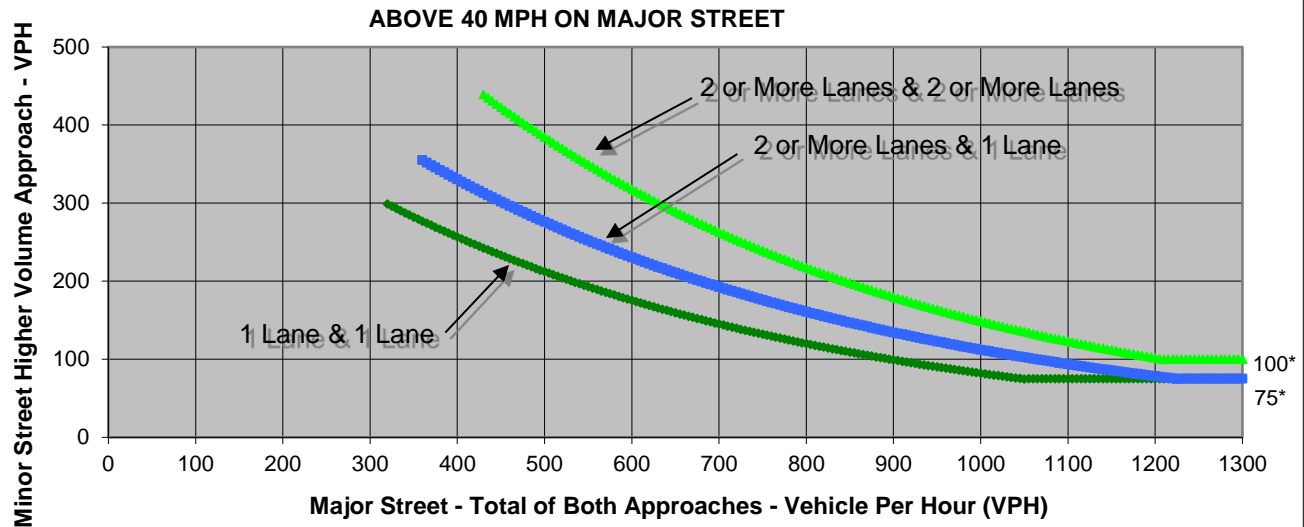
Turn Movement Volumes

	NB	SB	EB	WB
Left	80	290	20	50
Through	160	110	420	530
Right	60	30	50	320
Total	300	430	490	900

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,390	430	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

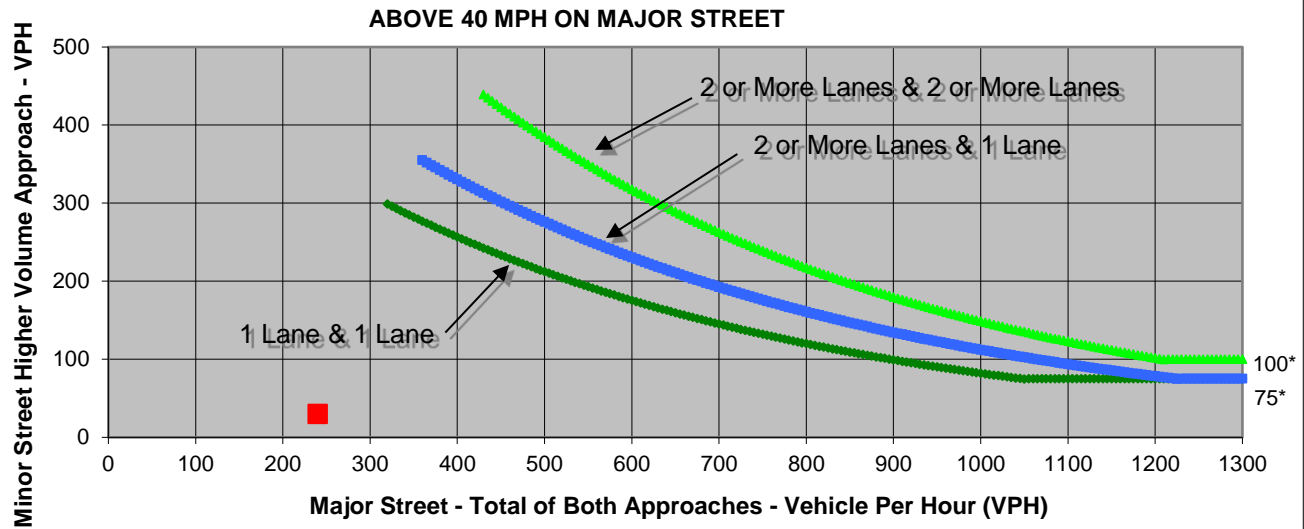
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	0	10
Through	90	110	0	0
Right	10	0	0	20
Total	100	140	0	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	240	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

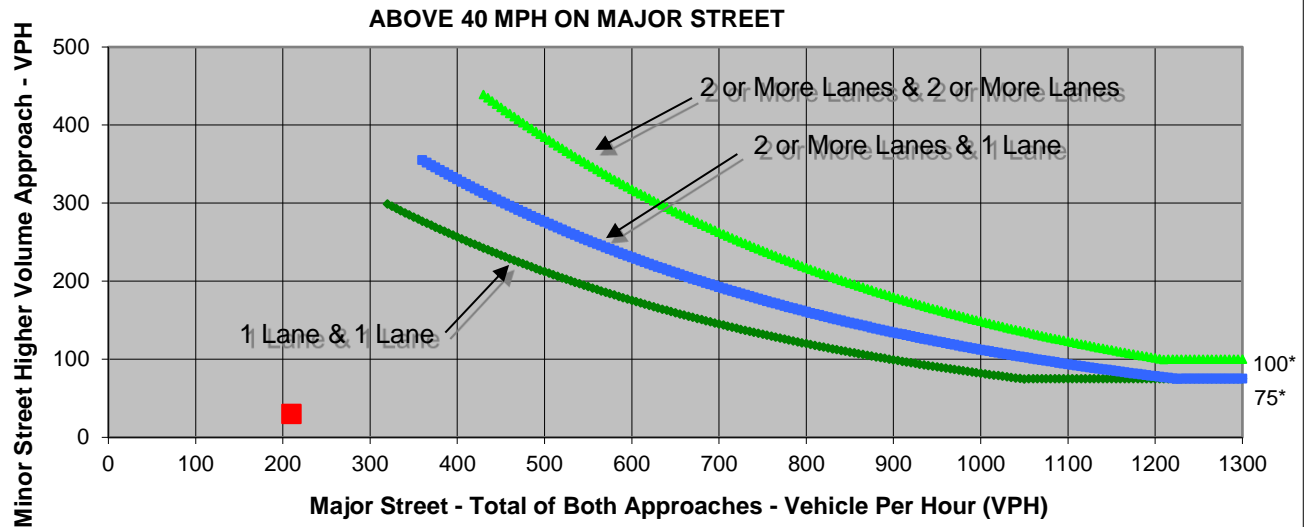
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	0
Through	100	80	0	0
Right	10	0	0	30
Total	110	100	0	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	210	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

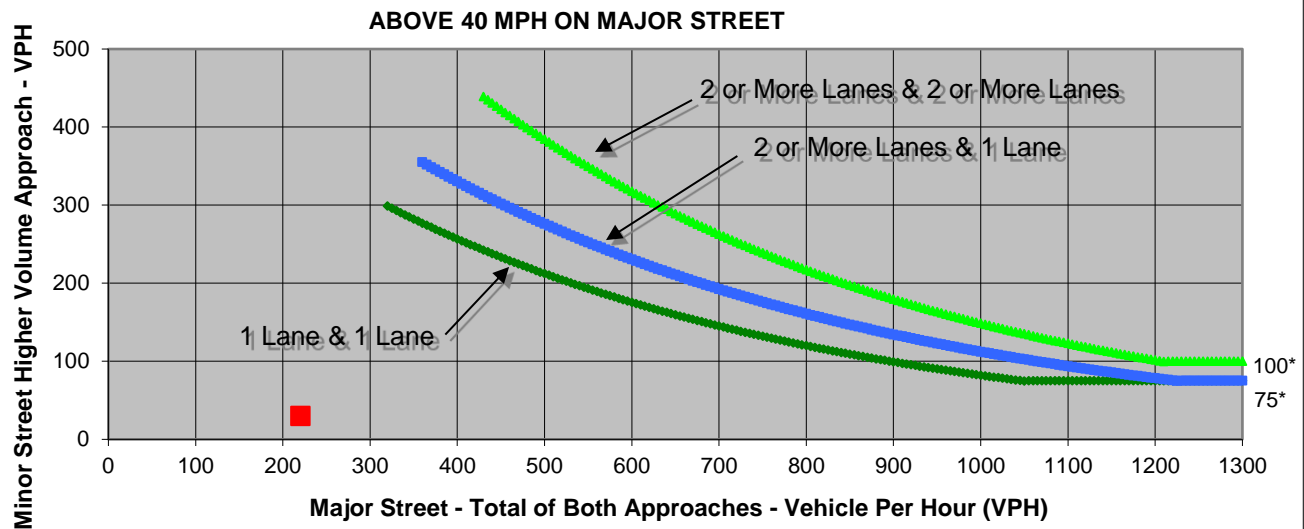
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	0
Through	90	100	10	10
Right	0	10	10	10
Total	100	120	30	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	220	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

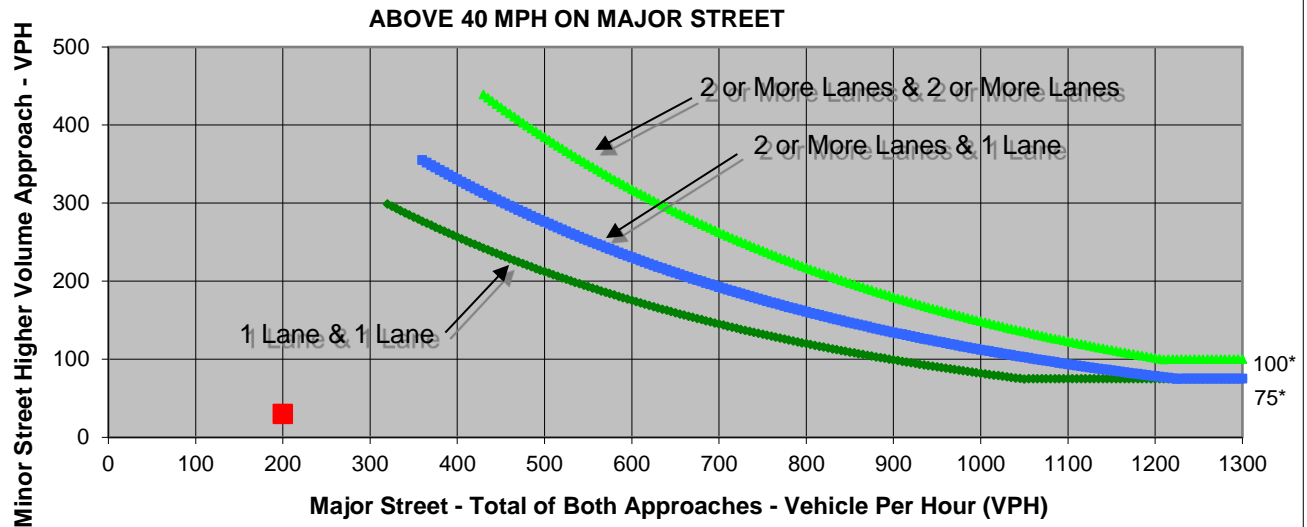
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	90	70	10	10
Right	10	10	10	10
Total	110	90	30	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	200	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

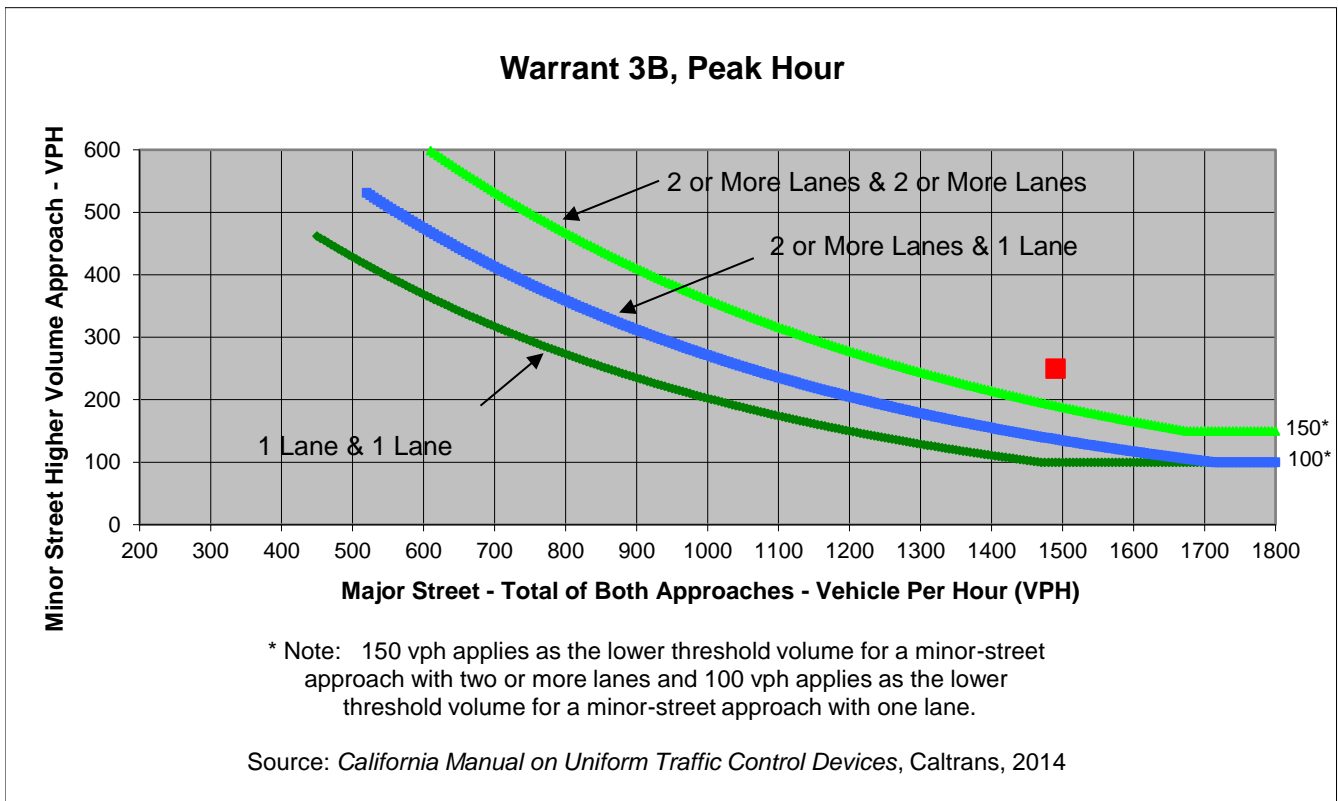
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	80
Through	0	0	810	470
Right	120	0	130	0
Total	250	0	940	550

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,490	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Lincoln Rd
 Minor Street Phillips Rd

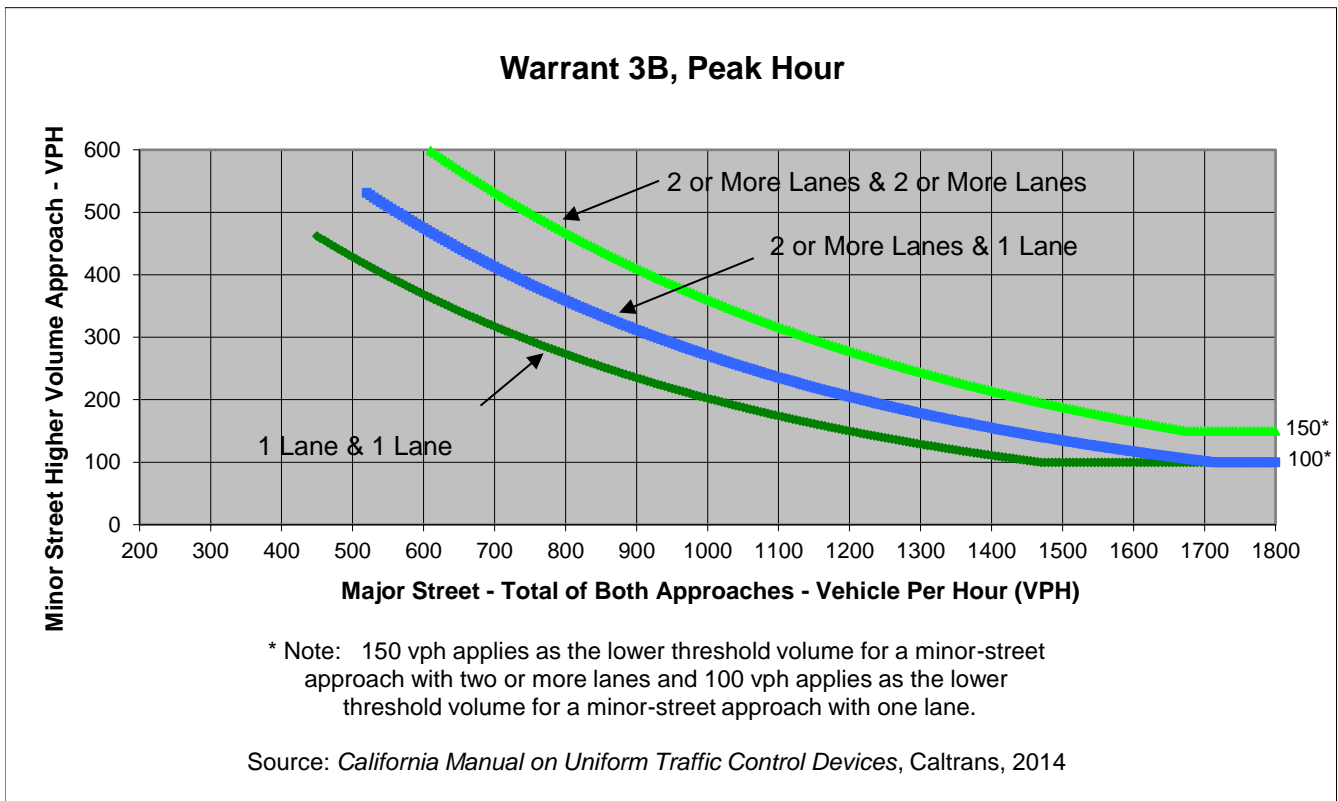
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	0	0	70
Through	0	0	830	1,000
Right	90	0	110	0
Total	190	0	940	1,070

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,010	190	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

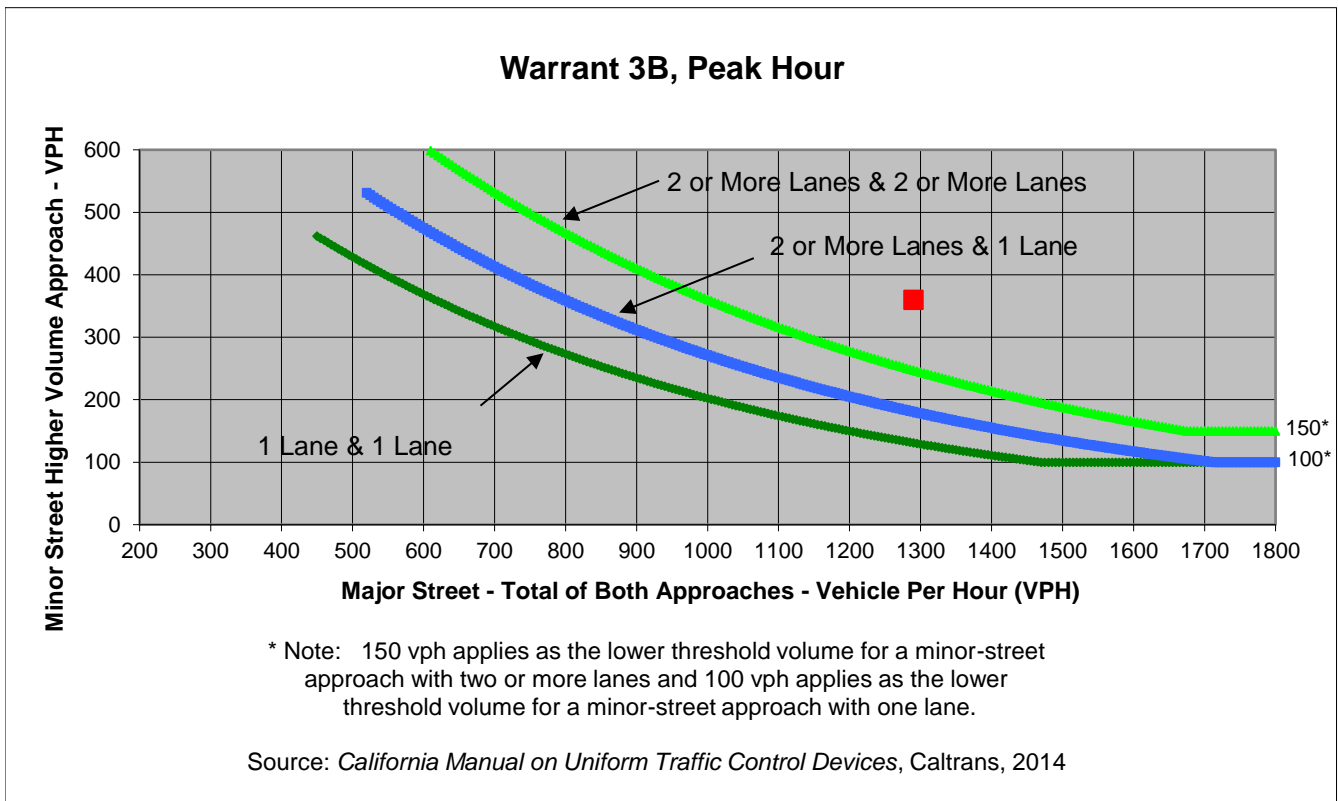
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	60	70	40
Through	140	90	790	280
Right	90	50	60	50
Total	360	200	920	370

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,290	360	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

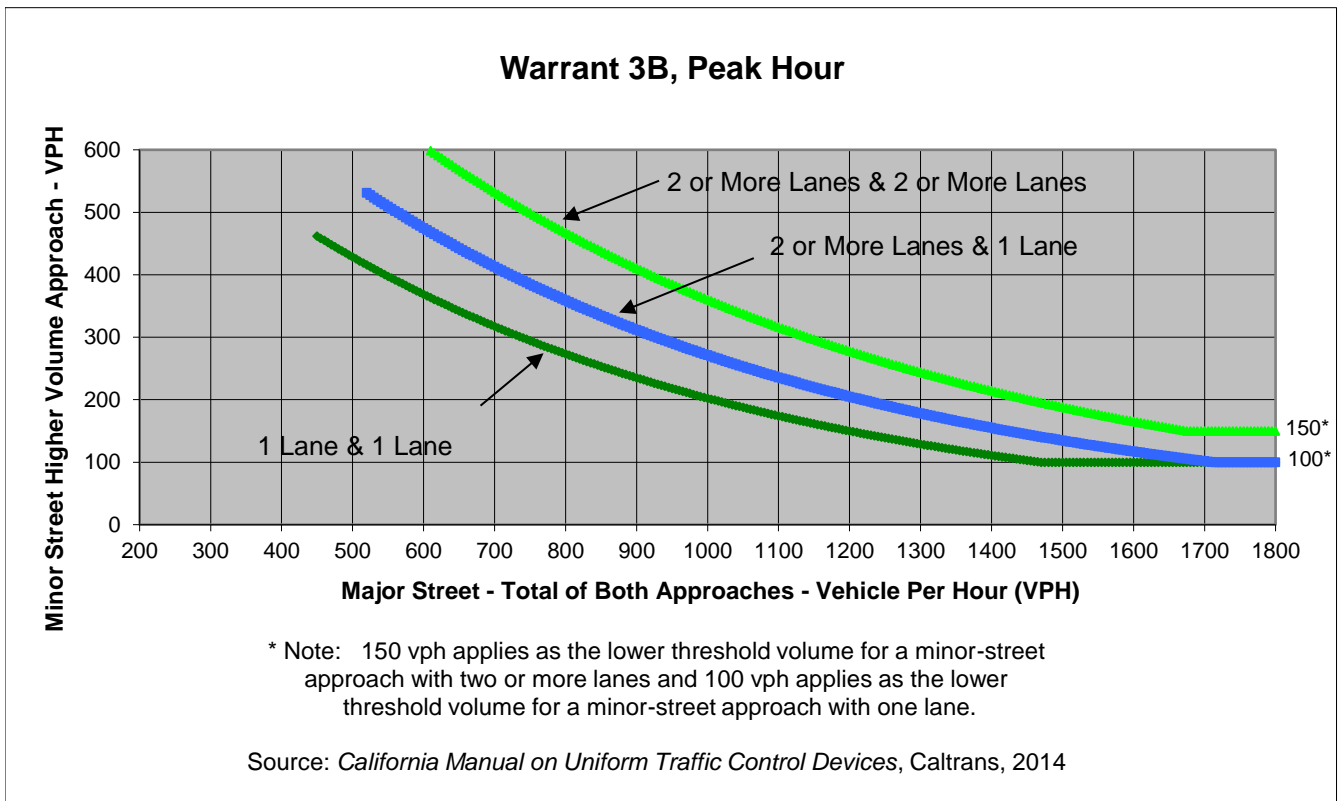
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	110	90	50	120
Through	100	150	590	880
Right	50	60	150	70
Total	260	300	790	1,070

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,860	300	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

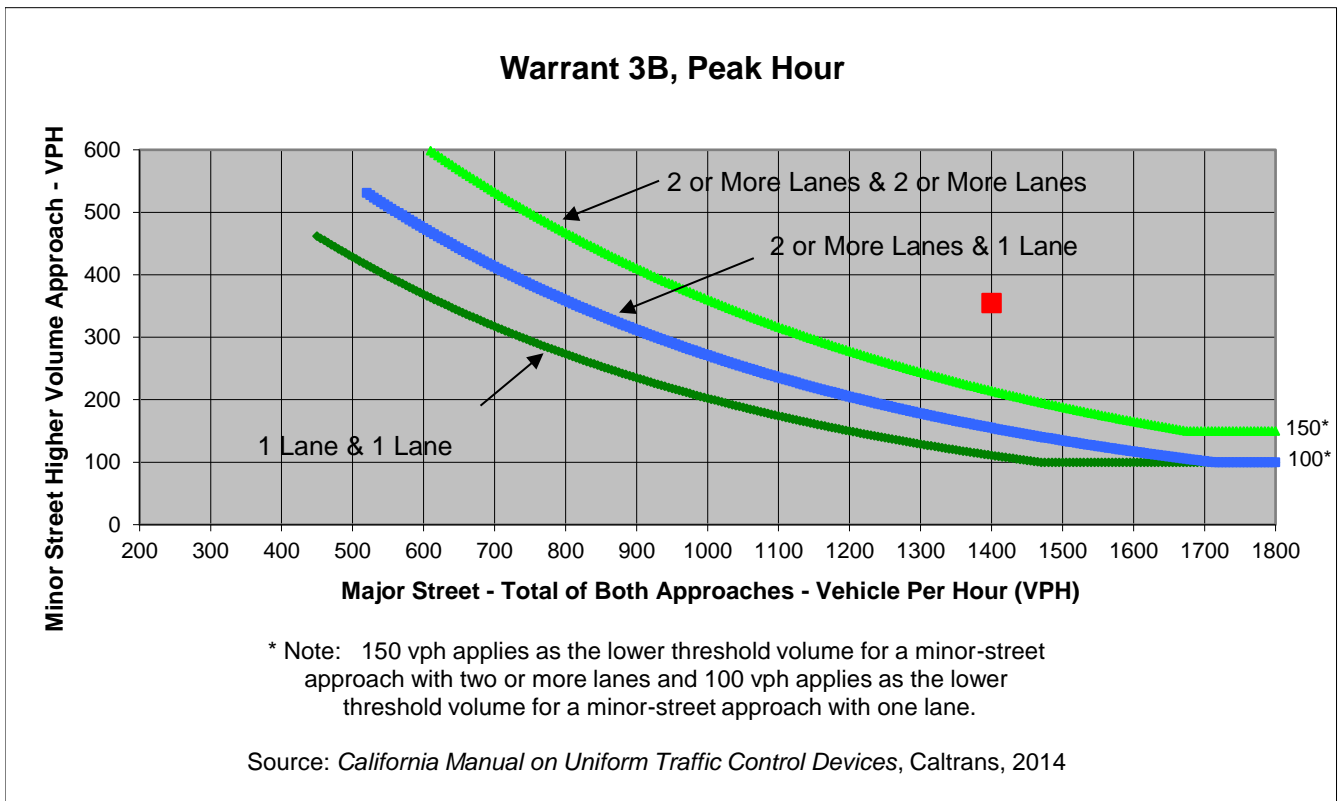
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	335	60	30	105
Through	10	20	450	635
Right	10	60	120	60
Total	355	140	600	800

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,400	355	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street **Bogue Rd**
 Minor Street **Philips Rd**

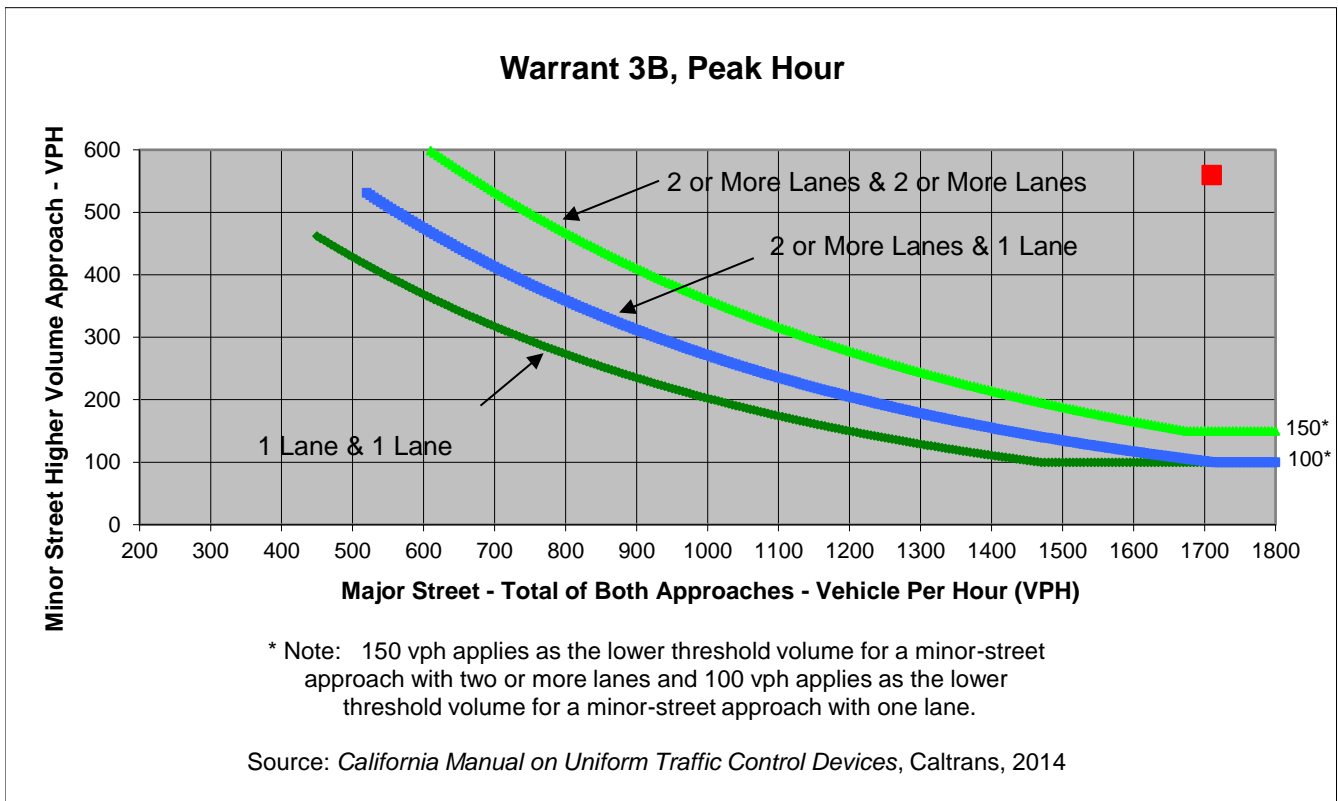
Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **PM Peak Hour**

Turn Movement Volumes

	NB	SB	EB	WB
Left	540	30	80	110
Through	10	30	840	480
Right	10	40	180	20
Total	560	100	1,100	610

Major Street Direction

North/South
X East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,710	560	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

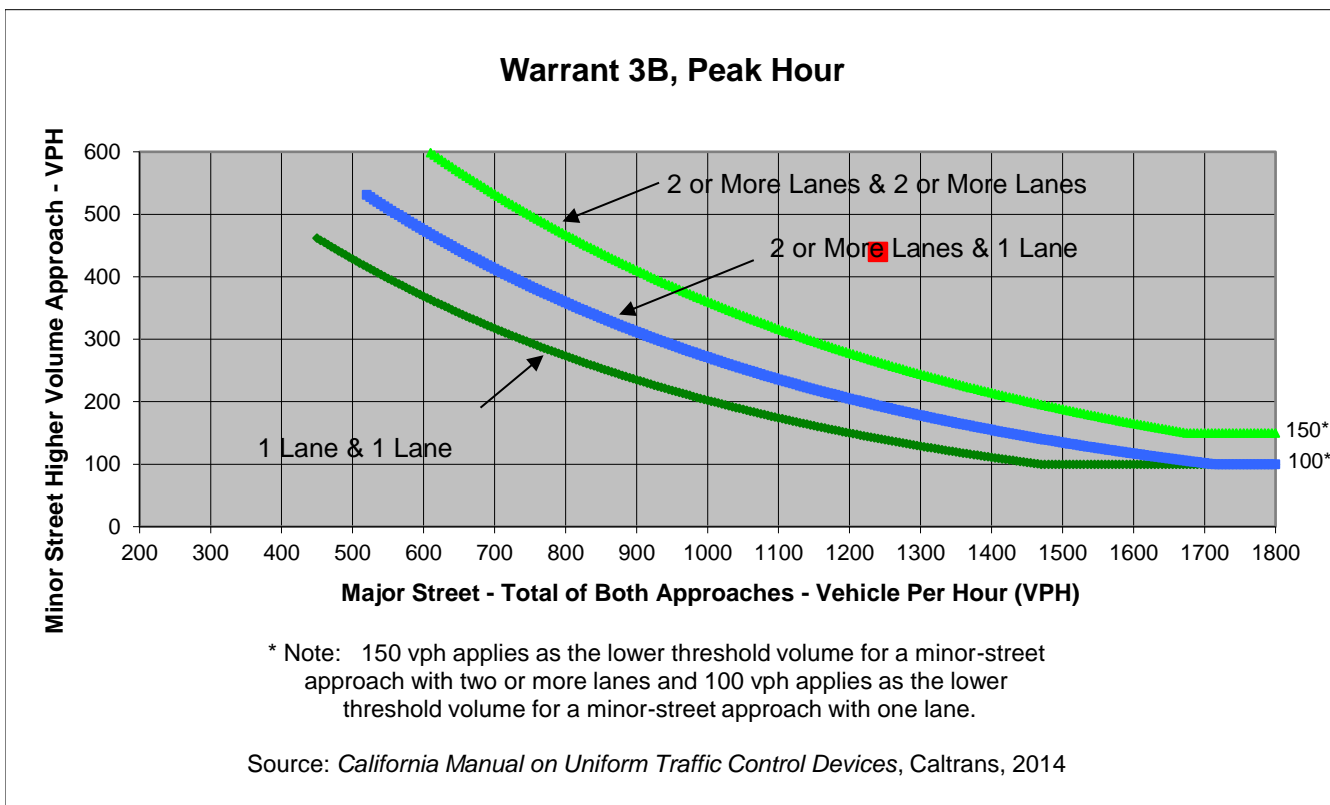
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	160	60	50	90
Through	140	120	400	570
Right	140	70	80	50
Total	440	250	530	710

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,240	440	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

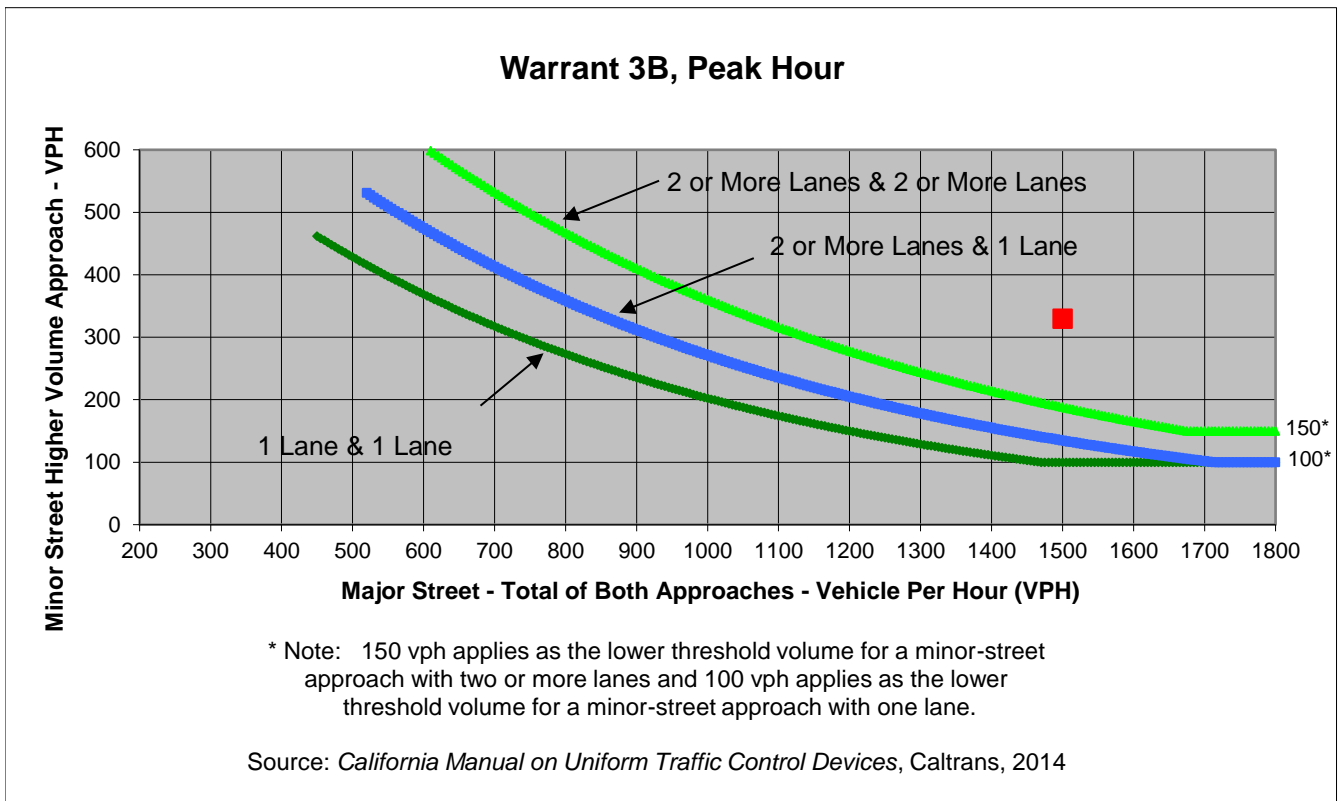
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	70	110	90
Through	80	170	640	470
Right	100	90	130	60
Total	250	330	880	620

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,500	330	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

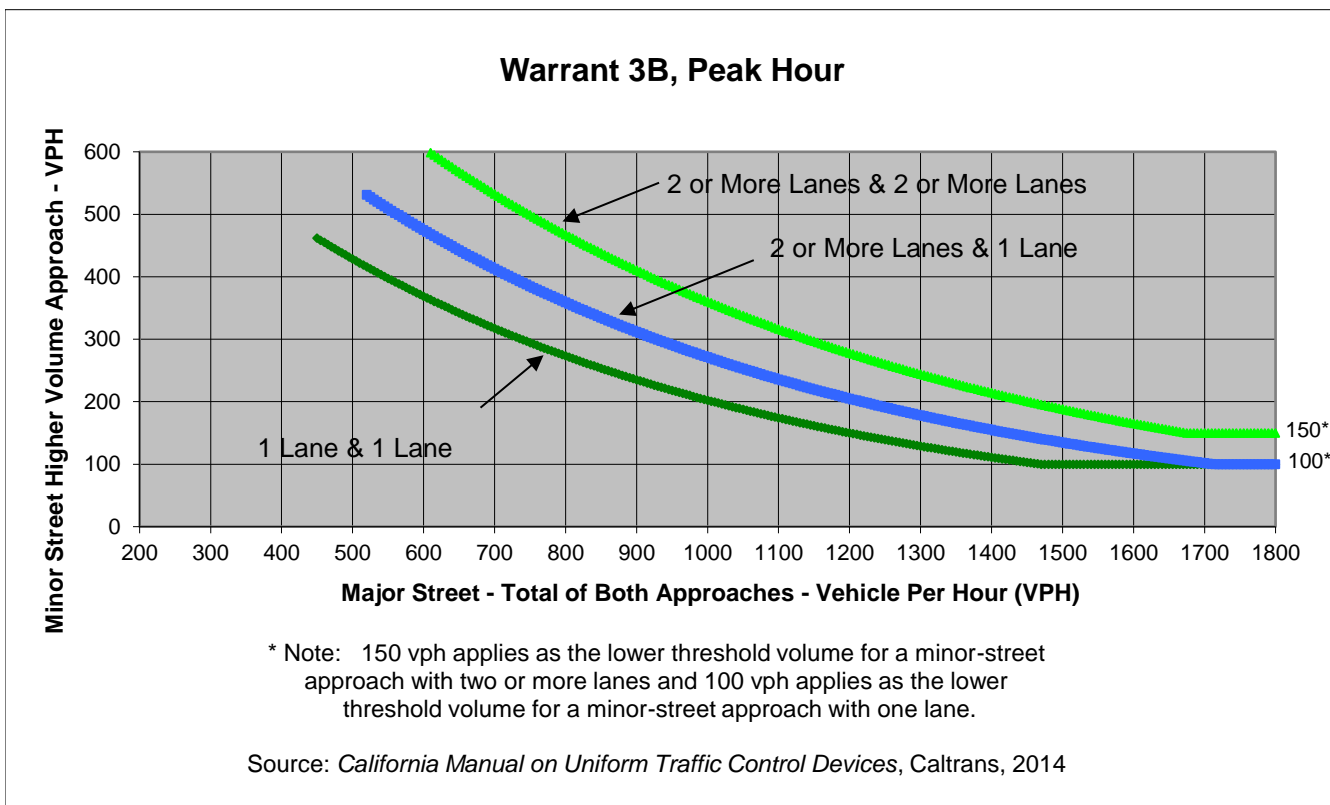
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	30	0
Through	90	110	0	0
Right	0	50	20	0
Total	110	160	50	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	50	160	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

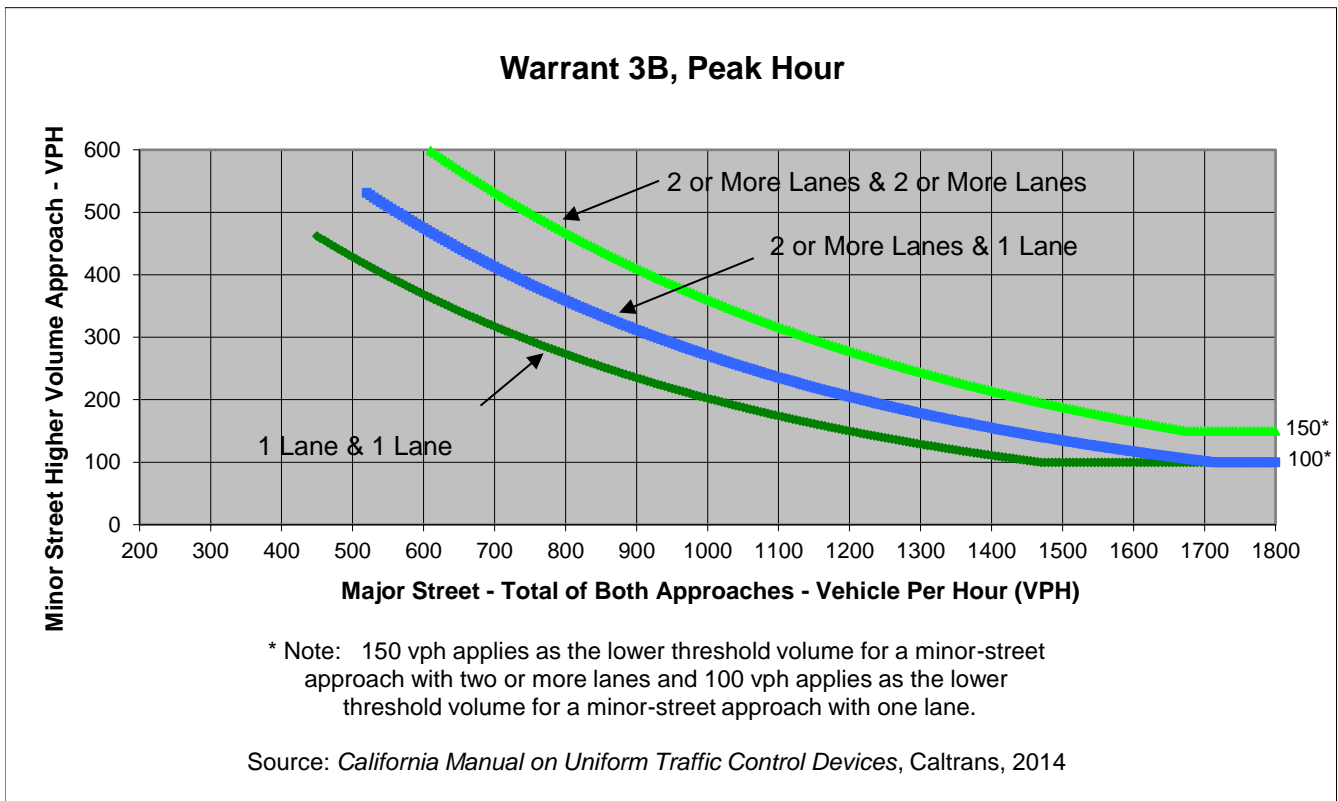
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	30	0
Through	90	70	0	0
Right	0	50	40	0
Total	110	120	70	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	70	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Wallace Dr

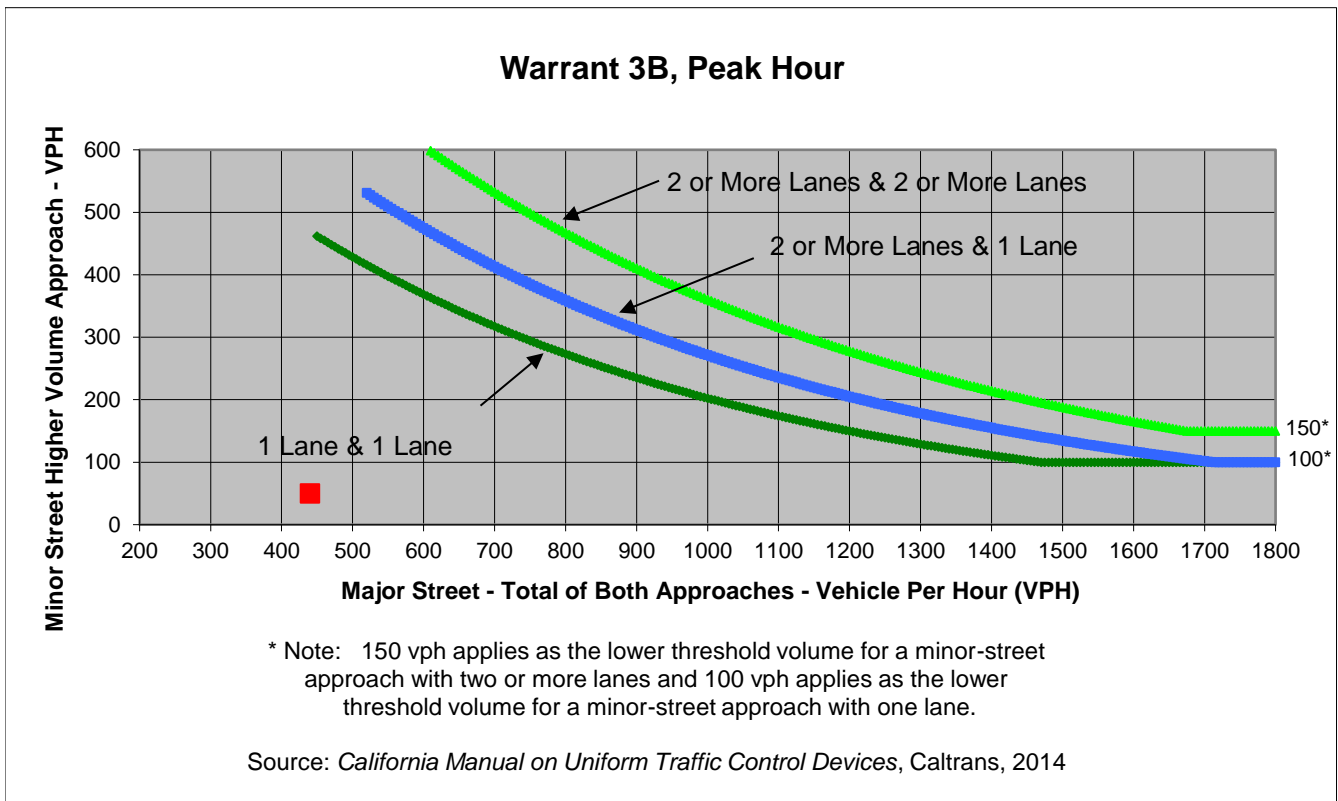
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	20	10
Through	0	0	170	220
Right	10	40	10	10
Total	20	50	200	240

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	440	50	
* Note: Traffic Volume for Major Street is Total Volume of Both Approaches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			

Major Street Stewart Rd
 Minor Street Wallace Dr

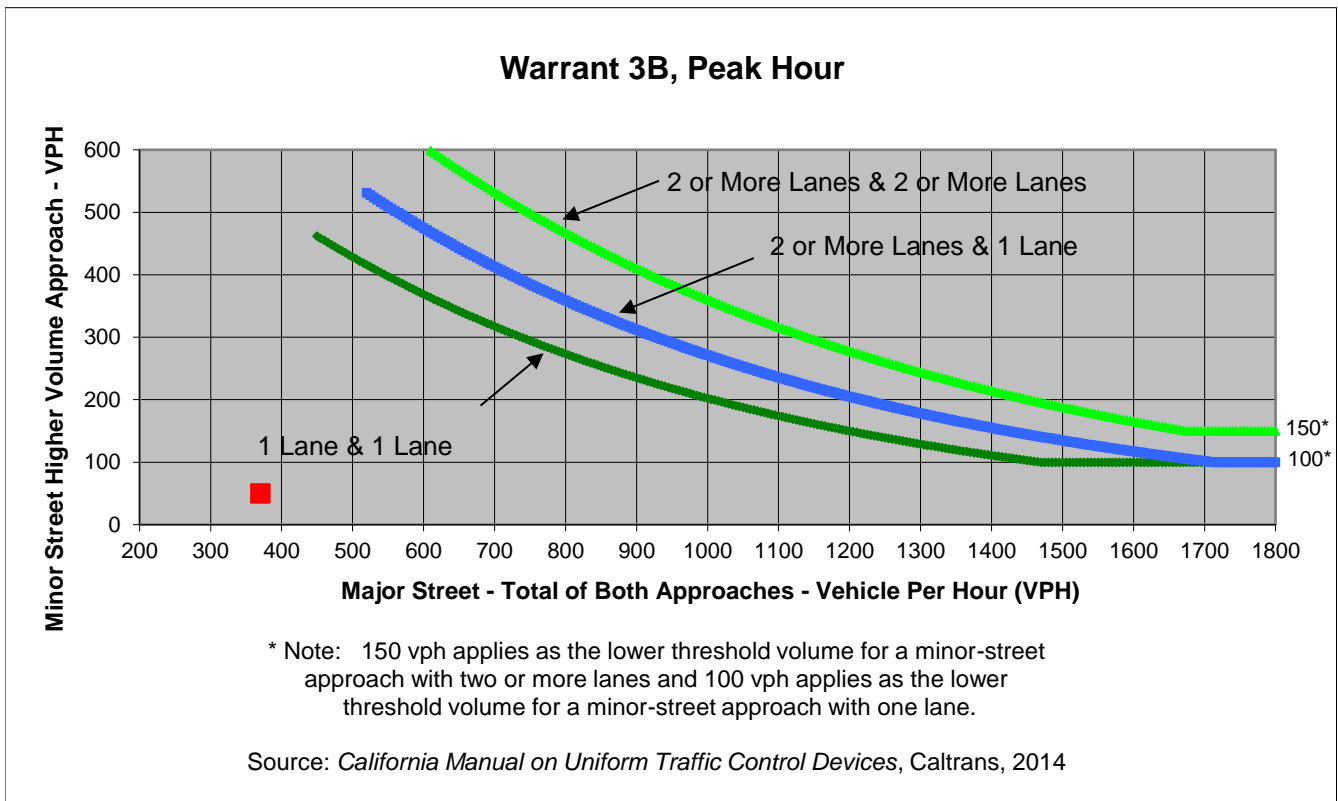
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	60	10
Through	0	0	180	100
Right	10	30	10	10
Total	20	50	250	120

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	370	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Muir Rd

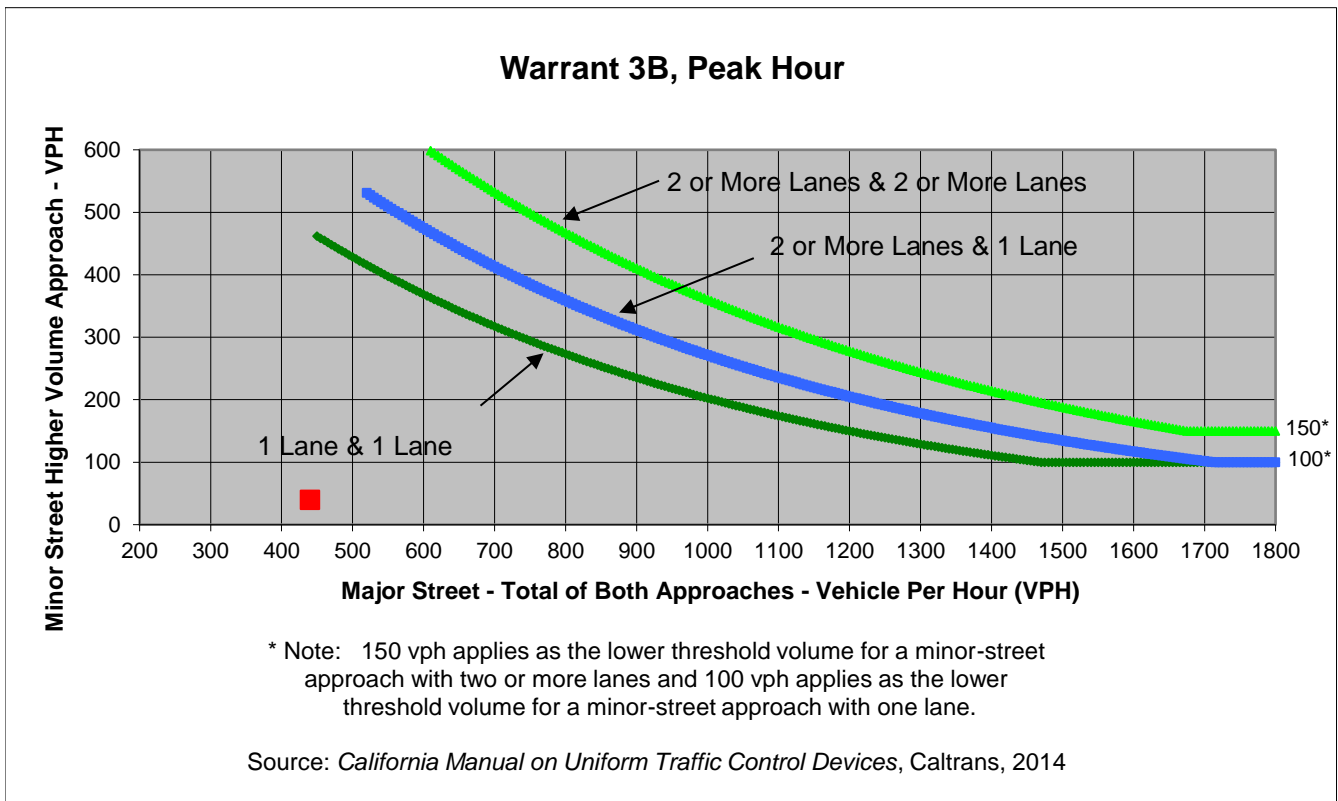
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	20
Through	0	0	180	230
Right	30	0	10	0
Total	40	0	190	250

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	440	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

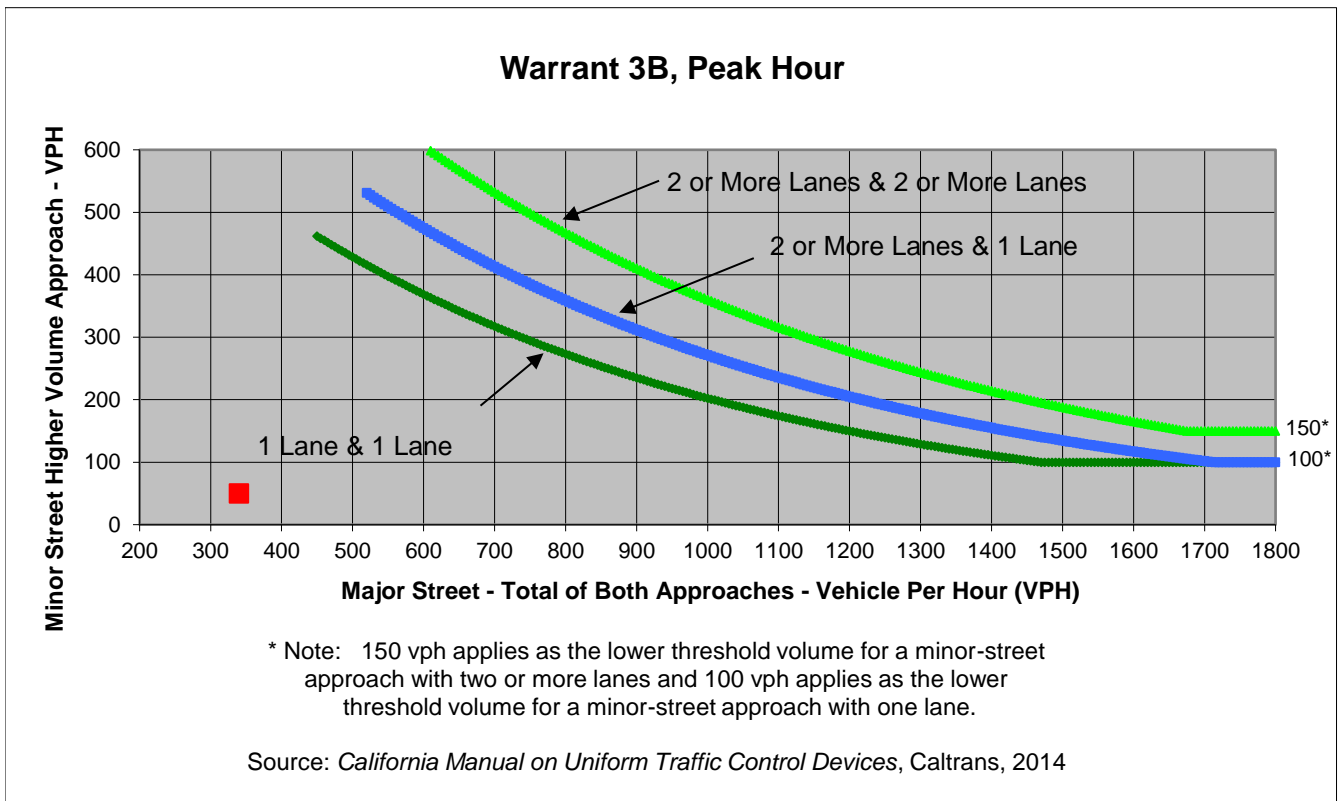
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	30
Through	0	0	190	100
Right	30	0	20	0
Total	50	0	210	130

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	340	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Railroad Ave

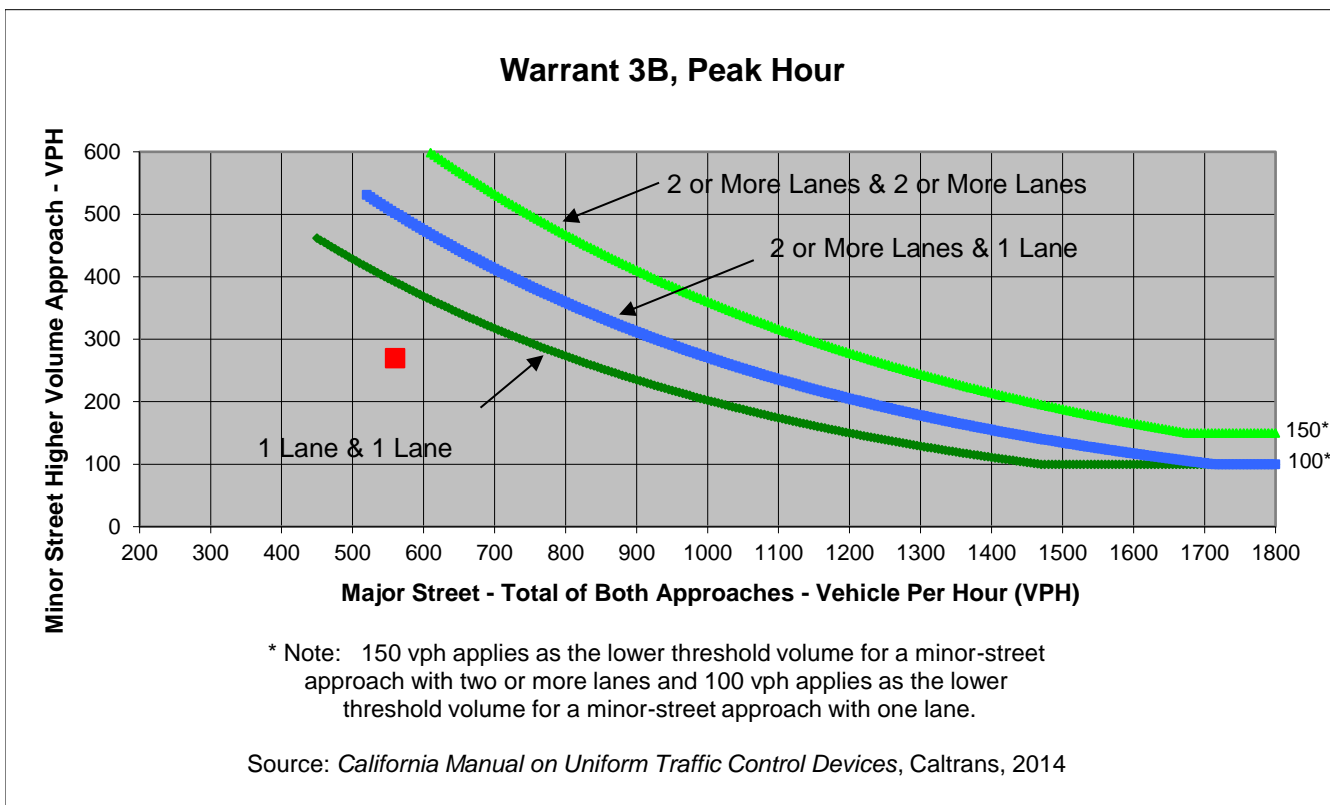
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	120	60	20
Through	40	90	150	170
Right	20	60	10	150
Total	70	270	220	340

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	560	270	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Railroad Ave

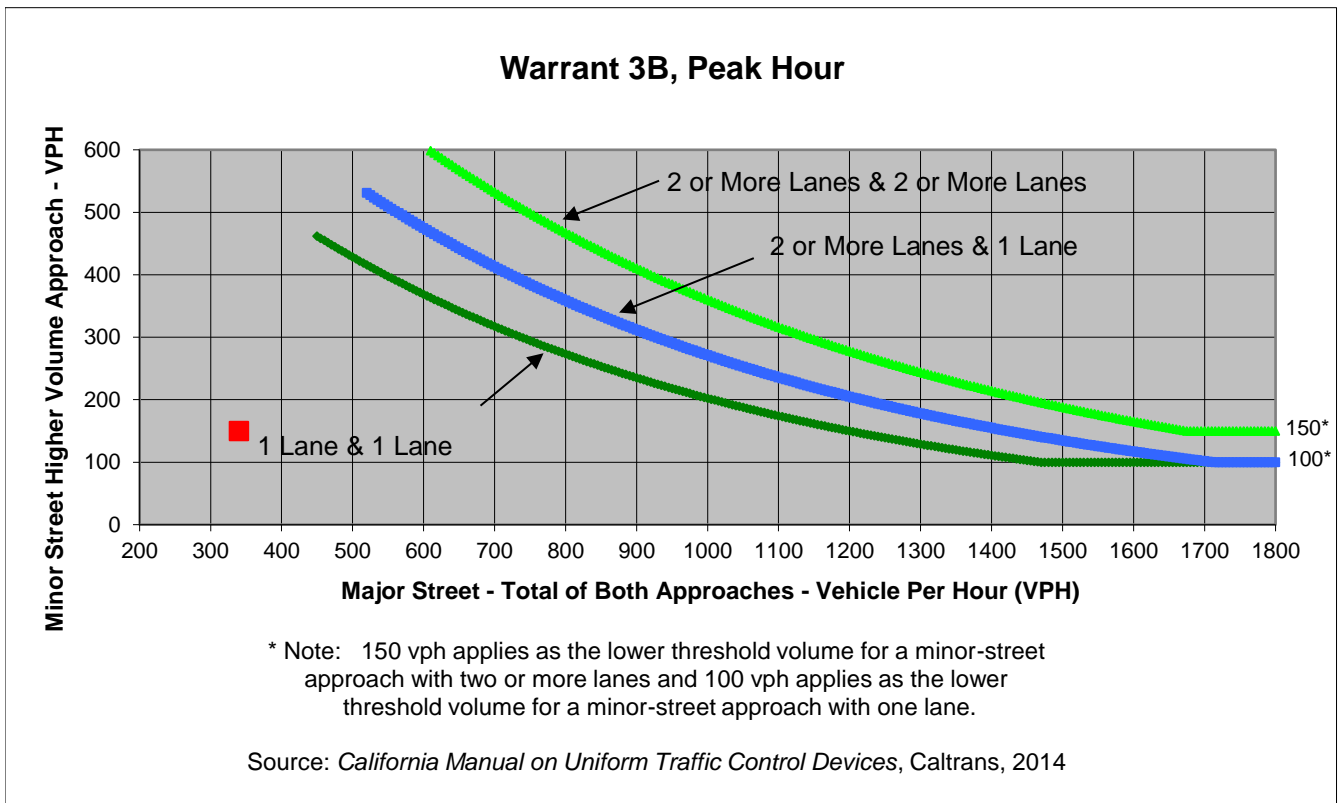
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	80	10
Through	60	50	130	80
Right	10	70	10	30
Total	80	150	220	120

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	340	150	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **Gilsizer Ranch Wy**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **AM Peak Hour**

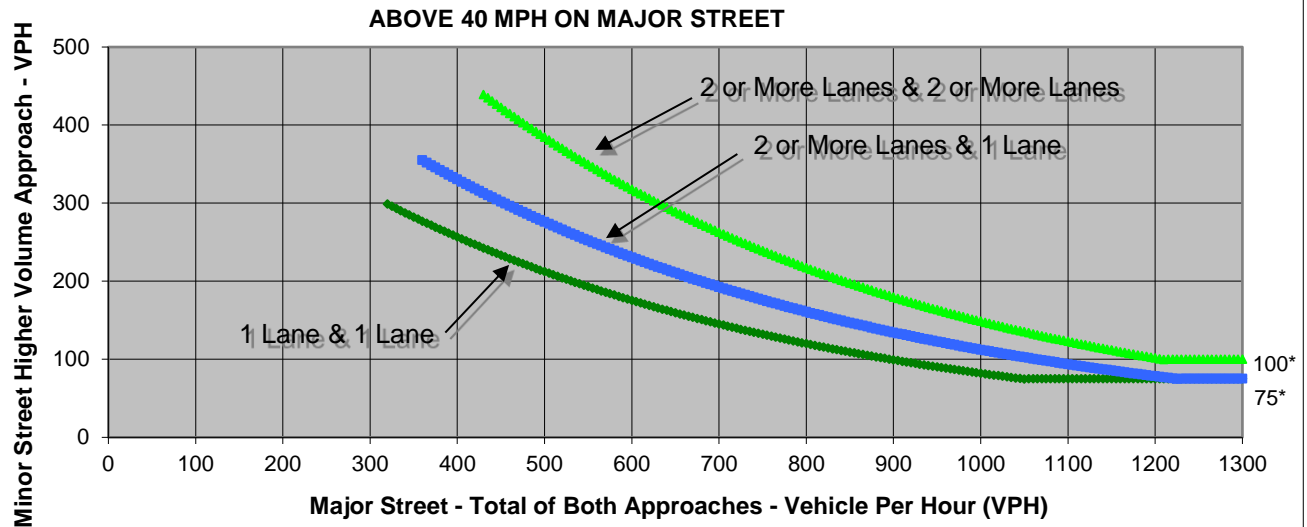
Turn Movement Volumes

	NB	SB	EB	WB
Left	40	0	0	140
Through	0	0	850	640
Right	100	0	20	0
Total	140	0	870	780

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,650	140	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **Gilsizer Ranch Wy**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Project Buildout**
 Peak Hour **PM Peak Hour**

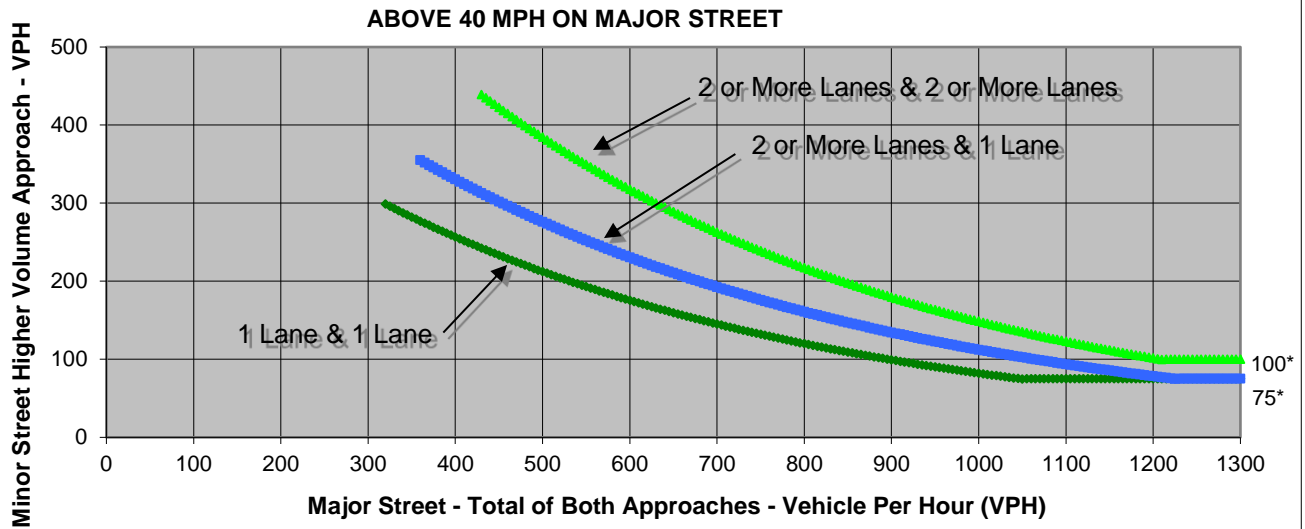
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	150
Through	0	0	760	950
Right	150	0	30	0
Total	170	0	790	1,100

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,890	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

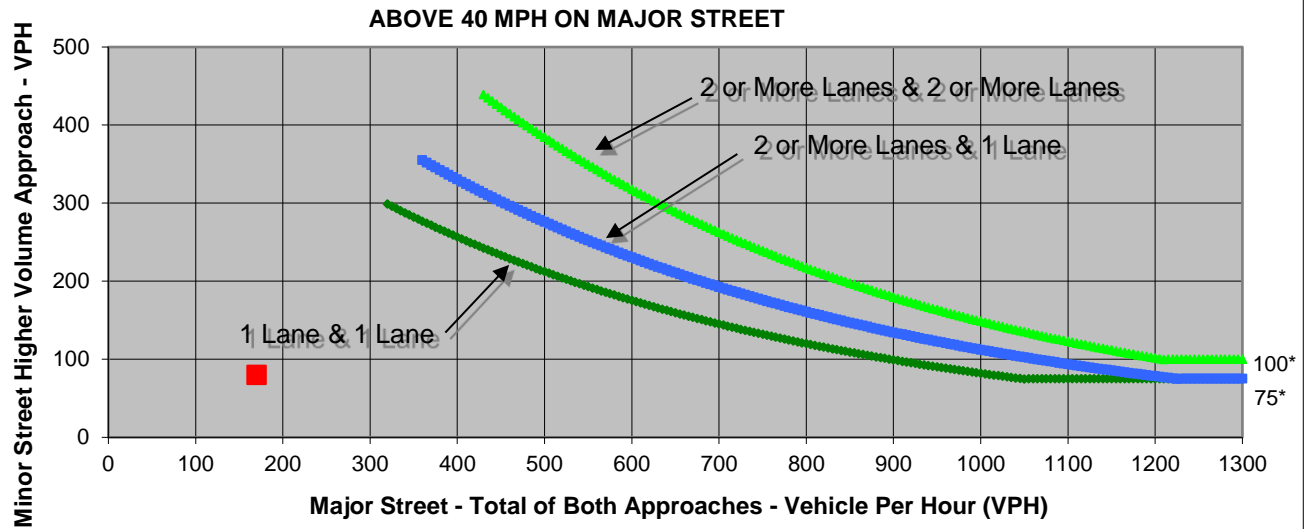
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	60	0
Through	20	20	0	0
Right	0	120	20	0
Total	30	140	80	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	170	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

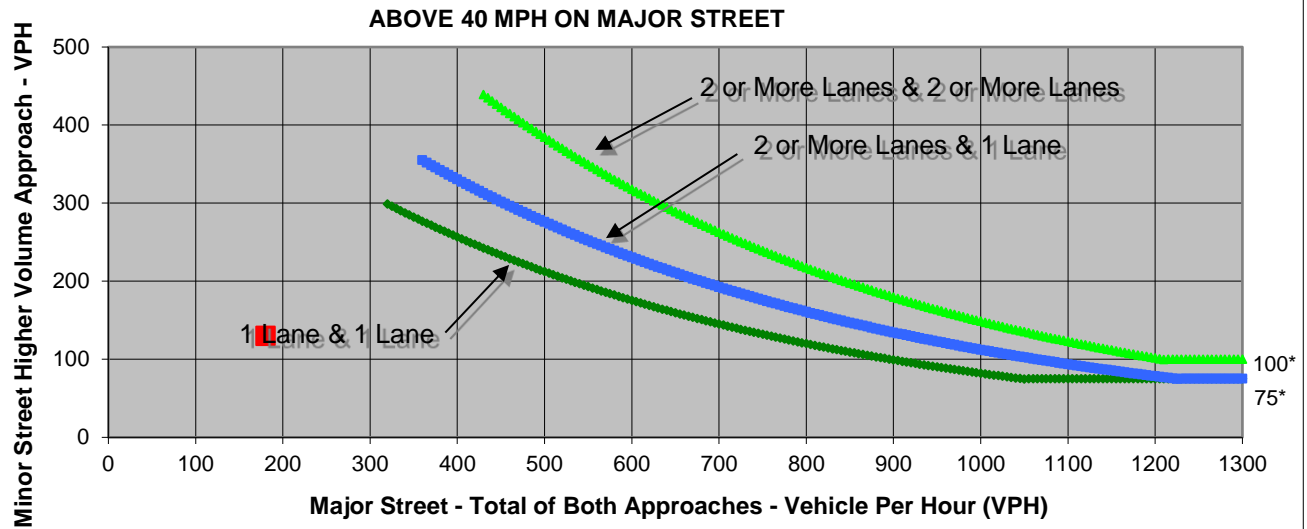
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	120	0
Through	30	40	0	0
Right	0	90	10	0
Total	50	130	130	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	180	130	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

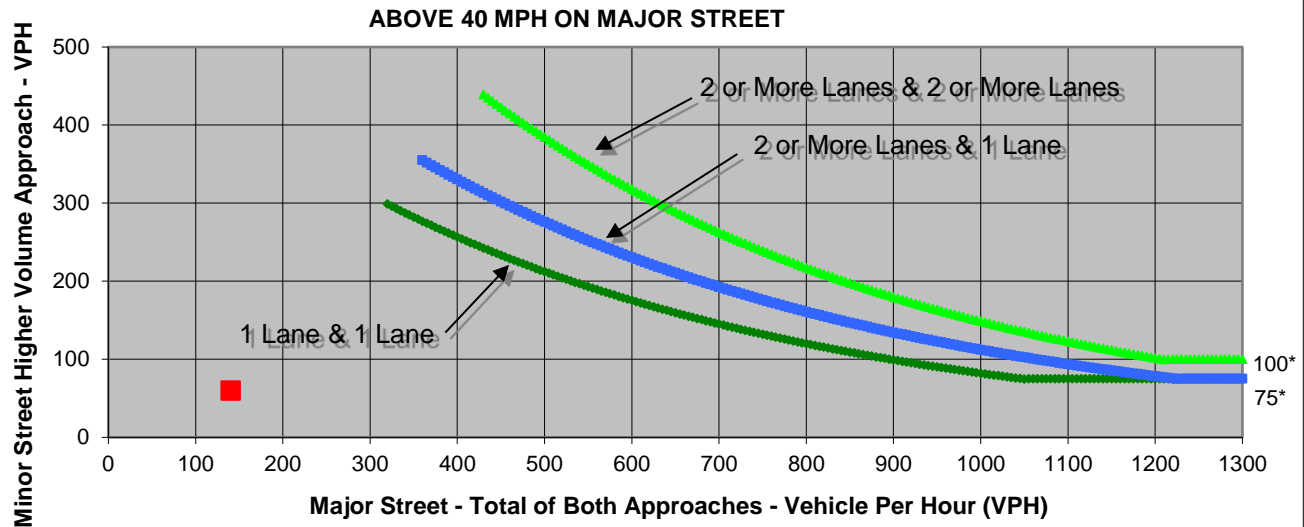
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	50	0	0
Through	0	0	50	70
Right	0	10	0	20
Total	0	60	50	90

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	140	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

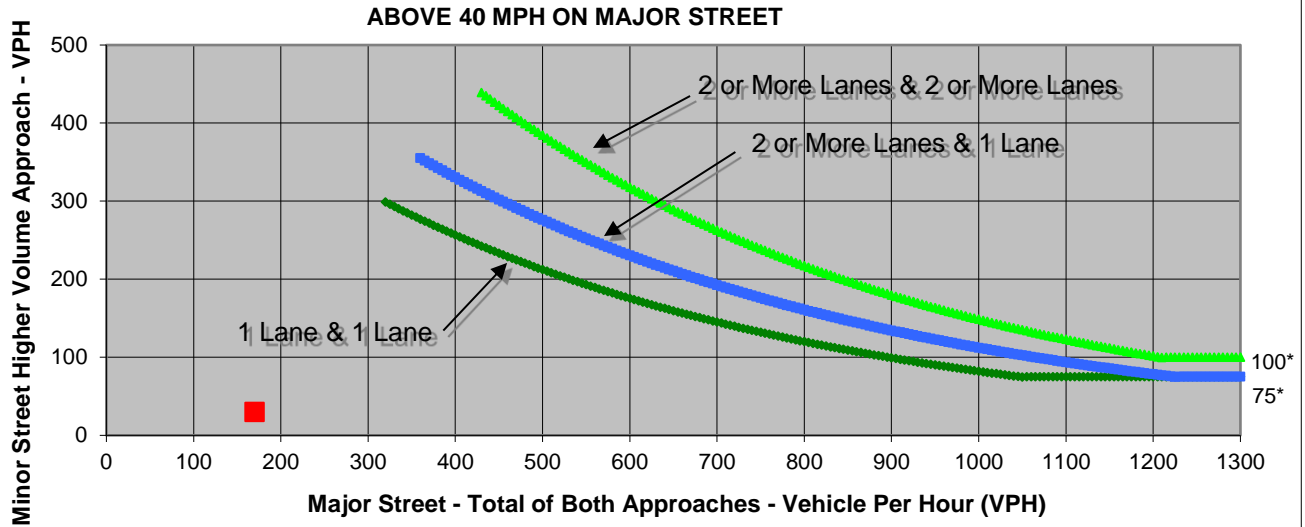
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	10	0
Through	0	0	60	60
Right	0	10	0	40
Total	0	30	70	100

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	170	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

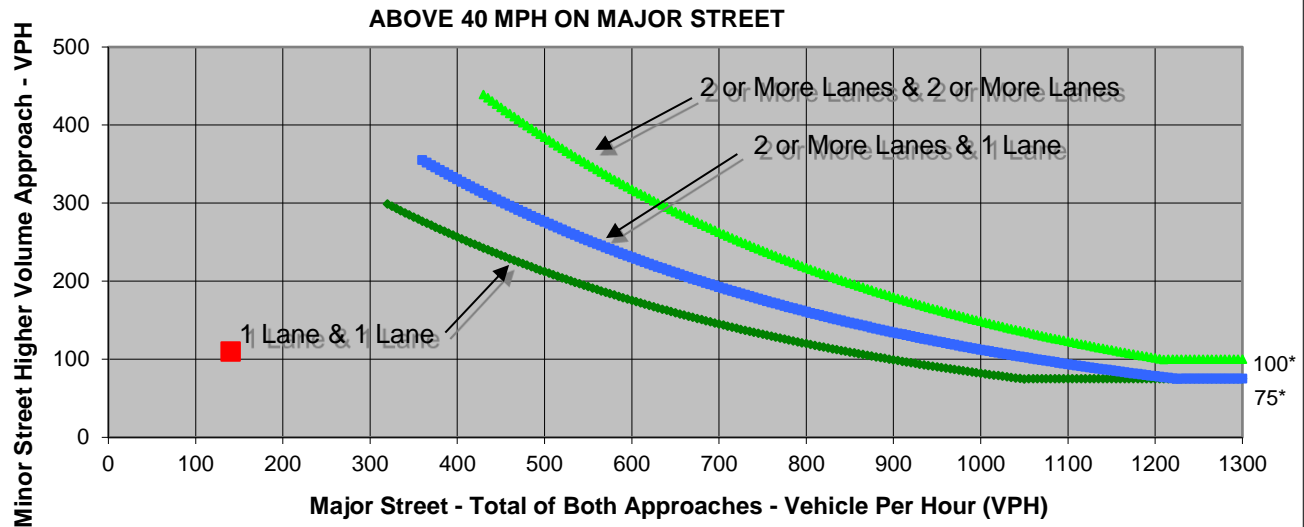
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	40	10
Through	40	30	20	10
Right	10	20	10	90
Total	60	80	70	110

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	140	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

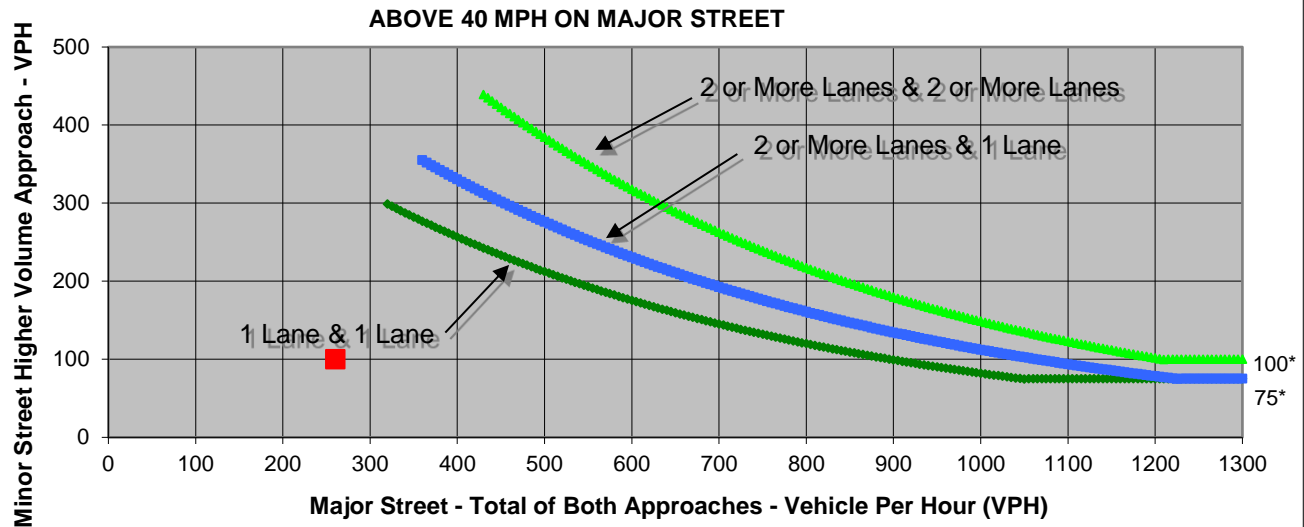
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	90	20	20
Through	50	40	20	30
Right	20	40	10	50
Total	90	170	50	100

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	260	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

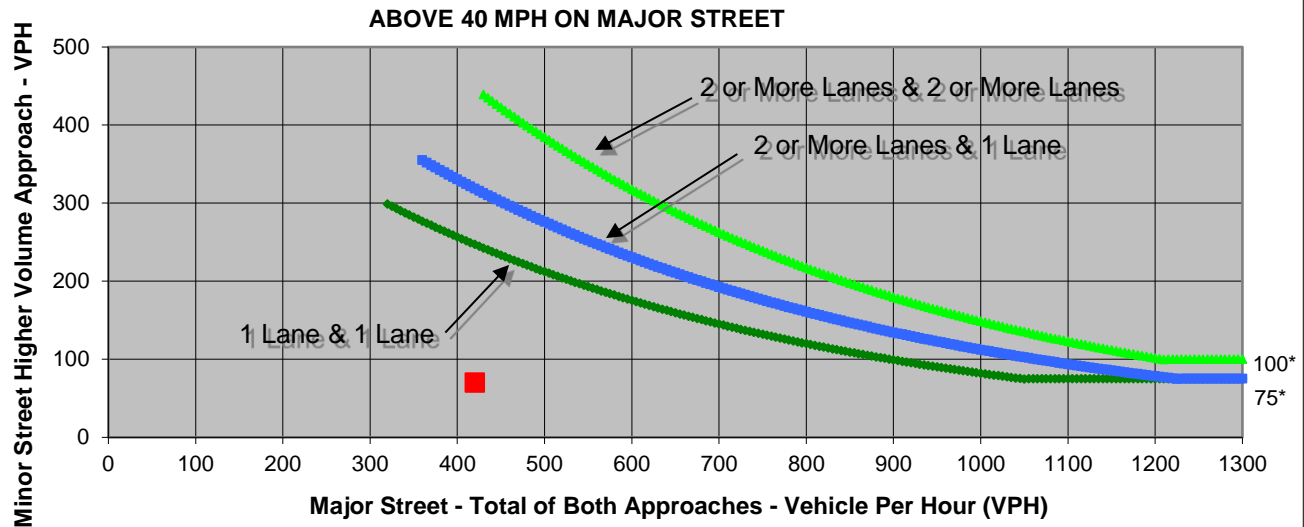
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	0	60	0
Through	140	220	0	0
Right	0	30	10	0
Total	170	250	70	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	420	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

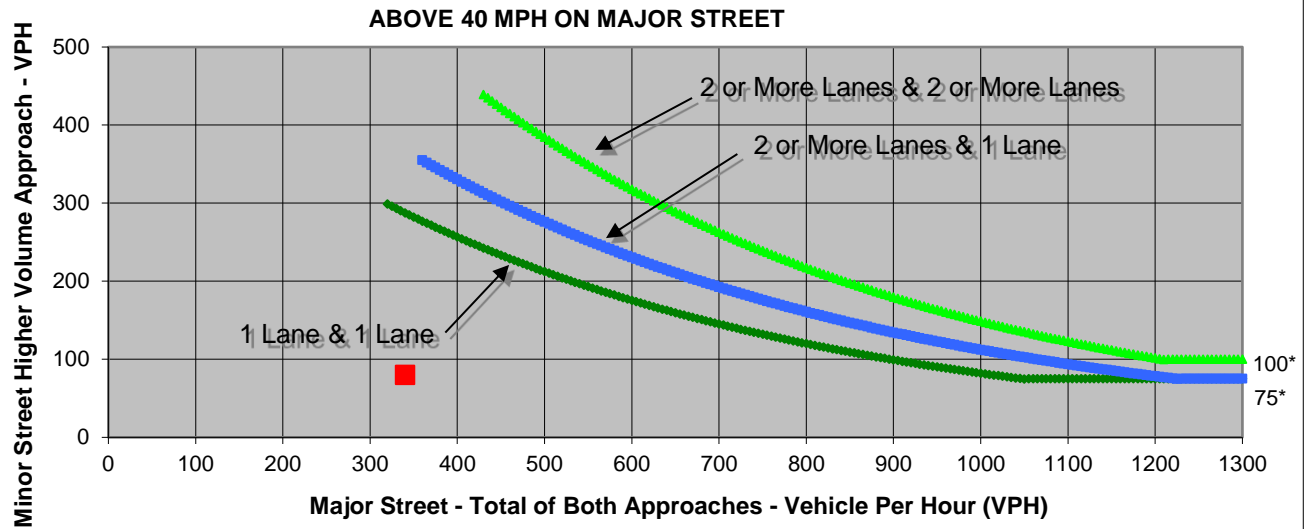
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	50	0
Through	110	130	0	0
Right	0	80	30	0
Total	130	210	80	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	340	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Kells Ranch Rd

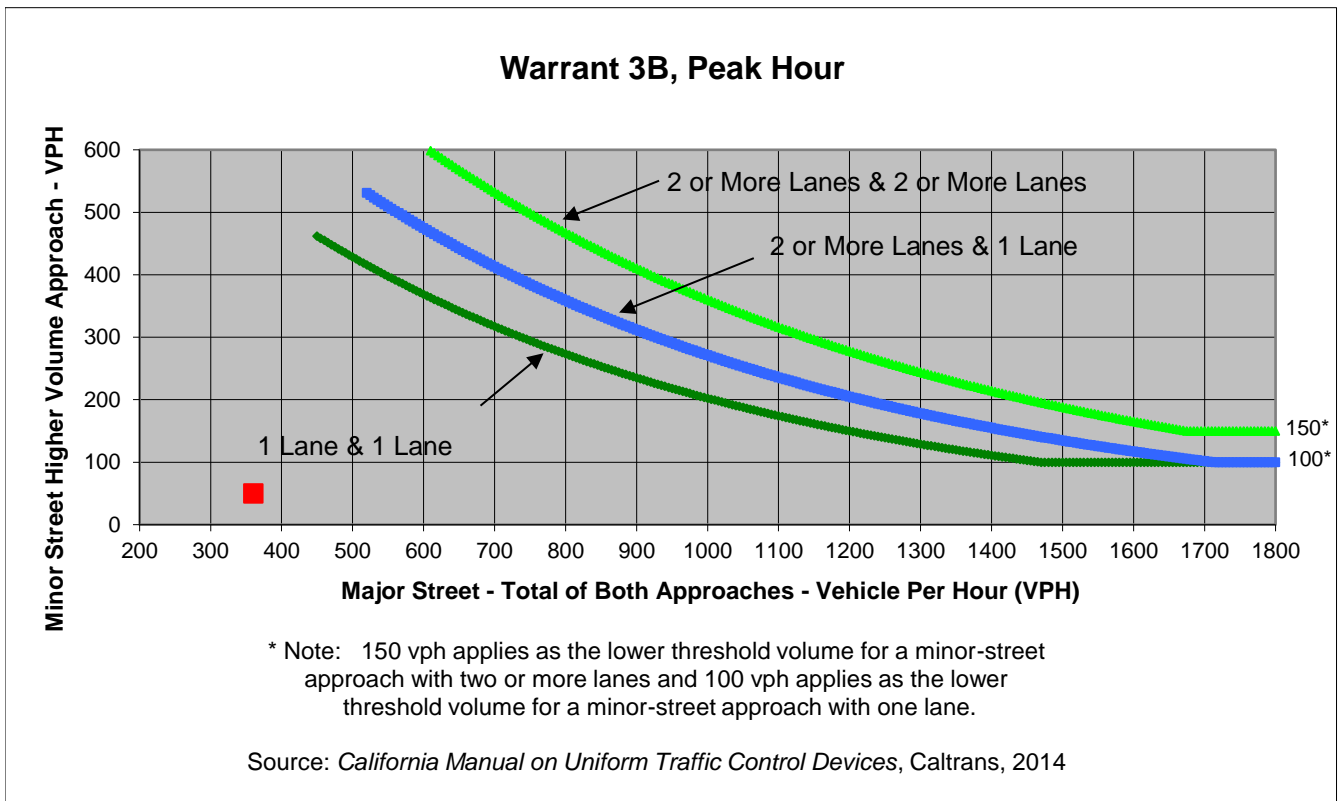
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	130	0	10
Through	100	120	0	0
Right	10	0	0	40
Total	110	250	0	50

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	360	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Kells Ranch Rd

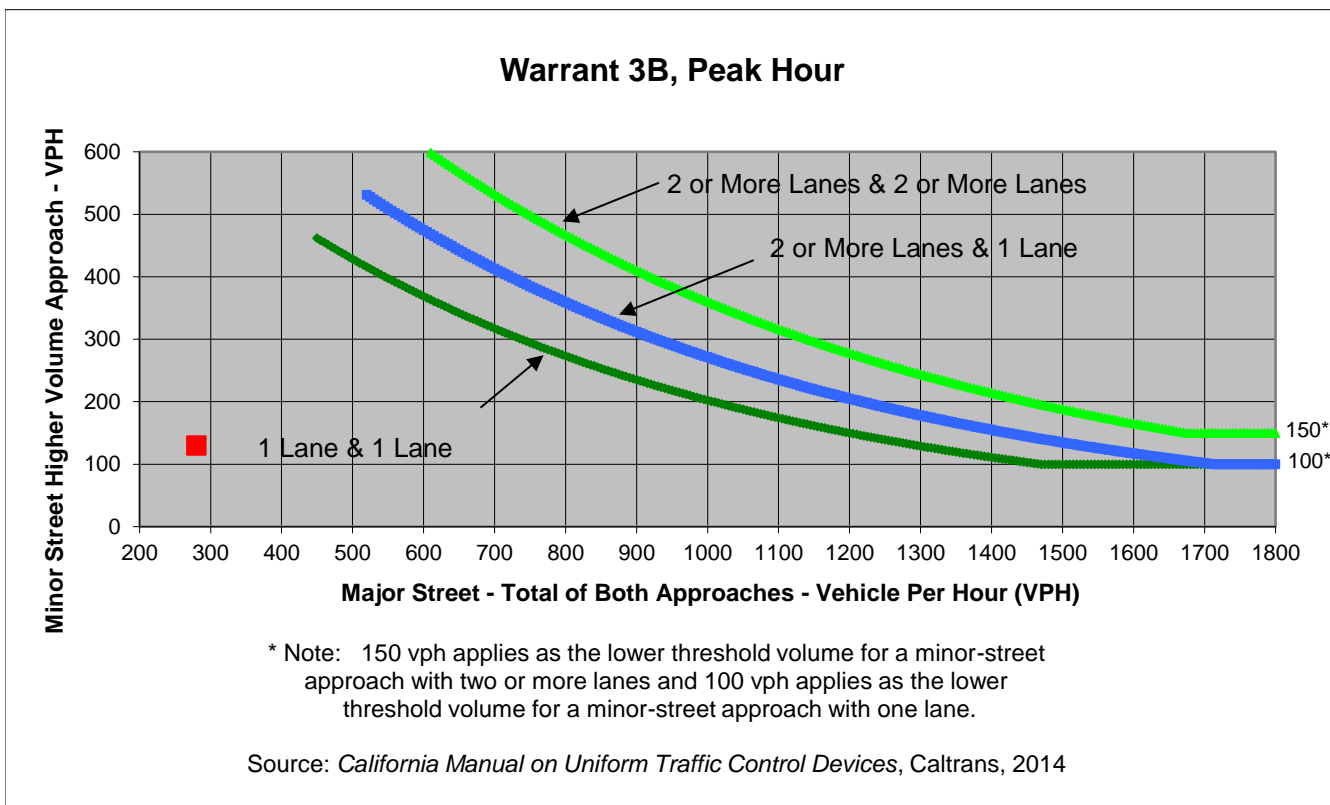
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	40	0	10
Through	130	100	0	0
Right	10	0	0	120
Total	140	140	0	130

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Kells Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	280	130	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Chagaris Ranch Wy
 Minor Street Newkom Ranch Rd

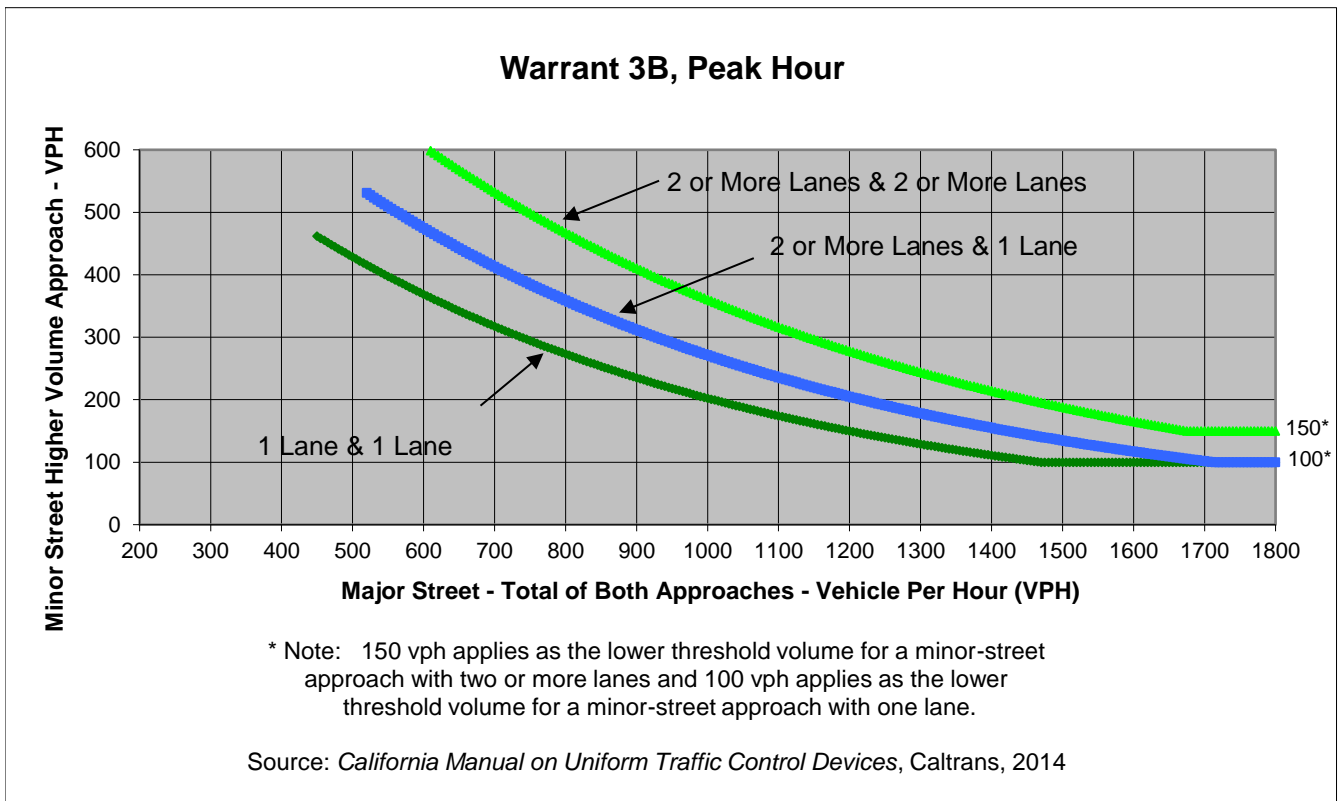
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	20	0
Through	20	10	0	0
Right	0	30	0	0
Total	20	40	20	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	60	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Newkom Ranch Rd

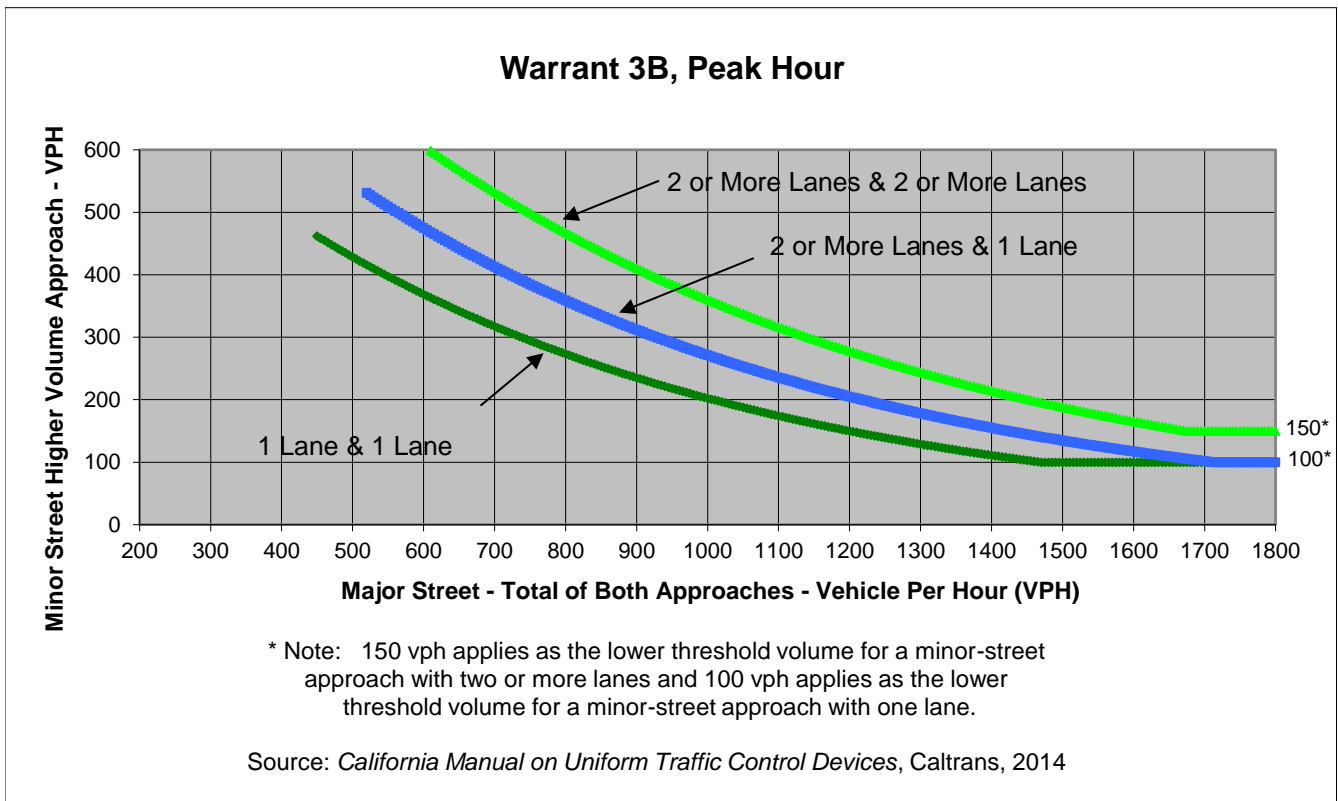
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	30	0
Through	10	20	0	0
Right	0	20	0	0
Total	10	40	30	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	50	30	
* Note: Traffic Volume for Major Street is Total Volume of Both Approches. Traffic Volume for Minor Street is the Volume of High Volume Approach.			

Major Street Chagaris Ranch Wy
 Minor Street Shangha Bend Rd

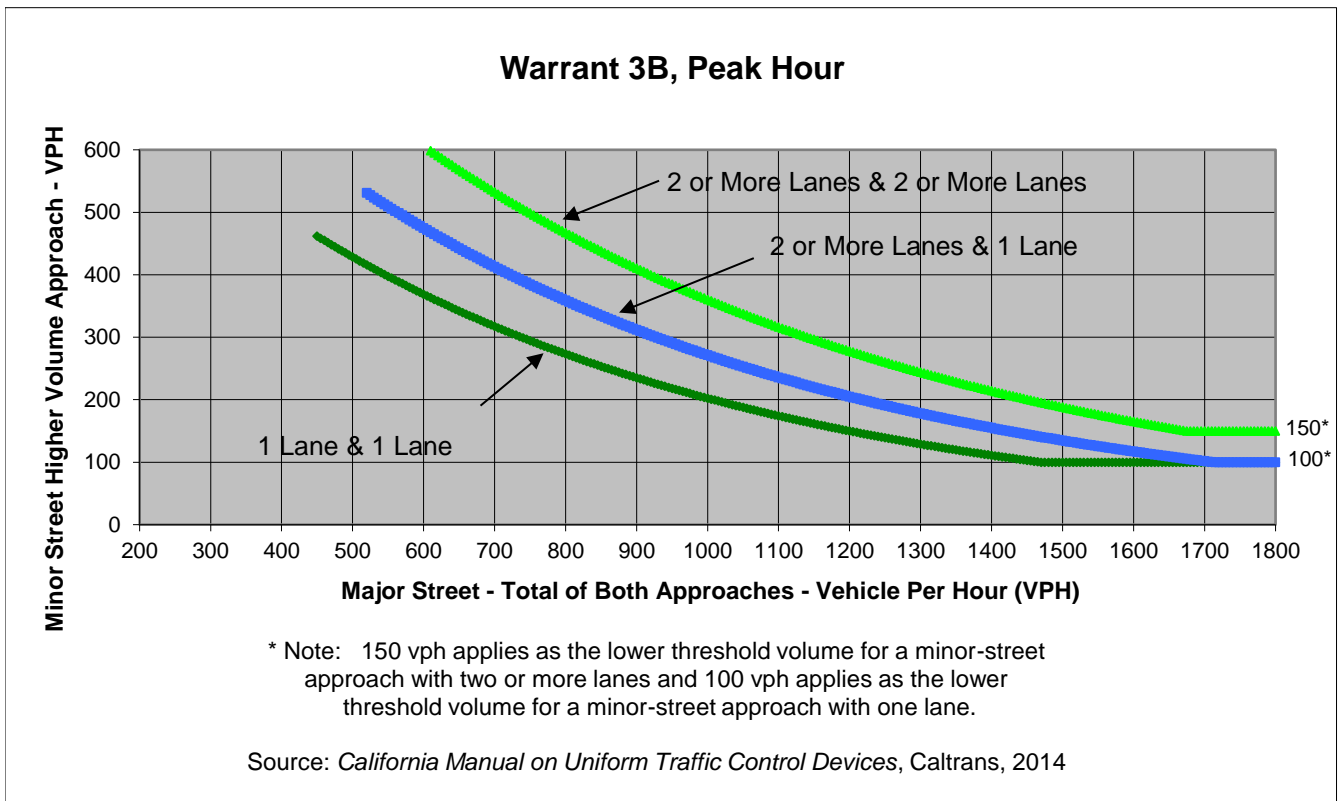
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	30
Through	80	30	0	0
Right	20	0	0	50
Total	100	50	0	80

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Shangha Bend Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	150	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Shangha Bend Rd

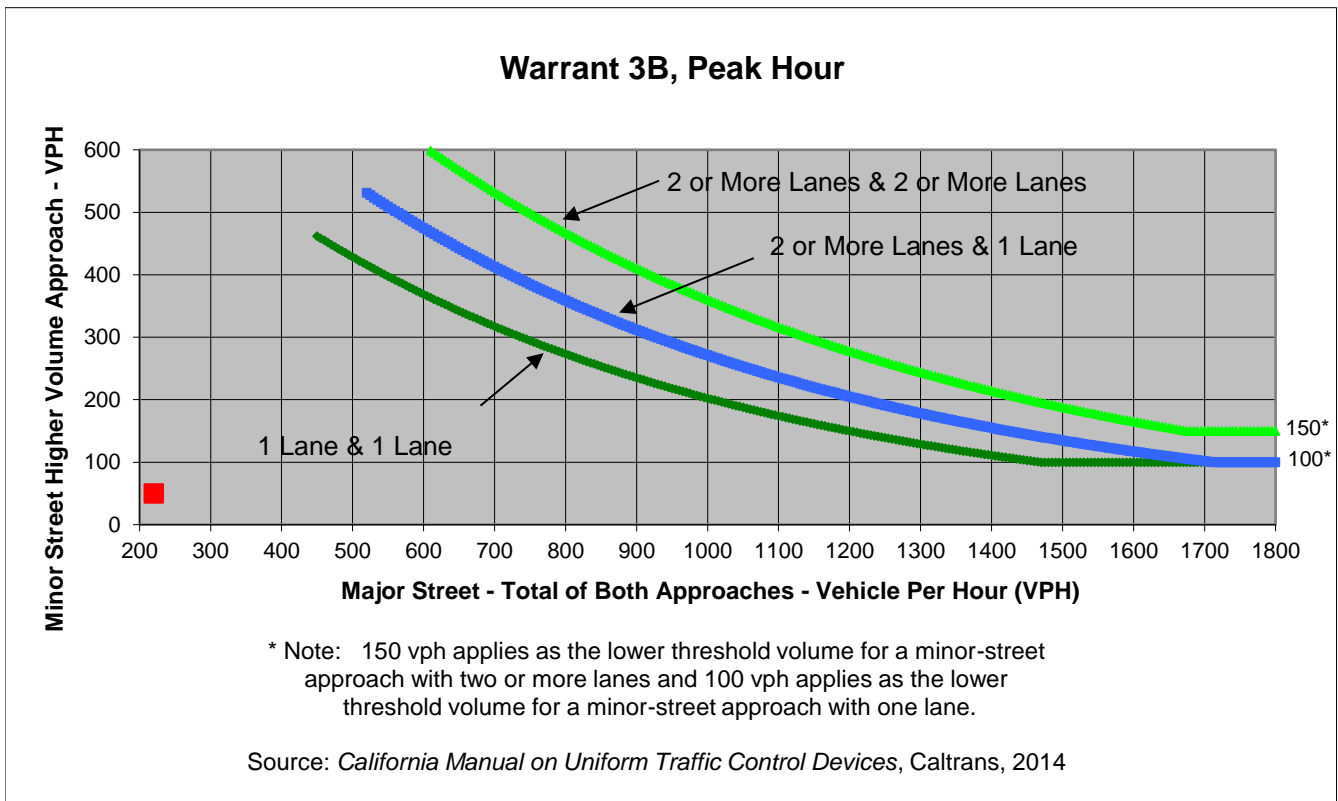
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	50	0	20
Through	50	90	0	0
Right	30	0	0	30
Total	80	140	0	50

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Shangha Bend Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	220	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Chagaris Ranch Wy
 Minor Street Halprin Ranch Dr

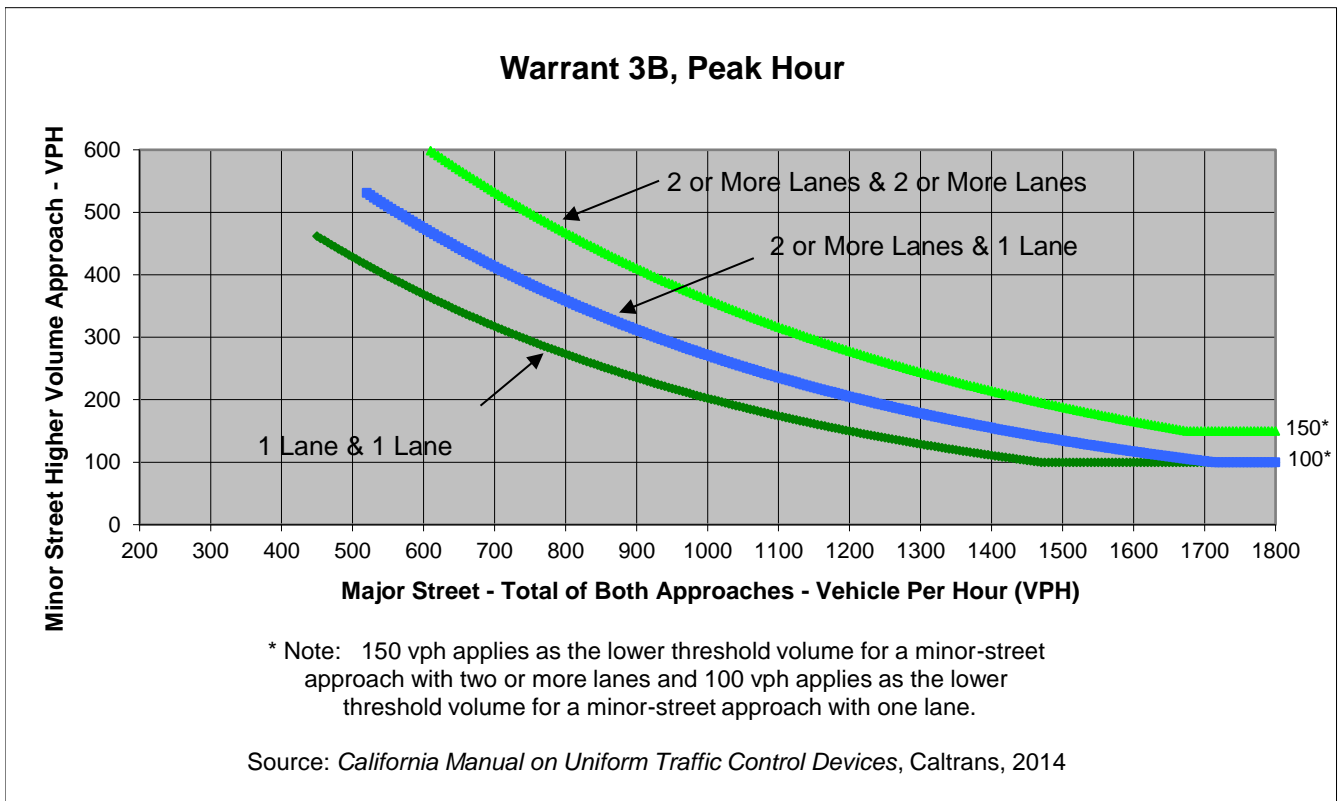
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	0	20	0
Through	80	30	0	0
Right	0	10	20	0
Total	130	40	40	0

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Halprin Ranch Dr	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	170	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Chagaris Ranch Wy
 Minor Street Halprin Ranch Dr

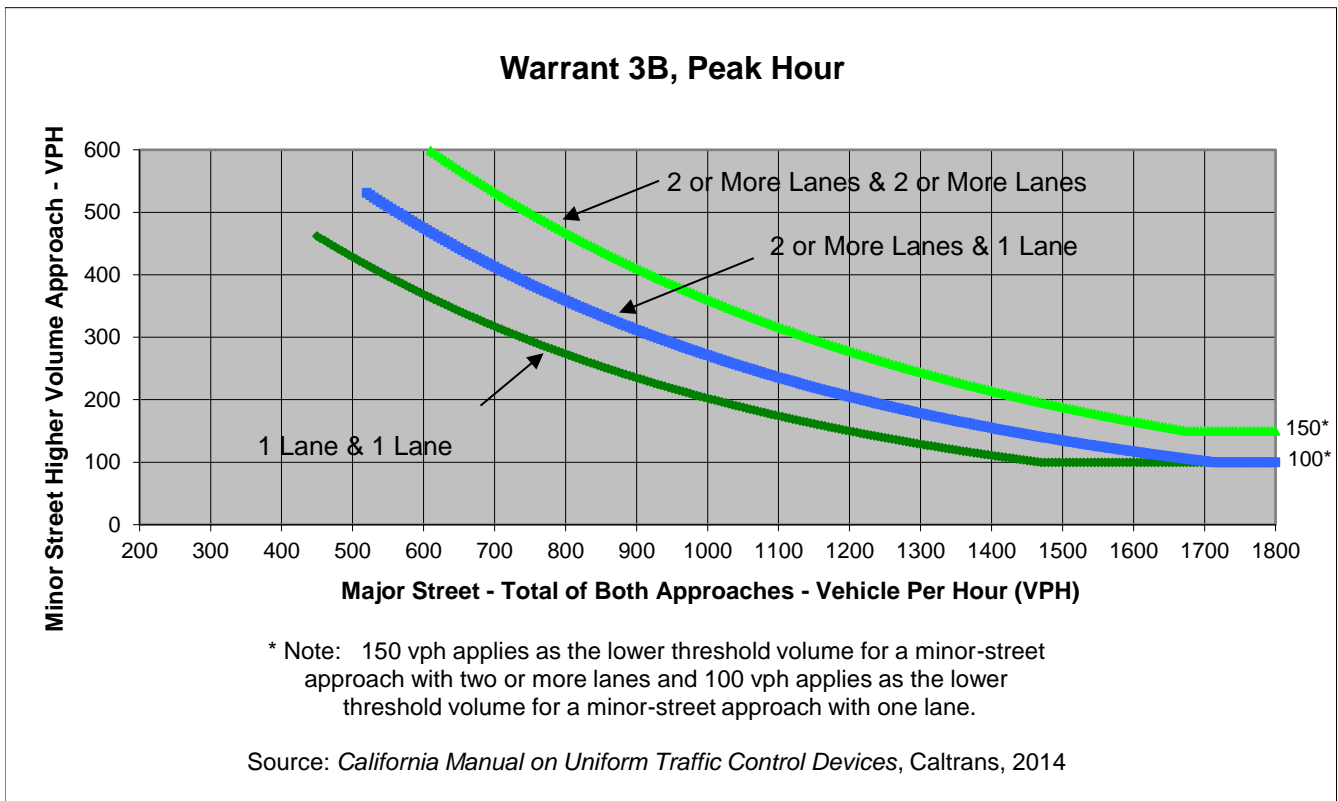
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Project Buildout
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	0	10	0
Through	50	80	0	0
Right	0	20	60	0
Total	80	100	70	0

Major Street Direction

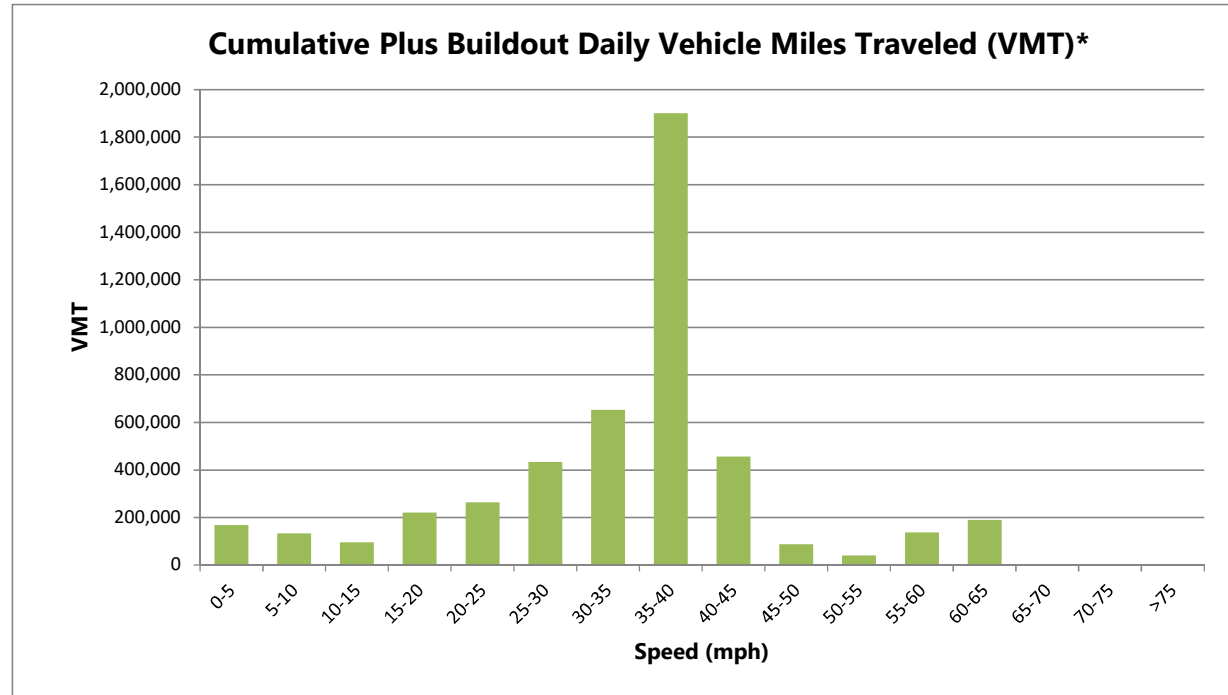
X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Chagaris Ranch Wy	Halprin Ranch Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	180	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	167,406
>5	<=10	5-10	132,341
>10	<=15	10-15	95,372
>15	<=20	15-20	219,933
>20	<=25	20-25	262,824
>25	<=30	25-30	432,697
>30	<=35	30-35	652,196
>35	<=40	35-40	1,900,807
>40	<=45	40-45	455,841
>45	<=50	45-50	86,408
>50	<=55	50-55	40,338
>55	<=60	55-60	136,853
>60	<=65	60-65	189,771
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			4,772,787



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.6.2:

Cumulative Conditions Plus
Newkom Ranch / Kells East Ranch
(Phases 1 and 2)

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	330	212	64.2%	59.3	9.6	E
	Through	920	581	63.2%	38.4	7.9	D
	Right Turn	280	194	69.3%	27.1	3.5	C
	Subtotal	1,530	987	64.5%	40.8	5.3	D
SB	Left Turn	680	542	79.7%	134.8	21.2	F
	Through	1,265	1,067	84.4%	99.4	14.7	F
	Right Turn	170	145	85.5%	70.7	14.9	E
	Subtotal	2,115	1,755	83.0%	108.1	16.2	F
EB	Left Turn	110	99	89.7%	86.4	14.9	F
	Through	930	801	86.1%	70.7	17.0	E
	Right Turn	320	299	93.5%	52.0	13.8	D
	Subtotal	1,360	1,199	88.1%	67.5	15.4	E
WB	Left Turn	250	245	97.9%	67.7	13.5	E
	Through	810	808	99.8%	33.2	2.4	C
	Right Turn	200	195	97.5%	12.3	2.0	B
	Subtotal	1,260	1,248	99.0%	36.8	3.8	D
Total		6,265	5,188	82.8%	68.8	6.9	E

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	78	59.7%	70.5	11.0	E
	Through	1,230	778	63.2%	55.5	7.9	E
	Right Turn	50	33	67.0%	40.1	13.9	D
	Subtotal	1,410	889	63.0%	56.1	7.9	E
SB	Left Turn	585	443	75.7%	94.8	24.2	F
	Through	1,230	1,031	83.8%	33.0	5.5	C
	Right Turn	20	14	69.9%	21.4	10.5	C
	Subtotal	1,835	1,487	81.1%	51.2	10.6	D
EB	Left Turn	95	103	108.9%	62.3	11.5	E
	Through	140	131	93.8%	57.3	10.9	E
	Right Turn	90	82	91.6%	17.5	6.4	B
	Subtotal	325	317	97.6%	48.3	6.6	D
WB	Left Turn	110	107	97.7%	49.6	5.4	D
	Through	280	265	94.6%	41.9	4.8	D
	Right Turn	190	193	101.7%	22.6	5.1	C
	Subtotal	580	566	97.5%	36.8	3.3	D
Total		4,150	3,259	78.5%	49.7	5.5	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	120	74	61.9%	63.4	23.3	E
	Through	1,195	753	63.0%	44.2	6.4	D
	Right Turn	250	167	67.0%	19.1	4.1	B
	Subtotal	1,565	995	63.6%	41.6	5.7	D
SB	Left Turn	120	108	89.9%	50.0	11.2	D
	Through	1,190	1,002	84.2%	39.7	6.6	D
	Right Turn	120	107	89.5%	17.2	2.8	B
	Subtotal	1,430	1,217	85.1%	38.7	6.3	D
EB	Left Turn	55	47	85.0%	98.2	27.2	F
	Through	840	749	89.2%	74.4	21.9	E
	Right Turn	120	100	83.1%	75.5	19.7	E
	Subtotal	1,015	895	88.2%	75.8	21.8	E
WB	Left Turn	265	173	65.4%	198.2	34.4	F
	Through	320	311	97.2%	36.8	9.2	D
	Right Turn	160	148	92.5%	31.6	9.9	C
	Subtotal	745	632	84.9%	80.0	11.8	E
Total		4,755	3,740	78.6%	55.2	6.7	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	160	102	63.7%	68.0	9.5	E
	Through	1,235	849	68.7%	66.5	10.4	E
	Right Turn	340	229	67.4%	50.6	6.1	D
	Subtotal	1,735	1,180	68.0%	63.6	9.1	E
SB	Left Turn	110	80	72.9%	63.8	19.2	E
	Through	945	768	81.2%	43.5	7.7	D
	Right Turn	520	411	79.0%	26.4	6.3	C
	Subtotal	1,575	1,259	79.9%	39.4	6.5	D
EB	Left Turn	215	120	55.8%	188.1	19.2	F
	Through	960	581	60.5%	173.2	13.6	F
	Right Turn	155	124	79.8%	55.9	9.1	E
	Subtotal	1,330	824	62.0%	157.7	11.9	F
WB	Left Turn	250	145	58.0%	162.6	30.3	F
	Through	430	283	65.9%	118.2	38.3	F
	Right Turn	120	88	73.3%	113.2	41.2	F
	Subtotal	800	516	64.5%	130.0	36.5	F
Total		5,440	3,779	69.5%	84.7	5.6	F

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	90.8%	16.9	4.2	C
	Through	1,685	1,308	77.6%	7.4	0.8	A
	Right Turn	40	35	87.4%	6.9	2.2	A
	Subtotal	1,755	1,370	78.1%	7.6	0.7	A
SB	Left Turn	60	33	55.2%	23.8	6.1	C
	Through	1,270	954	75.1%	8.0	0.9	A
	Right Turn	20	15	73.6%	7.9	3.5	A
	Subtotal	1,350	1,002	74.2%	8.5	0.8	A
EB	Left Turn	10	7	73.6%	59.4	47.7	F
	Through	10	13	132.5%	108.5	65.3	F
	Right Turn	30	29	98.1%	18.7	12.4	C
	Subtotal	50	50	100.1%	52.4	44.4	F
WB	Left Turn	10	6	58.9%	82.0	76.9	F
	Through	10	6	62.6%	80.6	61.1	F
	Right Turn	40	27	68.1%	74.2	68.7	F
	Subtotal	60	39	65.6%	77.0	65.3	F
Total		3,215	2,461	76.6%	10.0	1.7	B

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	24	81.0%	56.4	14.7	E
	Through	1,520	1,206	79.4%	33.6	3.6	C
	Right Turn	60	43	71.1%	18.2	5.6	B
	Subtotal	1,610	1,273	79.1%	33.5	3.7	C
SB	Left Turn	110	77	69.9%	71.3	18.8	E
	Through	1,170	861	73.6%	39.9	8.4	D
	Right Turn	30	28	94.5%	15.1	4.8	B
	Subtotal	1,310	967	73.8%	41.8	9.0	D
EB	Left Turn	100	91	90.9%	57.3	14.3	E
	Through	110	108	98.0%	56.6	16.3	E
	Right Turn	50	47	93.5%	41.8	14.8	D
	Subtotal	260	245	94.4%	54.2	13.2	D
WB	Left Turn	85	69	81.4%	53.2	26.5	D
	Through	60	53	88.3%	58.0	27.3	E
	Right Turn	135	125	93.0%	37.7	24.7	D
	Subtotal	280	248	88.5%	46.1	25.7	D
Total		3,460	2,733	79.0%	39.7	7.2	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	255	201	78.7%	54.7	10.0	D
	Through	1,120	888	79.3%	47.4	3.6	D
	Right Turn	150	124	82.7%	17.0	2.9	B
	Subtotal	1,525	1,213	79.5%	45.5	3.8	D
SB	Left Turn	130	98	75.6%	55.2	11.0	E
	Through	1,095	716	65.4%	47.6	6.1	D
	Right Turn	80	53	65.8%	20.7	5.9	C
	Subtotal	1,305	867	66.4%	47.0	5.7	D
EB	Left Turn	250	219	87.6%	81.5	19.2	F
	Through	690	655	94.9%	50.2	13.4	D
	Right Turn	390	379	97.3%	39.7	12.9	D
	Subtotal	1,330	1,253	94.2%	52.7	14.3	D
WB	Left Turn	150	132	87.8%	88.7	30.1	F
	Through	500	497	99.4%	41.8	5.9	D
	Right Turn	240	225	93.8%	16.7	3.9	B
	Subtotal	890	854	95.9%	42.5	9.0	D
Total		5,050	4,187	82.9%	47.4	6.8	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	20	24	117.8%	21.4	14.9	C
	Through	1,410	1,231	87.3%	11.6	0.7	B
	Right Turn	30	25	83.4%	11.4	3.6	B
	Subtotal	1,460	1,280	87.6%	11.7	0.6	B
SB	Left Turn	40	26	66.2%	17.9	6.9	C
	Through	1,545	1,159	75.0%	10.2	1.0	B
	Right Turn	50	45	89.8%	10.0	4.1	A
	Subtotal	1,635	1,230	75.2%	10.4	1.1	B
EB	Left Turn	75	41	55.0%	153.4	48.3	F
	Through	10	4	44.2%	119.9	93.2	F
	Right Turn	30	24	81.0%	86.2	61.6	F
	Subtotal	115	70	60.8%	122.1	45.5	F
WB	Left Turn	20	11	55.2%	141.2	128.3	F
	Through	10	7	73.6%	110.3	69.8	F
	Right Turn	40	27	67.2%	40.3	38.1	E
	Subtotal	70	45	64.7%	74.9	56.9	F
Total		3,280	2,625	80.0%	14.9	1.9	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	175	153	87.3%	91.7	32.0	F
	Through	980	863	88.1%	91.6	17.1	F
	Right Turn	105	96	91.1%	61.7	22.6	E
	Subtotal	1,260	1,112	88.2%	89.4	18.3	F
SB	Left Turn	255	161	63.2%	62.9	7.2	E
	Through	1,155	790	68.4%	54.8	6.7	D
	Right Turn	185	140	75.6%	26.1	3.4	C
	Subtotal	1,595	1,091	68.4%	52.4	5.7	D
EB	Left Turn	155	144	92.8%	79.1	40.0	E
	Through	330	319	96.6%	49.4	11.1	D
	Right Turn	305	269	88.3%	62.3	25.8	E
	Subtotal	790	732	92.7%	61.2	19.8	E
WB	Left Turn	185	171	92.5%	43.9	5.7	D
	Through	320	321	100.4%	31.3	3.9	C
	Right Turn	325	315	96.9%	27.0	4.5	C
	Subtotal	830	807	97.3%	32.3	3.3	C
Total		4,475	3,742	83.6%	60.7	6.6	E

Intersection 10 SR 99/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	28	94.5%	33.2	7.8	D
	Through	1,140	1,134	99.5%	14.6	1.7	B
	Right Turn	50	45	90.5%	12.4	2.0	B
	Subtotal	1,220	1,208	99.0%	14.9	1.5	B
SB	Left Turn	100	71	71.4%	24.1	5.2	C
	Through	1,535	1,099	71.6%	13.0	0.8	B
	Right Turn	10	8	81.0%	14.7	10.6	B
	Subtotal	1,645	1,179	71.7%	13.7	1.0	B
EB	Left Turn	10	12	117.8%	143.2	96.7	F
	Through	10	8	84.6%	105.5	82.5	F
	Right Turn	30	38	127.6%	64.4	48.3	F
	Subtotal	50	59	117.0%	84.6	56.3	F
WB	Left Turn	50	36	71.4%	135.4	70.3	F
	Through	10	7	69.9%	74.7	89.9	F
	Right Turn	110	91	82.3%	55.7	62.7	F
	Subtotal	170	133	78.4%	79.4	66.5	F
Total		3,085	2,578	83.6%	19.0	3.7	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	10	95.7%	20.0	7.5	C
	Through	1,190	1,193	100.3%	9.9	1.1	A
	Right Turn	10	8	77.3%	7.8	3.3	A
	Subtotal	1,210	1,211	100.1%	10.0	1.1	B
SB	Left Turn	20	12	60.7%	30.5	12.8	D
	Through	1,585	1,146	72.3%	18.9	1.0	C
	Right Turn	10	9	92.0%	16.2	2.2	C
	Subtotal	1,615	1,167	72.3%	18.9	1.0	C
EB	Left Turn	10	7	73.6%	82.4	79.0	F
	Through	10	8	84.6%	54.8	35.5	F
	Right Turn	10	12	117.8%	14.8	6.2	B
	Subtotal	30	28	92.0%	54.1	23.8	F
WB	Left Turn	10	8	84.6%	110.4	56.7	F
	Through	10	5	51.5%	88.4	62.7	F
	Right Turn	20	22	110.4%	21.0	10.1	C
	Subtotal	40	36	89.2%	49.7	23.7	E
Total		2,895	2,441	84.3%	15.3	0.6	C

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	11	114.1%	15.5	7.1	C
	Through	1,190	1,223	102.8%	5.0	0.5	A
	Right Turn	10	11	110.4%	5.6	3.2	A
	Subtotal	1,210	1,246	102.9%	5.1	0.5	A
SB	Left Turn	20	15	75.4%	33.7	7.5	D
	Through	1,575	1,132	71.8%	19.9	1.1	C
	Right Turn	10	5	47.8%	19.5	1.9	C
	Subtotal	1,605	1,151	71.7%	20.1	1.2	C
EB	Left Turn						
	Through						
	Right Turn	10	8	84.6%	4.4	5.2	A
	Subtotal	10	8	84.6%	4.4	5.2	A
WB	Left Turn	10	8	84.6%	35.8	59.9	E
	Through						
	Right Turn	20	15	75.4%	13.9	10.2	B
	Subtotal	30	24	78.5%	15.6	8.2	C
Total		2,855	2,429	85.1%	12.4	0.5	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	7	69.9%	59.5	22.1	E
	Through	1,050	995	94.7%	26.5	2.7	C
	Right Turn	20	16	81.0%	20.5	7.9	C
	Subtotal	1,080	1,018	94.2%	26.6	2.6	C
SB	Left Turn	80	45	56.6%	49.7	10.4	D
	Through	1,495	987	66.0%	27.4	1.7	C
	Right Turn	20	13	66.2%	29.1	9.1	C
	Subtotal	1,595	1,046	65.6%	28.3	1.8	C
EB	Left Turn	30	30	99.4%	34.7	11.2	C
	Through	100	106	105.6%	30.6	4.5	C
	Right Turn	10	8	77.3%	19.0	20.2	B
	Subtotal	140	143	102.3%	30.6	4.3	C
WB	Left Turn	30	27	90.8%	40.1	9.6	D
	Through	60	65	108.6%	40.3	7.2	D
	Right Turn	130	140	107.9%	26.0	5.4	C
	Subtotal	220	233	105.7%	31.6	5.8	C
Total		3,035	2,439	80.4%	28.1	1.6	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	130	129	99.4%	44.0	16.1	E
	Through						
	Right Turn	120	115	96.0%	36.3	16.9	E
	Subtotal	250	244	97.7%	40.3	16.4	E
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	820	743	90.6%	3.8	0.3	A
	Right Turn	130	110	84.9%	3.7	0.4	A
	Subtotal	950	853	89.8%	3.8	0.3	A
WB	Left Turn	80	75	93.8%	12.2	2.6	B
	Through	460	454	98.6%	0.6	0.1	A
	Right Turn						
	Subtotal	540	529	97.9%	2.3	0.4	A
Total		1,740	1,626	93.5%	8.9	2.8	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	245	237	96.6%	52.5	24.9	F
	Through	30	31	103.0%	79.7	50.1	F
	Right Turn	30	29	98.1%	20.7	18.6	C
	Subtotal	305	297	97.4%	52.6	27.4	F
SB	Left Turn	60	52	85.9%	23.8	8.5	C
	Through	30	25	83.4%	33.1	13.4	D
	Right Turn	60	61	102.4%	15.7	6.4	C
	Subtotal	150	138	92.0%	22.4	6.9	C
EB	Left Turn	30	27	89.5%	6.9	1.4	A
	Through	390	329	84.5%	3.0	0.4	A
	Right Turn	100	82	82.1%	3.5	0.7	A
	Subtotal	520	438	84.3%	3.4	0.5	A
WB	Left Turn	105	110	104.4%	4.7	1.0	A
	Through	495	507	102.4%	1.1	0.2	A
	Right Turn	60	57	95.7%	0.6	0.3	A
	Subtotal	660	674	102.1%	1.6	0.3	A
Total		1,635	1,547	94.6%	13.9	5.5	B

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	16	79.1%	3.6	0.8	A
	Through	110	106	96.7%	1.4	0.4	A
	Right Turn						
	Subtotal	130	122	94.0%	1.6	0.5	A
SB	Left Turn						
	Through	120	113	93.8%	0.5	0.3	A
	Right Turn	50	42	83.2%	0.2	0.2	A
	Subtotal	170	154	90.7%	0.4	0.2	A
EB	Left Turn	40	27	67.2%	5.5	0.9	A
	Through						
	Right Turn	20	17	86.5%	3.4	0.8	A
	Subtotal	60	44	73.6%	4.7	0.9	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		360	321	89.0%	1.5	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
AM Peak Hour

Intersection 28

Wallace Dr/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	9	92.0%	4.8	2.4	A
	Through						
	Right Turn	10	11	106.7%	2.5	0.4	A
	Subtotal	20	20	99.4%	3.9	1.2	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	150	127	84.9%	1.0	0.3	A
	Right Turn	10	9	92.0%	0.7	0.2	A
	Subtotal	160	137	85.3%	1.0	0.3	A
WB	Left Turn	10	13	125.1%	2.7	1.6	A
	Through	130	132	101.6%	0.3	0.1	A
	Right Turn						
	Subtotal	140	145	103.3%	0.5	0.2	A
Total		320	301	94.1%	0.9	0.3	A

Intersection 29























Muir Rd/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	9	88.3%	4.6	3.0	A
	Through						
	Right Turn	30	29	95.7%	3.0	0.5	A
	Subtotal	40	38	93.8%	3.5	0.7	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	140	113	81.0%	0.6	0.4	A
	Right Turn	20	18	90.2%	0.4	0.4	A
	Subtotal	160	131	82.1%	0.6	0.4	A
WB	Left Turn	20	16	79.1%	2.4	0.7	A
	Through	130	137	105.6%	0.2	0.1	A
	Right Turn						
	Subtotal	150	153	102.1%	0.4	0.1	A
Total		350	322	92.0%	0.9	0.4	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative Plus Phases 1 & 2
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	760	260	120	420	250	180	570	140	180	350	10
Future Volume (veh/h)	170	760	260	120	420	250	180	570	140	180	350	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		0.99	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	1863	1863	1863	1863	1863	1863	1863	1863	1900	1845	1851	1900
Adj Flow Rate, veh/h	185	826	283	130	457	272	196	620	152	196	380	11
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	258	1124	501	234	802	477	404	859	210	307	583	17
Arrive On Green	0.15	0.32	0.32	0.07	0.23	0.21	0.23	0.30	0.29	0.09	0.17	0.15
Sat Flow, veh/h	1774	3539	1577	3442	3539	1572	1774	2819	690	3408	3491	101
Grp Volume(v), veh/h	185	826	283	130	457	272	196	389	383	196	191	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1577	1721	1770	1572	1774	1770	1739	1704	1758	1833
Q Serve(g_s), s	7.2	15.1	4.8	2.7	8.4	4.0	7.0	14.3	14.3	4.0	7.4	7.4
Cycle Q Clear(g_c), s	7.2	15.1	4.8	2.7	8.4	4.0	7.0	14.3	14.3	4.0	7.4	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.06
Lane Grp Cap(c), veh/h	258	1124	501	234	802	477	404	539	530	307	294	306
V/C Ratio(X)	0.72	0.74	0.57	0.56	0.57	0.57	0.48	0.72	0.72	0.64	0.65	0.65
Avail Cap(c_a), veh/h	258	1409	628	661	1701	877	404	899	883	655	845	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	22.1	4.1	32.9	25.0	21.4	24.4	22.6	22.8	32.0	28.3	28.4
Incr Delay (d2), s/veh	8.1	1.5	1.0	0.8	0.6	1.1	0.3	1.8	1.9	0.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	7.6	3.9	1.3	4.1	4.4	3.5	7.2	7.1	1.9	3.6	3.9
LnGrp Delay(d),s/veh	37.8	23.7	5.1	33.7	25.7	22.5	24.7	24.4	24.6	32.8	29.3	29.3
LnGrp LOS	D	C	A	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		1294			859			968			587	
Approach Delay, s/veh		21.6			25.9			24.6			30.5	
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	10.6	26.2	8.9	27.1	20.6	16.2	15.6	20.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	5.5	* 5.5				
Max Green Setting (Gmax), s	13.5	36.0	13.5	27.5	15.5	34.0	7.5	* 34				
Max Q Clear Time (g_c+I1), s	6.0	16.3	4.7	17.1	9.0	9.4	9.2	10.4				
Green Ext Time (p_c), s	0.1	4.7	0.1	4.5	0.3	1.4	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			24.8									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative Plus Phases 1 & 2
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	920	230	190	590	190	250	460	150	140	310	210
Future Volume (veh/h)	170	920	230	190	590	190	250	460	150	140	310	210
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		0.99	1.00		1.00	1.00		0.99	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	1863	1863	1900	1863	1836	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	1000	250	207	641	207	272	500	163	152	337	228
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	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, %	2	2	2	2	4	4	2	2	2	2	2	2
Cap, veh/h	209	1036	258	209	991	320	268	599	194	221	438	290
Arrive On Green	0.12	0.37	0.36	0.12	0.38	0.37	0.15	0.23	0.22	0.12	0.21	0.20
Sat Flow, veh/h	1774	2804	699	1774	2593	837	1774	2622	850	1774	2039	1352
Grp Volume(v), veh/h	185	630	620	207	431	417	272	337	326	152	292	273
Grp Sat Flow(s),veh/h/ln	1774	1770	1733	1774	1744	1686	1774	1770	1702	1774	1770	1622
Q Serve(g_s), s	12.2	41.5	41.9	13.9	24.1	24.3	18.0	21.6	21.8	9.8	18.4	19.0
Cycle Q Clear(g_c), s	12.2	41.5	41.9	13.9	24.1	24.3	18.0	21.6	21.8	9.8	18.4	19.0
Prop In Lane	1.00		0.40	1.00		0.50	1.00		0.50	1.00		0.83
Lane Grp Cap(c), veh/h	209	654	641	209	666	644	268	405	389	221	380	348
V/C Ratio(X)	0.89	0.96	0.97	0.99	0.65	0.65	1.01	0.83	0.84	0.69	0.77	0.79
Avail Cap(c_a), veh/h	209	654	641	209	666	644	268	461	443	298	490	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	36.7	37.2	52.5	30.2	30.5	50.5	43.7	44.2	49.9	44.0	44.8
Incr Delay (d2), s/veh	33.5	26.9	28.4	60.0	4.1	4.2	58.6	11.1	12.1	4.0	5.4	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	25.2	25.0	10.3	12.4	12.0	13.2	11.8	11.6	5.0	9.6	9.2
LnGrp Delay(d),s/veh	85.3	63.7	65.5	112.5	34.3	34.8	109.2	54.8	56.3	53.9	49.4	51.6
LnGrp LOS	F	E	E	F	C	C	F	D	E	D	D	D
Approach Vol, veh/h		1435			1055			935			717	
Approach Delay, s/veh		67.2			49.8			71.2			51.2	
Approach LOS		E			D			E			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	30.3	31.2	19.5	48.0	22.0	29.6	18.0	49.5				
Change Period (Y+Rc), s	5.5	* 5.5	5.5	* 5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	30.0	* 30	14.0	* 43	18.0	31.5	14.0	42.5				
Max Q Clear Time (g_c+11), s	11.8	23.8	15.9	43.9	20.0	21.0	14.2	26.3				
Green Ext Time (p_c), s	2.5	1.8	0.0	0.0	0.0	2.9	0.0	10.0				
Intersection Summary												
HCM 2010 Ctrl Delay				60.9								
HCM 2010 LOS				E								
Notes												

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	40	70	620	100	100	660
Future Vol, veh/h	40	70	620	100	100	660
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	2	5
Mvmt Flow	43	76	674	109	109	717
























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1305	392	0	0	784	0
Stage 1	729	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Critical Hdwy	6.84	7	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.35	-	-	2.22	-
Pot Cap-1 Maneuver	152	598	-	-	830	-
Stage 1	438	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	598	-	-	830	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	17.4		0		1.3
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 410	830	-
HCM Lane V/C Ratio	-	- 0.292	0.131	-
HCM Control Delay (s)	-	- 17.4	10	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 1.2	0.5	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Cumulative Plus Phases 1 & 2
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	150	650	60	80	310	430	5	40	230	170	520	180
Future Volume (veh/h)	150	650	60	80	310	430	5	40	230	170	520	180
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.91	1.00		1.00		1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1863		1863	1863	1863	1863	1839
Adj Flow Rate, veh/h	163	707	65	87	337	467		43	250	185	565	196
Adj No. of Lanes	1	2	1	1	2	1		1	2	1	1	2
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
Percent Heavy Veh, %	2	2	3	3	3	2		2	2	2	2	3
Cap, veh/h	180	1001	403	115	885	400		69	656	288	556	1690
Arrive On Green	0.10	0.28	0.28	0.07	0.25	0.25		0.04	0.19	0.19	0.31	0.46
Sat Flow, veh/h	1774	3539	1423	1757	3505	1581		1774	3539	1553	1774	3677
Grp Volume(v), veh/h	163	707	65	87	337	467		43	250	185	565	196
Grp Sat Flow(s),veh/h/ln	1774	1770	1423	1757	1752	1581		1774	1770	1553	1774	1839
Q Serve(g_s), s	9.9	19.4	3.1	5.3	8.6	12.8		2.6	6.7	9.7	34.0	3.3
Cycle Q Clear(g_c), s	9.9	19.4	3.1	5.3	8.6	12.8		2.6	6.7	9.7	34.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	180	1001	403	115	885	400		69	656	288	556	1690
V/C Ratio(X)	0.91	0.71	0.16	0.76	0.38	1.17		0.62	0.38	0.64	1.02	0.12
Avail Cap(c_a), veh/h	180	1076	433	146	1001	452		163	1076	472	556	1931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3	34.9	20.0	49.9	33.5	8.9		51.4	38.8	26.7	37.3	16.7
Incr Delay (d2), s/veh	41.3	1.8	0.1	13.9	0.2	99.7		6.6	0.3	1.8	42.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	9.8	1.4	3.0	4.2	19.9		1.4	3.3	4.6	23.1	1.7
LnGrp Delay(d),s/veh	89.6	36.7	20.2	63.8	33.7	108.6		58.0	39.0	28.5	79.7	16.8
LnGrp LOS	F	D	C	E	C	F		E	D	C	F	B
Approach Vol, veh/h		935			891				478			859
Approach Delay, s/veh		44.8			75.9				36.7			57.2
Approach LOS		D			E				D			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	38.0	24.1	11.7	34.7	8.2	53.9	15.0	31.4				
Change Period (Y+Rc), s	4.6	4.6	4.6	* 4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	33.4	32.4	9.0	* 32	9.4	56.4	10.4	30.4				
Max Q Clear Time (g_c+I1), s	36.0	11.7	7.3	21.4	4.6	5.3	11.9	14.8				
Green Ext Time (p_c), s	0.0	3.1	0.1	3.3	0.0	3.4	0.0	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			55.7									
HCM 2010 LOS			E									
Notes												

Movement	SBR
Lane Configurations	1
Traffic Volume (veh/h)	90
Future Volume (veh/h)	90
Number	16
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	0.99
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1827
Adj Flow Rate, veh/h	98
Adj No. of Lanes	1
Peak Hour Factor	0.92
Percent Heavy Veh, %	4
Cap, veh/h	701
Arrive On Green	0.45
Sat Flow, veh/h	1544
Grp Volume(v), veh/h	98
Grp Sat Flow(s),veh/h/ln	1544
Q Serve(g_s), s	2.7
Cycle Q Clear(g_c), s	2.7
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	701
V/C Ratio(X)	0.14
Avail Cap(c_a), veh/h	802
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	7.7
Incr Delay (d2), s/veh	0.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.6
LnGrp Delay(d),s/veh	7.8
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Intersection	
Intersection Delay, s/veh	85
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕			↗	↘			↗	↘	
Traffic Vol, veh/h	0	30	580	50	0	30	410	70	0	30	50	40	0	110	70	30
Future Vol, veh/h	0	30	580	50	0	30	410	70	0	30	50	40	0	110	70	30
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	6	2	2	2	5	2	4	4	2	2	2	4	7
Mvmt Flow	0	32	617	53	0	32	436	74	0	32	53	43	0	117	74	32
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	144.1	54.1	13.8	14.7
HCM LOS	F	F	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	5%	6%	100%	0%
Vol Thru, %	0%	56%	88%	80%	0%	70%
Vol Right, %	0%	44%	8%	14%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	90	660	510	110	100
LT Vol	30	0	30	30	110	0
Through Vol	0	50	580	410	0	70
RT Vol	0	40	50	70	0	30
Lane Flow Rate	32	96	702	543	117	106
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.079	0.217	1.24	0.953	0.279	0.234
Departure Headway (Hd)	9.677	8.826	6.358	6.773	9.242	8.535
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	372	410	569	537	391	423
Service Time	7.377	6.526	4.438	4.773	6.942	6.235
HCM Lane V/C Ratio	0.086	0.234	1.234	1.011	0.299	0.251
HCM Control Delay	13.2	14	144.1	54.1	15.5	13.8
HCM Lane LOS	B	B	F	F	C	B
HCM 95th-tile Q	0.3	0.8	26.6	12.3	1.1	0.9

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	20	90	10	30	110
Future Vol, veh/h	10	20	90	10	30	110
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, %	2	9	2	60	60	2
Mvmt Flow	11	22	98	11	33	120

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	288	103	0	0	109	0
Stage 1	103	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.42	6.29	-	-	4.7	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.381	-	-	2.74	-
Pot Cap-1 Maneuver	702	933	-	-	1188	-
Stage 1	921	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	681	933	-	-	1188	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.5		0		1.7
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	831	1188
HCM Lane V/C Ratio	-	-	0.039	0.027
HCM Control Delay (s)	-	-	9.5	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10
Future Vol, veh/h	10	10	10	0	10	10	10	90	0	10	100	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	0	11	11	11	98	0	11	109	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	266	256	114	267	261	98	120	0	0	98	0	0
Stage 1	136	136	-	120	120	-	-	-	-	-	-	-
Stage 2	130	120	-	147	141	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.57	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.063	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	687	648	939	686	635	958	1468	-	-	1495	-	-
Stage 1	867	784	-	884	787	-	-	-	-	-	-	-
Stage 2	874	796	-	856	771	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	662	638	939	661	625	958	1468	-	-	1495	-	-
Mov Cap-2 Maneuver	662	638	-	661	625	-	-	-	-	-	-	-
Stage 1	860	778	-	877	781	-	-	-	-	-	-	-
Stage 2	845	790	-	828	765	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	9.9	0.7	0.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	724	756	1495	-	-
HCM Lane V/C Ratio	0.007	-	-	0.045	0.029	0.007	-	-
HCM Control Delay (s)	7.5	0	-	10.2	9.9	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	67.2
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↙	↕				↕	↘		↙	↕	↘
Traffic Vol, veh/h	0	70	800	50	0	40	250	50	0	110	140	90
Future Vol, veh/h	0	70	800	50	0	40	250	50	0	110	140	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	4	2	2	2	7	2	2	2	2	2
Mvmt Flow	0	76	870	54	0	43	272	54	0	120	152	98
Number of Lanes	0	1	2	0	0	0	2	1	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	115.2	18.1	16.9
HCM LOS	F	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	32%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	84%	68%	100%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	16%	0%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	140	90	70	533	317	123	167	50	60	90
LT Vol	110	0	0	70	0	0	40	0	0	60	0
Through Vol	0	140	0	0	533	267	83	167	0	0	90
RT Vol	0	0	90	0	0	50	0	0	50	0	0
Lane Flow Rate	120	152	98	76	580	344	134	181	54	65	98
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.322	0.389	0.232	0.181	1.307	0.762	0.347	0.465	0.128	0.184	0.263
Departure Headway (Hd)	10.064	9.564	8.864	8.583	8.117	7.972	9.644	9.567	8.782	10.55	10.05
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	379	408	418	446	454	375	379	411	342	360
Service Time	7.764	7.264	6.564	6.349	5.883	5.739	7.344	7.267	6.482	8.25	7.75
HCM Lane V/C Ratio	0.333	0.401	0.24	0.182	1.3	0.758	0.357	0.478	0.131	0.19	0.272
HCM Control Delay	17.5	18.2	14.2	13.3	177.9	32.2	17.4	20.3	12.8	15.6	16.3
HCM Lane LOS	C	C	B	B	F	D	C	C	B	C	C
HCM 95th-tile Q	1.4	1.8	0.9	0.7	25.4	6.5	1.5	2.4	0.4	0.7	1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↙	↑	↗
Traffic Vol, veh/h	0	60	90	50
Future Vol, veh/h	0	60	90	50
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5
Mvmt Flow	0	65	98	54
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	15.4
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Cumulative Plus Phases 1 & 2
 AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	650	320	130	970	690	250		
Future Volume (veh/h)	650	320	130	970	690	250		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1863	1810	1863	1845	1845		
Adj Flow Rate, veh/h	707	348	141	1054	750	272		
Adj No. of Lanes	2	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	3	2	5	2	3	3		
Cap, veh/h	951	442	199	2081	1424	635		
Arrive On Green	0.28	0.28	0.12	0.59	0.41	0.41		
Sat Flow, veh/h	3408	1583	1723	3632	3597	1562		
Grp Volume(v), veh/h	707	348	141	1054	750	272		
Grp Sat Flow(s),veh/h/ln	1704	1583	1723	1770	1752	1562		
Q Serve(g_s), s	11.4	12.2	4.7	10.5	9.7	7.5		
Cycle Q Clear(g_c), s	11.4	12.2	4.7	10.5	9.7	7.5		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	951	442	199	2081	1424	635		
V/C Ratio(X)	0.74	0.79	0.71	0.51	0.53	0.43		
Avail Cap(c_a), veh/h	1587	737	573	3472	2040	909		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.7	20.0	25.6	7.3	13.5	12.8		
Incr Delay (d2), s/veh	0.4	1.2	1.7	0.1	0.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.4	10.1	2.3	5.0	4.7	3.3		
LnGrp Delay(d),s/veh	20.2	21.2	27.4	7.3	13.6	13.0		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	1055			1195	1022			
Approach Delay, s/veh	20.5			9.7	13.4			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		39.4		20.8	10.9	28.4		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		57.0		27.4	19.4	33.0		
Max Q Clear Time (g_c+I1), s		12.5		14.2	6.7	11.7		
Green Ext Time (p_c), s		13.6		2.0	0.0	10.4		
Intersection Summary								
HCM 2010 Ctrl Delay			14.4					
HCM 2010 LOS			B					

Intersection																
Intersection Delay, s/veh104.9																
Intersection LOS F																

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	50	400	40	0	80	540	50	0	60	110	110	0	60	110	70
Future Vol, veh/h	0	50	400	40	0	80	540	50	0	60	110	110	0	60	110	70
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	4	2	3	2	3	2	2	2	2	2	2	2	2	3	2
Mvmt Flow	0	53	421	42	0	84	568	53	0	63	116	116	0	63	116	74
Number of Lanes	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	117.7	152.7	33.6	28.5
HCM LOS	F	F	D	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	21%	100%	0%	100%	0%	0%	25%
Vol Thru, %	39%	0%	91%	0%	100%	0%	46%
Vol Right, %	39%	0%	9%	0%	0%	100%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	50	440	80	540	50	240
LT Vol	60	50	0	80	0	0	60
Through Vol	110	0	400	0	540	0	110
RT Vol	110	0	40	0	0	50	70
Lane Flow Rate	295	53	463	84	568	53	253
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.717	0.141	1.163	0.208	1.322	0.112	0.633
Departure Headway (Hd)	9.74	10.366	9.734	9.316	8.776	8.045	10.04
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	374	348	375	387	421	448	361
Service Time	7.44	8.066	7.434	7.016	6.476	5.745	7.74
HCM Lane V/C Ratio	0.789	0.152	1.235	0.217	1.349	0.118	0.701
HCM Control Delay	33.6	14.8	129.4	14.4	186.2	11.8	28.5
HCM Lane LOS	D	B	F	B	F	B	D
HCM 95th-tile Q	5.4	0.5	17	0.8	24.7	0.4	4.1

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative Plus Phases 1 & 2
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	430	50	190	40	90	80	5	240	420	20	5	30	320	320
Future Volume (veh/h)	430	50	190	40	90	80	5	240	420	20	5	30	320	320
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1847	1827	1900
Adj Flow Rate, veh/h	467	54	207	43	98	87		261	457	22		33	348	348
Adj No. of Lanes	1	1	1	1	1	1		1	2	0		1	2	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, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	497	646	549	63	191	162		297	1519	73		49	526	457
Arrive On Green	0.28	0.35	0.35	0.04	0.10	0.10		0.17	0.44	0.42		0.03	0.30	0.28
Sat Flow, veh/h	1774	1863	1582	1757	1863	1583		1774	3434	165		1759	1736	1509
Grp Volume(v), veh/h	467	54	207	43	98	87		261	235	244		33	348	348
Grp Sat Flow(s),veh/h/ln	1774	1863	1582	1757	1863	1583		1774	1770	1830		1759	1736	1509
Q Serve(g_s), s	28.0	2.1	10.7	2.6	5.4	5.7		15.6	9.3	9.4		2.0	19.0	22.9
Cycle Q Clear(g_c), s	28.0	2.1	10.7	2.6	5.4	5.7		15.6	9.3	9.4		2.0	19.0	22.9
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.09		1.00		1.00
Lane Grp Cap(c), veh/h	497	646	549	63	191	162		297	783	809		49	526	457
V/C Ratio(X)	0.94	0.08	0.38	0.69	0.51	0.54		0.88	0.30	0.30		0.67	0.66	0.76
Avail Cap(c_a), veh/h	498	1233	1047	493	1233	1048		498	1172	1211		493	1149	999
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	23.9	26.7	51.8	46.2	46.4		44.2	19.5	19.6		52.4	33.1	35.3
Incr Delay (d2), s/veh	25.7	0.0	0.2	4.9	0.8	1.0		5.0	0.1	0.1		5.7	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	1.1	4.7	1.4	2.8	2.5		8.1	4.5	4.7		1.1	9.2	9.7
LnGrp Delay(d),s/veh	63.9	23.9	26.8	56.7	47.0	47.4		49.2	19.6	19.7		58.1	33.6	36.3
LnGrp LOS	E	C	C	E	D	D		D	B	B		E	C	D
Approach Vol, veh/h		728			228				740				729	
Approach Delay, s/veh		50.4			49.0				30.1				36.0	
Approach LOS		D			D				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	7.0	52.1	7.9	41.7	22.2	36.9	34.5	15.1						
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0						
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0						
Max Q Clear Time (g_c+14), s	11.4	11.4	4.6	12.7	17.6	24.9	30.0	7.7						
Green Ext Time (p_c), s	0.0	5.8	0.0	1.1	0.1	5.8	0.0	1.1						
Intersection Summary														
HCM 2010 Ctrl Delay					39.7									
HCM 2010 LOS					D									
Notes														

Intersection

Intersection Delay, s/veh 11.6

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	40	130	10	0	20	120	150	0	10	40	20	0	110	100	20
Future Vol, veh/h	0	40	130	10	0	20	120	150	0	10	40	20	0	110	100	20
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	3	4	2	2	20	4	2	2	2	2	2	2	3	3	14
Mvmt Flow	0	43	141	11	0	22	130	163	0	11	43	22	0	120	109	22
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	12.5	9.4	11.9
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	22%	7%	48%
Vol Thru, %	57%	72%	41%	43%
Vol Right, %	29%	6%	52%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	180	290	230
LT Vol	10	40	20	110
Through Vol	40	130	120	100
RT Vol	20	10	150	20
Lane Flow Rate	76	196	315	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.118	0.292	0.453	0.381
Departure Headway (Hd)	5.604	5.37	5.179	5.484
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	638	669	697	658
Service Time	3.648	3.405	3.21	3.516
HCM Lane V/C Ratio	0.119	0.293	0.452	0.38
HCM Control Delay	9.4	10.6	12.5	11.9
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	1.2	2.4	1.8

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

Cumulative Plus Phases 1 & 2
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	0	20	0	0	10	10	100	0	0	170	440
Future Volume (veh/h)	280	0	20	0	0	10	10	100	0	0	170	440
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	1863	1863	1863	1900	1863	1900	1863	1827	0	1863	1792	1863
Adj Flow Rate, veh/h	304	0	22	0	0	11	11	109	0	0	185	478
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	4	0	2	6	2
Cap, veh/h	619	0	276	0	0	73	19	939	0	4	744	657
Arrive On Green	0.17	0.00	0.17	0.00	0.00	0.02	0.01	0.51	0.00	0.00	0.41	0.41
Sat Flow, veh/h	3548	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Grp Volume(v), veh/h	304	0	22	0	0	11	11	109	0	0	185	478
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	0	1580	1774	1827	0	1774	1792	1583
Q Serve(g_s), s	3.5	0.0	0.5	0.0	0.0	0.3	0.3	1.4	0.0	0.0	3.0	11.4
Cycle Q Clear(g_c), s	3.5	0.0	0.5	0.0	0.0	0.3	0.3	1.4	0.0	0.0	3.0	11.4
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	619	0	276	0	0	73	19	939	0	4	744	657
V/C Ratio(X)	0.49	0.00	0.08	0.00	0.00	0.15	0.58	0.12	0.00	0.00	0.25	0.73
Avail Cap(c_a), veh/h	942	0	420	0	0	1049	314	1374	0	314	1348	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.9	0.0	15.6	0.0	0.0	21.2	22.3	5.7	0.0	0.0	8.6	11.1
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.0	0.0	1.1	24.5	0.1	0.0	0.0	0.2	1.9
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	1.8	0.0	0.2	0.0	0.0	0.2	0.3	0.7	0.0	0.0	1.5	5.3
LnGrp Delay(d),s/veh	17.6	0.0	15.8	0.0	0.0	22.3	46.7	5.7	0.0	0.0	8.8	13.0
LnGrp LOS	B		B			C	D	A			A	B
Approach Vol, veh/h		326			11			120			663	
Approach Delay, s/veh		17.5			22.3			9.5			11.8	
Approach LOS		B			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	27.2		11.9	4.5	22.8		6.1				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	33.0		11.0	7.9	33.0		29.0				
Max Q Clear Time (g_c+10), s	3	3.4		5.5	2.3	13.4		2.3				
Green Ext Time (p_c), s	0.0	4.8		0.7	0.0	4.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				13.3								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Cumulative Plus Phases 1 & 2
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations														
Traffic Volume (veh/h)	120	10	90	100	10	160	50	380	50	5	80	420	60	
Future Volume (veh/h)	120	10	90	100	10	160	50	380	50	5	80	420	60	
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		0.97		1.00		0.96	
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	1863	1863	1900	1863	1863	1863	1863	1863	1900		1846	1863	1900	
Adj Flow Rate, veh/h	130	11	98	109	11	174	54	413	54		87	457	65	
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	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, %	2	2	2	2	2	2	2	2	2		3	2	2	
Cap, veh/h	184	34	301	157	361	306	83	1012	131		128	1078	152	
Arrive On Green	0.10	0.21	0.20	0.09	0.19	0.19	0.05	0.32	0.28		0.07	0.35	0.31	
Sat Flow, veh/h	1774	162	1439	1774	1863	1578	1774	3140	408		1758	3098	438	
Grp Volume(v), veh/h	130	0	109	109	11	174	54	232	235		87	260	262	
Grp Sat Flow(s),veh/h/ln	1774	0	1601	1774	1863	1578	1774	1770	1778		1758	1770	1766	
Q Serve(g_s), s	3.7	0.0	3.0	3.1	0.2	5.2	1.6	5.3	5.4		2.5	5.8	6.0	
Cycle Q Clear(g_c), s	3.7	0.0	3.0	3.1	0.2	5.2	1.6	5.3	5.4		2.5	5.8	6.0	
Prop In Lane	1.00		0.90	1.00		1.00	1.00		0.23		1.00		0.25	
Lane Grp Cap(c), veh/h	184	0	335	157	361	306	83	570	573		128	616	614	
V/C Ratio(X)	0.71	0.00	0.33	0.70	0.03	0.57	0.65	0.41	0.41		0.68	0.42	0.43	
Avail Cap(c_a), veh/h	341	0	1262	273	1397	1184	307	1157	1162		372	1225	1222	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Uniform Delay (d), s/veh	22.5	0.0	17.6	23.0	17.0	19.0	24.4	13.7	14.0		23.5	13.0	13.2	
Incr Delay (d2), s/veh	4.9	0.0	0.6	5.5	0.0	1.7	8.2	0.5	0.5		6.2	0.5	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.4	1.8	0.1	2.4	1.0	2.6	2.7		1.4	2.9	2.9	
LnGrp Delay(d),s/veh	27.4	0.0	18.2	28.5	17.0	20.7	32.5	14.2	14.4		29.7	13.4	13.7	
LnGrp LOS	C		B	C	B	C	C	B	B		C	B	B	
Approach Vol, veh/h		239			294			521				609		
Approach Delay, s/veh		23.2			23.4			16.2				15.9		
Approach LOS		C			C			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	7.8	20.8	8.6	14.9	6.4	22.1	9.4	14.1						
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5						
Max Green Setting (Gmax), s	10.5	32.0	7.5	40.5	8.5	34.0	9.5	38.5						
Max Q Clear Time (g_c+14), s	14.5	7.4	5.1	5.0	3.6	8.0	5.7	7.2						
Green Ext Time (p_c), s	0.1	5.7	0.1	1.4	0.0	5.8	0.1	1.4						
Intersection Summary														
HCM 2010 Ctrl Delay			18.4											
HCM 2010 LOS			B											
Notes														

Intersection

Int Delay, s/veh 1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↓	↑↑	↓	↓
Traffic Vol, veh/h	650	10	30	500	30	80
Future Vol, veh/h	650	10	30	500	30	80
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	707	11	33	543	33	87

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	719	1053
Stage 1	-	-	714
Stage 2	-	-	339
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	878	222
Stage 1	-	-	446
Stage 2	-	-	693
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	877	213
Mov Cap-2 Maneuver	-	-	213
Stage 1	-	-	445
Stage 2	-	-	666

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	213	632	-	-	877	-
HCM Lane V/C Ratio	0.153	0.138	-	-	0.037	-
HCM Control Delay (s)	24.9	11.6	-	-	9.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.5	-	-	0.1	-

Intersection			
Intersection Delay, s/veh	3.6		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	0	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	54	22
Demand Flow Rate, veh/h	0	55	22
Vehicles Circulating, veh/h	22	0	0
Vehicles Exiting, veh/h	0	22	55
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	3.7	3.4
Approach LOS	-	A	A
Lane	Left	Left	
Designated Moves	T	T	
Assumed Moves	T	T	
RT Channelized			
Lane Util	1.000	1.000	
Critical Headway, s	5.193	5.193	
Entry Flow, veh/h	55	22	
Cap Entry Lane, veh/h	1130	1130	
Entry HV Adj Factor	0.980	0.980	
Flow Entry, veh/h	54	22	
Cap Entry, veh/h	1108	1108	
V/C Ratio	0.049	0.019	
Control Delay, s/veh	3.7	3.4	
LOS	A	A	
95th %tile Queue, veh	0	0	

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	10	30	20	20	20	0
Future Vol, veh/h	10	30	20	20	20	0
Conflicting Peds, #/hr	0	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	33	22	22	22	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	45	0	91
Stage 1	-	-	35
Stage 2	-	-	56
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1563	-	909
Stage 1	-	-	987
Stage 2	-	-	967
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1560	-	900
Mov Cap-2 Maneuver	-	-	900
Stage 1	-	-	985
Stage 2	-	-	959

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1560	-	-	-	900	-
HCM Lane V/C Ratio	0.007	-	-	-	0.024	-
HCM Control Delay (s)	7.3	0	-	-	9.1	0
HCM Lane LOS	A	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1	-

Intersection				
Intersection Delay, s/veh	4.1			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	76	65	65	87
Demand Flow Rate, veh/h	77	66	66	88
Vehicles Circulating, veh/h	77	99	88	33
Vehicles Exiting, veh/h	44	55	66	132
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.2	4.1	4.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	77	66	66	88
Cap Entry Lane, veh/h	1046	1023	1035	1093
Entry HV Adj Factor	0.981	0.982	0.987	0.990
Flow Entry, veh/h	76	65	65	87
Cap Entry, veh/h	1026	1004	1021	1082
V/C Ratio	0.074	0.065	0.064	0.081
Control Delay, s/veh	4.2	4.2	4.1	4.0
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	10	10	130	210	20
Future Vol, veh/h	50	10	10	130	210	20
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	11	11	141	228	22

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	406	243	252	0
Stage 1	241	-	-	-
Stage 2	165	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	601	796	1313	-
Stage 1	799	-	-	-
Stage 2	864	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	594	793	1311	-
Mov Cap-2 Maneuver	594	-	-	-
Stage 1	798	-	-	-
Stage 2	855	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1311	-	620	-	-
HCM Lane V/C Ratio	0.008	-	0.105	-	-
HCM Control Delay (s)	7.8	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 1 SR 99/SR 20 Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	760	402	53.0%	94.8	26.8	F
	Through	1,040	657	63.2%	53.9	7.9	D
	Right Turn	380	244	64.2%	26.2	8.4	C
	Subtotal	2,180	1,303	59.8%	61.3	11.7	E
SB	Left Turn	460	391	85.0%	112.7	17.4	F
	Through	910	774	85.1%	92.3	15.3	F
	Right Turn	100	92	91.6%	42.2	15.8	D
	Subtotal	1,470	1,257	85.5%	95.1	14.6	F
EB	Left Turn	260	181	69.4%	165.3	27.7	F
	Through	1,090	722	66.3%	183.2	32.2	F
	Right Turn	395	288	72.8%	160.8	36.0	F
	Subtotal	1,745	1,191	68.2%	175.1	32.4	F
WB	Left Turn	710	603	84.9%	119.2	24.3	F
	Through	1,080	1,070	99.1%	49.7	7.7	D
	Right Turn	700	660	94.3%	55.3	20.2	E
	Subtotal	2,490	2,333	93.7%	69.5	11.6	E
Total		7,885	6,084	77.2%	93.5	9.1	F

Intersection 2 SR 99/Sunsweet Blvd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	520	305	58.6%	61.1	8.8	E
	Through	1,530	873	57.0%	52.8	8.6	D
	Right Turn	60	40	65.9%	34.1	6.4	C
	Subtotal	2,110	1,217	57.7%	54.3	8.2	D
SB	Left Turn	525	349	66.4%	120.8	26.5	F
	Through	1,370	1,017	74.3%	67.7	14.9	E
	Right Turn	120	94	78.2%	43.0	10.2	D
	Subtotal	2,015	1,460	72.5%	79.0	17.2	E
EB	Left Turn	120	121	100.7%	66.2	8.8	E
	Through	170	177	104.2%	53.4	6.5	D
	Right Turn	105	101	96.6%	18.2	5.0	B
	Subtotal	395	399	101.1%	47.8	3.5	D
WB	Left Turn	235	193	82.1%	129.6	35.4	F
	Through	120	116	96.9%	40.4	3.9	D
	Right Turn	505	458	90.6%	48.0	13.0	D
	Subtotal	860	767	89.2%	67.4	7.8	E
Total		5,380	3,843	71.4%	65.4	6.0	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 3 SR 99/Bridge St Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	170	112	66.2%	73.0	11.1	E
	Through	1,620	985	60.8%	45.3	3.6	D
	Right Turn	210	135	64.1%	17.2	1.4	B
	Subtotal	2,000	1,232	61.6%	44.8	2.8	D
SB	Left Turn	160	115	72.0%	58.6	7.9	E
	Through	1,150	894	77.8%	36.1	3.3	D
	Right Turn	400	296	74.0%	20.0	2.1	B
	Subtotal	1,710	1,305	76.3%	34.4	3.0	C
EB	Left Turn	100	80	79.8%	108.0	20.6	F
	Through	800	690	86.3%	77.9	22.5	E
	Right Turn	180	148	82.3%	76.4	22.7	E
	Subtotal	1,080	918	85.0%	80.4	21.3	F
WB	Left Turn	250	144	57.5%	246.7	43.7	F
	Through	840	487	58.0%	191.9	50.7	F
	Right Turn	390	238	60.9%	182.4	50.7	F
	Subtotal	1,480	868	58.7%	198.2	49.8	F
Total		6,270	4,323	69.0%	79.4	10.6	E

Intersection 4 SR 99/Franklin Ave Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	250	133	53.4%	83.5	8.8	F
	Through	1,530	914	59.7%	96.2	9.7	F
	Right Turn	250	149	59.6%	69.5	10.9	E
	Subtotal	2,030	1,196	58.9%	91.5	9.6	F
SB	Left Turn	110	85	77.4%	56.0	10.7	E
	Through	980	700	71.4%	40.4	5.5	D
	Right Turn	490	372	75.8%	33.6	11.0	C
	Subtotal	1,580	1,156	73.2%	39.5	6.5	D
EB	Left Turn	250	215	86.2%	65.7	10.5	E
	Through	930	902	97.0%	43.0	6.3	D
	Right Turn	210	217	103.3%	38.7	7.9	D
	Subtotal	1,390	1,335	96.0%	46.0	7.0	D
WB	Left Turn	410	202	49.2%	200.4	18.5	F
	Through	910	593	65.2%	140.6	18.8	F
	Right Turn	235	158	67.1%	121.8	20.6	F
	Subtotal	1,555	953	61.3%	150.1	16.6	F
Total		6,555	4,640	70.8%	77.5	3.0	E

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	45	33	73.5%	20.4	6.4	C
	Through	1,910	1,441	75.5%	7.6	1.2	A
	Right Turn	30	20	67.1%	8.4	3.9	A
	Subtotal	1,985	1,495	75.3%	7.9	1.3	A
SB	Left Turn	60	39	65.2%	27.0	7.3	D
	Through	1,505	1,034	68.7%	7.0	0.3	A
	Right Turn	35	24	67.3%	6.5	1.4	A
	Subtotal	1,600	1,097	68.5%	7.7	0.5	A
EB	Left Turn	10	8	79.8%	111.6	134.3	F
	Through	10	6	64.6%	132.4	95.6	F
	Right Turn	35	33	94.5%	16.3	5.3	C
	Subtotal	55	48	86.4%	41.8	21.7	E
WB	Left Turn	10	8	83.6%	95.3	89.8	F
	Through	10	5	53.2%	138.8	127.1	F
	Right Turn	105	81	77.4%	94.9	66.3	F
	Subtotal	125	95	76.0%	102.9	66.4	F
Total		3,765	2,734	72.6%	11.4	2.1	B

Intersection 6 SR 99/Richland Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	50	36	71.4%	51.9	8.5	D
	Through	1,765	1,283	72.7%	31.3	6.7	C
	Right Turn	120	94	78.5%	16.4	5.3	B
	Subtotal	1,935	1,413	73.0%	30.8	6.5	C
SB	Left Turn	85	55	64.4%	63.8	11.6	E
	Through	1,415	923	65.2%	35.5	8.0	D
	Right Turn	55	34	62.2%	14.4	2.7	B
	Subtotal	1,555	1,012	65.1%	36.4	7.8	D
EB	Left Turn	40	37	92.2%	41.7	9.7	D
	Through	90	92	101.8%	45.8	8.3	D
	Right Turn	55	52	95.3%	23.8	7.3	C
	Subtotal	185	181	97.8%	38.7	7.2	D
WB	Left Turn	70	68	97.7%	61.4	24.5	E
	Through	90	87	97.1%	63.6	23.8	E
	Right Turn	180	177	98.2%	43.4	19.4	D
	Subtotal	340	333	97.8%	52.5	21.6	D
Total		4,015	2,938	73.2%	35.8	6.7	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 7 SR 99/Lincoln Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	250	184	73.6%	60.8	7.6	E
	Through	1,465	1,101	75.1%	46.2	3.4	D
	Right Turn	270	207	76.6%	19.7	3.3	B
	Subtotal	1,985	1,492	75.1%	44.3	3.4	D
SB	Left Turn	265	171	64.4%	59.3	8.1	E
	Through	1,095	739	67.5%	33.3	7.9	C
	Right Turn	180	118	65.4%	16.8	3.8	B
	Subtotal	1,540	1,028	66.7%	35.8	7.2	D
EB	Left Turn	160	132	82.7%	93.6	43.7	F
	Through	660	584	88.4%	68.3	18.5	E
	Right Turn	290	255	87.8%	51.5	23.2	D
	Subtotal	1,110	971	87.4%	67.2	20.0	E
WB	Left Turn	155	131	84.8%	79.4	12.6	E
	Through	750	650	86.6%	70.4	18.3	E
	Right Turn	310	288	92.8%	43.6	14.3	D
	Subtotal	1,215	1,069	88.0%	64.6	15.9	E
Total		5,850	4,558	77.9%	52.0	5.5	D

Intersection 8 SR 99/Smith Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	61	87.4%	19.0	4.5	C
	Through	1,875	1,446	77.1%	11.4	1.2	B
	Right Turn	20	16	79.8%	9.1	4.7	A
	Subtotal	1,965	1,523	77.5%	11.7	1.2	B
SB	Left Turn	55	39	70.5%	23.2	10.0	C
	Through	1,365	971	71.1%	8.9	1.6	A
	Right Turn	120	75	62.7%	7.5	2.3	A
	Subtotal	1,540	1,085	70.4%	9.3	2.0	A
EB	Left Turn	60	36	60.8%	192.5	58.8	F
	Through	10	6	57.0%	226.7	108.2	F
	Right Turn	30	21	70.9%	111.6	68.3	F
	Subtotal	100	63	63.5%	166.8	63.1	F
WB	Left Turn	20	12	60.8%	196.0	123.1	F
	Through	20	14	72.2%	174.5	104.4	F
	Right Turn	50	39	77.5%	84.0	89.2	F
	Subtotal	90	65	72.6%	129.4	96.0	F
Total		3,695	2,737	74.1%	16.5	1.9	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	150	121	80.8%	83.0	14.6	F
	Through	1,210	973	80.4%	97.0	20.5	F
	Right Turn	275	219	79.7%	60.2	22.4	E
	Subtotal	1,635	1,313	80.3%	89.6	20.0	F
SB	Left Turn	445	269	60.4%	67.6	13.8	E
	Through	765	530	69.3%	27.8	5.0	C
	Right Turn	205	133	65.1%	7.3	1.6	A
	Subtotal	1,415	933	65.9%	36.2	5.6	D
EB	Left Turn	240	204	85.2%	122.4	37.2	F
	Through	390	356	91.4%	48.7	11.9	D
	Right Turn	260	237	91.1%	44.0	12.1	D
	Subtotal	890	798	89.6%	66.2	17.4	E
WB	Left Turn	145	99	68.1%	69.0	10.8	E
	Through	380	291	76.5%	50.9	5.4	D
	Right Turn	515	378	73.5%	43.9	8.0	D
	Subtotal	1,040	768	73.8%	49.8	7.1	D
Total		4,980	3,811	76.5%	63.6	11.0	E

Intersection 10 SR 99/Stewart Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	420	367	87.4%	60.9	29.8	F
	Through	1,585	1,604	101.2%	10.6	6.0	B
	Right Turn	80	72	89.8%	6.7	4.5	A
	Subtotal	2,085	2,043	98.0%	19.6	10.2	C
SB	Left Turn	40	24	60.8%	41.3	20.6	E
	Through	1,120	816	72.8%	8.4	0.9	A
	Right Turn	10	8	76.0%	9.4	5.6	A
	Subtotal	1,170	848	72.5%	9.4	1.5	A
EB	Left Turn	10	2	22.8%	349.6	155.7	F
	Through	10	2	19.0%	374.5	185.9	F
	Right Turn	20	7	34.2%	182.8	132.8	F
	Subtotal	40	11	27.6%	191.3	147.9	F
WB	Left Turn	30	3	8.9%	411.4	68.6	F
	Through	10	2	19.0%	354.0	138.4	F
	Right Turn	40	18	44.7%	172.1	71.0	F
	Subtotal	80	22	28.0%	209.3	82.6	F
Total		3,375	2,924	86.6%	18.8	6.1	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 11 SR 99/Reed Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	19	95.0%	8.5	4.1	A
	Through	2,045	1,976	96.6%	5.8	0.7	A
	Right Turn	10	14	136.8%	3.7	1.2	A
	Subtotal	2,075	2,008	96.8%	5.8	0.7	A
SB	Left Turn	20	11	53.2%	47.2	35.0	E
	Through	1,140	798	70.0%	5.3	0.2	A
	Right Turn	10	10	95.0%	1.4	1.0	A
	Subtotal	1,170	819	70.0%	5.8	0.6	A
EB	Left Turn	10	7	68.4%	164.4	92.2	F
	Through	10	8	76.0%	165.5	88.9	F
	Right Turn	10	10	98.8%	23.9	33.4	C
	Subtotal	30	24	81.1%	115.0	53.1	F
WB	Left Turn	10	10	95.0%	115.5	72.2	F
	Through						
	Right Turn	30	24	79.8%	44.1	19.5	E
	Subtotal	40	33	83.6%	69.0	40.4	F
Total		3,315	2,885	87.0%	7.4	0.8	A

Intersection 12 SR 99/Walnut Ave Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	11	106.4%	12.8	12.5	B
	Through	2,055	2,018	98.2%	5.9	0.5	A
	Right Turn	10	11	110.2%	6.8	2.6	A
	Subtotal	2,075	2,040	98.3%	5.9	0.5	A
SB	Left Turn	10	8	76.0%	30.4	25.5	D
	Through	1,140	791	69.4%	0.8	0.1	A
	Right Turn	10	6	57.0%	1.1	1.1	A
	Subtotal	1,160	804	69.4%	1.1	0.3	A
EB	Left Turn	10	8	79.8%	57.6	86.8	F
	Through	10	10	102.6%	75.9	50.5	F
	Right Turn						
	Subtotal	20	18	91.2%	80.4	63.9	F
WB	Left Turn	10	11	106.4%	78.2	50.7	F
	Through	10	9	91.2%	83.5	48.6	F
	Right Turn	10	13	125.4%	37.6	18.8	E
	Subtotal	30	32	107.7%	66.9	24.8	F
Total		3,285	2,895	88.1%	5.7	0.5	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 13 SR 99/Barry Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	10	11	106.4%	38.0	22.0	D
	Through	2,005	1,945	97.0%	21.5	3.5	C
	Right Turn	20	22	108.3%	20.6	7.0	C
	Subtotal	2,035	1,978	97.2%	21.6	3.5	C
SB	Left Turn	20	13	66.5%	54.3	19.8	D
	Through	1,100	753	68.5%	20.8	1.2	C
	Right Turn	30	18	59.5%	18.9	1.9	B
	Subtotal	1,150	784	68.2%	21.4	1.0	C
EB	Left Turn	30	31	103.9%	34.6	10.7	C
	Through	20	21	102.6%	32.3	13.3	C
	Right Turn	10	13	125.4%	10.1	8.7	B
	Subtotal	60	64	107.0%	29.1	7.9	C
WB	Left Turn	10	11	106.4%	30.0	17.3	C
	Through	30	36	119.1%	30.0	8.9	C
	Right Turn	40	41	102.6%	27.8	3.4	C
	Subtotal	80	87	109.3%	30.5	4.0	C
Total		3,325	2,913	87.6%	22.0	2.6	C

Intersection 21 Phillips Rd/Lincoln Rd Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	100	80	79.8%	88.8	38.2	F
	Through						
	Right Turn	90	82	91.6%	75.8	42.8	F
	Subtotal	190	162	85.4%	81.9	40.7	F
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	820	662	80.8%	3.8	0.3	A
	Right Turn	110	90	81.9%	4.2	0.3	A
	Subtotal	930	752	80.9%	3.8	0.3	A
WB	Left Turn	70	64	91.2%	9.7	3.7	A
	Through	1,000	996	99.6%	2.8	3.2	A
	Right Turn						
	Subtotal	1,070	1,060	99.0%	3.2	3.2	A
Total		2,190	1,974	90.2%	9.9	3.6	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 24

Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	530	286	54.0%	224.5	79.6	F
	Through	10	8	83.6%	206.7	93.6	F
	Right Turn	20	15	74.1%	161.2	57.2	F
	Subtotal	560	309	55.2%	222.0	77.6	F
SB	Left Turn	30	23	77.3%	36.5	20.5	E
	Through	30	27	89.9%	55.5	18.8	F
	Right Turn	40	37	93.1%	24.2	14.1	C
	Subtotal	100	87	87.4%	36.4	15.3	E
EB	Left Turn	80	64	79.8%	9.7	5.1	A
	Through	690	518	75.1%	6.4	2.7	A
	Right Turn	160	117	72.9%	6.3	2.2	A
	Subtotal	930	699	75.1%	6.6	2.7	A
WB	Left Turn	150	138	91.7%	8.2	2.4	A
	Through	380	371	97.7%	0.9	0.1	A
	Right Turn	20	21	104.5%	0.3	0.1	A
	Subtotal	550	530	96.3%	2.8	0.8	A
Total		2,140	1,625	75.9%	46.3	10.8	E

Intersection 27

Phillips Rd/Smith Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	14	68.4%	3.0	0.6	A
	Through	90	76	84.9%	1.1	0.5	A
	Right Turn						
	Subtotal	110	90	81.9%	1.3	0.4	A
SB	Left Turn						
	Through	70	71	101.0%	0.3	0.1	A
	Right Turn	40	39	97.9%	0.2	0.2	A
	Subtotal	110	110	99.8%	0.2	0.1	A
EB	Left Turn	30	16	51.9%	5.4	0.6	A
	Through						
	Right Turn	40	34	85.5%	3.3	0.4	A
	Subtotal	70	50	71.1%	4.0	0.4	A
WB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
Total		290	250	86.1%	1.4	0.3	A

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 & 2
PM Peak Hour

Intersection 28

Wallace Dr/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	10	9	91.2%	4.7	1.5	A
	Through						
	Right Turn	10	11	110.2%	2.3	0.1	A
	Subtotal	20	20	100.7%	3.4	0.6	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	80	54	67.9%	0.7	0.3	A
	Right Turn	10	6	60.8%	0.6	0.4	A
	Subtotal	90	60	67.1%	0.7	0.3	A
WB	Left Turn	10	11	106.4%	2.0	0.9	A
	Through	60	59	98.2%	0.4	0.2	A
	Right Turn						
	Subtotal	70	70	99.3%	0.6	0.3	A
Total		180	150	83.4%	1.0	0.3	A

Intersection 29

























Muir Rd/Stewart Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	20	23	115.9%	4.8	0.7	A
	Through						
	Right Turn	30	30	101.3%	2.9	0.4	A
	Subtotal	50	54	107.2%	3.8	0.5	A
SB	Left Turn						
	Through						
	Right Turn						
	Subtotal						
EB	Left Turn						
	Through	70	48	68.9%	0.3	0.2	A
	Right Turn	20	19	93.1%	0.1	0.1	A
	Subtotal	90	67	74.3%	0.2	0.2	A
WB	Left Turn	30	33	111.5%	1.9	0.3	A
	Through	50	46	92.0%	0.2	0.1	A
	Right Turn						
	Subtotal	80	79	99.3%	0.9	0.2	A
Total		220	200	90.9%	1.4	0.4	A

HCM 2010 Signalized Intersection Summary
 14: Walton Ave & Bridge St

Cumulative Plus Phases 1 & 2
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	640	340	230	1080	300	230	530	160	300	680	100
Future Volume (veh/h)	160	640	340	230	1080	300	230	530	160	300	680	100
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		0.99	1.00		1.00	1.00		0.98
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	1776	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	174	696	370	250	1174	326	250	576	174	326	739	109
Adj No. of Lanes	1	2	1	2	2	1	1	2	0	2	2	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, %	7	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1220	543	327	1167	689	260	797	240	400	825	122
Arrive On Green	0.11	0.34	0.34	0.09	0.33	0.32	0.15	0.30	0.29	0.12	0.27	0.26
Sat Flow, veh/h	1691	3539	1576	3442	3539	1574	1774	2680	808	3442	3086	455
Grp Volume(v), veh/h	174	696	370	250	1174	326	250	380	370	326	424	424
Grp Sat Flow(s),veh/h/ln	1691	1770	1576	1721	1770	1574	1774	1770	1718	1721	1770	1771
Q Serve(g_s), s	11.1	17.5	21.9	7.7	36.0	16.1	15.3	21.0	21.1	10.1	25.2	25.2
Cycle Q Clear(g_c), s	11.1	17.5	21.9	7.7	36.0	16.1	15.3	21.0	21.1	10.1	25.2	25.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.26
Lane Grp Cap(c), veh/h	186	1220	543	327	1167	689	260	526	511	400	473	473
V/C Ratio(X)	0.94	0.57	0.68	0.76	1.01	0.47	0.96	0.72	0.72	0.81	0.90	0.90
Avail Cap(c_a), veh/h	186	1220	543	410	1167	689	260	526	511	441	486	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	29.2	30.6	48.2	36.6	21.8	46.3	34.3	34.6	47.1	38.5	38.7
Incr Delay (d2), s/veh	47.3	0.6	3.4	4.8	27.8	0.5	44.8	4.8	5.1	9.2	18.0	18.1
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	7.7	8.6	10.0	3.9	22.0	7.0	10.7	10.9	10.7	5.3	14.6	14.6
LnGrp Delay(d),s/veh	95.5	29.8	34.1	53.1	64.4	22.3	91.1	39.1	39.6	56.3	56.6	56.8
LnGrp LOS	F	C	C	D	F	C	F	D	D	E	E	E
Approach Vol, veh/h		1240			1750			1000			1174	
Approach Delay, s/veh		40.3			54.9			52.3			56.6	
Approach LOS		D			D			D			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	16.7	36.5	14.4	41.6	20.0	33.2	16.0	40.0				
Change Period (Y+Rc), s	4.5	5.0	4.5	5.5	4.5	5.0	4.5	5.5				
Max Green Setting (Gmax), s	13.5	31.0	12.5	32.5	15.5	29.0	11.5	34.5				
Max Q Clear Time (g_c+I1), s	12.1	23.1	9.7	23.9	17.3	27.2	13.1	38.0				
Green Ext Time (p_c), s	0.1	4.8	0.1	7.4	0.0	0.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			51.3									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
 15: Walton Ave & Franklin Rd

Cumulative Plus Phases 1 & 2
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	810	210	180	1030	230	260	400	110	210	630	250
Future Volume (veh/h)	190	810	210	180	1030	230	260	400	110	210	630	250
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		0.98	1.00		0.97	1.00		0.98	1.00		0.98
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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	204	871	226	194	1108	247	280	430	118	226	677	269
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	959	249	197	1026	227	253	544	148	344	643	256
Arrive On Green	0.11	0.35	0.33	0.11	0.36	0.35	0.14	0.20	0.19	0.19	0.26	0.25
Sat Flow, veh/h	1774	2772	719	1774	2866	635	1774	2738	744	1774	2459	977
Grp Volume(v), veh/h	204	556	541	194	681	674	280	276	272	226	487	459
Grp Sat Flow(s),veh/h/ln	1774	1770	1720	1774	1770	1731	1774	1770	1712	1774	1770	1666
Q Serve(g_s), s	14.0	37.8	37.9	13.8	45.1	45.1	18.0	18.7	19.1	14.8	33.0	33.0
Cycle Q Clear(g_c), s	14.0	37.8	37.9	13.8	45.1	45.1	18.0	18.7	19.1	14.8	33.0	33.0
Prop In Lane	1.00		0.42	1.00		0.37	1.00		0.43	1.00		0.59
Lane Grp Cap(c), veh/h	197	612	595	197	633	620	253	352	340	344	463	436
V/C Ratio(X)	1.04	0.91	0.91	0.99	1.08	1.09	1.11	0.79	0.80	0.66	1.05	1.05
Avail Cap(c_a), veh/h	197	617	600	197	633	620	253	435	421	344	463	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	39.3	39.7	56.0	40.5	40.8	54.1	48.0	48.5	47.0	46.6	47.0
Incr Delay (d2), s/veh	73.9	19.0	19.6	59.7	57.9	62.3	87.9	7.5	8.5	4.5	56.3	57.6
Initial Q Delay(d3),s/veh	0.1	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	21.6	21.3	10.0	32.2	32.2	15.0	9.9	9.9	7.7	23.3	22.1
LnGrp Delay(d),s/veh	130.1	58.4	59.3	115.7	98.4	103.0	142.0	55.5	57.0	51.5	102.9	104.6
LnGrp LOS	F	E	E	F	F	F	F	E	E	D	F	F
Approach Vol, veh/h		1301			1549			828			1172	
Approach Delay, s/veh		70.0			102.6			85.2			93.7	
Approach LOS		E			F			F			F	
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	29.9	29.1	19.5	47.6	22.0	37.0	18.0	49.1				
Change Period (Y+Rc), s	5.5	* 5.5	5.5	* 5.5	4.0	5.5	4.0	5.5				
Max Green Setting (Gmax), s	20.0	* 30	14.0	* 43	18.0	31.5	14.0	42.5				
Max Q Clear Time (g_c+1/6), s	11.0	21.1	15.8	39.9	20.0	35.0	16.0	47.1				
Green Ext Time (p_c), s	1.9	1.9	0.0	2.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				88.7								
HCM 2010 LOS				F								
Notes												

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	80	90	760	60	100	870
Future Vol, veh/h	80	90	760	60	100	870
Conflicting Peds, #/hr	0	0	0	1	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	94	792	63	104	906

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1485	428	0	0	855	0
Stage 1	824	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	115	575	-	-	781	-
Stage 1	391	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	100	575	-	-	781	-
Mov Cap-2 Maneuver	229	-	-	-	-	-
Stage 1	391	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	27.1		0		1.1
HCM LOS	D				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 336	781	-
HCM Lane V/C Ratio	-	- 0.527	0.133	-
HCM Control Delay (s)	-	- 27.1	10.3	-
HCM Lane LOS	-	- D	B	-
HCM 95th %tile Q(veh)	-	- 2.9	0.5	-

HCM 2010 Signalized Intersection Summary
 17: S Walton Ave & Lincoln Rd

Cumulative Plus Phases 1 & 2
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	400	40	130	650	380	60	240	100	500	290	170
Future Volume (veh/h)	150	400	40	130	650	380	60	240	100	500	290	170
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		0.98	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	160	426	43	138	691	404	64	255	106	532	309	181
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	678	298	299	907	404	93	545	243	569	1495	647
Arrive On Green	0.11	0.19	0.19	0.17	0.26	0.26	0.05	0.15	0.15	0.32	0.42	0.42
Sat Flow, veh/h	1774	3539	1554	1774	3539	1578	1774	3539	1577	1774	3539	1555
Grp Volume(v), veh/h	160	426	43	138	691	404	64	255	106	532	309	181
Grp Sat Flow(s),veh/h/ln	1774	1770	1554	1774	1770	1578	1774	1770	1577	1774	1770	1555
Q Serve(g_s), s	8.9	11.1	1.9	7.0	18.1	11.4	3.6	6.6	4.2	29.2	5.5	5.1
Cycle Q Clear(g_c), s	8.9	11.1	1.9	7.0	18.1	11.4	3.6	6.6	4.2	29.2	5.5	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	678	298	299	907	404	93	545	243	569	1495	647
V/C Ratio(X)	0.82	0.63	0.14	0.46	0.76	1.00	0.69	0.47	0.44	0.94	0.21	0.28
Avail Cap(c_a), veh/h	194	1164	511	299	1093	487	177	1164	519	601	2011	874
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	37.3	22.8	37.6	34.5	7.4	46.7	38.7	18.1	33.1	18.3	8.6
Incr Delay (d2), s/veh	23.3	0.7	0.2	0.8	2.4	37.6	6.6	0.5	0.9	21.3	0.1	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	5.6	5.5	1.0	3.5	9.1	12.4	1.9	3.3	2.5	17.6	2.7	2.9
LnGrp Delay(d),s/veh	67.0	38.0	22.9	38.5	36.9	45.0	53.4	39.2	19.0	54.4	18.4	8.7
LnGrp LOS	E	D	C	D	D	D	D	D	B	D	B	A
Approach Vol, veh/h		629			1233			425			1022	
Approach Delay, s/veh		44.4			39.7			36.3			35.4	
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	36.2	19.5	21.5	23.2	9.2	46.4	15.0	29.7				
Change Period (Y+Rc), s	4.6	4.6	4.6	* 4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	33.4	32.4	9.0	* 32	9.4	56.4	10.4	30.4				
Max Q Clear Time (g_c+I1), s	31.2	8.6	9.0	13.1	5.6	7.5	10.9	20.1				
Green Ext Time (p_c), s	0.4	3.9	0.0	2.3	0.0	4.2	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.8									
HCM 2010 LOS			D									
Notes												

Intersection																
Intersection Delay, s/veh	14.7															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕			↗	↘			↗	↘	
Traffic Vol, veh/h	0	20	380	20	0	40	440	120	0	150	180	50	0	180	60	30
Future Vol, veh/h	0	20	380	20	0	40	440	120	0	150	180	50	0	180	60	30
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	13	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	409	22	0	43	473	129	0	161	194	54	0	194	65	32
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	79.2	238.6	24.3	22
HCM LOS	F	F	C	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	5%	7%	100%	0%
Vol Thru, %	0%	78%	90%	73%	0%	67%
Vol Right, %	0%	22%	5%	20%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	230	420	600	180	90
LT Vol	150	0	20	40	180	0
Through Vol	0	180	380	440	0	60
RT Vol	0	50	20	120	0	30
Lane Flow Rate	161	247	452	645	194	97
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.423	0.604	1.011	1.453	0.523	0.242
Departure Headway (Hd)	10.585	9.896	9.142	8.106	10.923	10.146
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	342	368	402	452	333	356
Service Time	8.285	7.596	7.142	6.189	8.623	7.846
HCM Lane V/C Ratio	0.471	0.671	1.124	1.427	0.583	0.272
HCM Control Delay	20.8	26.6	79.2	238.6	25	16.1
HCM Lane LOS	C	D	F	F	C	C
HCM 95th-tile Q	2	3.8	12.5	32.3	2.9	0.9

Intersection

Int Delay, s/veh 6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	10	260	100	10	20	80
Future Vol, veh/h	10	260	100	10	20	80
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, %	2	8	2	33	46	7
Mvmt Flow	11	283	109	11	22	87

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	244	114	0	0	120	0
Stage 1	114	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	6.42	6.28	-	-	4.56	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.372	-	-	2.614	-
Pot Cap-1 Maneuver	744	923	-	-	1235	-
Stage 1	911	-	-	-	-	-
Stage 2	896	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	730	923	-	-	1235	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	879	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	10.8		0		1.6
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 914	1235	-
HCM Lane V/C Ratio	-	- 0.321	0.018	-
HCM Control Delay (s)	-	- 10.8	8	0
HCM Lane LOS	-	- B	A	A
HCM 95th %tile Q(veh)	-	- 1.4	0.1	-

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Future Vol, veh/h	10	10	10	10	10	10	10	90	10	10	70	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	17	2	2	2	14	14	2	2	2	2	5	2
Mvmt Flow	11	11	11	11	11	11	11	98	11	11	76	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	239	233	82	239	234	103	87	0	0	109	0	0
Stage 1	103	103	-	125	125	-	-	-	-	-	-	-
Stage 2	136	130	-	114	109	-	-	-	-	-	-	-
Critical Hdwy	7.27	6.52	6.22	7.12	6.64	6.34	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.27	5.52	-	6.12	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.653	4.018	3.318	3.518	4.126	3.426	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	685	667	978	715	646	920	1509	-	-	1481	-	-
Stage 1	867	810	-	879	770	-	-	-	-	-	-	-
Stage 2	833	789	-	891	782	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	660	656	978	690	636	920	1509	-	-	1481	-	-
Mov Cap-2 Maneuver	660	656	-	690	636	-	-	-	-	-	-	-
Stage 1	860	804	-	872	764	-	-	-	-	-	-	-
Stage 2	805	783	-	862	776	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.2	0.7	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1509	-	-	739	730	1481	-	-
HCM Lane V/C Ratio	0.007	-	-	0.044	0.045	0.007	-	-
HCM Control Delay (s)	7.4	0	-	10.1	10.2	7.4	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	137.4
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔↔	↔		↔	↔↔			↔	↔	↔
Traffic Vol, veh/h	0	50	590	100	0	90	910	70	0	90	100	50
Future Vol, veh/h	0	50	590	100	0	90	910	70	0	90	100	50
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	6	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	628	106	0	96	968	74	0	96	106	53
Number of Lanes	0	0	2	1	0	1	2	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	83.2	229.5	20.2
HCM LOS	F	F	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	20%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	0%	80%	100%	0%	0%	100%	81%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	0%	19%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	100	50	247	393	100	90	607	373	90	110
LT Vol	90	0	0	50	0	0	90	0	0	90	0
Through Vol	0	100	0	197	393	0	0	607	303	0	110
RT Vol	0	0	50	0	0	100	0	0	70	0	0
Lane Flow Rate	96	106	53	262	418	106	96	645	397	96	117
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.32	0.341	0.16	0.727	1.155	0.271	0.267	1.7	1.032	0.318	0.372
Departure Headway (Hd)	12.742	12.242	11.542	10.464	10.431	9.663	10.154	9.654	9.522	12.696	12.196
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	284	296	313	349	351	374	356	381	385	285	297
Service Time	10.442	9.942	9.242	8.164	8.131	7.363	7.854	7.354	7.222	10.396	9.896
HCM Lane V/C Ratio	0.338	0.358	0.169	0.751	1.191	0.283	0.27	1.693	1.031	0.337	0.394
HCM Control Delay	21.3	21.1	16.4	36.6	129.5	15.9	16.5	349.3	86.3	21.2	21.9
HCM Lane LOS	C	C	C	E	F	C	C	F	F	C	C
HCM 95th-tile Q	1.3	1.5	0.6	5.5	16	1.1	1.1	38.8	12.9	1.3	1.7

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↙	↑	↗
Traffic Vol, veh/h	0	90	110	60
Future Vol, veh/h	0	90	110	60
Peak Hour Factor	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	96	117	64
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.5
HCM LOS	C

HCM 2010 Signalized Intersection Summary
 23: Garden Hwy & Lincoln Rd

Cumulative Plus Phases 1 & 2
 PM Peak Hour



Movement	EBL	EBR	NBU	NBL	NBT	SBT	SBR	
Lane Configurations	↖↗	↗		↖	↑↑	↑↑	↗	
Traffic Volume (veh/h)	480	180	5	440	870	970	630	
Future Volume (veh/h)	480	180	5	440	870	970	630	
Number	7	14		5	2	6	16	
Initial Q (Qb), veh	0	0		0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00			1.00	
Parking Bus, Adj	1.00	1.00		1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1827	1776		1863	1863	1863	1863	
Adj Flow Rate, veh/h	511	191		468	926	1032	670	
Adj No. of Lanes	2	1		1	2	2	1	
Peak Hour Factor	0.94	0.94		0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	4	7		2	2	2	2	
Cap, veh/h	644	288		429	2522	1496	669	
Arrive On Green	0.19	0.19		0.24	0.71	0.42	0.42	
Sat Flow, veh/h	3375	1509		1774	3632	3632	1583	
Grp Volume(v), veh/h	511	191		468	926	1032	670	
Grp Sat Flow(s),veh/h/ln	1688	1509		1774	1770	1770	1583	
Q Serve(g_s), s	12.0	9.7		20.0	8.4	19.7	35.0	
Cycle Q Clear(g_c), s	12.0	9.7		20.0	8.4	19.7	35.0	
Prop In Lane	1.00	1.00		1.00			1.00	
Lane Grp Cap(c), veh/h	644	288		429	2522	1496	669	
V/C Ratio(X)	0.79	0.66		1.09	0.37	0.69	1.00	
Avail Cap(c_a), veh/h	1142	510		429	2522	1496	669	
HCM Platoon Ratio	1.00	1.00		1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00		1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	31.9	31.0		31.4	4.6	19.5	23.9	
Incr Delay (d2), s/veh	0.9	1.0		70.7	0.0	1.1	35.0	
Initial Q Delay(d3),s/veh	0.0	0.0		0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.6	8.0		18.1	4.0	9.8	21.6	
LnGrp Delay(d),s/veh	32.8	32.0		102.1	4.7	20.6	58.9	
LnGrp LOS	C	C		F	A	C	F	
Approach Vol, veh/h	702				1394	1702		
Approach Delay, s/veh	32.6				37.4	35.7		
Approach LOS	C				D	D		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		63.0		19.8	24.0	39.0		
Change Period (Y+Rc), s		6.0		4.6	4.6	6.0		
Max Green Setting (Gmax), s		57.0		27.4	19.4	33.0		
Max Q Clear Time (g_c+I1), s		10.4		14.0	22.0	37.0		
Green Ext Time (p_c), s		18.1		1.2	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			35.7					
HCM 2010 LOS			D					
Notes								

Intersection																
Intersection Delay, s/veh	11.4															
Intersection LOS	F															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	110	600	20	0	100	500	50	0	20	70	90	0	60	60	60
Future Vol, veh/h	0	110	600	20	0	100	500	50	0	20	70	90	0	60	60	60
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	113	619	21	0	103	515	52	0	21	72	93	0	62	62	62
Number of Lanes	0	1	1	0	0	1	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	2
HCM Control Delay	198.8	64.6	18.5	19.2
HCM LOS	F	F	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	11%	100%	0%	100%	0%	0%	33%
Vol Thru, %	39%	0%	97%	0%	100%	0%	33%
Vol Right, %	50%	0%	3%	0%	0%	100%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	110	620	100	500	50	180
LT Vol	20	110	0	100	0	0	60
Through Vol	70	0	600	0	500	0	60
RT Vol	90	0	20	0	0	50	60
Lane Flow Rate	186	113	639	103	515	52	186
Geometry Grp	7	8	8	7	7	7	7
Degree of Util (X)	0.428	0.272	1.436	0.222	1.037	0.094	0.439
Departure Headway (Hd)	9.144	8.801	8.259	8.425	7.907	7.183	9.357
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	411	447	429	464	502	388
Service Time	6.844	6.501	5.959	6.125	5.607	4.883	7.057
HCM Lane V/C Ratio	0.469	0.275	1.43	0.24	1.11	0.104	0.479
HCM Control Delay	18.5	14.8	231.4	13.5	80.2	10.6	19.2
HCM Lane LOS	C	B	F	B	F	B	C
HCM 95th-tile Q	2.1	1.1	31.3	0.8	14.4	0.3	2.2

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative Plus Phases 1 & 2
PM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		🚗	↑	↗	↖	↑	↗		🚗	↑↑			🚗	↑↑	
Traffic Volume (veh/h)	5	400	90	210	10	70	60	5	190	330	20	5	70	290	500
Future Volume (veh/h)	5	400	90	210	10	70	60	5	190	330	20	5	70	290	500
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		0.99	1.00		1.00		1.00		1.00		1.00		0.97
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		1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900
Adj Flow Rate, veh/h		408	92	214	10	71	61		194	337	20		71	296	510
Adj No. of Lanes		1	1	1	1	1	1		1	2	0		1	2	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, %		2	2	2	2	2	2		3	2	2		2	2	2
Cap, veh/h		428	648	545	19	219	186		226	1561	92		97	683	591
Arrive On Green		0.24	0.35	0.35	0.01	0.12	0.12		0.13	0.46	0.44		0.05	0.39	0.37
Sat Flow, veh/h		1774	1863	1567	1774	1863	1583		1757	3396	201		1774	1770	1531
Grp Volume(v), veh/h		408	92	214	10	71	61		194	175	182		71	296	510
Grp Sat Flow(s),veh/h/ln		1774	1863	1567	1774	1863	1583		1757	1770	1827		1774	1770	1531
Q Serve(g_s), s		28.6	4.3	13.0	0.7	4.4	4.5		13.7	7.5	7.6		5.0	15.6	39.0
Cycle Q Clear(g_c), s		28.6	4.3	13.0	0.7	4.4	4.5		13.7	7.5	7.6		5.0	15.6	39.0
Prop In Lane		1.00		1.00	1.00		1.00		1.00		0.11		1.00		1.00
Lane Grp Cap(c), veh/h		428	648	545	19	219	186		226	813	840		97	683	591
V/C Ratio(X)		0.95	0.14	0.39	0.51	0.32	0.33		0.86	0.22	0.22		0.73	0.43	0.86
Avail Cap(c_a), veh/h		428	1062	893	428	1062	902		424	1009	1041		428	1009	872
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh		47.2	28.2	31.1	62.1	51.1	51.2		53.9	20.5	20.6		58.8	28.6	36.7
Incr Delay (d2), s/veh		31.3	0.0	0.2	7.5	0.3	0.4		3.7	0.0	0.0		3.9	0.2	4.2
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		17.8	2.2	5.6	0.4	2.3	2.0		6.9	3.7	3.8		2.6	7.6	17.2
LnGrp Delay(d),s/veh		78.5	28.3	31.3	69.7	51.5	51.5		57.6	20.5	20.6		62.7	28.8	40.9
LnGrp LOS		E	C	C	E	D	D		E	C	C		E	C	D
Approach Vol, veh/h			714			142				551				877	
Approach Delay, s/veh			57.8			52.8				33.6				38.6	
Approach LOS			E			D				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	0.9	62.1	5.4	48.0	20.2	52.8	34.5	18.8							
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0							
Max Green Setting (Gmax), s	30.0	70.0	30.0	70.0	30.0	70.0	30.0	70.0							
Max Q Clear Time (g_c+1), s	9.6	2.7	15.0	15.7	41.0	30.6	6.5								
Green Ext Time (p_c), s	0.0	6.1	0.0	1.1	0.1	5.8	0.0	1.1							

Intersection Summary

HCM 2010 Ctrl Delay	44.3
HCM 2010 LOS	D

Notes

Intersection																
Intersection Delay, s/veh	8.1															
Intersection LOS	A															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	30	70	10	0	10	50	30	0	10	60	10	0	30	50	40
Future Vol, veh/h	0	30	70	10	0	10	50	30	0	10	60	10	0	30	50	40
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	50	2	2	2	2
Mvmt Flow	0	31	73	10	0	10	52	31	0	10	63	10	0	31	52	42
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.9	8	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	27%	11%	25%
Vol Thru, %	75%	64%	56%	42%
Vol Right, %	12%	9%	33%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	110	90	120
LT Vol	10	30	10	30
Through Vol	60	70	50	50
RT Vol	10	10	30	40
Lane Flow Rate	83	115	94	125
Geometry Grp	1	1	1	1
Degree of Util (X)	0.104	0.144	0.114	0.151
Departure Headway (Hd)	4.501	4.513	4.362	4.357
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	798	796	823	824
Service Time	2.523	2.532	2.382	2.378
HCM Lane V/C Ratio	0.104	0.144	0.114	0.152
HCM Control Delay	8	8.3	7.9	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.5	0.4	0.5

HCM 2010 Signalized Intersection Summary
31: Garden Hwy & Stewart Rd

























Cumulative Plus Phases 1 & 2
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	10	0	10	0	20	270	0	10	140	70
Future Volume (veh/h)	100	10	10	0	10	0	20	270	0	10	140	70
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	1863	1863	1863	1900	1863	1900	1863	1863	0	1863	1863	1863
Adj Flow Rate, veh/h	117	0	11	0	11	0	22	293	0	11	152	76
Adj No. of Lanes	2	0	1	0	1	0	1	1	0	1	1	1
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, %	2	2	2	2	2	2	2	2	0	2	2	2
Cap, veh/h	603	0	269	0	91	0	34	590	0	20	575	489
Arrive On Green	0.17	0.00	0.17	0.00	0.05	0.00	0.02	0.32	0.00	0.01	0.31	0.31
Sat Flow, veh/h	3548	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	117	0	11	0	11	0	22	293	0	11	152	76
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	1.0	0.0	0.2	0.0	0.2	0.0	0.4	4.5	0.0	0.2	2.2	1.2
Cycle Q Clear(g_c), s	1.0	0.0	0.2	0.0	0.2	0.0	0.4	4.5	0.0	0.2	2.2	1.2
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	603	0	269	0	91	0	34	590	0	20	575	489
V/C Ratio(X)	0.19	0.00	0.04	0.00	0.12	0.00	0.64	0.50	0.00	0.54	0.26	0.16
Avail Cap(c_a), veh/h	1206	0	538	0	1583	0	402	1794	0	402	1794	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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	12.2	0.0	16.1	0.0	17.2	9.8	0.0	17.4	9.2	8.9
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.7	0.0	18.3	0.8	0.0	20.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.0	0.1	0.0	0.4	2.4	0.0	0.2	1.1	0.6
LnGrp Delay(d),s/veh	12.8	0.0	12.3	0.0	16.8	0.0	35.4	10.6	0.0	37.6	9.5	9.0
LnGrp LOS	B		B		B		D	B		D	A	A
Approach Vol, veh/h		128			11			315			239	
Approach Delay, s/veh		12.7			16.8			12.3			10.6	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.4	15.2		10.0	4.7	14.9		5.7				
Change Period (Y+Rc), s	4.1	5.0		5.0	4.1	5.0		5.0				
Max Green Setting (Gmax), s	9	33.0		11.0	7.9	33.0		29.0				
Max Q Clear Time (g_c+1), s	12.2	6.5		3.0	2.4	4.2		2.2				
Green Ext Time (p_c), s	0.0	3.7		0.3	0.0	3.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
32: Garden Hwy & Shanghai Bend Rd

Cumulative Plus Phases 1 & 2
PM Peak Hour

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations														
Traffic Volume (veh/h)	90	10	30	30	20	130	50	320	50	5	170	280	120	
Future Volume (veh/h)	90	10	30	30	20	130	50	320	50	5	170	280	120	
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		0.99	1.00		1.00	1.00		1.00		1.00		0.99	
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	1863	1748	1900	1863	1863	1863	1863	1860	1900		1863	1863	1900	
Adj Flow Rate, veh/h	96	11	32	32	21	138	53	340	53		181	298	128	
Adj No. of Lanes	1	1	0	1	1	1	1	2	0		1	2	0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94		0.94	0.94	0.94	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2		2	2	2	
Cap, veh/h	141	90	261	56	337	285	82	858	133		247	904	379	
Arrive On Green	0.08	0.23	0.22	0.03	0.18	0.18	0.05	0.28	0.24		0.14	0.37	0.33	
Sat Flow, veh/h	1774	392	1141	1774	1863	1575	1774	3069	474		1774	2427	1018	
Grp Volume(v), veh/h	96	0	43	32	21	138	53	194	199		181	215	211	
Grp Sat Flow(s),veh/h/ln	1774	0	1534	1774	1863	1575	1774	1767	1775		1774	1770	1676	
Q Serve(g_s), s	2.6	0.0	1.1	0.9	0.5	3.9	1.5	4.4	4.6		4.9	4.3	4.6	
Cycle Q Clear(g_c), s	2.6	0.0	1.1	0.9	0.5	3.9	1.5	4.4	4.6		4.9	4.3	4.6	
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.27		1.00		0.61	
Lane Grp Cap(c), veh/h	141	0	351	56	337	285	82	494	497		247	659	624	
V/C Ratio(X)	0.68	0.00	0.12	0.57	0.06	0.48	0.64	0.39	0.40		0.73	0.33	0.34	
Avail Cap(c_a), veh/h	355	0	1260	284	1455	1231	320	1204	1209		391	1276	1208	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	
Uniform Delay (d), s/veh	22.4	0.0	15.4	23.8	16.9	18.4	23.4	14.6	14.8		20.6	11.2	11.7	
Incr Delay (d2), s/veh	5.7	0.0	0.2	8.9	0.1	1.3	8.1	0.5	0.5		4.1	0.3	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	1.5	0.0	0.5	0.6	0.2	1.8	0.9	2.2	2.3		2.6	2.1	2.2	
LnGrp Delay(d),s/veh	28.0	0.0	15.6	32.7	17.0	19.6	31.5	15.1	15.3		24.7	11.5	12.0	
LnGrp LOS	C		B	C	B	B	C	B	B		C	B	B	
Approach Vol, veh/h		139			191			446				607		
Approach Delay, s/veh		24.2			21.5			17.1				15.6		
Approach LOS		C			C			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	18.0	5.6	15.4	6.3	22.6	8.0	13.0							
Change Period (Y+Rc), s	4.5	6.0	4.5	4.5	4.5	6.0	4.5	4.5						
Max Green Setting (Gmax), s	32.0	7.5	40.5	8.5	34.0	9.5	38.5							
Max Q Clear Time (g_c+10), s	6.6	2.9	3.1	3.5	6.6	4.6	5.9							
Green Ext Time (p_c), s	0.1	4.7	0.0	0.9	0.0	4.7	0.1	0.9						
Intersection Summary														
HCM 2010 Ctrl Delay			17.8											
HCM 2010 LOS			B											
Notes														

Intersection

Int Delay, s/veh 13.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	600	30	90	510	160	50
Future Vol, veh/h	600	30	90	510	160	50
Conflicting Peds, #/hr	0	2	2	0	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	638	32	96	543	170	53

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	672	1121
Stage 1	-	-	656
Stage 2	-	-	465
Critical Hdwy	-	4.14	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	-	2.22	3.52
Pot Cap-1 Maneuver	-	915	200
Stage 1	-	-	478
Stage 2	-	-	599
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	913	178
Mov Cap-2 Maneuver	-	-	178
Stage 1	-	-	477
Stage 2	-	-	535

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	85.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	178	655	-	-	913	-
HCM Lane V/C Ratio	0.956	0.081	-	-	0.105	-
HCM Control Delay (s)	109.2	11	-	-	9.4	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	7.5	0.3	-	-	0.3	-

Intersection			
Intersection Delay, s/veh	4.7		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	0	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	0	217	54
Demand Flow Rate, veh/h	0	221	55
Vehicles Circulating, veh/h	55	0	0
Vehicles Exiting, veh/h	0	55	221
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	0.0	5.0	3.7
Approach LOS	-	A	A
Lane	Left	Left	
Designated Moves	T	T	
Assumed Moves	T	T	
RT Channelized			
Lane Util	1.000	1.000	
Critical Headway, s	5.193	5.193	
Entry Flow, veh/h	221	55	
Cap Entry Lane, veh/h	1130	1130	
Entry HV Adj Factor	0.980	0.980	
Flow Entry, veh/h	217	54	
Cap Entry, veh/h	1108	1108	
V/C Ratio	0.196	0.049	
Control Delay, s/veh	5.0	3.7	
LOS	A	A	
95th %tile Queue, veh	1	0	

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↖	↗
Traffic Vol, veh/h	10	20	260	180	10	10
Future Vol, veh/h	10	20	260	180	10	10
Conflicting Peds, #/hr	2	0	0	2	2	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	21	277	191	11	11

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	470	0	376
Stage 1	-	-	374
Stage 2	-	-	45
Critical Hdwy	4.12	-	6.22
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.318
Pot Cap-1 Maneuver	1092	-	670
Stage 1	-	-	696
Stage 2	-	-	977
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1090	-	668
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	695
Stage 2	-	-	966

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1090	-	-	-	583	668
HCM Lane V/C Ratio	0.01	-	-	-	0.018	0.016
HCM Control Delay (s)	8.3	0	-	-	11.3	10.5
HCM Lane LOS	A	A	-	-	B	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

Intersection				
Intersection Delay, s/veh	4.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	64	74	75	139
Demand Flow Rate, veh/h	65	75	76	142
Vehicles Circulating, veh/h	119	98	98	65
Vehicles Exiting, veh/h	88	76	86	108
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	2	2	2	2
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	4.2	4.2	4.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	65	75	76	142
Cap Entry Lane, veh/h	1003	1024	1024	1059
Entry HV Adj Factor	0.978	0.991	0.986	0.978
Flow Entry, veh/h	64	74	75	139
Cap Entry, veh/h	981	1015	1010	1036
V/C Ratio	0.065	0.073	0.074	0.134
Control Delay, s/veh	4.2	4.2	4.2	4.7
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	10	10	100	110	60
Future Vol, veh/h	40	10	10	100	110	60
Conflicting Peds, #/hr	2	2	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	11	11	106	117	64

Major/Minor	Minor2	Major1		Major2
Conflicting Flow All	281	153	183	0
Stage 1	151	-	-	-
Stage 2	130	-	-	-
Critical Hdwy	6.42	6.22	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-
Pot Cap-1 Maneuver	709	893	1392	-
Stage 1	877	-	-	-
Stage 2	896	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	701	890	1390	-
Mov Cap-2 Maneuver	701	-	-	-
Stage 1	876	-	-	-
Stage 2	887	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1390	-	732	-	-
HCM Lane V/C Ratio	0.008	-	0.073	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Queuing and Blocking Report
 Cumulative Plus Phases 1 & 2

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	211	398	449	196	180	216	453	798	798	325	293	452
Average Queue (ft)	141	210	295	127	122	169	246	475	492	165	148	265
95th Queue (ft)	259	437	505	200	201	255	515	829	861	400	287	459
Link Distance (ft)		1198	1198	146	146	146		3915	3915			1981
Upstream Blk Time (%)				8	5	18						
Queuing Penalty (veh)				25	15	54						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	6	2					0	20	35	0		2
Queuing Penalty (veh)	10	3					0	37	39	1		4

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	450	299
Average Queue (ft)	273	124
95th Queue (ft)	485	335
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)	10	0
Queuing Penalty (veh)	20	1

Queuing and Blocking Report
 Cumulative Plus Phases 1 & 2

AM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	R	UL	T	T	R
Maximum Queue (ft)	178	64	278	99	106	8	73	8	3	7
Average Queue (ft)	91	37	131	57	41	1	37	1	0	1
95th Queue (ft)	227	79	332	117	100	8	79	13	4	14
Link Distance (ft)	961		490					3915	3915	
Upstream Blk Time (%)			3							
Queuing Penalty (veh)			6							
Storage Bay Dist (ft)		30		75	450	70	450			70
Storage Blk Time (%)	50	13	40	6						0
Queuing Penalty (veh)	16	3	48	4						0

Queuing and Blocking Report
 Cumulative Plus Phase 1 & 2 Conditions

Cumulative Plus Phase 1 & 2 Conditions
 PM PEAK HOUR

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	274	550	524	154	209	221	474	1085	1104	325	401	324
Average Queue (ft)	250	345	349	94	155	214	245	657	673	236	260	161
95th Queue (ft)	316	663	588	172	225	242	528	1145	1172	438	444	352
Link Distance (ft)		1198	1198	146	146	146		3915	3915			1981
Upstream Blk Time (%)				4	12	50						
Queuing Penalty (veh)				16	43	184						
Storage Bay Dist (ft)	250						450			300	450	
Storage Blk Time (%)	45	0					0	31	43	0	4	
Queuing Penalty (veh)	92	1					0	49	124	2	18	

Intersection: 9: SR 99 & Bogue Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	245	78
Average Queue (ft)	144	40
95th Queue (ft)	256	85
Link Distance (ft)	1981	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
 Cumulative Plus Phase 1 & 2 Conditions

Cumulative Plus Phase 1 & 2 Conditions
 PM PEAK HOUR

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	UL	T	R
Maximum Queue (ft)	214	41	405	83	464	545	381	8	46	11	17
Average Queue (ft)	92	8	224	22	298	183	112	1	17	2	2
95th Queue (ft)	221	38	475	81	537	700	567	12	58	10	24
Link Distance (ft)	961		490			1341	1341			3915	
Upstream Blk Time (%)			10								
Queuing Penalty (veh)			8								
Storage Bay Dist (ft)		30		75	450			70	450		70
Storage Blk Time (%)	91	1	76	0	15	2	0				0
Queuing Penalty (veh)	19	0	32	0	128	8	0				0

Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

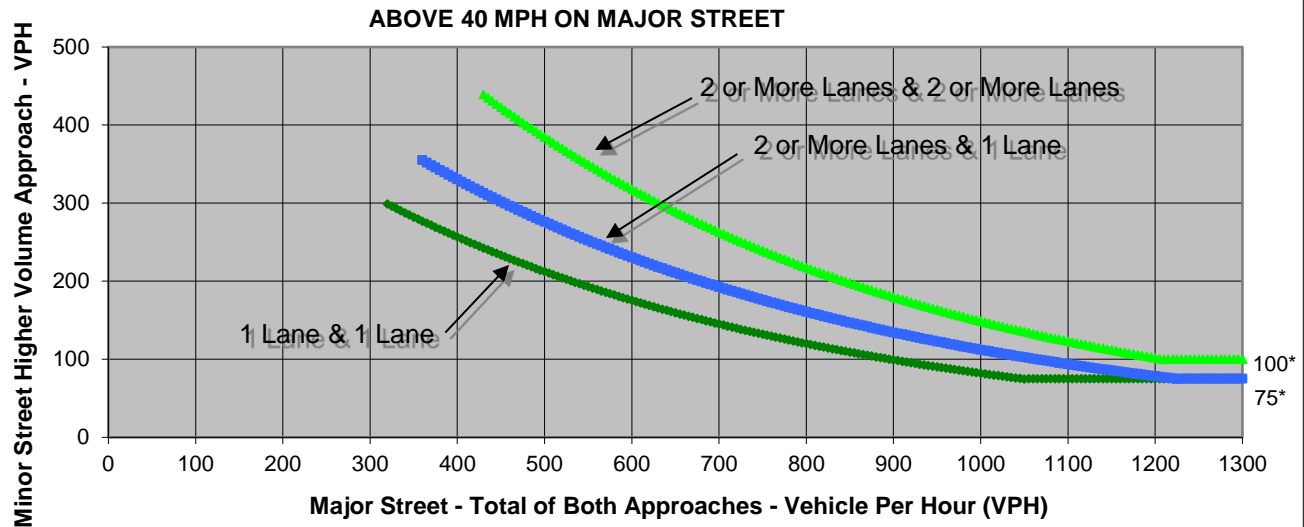
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	60	10	10
Through	1,685	1,270	10	10
Right	40	20	30	40
Total	1,755	1,350	50	60

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	3,105	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Hunn Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

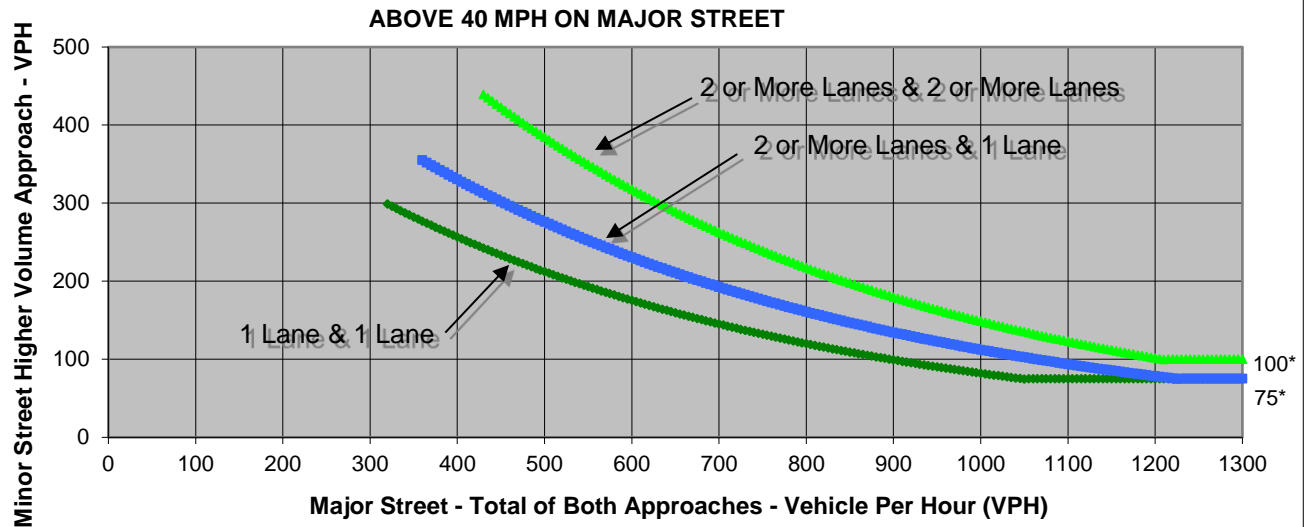
Turn Movement Volumes

	NB	SB	EB	WB
Left	45	60	10	10
Through	1,910	1,505	10	10
Right	30	35	35	105
Total	1,985	1,600	55	125

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Hunn Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,585	125	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

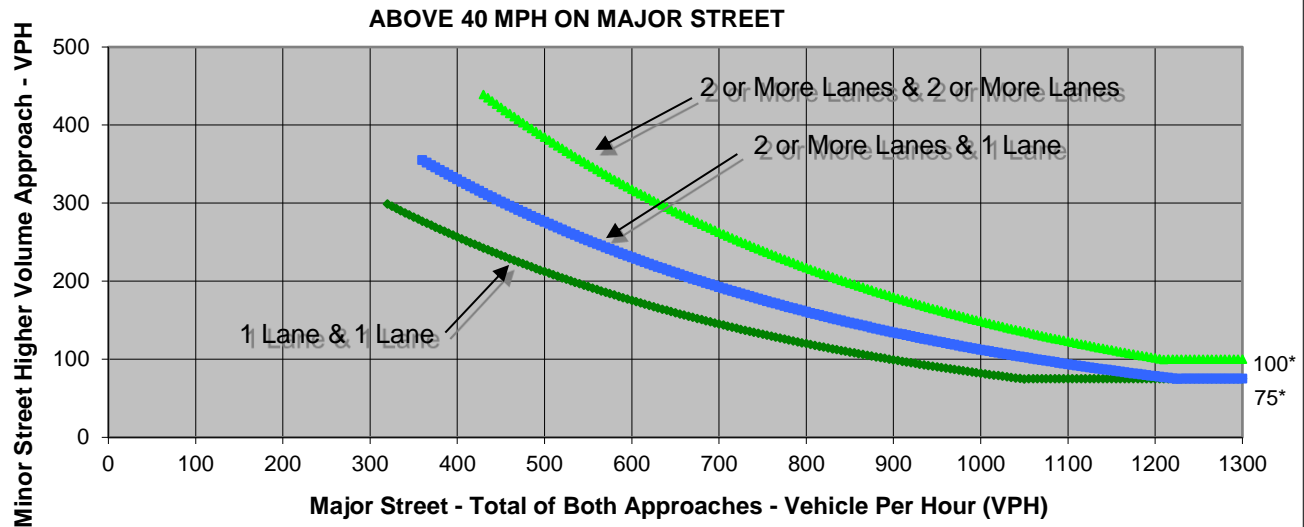
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	40	75	20
Through	1,410	1,545	10	10
Right	30	50	30	40
Total	1,460	1,635	115	70

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,095	115	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Smith Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

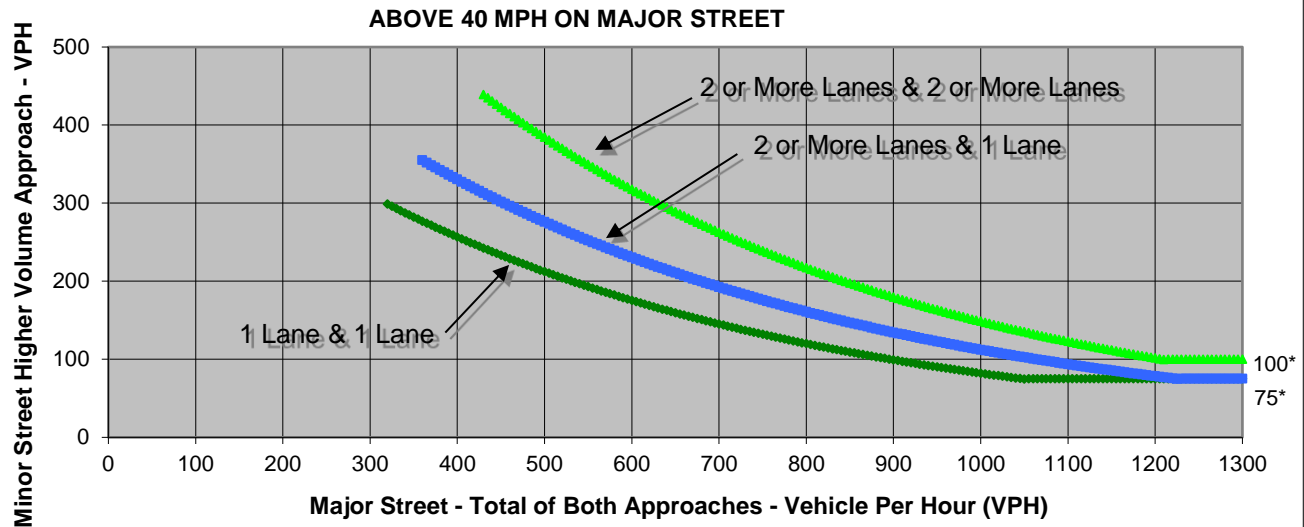
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	55	60	20
Through	1,875	1,365	10	20
Right	20	120	30	50
Total	1,965	1,540	100	90

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Smith Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,505	100	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

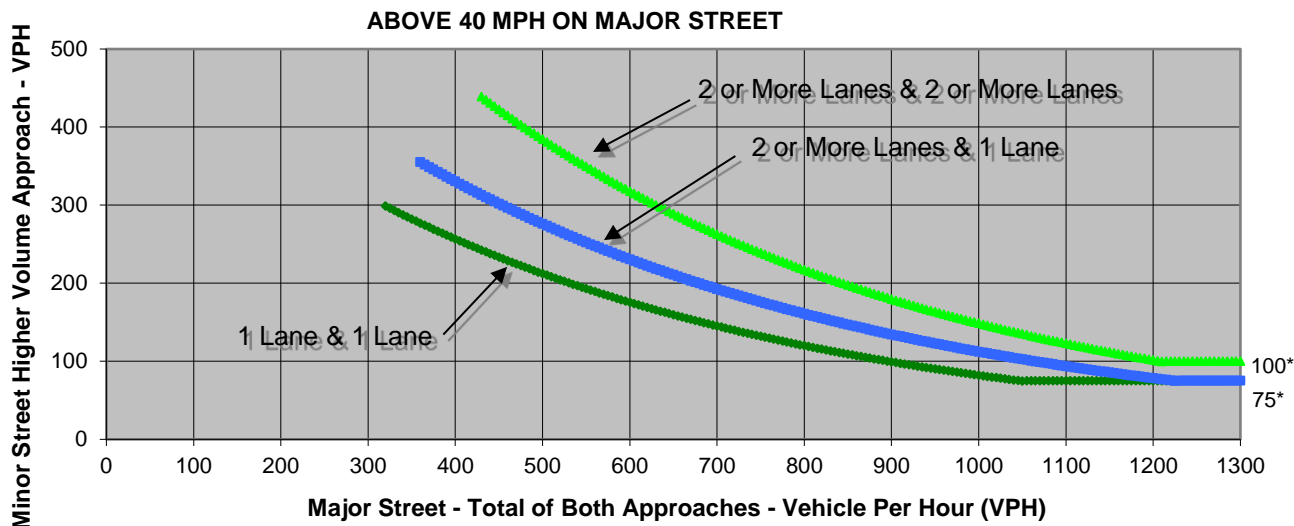
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	100	10	50
Through	1,140	1,535	10	10
Right	50	10	30	110
Total	1,220	1,645	50	170

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,865	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

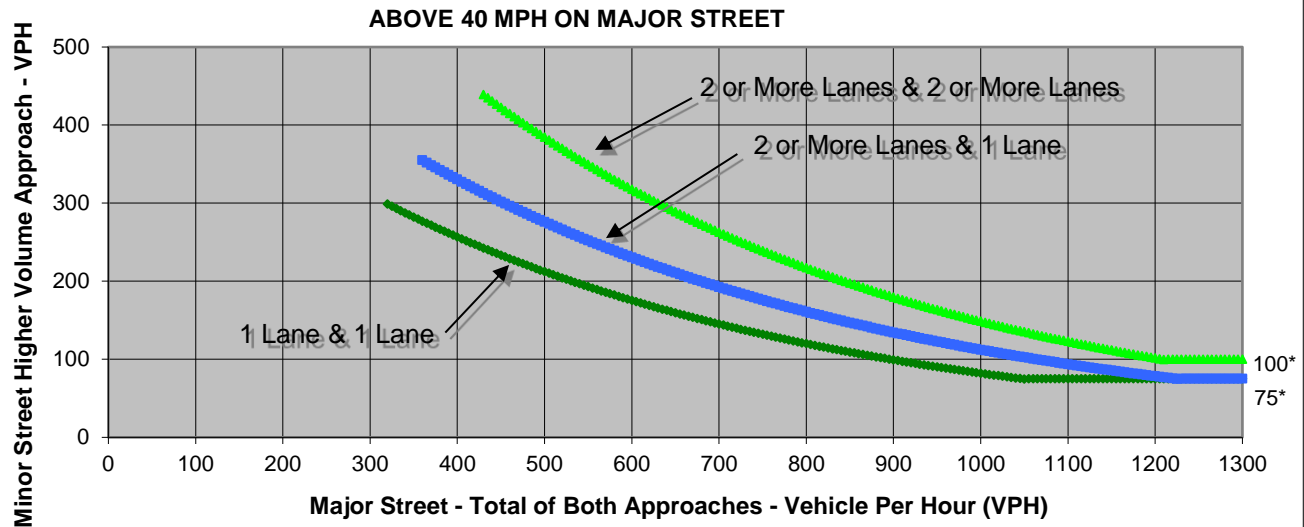
Turn Movement Volumes

	NB	SB	EB	WB
Left	420	40	10	30
Through	1,585	1,120	10	10
Right	80	10	20	40
Total	2,085	1,170	40	80

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Stewart Rd	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	3,255	80	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

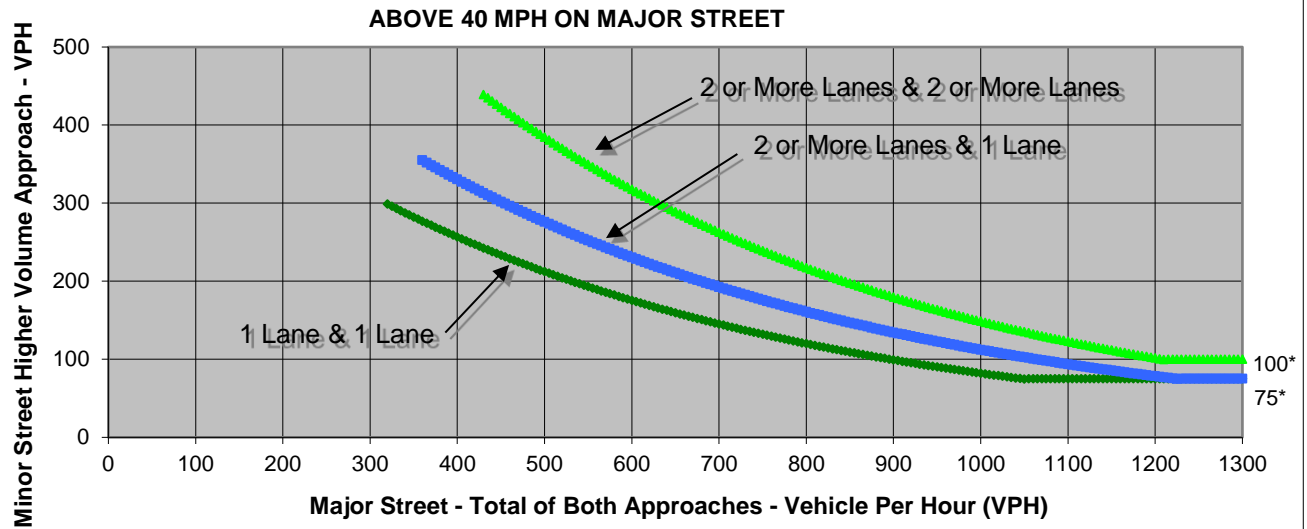
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	10	10
Through	1,190	1,585	10	10
Right	10	10	10	20
Total	1,210	1,615	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,825	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

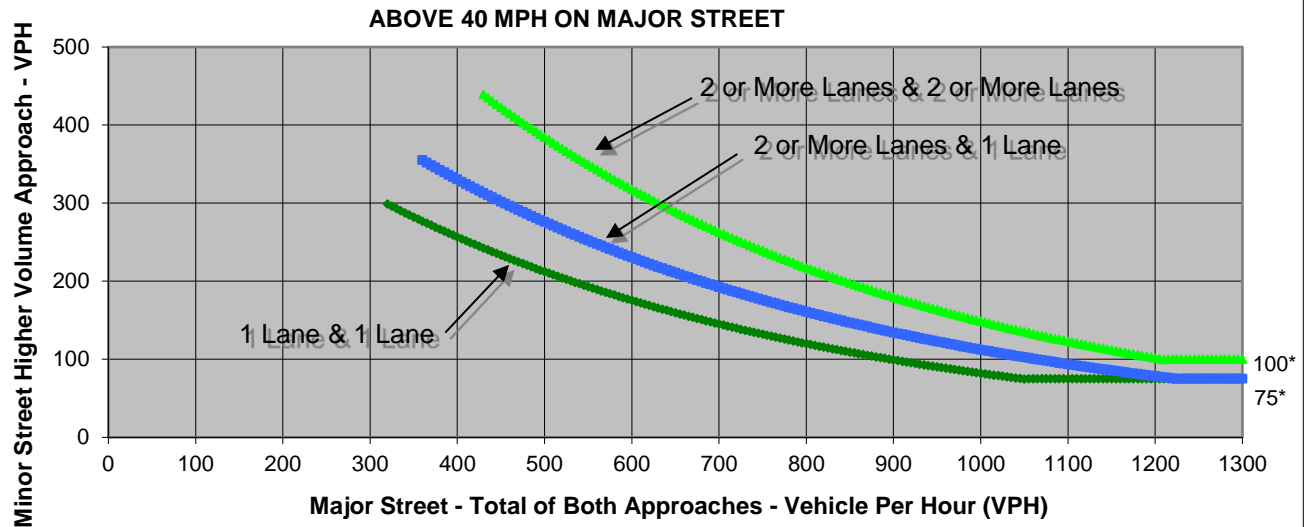
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	20	10	10
Through	2,045	1,140	10	0
Right	10	10	10	30
Total	2,075	1,170	30	40

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Reed Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,245	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

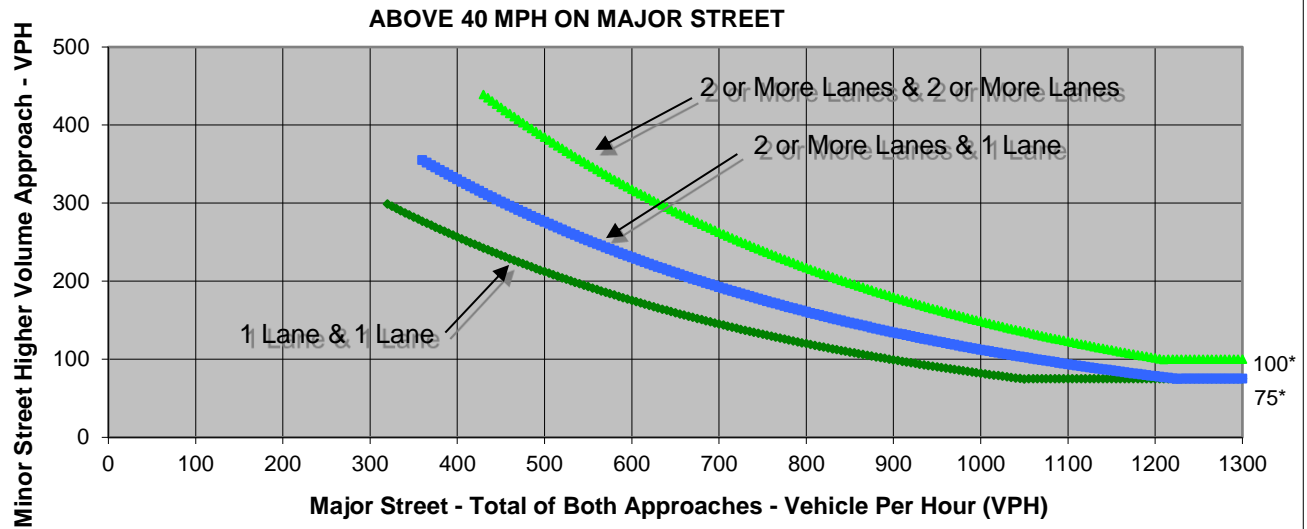
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	0	10
Through	1,190	1,575	0	0
Right	10	10	10	20
Total	1,210	1,605	10	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	2,815	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street SR 99
 Minor Street Walnut Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

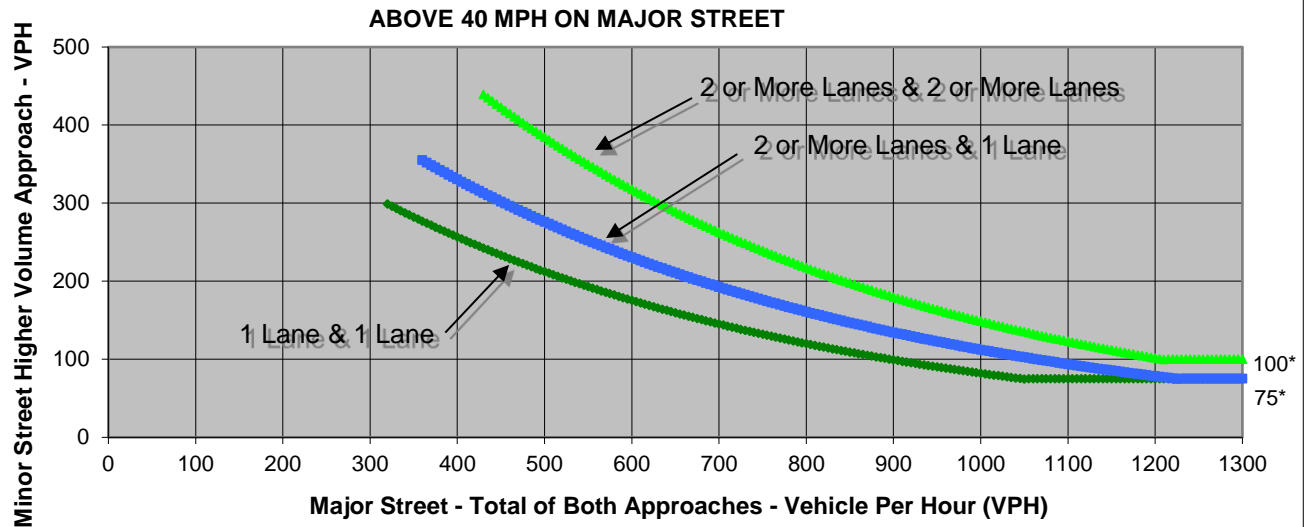
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	2,055	1,140	10	10
Right	10	10	0	10
Total	2,075	1,160	20	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	SR 99	Walnut Ave	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	3,235	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Walton Ave
 Minor Street Richland Rd

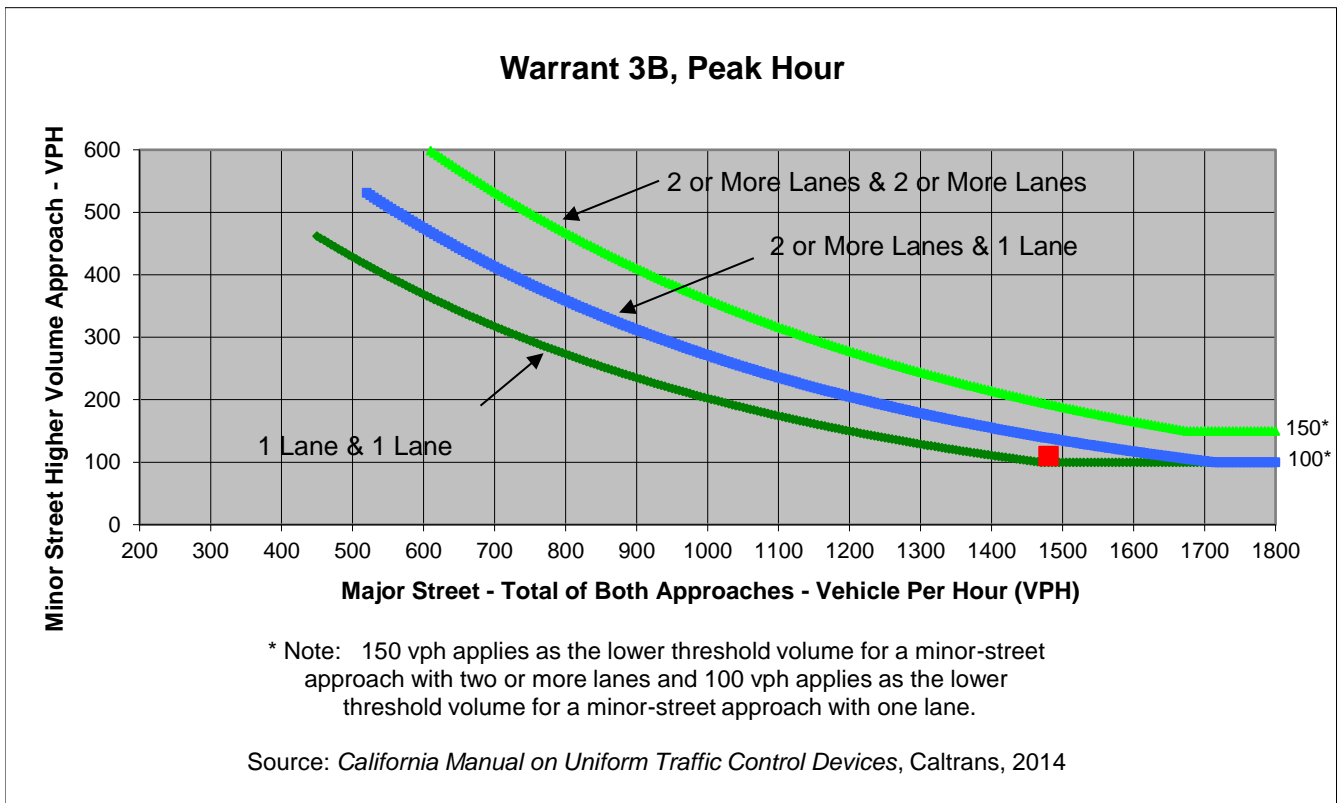
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	40
Through	620	660	0	0
Right	100	0	0	70
Total	720	760	0	110

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	<u>NO</u>
Traffic Volume (VPH) *	1,480	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Walton Ave
 Minor Street Richland Rd

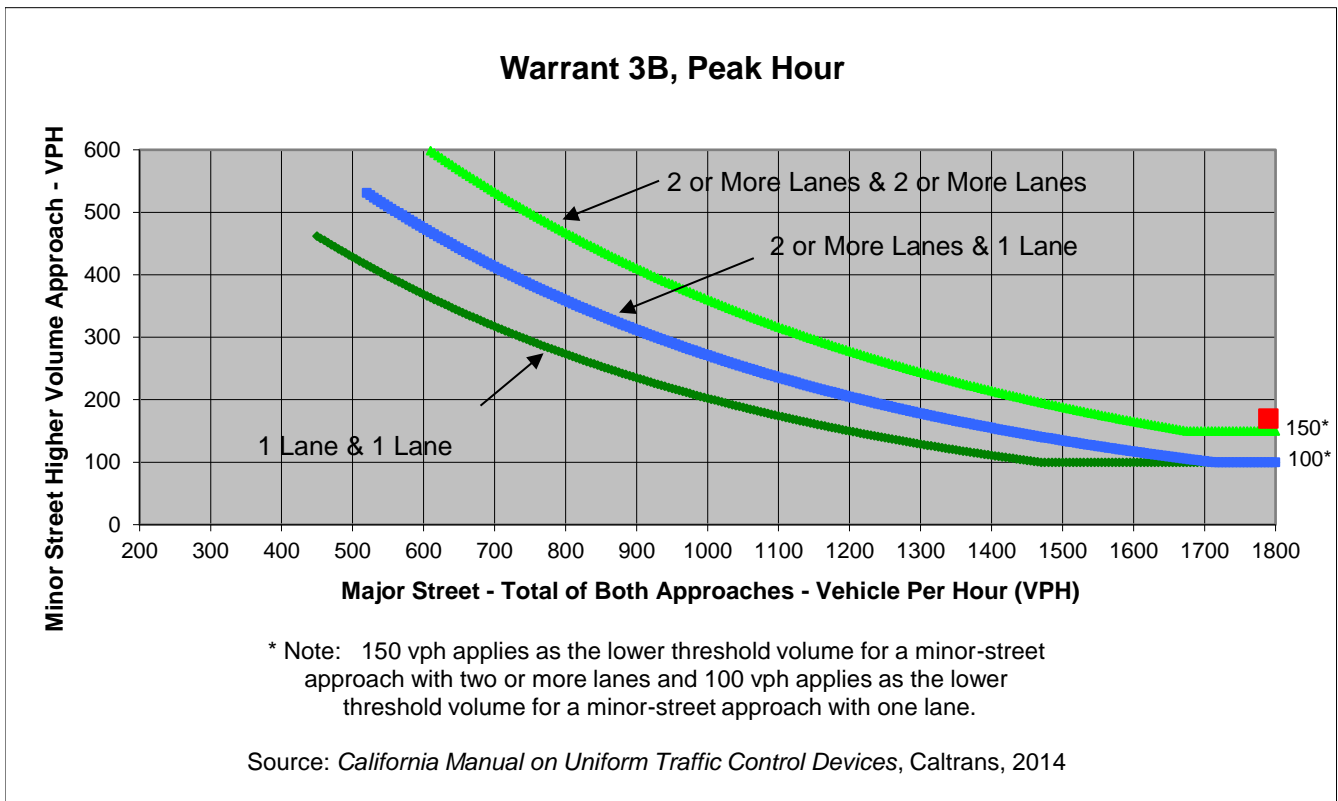
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	100	0	80
Through	760	870	0	0
Right	60	0	0	90
Total	820	970	0	170

Major Street Direction

X	North/South
	East/West



	Major Street	Minor Street	Warrant Met
	Walton Ave	Richland Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,790	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street S Walton Ave

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

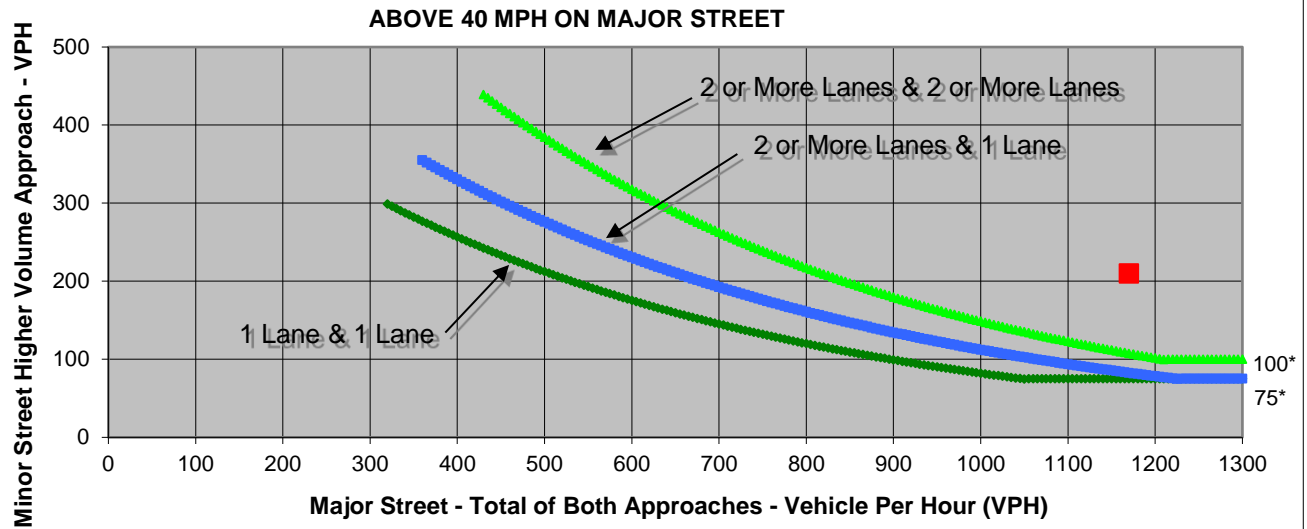
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	110	30	30
Through	50	70	580	410
Right	40	30	50	70
Total	120	210	660	510

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,170	210	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **S Walton Ave**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Phases 1 & 2**
 Peak Hour **PM Peak Hour**

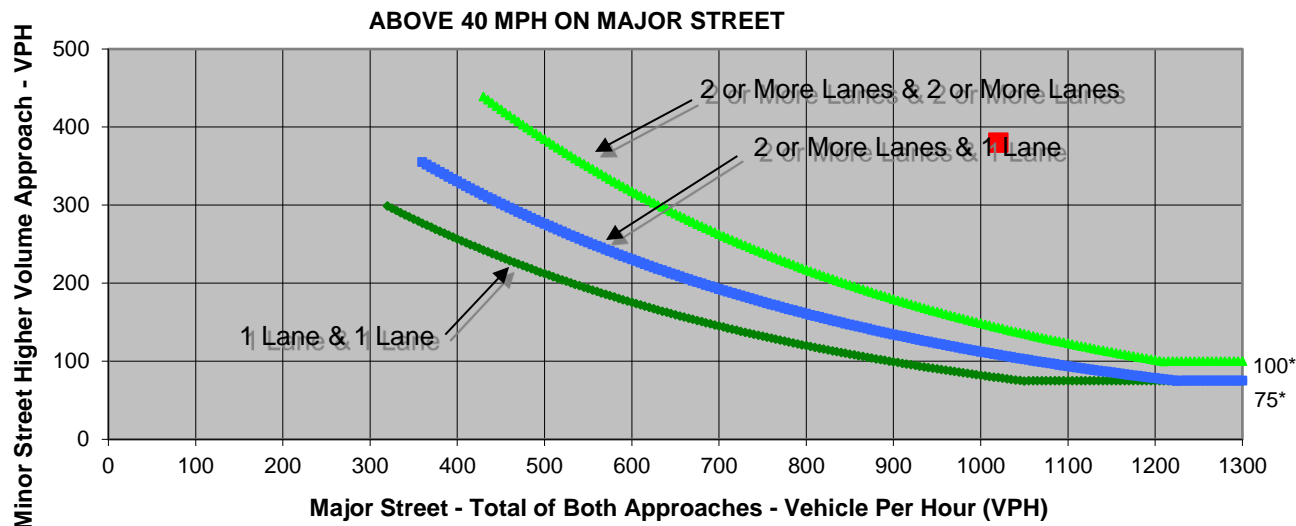
Turn Movement Volumes

	NB	SB	EB	WB
Left	150	180	20	40
Through	180	60	380	440
Right	50	30	20	120
Total	380	270	420	600

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	S Walton Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,020	380	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

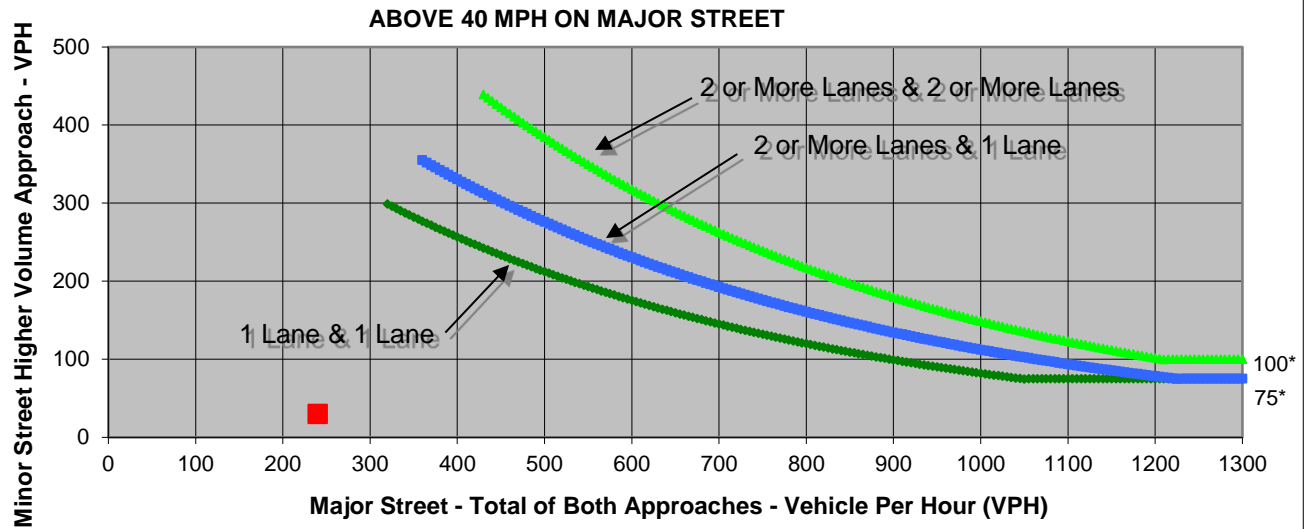
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	0	10
Through	90	110	0	0
Right	10	0	0	20
Total	100	140	0	30

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	240	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Stewart Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

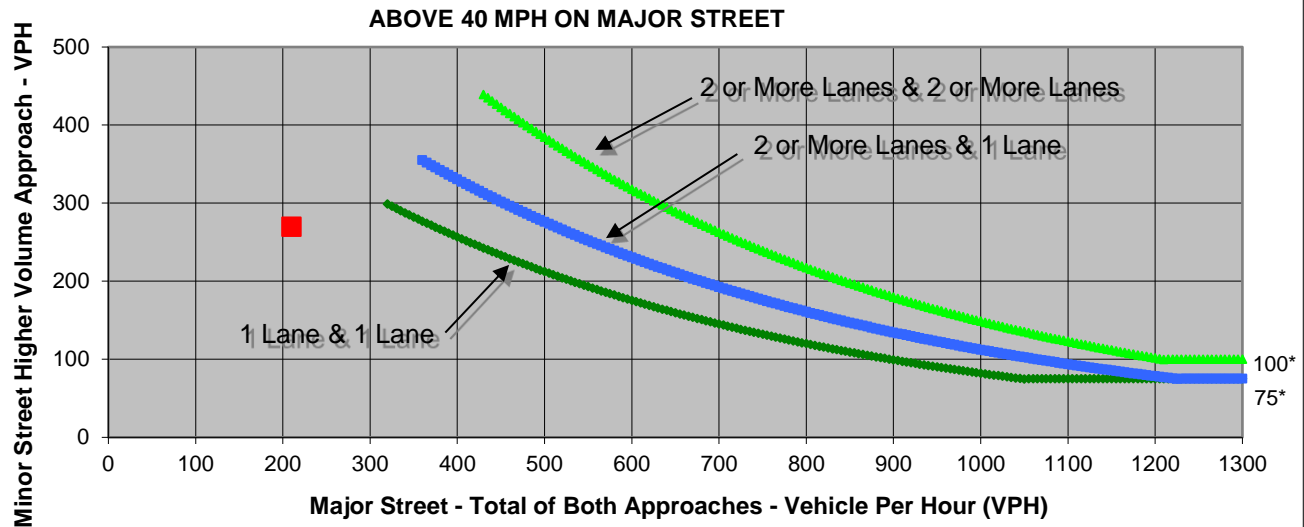
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	10
Through	100	80	0	0
Right	10	0	0	260
Total	110	100	0	270

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Stewart Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	210	270	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street S Walton Ave
 Minor Street Reed Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

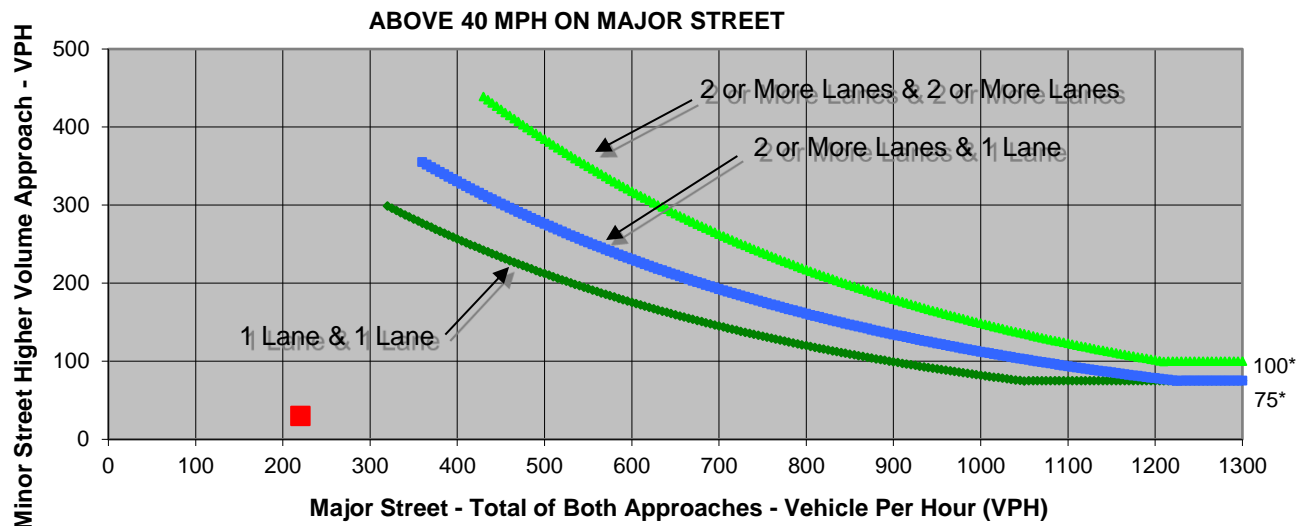
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	0
Through	90	100	10	10
Right	0	10	10	10
Total	100	120	30	20

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	S Walton Ave	Reed Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	220	30	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Phillips Rd

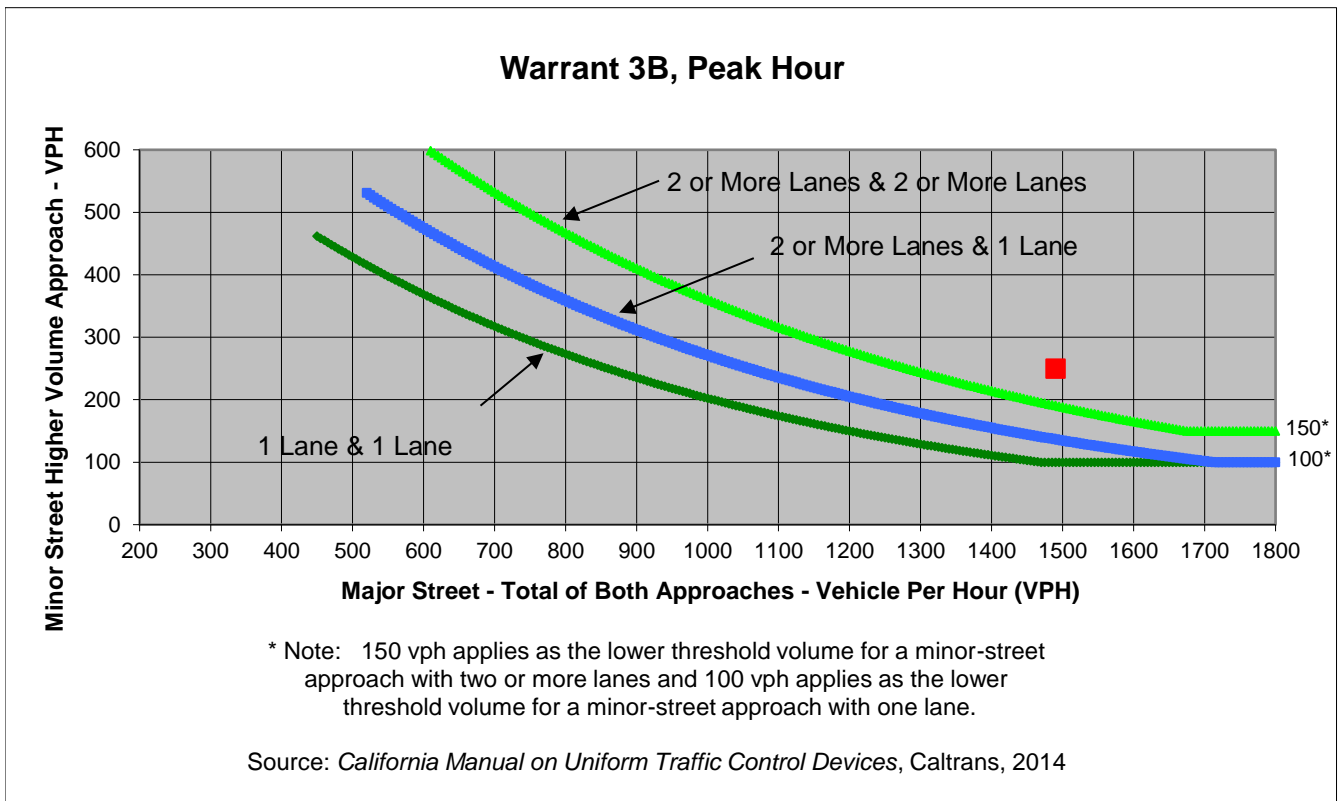
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	80
Through	0	0	820	460
Right	120	0	130	0
Total	250	0	950	540

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,490	250	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Phillips Rd

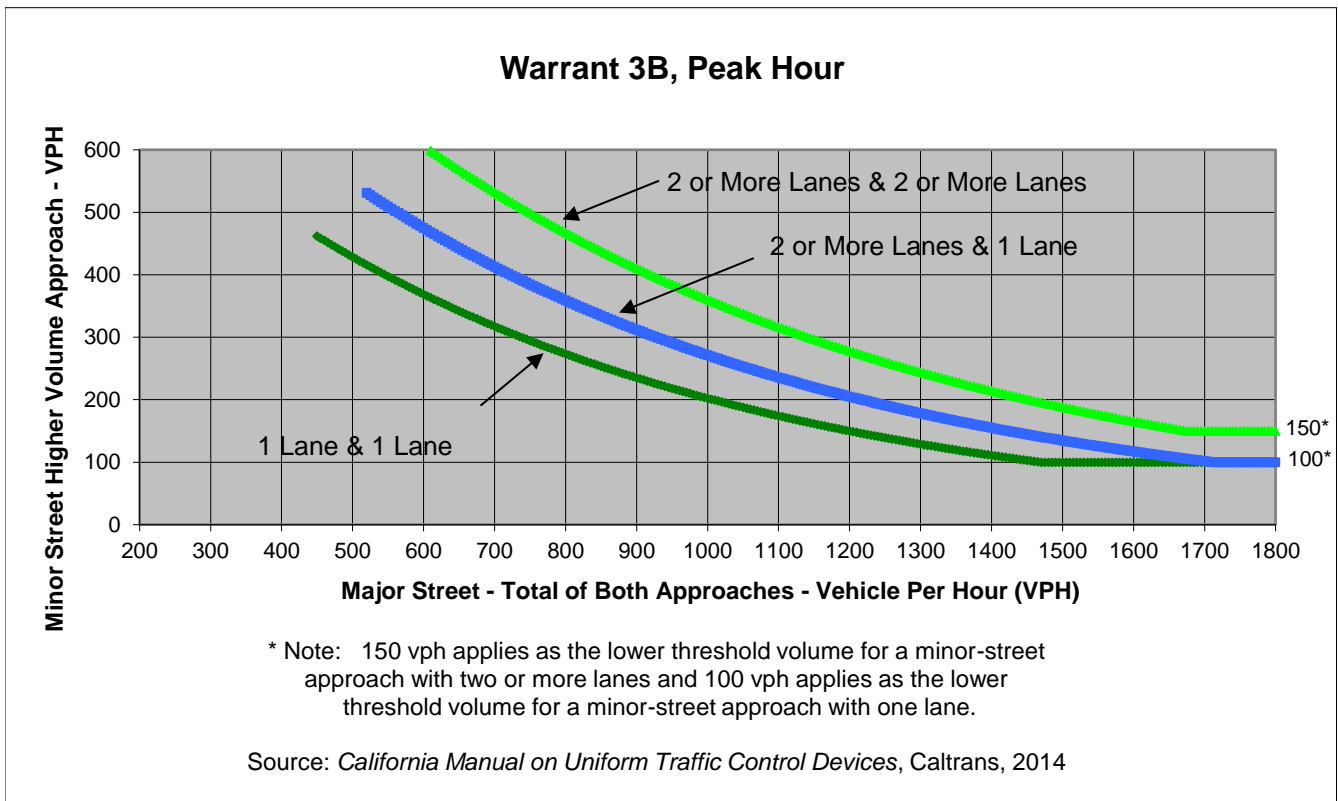
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	0	0	70
Through	0	0	820	1,000
Right	90	0	110	0
Total	190	0	930	1,070

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Phillips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	2,000	190	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

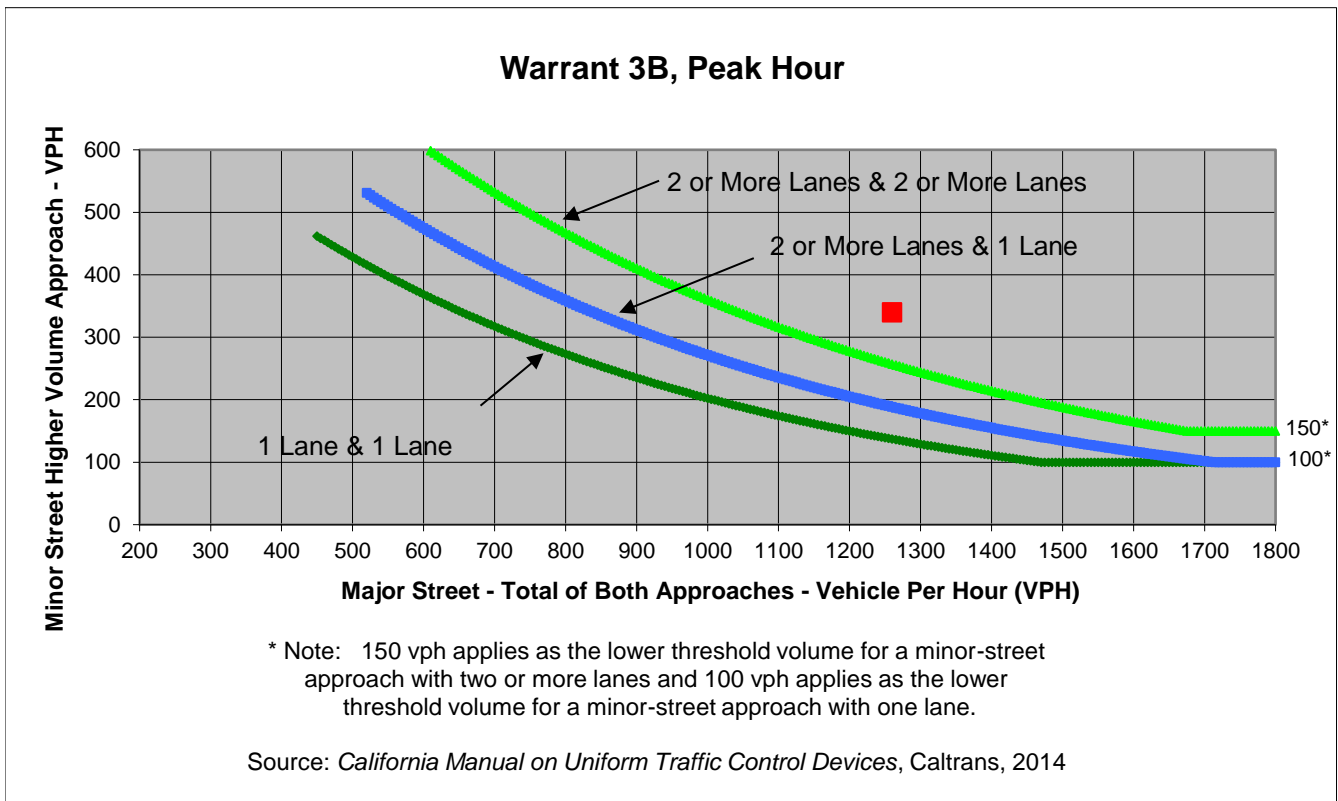
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	110	60	70	40
Through	140	90	800	250
Right	90	50	50	50
Total	340	200	920	340

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,260	340	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Lincoln Rd
 Minor Street Railroad Ave

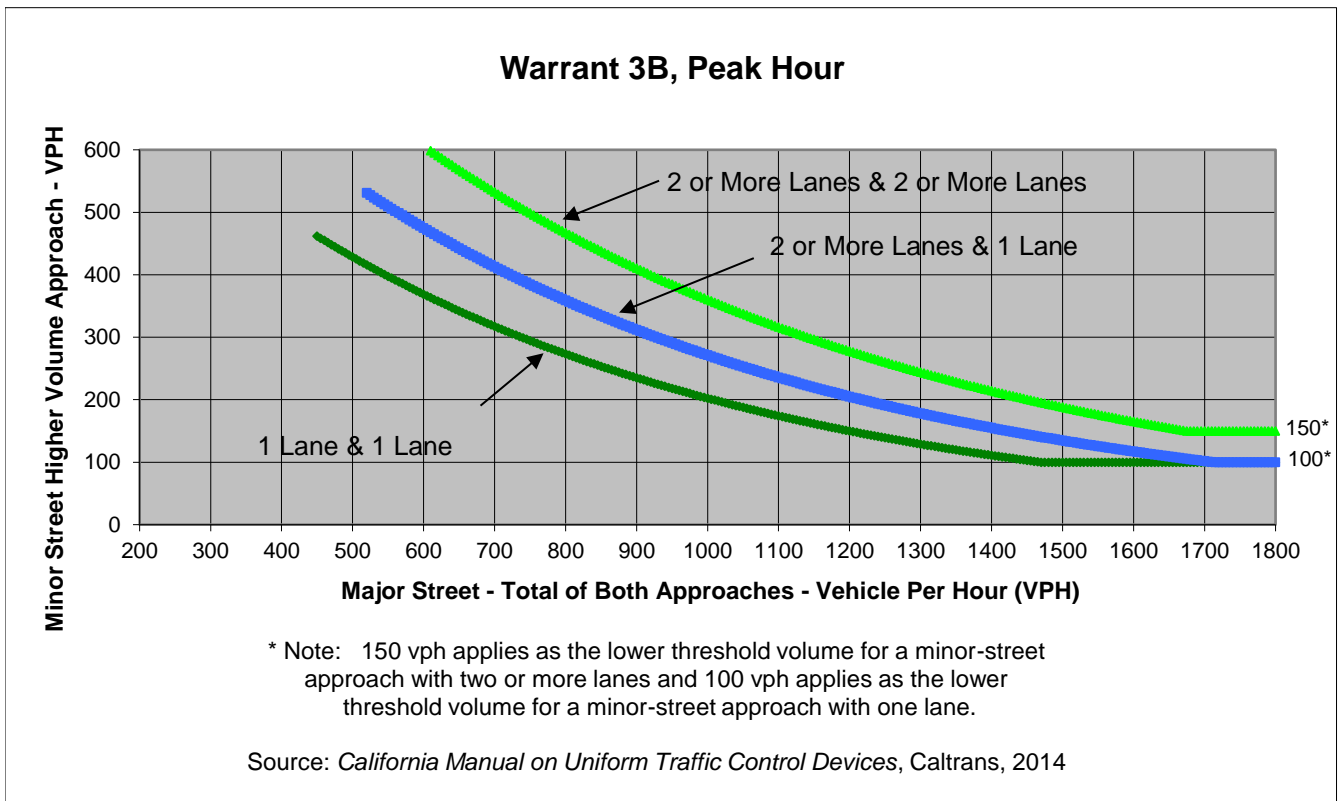
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	90	90	50	90
Through	100	110	590	910
Right	50	60	100	70
Total	240	260	740	1,070

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Lincoln Rd	Railroad Ave	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,810	260	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

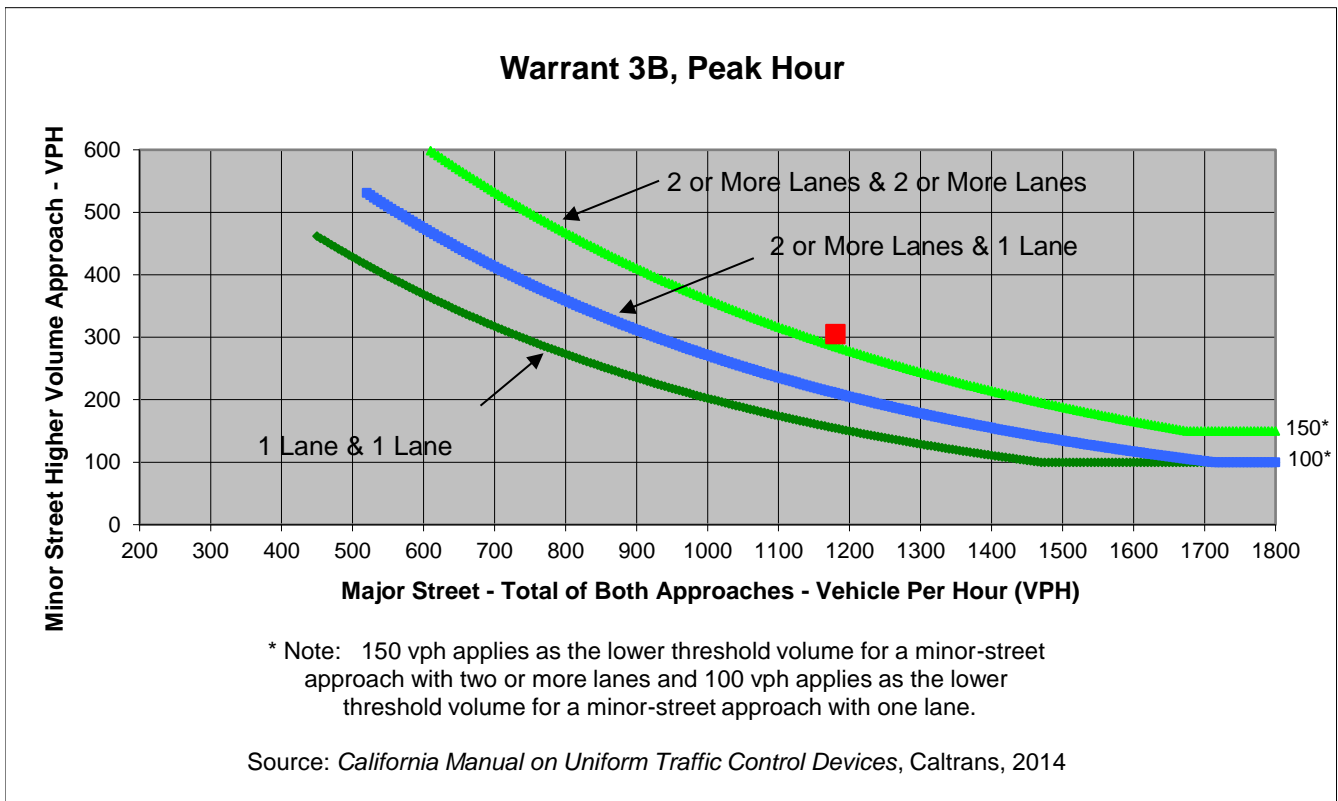
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	245	60	30	105
Through	30	30	390	495
Right	30	60	100	60
Total	305	150	520	660

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,180	305	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Philips Rd

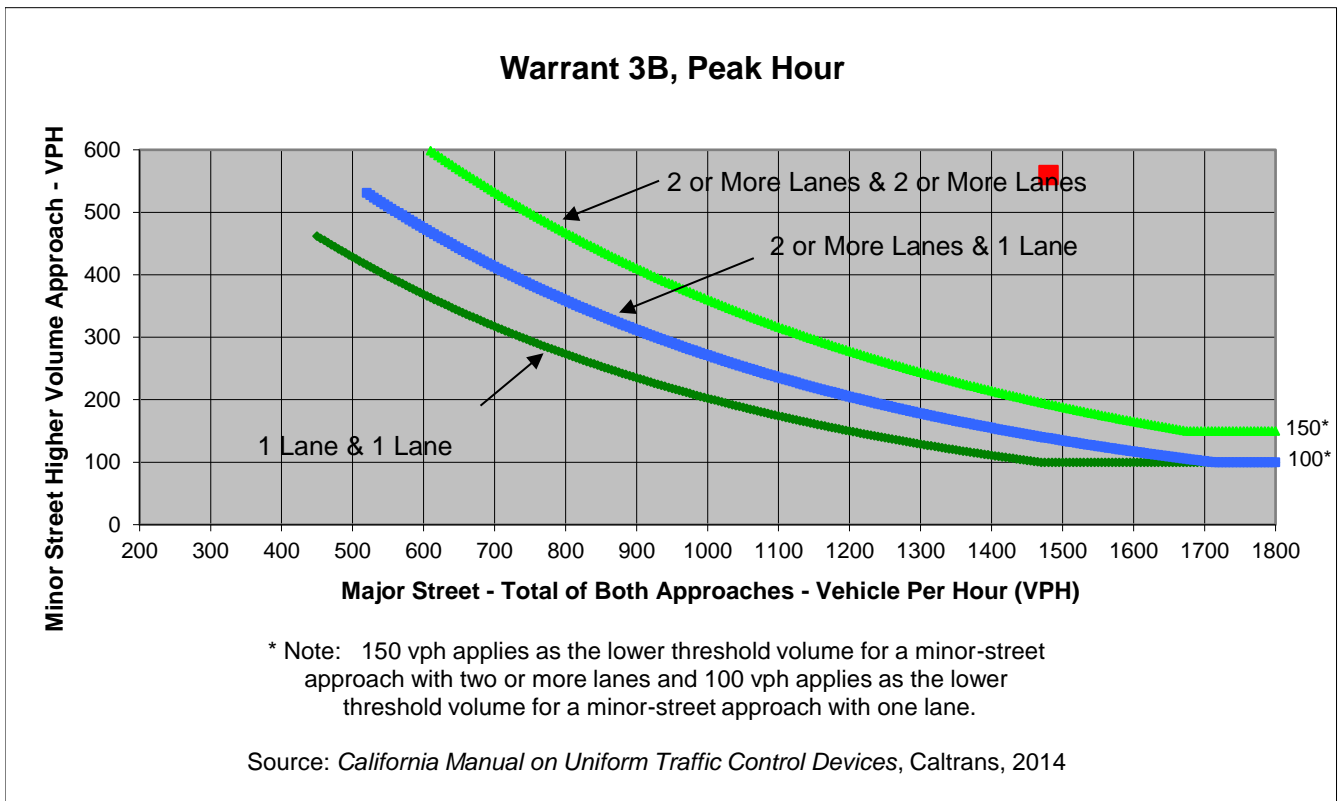
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	530	30	80	150
Through	10	30	690	380
Right	20	40	160	20
Total	560	100	930	550

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Philips Rd	
Number of Approach Lanes	2	1	<u>YES</u>
Traffic Volume (VPH) *	1,480	560	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

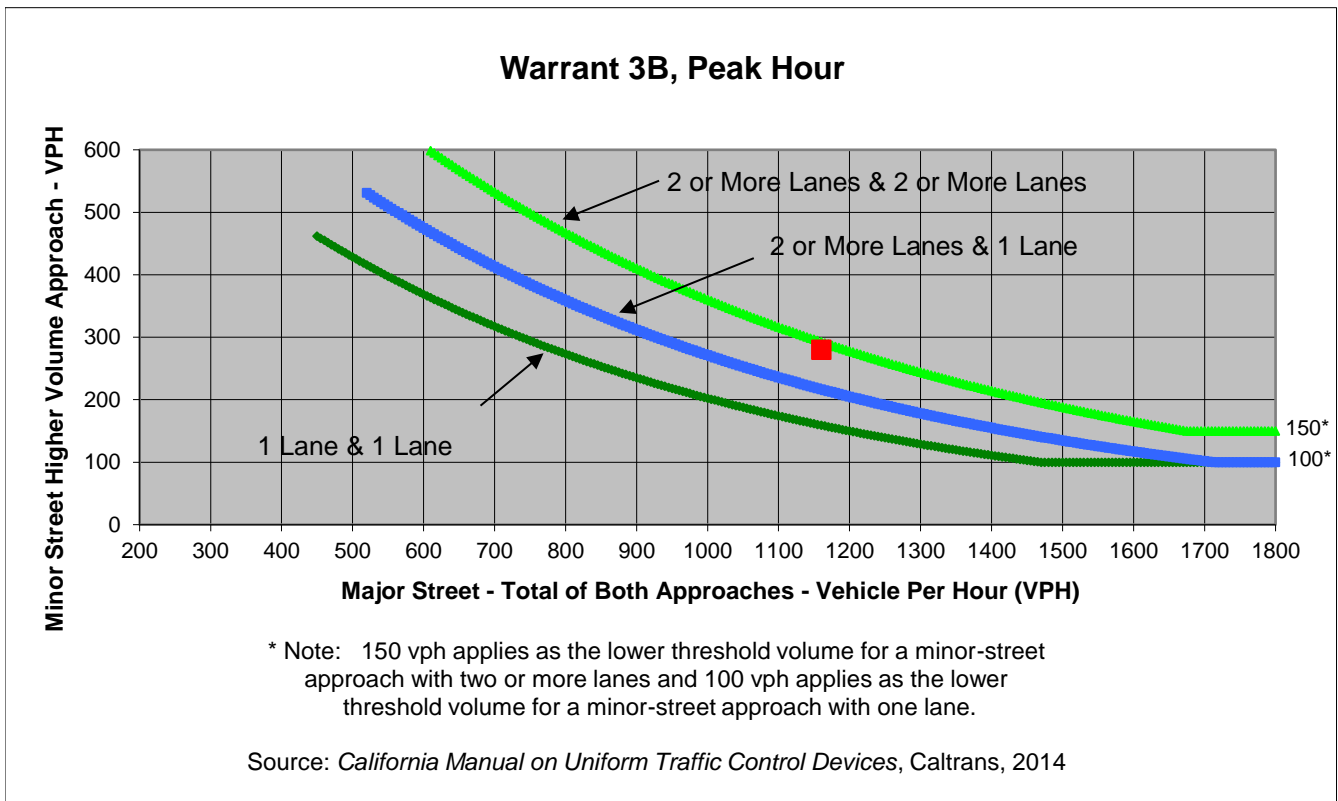
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	60	50	80
Through	110	110	400	540
Right	110	70	40	50
Total	280	240	490	670

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>YES</u>
Traffic Volume (VPH) *	1,160	280	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Bogue Rd
 Minor Street Railroad Ave

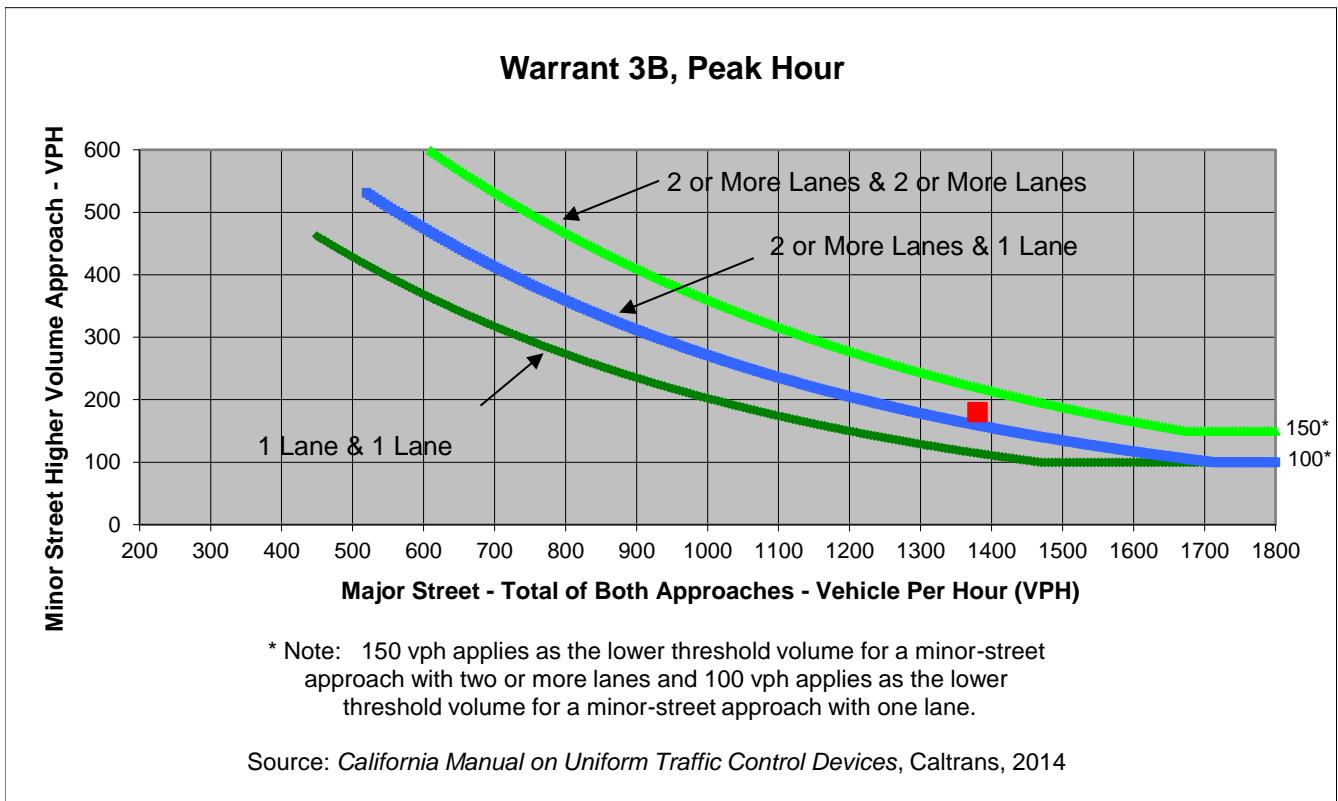
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	60	110	100
Through	70	60	600	500
Right	90	60	20	50
Total	180	180	730	650

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Bogue Rd	Railroad Ave	
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,380	180	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

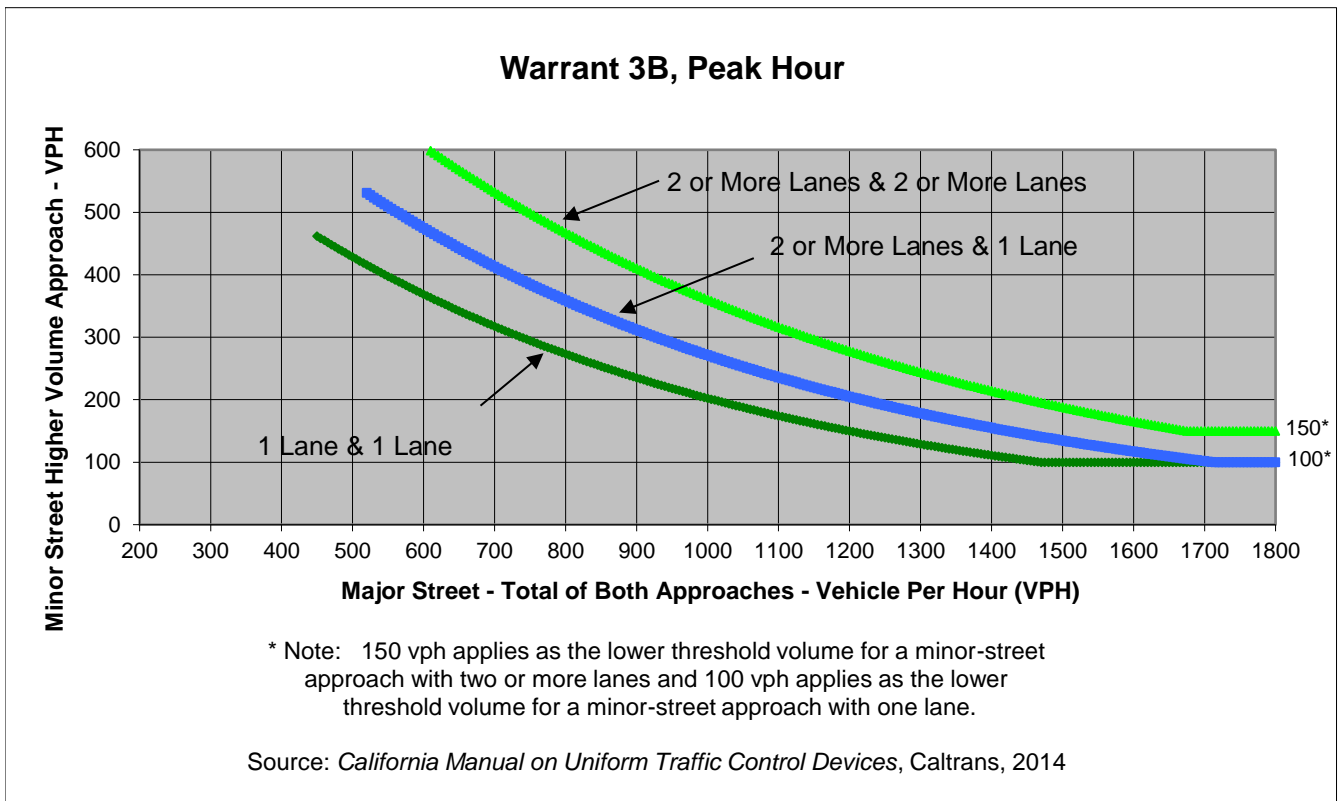
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	40	0
Through	110	120	0	0
Right	0	50	20	0
Total	130	170	60	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	60	170	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Smith Rd
 Minor Street Philips Rd

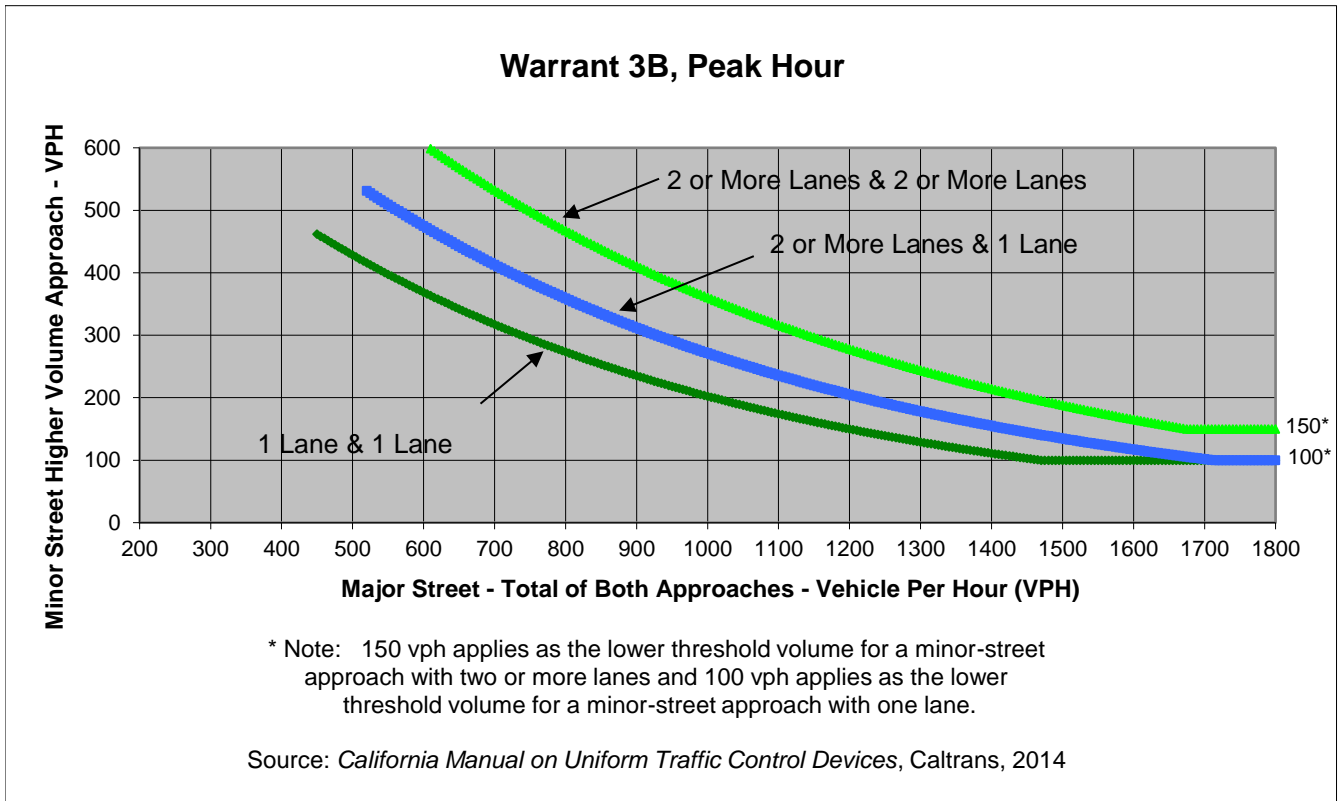
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	30	0
Through	90	70	0	0
Right	0	40	40	0
Total	110	110	70	0

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Smith Rd	Philips Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	70	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Wallace Dr

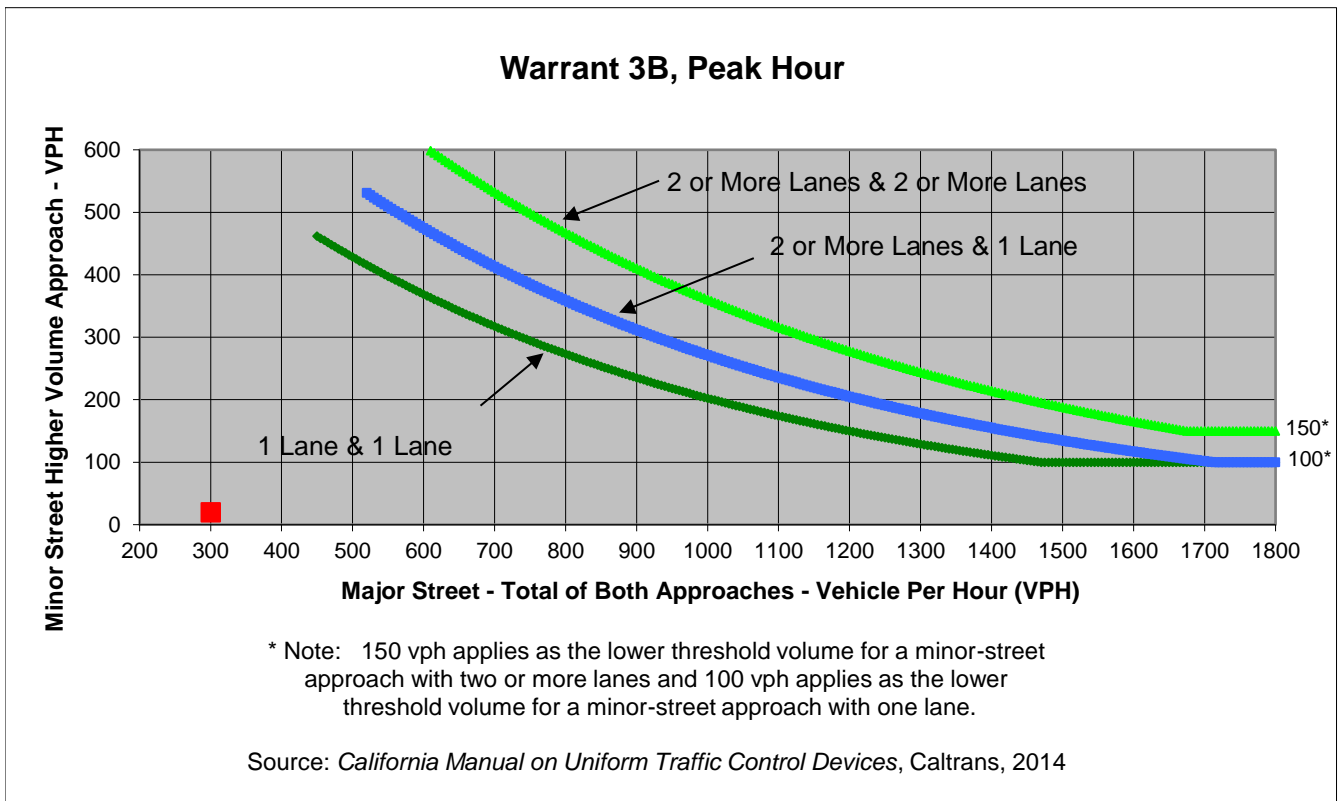
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	0	0	150	130
Right	10	0	10	0
Total	20	0	160	140

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	300	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Wallace Dr

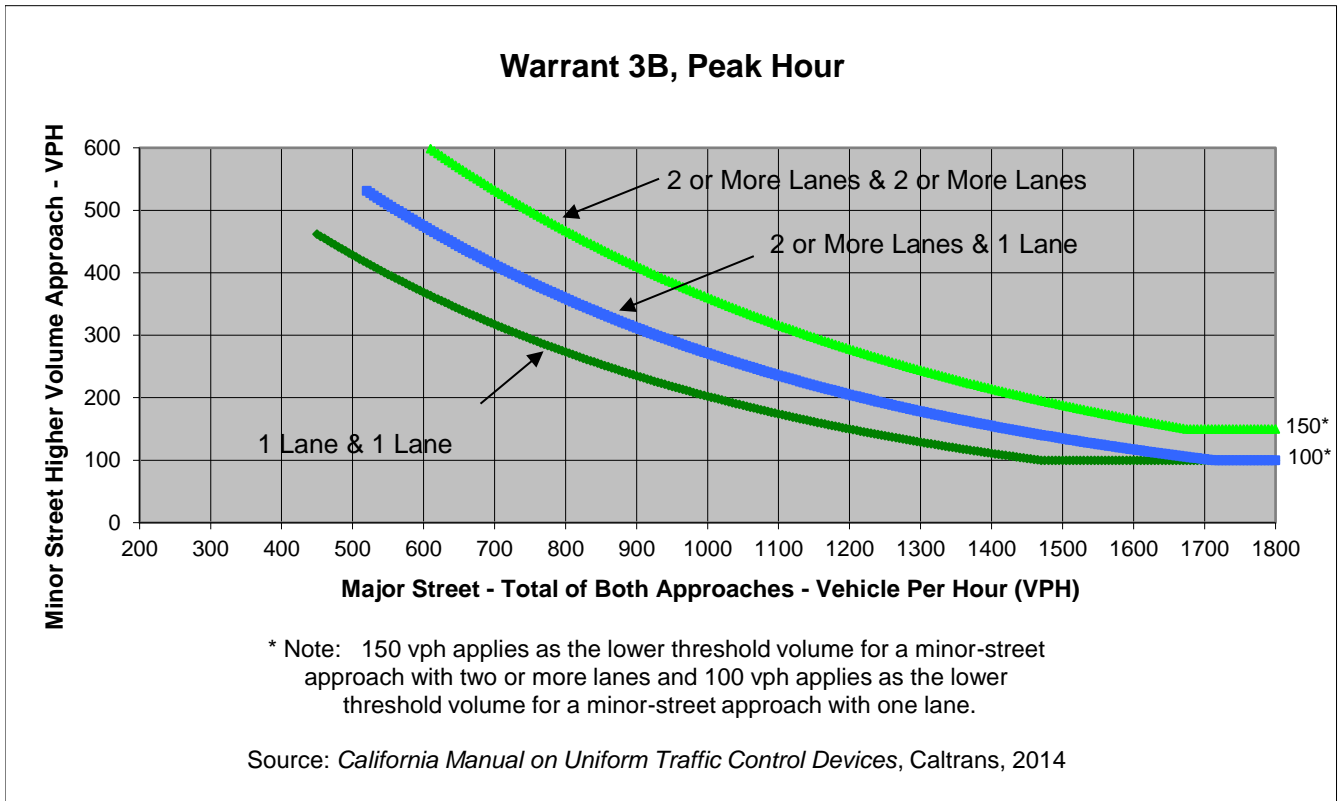
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	0	0	80	60
Right	10	0	10	0
Total	20	0	90	70

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Wallace Dr	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	160	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



Major Street Stewart Rd
 Minor Street Muir Rd

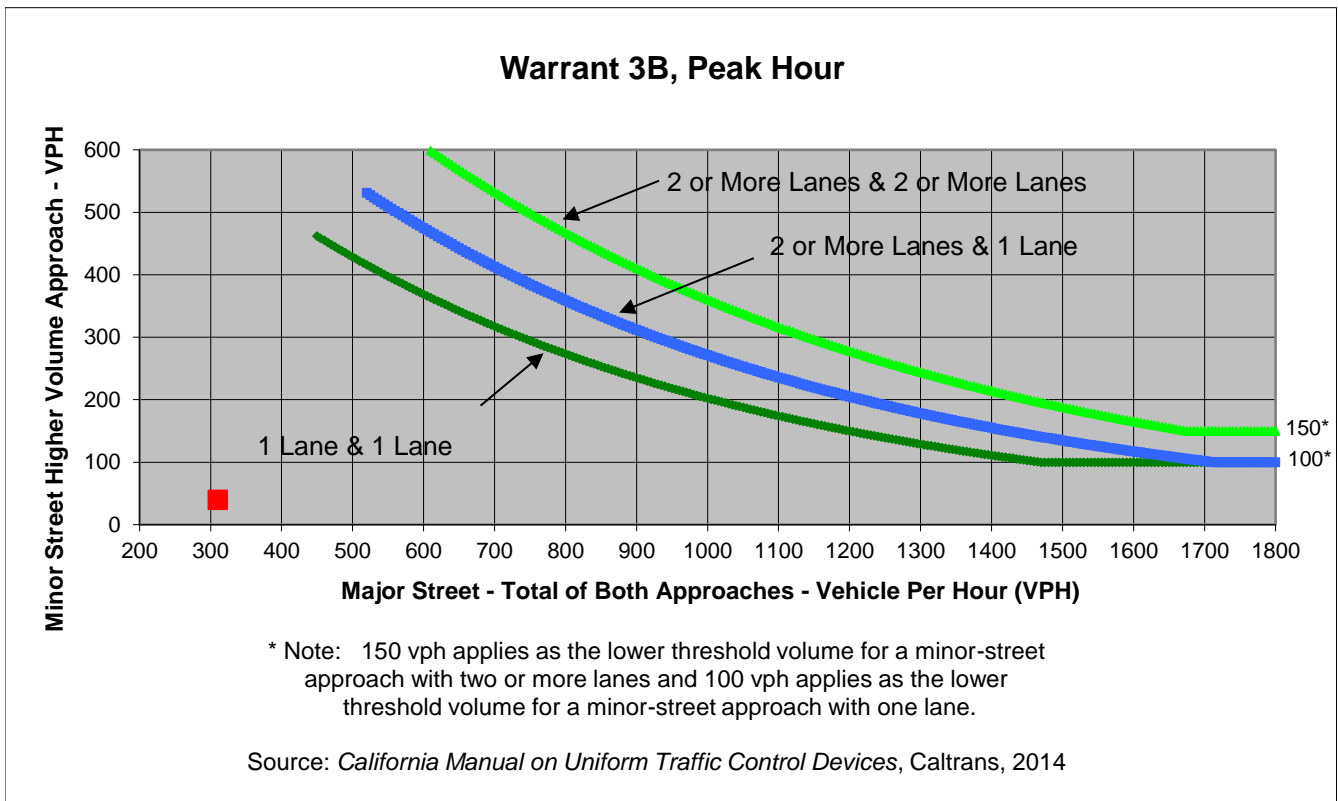
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	20
Through	0	0	140	130
Right	30	0	20	0
Total	40	0	160	150

Major Street Direction

 North/South
 X East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	310	40	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Muir Rd

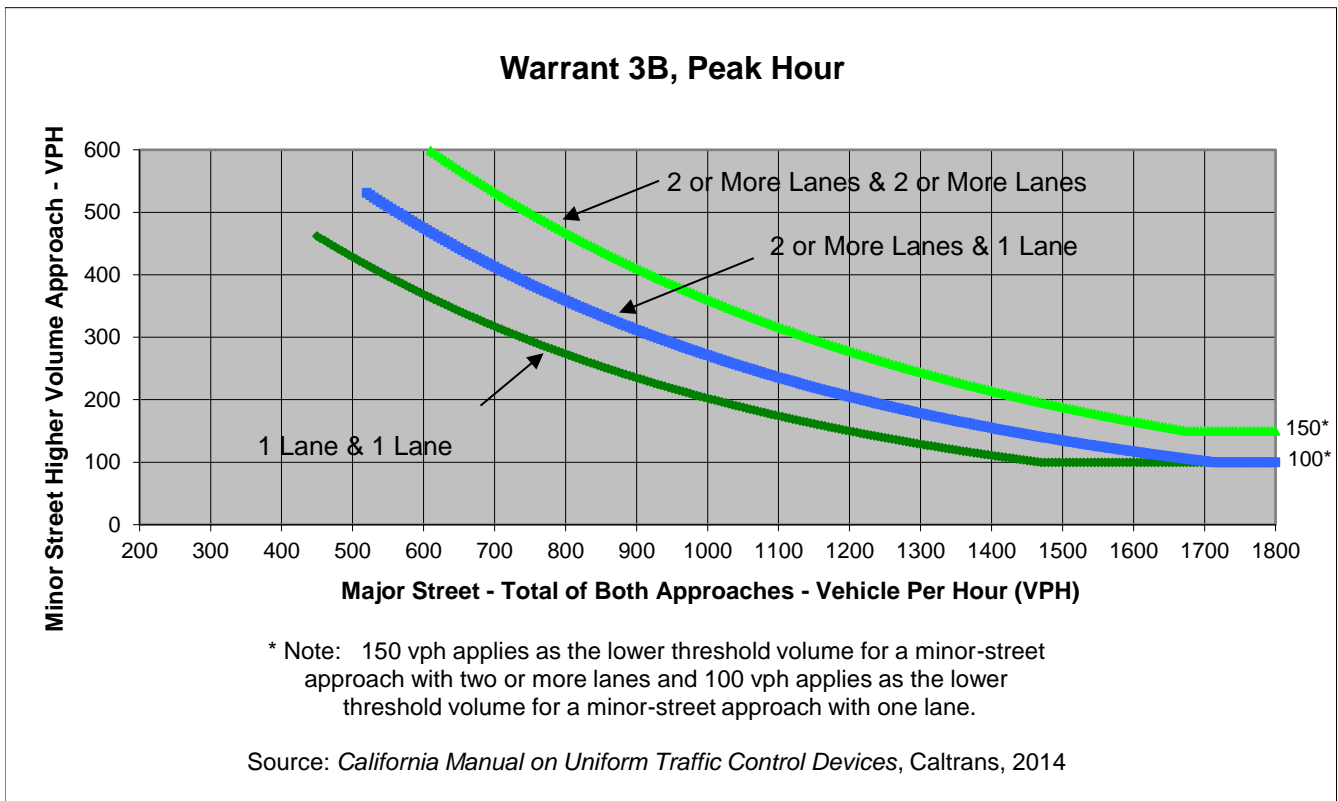
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	30
Through	0	0	70	50
Right	30	0	20	0
Total	50	0	90	80

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Muir Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	170	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

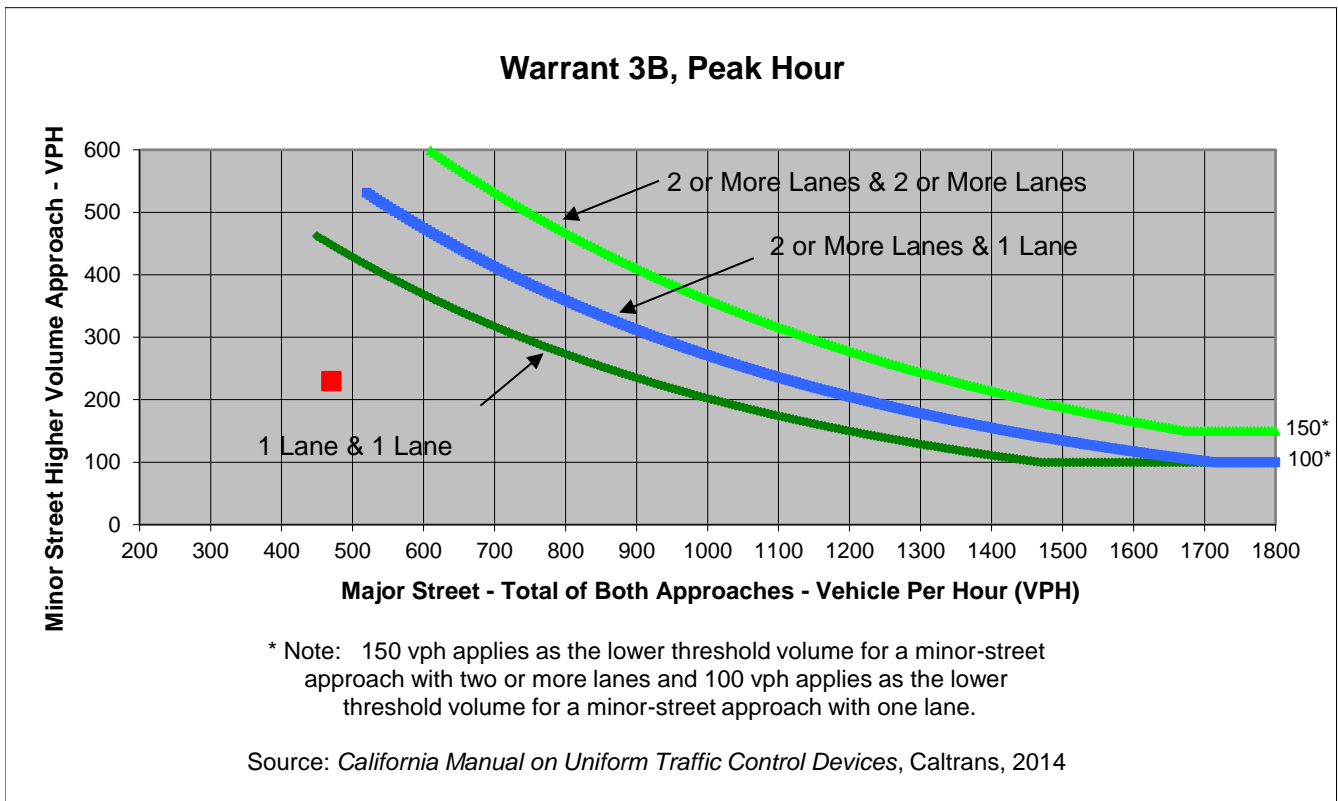
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	110	40	20
Through	40	100	130	120
Right	20	20	10	150
Total	70	230	180	290

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	470	230	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Railroad Ave

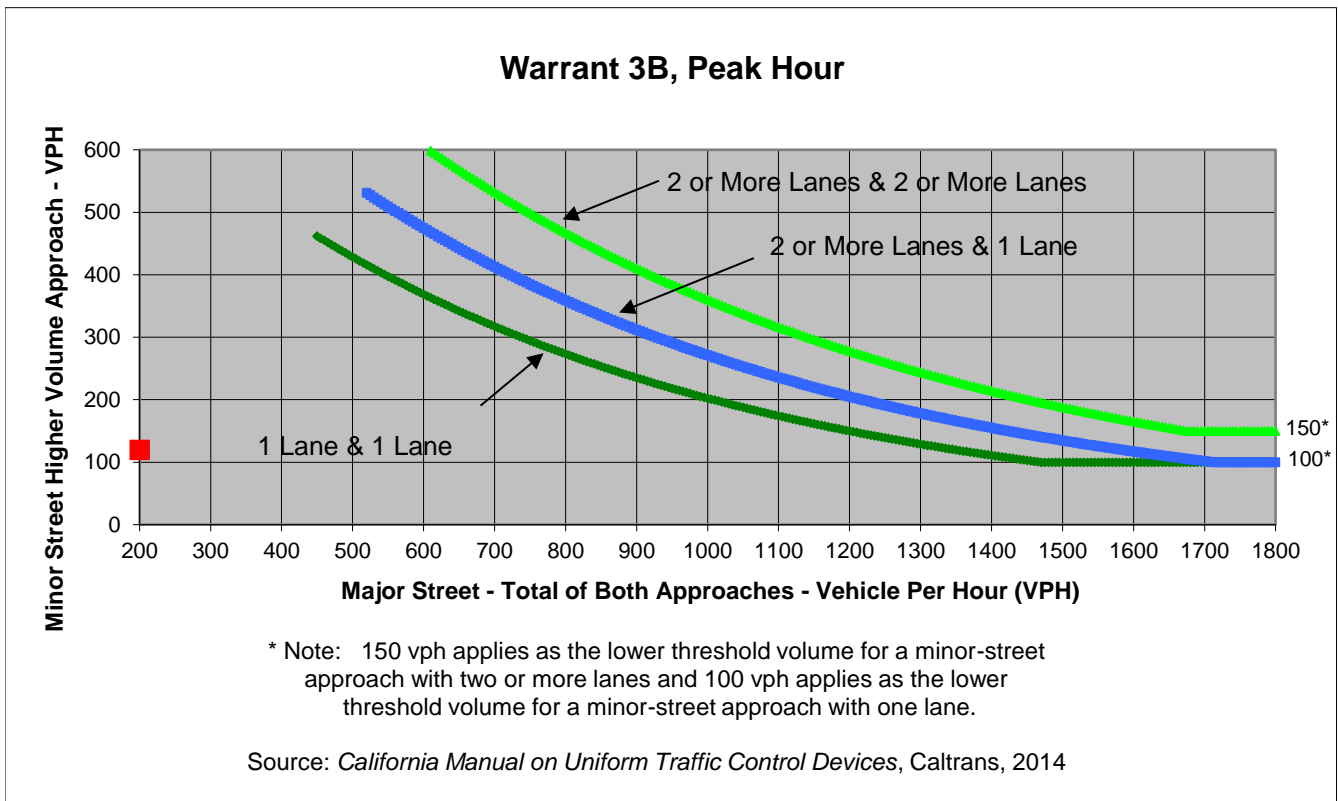
Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	30	30	10
Through	60	50	70	50
Right	10	40	10	30
Total	80	120	110	90

Major Street Direction

	North/South
X	East/West



	Major Street	Minor Street	Warrant Met
	Stewart Rd	Railroad Ave	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	200	120	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street **Bogue Rd**
 Minor Street **Gilsizer Ranch Wy**

Project **Bogue Stewart Master Plan**
 Scenario **Cumulative Plus Phases 1 & 2**
 Peak Hour **AM Peak Hour**

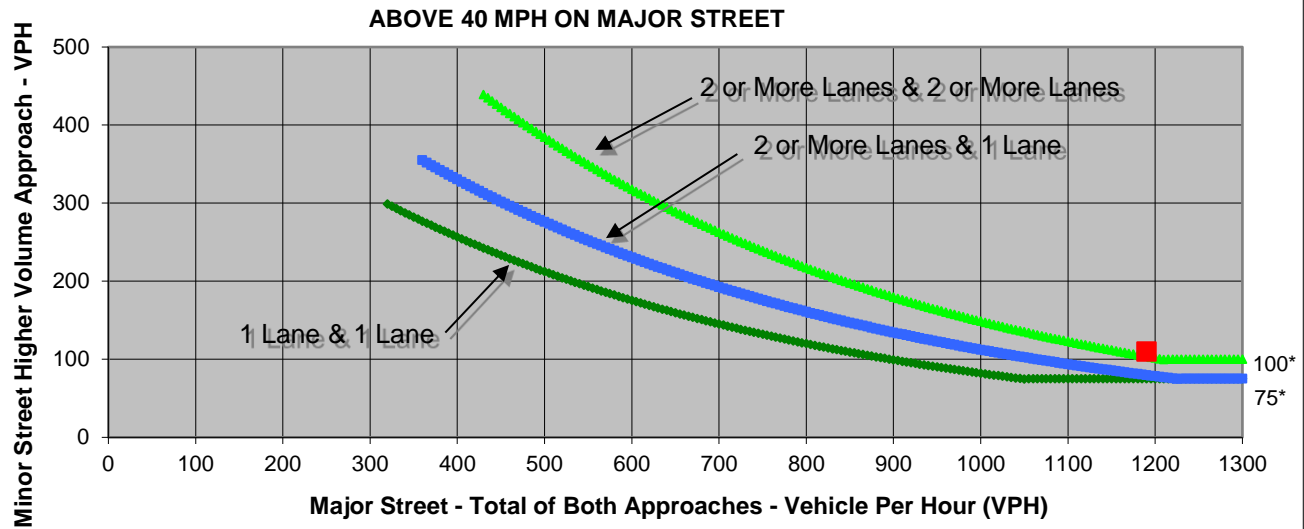
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	0	0	30
Through	0	0	650	500
Right	80	0	10	0
Total	110	0	660	530

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,190	110	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Bogue Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

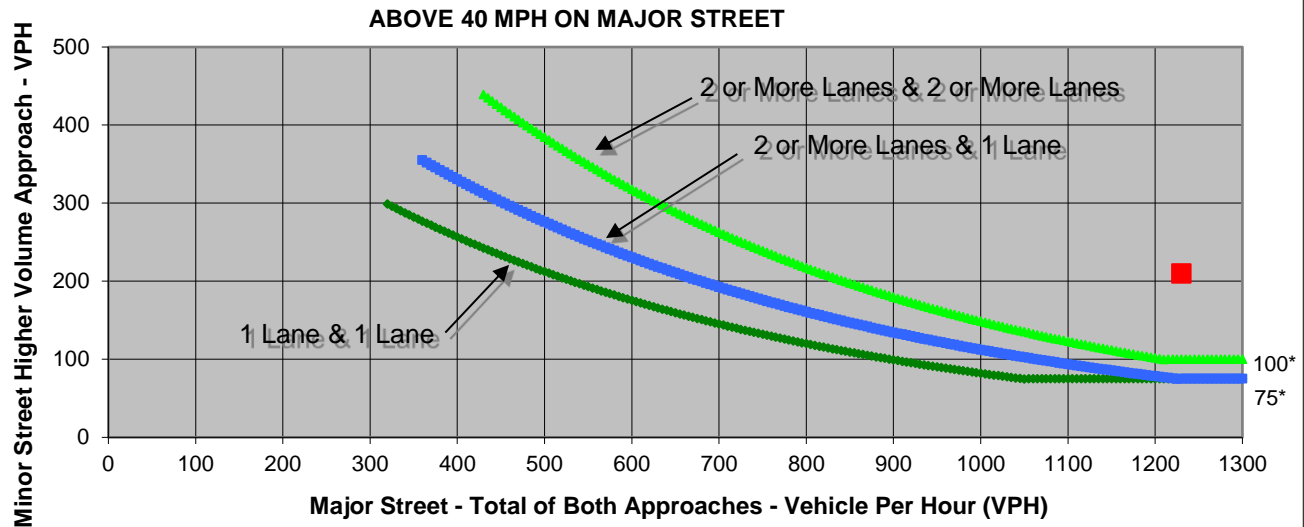
Turn Movement Volumes

	NB	SB	EB	WB
Left	160	0	0	90
Through	0	0	600	510
Right	50	0	30	0
Total	210	0	630	600

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Bogue Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,230	210	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells Ranch Rd (DNE)

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

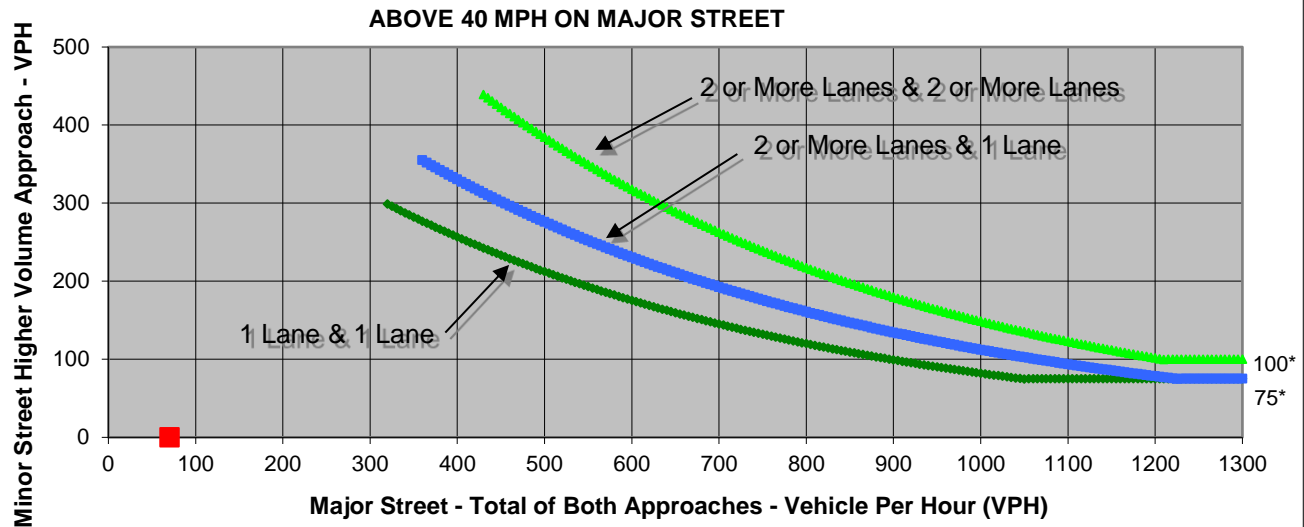
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	50	20	0	0
Right	0	0	0	0
Total	50	20	0	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells Ranch Rd (DNE)	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	70	0	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Gilsizer Ranch Wy
 Minor Street Kells East Rd (DNE)

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

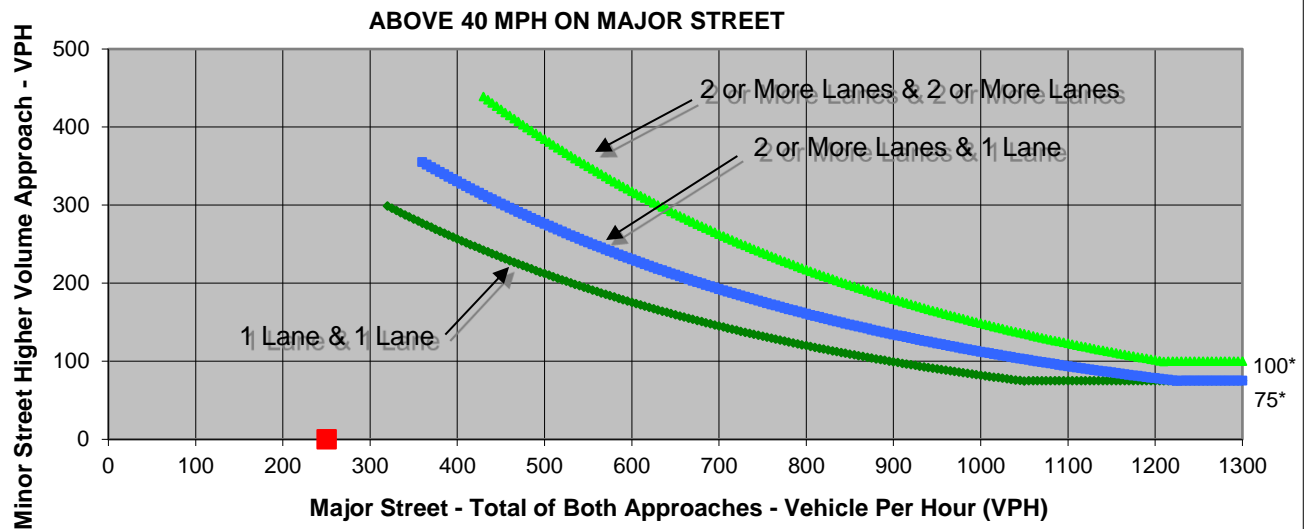
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	200	50	0	0
Right	0	0	0	0
Total	200	50	0	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Gilsizer Ranch Wy	Kells East Rd (DNE)	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	250	0	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

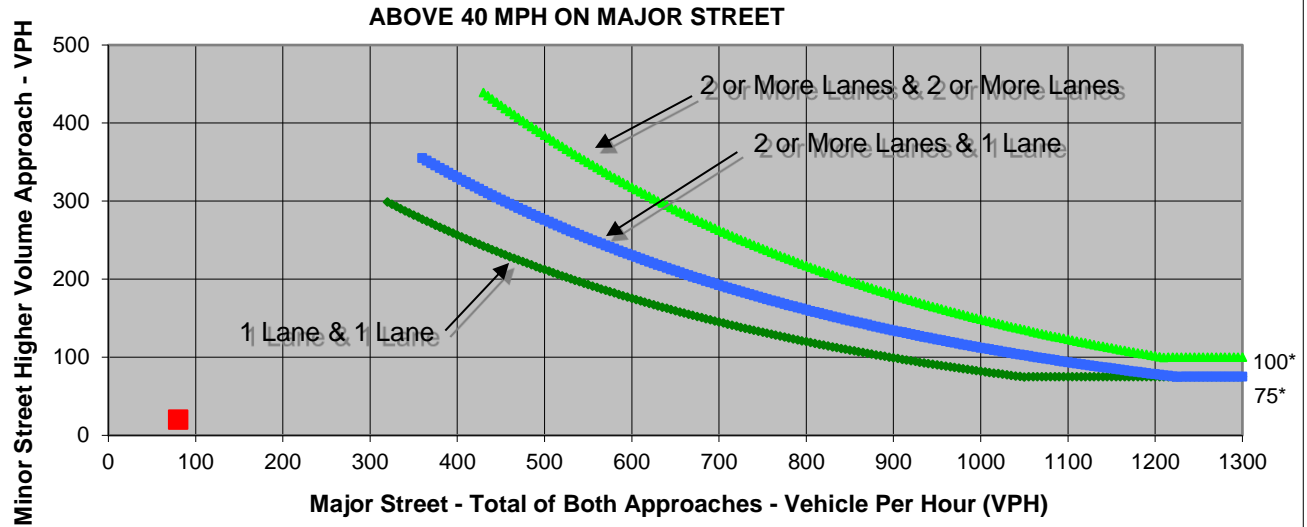
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	10	0
Through	0	0	30	20
Right	0	0	0	20
Total	0	20	40	40

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	80	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Stewart Rd
 Minor Street Gilsizer Ranch Wy

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

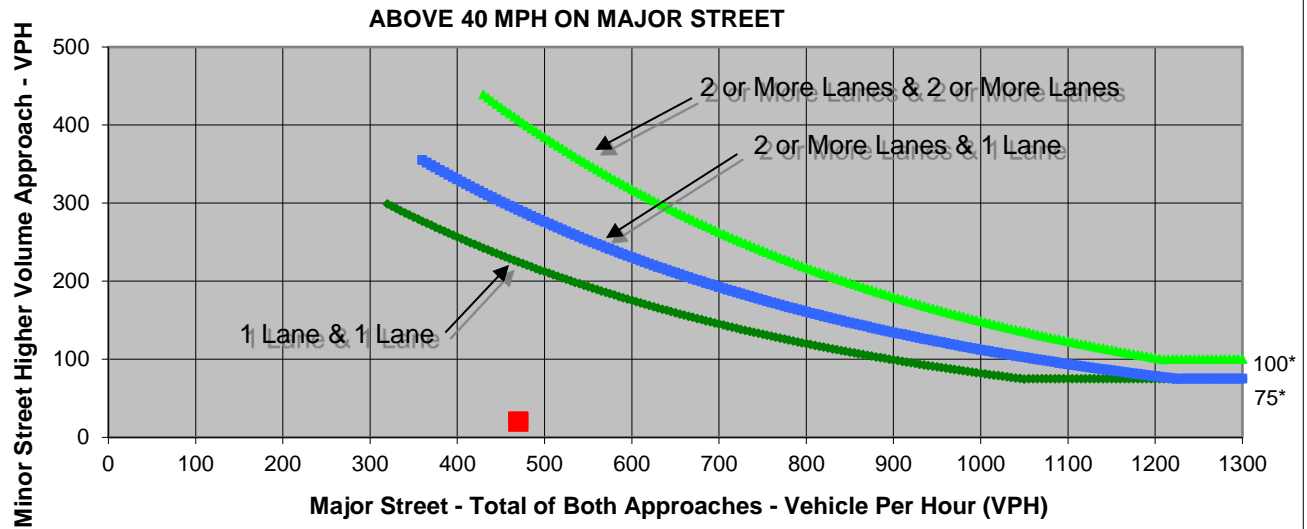
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	10	0
Through	0	0	20	260
Right	0	10	0	180
Total	0	20	30	440

Major Street Direction

	North/South
X	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Stewart Rd	Gilsizer Ranch Wy	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	470	20	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

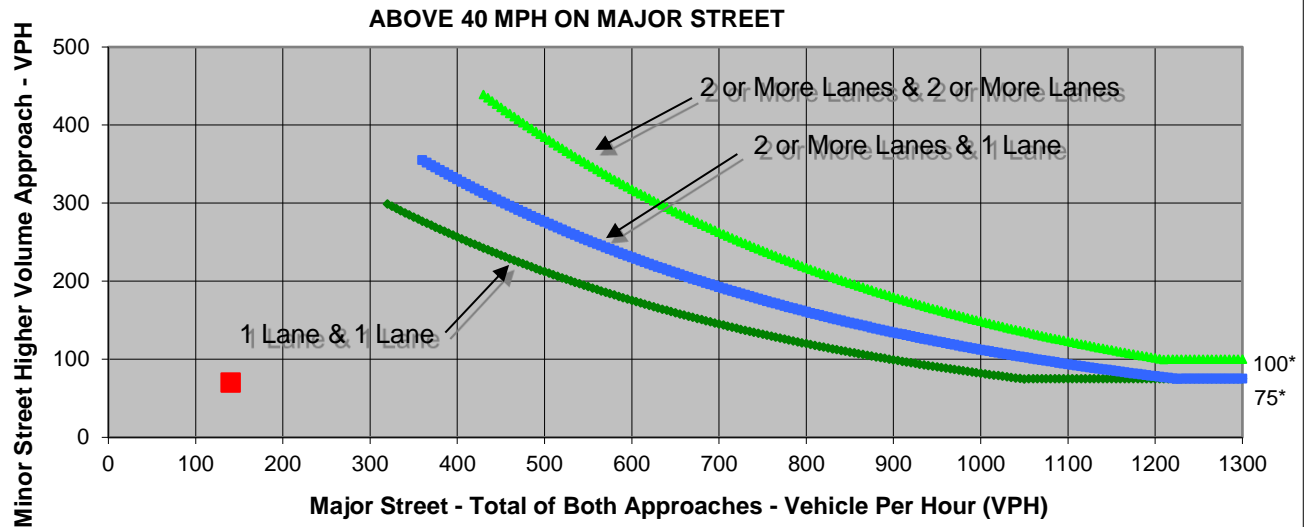
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	40	10
Through	40	40	20	10
Right	10	20	10	40
Total	60	80	70	60

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	140	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Phillips Rd
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

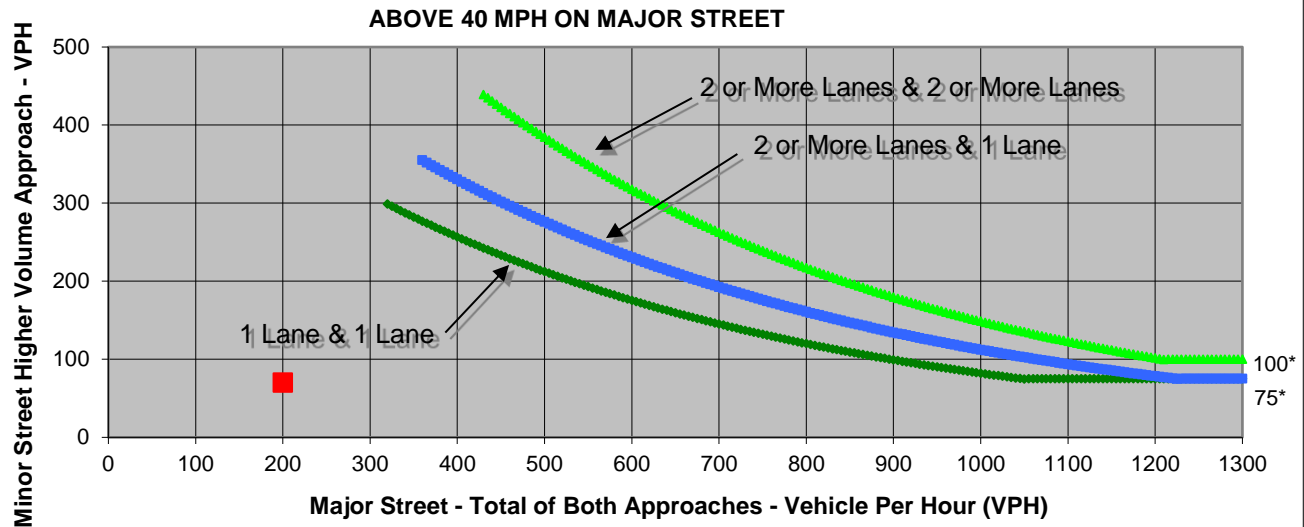
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	40	30	20
Through	50	50	20	30
Right	10	40	10	20
Total	70	130	60	70

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Phillips Rd	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	200	70	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour AM Peak Hour

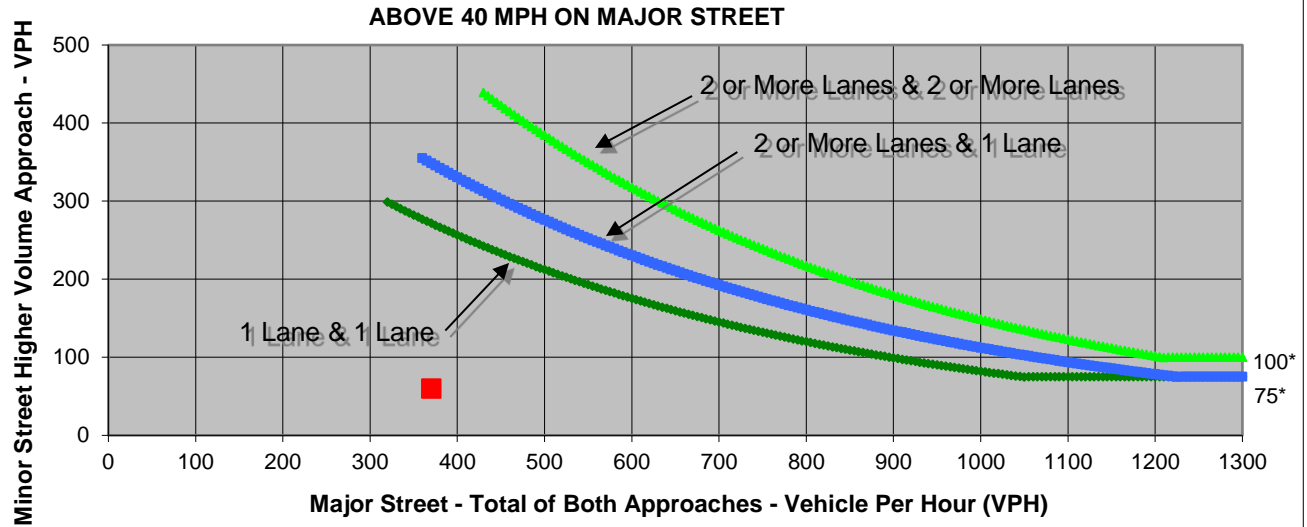
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	50	0
Through	130	210	0	0
Right	0	20	10	0
Total	140	230	60	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	370	60	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Major Street Railroad Ave
 Minor Street Newkom Ranch Rd

Project Bogue Stewart Master Plan
 Scenario Cumulative Plus Phases 1 & 2
 Peak Hour PM Peak Hour

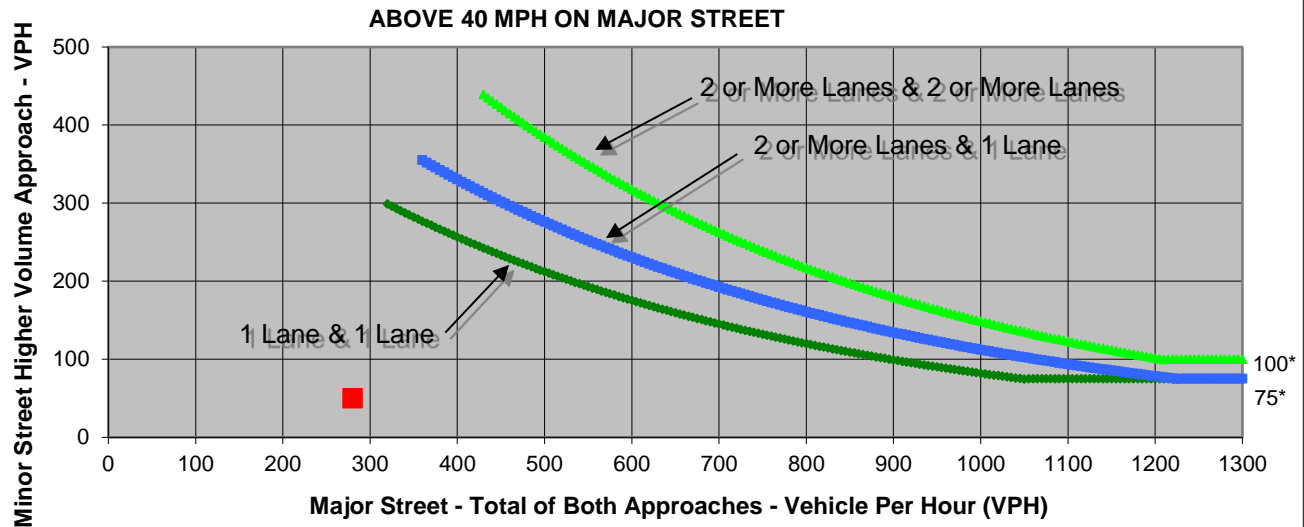
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	40	0
Through	100	110	0	0
Right	0	60	10	0
Total	110	170	50	0

Major Street Direction

X	North/South
	East/West

Figure 4C-4. Warrant 3B, Peak Hour (70% Factor)
 (COMMUNITY LESS THAN 10,000 POPULATION OR

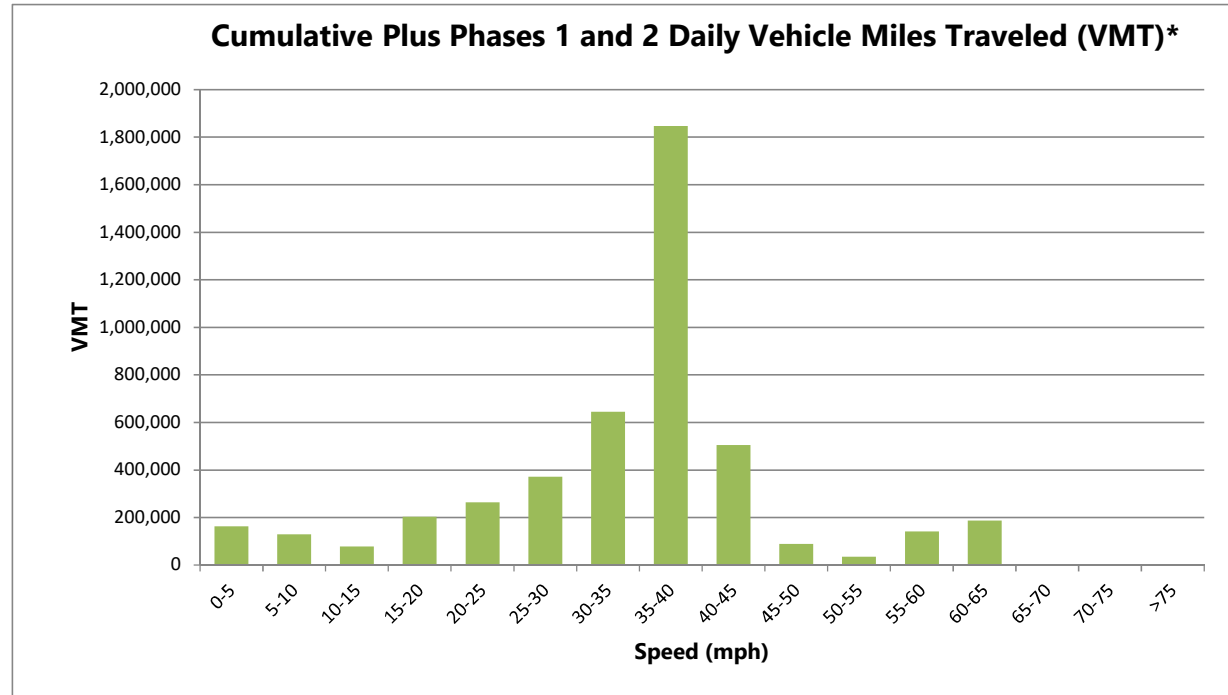


* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

	Major Street	Minor Street	Warrant Met
	Railroad Ave	Newkom Ranch Rd	
Number of Approach Lanes	1	1	<u>NO</u>
Traffic Volume (VPH) *	280	50	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

SPEED RANGE			DAILY_VMT
>0	<=5	0-5	162,391
>5	<=10	5-10	128,648
>10	<=15	10-15	78,086
>15	<=20	15-20	202,149
>20	<=25	20-25	262,914
>25	<=30	25-30	370,632
>30	<=35	30-35	644,012
>35	<=40	35-40	1,846,779
>40	<=45	40-45	504,814
>45	<=50	45-50	88,274
>50	<=55	50-55	34,093
>55	<=60	55-60	140,904
>60	<=65	60-65	186,092
>65	<=70	65-70	0
>70	<=75	70-75	0
>75	>75	>75	0
Total VMT			4,649,789



Values shown represent model-wide VMT for the given scenario.

APPENDIX G.7.1:

Cumulative Conditions Plus

Bogue Stewart Master Plan Buildout with Mitigations

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout with Mitigation
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	35	31	87.3%	38.0	14.9	D
	Through	1,810	1,366	75.5%	15.7	2.6	B
	Right Turn	45	33	73.6%	11.8	1.9	B
	Subtotal	1,890	1,430	75.7%	16.2	2.8	B
SB	Left Turn	60	43	72.4%	33.7	10.1	C
	Through	1,345	1,065	79.2%	12.4	1.6	B
	Right Turn	20	15	73.6%	9.2	3.5	A
	Subtotal	1,425	1,123	78.8%	13.1	1.7	B
EB	Left Turn	10	8	81.0%	35.1	17.2	D
	Through	10	7	73.6%	27.9	17.0	C
	Right Turn	30	26	87.1%	8.3	3.1	A
	Subtotal	50	42	83.2%	17.4	6.4	B
WB	Left Turn	10	11	106.7%	22.0	15.0	C
	Through	10	10	103.0%	27.6	15.1	C
	Right Turn	35	40	114.6%	14.3	4.9	B
	Subtotal	55	61	111.1%	20.0	4.2	B
Total		3,420	2,656	77.7%	15.0	2.3	B

Intersection 8 SR 99/Smith Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	30	27	89.5%	48.9	14.4	D
	Through	1,580	1,441	91.2%	22.9	3.2	C
	Right Turn	20	21	106.7%	18.0	8.2	B
	Subtotal	1,630	1,489	91.4%	23.3	3.1	C
SB	Left Turn	30	25	83.4%	47.2	6.0	D
	Through	1,490	1,086	72.9%	19.5	2.4	B
	Right Turn	50	36	72.9%	15.6	3.1	B
	Subtotal	1,570	1,147	73.1%	20.0	2.3	B
EB	Left Turn	65	61	94.5%	27.3	8.6	C
	Through	10	10	95.7%	26.7	11.7	C
	Right Turn	40	45	111.3%	10.5	3.3	B
	Subtotal	115	116	100.5%	21.0	5.7	C
WB	Left Turn	30	24	81.0%	31.7	6.9	C
	Through	10	14	143.5%	26.3	12.7	C
	Right Turn	45	45	99.0%	15.9	3.9	B
	Subtotal	85	83	97.8%	22.3	5.6	C
Total		3,400	2,835	83.4%	21.8	2.5	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout with Mitigation
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	255	229	89.9%	62.4	8.4	E
	Through	955	868	90.9%	64.7	14.5	E
	Right Turn	125	110	88.3%	36.5	10.0	D
	Subtotal	1,335	1,208	90.5%	61.6	12.6	E
SB	Left Turn	285	199	69.7%	45.7	3.6	D
	Through	990	689	69.6%	36.1	7.6	D
	Right Turn	285	198	69.6%	19.4	3.7	B
	Subtotal	1,560	1,086	69.6%	34.9	5.3	C
EB	Left Turn	205	201	98.0%	47.0	5.3	D
	Through	370	349	94.4%	37.2	4.9	D
	Right Turn	445	428	96.1%	33.1	10.3	C
	Subtotal	1,020	978	95.9%	37.7	5.6	D
WB	Left Turn	195	182	93.4%	50.2	6.1	D
	Through	420	399	95.0%	39.4	2.2	D
	Right Turn	470	472	100.5%	24.1	3.4	C
	Subtotal	1,085	1,053	97.1%	34.4	2.1	C
Total		5,000	4,325	86.5%	43.0	3.6	D

Intersection 10 SR 99/Stewarts Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	40	31	76.4%	65.0	10.9	E
	Through	1,090	1,048	96.1%	23.3	3.2	C
	Right Turn	70	64	90.9%	14.1	5.4	B
	Subtotal	1,200	1,142	95.2%	23.8	3.4	C
SB	Left Turn	135	102	75.8%	64.6	20.4	E
	Through	1,475	1,087	73.7%	27.7	5.6	C
	Right Turn	20	15	77.3%	22.1	5.7	C
	Subtotal	1,630	1,204	73.9%	30.9	7.2	C
EB	Left Turn	20	21	106.7%	42.8	15.3	D
	Through	20	36	180.3%	18.0	8.6	B
	Right Turn	60	62	103.7%	19.3	6.4	B
	Subtotal	100	120	119.6%	22.9	4.7	C
WB	Left Turn	110	105	95.0%	36.0	5.9	D
	Through	30	28	93.2%	39.8	9.1	D
	Right Turn	220	223	101.5%	22.3	4.2	C
	Subtotal	360	356	98.8%	28.0	2.4	C
Total		3,290	2,822	85.8%	27.4	4.1	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout with Mitigation
AM Peak Hour

Intersection 24
























Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	335	330	98.5%	20.6	1.5	C
	Through	10	15	147.2%	24.0	14.9	C
	Right Turn	10	9	92.0%	5.9	5.3	A
	Subtotal	355	354	99.7%	20.4	1.1	C
SB	Left Turn	60	56	93.2%	26.1	6.5	D
	Through	20	19	93.8%	25.0	5.3	C
	Right Turn	60	65	107.9%	15.9	4.1	C
	Subtotal	140	139	99.6%	21.3	4.1	C
EB	Left Turn	30	20	67.5%	39.1	7.9	E
	Through	450	362	80.4%	24.9	3.6	C
	Right Turn	120	99	82.2%	20.1	3.3	C
	Subtotal	600	481	80.1%	24.4	3.4	C
WB	Left Turn	105	99	93.9%	47.3	12.9	E
	Through	635	634	99.9%	45.7	16.8	E
	Right Turn	60	54	89.5%	48.0	27.0	E
	Subtotal	800	786	98.3%	46.2	15.3	E
Total		1,895	1,761	92.9%	32.9	6.5	D

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Cumulative Plus Project Buildout w Mitigation
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	580	110	40	450	120	50	80	60	180	130	20
Future Volume (veh/h)	30	580	110	40	450	120	50	80	60	180	130	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	1863	1851	1900	1863	1863	1810	1827	1827	1863	1863	1820	1900
Adj Flow Rate, veh/h	32	617	117	43	479	128	53	85	64	191	138	21
Adj No. of Lanes	1	1	0	1	1	1	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, %	2	2	2	2	2	5	4	4	2	2	4	4
Cap, veh/h	39	704	134	53	882	728	66	171	148	230	286	44
Arrive On Green	0.02	0.47	0.47	0.03	0.47	0.47	0.04	0.09	0.09	0.13	0.19	0.19
Sat Flow, veh/h	1774	1514	287	1774	1863	1538	1740	1827	1583	1774	1544	235
Grp Volume(v), veh/h	32	0	734	43	479	128	53	85	64	191	0	159
Grp Sat Flow(s),veh/h/ln	1774	0	1801	1774	1863	1538	1740	1827	1583	1774	0	1779
Q Serve(g_s), s	1.3	0.0	27.5	1.8	13.6	3.6	2.3	3.3	2.9	7.8	0.0	6.0
Cycle Q Clear(g_c), s	1.3	0.0	27.5	1.8	13.6	3.6	2.3	3.3	2.9	7.8	0.0	6.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	39	0	838	53	882	728	66	171	148	230	0	330
V/C Ratio(X)	0.83	0.00	0.88	0.81	0.54	0.18	0.80	0.50	0.43	0.83	0.00	0.48
Avail Cap(c_a), veh/h	119	0	940	83	948	783	172	604	524	280	0	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	18.0	36.0	13.9	11.3	35.6	32.2	32.0	31.7	0.0	27.2
Incr Delay (d2), s/veh	15.3	0.0	8.7	13.7	0.5	0.1	8.0	2.2	2.0	13.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	15.5	1.1	7.1	1.5	1.2	1.8	1.3	4.7	0.0	3.0
LnGrp Delay(d),s/veh	51.7	0.0	26.7	49.7	14.5	11.4	43.6	34.4	33.9	45.0	0.0	28.3
LnGrp LOS	D		C	D	B	B	D	C	C	D		C
Approach Vol, veh/h		766			650			202			350	
Approach Delay, s/veh		27.7			16.2			36.7			37.4	
Approach LOS		C			B			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	14.2	13.0	6.7	40.7	7.3	19.9	6.1	41.4				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	* 6				
Max Green Setting (Gmax), s	11.8	24.7	3.5	39.0	7.4	29.1	5.0	* 38				
Max Q Clear Time (g_c+I1), s	9.8	5.3	3.8	29.5	4.3	8.0	3.3	15.6				
Green Ext Time (p_c), s	0.1	1.3	0.0	5.3	0.0	1.4	0.0	8.6				
Intersection Summary												
HCM 2010 Ctrl Delay			26.6									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
22: Railroad Ave & Lincoln Rd

Cumulative Plus Project Buildout w Mitigation
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	790	60	40	280	50	130	140	90	60	90	50
Future Volume (veh/h)	70	790	60	40	280	50	130	140	90	60	90	50
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		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1863	1827	1863	1863	1776	1863	1863	1863	1863	1863	1863	1810
Adj Flow Rate, veh/h	76	859	65	43	304	54	141	152	98	65	98	54
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
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, %	2	4	2	2	7	2	2	2	2	2	2	5
Cap, veh/h	79	1056	476	53	977	455	126	702	596	83	657	539
Arrive On Green	0.04	0.30	0.30	0.03	0.29	0.29	0.07	0.38	0.38	0.05	0.35	0.35
Sat Flow, veh/h	1774	3471	1565	1774	3374	1572	1774	1863	1581	1774	1863	1529
Grp Volume(v), veh/h	76	859	65	43	304	54	141	152	98	65	98	54
Grp Sat Flow(s),veh/h/ln	1774	1736	1565	1774	1687	1572	1774	1863	1581	1774	1863	1529
Q Serve(g_s), s	3.2	17.4	2.3	1.8	5.3	1.9	5.4	4.2	3.1	2.8	2.7	1.8
Cycle Q Clear(g_c), s	3.2	17.4	2.3	1.8	5.3	1.9	5.4	4.2	3.1	2.8	2.7	1.8
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	79	1056	476	53	977	455	126	702	596	83	657	539
V/C Ratio(X)	0.96	0.81	0.14	0.81	0.31	0.12	1.12	0.22	0.16	0.78	0.15	0.10
Avail Cap(c_a), veh/h	79	1151	519	98	1154	538	126	702	596	168	657	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	24.5	19.2	36.6	21.1	19.9	35.3	16.1	15.7	35.8	16.8	16.5
Incr Delay (d2), s/veh	86.5	4.3	0.1	23.7	0.2	0.1	115.6	0.7	0.6	14.5	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	8.9	1.0	1.2	2.5	0.8	6.7	2.3	1.5	1.7	1.5	0.8
LnGrp Delay(d),s/veh	122.7	28.7	19.3	60.4	21.3	20.0	150.9	16.8	16.3	50.3	17.3	16.9
LnGrp LOS	F	C	B	E	C	B	F	B	B	D	B	B
Approach Vol, veh/h		1000			401			391			217	
Approach Delay, s/veh		35.2			25.3			65.0			27.1	
Approach LOS		D			C			E			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	8.2	33.2	6.9	27.7	10.0	31.4	8.0	26.6				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	25.0	4.2	25.2	5.4	26.8	3.4	26.0				
Max Q Clear Time (g_c+1), s	6.2	6.2	3.8	19.4	7.4	4.7	5.2	7.3				
Green Ext Time (p_c), s	0.0	1.8	0.0	3.7	0.0	1.9	0.0	8.4				
Intersection Summary												
HCM 2010 Ctrl Delay			38.2									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

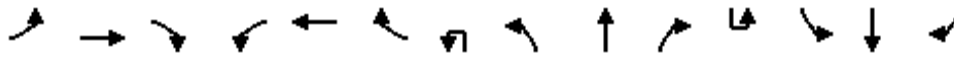
Cumulative Plus Project Buildout w Mitigation
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	400	80	90	570	50	160	140	140	60	120	70
Future Volume (veh/h)	50	400	80	90	570	50	160	140	140	60	120	70
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	1827	1860	1900	1845	1863	1900	1863	1863	1900	1863	1851	1900
Adj Flow Rate, veh/h	53	421	84	95	600	53	168	147	147	63	126	74
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	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, %	4	2	2	3	2	2	2	2	2	2	3	3
Cap, veh/h	65	501	100	121	1198	106	211	219	219	80	200	117
Arrive On Green	0.04	0.33	0.33	0.07	0.36	0.36	0.12	0.26	0.26	0.04	0.18	0.18
Sat Flow, veh/h	1740	1506	301	1757	3290	290	1774	856	856	1774	1095	643
Grp Volume(v), veh/h	53	0	505	95	322	331	168	0	294	63	0	200
Grp Sat Flow(s),veh/h/ln	1740	0	1807	1757	1770	1811	1774	0	1712	1774	0	1738
Q Serve(g_s), s	1.9	0.0	16.0	3.3	8.8	8.8	5.7	0.0	9.5	2.2	0.0	6.6
Cycle Q Clear(g_c), s	1.9	0.0	16.0	3.3	8.8	8.8	5.7	0.0	9.5	2.2	0.0	6.6
Prop In Lane	1.00		0.17	1.00		0.16	1.00		0.50	1.00		0.37
Lane Grp Cap(c), veh/h	65	0	601	121	644	659	211	0	438	80	0	317
V/C Ratio(X)	0.81	0.00	0.84	0.79	0.50	0.50	0.80	0.00	0.67	0.79	0.00	0.63
Avail Cap(c_a), veh/h	191	0	684	153	644	659	270	0	711	204	0	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	19.1	28.3	15.3	15.3	26.5	0.0	20.7	29.2	0.0	23.4
Incr Delay (d2), s/veh	20.5	0.0	8.3	18.4	0.6	0.6	12.2	0.0	1.8	15.8	0.0	2.1
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	1.3	0.0	9.2	2.2	4.3	4.4	3.5	0.0	4.7	1.4	0.0	3.3
LnGrp Delay(d),s/veh	50.0	0.0	27.4	46.8	15.9	15.9	38.7	0.0	22.5	45.1	0.0	25.4
LnGrp LOS	D		C	D	B	B	D		C	D		C
Approach Vol, veh/h		558			748			462			263	
Approach Delay, s/veh		29.6			19.8			28.4			30.1	
Approach LOS		C			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	7.4	20.4	8.9	25.2	11.9	15.9	6.9	27.1				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.7	5.4	23.4	9.4	23.4	6.8	22.0					
Max Q Clear Time (g_c+1), s	11.5	5.3	18.0	7.7	8.6	3.9	10.8					
Green Ext Time (p_c), s	0.0	2.6	0.0	2.6	0.1	2.7	0.0	5.5				
Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

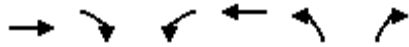
Cumulative Plus Project Buildout w Mitigation
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	530	50	200	40	90	80	5	240	480	20	5	30	350	370
Future Volume (veh/h)	530	50	200	40	90	80	5	240	480	20	5	30	350	370
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1847	1826	1900
Adj Flow Rate, veh/h	615	0	217	43	98	87		261	522	22		33	380	402
Adj No. of Lanes	2	0	1	1	1	1		1	2	0		1	2	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, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	764	0	368	153	195	165		227	1548	65		50	605	526
Arrive On Green	0.22	0.00	0.23	0.09	0.10	0.10		0.13	0.45	0.42		0.03	0.35	0.33
Sat Flow, veh/h	3548	0	1581	1757	1863	1583		1774	3458	145		1759	1735	1510
Grp Volume(v), veh/h	615	0	217	43	98	87		261	267	277		33	380	402
Grp Sat Flow(s),veh/h/ln	1774	0	1581	1757	1863	1583		1774	1770	1833		1759	1735	1510
Q Serve(g_s), s	14.1	0.0	10.5	2.0	4.3	4.5		11.0	8.4	8.5		1.6	15.7	20.5
Cycle Q Clear(g_c), s	14.1	0.0	10.5	2.0	4.3	4.5		11.0	8.4	8.5		1.6	15.7	20.5
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.08		1.00		1.00
Lane Grp Cap(c), veh/h	764	0	368	153	195	165		227	793	821		50	605	526
V/C Ratio(X)	0.80	0.00	0.59	0.28	0.50	0.53		1.15	0.34	0.34		0.65	0.63	0.76
Avail Cap(c_a), veh/h	1714	0	791	726	802	682		227	828	858		180	767	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	29.3	36.7	36.4	36.5		37.5	15.4	15.5		41.3	23.4	25.8
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.4	0.8	1.0		105.9	0.1	0.1		5.2	0.4	2.9
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	7.0	0.0	4.6	1.0	2.2	2.0		12.0	4.1	4.3		0.9	7.6	9.0
LnGrp Delay(d),s/veh	32.8	0.0	29.9	37.1	37.1	37.4		143.3	15.5	15.6		46.6	23.8	28.7
LnGrp LOS	C		C	D	D	D		F	B	B		D	C	C
Approach Vol, veh/h		832			228				805				815	
Approach Delay, s/veh		32.0			37.2				57.0				27.1	
Approach LOS		C			D				E				C	
Timer	1	2	3	4	5	6	7	8						
Assigned Phs	1	2		4	5	6		8						
Phs Duration (G+Y+Rc), s	6.5	42.5		24.0	15.0	33.9		13.0						
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0						
Max Green Setting (Gmax), s	38.2	38.2		41.0	10.5	36.0		35.0						
Max Q Clear Time (g_c+1), s	13.6	10.5		16.1	13.0	22.5		6.5						
Green Ext Time (p_c), s	0.0	6.5		1.6	0.0	5.1		0.5						
Intersection Summary														
HCM 2010 Ctrl Delay			38.5											
HCM 2010 LOS			D											
Notes														

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Cumulative Plus Project Buildout w Mitigation
 AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	850	20	140	640	40	100		
Future Volume (veh/h)	850	20	140	640	40	100		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	924	22	152	696	43	109		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2267	54	489	2271	224	200		
Arrive On Green	0.64	0.64	0.64	0.64	0.13	0.13		
Sat Flow, veh/h	3626	84	590	3632	1774	1583		
Grp Volume(v), veh/h	463	483	152	696	43	109		
Grp Sat Flow(s),veh/h/ln	1770	1848	590	1770	1774	1583		
Q Serve(g_s), s	4.9	4.9	6.5	3.4	0.8	2.5		
Cycle Q Clear(g_c), s	4.9	4.9	11.5	3.4	0.8	2.5		
Prop In Lane		0.05	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	1135	1185	489	2271	224	200		
V/C Ratio(X)	0.41	0.41	0.31	0.31	0.19	0.54		
Avail Cap(c_a), veh/h	1438	1501	590	2875	1121	1000		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	3.4	3.4	6.2	3.1	15.2	15.9		
Incr Delay (d2), s/veh	0.2	0.2	0.4	0.1	0.4	2.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.4	2.5	1.1	1.7	0.4	1.2		
LnGrp Delay(d),s/veh	3.6	3.6	6.5	3.2	15.6	18.2		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h	946			848	152			
Approach Delay, s/veh	3.6			3.8	17.5			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		9.4		29.4				29.4
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		24.5		31.5				31.5
Max Q Clear Time (g_c+I1), s		4.5		6.9				13.5
Green Ext Time (p_c), s		0.4		13.9				11.4
Intersection Summary								
HCM 2010 Ctrl Delay			4.8					
HCM 2010 LOS			A					

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Buildout with Mitgations
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	45	31	68.4%	42.5	12.8	D
	Through	1,960	1,460	74.5%	17.5	3.1	B
	Right Turn	30	21	68.4%	12.0	3.4	B
	Subtotal	2,035	1,511	74.3%	18.0	3.0	B
SB	Left Turn	55	33	60.1%	35.4	9.4	D
	Through	1,510	1,071	70.9%	14.0	2.1	B
	Right Turn	30	23	76.0%	10.0	2.1	B
	Subtotal	1,595	1,127	70.7%	14.5	2.1	B
EB	Left Turn	10	7	68.4%	31.1	19.9	C
	Through	10	12	117.8%	26.1	18.8	C
	Right Turn	35	36	104.2%	8.5	3.6	A
	Subtotal	55	55	100.2%	15.4	5.9	B
WB	Left Turn	10	13	133.0%	29.5	28.8	C
	Through	10	9	87.4%	27.4	24.6	C
	Right Turn	105	102	97.4%	18.7	4.7	B
	Subtotal	125	124	99.4%	20.2	5.1	C
Total		3,810	2,818	74.0%	16.6	2.2	B

Intersection 8 SR 99/Smith Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	56	79.8%	40.4	6.9	D
	Through	1,940	1,625	83.8%	18.6	2.6	B
	Right Turn	30	25	83.6%	16.9	4.8	B
	Subtotal	2,040	1,706	83.6%	19.3	2.6	B
SB	Left Turn	50	24	48.6%	39.4	5.4	D
	Through	1,430	952	66.6%	17.7	2.4	B
	Right Turn	100	62	61.6%	13.5	3.1	B
	Subtotal	1,580	1,038	65.7%	18.0	2.1	B
EB	Left Turn	50	55	111.0%	28.0	9.3	C
	Through	10	8	83.6%	30.7	23.2	C
	Right Turn	30	32	105.1%	8.2	2.7	A
	Subtotal	90	95	106.0%	21.8	8.2	C
WB	Left Turn	20	22	108.3%	25.4	11.8	C
	Through	20	19	95.0%	26.5	10.1	C
	Right Turn	40	37	93.1%	18.2	6.6	B
	Subtotal	80	78	97.4%	23.2	4.6	C
Total		3,790	2,917	77.0%	19.0	1.9	B

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	520	437	84.0%	75.4	12.1	E
	Through	1,180	968	82.1%	85.1	18.5	F
	Right Turn	295	221	74.8%	55.9	18.7	E
	Subtotal	1,995	1,626	81.5%	78.6	17.0	E
SB	Left Turn	525	328	62.5%	46.9	7.1	D
	Through	685	450	65.7%	37.1	5.8	D
	Right Turn	270	171	63.2%	17.6	4.1	B
	Subtotal	1,480	949	64.1%	37.2	3.9	D
EB	Left Turn	320	306	95.5%	60.8	10.5	E
	Through	460	451	98.1%	35.2	2.5	D
	Right Turn	390	397	101.7%	19.5	4.6	B
	Subtotal	1,170	1,153	98.6%	36.7	5.3	D
WB	Left Turn	155	149	96.1%	52.5	5.2	D
	Through	450	435	96.6%	41.5	2.4	D
	Right Turn	540	490	90.7%	30.4	2.8	C
	Subtotal	1,145	1,074	93.8%	38.1	2.2	D
Total		5,790	4,802	82.9%	51.2	5.1	D

Intersection 10 SR 99/Stewart Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	64	91.2%	66.2	15.8	E
	Through	1,880	1,718	91.4%	46.2	11.2	D
	Right Turn	140	124	88.2%	34.7	12.1	C
	Subtotal	2,090	1,906	91.2%	46.1	11.2	D
SB	Left Turn	160	117	73.2%	93.6	26.3	F
	Through	1,060	808	76.2%	19.2	4.6	B
	Right Turn	10	6	60.8%	15.8	9.8	B
	Subtotal	1,230	931	75.7%	28.6	6.6	C
EB	Left Turn	10	11	106.4%	39.0	19.5	D
	Through	40	58	144.4%	45.8	10.9	D
	Right Turn	40	38	96.0%	8.7	3.2	A
	Subtotal	90	107	118.6%	32.7	9.5	C
WB	Left Turn	70	62	88.5%	48.2	13.7	D
	Through	20	33	165.3%	59.5	12.3	E
	Right Turn	105	111	106.0%	31.6	5.0	C
	Subtotal	195	206	105.8%	40.9	5.5	D
Total		3,605	3,149	87.4%	40.1	8.5	D

Intersection 24
























Phillips Rd/Bogue Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	540	522	96.7%	33.2	4.2	C
	Through	10	10	98.8%	38.2	18.5	D
	Right Turn	10	10	98.8%	4.2	3.1	A
	Subtotal	560	542	96.8%	32.8	4.3	C
SB	Left Turn	30	25	82.3%	36.5	10.8	D
	Through	30	27	89.9%	32.3	7.3	C
	Right Turn	40	37	92.2%	17.2	4.0	B
	Subtotal	100	89	88.5%	27.8	3.6	C
EB	Left Turn	80	60	75.1%	44.7	7.3	D
	Through	840	626	74.6%	28.6	3.4	C
	Right Turn	180	147	81.5%	26.8	3.5	C
	Subtotal	1,100	833	75.7%	29.5	3.4	C
WB	Left Turn	110	103	93.6%	45.9	8.9	D
	Through	480	464	96.6%	22.4	1.5	C
	Right Turn	20	17	83.6%	16.3	4.2	B
	Subtotal	610	583	95.6%	26.5	2.8	C
Total		2,370	2,047	86.4%	29.5	2.1	C

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Cumulative Plus Project Buildout w Mitigations
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	420	50	50	530	320	80	160	60	290	110	30
Future Volume (veh/h)	20	420	50	50	530	320	80	160	60	290	110	30
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		0.98	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1842	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	22	452	54	54	570	344	86	172	65	312	118	32
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	524	63	68	650	553	111	260	221	355	389	106
Arrive On Green	0.01	0.33	0.33	0.04	0.35	0.35	0.06	0.14	0.14	0.20	0.28	0.28
Sat Flow, veh/h	1774	1610	192	1774	1863	1583	1774	1863	1583	1774	1405	381
Grp Volume(v), veh/h	22	0	506	54	570	344	86	172	65	312	0	150
Grp Sat Flow(s),veh/h/ln	1774	0	1803	1774	1863	1583	1774	1863	1583	1774	0	1786
Q Serve(g_s), s	0.9	0.0	18.6	2.1	20.3	12.8	3.4	6.2	2.6	12.1	0.0	4.7
Cycle Q Clear(g_c), s	0.9	0.0	18.6	2.1	20.3	12.8	3.4	6.2	2.6	12.1	0.0	4.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	26	0	587	68	650	553	111	260	221	355	0	495
V/C Ratio(X)	0.83	0.00	0.86	0.80	0.88	0.62	0.78	0.66	0.29	0.88	0.00	0.30
Avail Cap(c_a), veh/h	75	0	619	93	658	559	248	666	566	394	0	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	22.4	33.7	21.6	19.2	32.7	28.9	27.3	27.5	0.0	20.2
Incr Delay (d2), s/veh	21.3	0.0	11.5	19.7	12.7	2.1	4.4	2.9	0.7	17.4	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	0.6	0.0	11.2	1.4	12.6	5.9	1.8	3.4	1.2	7.6	0.0	2.3
LnGrp Delay(d),s/veh	56.0	0.0	33.9	53.5	34.3	21.3	37.1	31.7	28.1	44.9	0.0	20.5
LnGrp LOS	E		C	D	C	C	D	C	C	D		C
Approach Vol, veh/h		528			968			323			462	
Approach Delay, s/veh		34.8			30.7			32.4			37.0	
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	18.6	15.9	7.2	29.0	8.9	25.6	5.6	30.7				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	15.7	25.3	3.7	24.3	9.9	31.1	3.0	25.0				
Max Q Clear Time (g_c+I1), s	14.1	8.2	4.1	20.6	5.4	6.7	2.9	22.3				
Green Ext Time (p_c), s	0.1	1.7	0.0	2.4	0.0	1.8	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			33.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 22: Railroad Ave & Lincoln Rd

Cumulative Plus Project Buildout w Mitigations
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	590	150	120	880	70	110	100	50	90	150	60
Future Volume (veh/h)	50	590	150	120	880	70	110	100	50	90	150	60
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		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1863	1792	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	53	628	160	128	936	74	117	106	53	96	160	64
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	1111	510	164	1352	599	150	345	292	123	316	265
Arrive On Green	0.04	0.33	0.33	0.09	0.38	0.38	0.08	0.18	0.18	0.07	0.17	0.17
Sat Flow, veh/h	1774	3406	1564	1774	3539	1567	1774	1863	1581	1774	1863	1561
Grp Volume(v), veh/h	53	628	160	128	936	74	117	106	53	96	160	64
Grp Sat Flow(s),veh/h/ln	1774	1703	1564	1774	1770	1567	1774	1863	1581	1774	1863	1561
Q Serve(g_s), s	1.6	8.4	4.2	3.9	12.2	1.7	3.6	2.7	1.6	2.9	4.3	2.0
Cycle Q Clear(g_c), s	1.6	8.4	4.2	3.9	12.2	1.7	3.6	2.7	1.6	2.9	4.3	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	1111	510	164	1352	599	150	345	292	123	316	265
V/C Ratio(X)	0.82	0.57	0.31	0.78	0.69	0.12	0.78	0.31	0.18	0.78	0.51	0.24
Avail Cap(c_a), veh/h	113	1206	554	242	1510	669	242	944	801	229	930	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	15.3	13.9	24.4	14.3	11.0	24.7	19.4	18.9	25.2	20.8	19.8
Incr Delay (d2), s/veh	21.0	0.5	0.3	9.3	1.2	0.1	8.4	0.5	0.3	10.1	1.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.0	1.9	2.3	6.2	0.7	2.1	1.4	0.7	1.8	2.3	0.9
LnGrp Delay(d),s/veh	47.4	15.9	14.3	33.8	15.5	11.1	33.0	19.9	19.2	35.3	22.0	20.3
LnGrp LOS	D	B	B	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		841			1138			276			320	
Approach Delay, s/veh		17.5			17.3			25.3			25.7	
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	8.3	14.7	9.6	22.5	9.2	13.8	6.5	25.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.9	7.5	19.5	7.5	27.5	3.5	23.5					
Max Q Clear Time (g_c+1), s	4.7	5.9	10.4	5.6	6.3	3.6	14.2					
Green Ext Time (p_c), s	0.0	1.9	0.0	6.7	0.0	1.8	0.0	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay			19.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

Cumulative Plus Project Buildout w Mitigations
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	110	640	130	90	470	60	70	80	100	70	170	90
Future Volume (veh/h)	110	640	130	90	470	60	70	80	100	70	170	90
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		0.97	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	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	113	660	134	93	485	62	72	82	103	72	175	93
Adj No. of Lanes	1	1	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	696	141	119	1416	180	92	142	178	92	221	117
Arrive On Green	0.08	0.46	0.46	0.07	0.45	0.45	0.05	0.19	0.19	0.05	0.19	0.19
Sat Flow, veh/h	1774	1504	305	1774	3159	402	1774	738	927	1774	1146	609
Grp Volume(v), veh/h	113	0	794	93	271	276	72	0	185	72	0	268
Grp Sat Flow(s),veh/h/ln	1774	0	1809	1774	1770	1792	1774	0	1666	1774	0	1755
Q Serve(g_s), s	5.1	0.0	34.2	4.2	8.1	8.2	3.3	0.0	8.2	3.3	0.0	11.9
Cycle Q Clear(g_c), s	5.1	0.0	34.2	4.2	8.1	8.2	3.3	0.0	8.2	3.3	0.0	11.9
Prop In Lane	1.00		0.17	1.00		0.22	1.00		0.56	1.00		0.35
Lane Grp Cap(c), veh/h	145	0	837	119	793	803	92	0	321	92	0	338
V/C Ratio(X)	0.78	0.00	0.95	0.78	0.34	0.34	0.78	0.00	0.58	0.78	0.00	0.79
Avail Cap(c_a), veh/h	268	0	875	131	793	803	109	0	434	109	0	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	20.9	37.4	14.6	14.7	38.1	0.0	29.9	38.1	0.0	31.3
Incr Delay (d2), s/veh	8.8	0.0	18.7	24.1	0.3	0.3	25.8	0.0	1.6	25.8	0.0	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	2.8	0.0	21.3	2.9	4.0	4.1	2.3	0.0	3.9	2.3	0.0	6.4
LnGrp Delay(d),s/veh	45.5	0.0	39.7	61.5	14.9	14.9	64.0	0.0	31.5	64.0	0.0	38.1
LnGrp LOS	D		D	E	B	B	E		C	E		D
Approach Vol, veh/h		907			640			257			340	
Approach Delay, s/veh		40.4			21.7			40.6			43.5	
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	8.8	20.3	10.0	42.3	8.8	20.3	11.2	41.1				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	5.0	21.2	6.0	39.4	5.0	21.2	12.3	33.1				
Max Q Clear Time (g_c+1), s	10.2	10.2	6.2	36.2	5.3	13.9	7.1	10.2				
Green Ext Time (p_c), s	0.0	2.1	0.0	1.5	0.0	1.6	0.1	10.3				
Intersection Summary												
HCM 2010 Ctrl Delay			35.3									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

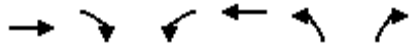
Cumulative Plus Project Buildout w Mitigations
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	495	90	210	10	70	60	5	190	400	20	5	70	400	510
Future Volume (veh/h)	495	90	210	10	70	60	5	190	400	20	5	70	400	510
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		0.99	1.00		1.00		1.00		1.00		1.00		0.97
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	1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900
Adj Flow Rate, veh/h	571	0	214	10	71	61		194	408	20		71	408	520
Adj No. of Lanes	2	0	1	1	1	1		1	2	0		1	2	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, %	2	2	2	2	2	2		3	2	2		2	2	2
Cap, veh/h	814	0	385	150	191	162		123	1398	68		101	697	603
Arrive On Green	0.23	0.00	0.25	0.08	0.10	0.10		0.07	0.41	0.38		0.06	0.39	0.37
Sat Flow, veh/h	3548	0	1560	1774	1863	1583		1757	3435	168		1774	1770	1531
Grp Volume(v), veh/h	571	0	214	10	71	61		194	210	218		71	408	520
Grp Sat Flow(s),veh/h/ln	1774	0	1560	1774	1863	1583		1757	1770	1833		1774	1770	1531
Q Serve(g_s), s	12.7	0.0	10.3	0.4	3.0	3.1		6.0	6.8	6.9		3.4	15.6	26.9
Cycle Q Clear(g_c), s	12.7	0.0	10.3	0.4	3.0	3.1		6.0	6.8	6.9		3.4	15.6	26.9
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.09		1.00		1.00
Lane Grp Cap(c), veh/h	814	0	385	150	191	162		123	720	746		101	697	603
V/C Ratio(X)	0.70	0.00	0.56	0.07	0.37	0.38		1.58	0.29	0.29		0.70	0.59	0.86
Avail Cap(c_a), veh/h	1595	0	729	797	870	739		123	720	746		199	764	661
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	28.2	36.1	35.9	35.9		39.8	17.1	17.2		39.7	20.4	24.8
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.1	0.4	0.5		294.5	0.1	0.1		3.3	0.5	9.8
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	6.2	0.0	4.5	0.2	1.6	1.4		12.9	3.3	3.5		1.7	7.7	13.0
LnGrp Delay(d),s/veh	30.7	0.0	28.6	36.2	36.3	36.4		334.3	17.2	17.2		43.0	21.0	34.6
LnGrp LOS	C		C	D	D	D		F	B	B		D	C	C
Approach Vol, veh/h		785			142				622				999	
Approach Delay, s/veh		30.2			36.4				116.1				29.6	
Approach LOS		C			D				F				C	
Timer	1	2	3	4	5	6	7	8						
Assigned Phs	1	2		4	5	6		8						
Phs Duration (G+Y+Rc), s	8.9	38.9		25.1	10.0	37.8		12.8						
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0						
Max Green Setting (Gmax), s	31.4			38.0	5.5	35.0		38.0						
Max Q Clear Time (g_c+1), s	8.9			14.7	8.0	28.9		5.1						
Green Ext Time (p_c), s	0.0	6.6		1.5	0.0	2.6		0.3						
Intersection Summary														
HCM 2010 Ctrl Delay			51.3											
HCM 2010 LOS			D											
Notes														

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Cumulative Plus Project Buildout w Mitigations
 PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	760	30	150	950	20	150		
Future Volume (veh/h)	760	30	150	950	20	150		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	809	32	160	1011	21	160		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	2098	83	504	2140	283	253		
Arrive On Green	0.60	0.60	0.60	0.60	0.16	0.16		
Sat Flow, veh/h	3564	137	651	3632	1774	1583		
Grp Volume(v), veh/h	412	429	160	1011	21	160		
Grp Sat Flow(s),veh/h/ln	1770	1838	651	1770	1774	1583		
Q Serve(g_s), s	4.6	4.6	6.4	6.0	0.4	3.6		
Cycle Q Clear(g_c), s	4.6	4.6	11.0	6.0	0.4	3.6		
Prop In Lane		0.07	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	1070	1111	504	2140	283	253		
V/C Ratio(X)	0.39	0.39	0.32	0.47	0.07	0.63		
Avail Cap(c_a), veh/h	1228	1275	562	2456	1138	1016		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	3.9	3.9	6.7	4.2	13.6	15.0		
Incr Delay (d2), s/veh	0.2	0.2	0.4	0.2	0.1	2.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.2	2.3	1.2	2.9	0.2	1.7		
LnGrp Delay(d),s/veh	4.1	4.1	7.1	4.3	13.8	17.6		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h	841			1171	181			
Approach Delay, s/veh	4.1			4.7	17.2			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		10.6		27.6				27.6
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		24.5		26.5				26.5
Max Q Clear Time (g_c+I1), s		5.6		6.6				13.0
Green Ext Time (p_c), s		0.5		13.5				10.1
Intersection Summary								
HCM 2010 Ctrl Delay				5.5				
HCM 2010 LOS				A				

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigation

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	139	133	225	348	270	120	132	191	172	220	148	341
Average Queue (ft)	84	89	109	178	190	73	86	137	123	190	93	157
95th Queue (ft)	148	142	215	351	299	127	143	206	183	255	152	383
Link Distance (ft)			5033	5033		143	143	143	143	143		
Upstream Blk Time (%)						0	1	8	6	25		
Queuing Penalty (veh)						1	1	19	13	59		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)				0	8							0
Queuing Penalty (veh)				1	16							0

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	557	566	299	124	143	304	300	197
Average Queue (ft)	357	358	125	62	84	194	192	64
95th Queue (ft)	603	604	351	131	149	344	344	173
Link Distance (ft)	3891	3891				1961	1961	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500		300	
Storage Blk Time (%)	6	18	0				2	0
Queuing Penalty (veh)	17	25	1				5	0

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigations

AM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	UL	T	T	R
Maximum Queue (ft)	61	98	204	167	142	365	375	131	166	317	343	57
Average Queue (ft)	31	48	106	105	69	209	215	38	94	177	185	11
95th Queue (ft)	65	107	201	181	149	391	407	142	186	340	353	71
Link Distance (ft)	191		394			1336	1336			3891	3891	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		150		150	450			150	450			150
Storage Blk Time (%)		0	3	2		0	12	0		0	12	0
Queuing Penalty (veh)		0	8	4		0	9	0		1	3	0

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigations

PM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	212	225	237	223	220	112	131	203	166	232	254	452
Average Queue (ft)	126	142	124	148	128	60	71	154	134	190	175	278
95th Queue (ft)	219	232	216	235	236	114	133	224	188	259	271	521
Link Distance (ft)			5033	5033		143	143	143	143	143		
Upstream Blk Time (%)						0	1	11	6	28		
Queuing Penalty (veh)						0	3	26	15	69		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)	0	2	0	0	0						0	0
Queuing Penalty (veh)	1	5	1	1	1						0	0

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	791	791	324	200	209	230	227	136
Average Queue (ft)	450	452	230	120	132	130	131	60
95th Queue (ft)	865	856	434	224	233	244	250	140
Link Distance (ft)	3898	3898				1961	1961	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500			300
Storage Blk Time (%)	12	27	0				0	
Queuing Penalty (veh)	64	83	2				0	

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigations

PM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	UL	T	T	R
Maximum Queue (ft)	102	68	133	137	363	844	854	175	232	229	229	24
Average Queue (ft)	49	25	76	69	101	494	498	80	152	109	115	5
95th Queue (ft)	107	68	144	137	287	934	935	211	292	234	233	41
Link Distance (ft)	191		267			1341	1341			3898	3898	
Upstream Blk Time (%)	0	0				0	0					
Queuing Penalty (veh)	0	0				1	1					
Storage Bay Dist (ft)		150		150	450			150	450			150
Storage Blk Time (%)	1		1	0	0	13	27	0				5
Queuing Penalty (veh)	0		1	0	0	10	40	1				1

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	255	241	94.5%	54.7	5.1	D
	Through	955	895	93.8%	60.3	9.4	E
	Right Turn	125	116	93.0%	24.8	8.1	C
	Subtotal	1,335	1,253	93.8%	55.9	7.7	E
SB	Left Turn	285	297	104.2%	51.5	4.2	D
	Through	990	945	95.5%	42.8	8.5	D
	Right Turn	285	275	96.5%	17.9	4.4	B
	Subtotal	1,560	1,517	97.2%	40.0	6.8	D
EB	Left Turn	205	204	99.6%	48.9	4.7	D
	Through	370	343	92.7%	39.4	2.5	D
	Right Turn	445	432	97.0%	41.9	12.1	D
	Subtotal	1,020	979	96.0%	42.6	6.1	D
WB	Left Turn	195	184	94.2%	53.6	4.8	D
	Through	420	397	94.6%	41.1	2.8	D
	Right Turn	470	455	96.9%	26.3	2.5	C
	Subtotal	1,085	1,036	95.5%	36.8	2.2	D
Total		5,000	4,785	95.7%	44.1	3.6	D

Intersection 10 SR 99/Stewarts Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	40	0	0.0%	0.0	0.0	A
	Through	1,090	0	0.0%	0.0	0.0	A
	Right Turn	70	0	0.0%	0.0	0.0	A
	Subtotal	1,200	0	0.0%	0.0	0.0	A
SB	Left Turn	135	0	0.0%	0.0	0.0	A
	Through	1,475	0	0.0%	0.0	0.0	A
	Right Turn	20	0	0.0%	0.0	0.0	A
	Subtotal	1,630	0	0.0%	0.0	0.0	A
EB	Left Turn	20	0	0.0%	0.0	0.0	A
	Through	20	0	0.0%	0.0	0.0	A
	Right Turn	60	0	0.0%	0.0	0.0	A
	Subtotal	100	0	0.0%	0.0	0.0	A
WB	Left Turn	110	0	0.0%	0.0	0.0	A
	Through	30	0	0.0%	0.0	0.0	A
	Right Turn	220	0	0.0%	0.0	0.0	A
	Subtotal	360	0	0.0%	0.0	0.0	A
Total		3,290	0	0.0%	0.0	0.0	A

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	520	404	77.7%	139.6	44.5	F
	Through	1,180	951	80.6%	177.6	41.8	F
	Right Turn	295	247	83.6%	154.5	53.2	F
	Subtotal	1,995	1,602	80.3%	164.5	44.0	F
SB	Left Turn	525	533	101.5%	66.5	9.1	E
	Through	685	658	96.1%	37.7	3.0	D
	Right Turn	270	264	98.0%	14.6	2.6	B
	Subtotal	1,480	1,455	98.3%	44.2	4.3	D
EB	Left Turn	320	296	92.4%	54.8	10.7	D
	Through	460	469	101.9%	34.7	2.6	C
	Right Turn	390	381	97.6%	22.4	3.7	C
	Subtotal	1,170	1,145	97.9%	35.8	3.9	D
WB	Left Turn	155	159	102.5%	57.2	5.4	E
	Through	450	429	95.3%	45.7	7.2	D
	Right Turn	540	531	98.4%	34.2	8.7	C
	Subtotal	1,145	1,119	97.7%	41.9	7.2	D
Total		5,790	5,321	91.9%	78.0	13.0	E

Intersection 10 SR 99/Stewart Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	70	0	0.0%	0.0	0.0	A
	Through	1,880	0	0.0%	0.0	0.0	A
	Right Turn	140	0	0.0%	0.0	0.0	A
	Subtotal	2,090	0	0.0%	0.0	0.0	A
SB	Left Turn	160	0	0.0%	0.0	0.0	A
	Through	1,060	0	0.0%	0.0	0.0	A
	Right Turn	10	0	0.0%	0.0	0.0	A
	Subtotal	1,230	0	0.0%	0.0	0.0	A
EB	Left Turn	10	0	0.0%	0.0	0.0	A
	Through	40	0	0.0%	0.0	0.0	A
	Right Turn	40	0	0.0%	0.0	0.0	A
	Subtotal	90	0	0.0%	0.0	0.0	A
WB	Left Turn	70	0	0.0%	0.0	0.0	A
	Through	20	0	0.0%	0.0	0.0	A
	Right Turn	105	0	0.0%	0.0	0.0	A
	Subtotal	195	0	0.0%	0.0	0.0	A
Total		3,605	0	0.0%	0.0	0.0	A

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigations - Unconstrained Scenario

PM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	208	220	229	245	254	120	154	212	175	219	234	475
Average Queue (ft)	139	150	140	160	162	71	92	158	128	205	170	456
95th Queue (ft)	235	241	243	247	259	130	157	234	188	247	252	580
Link Distance (ft)			5032	5032		143	143	143	143	143		
Upstream Blk Time (%)						0	2	15	7	39		
Queuing Penalty (veh)						0	5	35	17	93		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)	0	2	0	0	1							0
Queuing Penalty (veh)	1	4	0	1	3							1

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	2793	2774	325	298	327	284	272	164
Average Queue (ft)	1972	1972	284	227	257	203	192	82
95th Queue (ft)	2921	2903	436	344	366	292	280	157
Link Distance (ft)	3964	3964				2354	2354	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500			300
Storage Blk Time (%)	49	61	1				0	0
Queuing Penalty (veh)	266	191	5				0	0

Queuing and Blocking Report

Cumulative Plus Project Buildout with Mitigations - Unconstrained Scenario

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	118	136	222	371	267	124	154	192	171	221	165	411
Average Queue (ft)	72	90	110	195	212	75	95	143	130	187	101	191
95th Queue (ft)	132	146	226	402	306	133	161	207	184	248	184	448
Link Distance (ft)			5032	5032		143	143	143	143	143		
Upstream Blk Time (%)						0	1	11	6	26		
Queuing Penalty (veh)						1	3	25	14	60		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)				0	11							0
Queuing Penalty (veh)				1	22							0

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	684	707	325	186	296	444	431	271
Average Queue (ft)	450	448	129	119	187	316	297	136
95th Queue (ft)	733	747	348	213	328	474	478	314
Link Distance (ft)	3445	3445				1718	1718	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500			300
Storage Blk Time (%)	11	26	0			1	7	0
Queuing Penalty (veh)	30	36	1			5	21	1

APPENDIX G.7.2:

Cumulative Conditions Plus

Newkom Ranch / Kells East Ranch

(Phases 1 and 2) with Mitigations

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitigation
AM Peak Hour

Intersection 5 SR 99/Hunn Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	30	21	71.1%	33.5	13.8	C
	Through	1,685	1,288	76.5%	14.5	2.3	B
	Right Turn	40	31	78.2%	9.8	2.1	A
	Subtotal	1,755	1,341	76.4%	14.6	2.3	B
SB	Left Turn	60	50	83.4%	31.2	6.1	C
	Through	1,270	984	77.5%	10.8	1.5	B
	Right Turn	20	15	75.4%	9.0	3.3	A
	Subtotal	1,350	1,050	77.7%	11.7	1.5	B
EB	Left Turn	10	8	84.6%	18.0	12.1	B
	Through	10	10	99.4%	21.1	11.3	C
	Right Turn	30	26	88.3%	9.1	4.2	A
	Subtotal	50	45	89.8%	14.0	5.5	B
WB	Left Turn	10	13	125.1%	25.1	12.2	C
	Through	10	9	92.0%	29.0	15.7	C
	Right Turn	40	36	91.1%	15.7	8.1	B
	Subtotal	60	58	96.9%	20.4	7.3	C
Total		3,215	2,494	77.6%	13.5	1.6	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitigation
AM Peak Hour

Intersection 8 SR 99/Smith Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	20	20	101.2%	36.7	12.1	D
	Through	1,410	1,248	88.5%	21.7	2.9	C
	Right Turn	30	24	81.0%	15.0	4.8	B
	Subtotal	1,460	1,292	88.5%	21.8	2.9	C
SB	Left Turn	40	28	69.0%	29.7	7.8	C
	Through	1,545	1,156	74.8%	17.7	2.7	B
	Right Turn	50	38	75.1%	13.5	3.7	B
	Subtotal	1,635	1,221	74.7%	17.8	2.6	B
EB	Left Turn	75	74	99.1%	21.5	6.2	C
	Through	10	9	88.3%	25.9	11.0	C
	Right Turn	30	32	105.5%	15.6	10.5	B
	Subtotal	115	115	99.8%	20.0	6.4	C
WB	Left Turn	20	23	114.1%	25.4	5.9	C
	Through	10	6	55.2%	22.4	21.6	C
	Right Turn	40	38	94.8%	14.8	7.3	B
	Subtotal	70	66	94.6%	19.5	5.1	B
Total		3,280	2,694	82.1%	19.9	2.6	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitigation
AM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	175	164	93.6%	59.1	9.2	E
	Through	980	847	86.4%	68.5	15.1	E
	Right Turn	105	98	92.9%	41.1	11.7	D
	Subtotal	1,260	1,108	88.0%	64.8	13.0	E
SB	Left Turn	255	176	69.1%	45.6	3.2	D
	Through	1,155	791	68.5%	37.9	7.9	D
	Right Turn	185	128	69.4%	16.6	4.3	B
	Subtotal	1,595	1,096	68.7%	36.8	6.4	D
EB	Left Turn	155	158	101.6%	38.6	5.7	D
	Through	330	307	92.9%	25.5	2.5	C
	Right Turn	305	301	98.6%	17.6	3.2	B
	Subtotal	790	765	96.8%	25.2	1.9	C
WB	Left Turn	185	171	92.5%	35.0	3.0	D
	Through	320	323	101.0%	25.2	1.8	C
	Right Turn	325	320	98.4%	17.1	3.5	B
	Subtotal	830	814	98.1%	24.1	2.0	C
Total		4,475	3,783	84.5%	40.0	3.9	D

Intersection 10 SR 99/Stewarts Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	30	23	76.1%	55.2	20.2	E
	Through	1,140	1,097	96.3%	19.4	3.6	B
	Right Turn	50	56	111.1%	11.1	3.8	B
	Subtotal	1,220	1,176	96.4%	19.7	3.6	B
SB	Left Turn	100	65	65.1%	48.3	5.7	D
	Through	1,535	1,127	73.4%	21.5	1.7	C
	Right Turn	10	7	73.6%	18.1	12.4	B
	Subtotal	1,645	1,200	72.9%	22.9	1.7	C
EB	Left Turn	10	11	106.7%	49.9	22.0	D
	Through	10	11	110.4%	46.6	23.5	D
	Right Turn	30	26	87.1%	15.0	5.7	B
	Subtotal	50	48	95.7%	30.3	9.0	C
WB	Left Turn	50	47	94.2%	36.9	9.8	D
	Through	10	10	99.4%	33.6	22.3	C
	Right Turn	110	120	109.4%	18.0	4.0	B
	Subtotal	170	177	104.3%	24.2	4.9	C
Total		3,085	2,601	84.3%	21.8	1.6	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitigation
AM Peak Hour

Intersection 24























Phillips Rd/Bogue Rd

Side-street Stop

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	245	245	99.9%	20.2	0.9	C
	Through	30	31	103.0%	22.3	5.8	C
	Right Turn	30	36	120.2%	5.3	1.0	A
	Subtotal	305	312	102.2%	18.7	0.8	C
SB	Left Turn	60	52	87.1%	23.0	7.2	C
	Through	30	37	122.7%	22.6	7.3	C
	Right Turn	60	58	96.9%	13.4	4.8	B
	Subtotal	150	147	98.1%	19.0	5.1	C
EB	Left Turn	30	26	85.9%	36.2	10.0	E
	Through	390	315	80.8%	22.1	4.1	C
	Right Turn	100	84	84.3%	18.6	5.3	C
	Subtotal	520	425	81.7%	22.2	3.4	C
WB	Left Turn	105	97	92.5%	34.7	7.3	D
	Through	495	507	102.4%	21.9	4.7	C
	Right Turn	60	57	95.1%	17.2	6.3	C
	Subtotal	660	661	100.1%	23.4	3.7	C
Total		1,635	1,545	94.5%	21.8	2.0	C

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Cumulative Plus Phase 1 & 2 w Mitigation
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	580	50	30	410	70	30	50	40	110	70	30
Future Volume (veh/h)	30	580	50	30	410	70	30	50	40	110	70	30
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	1863	1857	1900	1863	1863	1810	1827	1827	1863	1863	1811	1900
Adj Flow Rate, veh/h	32	617	53	32	436	74	32	53	43	117	74	32
Adj No. of Lanes	1	1	0	1	1	1	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, %	2	2	2	2	2	5	4	4	2	2	4	4
Cap, veh/h	38	741	64	38	819	676	37	208	180	149	212	92
Arrive On Green	0.02	0.44	0.44	0.02	0.44	0.44	0.02	0.11	0.11	0.08	0.18	0.18
Sat Flow, veh/h	1774	1687	145	1774	1863	1538	1740	1827	1583	1774	1200	519
Grp Volume(v), veh/h	32	0	670	32	436	74	32	53	43	117	0	106
Grp Sat Flow(s),veh/h/ln	1774	0	1831	1774	1863	1538	1740	1827	1583	1774	0	1720
Q Serve(g_s), s	1.1	0.0	19.9	1.1	10.5	1.7	1.1	1.6	1.5	4.0	0.0	3.3
Cycle Q Clear(g_c), s	1.1	0.0	19.9	1.1	10.5	1.7	1.1	1.6	1.5	4.0	0.0	3.3
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	38	0	805	38	819	676	37	208	180	149	0	304
V/C Ratio(X)	0.85	0.00	0.83	0.85	0.53	0.11	0.86	0.26	0.24	0.78	0.00	0.35
Avail Cap(c_a), veh/h	112	0	982	95	996	822	170	748	648	216	0	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	15.2	30.0	12.6	10.2	30.0	24.9	24.9	27.6	0.0	22.2
Incr Delay (d2), s/veh	17.1	0.0	5.2	17.1	0.5	0.1	18.2	0.6	0.7	6.4	0.0	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	0.7	0.0	11.0	0.7	5.5	0.7	0.7	0.9	0.7	2.2	0.0	1.6
LnGrp Delay(d),s/veh	47.1	0.0	20.5	47.1	13.2	10.2	48.2	25.5	25.5	34.0	0.0	22.9
LnGrp LOS	D		C	D	B	B	D	C	C	C		C
Approach Vol, veh/h		702			542			128			223	
Approach Delay, s/veh		21.7			14.8			31.2			28.7	
Approach LOS		C			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	9.7	13.0	5.8	33.1	5.8	16.9	5.8	33.1				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	* 6				
Max Green Setting (Gmax), s	7.5	25.2	3.3	33.0	6.0	26.7	3.9	* 33				
Max Q Clear Time (g_c+I1), s	6.0	3.6	3.1	21.9	3.1	5.3	3.1	12.5				
Green Ext Time (p_c), s	0.0	0.8	0.0	5.2	0.0	0.8	0.0	7.1				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 22: Railroad Ave & Lincoln Rd

Cumulative Plus Phase 1 & 2 w Mitigation
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	800	50	40	250	50	110	140	90	60	90	50
Future Volume (veh/h)	70	800	50	40	250	50	110	140	90	60	90	50
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		0.99	1.00		0.99	1.00		1.00	1.00		0.99
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	1863	1827	1863	1863	1776	1863	1863	1863	1863	1863	1863	1810
Adj Flow Rate, veh/h	76	870	54	43	272	54	120	152	98	65	98	54
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
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, %	2	4	2	2	7	2	2	2	2	2	2	5
Cap, veh/h	79	1058	477	53	980	457	126	701	595	83	656	538
Arrive On Green	0.04	0.30	0.30	0.03	0.29	0.29	0.07	0.38	0.38	0.05	0.35	0.35
Sat Flow, veh/h	1774	3471	1565	1774	3374	1572	1774	1863	1581	1774	1863	1529
Grp Volume(v), veh/h	76	870	54	43	272	54	120	152	98	65	98	54
Grp Sat Flow(s),veh/h/ln	1774	1736	1565	1774	1687	1572	1774	1863	1581	1774	1863	1529
Q Serve(g_s), s	3.3	17.7	1.9	1.8	4.7	1.9	5.1	4.2	3.1	2.8	2.7	1.8
Cycle Q Clear(g_c), s	3.3	17.7	1.9	1.8	4.7	1.9	5.1	4.2	3.1	2.8	2.7	1.8
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	79	1058	477	53	980	457	126	701	595	83	656	538
V/C Ratio(X)	0.96	0.82	0.11	0.81	0.28	0.12	0.95	0.22	0.16	0.78	0.15	0.10
Avail Cap(c_a), veh/h	79	1150	518	98	1153	537	126	701	595	168	656	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	24.5	19.0	36.7	20.8	19.8	35.2	16.1	15.8	35.9	16.9	16.6
Incr Delay (d2), s/veh	86.9	4.6	0.1	23.7	0.2	0.1	65.6	0.7	0.6	14.5	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	9.1	0.8	1.2	2.2	0.8	4.8	2.3	1.5	1.7	1.5	0.8
LnGrp Delay(d),s/veh	123.2	29.1	19.1	60.4	21.0	20.0	100.8	16.8	16.4	50.4	17.3	16.9
LnGrp LOS	F	C	B	E	C	B	F	B	B	D	B	B
Approach Vol, veh/h		1000			369			370			217	
Approach Delay, s/veh		35.7			25.4			43.9			27.1	
Approach LOS		D			C			D			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	8.2	33.2	6.9	27.8	10.0	31.4	8.0	26.7				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	25.0	4.2	25.2	5.4	26.8	3.4	26.0					
Max Q Clear Time (g_c+1), s	6.2	3.8	19.7	7.1	4.7	5.3	6.7					
Green Ext Time (p_c), s	0.0	1.8	0.0	3.5	0.0	1.9	0.0	8.4				
Intersection Summary												
HCM 2010 Ctrl Delay			34.4									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

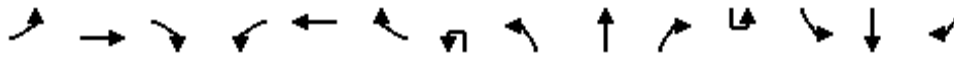
Cumulative Plus Phase 1 & 2 w Mitigation
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	400	40	80	540	50	60	110	110	60	110	70
Future Volume (veh/h)	50	400	40	80	540	50	60	110	110	60	110	70
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	1827	1861	1900	1845	1863	1863	1863	1863	1900	1863	1852	1900
Adj Flow Rate, veh/h	53	421	42	84	568	53	63	116	116	63	116	74
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	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, %	4	2	2	3	2	2	2	2	2	2	3	3
Cap, veh/h	65	623	62	107	741	629	79	169	169	79	209	134
Arrive On Green	0.04	0.37	0.37	0.06	0.40	0.40	0.04	0.20	0.20	0.04	0.20	0.20
Sat Flow, veh/h	1740	1666	166	1757	1863	1581	1774	856	856	1774	1058	675
Grp Volume(v), veh/h	53	0	463	84	568	53	63	0	232	63	0	190
Grp Sat Flow(s),veh/h/ln	1740	0	1832	1757	1863	1581	1774	0	1712	1774	0	1733
Q Serve(g_s), s	1.7	0.0	12.1	2.7	15.1	1.2	2.0	0.0	7.2	2.0	0.0	5.6
Cycle Q Clear(g_c), s	1.7	0.0	12.1	2.7	15.1	1.2	2.0	0.0	7.2	2.0	0.0	5.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.50	1.00		0.39
Lane Grp Cap(c), veh/h	65	0	685	107	741	629	79	0	339	79	0	343
V/C Ratio(X)	0.82	0.00	0.68	0.79	0.77	0.08	0.80	0.00	0.68	0.80	0.00	0.55
Avail Cap(c_a), veh/h	144	0	884	210	968	821	159	0	667	159	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	14.9	26.4	14.9	10.7	27.0	0.0	21.2	27.0	0.0	20.6
Incr Delay (d2), s/veh	21.6	0.0	1.4	11.9	2.7	0.1	16.5	0.0	2.5	16.5	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	6.3	1.7	8.3	0.5	1.3	0.0	3.6	1.3	0.0	2.8
LnGrp Delay(d),s/veh	48.8	0.0	16.3	38.2	17.6	10.8	43.5	0.0	23.7	43.5	0.0	22.0
LnGrp LOS	D		B	D	B	B	D		C	D		C
Approach Vol, veh/h		516			705			295			253	
Approach Delay, s/veh		19.7			19.6			27.9			27.3	
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	7.1	15.9	8.1	25.9	7.1	15.9	6.7	27.3				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	22.2	6.8	27.5	5.1	22.2	4.7	29.6					
Max Q Clear Time (g_c+1), s	9.2	4.7	14.1	4.0	7.6	3.7	17.1					
Green Ext Time (p_c), s	0.0	2.1	0.0	5.8	0.0	2.2	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			22.1									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

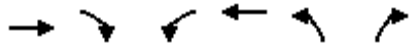
Cumulative Plus Phase 1 & 2 w Mitigation
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Volume (veh/h)	430	50	190	40	90	80	5	240	420	20	5	30	320	320
Future Volume (veh/h)	430	50	190	40	90	80	5	240	420	20	5	30	320	320
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		0.98		1.00		0.97
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	1863	1863	1863	1845	1863	1863		1863	1863	1900		1847	1827	1900
Adj Flow Rate, veh/h	506	0	207	43	98	87		261	457	22		33	348	348
Adj No. of Lanes	2	0	1	1	1	1		1	2	0		1	2	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, %	2	2	2	3	2	2		2	2	2		3	3	3
Cap, veh/h	659	0	323	160	203	173		307	1591	76		51	554	482
Arrive On Green	0.19	0.00	0.20	0.09	0.11	0.11		0.17	0.46	0.44		0.03	0.32	0.29
Sat Flow, veh/h	3548	0	1581	1757	1863	1583		1774	3434	165		1759	1736	1510
Grp Volume(v), veh/h	506	0	207	43	98	87		261	235	244		33	348	348
Grp Sat Flow(s),veh/h/ln	1774	0	1581	1757	1863	1583		1774	1770	1830		1759	1736	1510
Q Serve(g_s), s	11.1	0.0	9.9	1.9	4.1	4.3		11.7	6.7	6.8		1.5	14.0	17.0
Cycle Q Clear(g_c), s	11.1	0.0	9.9	1.9	4.1	4.3		11.7	6.7	6.8		1.5	14.0	17.0
Prop In Lane	1.00		1.00	1.00		1.00		1.00		0.09		1.00		1.00
Lane Grp Cap(c), veh/h	659	0	323	160	203	173		307	820	848		51	554	482
V/C Ratio(X)	0.77	0.00	0.64	0.27	0.48	0.50		0.85	0.29	0.29		0.65	0.63	0.72
Avail Cap(c_a), veh/h	1663	0	770	759	839	713		324	931	962		188	782	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	29.9	34.8	34.4	34.5		32.9	13.6	13.7		39.5	23.8	25.7
Incr Delay (d2), s/veh	0.7	0.0	0.8	0.3	0.7	0.8		17.2	0.1	0.1		5.1	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	4.3	0.9	2.1	1.9		7.2	3.3	3.4		0.8	6.7	7.2
LnGrp Delay(d),s/veh	32.5	0.0	30.7	35.1	35.1	35.3		50.1	13.7	13.8		44.6	24.2	26.7
LnGrp LOS	C		C	D	D	D		D	B	B		D	C	C
Approach Vol, veh/h		713			228				740				729	
Approach Delay, s/veh		32.0			35.2				26.6				26.3	
Approach LOS		C			D				C				C	
Timer	1	2	3	4	5	6	7	8						
Assigned Phs	1	2		4	5	6		8						
Phs Duration (G+Y+Rc), s	6.4	42.1		20.8	18.2	30.2		13.0						
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0						
Max Green Setting (Gmax), s	3	41.2		38.0	14.5	35.0		35.0						
Max Q Clear Time (g_c+1), s	3	8.8		13.1	13.7	19.0		6.3						
Green Ext Time (p_c), s	0.0	5.6		1.4	0.0	4.7		0.5						
Intersection Summary														
HCM 2010 Ctrl Delay			28.9											
HCM 2010 LOS			C											
Notes														

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Cumulative Plus Phase 1 & 2 w Mitigation
 AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	650	10	30	500	30	80		
Future Volume (veh/h)	650	10	30	500	30	80		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	707	11	33	543	33	87		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	1889	29	569	1875	241	215		
Arrive On Green	0.53	0.53	0.53	0.53	0.14	0.14		
Sat Flow, veh/h	3660	55	730	3632	1774	1583		
Grp Volume(v), veh/h	351	367	33	543	33	87		
Grp Sat Flow(s),veh/h/ln	1770	1853	730	1770	1774	1583		
Q Serve(g_s), s	3.1	3.1	0.7	2.3	0.4	1.4		
Cycle Q Clear(g_c), s	3.1	3.1	3.9	2.3	0.4	1.4		
Prop In Lane		0.03	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	937	981	569	1875	241	215		
V/C Ratio(X)	0.37	0.37	0.06	0.29	0.14	0.40		
Avail Cap(c_a), veh/h	1676	1755	874	3353	1681	1500		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	3.7	3.7	4.9	3.5	10.2	10.6		
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.3	1.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	1.6	0.2	1.1	0.2	0.7		
LnGrp Delay(d),s/veh	4.0	3.9	4.9	3.6	10.5	11.9		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h	718			576	120			
Approach Delay, s/veh	4.0			3.7	11.5			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		8.2		18.8				18.8
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		25.5		25.5				25.5
Max Q Clear Time (g_c+I1), s		3.4		5.1				5.9
Green Ext Time (p_c), s		0.3		8.4				8.2
Intersection Summary								
HCM 2010 Ctrl Delay				4.5				
HCM 2010 LOS				A				

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitgations
PM Peak Hour

Intersection 5 SR 99/Hunn Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	45	26	57.4%	39.4	12.1	D
	Through	1,910	1,432	75.0%	16.4	2.1	B
	Right Turn	30	23	77.3%	12.5	3.4	B
	Subtotal	1,985	1,481	74.6%	16.8	2.1	B
SB	Left Turn	60	30	50.7%	42.2	14.5	D
	Through	1,505	1,067	70.9%	13.3	2.5	B
	Right Turn	35	28	80.3%	8.2	2.5	A
	Subtotal	1,600	1,125	70.3%	13.9	2.5	B
EB	Left Turn	10	6	60.8%	18.3	13.5	B
	Through	10	8	83.6%	27.1	16.3	C
	Right Turn	35	32	92.3%	11.8	3.6	B
	Subtotal	55	47	85.0%	16.5	4.4	B
WB	Left Turn	10	7	72.2%	20.1	18.5	C
	Through	10	9	91.2%	22.8	20.8	C
	Right Turn	105	100	95.5%	16.0	4.7	B
	Subtotal	125	117	93.3%	16.8	5.1	B
Total		3,765	2,770	73.6%	15.6	2.0	B

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitgations
PM Peak Hour

Intersection 8

SR 99/Smith Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		
			Average	Percent	Average	Std. Dev.	LOS
NB	Left Turn	70	54	77.6%	44.4	13.9	D
	Through	1,875	1,614	86.1%	21.5	2.6	C
	Right Turn	20	15	74.1%	16.4	11.9	B
	Subtotal	1,965	1,683	85.6%	22.2	2.9	C
SB	Left Turn	55	39	71.2%	42.0	11.1	D
	Through	1,365	942	69.0%	18.0	2.6	B
	Right Turn	120	73	61.1%	12.5	2.3	B
	Subtotal	1,540	1,055	68.5%	18.5	2.7	B
EB	Left Turn	60	62	103.9%	26.4	5.6	C
	Through	10	13	129.2%	27.3	11.8	C
	Right Turn	30	34	112.7%	8.8	3.9	A
	Subtotal	100	109	109.1%	21.5	3.4	C
WB	Left Turn	20	21	104.5%	29.4	8.7	C
	Through	20	22	108.3%	19.5	11.0	B
	Right Turn	50	43	86.6%	17.2	6.5	B
	Subtotal	90	86	95.4%	21.6	6.5	C
Total		3,695	2,932	79.4%	20.9	2.0	C

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitgations
PM Peak Hour

Intersection 9 SR 99/Bogue Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	150	122	81.6%	53.4	5.6	D
	Through	1,210	1,002	82.8%	62.6	8.8	E
	Right Turn	275	224	81.5%	35.9	7.8	D
	Subtotal	1,635	1,349	82.5%	57.4	7.8	E
SB	Left Turn	445	301	67.5%	45.9	4.1	D
	Through	765	494	64.6%	23.9	3.3	C
	Right Turn	205	136	66.2%	12.4	2.4	B
	Subtotal	1,415	931	65.8%	29.4	3.2	C
EB	Left Turn	240	222	92.5%	44.7	6.6	D
	Through	390	378	96.9%	32.6	2.6	C
	Right Turn	260	276	106.0%	13.8	1.7	B
	Subtotal	890	875	98.3%	29.9	2.1	C
WB	Left Turn	145	151	104.3%	46.2	5.5	D
	Through	380	388	102.0%	40.1	4.8	D
	Right Turn	515	481	93.5%	29.4	5.9	C
	Subtotal	1,040	1,020	98.1%	36.0	4.3	D
Total		4,980	4,175	83.8%	40.2	3.0	D

Intersection 10 SR 99/Stewart Rd Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	420	275	65.4%	164.2	40.2	F
	Through	1,585	1,467	92.6%	41.1	13.4	D
	Right Turn	80	77	96.4%	29.6	13.8	C
	Subtotal	2,085	1,819	87.2%	59.2	17.2	E
SB	Left Turn	40	22	56.1%	50.2	24.7	D
	Through	1,120	848	75.7%	21.6	2.8	C
	Right Turn	10	13	129.2%	13.3	5.3	B
	Subtotal	1,170	883	75.5%	22.3	2.7	C
EB	Left Turn	10	9	91.2%	29.7	16.2	C
	Through	10	10	95.0%	36.2	19.7	D
	Right Turn	20	17	85.5%	9.5	6.4	A
	Subtotal	40	36	89.3%	23.9	9.0	C
WB	Left Turn	30	27	89.9%	36.7	11.5	D
	Through	10	14	144.4%	35.5	14.7	D
	Right Turn	40	40	98.8%	17.2	6.5	B
	Subtotal	80	81	101.2%	26.5	5.8	C
Total		3,375	2,819	83.5%	46.1	11.2	D

SimTraffic Post-Processor
Average Results from 10 Runs
Volume and Delay by Movement

Bogue Stewart Master Plan
Cumulative Plus Phases 1 and 2 with Mitgations
PM Peak Hour

Intersection 24
























Phillips Rd/Bogue Rd

Signal

Direction	Movement	Demand Volume (vph)	Served Volume (vph)		Total Delay (sec/veh)		LOS
			Average	Percent	Average	Std. Dev.	
NB	Left Turn	530	520	98.1%	31.6	5.1	C
	Through	10	13	125.4%	32.4	14.9	C
	Right Turn	20	25	127.3%	12.9	6.2	B
	Subtotal	560	558	99.6%	30.8	4.9	C
SB	Left Turn	30	26	87.4%	31.7	7.4	C
	Through	30	27	91.2%	29.1	5.6	C
	Right Turn	40	38	94.1%	14.9	3.7	B
	Subtotal	100	91	91.2%	24.2	3.3	C
EB	Left Turn	80	60	74.6%	44.1	6.7	D
	Through	690	540	78.3%	25.2	2.4	C
	Right Turn	160	116	72.4%	22.8	4.0	C
	Subtotal	930	716	76.9%	26.4	2.2	C
WB	Left Turn	150	137	91.5%	74.2	39.6	E
	Through	380	393	103.4%	22.7	4.4	C
	Right Turn	20	21	106.4%	18.8	7.1	B
	Subtotal	550	551	100.3%	35.5	12.6	D
Total		2,140	1,916	89.5%	30.3	4.2	C

HCM 2010 Signalized Intersection Summary
18: S Walton Ave & Bogue Rd

Cumulative Plus Phases 1 & 2 w Mitigations
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	380	20	40	440	120	150	180	50	180	60	30
Future Volume (veh/h)	20	380	20	40	440	120	150	180	50	180	60	30
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		0.98	1.00		1.00	1.00		1.00	1.00		0.98
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	1863	1853	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	22	409	22	43	473	129	161	194	54	194	65	32
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	27	548	29	52	613	521	202	295	251	232	205	101
Arrive On Green	0.02	0.32	0.32	0.03	0.33	0.33	0.11	0.16	0.16	0.13	0.18	0.18
Sat Flow, veh/h	1774	1740	94	1774	1863	1583	1774	1863	1583	1774	1170	576
Grp Volume(v), veh/h	22	0	431	43	473	129	161	194	54	194	0	97
Grp Sat Flow(s),veh/h/ln	1774	0	1834	1774	1863	1583	1774	1863	1583	1774	0	1746
Q Serve(g_s), s	0.7	0.0	12.1	1.4	13.1	3.4	5.1	5.6	1.7	6.1	0.0	2.8
Cycle Q Clear(g_c), s	0.7	0.0	12.1	1.4	13.1	3.4	5.1	5.6	1.7	6.1	0.0	2.8
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	27	0	578	52	613	521	202	295	251	232	0	306
V/C Ratio(X)	0.80	0.00	0.75	0.83	0.77	0.25	0.80	0.66	0.22	0.84	0.00	0.32
Avail Cap(c_a), veh/h	93	0	768	93	780	663	232	796	677	232	0	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	17.6	27.7	17.3	14.1	24.7	22.7	21.0	24.3	0.0	20.6
Incr Delay (d2), s/veh	17.8	0.0	2.8	11.7	3.7	0.2	13.3	2.5	0.4	21.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	6.6	0.8	7.3	1.5	3.2	3.1	0.8	4.3	0.0	1.4
LnGrp Delay(d),s/veh	45.9	0.0	20.4	39.4	21.0	14.3	38.0	25.1	21.4	45.7	0.0	21.2
LnGrp LOS	D		C	D	C	B	D	C	C	D		C
Approach Vol, veh/h		453			645			409			291	
Approach Delay, s/veh		21.6			20.9			29.7			37.5	
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	12.0	15.1	6.2	24.1	11.0	16.0	5.4	24.9				
Change Period (Y+Rc), s	4.5	6.0	4.5	6.0	4.5	6.0	4.5	6.0				
Max Green Setting (Gmax), s	7.5	24.5	3.0	24.0	7.5	24.5	3.0	24.0				
Max Q Clear Time (g_c+I1), s	8.1	7.6	3.4	14.1	7.1	4.8	2.7	15.1				
Green Ext Time (p_c), s	0.0	1.5	0.0	4.0	0.0	1.6	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 22: Railroad Ave & Lincoln Rd

Cumulative Plus Phases 1 & 2 w Mitigations
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	590	100	90	910	70	90	100	50	90	110	60
Future Volume (veh/h)	50	590	100	90	910	70	90	100	50	90	110	60
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		0.99	1.00		0.99	1.00		1.00	1.00		0.98
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	1863	1792	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	53	628	106	96	968	74	96	106	53	96	117	64
Adj No. of Lanes	1	2	1	1	2	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	6	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	1261	580	123	1427	632	123	288	244	123	288	241
Arrive On Green	0.04	0.37	0.37	0.07	0.40	0.40	0.07	0.15	0.15	0.07	0.15	0.15
Sat Flow, veh/h	1774	3406	1566	1774	3539	1568	1774	1863	1580	1774	1863	1559
Grp Volume(v), veh/h	53	628	106	96	968	74	96	106	53	96	117	64
Grp Sat Flow(s),veh/h/ln	1774	1703	1566	1774	1770	1568	1774	1863	1580	1774	1863	1559
Q Serve(g_s), s	1.6	7.6	2.4	2.8	12.0	1.6	2.8	2.7	1.6	2.8	3.0	1.9
Cycle Q Clear(g_c), s	1.6	7.6	2.4	2.8	12.0	1.6	2.8	2.7	1.6	2.8	3.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	1261	580	123	1427	632	123	288	244	123	288	241
V/C Ratio(X)	0.82	0.50	0.18	0.78	0.68	0.12	0.78	0.37	0.22	0.78	0.41	0.27
Avail Cap(c_a), veh/h	116	1332	612	236	1622	718	216	958	813	216	958	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	13.0	11.4	24.5	13.1	10.0	24.5	20.3	19.8	24.5	20.4	19.9
Incr Delay (d2), s/veh	21.3	0.3	0.1	10.1	1.0	0.1	10.2	0.8	0.4	10.2	0.9	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	1.1	3.6	1.1	1.7	6.0	0.7	1.7	1.4	0.7	1.7	1.6	0.9
LnGrp Delay(d),s/veh	46.9	13.3	11.5	34.6	14.1	10.1	34.7	21.1	20.2	34.7	21.3	20.5
LnGrp LOS	D	B	B	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		787			1138			255			277	
Approach Delay, s/veh		15.3			15.6			26.0			25.8	
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	8.2	12.8	8.2	24.3	8.2	12.8	6.5	26.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	27.5	7.1	20.9	6.5	27.5	3.5	24.5				
Max Q Clear Time (g_c+14), s	4.7	4.7	4.8	9.6	4.8	5.0	3.6	14.0				
Green Ext Time (p_c), s	0.0	1.6	0.0	8.0	0.0	1.6	0.0	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay					17.7							
HCM 2010 LOS					B							

HCM 2010 Signalized Intersection Summary
25: Railroad Ave & Bogue Rd

Cumulative Plus Phases 1 & 2 w Mitigations
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	600	20	100	500	50	20	70	90	60	60	60
Future Volume (veh/h)	110	600	20	100	500	50	20	70	90	60	60	60
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		0.97	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	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	113	619	21	103	515	52	21	72	93	62	62	62
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	748	25	132	765	650	26	114	147	78	159	159
Arrive On Green	0.08	0.42	0.42	0.07	0.41	0.41	0.01	0.16	0.16	0.04	0.19	0.19
Sat Flow, veh/h	1774	1791	61	1774	1863	1583	1774	725	936	1774	856	856
Grp Volume(v), veh/h	113	0	640	103	515	52	21	0	165	62	0	124
Grp Sat Flow(s),veh/h/ln	1774	0	1852	1774	1863	1583	1774	0	1661	1774	0	1712
Q Serve(g_s), s	3.7	0.0	18.4	3.4	13.5	1.2	0.7	0.0	5.6	2.1	0.0	3.8
Cycle Q Clear(g_c), s	3.7	0.0	18.4	3.4	13.5	1.2	0.7	0.0	5.6	2.1	0.0	3.8
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.56	1.00		0.50
Lane Grp Cap(c), veh/h	145	0	774	132	765	650	26	0	260	78	0	318
V/C Ratio(X)	0.78	0.00	0.83	0.78	0.67	0.08	0.80	0.00	0.63	0.80	0.00	0.39
Avail Cap(c_a), veh/h	202	0	879	178	859	731	107	0	647	116	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	15.5	27.2	14.4	10.7	29.4	0.0	23.6	28.3	0.0	21.4
Incr Delay (d2), s/veh	12.2	0.0	5.9	14.4	1.8	0.1	41.0	0.0	2.6	20.4	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	2.3	0.0	10.5	2.2	7.2	0.5	0.6	0.0	2.7	1.4	0.0	1.9
LnGrp Delay(d),s/veh	39.2	0.0	21.4	41.7	16.2	10.8	70.4	0.0	26.2	48.8	0.0	22.2
LnGrp LOS	D		C	D	B	B	E		C	D		C
Approach Vol, veh/h		753			670			186			186	
Approach Delay, s/veh		24.1			19.7			31.2			31.0	
Approach LOS		C			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	7.2	14.0	9.0	29.6	5.5	15.7	9.5	29.2				
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6				
Max Green Setting (Gmax), s	23.3	6.0	28.4	3.6	23.6	6.8	27.6					
Max Q Clear Time (g_c+1), s	7.6	5.4	20.4	2.7	5.8	5.7	15.5					
Green Ext Time (p_c), s	0.0	1.5	0.0	4.6	0.0	1.6	0.0	6.2				
Intersection Summary												
HCM 2010 Ctrl Delay			23.9									
HCM 2010 LOS			C									

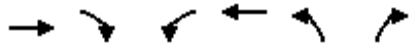
HCM 2010 Signalized Intersection Summary
26: Garden Hwy & Bogue Rd

Cumulative Plus Phases 1 & 2 w Mitigations
PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations																
Traffic Volume (veh/h)	5	400	90	210	10	70	60	5	190	330	20	5	70	290	500	
Future Volume (veh/h)	5	400	90	210	10	70	60	5	190	330	20	5	70	290	500	
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		0.98	1.00		1.00		1.00		1.00		1.00		0.97	
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		1863	1863	1863	1863	1863	1863		1845	1863	1900		1863	1863	1900	
Adj Flow Rate, veh/h		474	0	214	10	71	61		194	337	20		71	296	510	
Adj No. of Lanes		2	0	1	1	1	1		1	2	0		1	2	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, %		2	2	2	2	2	2		3	2	2		2	2	2	
Cap, veh/h		719	0	341	142	179	152		236	1540	91		101	666	575	
Arrive On Green		0.20	0.00	0.22	0.08	0.10	0.10		0.13	0.45	0.43		0.06	0.38	0.35	
Sat Flow, veh/h		3548	0	1557	1774	1863	1583		1757	3396	201		1774	1770	1530	
Grp Volume(v), veh/h		474	0	214	10	71	61		194	175	182		71	296	510	
Grp Sat Flow(s),veh/h/ln		1774	0	1557	1774	1863	1583		1757	1770	1827		1774	1770	1530	
Q Serve(g_s), s		11.3	0.0	11.4	0.5	3.3	3.3		9.8	5.5	5.6		3.6	11.5	28.8	
Cycle Q Clear(g_c), s		11.3	0.0	11.4	0.5	3.3	3.3		9.8	5.5	5.6		3.6	11.5	28.8	
Prop In Lane		1.00		1.00	1.00		1.00		1.00		0.11		1.00		1.00	
Lane Grp Cap(c), veh/h		719	0	341	142	179	152		236	803	829		101	666	575	
V/C Ratio(X)		0.66	0.00	0.63	0.07	0.40	0.40		0.82	0.22	0.22		0.71	0.44	0.89	
Avail Cap(c_a), veh/h		1490	0	680	687	752	639		288	803	829		248	714	618	
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Upstream Filter(I)		1.00	0.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Uniform Delay (d), s/veh		33.6	0.0	32.4	39.0	38.9	38.9		38.6	15.2	15.3		42.5	21.4	27.7	
Incr Delay (d2), s/veh		0.4	0.0	0.7	0.1	0.5	0.6		12.4	0.1	0.0		3.4	0.2	13.2	
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		5.6	0.0	5.0	0.2	1.7	1.5		5.6	2.7	2.8		1.9	5.6	14.2	
LnGrp Delay(d),s/veh		34.0	0.0	33.1	39.1	39.5	39.6		51.0	15.2	15.3		45.8	21.6	40.9	
LnGrp LOS		C		C	D	D	D		D	B	B		D	C	D	
Approach Vol, veh/h			688			142				551				877		
Approach Delay, s/veh			33.7			39.5				27.9				34.8		
Approach LOS			C			D				C				C		
Timer	1	2	3	4	5	6	7	8								
Assigned Phs	1	2		4	5	6		8								
Phs Duration (G+Y+Rc), s	9.2	45.6		24.1	16.3	38.5		12.8								
Change Period (Y+Rc), s	4.5	6.0		6.0	4.5	6.0		6.0								
Max Green Setting (Gmax), s	12.3	37.2		38.0	14.5	35.0		35.0								
Max Q Clear Time (g_c+1), s	11.6	7.6		13.4	11.8	30.8		5.3								
Green Ext Time (p_c), s	0.0	5.8		1.3	0.0	1.5		0.3								
Intersection Summary																
HCM 2010 Ctrl Delay			33.1													
HCM 2010 LOS			C													
Notes																

HCM 2010 Signalized Intersection Summary
 33: Gilsizer Ranch Wy & Bogue Rd

Cumulative Plus Phases 1 & 2 w Mitigations
 PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵	↵		
Traffic Volume (veh/h)	600	30	90	510	160	50		
Future Volume (veh/h)	600	30	90	510	160	50		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	638	32	96	543	170	53		
Adj No. of Lanes	2	0	1	2	1	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	1808	91	559	1866	308	275		
Arrive On Green	0.53	0.53	0.53	0.53	0.17	0.17		
Sat Flow, veh/h	3523	172	764	3632	1774	1583		
Grp Volume(v), veh/h	329	341	96	543	170	53		
Grp Sat Flow(s),veh/h/ln	1770	1832	764	1770	1774	1583		
Q Serve(g_s), s	3.2	3.3	2.5	2.6	2.6	0.9		
Cycle Q Clear(g_c), s	3.2	3.3	5.8	2.6	2.6	0.9		
Prop In Lane		0.09	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	933	966	559	1866	308	275		
V/C Ratio(X)	0.35	0.35	0.17	0.29	0.55	0.19		
Avail Cap(c_a), veh/h	1499	1552	804	2999	1503	1342		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	4.1	4.1	5.8	4.0	11.4	10.6		
Incr Delay (d2), s/veh	0.2	0.2	0.1	0.1	1.5	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.7	0.5	1.2	1.4	0.4		
LnGrp Delay(d),s/veh	4.4	4.4	6.0	4.1	12.9	11.0		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h	670			639	223			
Approach Delay, s/veh	4.4			4.3	12.4			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		9.7		20.4				20.4
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		25.5		25.5				25.5
Max Q Clear Time (g_c+I1), s		4.6		5.3				7.8
Green Ext Time (p_c), s		0.6		8.5				7.9
Intersection Summary								
HCM 2010 Ctrl Delay				5.5				
HCM 2010 LOS				A				

Queuing and Blocking Report

Cumulative Plus Phases 1 & 2 with Mitigations

AM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	83	108	136	148	208	110	122	122	127	190	102	278
Average Queue (ft)	44	67	74	92	127	61	77	82	71	113	58	119
95th Queue (ft)	92	115	143	156	227	112	122	129	123	200	106	338
Link Distance (ft)			1872	1872		143	143	143	143	143		
Upstream Blk Time (%)						0	0	0	0	5		
Queuing Penalty (veh)						0	0	1	1	9		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)					0							
Queuing Penalty (veh)					0							

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	544	533	300	103	157	365	367	198
Average Queue (ft)	341	348	129	50	83	211	206	59
95th Queue (ft)	615	617	355	103	182	398	395	209
Link Distance (ft)	3897	3897				1961	1961	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500			300
Storage Blk Time (%)	6	17	0			0	4	0
Queuing Penalty (veh)	12	20	1			1	9	0

Queuing and Blocking Report

Cumulative Plus Phases 1 & 2 with Mitigations

AM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	T	R	UL	T	T	R
Maximum Queue (ft)	44	62	76	95	120	366	348	124	89	259	267	41
Average Queue (ft)	19	22	41	53	49	163	164	25	52	114	137	6
95th Queue (ft)	47	62	85	100	141	362	371	113	96	254	266	55
Link Distance (ft)	940		496			1341	1341			3897	3897	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		150		150	450			150	450			150
Storage Blk Time (%)				0		1	9	0			5	0
Queuing Penalty (veh)				0		0	5	0			1	0

Queuing and Blocking Report

Cumulative Plus Phases 1 & 2 with Mitigations

PM Peak Hour

Intersection: 9: SR 99 & Bogue Rd

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	R	L	L	T	T	R	L	L
Maximum Queue (ft)	136	141	161	182	173	93	101	193	167	233	80	246
Average Queue (ft)	77	94	108	127	87	49	66	133	118	201	39	98
95th Queue (ft)	146	155	173	189	170	96	105	212	182	258	79	305
Link Distance (ft)			2149	2149		143	143	143	143	143		
Upstream Blk Time (%)						0		7	4	32		
Queuing Penalty (veh)						0		16	9	70		
Storage Bay Dist (ft)	250	250			250						450	450
Storage Blk Time (%)					0							0
Queuing Penalty (veh)					0							0

Intersection: 9: SR 99 & Bogue Rd

Movement	NB	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	R
Maximum Queue (ft)	565	586	325	161	197	172	181	72
Average Queue (ft)	378	384	180	93	110	86	85	29
95th Queue (ft)	676	709	397	176	196	173	174	75
Link Distance (ft)	3897	3897				1961	1961	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300	500	500		300	
Storage Blk Time (%)	8	20	0					
Queuing Penalty (veh)	12	57	2					

Queuing and Blocking Report

Cumulative Plus Phases 1 & 2 with Mitigations - Duel NBL

PM Peak Hour

Intersection: 10: Stewart Rd & SR 99

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	L	T	T	R	UL	T	T
Maximum Queue (ft)	45	43	62	43	285	308	269	303	64	52	279	295
Average Queue (ft)	15	16	27	20	148	203	127	148	14	23	130	149
95th Queue (ft)	45	43	62	48	276	312	264	309	80	57	266	277
Link Distance (ft)	703		484				1340	1340			3897	3897
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		150		150	450	450			150	450		
Storage Blk Time (%)								7	0			10
Queuing Penalty (veh)								6	0			1

Intersection: 10: Stewart Rd & SR 99

Movement	SB
Directions Served	R
Maximum Queue (ft)	60
Average Queue (ft)	11
95th Queue (ft)	70
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	0
Queuing Penalty (veh)	0