

APPENDIX A

APPENDIX

TURNING MOVEMENT VOLUMES

PROJECT TRIP GENERATION

EXISTING (2013) INTERSECTION LOS ANALYSIS WORKSHEETS

NEAR-TERM (2014) INTERSECTION LOS ANALYSIS WORKSHEETS

NEAR-TERM (2014) PLUS PROJECT INTERSECTION LOS ANALYSIS
WORKSHEETS

LONG-TERM (2030) INTERSECTION LOS ANALYSIS WORKSHEETS

LONG-TERM (2030) PLUS PROJECT INTERSECTION LOS ANALYSIS
WORKSHEETS

QUEUING SUMMARY

TURNING MOVEMENT VOLUMES

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-003.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Auto Club Way Southbound					Admiral Callaghan Lane Westbound					Auto Club Way Northbound					Admiral Callaghan Lane Eastbound					Total	Utum 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		
07:00	2	0	0	0	2	6	39	0	0	45	0	0	3	0	3	0	41	0	0	41	91	0
07:15	6	0	2	0	8	5	40	3	0	48	0	0	3	0	3	1	48	0	0	49	108	0
07:30	0	0	0	0	0	4	57	0	0	61	0	0	2	0	2	0	45	0	0	45	108	0
07:45	1	0	0	0	1	9	63	5	0	77	1	0	3	0	4	2	53	1	0	56	138	0
Total	9	0	2	0	11	24	199	8	0	231	1	0	11	0	12	3	187	1	0	191	445	0
08:00	2	0	1	0	3	7	79	3	0	89	0	0	2	0	2	3	54	0	0	57	151	0
08:15	1	0	2	0	3	8	81	8	0	97	0	0	4	0	4	2	54	1	0	57	161	0
08:30	1	0	0	0	1	7	74	3	0	84	0	0	6	0	6	0	88	5	0	93	184	0
08:45	0	0	0	0	0	8	81	2	0	91	1	0	4	0	5	5	43	0	0	48	144	0
Total	4	0	3	0	7	30	315	16	0	361	1	0	16	0	17	10	239	6	0	255	640	0
16:00	5	1	11	0	17	30	156	7	0	193	7	2	25	0	34	9	165	8	0	182	426	0
16:15	7	0	16	0	23	38	153	7	0	198	7	0	23	0	30	5	181	11	0	197	448	0
16:30	3	0	4	0	7	35	170	5	0	210	10	1	23	0	34	5	193	7	0	205	456	0
16:45	5	1	6	0	12	47	156	10	0	213	7	0	21	0	28	4	170	12	0	186	439	0
Total	20	2	37	0	59	150	635	29	0	814	31	3	92	0	126	23	709	38	0	770	1769	0
17:00	7	0	6	0	13	40	178	5	0	223	8	0	35	0	43	7	185	7	0	199	478	0
17:15	4	3	5	0	12	42	186	5	0	233	4	0	28	0	32	5	181	13	0	199	476	0
17:30	6	2	6	0	14	46	202	4	0	252	6	0	19	0	25	2	201	14	0	217	508	0
17:45	6	0	3	0	9	52	172	3	0	227	9	0	36	0	45	2	167	6	0	175	456	0
Total	23	5	20	0	48	180	738	17	0	935	27	0	118	0	145	16	734	40	0	790	1918	0
Grand Total	56	7	62	0	125	384	1887	70	0	2341	60	3	237	0	300	52	1869	85	0	2006	4772	0
Approch %	44.8%	5.6%	49.6%	0.0%		16.4%	80.6%	3.0%	0.0%		20.0%	1.0%	79.0%	0.0%		2.6%	93.2%	4.2%	0.0%			
Total %	1.2%	0.1%	1.3%	0.0%	2.6%	8.0%	39.5%	1.5%	0.0%	49.1%	1.3%	0.1%	5.0%	0.0%	6.3%	1.1%	39.2%	1.8%	0.0%	42.0%	100.0%	

AM PEAK HOUR	Auto Club Way Southbound					Admiral Callaghan Lane Westbound					Auto Club Way Northbound					Admiral Callaghan Lane Eastbound					Total
START TIME	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 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	2	0	1	0	3	7	79	3	0	89	0	0	2	0	2	3	54	0	0	57	151
08:15	1	0	2	0	3	8	81	8	0	97	0	0	4	0	4	2	54	1	0	57	161
08:30	1	0	0	0	1	7	74	3	0	84	0	0	6	0	6	0	88	5	0	93	184
08:45	0	0	0	0	0	8	81	2	0	91	1	0	4	0	5	5	43	0	0	48	144
Total Volume	4	0	3	0	7	30	315	16	0	361	1	0	16	0	17	10	239	6	0	255	640
% App Total	57.1%	0.0%	42.9%	0.0%		8.3%	87.3%	4.4%	0.0%		5.9%	0.0%	94.1%	0.0%		3.9%	93.7%	2.4%	0.0%		
PHF	.500	.000	.375	.000	.583	.938	.972	.500	.000	.930	.250	.000	.667	.000	.708	.500	.679	.300	.000	.685	.870

PM PEAK HOUR	Auto Club Way Southbound					Admiral Callaghan Lane Westbound					Auto Club Way Northbound					Admiral Callaghan Lane Eastbound					Total
START TIME	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	7	0	6	0	13	40	178	5	0	223	8	0	35	0	43	7	185	7	0	199	478
17:15	4	3	5	0	12	42	186	5	0	233	4	0	28	0	32	5	181	13	0	199	476
17:30	6	2	6	0	14	46	202	4	0	252	6	0	19	0	25	2	201	14	0	217	508
17:45	6	0	3	0	9	52	172	3	0	227	9	0	36	0	45	2	167	6	0	175	456
Total Volume	23	5	20	0	48	180	738	17	0	935	27	0	118	0	145	16	734	40	0	790	1918
% App Total	47.9%	10.4%	41.7%	0.0%		19.3%	78.9%	1.8%	0.0%		18.6%	0.0%	81.4%	0.0%		2.0%	92.9%	5.1%	0.0%		
PHF	.821	.417	.833	.000	.857	.865	.913	.850	.000	.928	.750	.000	.819	.000	.806	.571	.913	.714	.000	.910	.944

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-003.ppd

Date : 4/5/2014

City of Vallejo
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

START TIME	Auto Club Way Southbound					Admiral Callaghan Lane Westbound					Auto Club Way Northbound					Admiral Callaghan Lane Eastbound					Total	Utum 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		
11:00	4	1	5	0	10	38	231	2	0	271	2	0	17	0	19	2	191	10	0	203	503	0
11:15	5	1	4	0	10	45	247	10	0	302	5	1	20	0	26	14	193	7	0	214	552	0
11:30	4	0	6	0	10	45	224	8	0	277	6	0	11	0	17	2	235	9	0	246	550	0
11:45	4	2	3	0	9	58	229	7	0	294	13	0	34	0	47	7	207	9	0	223	573	0
Total	17	4	18	0	39	186	931	27	0	1144	26	1	82	0	109	25	826	35	0	886	2178	0
12:00	1	1	3	0	5	44	216	3	0	263	8	1	27	0	36	0	239	13	0	252	556	0
12:15	7	1	2	0	10	44	244	5	0	293	7	0	17	0	24	3	222	13	0	238	565	0
12:30	7	1	2	0	10	53	243	4	0	300	11	0	22	0	33	5	243	14	0	262	605	0
12:45	6	2	4	0	12	57	259	7	0	323	6	2	20	0	28	1	248	9	0	258	621	0
Total	21	5	11	0	37	198	962	19	0	1179	32	3	86	0	121	9	952	49	0	1010	2347	0
Grand Total	38	9	29	0	76	384	1893	46	0	2323	58	4	168	0	230	34	1778	84	0	1896	4525	0
Apprch %	50.0%	11.8%	38.2%	0.0%		16.5%	81.5%	2.0%	0.0%		25.2%	1.7%	73.0%	0.0%		1.8%	93.8%	4.4%	0.0%			
Total %	0.8%	0.2%	0.6%	0.0%	1.7%	8.5%	41.8%	1.0%	0.0%	51.3%	1.3%	0.1%	3.7%	0.0%	5.1%	0.8%	39.3%	1.9%	0.0%	41.9%	100.0%	

NOON PEAK	Auto Club Way Southbound					Admiral Callaghan Lane Westbound					Auto Club Way Northbound					Admiral Callaghan Lane 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 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	1	1	3	0	5	44	216	3	0	263	8	1	27	0	36	0	239	13	0	252	556
12:15	7	1	2	0	10	44	244	5	0	293	7	0	17	0	24	3	222	13	0	238	565
12:30	7	1	2	0	10	53	243	4	0	300	11	0	22	0	33	5	243	14	0	262	605
12:45	6	2	4	0	12	57	259	7	0	323	6	2	20	0	28	1	248	9	0	258	621
Total Volume	21	5	11	0	37	198	962	19	0	1179	32	3	86	0	121	9	952	49	0	1010	2347
% App Total	56.8%	13.5%	29.7%	0.0%		16.8%	81.6%	1.6%	0.0%		26.4%	2.5%	71.1%	0.0%		0.9%	94.3%	4.9%	0.0%		
PHF	.750	.625	.688	.000	.771	.868	.929	.679	.000	.913	.727	.375	.796	.000	.840	.450	.960	.875	.000	.964	.945

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-001 Admiral Callaghan Lane-Columbus Parkway.p

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Admiral Callaghan Lane Southbound					Columbus Parkway Westbound					Admiral Callaghan Lane Northbound					Columbus Parkway Eastbound					Total	Utum 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		
07:00	0	0	0	0	0	1	138	0	0	139	44	0	4	0	48	1	99	43	0	143	330	0
07:15	0	0	0	0	0	5	146	0	0	151	47	0	13	0	60	0	145	41	0	186	397	0
07:30	0	0	0	0	0	2	215	0	0	217	38	0	8	0	46	0	193	58	0	251	514	0
07:45	0	0	0	0	0	15	208	0	0	223	42	0	14	0	56	0	245	60	0	305	584	0
Total	0	0	0	0	0	23	707	0	0	730	171	0	39	0	210	1	682	202	0	885	1825	0
08:00	0	0	0	0	0	9	153	0	0	162	49	0	9	0	58	0	167	76	0	243	463	0
08:15	0	0	0	0	0	11	135	0	0	146	50	0	11	0	61	0	133	91	0	224	431	0
08:30	0	0	0	0	0	11	128	0	0	139	56	0	23	0	79	0	129	80	0	209	427	0
08:45	0	0	0	0	0	18	146	0	0	164	44	0	10	0	54	1	124	73	0	198	416	0
Total	0	0	0	0	0	49	562	0	0	611	199	0	53	0	252	1	553	320	0	874	1737	0
16:00	0	0	0	0	0	20	137	1	0	158	174	0	44	0	218	2	152	162	0	316	692	0
16:15	2	0	0	0	2	24	135	0	0	159	171	0	43	0	214	1	128	184	0	313	688	0
16:30	0	0	1	0	1	26	125	1	0	152	189	0	47	0	236	0	173	173	0	346	735	0
16:45	0	0	1	0	1	31	154	0	0	185	168	0	38	0	206	0	135	181	0	316	708	0
Total	2	0	2	0	4	101	551	2	0	654	702	0	172	0	874	3	588	700	0	1291	2823	0
17:00	0	1	0	0	1	40	154	0	0	194	206	0	39	0	245	1	150	190	0	341	781	0
17:15	1	0	0	0	1	30	154	1	0	185	195	0	38	0	233	0	177	194	0	371	790	0
17:30	0	0	1	0	1	23	144	0	0	167	186	0	51	0	237	1	170	233	0	404	809	0
17:45	0	0	0	0	0	28	129	0	0	157	177	0	38	0	215	2	148	194	0	344	716	0
Total	1	1	1	0	3	121	581	1	0	703	764	0	166	0	930	4	645	811	0	1460	3096	0
Grand Total	3	1	3	0	7	294	2401	3	0	2698	1836	0	430	0	2266	9	2468	2033	0	4510	9481	0
Approch %	42.9%	14.3%	42.9%	0.0%		10.9%	89.0%	0.1%	0.0%		81.0%	0.0%	19.0%	0.0%		0.2%	54.7%	45.1%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.1%	3.1%	25.3%	0.0%	0.0%	28.5%	19.4%	0.0%	4.5%	0.0%	23.9%	0.1%	26.0%	21.4%	0.0%	47.6%	100.0%	

AM PEAK HOUR	Admiral Callaghan Lane Southbound					Columbus Parkway Westbound					Admiral Callaghan Lane Northbound					Columbus Parkway Eastbound					Total
START TIME	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																					
07:30	0	0	0	0	0	2	215	0	0	217	38	0	8	0	46	0	193	58	0	251	514
07:45	0	0	0	0	0	15	208	0	0	223	42	0	14	0	56	0	245	60	0	305	584
08:00	0	0	0	0	0	9	153	0	0	162	49	0	9	0	58	0	167	76	0	243	463
08:15	0	0	0	0	0	11	135	0	0	146	50	0	11	0	61	0	133	91	0	224	431
Total Volume	0	0	0	0	0	37	711	0	0	748	179	0	42	0	221	0	738	285	0	1023	1992
% App Total	0.0%	0.0%	0.0%	0.0%		4.9%	95.1%	0.0%	0.0%		81.0%	0.0%	19.0%	0.0%		0.0%	72.1%	27.9%	0.0%		
PHF	.000	.000	.000	.000	.000	.617	.827	.000	.000	.839	.895	.000	.750	.000	.906	.000	.753	.783	.000	.839	.853

PM PEAK HOUR	Admiral Callaghan Lane Southbound					Columbus Parkway Westbound					Admiral Callaghan Lane Northbound					Columbus Parkway Eastbound					Total
START TIME	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	1	0	0	1	40	154	0	0	194	206	0	39	0	245	1	150	190	0	341	781
17:15	1	0	0	0	1	30	154	1	0	185	195	0	38	0	233	0	177	194	0	371	790
17:30	0	0	1	0	1	23	144	0	0	167	186	0	51	0	237	1	170	233	0	404	809
17:45	0	0	0	0	0	28	129	0	0	157	177	0	38	0	215	2	148	194	0	344	716
Total Volume	1	1	1	0	3	121	581	1	0	703	764	0	166	0	930	4	645	811	0	1460	3096
% App Total	33.3%	33.3%	33.3%	0.0%		17.2%	82.6%	0.1%	0.0%		82.2%	0.0%	17.8%	0.0%		0.3%	44.2%	55.5%	0.0%		
PHF	.250	.250	.250	.000	.750	.756	.943	.250	.000	.906	.927	.000	.814	.000	.949	.500	.911	.870	.000	.903	.957

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-001 Admiral Callaghan Lane-Columbus Parkway.p

Date : 4/5/2014

Unshifted Count = All Vehicles

START TIME	Admiral Callaghan Lane Southbound					Columbus Parkway Westbound					Admiral Callaghan Lane Northbound					Columbus Parkway Eastbound					Total	Utum 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		
11:00	0	0	0	0	0	39	117	1	0	157	157	0	52	0	209	0	117	238	4	359	725	4
11:15	0	0	0	0	0	46	114	0	0	160	185	1	46	0	232	0	103	250	6	359	751	6
11:30	0	0	0	0	0	45	102	0	0	147	193	1	73	0	267	0	108	237	5	350	764	5
11:45	0	1	1	0	2	56	113	0	0	169	181	0	71	0	252	3	105	231	3	342	765	3
Total	0	1	1	0	2	186	446	1	0	633	716	2	242	0	960	3	433	956	18	1410	3005	18
12:00	2	1	1	0	4	42	120	0	0	162	213	1	57	0	271	1	96	223	2	322	759	2
12:15	0	0	1	0	1	55	114	0	0	169	185	0	61	0	246	0	106	236	5	347	763	5
12:30	0	0	0	0	0	42	116	0	0	158	227	1	61	0	289	0	115	256	2	373	820	2
12:45	0	0	1	0	1	79	115	0	0	194	200	0	71	0	271	1	118	252	2	373	839	2
Total	2	1	3	0	6	218	465	0	0	683	825	2	250	0	1077	2	435	967	11	1415	3181	11
Grand Total	2	2	4	0	8	404	911	1	0	1316	1541	4	492	0	2037	5	868	1923	29	2825	6186	29
Apprch %	25.0%	25.0%	50.0%	0.0%		30.7%	69.2%	0.1%	0.0%		75.7%	0.2%	24.2%	0.0%		0.2%	30.7%	68.1%	1.0%			
Total %	0.0%	0.0%	0.1%	0.0%	0.1%	6.5%	14.7%	0.0%	0.0%	21.3%	24.9%	0.1%	8.0%	0.0%	32.9%	0.1%	14.0%	31.1%	0.5%	45.7%	100.0%	

NOON PEAK	Admiral Callaghan Lane Southbound					Columbus Parkway Westbound					Admiral Callaghan Lane Northbound					Columbus Parkway 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 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	2	1	1	0	4	42	120	0	0	162	213	1	57	0	271	1	96	223	2	322	759
12:15	0	0	1	0	1	55	114	0	0	169	185	0	61	0	246	0	106	236	5	347	763
12:30	0	0	0	0	0	42	116	0	0	158	227	1	61	0	289	0	115	256	2	373	820
12:45	0	0	1	0	1	79	115	0	0	194	200	0	71	0	271	1	118	252	2	373	839
Total Volume	2	1	3	0	6	218	465	0	0	683	825	2	250	0	1077	2	435	967	11	1415	3181
% App Total	33.3%	16.7%	50.0%	0.0%		31.9%	68.1%	0.0%	0.0%		76.6%	0.2%	23.2%	0.0%		0.1%	30.7%	68.3%	0.8%		
PHF	.250	.250	.750	.000	.375	.690	.969	.000	.000	.880	.909	.500	.880	.000	.932	.500	.922	.944	.550	.948	.948

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-008.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Redwood Parkway Southbound					Columbus Parkway Westbound					Redwood Parkway Northbound					Columbus Parkway Eastbound					Total	Utum 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		
07:00	0	0	0	0	0	1	63	0	0	64	40	0	8	0	48	0	64	8	0	72	184	0
07:15	0	0	0	0	0	1	65	0	0	66	57	0	6	0	63	0	68	24	0	92	221	0
07:30	0	0	0	0	0	3	114	0	0	117	70	0	42	0	112	0	83	31	0	114	343	0
07:45	0	0	0	0	0	9	93	0	0	102	92	0	28	0	120	0	121	27	0	148	370	0
Total	0	0	0	0	0	14	335	0	0	349	259	0	84	0	343	0	336	90	0	426	1118	0
08:00	0	0	0	0	0	3	77	0	0	80	36	0	13	0	49	0	105	28	0	133	262	0
08:15	0	0	0	0	0	4	82	0	0	86	34	0	7	0	41	0	66	20	0	86	213	0
08:30	0	0	0	0	0	1	74	0	0	75	36	0	2	0	38	0	53	22	0	75	188	0
08:45	0	0	0	0	0	3	83	0	0	86	40	0	11	0	51	0	54	19	0	73	210	0
Total	0	0	0	0	0	11	316	0	0	327	146	0	33	0	179	0	278	89	0	367	873	0
16:00	0	0	0	0	0	9	112	0	0	121	23	0	8	0	31	0	98	38	0	136	288	0
16:15	0	0	0	0	0	6	105	0	0	111	22	0	5	0	27	0	91	43	0	134	272	0
16:30	0	0	0	0	0	6	110	0	0	116	26	0	6	0	32	0	107	59	0	166	314	0
16:45	0	0	0	0	0	12	102	0	0	114	26	0	5	0	31	0	94	37	0	131	276	0
Total	0	0	0	0	0	33	429	0	0	462	97	0	24	0	121	0	390	177	0	567	1150	0
17:00	0	0	0	0	0	13	99	0	0	112	26	0	6	0	32	0	82	52	0	134	278	0
17:15	0	0	0	0	0	6	110	0	0	116	24	0	6	0	30	0	111	42	0	153	299	0
17:30	0	0	0	0	0	7	119	0	0	126	39	0	6	0	45	0	98	39	0	137	308	0
17:45	0	0	0	0	0	0	86	0	0	86	31	0	2	0	33	0	110	37	0	147	266	0
Total	0	0	0	0	0	26	414	0	0	440	120	0	20	0	140	0	401	170	0	571	1151	0
Grand Total	0	0	0	0	0	84	1494	0	0	1578	622	0	161	0	783	0	1405	526	0	1931	4292	0
Approch %	0.0%	0.0%	0.0%	0.0%		5.3%	94.7%	0.0%	0.0%		79.4%	0.0%	20.6%	0.0%		0.0%	72.8%	27.2%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	34.8%	0.0%	0.0%	36.8%	14.5%	0.0%	3.8%	0.0%	18.2%	0.0%	32.7%	12.3%	0.0%	45.0%	100.0%	

AM PEAK HOUR	Redwood Parkway Southbound					Columbus Parkway Westbound					Redwood Parkway Northbound					Columbus Parkway 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																						
07:15	0	0	0	0	0	1	65	0	0	66	57	0	6	0	63	0	68	24	0	92	221	
07:30	0	0	0	0	0	3	114	0	0	117	70	0	42	0	112	0	83	31	0	114	343	
07:45	0	0	0	0	0	9	93	0	0	102	92	0	28	0	120	0	121	27	0	148	370	
08:00	0	0	0	0	0	3	77	0	0	80	36	0	13	0	49	0	105	28	0	133	262	
Total Volume	0	0	0	0	0	16	349	0	0	365	255	0	89	0	344	0	377	110	0	487	1196	
% App Total	0.0%	0.0%	0.0%	0.0%		4.4%	95.6%	0.0%	0.0%		74.1%	0.0%	25.9%	0.0%		0.0%	77.4%	22.6%	0.0%			
PHF	.000	.000	.000	.000	.000	.444	.765	.000	.000	.780	.693	.000	.530	.000	.717	.000	.779	.887	.000	.823	.808	

PM PEAK HOUR	Redwood Parkway Southbound					Columbus Parkway Westbound					Redwood Parkway Northbound					Columbus Parkway 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	0	0	0	0	6	110	0	0	116	26	0	6	0	32	0	107	59	0	166	314	
16:45	0	0	0	0	0	12	102	0	0	114	26	0	5	0	31	0	94	37	0	131	276	
17:00	0	0	0	0	0	13	99	0	0	112	26	0	6	0	32	0	82	52	0	134	278	
17:15	0	0	0	0	0	6	110	0	0	116	24	0	6	0	30	0	111	42	0	153	299	
Total Volume	0	0	0	0	0	37	421	0	0	458	102	0	23	0	125	0	394	190	0	584	1167	
% App Total	0.0%	0.0%	0.0%	0.0%		8.1%	91.9%	0.0%	0.0%		81.6%	0.0%	18.4%	0.0%		0.0%	67.5%	32.5%	0.0%			
PHF	.000	.000	.000	.000	.000	.712	.957	.000	.000	.987	.981	.000	.958	.000	.977	.000	.887	.805	.000	.880	.929	

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-008.ppd

Date : 4/5/2014

City of Vallejo
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

Unshifted Count = All Vehicles

START TIME	Southbound					Columbus Parkway Westbound					Redwood Parkway Northbound					Columbus Parkway Eastbound					Total	Utum 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		
11:00	0	0	0	0	0	6	86	0	0	92	30	0	4	0	34	0	83	25	0	108	234	0
11:15	0	0	0	0	0	2	85	0	0	87	32	0	1	0	33	0	81	32	0	113	233	0
11:30	0	0	0	0	0	9	100	0	0	109	32	0	7	0	39	0	90	32	0	122	270	0
11:45	0	0	0	0	0	7	103	0	0	110	35	0	6	0	41	0	91	34	0	125	276	0
Total	0	0	0	0	0	24	374	0	0	398	129	0	18	0	147	0	345	123	0	468	1013	0
12:00	0	0	0	0	0	4	83	0	0	87	29	0	3	0	32	0	84	21	0	105	224	0
12:15	0	0	0	0	0	5	84	0	0	89	35	0	3	0	38	0	82	34	0	116	243	0
12:30	0	0	0	0	0	5	89	0	0	94	31	0	7	0	38	0	93	31	0	124	256	0
12:45	0	0	0	0	0	3	87	0	0	90	29	0	3	0	32	0	95	26	0	121	243	0
Total	0	0	0	0	0	17	343	0	0	360	124	0	16	0	140	0	354	112	0	466	966	0
Grand Total	0	0	0	0	0	41	717	0	0	758	253	0	34	0	287	0	699	235	0	934	1979	0
Apprch %	0.0%	0.0%	0.0%	0.0%		5.4%	94.6%	0.0%	0.0%		88.2%	0.0%	11.8%	0.0%		0.0%	74.8%	25.2%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	36.2%	0.0%	0.0%	38.3%	12.8%	0.0%	1.7%	0.0%	14.5%	0.0%	35.3%	11.9%	0.0%	47.2%	100.0%	

NOON PEAK	Southbound					Columbus Parkway Westbound					Redwood Parkway Northbound					Columbus Parkway 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 11:00 to 12:00																					
Peak Hour For Entire Intersection Begins at 11:00																					
11:00	0	0	0	0	0	6	86	0	0	92	30	0	4	0	34	0	83	25	0	108	234
11:15	0	0	0	0	0	2	85	0	0	87	32	0	1	0	33	0	81	32	0	113	233
11:30	0	0	0	0	0	9	100	0	0	109	32	0	7	0	39	0	90	32	0	122	270
11:45	0	0	0	0	0	7	103	0	0	110	35	0	6	0	41	0	91	34	0	125	276
Total Volume	0	0	0	0	0	24	374	0	0	398	129	0	18	0	147	0	345	123	0	468	1013
% App Total	0.0%	0.0%	0.0%	0.0%		6.0%	94.0%	0.0%	0.0%		87.8%	0.0%	12.2%	0.0%		0.0%	73.7%	26.3%	0.0%		
PHF	.000	.000	.000	.000	.000	.667	.908	.000	.000	.905	.921	.000	.643	.000	.896	.000	.948	.904	.000	.936	.918

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-007.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Ascot Parkway Southbound					Columbus Parkway Westbound					Ascot Parkway Northbound					Columbus Parkway Eastbound					Total	Utum 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		
07:00	0	0	1	0	1	4	115	0	0	119	31	0	3	0	34	0	69	27	0	96	250	0
07:15	0	0	0	0	0	2	110	0	0	112	46	0	8	0	54	0	92	48	0	140	306	0
07:30	0	0	0	0	0	3	162	0	0	165	56	0	5	0	61	0	110	81	0	191	417	0
07:45	0	0	0	0	0	5	164	0	0	169	56	0	12	0	68	3	175	71	0	249	486	0
Total	0	0	1	0	1	14	551	0	0	565	189	0	28	0	217	3	446	227	0	676	1459	0
08:00	0	0	0	0	0	0	124	0	0	124	32	0	2	0	34	3	128	38	0	169	327	0
08:15	0	0	0	0	0	2	113	0	0	115	39	0	4	0	43	2	96	33	0	131	289	0
08:30	0	0	1	0	1	4	104	1	0	109	30	0	7	0	37	4	113	39	0	156	303	0
08:45	0	0	0	0	0	3	113	0	0	116	55	0	5	0	60	2	93	36	0	131	307	0
Total	0	0	1	0	1	9	454	1	0	464	156	0	18	0	174	11	430	146	0	587	1226	0
16:00	0	0	1	0	1	12	127	1	0	140	30	0	6	0	36	8	141	56	0	205	382	0
16:15	0	0	0	0	0	10	122	0	0	132	33	0	4	0	37	8	130	45	0	183	352	0
16:30	0	0	0	0	0	2	123	0	0	125	39	0	9	0	48	5	149	54	0	208	381	0
16:45	0	0	0	0	0	2	120	0	0	122	52	0	2	0	54	5	115	55	0	175	351	0
Total	0	0	1	0	1	26	492	1	0	519	154	0	21	0	175	26	535	210	0	771	1466	0
17:00	0	0	0	0	0	2	160	0	0	162	38	0	6	0	44	5	135	45	0	185	391	0
17:15	0	0	0	0	0	4	145	0	0	149	38	0	9	0	47	11	162	65	0	238	434	0
17:30	0	0	0	0	0	2	135	0	0	137	41	0	12	0	53	2	168	59	0	229	419	0
17:45	0	0	0	0	0	6	114	0	0	120	37	0	8	0	45	6	155	53	0	214	379	0
Total	0	0	0	0	0	14	554	0	0	568	154	0	35	0	189	24	620	222	0	866	1623	0
Grand Total	0	0	3	0	3	63	2051	2	0	2116	653	0	102	0	755	64	2031	805	0	2900	5774	0
Approch %	0.0%	0.0%	100.0%	0.0%		3.0%	96.9%	0.1%	0.0%		86.5%	0.0%	13.5%	0.0%		2.2%	70.0%	27.8%	0.0%			
Total %	0.0%	0.0%	0.1%	0.0%	0.1%	1.1%	35.5%	0.0%	0.0%	36.6%	11.3%	0.0%	1.8%	0.0%	13.1%	1.1%	35.2%	13.9%	0.0%	50.2%	100.0%	

AM PEAK HOUR	Ascot Parkway Southbound					Columbus Parkway Westbound					Ascot Parkway Northbound					Columbus Parkway 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																					
07:15	0	0	0	0	0	2	110	0	0	112	46	0	8	0	54	0	92	48	0	140	306
07:30	0	0	0	0	0	3	162	0	0	165	56	0	5	0	61	0	110	81	0	191	417
07:45	0	0	0	0	0	5	164	0	0	169	56	0	12	0	68	3	175	71	0	249	486
08:00	0	0	0	0	0	0	124	0	0	124	32	0	2	0	34	3	128	38	0	169	327
Total Volume	0	0	0	0	0	10	560	0	0	570	190	0	27	0	217	6	505	238	0	749	1536
% App Total	0.0%	0.0%	0.0%	0.0%		1.8%	98.2%	0.0%	0.0%		87.6%	0.0%	12.4%	0.0%		0.8%	67.4%	31.8%	0.0%		
PHF	.000	.000	.000	.000	.000	.500	.854	.000	.000	.843	.848	.000	.563	.000	.798	.500	.721	.735	.000	.752	.790

PM PEAK HOUR	Ascot Parkway Southbound					Columbus Parkway Westbound					Ascot Parkway Northbound					Columbus Parkway 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	2	160	0	0	162	38	0	6	0	44	5	135	45	0	185	391
17:15	0	0	0	0	0	4	145	0	0	149	38	0	9	0	47	11	162	65	0	238	434
17:30	0	0	0	0	0	2	135	0	0	137	41	0	12	0	53	2	168	59	0	229	419
17:45	0	0	0	0	0	6	114	0	0	120	37	0	8	0	45	6	155	53	0	214	379
Total Volume	0	0	0	0	0	14	554	0	0	568	154	0	35	0	189	24	620	222	0	866	1623
% App Total	0.0%	0.0%	0.0%	0.0%		2.5%	97.5%	0.0%	0.0%		81.5%	0.0%	18.5%	0.0%		2.8%	71.6%	25.6%	0.0%		
PHF	.000	.000	.000	.000	.000	.583	.866	.000	.000	.877	.939	.000	.729	.000	.892	.545	.923	.854	.000	.910	.935

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-007.ppd

Date : 4/5/2014

Unshifted Count = All Vehicles

START TIME	Ascot Parkway Southbound					Columbus Parkway Westbound					Ascot Parkway Northbound					Columbus Parkway Eastbound					Total	Utum 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		
11:00	0	0	14	0	14	6	123	0	0	129	43	0	5	0	48	14	120	39	13	186	377	13
11:15	0	0	13	0	13	7	96	0	0	103	26	2	6	0	34	15	101	29	12	157	307	12
11:30	0	0	3	0	3	8	119	0	1	128	32	0	6	0	38	3	132	44	3	182	351	4
11:45	0	0	9	0	9	7	121	0	0	128	41	0	4	0	45	10	117	42	9	178	360	9
Total	0	0	39	0	39	28	459	0	1	488	142	2	21	0	165	42	470	154	37	703	1395	38
12:00	0	0	9	0	9	6	109	0	1	116	50	2	6	0	58	10	112	30	9	161	344	10
12:15	0	0	7	0	7	4	126	1	1	132	34	4	5	0	43	8	114	32	7	161	343	8
12:30	0	0	10	0	10	6	116	0	1	123	34	0	10	0	44	10	126	38	10	184	361	11
12:45	0	0	16	0	16	11	127	0	2	140	52	0	14	0	66	16	156	49	16	237	459	18
Total	0	0	42	0	42	27	478	1	5	511	170	6	35	0	211	44	508	149	42	743	1507	47
Grand Total	0	0	81	0	81	55	937	1	6	999	312	8	56	0	376	86	978	303	79	1446	2902	85
Apprch %	0.0%	0.0%	100.0%	0.0%		5.5%	93.8%	0.1%	0.6%		83.0%	2.1%	14.9%	0.0%		5.9%	67.6%	21.0%	5.5%			
Total %	0.0%	0.0%	2.8%	0.0%	2.8%	1.9%	32.3%	0.0%	0.2%	34.4%	10.8%	0.3%	1.9%	0.0%	13.0%	3.0%	33.7%	10.4%	2.7%	49.8%	100.0%	

NOON PEAK	Ascot Parkway Southbound					Columbus Parkway Westbound					Ascot Parkway Northbound					Columbus Parkway 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 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	0	0	9	0	9	6	109	0	1	116	50	2	6	0	58	10	112	30	9	161	344
12:15	0	0	7	0	7	4	126	1	1	132	34	4	5	0	43	8	114	32	7	161	343
12:30	0	0	10	0	10	6	116	0	1	123	34	0	10	0	44	10	126	38	10	184	361
12:45	0	0	16	0	16	11	127	0	2	140	52	0	14	0	66	16	156	49	16	237	459
Total Volume	0	0	42	0	42	27	478	1	5	511	170	6	35	0	211	44	508	149	42	743	1507
% App Total	0.0%	0.0%	100.0%	0.0%		5.3%	93.5%	0.2%	1.0%		80.6%	2.8%	16.6%	0.0%		5.9%	68.4%	20.1%	5.7%		
PHF	.000	.000	.656	.000	.656	.614	.941	.250	.625	.913	.817	.375	.625	.000	.799	.688	.814	.760	.656	.784	.821

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-006.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Plaza Drive Southbound					Turner Parkway Westbound					Plaza Drive Northbound					Turner Parkway Eastbound					Total	Utum 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		
07:00	10	0	6	0	16	0	7	18	0	25	0	0	0	0	0	14	5	0	0	19	60	0
07:15	11	0	8	0	19	0	13	13	0	26	0	0	0	0	0	8	5	0	0	13	58	0
07:30	9	0	9	0	18	0	11	21	0	32	0	0	0	0	11	9	14	0	0	23	73	0
07:45	15	0	8	0	23	0	18	21	0	39	0	0	0	0	0	21	15	0	0	36	98	0
Total	45	0	31	0	76	0	49	73	0	122	0	0	0	0	0	52	39	0	0	91	289	0
08:00	20	0	6	0	26	0	6	22	0	28	0	0	0	0	0	14	6	0	0	20	74	0
08:15	10	0	12	0	22	0	15	14	0	29	0	0	0	0	15	14	0	0	0	29	80	0
08:30	14	0	11	0	25	0	11	20	0	31	0	0	0	0	14	6	0	0	0	20	76	0
08:45	11	0	14	0	25	0	13	21	0	34	0	0	0	0	19	11	0	0	0	30	89	0
Total	55	0	43	0	98	0	45	77	0	122	0	0	0	0	0	62	37	0	0	99	319	0
16:00	68	0	41	0	109	0	25	41	0	66	0	0	0	0	0	43	20	0	0	63	238	0
16:15	64	0	51	0	115	0	20	60	0	80	0	0	0	0	0	64	21	0	0	85	280	0
16:30	23	0	19	0	42	0	8	37	0	45	0	0	0	0	0	21	13	0	0	34	121	0
16:45	56	0	47	0	103	0	13	44	0	57	0	0	0	0	0	50	24	0	0	74	234	0
Total	211	0	158	0	369	0	66	182	0	248	0	0	0	0	0	178	78	0	0	256	873	0
17:00	71	0	66	0	137	0	15	41	0	56	0	0	0	0	0	57	27	0	0	84	277	0
17:15	63	0	67	0	130	0	18	47	0	65	0	0	0	0	18	73	20	0	0	93	288	0
17:30	57	0	44	0	101	0	20	48	0	68	0	0	0	0	0	50	21	0	0	71	240	0
17:45	69	0	62	0	131	0	22	54	0	76	0	0	0	0	0	44	25	0	0	69	276	0
Total	260	0	239	0	499	0	75	190	0	265	0	0	0	0	0	224	93	0	0	317	1081	0
Grand Total	571	0	471	0	1042	0	235	522	0	757	0	0	0	0	0	516	247	0	0	763	2562	0
Apprch %	54.8%	0.0%	45.2%	0.0%		0.0%	31.0%	69.0%	0.0%		0.0%	0.0%	0.0%	0.0%		67.6%	32.4%	0.0%	0.0%			
Total %	22.3%	0.0%	18.4%	0.0%	40.7%	0.0%	9.2%	20.4%	0.0%	29.5%	0.0%	0.0%	0.0%	0.0%	0.0%	20.1%	9.6%	0.0%	0.0%	29.8%	100.0%	

AM PEAK HOUR	Plaza Drive Southbound					Turner Parkway Westbound					Plaza Drive Northbound					Turner Parkway Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
07:45	15	0	8	0	23	0	18	21	0	39	0	0	0	0	0	21	15	0	0	36	98
08:00	20	0	6	0	26	0	6	22	0	28	0	0	0	0	0	14	6	0	0	20	74
08:15	10	0	12	0	22	0	15	14	0	29	0	0	0	0	0	15	14	0	0	29	80
08:30	14	0	11	0	25	0	11	20	0	31	0	0	0	0	0	14	6	0	0	20	76
Total Volume	59	0	37	0	96	0	50	77	0	127	0	0	0	0	0	64	41	0	0	105	328
% App Total	61.5%	0.0%	38.5%	0.0%		0.0%	39.4%	60.6%	0.0%		0.0%	0.0%	0.0%	0.0%		61.0%	39.0%	0.0%	0.0%		
PHF	.738	.000	.771	.000	.923	.000	.694	.875	.000	.814	.000	.000	.000	.000	.000	.762	.683	.000	.000	.729	.837

PM PEAK HOUR	Plaza Drive Southbound					Turner Parkway Westbound					Plaza Drive Northbound					Turner Parkway Eastbound					Total
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	71	0	66	0	137	0	15	41	0	56	0	0	0	0	0	57	27	0	0	84	277
17:15	63	0	67	0	130	0	18	47	0	65	0	0	0	0	18	73	20	0	0	93	288
17:30	57	0	44	0	101	0	20	48	0	68	0	0	0	0	0	50	21	0	0	71	240
17:45	69	0	62	0	131	0	22	54	0	76	0	0	0	0	0	44	25	0	0	69	276
Total Volume	260	0	239	0	499	0	75	190	0	265	0	0	0	0	0	224	93	0	0	317	1081
% App Total	52.1%	0.0%	47.9%	0.0%		0.0%	28.3%	71.7%	0.0%		0.0%	0.0%	0.0%	0.0%		70.7%	29.3%	0.0%	0.0%		
PHF	.915	.000	.892	.000	.911	.000	.852	.880	.000	.872	.000	.000	.000	.000	.000	.767	.861	.000	.000	.852	.938

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-006.ppd

Date : 4/5/2014

Unshifted Count = All Vehicles

START TIME	Plaza Drive Southbound					Turner Parkway Westbound					Northbound					Turner Parkway Eastbound					Total	Utum 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		
11:00	49	0	42	0	91	0	21	64	0	85	0	0	0	0	0	58	13	0	0	71	247	0
11:15	49	0	55	0	104	0	14	75	0	89	0	0	0	0	0	55	16	0	0	71	264	0
11:30	81	0	77	0	158	0	29	93	0	122	0	0	0	0	0	65	16	0	0	81	361	0
11:45	57	0	51	0	108	0	18	43	0	61	0	0	0	0	0	35	15	0	0	50	219	0
Total	236	0	225	0	461	0	82	275	0	357	0	0	0	0	0	213	60	0	0	273	1091	0
12:00	75	0	70	0	145	0	20	75	0	95	0	0	0	0	0	45	27	0	0	72	312	0
12:15	57	0	48	0	105	0	22	73	0	95	0	0	0	0	0	65	17	0	0	82	282	0
12:30	65	0	58	0	123	0	23	77	0	100	0	0	0	0	0	55	8	0	0	63	286	0
12:45	71	0	68	0	139	0	31	78	0	109	0	0	0	0	0	50	22	0	0	72	320	0
Total	268	0	244	0	512	0	96	303	0	399	0	0	0	0	0	215	74	0	0	289	1200	0
Grand Total	504	0	469	0	973	0	178	578	0	756	0	0	0	0	0	428	134	0	0	562	2291	0
Apprch %	51.8%	0.0%	48.2%	0.0%		0.0%	23.5%	76.5%	0.0%		0.0%	0.0%	0.0%	0.0%		76.2%	23.8%	0.0%	0.0%			
Total %	22.0%	0.0%	20.5%	0.0%	42.5%	0.0%	7.8%	25.2%	0.0%	33.0%	0.0%	0.0%	0.0%	0.0%		18.7%	5.8%	0.0%	0.0%	24.5%	100.0%	

NOON PEAK	Plaza Drive Southbound					Turner Parkway Westbound					Northbound					Turner Parkway 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 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	75	0	70	0	145	0	20	75	0	95	0	0	0	0	0	45	27	0	0	72	312
12:15	57	0	48	0	105	0	22	73	0	95	0	0	0	0	0	65	17	0	0	82	282
12:30	65	0	58	0	123	0	23	77	0	100	0	0	0	0	0	55	8	0	0	63	286
12:45	71	0	68	0	139	0	31	78	0	109	0	0	0	0	0	50	22	0	0	72	320
Total Volume	268	0	244	0	512	0	96	303	0	399	0	0	0	0	0	215	74	0	0	289	1200
% App Total	52.3%	0.0%	47.7%	0.0%		0.0%	24.1%	75.9%	0.0%		0.0%	0.0%	0.0%	0.0%		74.4%	25.6%	0.0%	0.0%		
PHF	.893	.000	.871	.000	.883	.000	.774	.971	.000	.915	.000	.000	.000	.000	.000	.827	.685	.000	.000	.881	.938

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-005 Admiral Callaghan Lane-Turner Parkway.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Admiral Callaghan Lane Southbound					Turner Parkway Westbound					Admiral Callaghan Lane Northbound					Turner Parkway Eastbound					Total	Utum 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		
07:00	3	12	0	0	15	12	0	4	0	16	0	11	10	0	21	0	0	0	0	0	52	0
07:15	2	18	0	0	20	15	0	4	1	20	0	19	13	0	32	0	0	0	0	0	72	1
07:30	1	18	0	0	19	18	0	3	8	29	0	23	9	0	32	0	0	0	0	0	80	8
07:45	7	30	0	0	37	22	0	6	9	37	0	40	15	0	55	0	0	0	0	0	129	9
Total	13	78	0	0	91	67	0	17	18	102	0	93	47	0	140	0	0	0	0	0	333	18
08:00	5	29	0	0	34	18	0	4	0	22	0	31	16	0	47	0	0	0	0	0	103	0
08:15	2	33	0	0	35	22	0	2	4	28	0	42	21	0	63	0	0	0	0	0	126	4
08:30	8	33	0	0	41	25	0	6	0	31	0	51	14	0	65	0	0	0	0	0	137	0
08:45	5	39	0	0	44	26	0	5	2	33	0	51	17	0	68	0	0	0	0	0	145	2
Total	20	134	0	0	154	91	0	17	6	114	0	175	68	0	243	0	0	0	0	0	511	6
16:00	12	77	0	0	89	83	0	4	6	93	0	93	49	0	142	0	0	0	0	0	324	6
16:15	17	81	0	0	98	79	0	6	5	90	0	108	79	0	187	0	0	0	0	0	375	5
16:30	15	95	0	0	110	82	0	4	6	92	0	114	68	0	182	0	0	0	0	0	384	6
16:45	10	100	0	0	110	67	0	4	6	77	0	114	68	0	182	0	0	0	0	0	369	6
Total	54	353	0	0	407	311	0	18	23	352	0	429	264	0	693	0	0	0	0	0	1452	23
17:00	17	96	0	0	113	91	0	12	10	113	0	93	62	0	155	0	0	0	0	0	381	10
17:15	19	86	0	0	105	89	0	9	6	104	0	114	92	0	206	0	0	0	0	0	415	6
17:30	11	94	0	0	105	81	0	4	5	90	0	118	62	0	180	0	0	0	0	0	375	5
17:45	15	91	0	0	106	90	0	4	11	105	0	118	73	0	191	0	0	0	0	0	402	11
Total	62	367	0	0	429	351	0	29	32	412	0	443	289	0	732	0	0	0	0	0	1573	32
Grand Total	149	932	0	0	1081	820	0	81	79	980	0	1140	668	0	1808	0	0	0	0	0	3869	79
Approch %	13.8%	86.2%	0.0%	0.0%		83.7%	0.0%	8.3%	8.1%		0.0%	63.1%	36.9%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	3.9%	24.1%	0.0%	0.0%	27.9%	21.2%	0.0%	2.1%	2.0%	25.3%	0.0%	29.5%	17.3%	0.0%	46.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Admiral Callaghan Lane Southbound					Turner Parkway Westbound					Admiral Callaghan Lane Northbound					Turner Parkway Eastbound					Total
START TIME	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 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	5	29	0	0	34	18	0	4	0	22	0	31	16	0	47	0	0	0	0	0	103
08:15	2	33	0	0	35	22	0	2	4	28	0	42	21	0	63	0	0	0	0	0	126
08:30	8	33	0	0	41	25	0	6	0	31	0	51	14	0	65	0	0	0	0	0	137
08:45	5	39	0	0	44	26	0	5	2	33	0	51	17	0	68	0	0	0	0	0	145
Total Volume	20	134	0	0	154	91	0	17	6	114	0	175	68	0	243	0	0	0	0	0	511
% App Total	13.0%	87.0%	0.0%	0.0%		79.8%	0.0%	14.9%	5.3%		0.0%	72.0%	28.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.625	.859	.000	.000	.875	.875	.000	.708	.375	.864	.000	.858	.810	.000	.893	.000	.000	.000	.000	.000	.881

PM PEAK HOUR	Admiral Callaghan Lane Southbound					Turner Parkway Westbound					Admiral Callaghan Lane Northbound					Turner Parkway Eastbound					Total
START TIME	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	17	96	0	0	113	91	0	12	10	113	0	93	62	0	155	0	0	0	0	0	381
17:15	19	86	0	0	105	89	0	9	6	104	0	114	92	0	206	0	0	0	0	0	415
17:30	11	94	0	0	105	81	0	4	5	90	0	118	62	0	180	0	0	0	0	0	375
17:45	15	91	0	0	106	90	0	4	11	105	0	118	73	0	191	0	0	0	0	0	402
Total Volume	62	367	0	0	429	351	0	29	32	412	0	443	289	0	732	0	0	0	0	0	1573
% App Total	14.5%	85.5%	0.0%	0.0%		85.2%	0.0%	7.0%	7.8%		0.0%	60.5%	39.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.816	.956	.000	.000	.949	.964	.000	.604	.727	.912	.000	.939	.785	.000	.888	.000	.000	.000	.000	.000	.948

ALL TRAFFIC DATA

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

(916) 771-8700

orders@atdtraffic.com

File Name : 13-7585-004.ppd

Date : 10/10/2013

Unshifted Count = All Vehicles

START TIME	Plaza Drive Southbound					Admiral Callaghan Lane Westbound					Plaza Drive Northbound					Admiral Callaghan Lane Eastbound					Total	Utum 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		
07:00	11	3	4	0	18	12	18	7	0	37	4	2	17	0	23	4	13	4	0	21	99	0
07:15	10	3	2	0	15	11	21	12	0	44	1	1	20	0	22	7	13	5	0	25	106	0
07:30	8	2	3	0	13	18	25	11	0	54	4	1	25	0	30	8	18	4	0	30	127	0
07:45	18	1	4	0	23	26	24	16	0	66	1	3	19	0	23	12	22	6	0	40	152	0
Total	47	9	13	0	69	67	88	46	0	201	10	7	81	0	98	31	66	19	0	116	484	0
08:00	11	2	5	0	18	25	34	19	0	78	4	5	17	0	26	14	26	4	0	44	166	0
08:15	9	5	6	0	20	25	35	22	0	82	3	4	20	0	27	13	28	8	0	49	178	0
08:30	26	5	9	0	40	25	28	25	0	78	3	4	25	0	32	8	42	8	0	58	208	0
08:45	18	6	11	0	35	36	30	19	0	85	5	5	13	0	23	7	21	4	0	32	175	0
Total	64	18	31	0	113	111	127	85	0	323	15	18	75	0	108	42	117	24	0	183	727	0
16:00	28	12	8	0	48	87	55	28	0	170	31	10	73	0	114	17	84	24	0	125	457	0
16:15	23	17	8	0	48	83	74	23	0	180	22	6	90	0	118	21	88	33	0	142	488	0
16:30	25	5	10	0	40	85	71	24	0	180	26	11	86	0	123	14	90	29	0	133	476	0
16:45	25	4	15	0	44	89	62	23	0	174	28	8	85	0	121	12	76	31	0	119	458	0
Total	101	38	41	0	180	344	262	98	0	704	107	35	334	0	476	64	338	117	0	519	1879	0
17:00	22	5	11	0	38	104	61	23	0	188	25	10	94	0	129	16	85	21	0	122	477	0
17:15	24	3	10	0	37	108	63	27	0	198	25	9	92	0	126	15	89	34	0	138	499	0
17:30	26	9	15	0	50	115	70	23	0	208	27	18	97	0	142	16	88	16	0	120	520	0
17:45	17	12	10	0	39	86	78	24	0	188	22	7	83	0	112	30	77	29	0	136	475	0
Total	89	29	46	0	164	413	272	97	0	782	99	44	366	0	509	77	339	100	0	516	1971	0
Grand Total	301	94	131	0	526	935	749	326	0	2010	231	104	856	0	1191	214	860	260	0	1334	5061	0
Apprch %	57.2%	17.9%	24.9%	0.0%		46.5%	37.3%	16.2%	0.0%		19.4%	8.7%	71.9%	0.0%		16.0%	64.5%	19.5%	0.0%			
Total %	5.9%	1.9%	2.6%	0.0%	10.4%	18.5%	14.8%	6.4%	0.0%	39.7%	4.6%	2.1%	16.9%	0.0%	23.5%	4.2%	17.0%	5.1%	0.0%	26.4%	100.0%	

AM PEAK HOUR	Plaza Drive Southbound					Admiral Callaghan Lane Westbound					Plaza Drive Northbound					Admiral Callaghan Lane Eastbound					Total
START TIME	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 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	11	2	5	0	18	25	34	19	0	78	4	5	17	0	26	14	26	4	0	44	166
08:15	9	5	6	0	20	25	35	22	0	82	3	4	20	0	27	13	28	8	0	49	178
08:30	26	5	9	0	40	25	28	25	0	78	3	4	25	0	32	8	42	8	0	58	208
08:45	18	6	11	0	35	36	30	19	0	85	5	5	13	0	23	7	21	4	0	32	175
Total Volume	64	18	31	0	113	111	127	85	0	323	15	18	75	0	108	42	117	24	0	183	727
% App Total	56.6%	15.9%	27.4%	0.0%		34.4%	39.3%	26.3%	0.0%		13.9%	16.7%	69.4%	0.0%		23.0%	63.9%	13.1%	0.0%		
PHF	.615	.750	.705	.000	.706	.771	.907	.850	.000	.950	.750	.900	.750	.000	.844	.750	.696	.750	.000	.789	.874

PM PEAK HOUR	Plaza Drive Southbound					Admiral Callaghan Lane Westbound					Plaza Drive Northbound					Admiral Callaghan Lane Eastbound					Total
START TIME	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	22	5	11	0	38	104	61	23	0	188	25	10	94	0	129	16	85	21	0	122	477
17:15	24	3	10	0	37	108	63	27	0	198	25	9	92	0	126	15	89	34	0	138	499
17:30	26	9	15	0	50	115	70	23	0	208	27	18	97	0	142	16	88	16	0	120	520
17:45	17	12	10	0	39	86	78	24	0	188	22	7	83	0	112	30	77	29	0	136	475
Total Volume	89	29	46	0	164	413	272	97	0	782	99	44	366	0	509	77	339	100	0	516	1971
% App Total	54.3%	17.7%	28.0%	0.0%		52.8%	34.8%	12.4%	0.0%		19.4%	8.6%	71.9%	0.0%		14.9%	65.7%	19.4%	0.0%		
PHF	.856	.604	.767	.000	.820	.898	.872	.898	.000	.940	.917	.611	.943	.000	.896	.642	.952	.735	.000	.935	.948

ALL TRAFFIC DATA

(916) 771-8700

orders@atdtraffic.com

File Name : 14-7195-004.ppd

Date : 4/5/2014

City of Vallejo
 All Vehicles on Unshifted
 Peds & Bikes on Bank 1
 Nothing on Bank 2

Unshifted Count = All Vehicles

START TIME	Plaza Drive Southbound					Admiral Callaghan Lane Westbound					Plaza Drive Northbound					Admiral Callaghan Lane Eastbound					Total	Utum 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		
11:00	21	12	18	0	51	116	67	49	0	232	33	25	90	0	148	37	86	30	0	153	584	0
11:15	30	17	19	0	66	129	82	53	0	264	22	15	94	0	131	30	93	31	0	154	615	0
11:30	46	22	24	0	92	102	67	60	0	229	19	33	115	0	167	29	81	35	0	145	633	0
11:45	44	19	18	0	81	133	66	44	0	243	35	12	94	0	141	32	87	31	0	150	615	0
Total	141	70	79	0	290	480	282	206	0	968	109	85	393	0	587	128	347	127	0	602	2447	0
12:00	41	19	9	0	69	109	71	54	0	234	25	12	93	0	130	28	115	37	0	180	613	0
12:15	35	26	26	0	87	118	74	56	0	248	32	17	98	0	147	28	111	30	0	169	651	0
12:30	30	24	18	0	72	112	97	52	0	261	33	21	115	0	169	33	113	26	0	172	674	0
12:45	31	17	19	0	67	127	85	54	0	266	35	17	116	0	168	26	113	38	0	177	678	0
Total	137	86	72	0	295	466	327	216	0	1009	125	67	422	0	614	115	452	131	0	698	2616	0
Grand Total	278	156	151	0	585	946	609	422	0	1977	234	152	815	0	1201	243	799	258	0	1300	5063	0
Apprch %	47.5%	26.7%	25.8%	0.0%		47.9%	30.8%	21.3%	0.0%		19.5%	12.7%	67.9%	0.0%		18.7%	61.5%	19.8%	0.0%			
Total %	5.5%	3.1%	3.0%	0.0%	11.6%	18.7%	12.0%	8.3%	0.0%	39.0%	4.6%	3.0%	16.1%	0.0%	23.7%	4.8%	15.8%	5.1%	0.0%	25.7%	100.0%	

NOON PEAK	Plaza Drive Southbound					Admiral Callaghan Lane Westbound					Plaza Drive Northbound					Admiral Callaghan Lane 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 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00	41	19	9	0	69	109	71	54	0	234	25	12	93	0	130	28	115	37	0	180	613
12:15	35	26	26	0	87	118	74	56	0	248	32	17	98	0	147	28	111	30	0	169	651
12:30	30	24	18	0	72	112	97	52	0	261	33	21	115	0	169	33	113	26	0	172	674
12:45	31	17	19	0	67	127	85	54	0	266	35	17	116	0	168	26	113	38	0	177	678
Total Volume	137	86	72	0	295	466	327	216	0	1009	125	67	422	0	614	115	452	131	0	698	2616
% App Total	46.4%	29.2%	24.4%	0.0%		46.2%	32.4%	21.4%	0.0%		20.4%	10.9%	68.7%	0.0%		16.5%	64.8%	18.8%	0.0%		
PHF	.835	.827	.692	.000	.848	.917	.843	.964	.000	.948	.893	.798	.909	.000	.908	.871	.983	.862	.000	.969	.965

PROJECT TRIP GENERATION

Columbus Parkway & Admiral Callahan Lane Commercial Development Traffic Impact Study

Detailed Project Trip Generation Summary

Time period	Land Use	ITE Code	Quantity	Trip Rate			Trips		
				In	Out	Total	In	Out	Total
Daily	Pharmacy/Drugstore w/ Drive-Through Window	881	16.5 KSF	48.46	48.46	96.91	800	800	1,600
	<i>Internal Capture (15%)</i>						(120)	(120)	(240)
	High-Turnover (Sit-Down) Restaurant	932	2.5 KSF	63.58	63.58	127.15	159	159	318
	<i>Internal Capture (15%)</i>						(24)	(24)	(48)
	Fast-Food Restaurant w/ Drive-Through	934	4.526 KSF	248.06	248.06	496.12	1,123	1,123	2,246
	<i>Internal Capture (15%)</i>						(169)	(168)	(337)
Net New Vehicle Trips							1,769	1,770	3,539
AM Peak	Pharmacy/Drugstore w/ Drive-Through Window	881	16.5 KSF	1.79	1.66	3.45	30	27	57
	<i>Internal Capture (15%)</i>						(5)	(4)	(9)
	High-Turnover (Sit-Down) Restaurant	932	2.5 KSF	5.95	4.86	10.81	15	12	27
	<i>Internal Capture (15%)</i>						(2)	(2)	(4)
	Fast-Food Restaurant w/ Drive-Through	934	4.526 KSF	23.16	22.26	45.42	105	101	206
	<i>Internal Capture (15%)</i>						(16)	(15)	(31)
<i>Pass-by (49%)</i>						(45)	(42)	(86)	
Net New Vehicle Trips							82	77	160
PM Peak	Pharmacy/Drugstore w/ Drive-Through Window	881	16.5 KSF	4.96	4.96	9.91	82	82	164
	<i>Internal Capture (15%)</i>						(13)	(12)	(25)
	<i>Pass-by (49%)</i>						(34)	(34)	(68)
	High-Turnover (Sit-Down) Restaurant	932	2.5 KSF	5.91	3.94	9.85	15	10	25
	<i>Internal Capture (15%)</i>						(2)	(2)	(4)
	<i>Pass-by (43%)</i>						(5)	(4)	(9)
	Fast-Food Restaurant w/ Drive-Through	934	4.526 KSF	16.98	15.67	32.65	77	71	148
	<i>Internal Capture (15%)</i>						(11)	(11)	(22)
<i>Pass-by (50%)</i>						(33)	(30)	(63)	
Net New Vehicle Trips							76	70	146
Saturday Midday Peak	Pharmacy/Drugstore w/ Drive-Through Window	881	16.5 KSF	4.02	4.18	8.2	67	68	135
	<i>Internal Capture (15%)</i>						(10)	(10)	(20)
	<i>Pass-by (49%)</i>						(28)	(28)	(56)
	High-Turnover (Sit-Down) Restaurant	932	2.5 KSF	7.46	6.61	14.07	19	16	35
	<i>Internal Capture (15%)</i>						(3)	(2)	(5)
	<i>Pass-by (43%)</i>						(7)	(6)	(13)
	Fast-Food Restaurant w/ Drive-Through	934	4.526 KSF	30.09	28.91	59	137	130	267
	<i>Internal Capture (15%)</i>						(20)	(20)	(40)
<i>Pass-by (50%)</i>						(58)	(56)	(114)	
Net New Vehicle Trips							97	92	189

Notes:

(1) Trip Generation data from ITE *Trip Generation, 9th Edition*

(2) Pass-by rates from ITE *Trip Generation Handbook, 2nd Edition* (Saturday assumed to be same as Weekday PM rate)

(3) Internal capture rates calculated using methodologies from the ITE *Trip Generation Handbook (2nd Edition)* result in an overall internal capture rate that varies from 21%-31% for Daily, AM and PM Peak Hour conditions. For the purposes of providing a conservative analysis, the internal capture rate for each retail use was capped at 15%.

Trip Generation Planner (ITE 9th Edition) - Summary Report



Weekday Trip Generation

Trips Based on Average Rates/Equations

Project Name Assumed SP Uses Trip Generation
Project Number

ITE Code	Internal Capture Land Use	Land Use Description	Independent Variable	No. of Units	Avg Rate or Eq	Rates			Total Trips				Net Trips after Internal Capture				Net Trips after Internal Capture & Pass-By													
						Daily Rate	AM Rate	PM Rate	Daily Trips	AM Trips	PM Trips	AM Trips In	AM Trips Out	PM Trips In	PM Trips Out	Daily Trips	AM Trips	PM Trips	AM Trips In	AM Trips Out	PM Trips In	PM Trips Out								
820	Retail	Shopping Center	1,000 Sq Ft GLA	23.96	Avg	42.70	0.96	3.71	1024	23	89	14	9	43	46	990	22	87	13	9	42	45	990	22	57	13	9	28	30	
710	Office	General Office Building (1)	1,000 Sq Ft	25.9	Avg	11.03	1.56	1.49	286	40	39	35	5	7	32	252	39	37	35	4	6	31	252	39	37	35	4	6	31	
	Retail																													
	Select Use																													
						Totals				1310	63	128	49	14	50	78	1242	61	124	48	13	48	76	1242	61	95	48	13	34	61

- Notes:
- (1) AM and/or PM rates correspond to peak hour of generator
 - A Trip Generation data from ITE *Trip Generation, 9th Edition*
 - B AM/PM rates correspond to peak of adjacent street traffic (if data available)
 - C Includes weekday rates only
 - D Total trips include pass-by trips w/ no internal capture
 - E Pass-by rates from ITE *Trip Generation Handbook, 2nd Edition*
 - F Internal capture rates from ITE *Trip Generation Handbook, 2nd Edition*
 - G Worksheet is intended as a planning tool. Verify results w/ ITE *Trip Generation 9th Edition*

Columbus Parkway & Admiral Callahan Lane Commercial Development Traffic Impact Study

Saturday Trip Generation Summary for Assumed Cumulative Development (Northgate Office Park Mixed-Use)

Time period	Land Use	ITE Code	Quantity	Trip Rate			Trips		
				In	Out	Total	In	Out	Total
Saturday Midday Peak	Retail	820	16.5 KSF	2.51	2.31	4.82	60	55	115
	<i>Pass-by (26%)</i>						(16)	(14)	(30)
	General Office	710	2.5 KSF	0.23	0.20	0.43	6	5	11
	Net New Vehicle Trips						50	46	96

Notes:

- (1) Trip Generation data from ITE *Trip Generation, 9th Edition*
- (2) Pass-by rates from ITE *Trip Generation Handbook, 2nd Edition (Saturday Pass-by for Retail = 26%)*
- (3) No internal capture rate assumed for assumed cumulative development due to very low office trip generation.

Columbus Parkway & Admiral Callahan Lane Commercial Development Traffic Impact Study

Cumulative Trip Generation Summary

Project	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips			Saturday Midday		
		In	Out	Total	In	Out	Total	In	Out	Total
Proposed Project	3,539	82	77	160	76	70	146	97	92	189
Assumed Cumulative Development (Northgate Office Park Mixed-Use)	1,242	48	13	61	34	61	95	50	46	96
Net New Cumulative Trips	2,297	34	64	99	42	9	51	47	46	93

Notes:

- (1) Proposed Project Land Use:
 - Pharmacy/Drug Store w/ D.T. (16.5 KSF)
 - High-Turnover Restaurant w/ D.T. (2.5 KSF)
 - Fast-Food Restaurant w/ D.T (4.526 KSF)
- (2) Assumed Cumulative Development Land Use:
 - Retail (23.96 KSF)
 - Office (25.9 KSF)
- (3) Trip Generation data from ITE *Trip Generation, 9th Edition*
- (4) See Detailed Project Trip Generation table for calculations.

EXISTING (2013) INTERSECTION LOS ANALYSIS WORKSHEETS

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Existing Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗↗		↖	↖	↖		↕	
Volume (vph)	0	738	285	37	711	0	179	0	42	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.0	5.0	6.3		5.0	5.0	5.0			
Lane Util. Factor		0.95	1.00	1.00	0.91		0.95	0.95	1.00			
Frbp, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	0.99			
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		3539	1583	1770	5085		1681	1681	1560			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		3539	1583	1770	5085		1681	1681	1560			
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	879	339	44	846	0	197	0	46	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	0	879	339	44	846	0	98	99	8	0	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free									
Actuated Green, G (s)		21.4	50.3	3.4	29.8		9.2	9.2	9.2			
Effective Green, g (s)		21.4	50.3	3.4	29.8		9.2	9.2	9.2			
Actuated g/C Ratio		0.43	1.00	0.07	0.59		0.18	0.18	0.18			
Clearance Time (s)		6.3		5.0	6.3		5.0	5.0	5.0			
Vehicle Extension (s)		2.0		2.0	2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1506	1583	120	3013		307	307	285			
v/s Ratio Prot		c0.25		0.02	0.17		0.06	0.06				
v/s Ratio Perm			c0.21						0.01			
v/c Ratio		0.58	0.21	0.37	0.28		0.32	0.32	0.03			
Uniform Delay, d1		11.0	0.0	22.4	5.0		17.8	17.8	16.9			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.4	0.3	0.7	0.0		0.6	0.6	0.0			
Delay (s)		11.4	0.3	23.1	5.0		18.4	18.5	16.9			
Level of Service		B	A	C	A		B	B	B			
Approach Delay (s)		8.3			5.9			18.2			0.0	
Approach LOS		A			A			B			A	

Intersection Summary

HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	50.3	Sum of lost time (s)	6.3
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Existing Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	239	6	30	315	16	1	0	16	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Peak-hour factor, PHF	0.69	0.69	0.69	0.93	0.93	0.93	0.71	0.71	0.71	0.58	0.58	0.58
Adj. Flow (vph)	14	346	9	32	339	17	1	0	23	7	0	5
RTOR Reduction (vph)	0	1	0	0	0	8	0	22	0	0	5	0
Lane Group Flow (vph)	14	354	0	32	339	9	1	1	0	7	0	0
Confl. Peds. (#/hr)			3						1			
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	0.5	25.1		0.6	25.2	25.2	0.4	2.3		0.4	2.3	
Effective Green, g (s)	1.5	25.1		1.6	25.2	25.2	0.4	2.3		1.4	2.3	
Actuated g/C Ratio	0.03	0.52		0.03	0.52	0.52	0.01	0.05		0.03	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	55	1828		59	1843	824	15	74		51	75	
v/s Ratio Prot	0.01	c0.10		c0.02	0.10		0.00	c0.00		c0.00	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.25	0.19		0.54	0.18	0.01	0.07	0.01		0.14	0.00	
Uniform Delay, d1	22.9	6.2		23.0	6.1	5.6	23.8	22.0		22.9	22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.0		5.4	0.0	0.0	0.7	0.0		0.4	0.0	
Delay (s)	23.8	6.3		28.4	6.2	5.6	24.5	22.0		23.4	22.0	
Level of Service	C	A		C	A	A	C	C		C	C	
Approach Delay (s)		6.9			8.0			22.1			22.8	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Existing Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	117	24	111	127	85	15	18	75	64	18	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3442		1770	3327		1770	1863	1583	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3442		1770	3327		1770	1863	1583	1770	1863	1562
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.84	0.84	0.84	0.71	0.71	0.71
Adj. Flow (vph)	53	148	30	117	134	89	18	21	89	90	25	44
RTOR Reduction (vph)	0	11	0	0	63	0	0	0	75	0	0	33
Lane Group Flow (vph)	53	167	0	117	160	0	18	21	14	90	25	11
Confl. Peds. (#/hr)			2									2
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	3.4	12.5		6.2	15.3		0.7	8.5	8.5	5.5	13.3	13.3
Effective Green, g (s)	3.4	12.5		6.2	15.3		0.7	8.5	8.5	5.5	13.3	13.3
Actuated g/C Ratio	0.06	0.24		0.12	0.29		0.01	0.16	0.16	0.10	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	114	816		208	966		24	300	255	185	470	394
v/s Ratio Prot	0.03	c0.05		c0.07	c0.05		0.01	c0.01		c0.05	c0.01	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.46	0.20		0.56	0.17		0.75	0.07	0.06	0.49	0.05	0.03
Uniform Delay, d1	23.8	16.1		22.0	13.9		25.9	18.7	18.7	22.3	14.9	14.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0		2.1	0.0		73.5	0.0	0.0	0.7	0.0	0.0
Delay (s)	24.9	16.2		24.0	14.0		99.4	18.8	18.7	23.0	14.9	14.8
Level of Service	C	B		C	B		F	B	B	C	B	B
Approach Delay (s)		18.2			17.4			30.1			19.5	
Approach LOS		B			B			C			B	

Intersection Summary

HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	30.0
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Existing Conditions
AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←←	←	↑↑		←	↑↑
Volume (vph)	97	17	175	68	20	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3436	1441	3379		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3436	1441	3379		1770	3539
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.88	0.88
Adj. Flow (vph)	113	20	197	76	23	152
RTOR Reduction (vph)	2	16	37	0	0	0
Lane Group Flow (vph)	113	2	236	0	23	152
Confl. Peds. (#/hr)				4		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	4.0	4.0	11.3		0.5	16.8
Effective Green, g (s)	4.0	4.0	11.3		0.5	16.8
Actuated g/C Ratio	0.13	0.13	0.37		0.02	0.55
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	446	187	1240		29	1930
v/s Ratio Prot	c0.03		c0.07		c0.01	
v/s Ratio Perm		0.00				0.04
v/c Ratio	0.25	0.01	0.19		0.79	0.08
Uniform Delay, d1	12.1	11.7	6.6		15.1	3.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0		79.5	0.0
Delay (s)	12.4	11.7	6.7		94.6	3.3
Level of Service	B	B	A		F	A
Approach Delay (s)	12.3		6.7			15.3
Approach LOS	B		A			B

Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	30.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Existing Conditions
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	41	50	77	59	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3193		1762	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3193		1762	1485
Peak-hour factor, PHF	0.73	0.73	0.81	0.81	0.92	0.92
Adj. Flow (vph)	88	56	62	95	64	40
RTOR Reduction (vph)	0	0	72	0	2	29
Lane Group Flow (vph)	88	56	85	0	66	7
Confl. Peds. (#/hr)				3	1	2
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	2.3	14.6	7.3		5.5	5.5
Effective Green, g (s)	2.3	14.6	7.3		5.5	5.5
Actuated g/C Ratio	0.08	0.49	0.24		0.18	0.18
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	135	1717	774		322	271
v/s Ratio Prot	c0.05	0.02	c0.03		c0.04	
v/s Ratio Perm						0.00
v/c Ratio	0.65	0.03	0.11		0.20	0.02
Uniform Delay, d1	13.5	4.1	8.9		10.4	10.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.3	0.0	0.0		0.1	0.0
Delay (s)	21.8	4.1	8.9		10.6	10.1
Level of Service	C	A	A		B	B
Approach Delay (s)		14.9	8.9		10.4	
Approach LOS		B	A		B	

Intersection Summary

HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	30.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Existing Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑	↗	↘	↗	
Volume (vph)	6	505	238	10	560	0	190	0	27	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1551	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1551	1770	3539		3433		1583			
Peak-hour factor, PHF	0.75	0.75	0.75	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	8	673	317	12	667	0	238	0	34	0	0	0
RTOR Reduction (vph)	0	0	202	0	0	0	0	0	26	0	0	0
Lane Group Flow (vph)	8	673	115	12	667	0	238	0	8	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	0.6	15.2	15.2	0.8	15.4		9.5		9.5			
Effective Green, g (s)	0.6	15.2	15.2	0.8	15.4		9.5		9.5			
Actuated g/C Ratio	0.01	0.36	0.36	0.02	0.37		0.23		0.23			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	25	1287	564	34	1304		780		360			
v/s Ratio Prot	0.00	c0.19		c0.01	0.19		c0.07					
v/s Ratio Perm			0.07						0.00			
v/c Ratio	0.32	0.52	0.20	0.35	0.51		0.31		0.02			
Uniform Delay, d1	20.4	10.5	9.1	20.2	10.3		13.4		12.5			
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2	7.3	0.2	0.1	6.2	0.1		0.2		0.0			
Delay (s)	27.7	10.6	9.2	26.5	10.4		13.6		12.6			
Level of Service	C	B	A	C	B		B		B			
Approach Delay (s)		10.3			10.7			13.5			0.0	
Approach LOS		B			B			B			A	

Intersection Summary

HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	41.8	Sum of lost time (s)	16.3
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Existing Conditions
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Volume (vph)	377	110	16	349	255	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frbp, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1563	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1563	1770	3539	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.78	0.78	0.72	0.72
Adj. Flow (vph)	460	134	21	447	354	124
RTOR Reduction (vph)	0	98	0	0	0	79
Lane Group Flow (vph)	460	36	21	447	354	45
Confl. Peds. (#/hr)	2					
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	12.6	12.6	1.0	18.6	16.8	16.8
Effective Green, g (s)	12.6	12.6	1.0	18.6	16.8	16.8
Actuated g/C Ratio	0.27	0.27	0.02	0.40	0.36	0.36
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	955	422	38	1410	637	569
v/s Ratio Prot	c0.13		0.01	c0.13	c0.20	
v/s Ratio Perm		0.02				0.03
v/c Ratio	0.48	0.09	0.55	0.32	0.56	0.08
Uniform Delay, d1	14.3	12.7	22.6	9.7	12.0	9.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	19.7	0.0	1.3	0.1
Delay (s)	14.4	12.8	42.3	9.7	13.3	9.9
Level of Service	B	B	D	A	B	A
Approach Delay (s)	14.1			11.2	12.4	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	46.7	Sum of lost time (s)	17.6
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Existing Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑↑		↖	↖	↗		↕	
Volume (vph)	4	645	811	121	581	1	764	0	166	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.95	0.95	0.95	0.75	0.75	0.75
Adj. Flow (vph)	4	717	901	133	638	1	804	0	175	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	120	0	1	0
Lane Group Flow (vph)	4	717	901	133	639	0	402	402	55	0	2	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm		Split	
Protected Phases	5	2		1	6		4	4			8	8
Permitted Phases			Free						4			
Actuated Green, G (s)	0.8	26.8	87.4	10.8	36.8		27.6	27.6	27.6		0.9	
Effective Green, g (s)	0.8	26.8	87.4	10.8	36.8		27.6	27.6	27.6		0.9	
Actuated g/C Ratio	0.01	0.31	1.00	0.12	0.42		0.32	0.32	0.32		0.01	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	16	1085	1583	219	2141		531	531	491		18	
v/s Ratio Prot	0.00	0.20		0.08	0.13		c0.24	0.24			0.00	
v/s Ratio Perm			c0.57						0.04			
v/c Ratio	0.25	0.66	0.57	0.61	0.30		0.76	0.76	0.11		0.11	
Uniform Delay, d1	43.0	26.3	0.0	36.3	16.8		26.9	26.9	21.2		42.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.0	1.2	1.5	3.2	0.0		6.1	6.1	0.1		2.7	
Delay (s)	46.0	27.5	1.5	39.5	16.8		33.0	33.0	21.3		45.6	
Level of Service	D	C	A	D	B		C	C	C		D	
Approach Delay (s)		13.1			20.7			30.9			45.6	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	5.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Existing Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	734	40	180	738	17	27	0	118	23	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3508		1770	3539	1583	1770	1583		1770	1641	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3508		1770	3539	1583	1770	1583		1770	1641	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	18	807	44	194	794	18	33	0	146	27	6	23
RTOR Reduction (vph)	0	3	0	0	0	5	0	139	0	0	22	0
Lane Group Flow (vph)	18	848	0	194	794	13	33	7	0	27	7	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	2.4	66.9		23.5	88.0	88.0	4.2	5.7		3.9	5.4	
Effective Green, g (s)	2.4	66.9		23.5	88.0	88.0	4.2	5.7		3.9	5.4	
Actuated g/C Ratio	0.02	0.56		0.20	0.73	0.73	0.04	0.05		0.03	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	35	1956		347	2595	1161	62	75		58	74	
v/s Ratio Prot	0.01	c0.24		c0.11	0.22		c0.02	c0.00		0.02	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.51	0.43		0.56	0.31	0.01	0.53	0.09		0.47	0.10	
Uniform Delay, d1	58.2	15.5		43.6	5.5	4.3	56.9	54.7		57.0	55.0	
Progression Factor	0.85	0.92		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	0.6		1.1	0.3	0.0	4.3	0.2		2.1	0.2	
Delay (s)	54.0	14.9		44.7	5.8	4.3	61.3	54.9		59.2	55.2	
Level of Service	D	B		D	A	A	E	D		E	E	
Approach Delay (s)		15.7			13.3			56.1			57.1	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Existing Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	339	100	413	272	97	99	44	366	89	29	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3419		1770	3388		1770	1863	1560	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3419		1770	3388		1770	1863	1560	1770	1863	1562
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90	0.82	0.82	0.82
Adj. Flow (vph)	82	361	106	439	289	103	110	49	407	109	35	56
RTOR Reduction (vph)	0	19	0	0	22	0	0	0	368	0	0	52
Lane Group Flow (vph)	82	448	0	439	370	0	110	49	39	109	35	4
Confl. Peds. (#/hr)						1			2			1
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	7.7	45.0		33.3	70.6		12.2	11.5	11.5	10.2	9.5	9.5
Effective Green, g (s)	7.7	45.0		33.3	70.6		12.2	11.5	11.5	10.2	9.5	9.5
Actuated g/C Ratio	0.06	0.38		0.28	0.59		0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	114	1282		491	1993		180	179	150	150	147	124
v/s Ratio Prot	0.05	c0.13		c0.25	0.11		c0.06	c0.03		0.06	0.02	
v/s Ratio Perm									0.02			0.00
v/c Ratio	0.72	0.35		0.89	0.19		0.61	0.27	0.26	0.73	0.24	0.04
Uniform Delay, d1	55.1	27.0		41.7	11.4		51.6	50.4	50.3	53.5	51.9	51.0
Progression Factor	1.00	1.00		0.87	0.64		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.5	0.8		17.6	0.2		4.3	0.3	0.3	13.8	0.3	0.0
Delay (s)	71.6	27.7		53.9	7.5		55.9	50.7	50.6	67.3	52.2	51.1
Level of Service	E	C		D	A		E	D	D	E	D	D
Approach Delay (s)		34.3			32.0			51.7			60.1	
Approach LOS		C			C			D			E	

Intersection Summary

HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Existing Conditions
PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↙	↕↘		↙	↕↕
Volume (vph)	383	29	443	289	62	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3311		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3311		1770	3539
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.95	0.95
Adj. Flow (vph)	421	32	498	325	65	386
RTOR Reduction (vph)	1	24	119	0	0	0
Lane Group Flow (vph)	423	5	704	0	65	386
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	13.8	13.8	44.8		6.4	56.2
Effective Green, g (s)	13.8	13.8	44.8		6.4	56.2
Actuated g/C Ratio	0.17	0.17	0.56		0.08	0.70
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	593	249	1854		142	2486
v/s Ratio Prot	c0.12		c0.21		c0.04	
v/s Ratio Perm		0.00				0.11
v/c Ratio	0.71	0.02	0.38		0.46	0.16
Uniform Delay, d1	31.2	27.5	9.8		35.1	4.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.1	0.0	0.6		0.9	0.1
Delay (s)	35.3	27.5	10.4		36.0	4.1
Level of Service	D	C	B		D	A
Approach Delay (s)	34.8		10.4			8.7
Approach LOS	C		B			A

Intersection Summary

HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Existing Conditions
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	224	93	75	190	260	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3125		1757	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3125		1757	1485
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.91	0.91
Adj. Flow (vph)	264	109	86	218	286	263
RTOR Reduction (vph)	0	0	180	0	3	167
Lane Group Flow (vph)	264	109	124	0	309	70
Confl. Peds. (#/hr)				5		1
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.8	28.2	9.4		15.9	15.9
Effective Green, g (s)	13.8	28.2	9.4		15.9	15.9
Actuated g/C Ratio	0.26	0.52	0.17		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	451	1845	543		516	436
v/s Ratio Prot	c0.15	0.03	c0.04		c0.18	
v/s Ratio Perm						0.05
v/c Ratio	0.59	0.06	0.23		0.60	0.16
Uniform Delay, d1	17.6	6.4	19.2		16.4	14.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.1		1.3	0.1
Delay (s)	18.9	6.4	19.3		17.6	14.2
Level of Service	B	A	B		B	B
Approach Delay (s)		15.2	19.3		16.2	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Existing Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↗↘	↑	↗	↘	↗	
Volume (vph)	24	620	222	14	554	0	154	0	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1549	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1549	1770	3539		3433		1583			
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	26	681	244	16	630	0	173	0	39	0	0	0
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	35	0	0	0
Lane Group Flow (vph)	26	681	178	16	630	0	173	0	4	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	4.8	80.1	80.1	3.1	78.4		10.5		10.5			
Effective Green, g (s)	4.8	80.1	80.1	3.1	78.4		10.5		10.5			
Actuated g/C Ratio	0.04	0.73	0.73	0.03	0.71		0.10		0.10			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	77	2577	1128	50	2522		328		151			
v/s Ratio Prot	c0.01	c0.19		0.01	0.18		c0.05					
v/s Ratio Perm			0.11						0.00			
v/c Ratio	0.34	0.26	0.16	0.32	0.25		0.53		0.02			
Uniform Delay, d1	51.1	5.0	4.6	52.4	5.5		47.4		45.1			
Progression Factor	1.00	1.00	1.00	0.94	0.82		1.00		1.00			
Incremental Delay, d2	2.6	0.3	0.3	3.7	0.2		1.5		0.1			
Delay (s)	53.7	5.3	4.9	53.0	4.7		48.9		45.2			
Level of Service	D	A	A	D	A		D		D			
Approach Delay (s)		6.5			5.9			48.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary

HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Existing Conditions
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Volume (vph)	394	190	37	421	102	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.99	0.99	0.98	0.98
Adj. Flow (vph)	448	216	37	425	104	23
RTOR Reduction (vph)	0	69	0	0	0	20
Lane Group Flow (vph)	448	147	37	425	104	3
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	75.0	75.0	6.0	86.0	12.7	12.7
Effective Green, g (s)	75.0	75.0	6.0	86.0	12.7	12.7
Actuated g/C Ratio	0.68	0.68	0.05	0.78	0.12	0.12
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	2413	1079	97	2767	204	183
v/s Ratio Prot	c0.13		c0.02	0.12	c0.06	
v/s Ratio Perm		0.09				0.00
v/c Ratio	0.19	0.14	0.38	0.15	0.51	0.01
Uniform Delay, d1	6.4	6.1	50.2	3.0	45.7	43.1
Progression Factor	0.56	0.16	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	3.4	0.1	2.7	0.0
Delay (s)	3.7	1.2	53.6	3.1	48.4	43.1
Level of Service	A	A	D	A	D	D
Approach Delay (s)	2.9			7.1	47.5	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Existing Conditions
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	435	967	218	465	0	825	2	250	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.93	0.93	0.93	0.38	0.38	0.38
Adj. Flow (vph)	14	458	1018	248	528	0	887	2	269	5	3	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	177	0	8	0
Lane Group Flow (vph)	14	458	1018	248	528	0	443	446	92	0	8	0
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	1.1	19.8	89.3	15.4	34.1		30.5	30.5	30.5		2.3	
Effective Green, g (s)	1.1	19.8	89.3	15.4	34.1		30.5	30.5	30.5		2.3	
Actuated g/C Ratio	0.01	0.22	1.00	0.17	0.38		0.34	0.34	0.34		0.03	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	22	785	1583	305	1942		574	576	541		44	
v/s Ratio Prot	0.01	0.13		c0.14	0.10		0.26	c0.26			0.00	
v/s Ratio Perm			c0.64						0.06			
v/c Ratio	0.64	0.58	0.64	0.81	0.27		0.77	0.77	0.17		0.19	
Uniform Delay, d1	43.9	31.1	0.0	35.6	19.0		26.3	26.3	20.6		42.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	36.7	0.7	2.0	14.4	0.0		6.4	6.4	0.1		2.1	
Delay (s)	80.6	31.8	2.0	50.0	19.1		32.7	32.8	20.7		44.6	
Level of Service	F	C	A	D	B		C	C	C		D	
Approach Delay (s)		11.9			28.9			29.9			44.6	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	5.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Existing Conditions
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	952	49	198	962	19	32	3	86	21	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3510		1770	3539	1583	1770	1594		1770	1667	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3510		1770	3539	1583	1770	1594		1770	1667	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.84	0.84	0.84	0.77	0.77	0.77
Adj. Flow (vph)	9	992	51	218	1057	21	38	4	102	27	6	14
RTOR Reduction (vph)	0	2	0	0	0	6	0	96	0	0	13	0
Lane Group Flow (vph)	9	1041	0	218	1057	15	38	10	0	27	7	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	0.8	40.4		12.8	52.4	52.4	3.4	4.6		2.0	3.2	
Effective Green, g (s)	1.8	40.4		13.8	52.4	52.4	3.4	4.6		3.0	3.2	
Actuated g/C Ratio	0.02	0.51		0.17	0.66	0.66	0.04	0.06		0.04	0.04	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	40	1777		306	2324	1039	75	92		67	67	
v/s Ratio Prot	0.01	c0.30		c0.12	0.30		c0.02	c0.01		0.02	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.23	0.59		0.71	0.45	0.01	0.51	0.11		0.40	0.10	
Uniform Delay, d1	38.3	13.8		31.1	6.7	4.7	37.4	35.7		37.5	36.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.3		6.4	0.1	0.0	2.0	0.2		1.4	0.2	
Delay (s)	39.4	14.1		37.5	6.8	4.8	39.3	35.8		39.0	37.1	
Level of Service	D	B		D	A	A	D	D		D	D	
Approach Delay (s)		14.4			11.9			36.8			38.2	
Approach LOS		B			B			D			D	

Intersection Summary

HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Existing Conditions
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	452	131	466	327	216	125	67	422	137	86	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3410		1770	3328		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3410		1770	3328		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	119	466	135	491	344	227	137	74	464	161	101	85
RTOR Reduction (vph)	0	19	0	0	70	0	0	0	421	0	0	76
Lane Group Flow (vph)	119	582	0	491	501	0	137	74	43	161	101	9
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	11.7	23.8		37.9	50.0		12.7	9.9	9.9	14.4	11.6	11.6
Effective Green, g (s)	11.7	23.8		37.9	50.0		12.7	9.9	9.9	14.4	11.6	11.6
Actuated g/C Ratio	0.11	0.22		0.36	0.47		0.12	0.09	0.09	0.14	0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	195	766		633	1570		212	174	148	240	204	173
v/s Ratio Prot	0.07	c0.17		c0.28	0.15		0.08	0.04		c0.09	c0.05	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.61	0.76		0.78	0.32		0.65	0.43	0.29	0.67	0.50	0.05
Uniform Delay, d1	45.0	38.4		30.3	17.4		44.5	45.4	44.8	43.5	44.4	42.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	4.0		5.4	0.0		5.0	0.6	0.4	5.7	0.7	0.0
Delay (s)	48.9	42.5		35.7	17.5		49.5	46.0	45.2	49.2	45.1	42.3
Level of Service	D	D		D	B		D	D	D	D	D	D
Approach Delay (s)		43.5			25.9			46.2			46.3	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Existing Conditions
SAT Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	←←	←	↑↑		←	↑↑
Volume (vph)	400	25	597	289	65	433
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3351		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3351		1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.94	0.94
Adj. Flow (vph)	421	26	628	304	69	461
RTOR Reduction (vph)	1	17	52	0	0	0
Lane Group Flow (vph)	423	6	880	0	69	461
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	14.1	14.1	22.2		4.2	31.4
Effective Green, g (s)	14.1	14.1	22.2		4.2	31.4
Actuated g/C Ratio	0.25	0.25	0.40		0.08	0.57
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	874	366	1340		134	2002
v/s Ratio Prot	c0.12		c0.26		c0.04	
v/s Ratio Perm		0.00				0.13
v/c Ratio	0.48	0.02	0.66		0.51	0.23
Uniform Delay, d1	17.6	15.5	13.6		24.7	6.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.0	0.9		1.4	0.0
Delay (s)	18.0	15.5	14.4		26.1	6.0
Level of Service	B	B	B		C	A
Approach Delay (s)	17.9		14.4			8.6
Approach LOS	B		B			A

Intersection Summary

HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Existing Conditions
SAT Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	215	74	96	303	268	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3105		1757	1484
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3105		1757	1484
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.88	0.88
Adj. Flow (vph)	244	84	104	329	305	277
RTOR Reduction (vph)	0	0	271	0	3	173
Lane Group Flow (vph)	244	84	162	0	330	76
Confl. Peds. (#/hr)				2		3
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.4	28.1	9.7		16.6	16.6
Effective Green, g (s)	13.4	28.1	9.7		16.6	16.6
Actuated g/C Ratio	0.24	0.51	0.18		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	434	1818	551		533	450
v/s Ratio Prot	c0.14	0.02	c0.05		c0.19	
v/s Ratio Perm						0.05
v/c Ratio	0.56	0.05	0.29		0.62	0.17
Uniform Delay, d1	18.1	6.6	19.5		16.3	14.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	0.1		1.5	0.1
Delay (s)	19.1	6.6	19.6		17.9	14.0
Level of Service	B	A	B		B	B
Approach Delay (s)		15.9	19.6		16.2	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Existing Conditions
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	508	149	32	478	1	170	6	35	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Peak-hour factor, PHF	0.78	0.78	0.78	0.91	0.91	0.91	0.80	0.80	0.80	0.66	0.66	0.66
Adj. Flow (vph)	110	651	191	35	525	1	212	8	44	0	0	64
RTOR Reduction (vph)	0	0	118	0	0	0	0	0	30	0	58	0
Lane Group Flow (vph)	110	651	73	35	526	0	212	8	14	0	6	0
Confl. Peds. (#/hr)									1			3
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	5.8	24.7	24.7	2.6	21.5		10.6	21.3	21.3		5.7	
Effective Green, g (s)	5.8	24.7	24.7	2.6	21.5		10.6	21.3	21.3		5.7	
Actuated g/C Ratio	0.09	0.38	0.38	0.04	0.33		0.16	0.33	0.33		0.09	
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	158	1347	602	71	1172		561	611	513		137	
v/s Ratio Prot	c0.06	c0.18		0.02	0.15		c0.06	0.00			c0.00	
v/s Ratio Perm			0.05						0.01			
v/c Ratio	0.70	0.48	0.12	0.49	0.45		0.38	0.01	0.03		0.04	
Uniform Delay, d1	28.7	15.3	13.0	30.5	17.0		24.2	14.7	14.8		27.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	12.5	0.1	0.0	5.3	0.1		0.4	0.0	0.0		0.1	
Delay (s)	41.2	15.4	13.1	35.8	17.1		24.6	14.7	14.8		27.2	
Level of Service	D	B	B	D	B		C	B	B		C	
Approach Delay (s)		17.9			18.3			22.7			27.2	
Approach LOS		B			B			C			C	

Intersection Summary

HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	64.9	Sum of lost time (s)	21.3
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Existing Conditions
SAT Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	345	123	24	374	129	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.90	0.90
Adj. Flow (vph)	367	131	27	416	143	20
RTOR Reduction (vph)	0	94	0	0	0	16
Lane Group Flow (vph)	367	37	27	416	143	4
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	9.8	9.8	1.0	15.8	7.4	7.4
Effective Green, g (s)	9.8	9.8	1.0	15.8	7.4	7.4
Actuated g/C Ratio	0.28	0.28	0.03	0.46	0.21	0.21
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1005	450	51	1621	380	340
v/s Ratio Prot	c0.10		0.02	c0.12	c0.08	
v/s Ratio Perm		0.02				0.00
v/c Ratio	0.37	0.08	0.53	0.26	0.38	0.01
Uniform Delay, d1	9.9	9.1	16.5	5.7	11.6	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	12.3	0.0	0.9	0.0
Delay (s)	9.9	9.1	28.8	5.8	12.4	10.7
Level of Service	A	A	C	A	B	B
Approach Delay (s)	9.7			7.2	12.2	
Approach LOS	A			A	B	

Intersection Summary

HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	17.6
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

NEAR-TERM (2014) INTERSECTION LOS ANALYSIS WORKSHEETS

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↖	↗		↕	
Volume (vph)	0	760	289	37	746	0	184	0	42	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.0	5.0	6.3		5.0	5.0	5.0			
Lane Util. Factor		0.95	1.00	1.00	0.91		0.95	0.95	1.00			
Frbp, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	0.98			
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		3539	1583	1770	5085		1681	1681	1559			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		3539	1583	1770	5085		1681	1681	1559			
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	905	344	44	888	0	202	0	46	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	36	0	0	0
Lane Group Flow (vph)	0	905	344	44	888	0	101	101	10	0	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)		20.9	52.8	3.6	29.5		12.0	12.0	12.0			
Effective Green, g (s)		20.9	52.8	3.6	29.5		12.0	12.0	12.0			
Actuated g/C Ratio		0.40	1.00	0.07	0.56		0.23	0.23	0.23			
Clearance Time (s)		6.3		5.0	6.3		5.0	5.0	5.0			
Vehicle Extension (s)		2.0		2.0	2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1401	1583	121	2841		382	382	354			
v/s Ratio Prot		c0.26		0.02	c0.17		0.06	0.06				
v/s Ratio Perm			c0.22						0.01			
v/c Ratio		0.65	0.22	0.36	0.31		0.26	0.26	0.03			
Uniform Delay, d1		12.9	0.0	23.5	6.2		16.8	16.8	15.9			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.8	0.3	0.7	0.0		0.4	0.4	0.0			
Delay (s)		13.7	0.3	24.2	6.3		17.1	17.1	15.9			
Level of Service		B	A	C	A		B	B	B			
Approach Delay (s)		10.0			7.1			16.9			0.0	
Approach LOS		B			A			B			A	

Intersection Summary

HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	52.8	Sum of lost time (s)	12.6
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	241	6	30	315	16	1	0	16	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Peak-hour factor, PHF	0.69	0.69	0.69	0.93	0.93	0.93	0.71	0.71	0.71	0.58	0.58	0.58
Adj. Flow (vph)	14	349	9	32	339	17	1	0	23	7	0	5
RTOR Reduction (vph)	0	1	0	0	0	8	0	22	0	0	5	0
Lane Group Flow (vph)	14	357	0	32	339	9	1	1	0	7	0	0
Confl. Peds. (#/hr)			3						1			
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	0.5	25.1		0.6	25.2	25.2	0.4	2.3		0.4	2.3	
Effective Green, g (s)	1.5	25.1		1.6	25.2	25.2	0.4	2.3		1.4	2.3	
Actuated g/C Ratio	0.03	0.52		0.03	0.52	0.52	0.01	0.05		0.03	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	55	1828		59	1843	824	15	74		51	75	
v/s Ratio Prot	0.01	c0.10		c0.02	0.10		0.00	c0.00		c0.00	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.25	0.20		0.54	0.18	0.01	0.07	0.01		0.14	0.00	
Uniform Delay, d1	22.9	6.2		23.0	6.1	5.6	23.8	22.0		22.9	22.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.0		5.4	0.0	0.0	0.7	0.0		0.4	0.0	
Delay (s)	23.8	6.3		28.4	6.2	5.6	24.5	22.0		23.4	22.0	
Level of Service	C	A		C	A	A	C	C		C	C	
Approach Delay (s)		6.9			8.0			22.1			22.8	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	118	24	111	127	85	15	18	75	64	18	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3443		1770	3327		1770	1863	1583	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3443		1770	3327		1770	1863	1583	1770	1863	1562
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.84	0.84	0.84	0.71	0.71	0.71
Adj. Flow (vph)	53	149	30	117	134	89	18	21	89	90	25	44
RTOR Reduction (vph)	0	11	0	0	63	0	0	0	75	0	0	33
Lane Group Flow (vph)	53	168	0	117	160	0	18	21	14	90	25	11
Confl. Peds. (#/hr)			2									2
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	3.4	12.5		6.2	15.3		0.7	8.5	8.5	5.5	13.3	13.3
Effective Green, g (s)	3.4	12.5		6.2	15.3		0.7	8.5	8.5	5.5	13.3	13.3
Actuated g/C Ratio	0.06	0.24		0.12	0.29		0.01	0.16	0.16	0.10	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	114	817		208	966		24	300	255	185	470	394
v/s Ratio Prot	0.03	c0.05		c0.07	c0.05		0.01	c0.01		c0.05	c0.01	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.46	0.21		0.56	0.17		0.75	0.07	0.06	0.49	0.05	0.03
Uniform Delay, d1	23.8	16.1		22.0	13.9		25.9	18.7	18.7	22.3	14.9	14.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0		2.1	0.0		73.5	0.0	0.0	0.7	0.0	0.0
Delay (s)	24.9	16.2		24.0	14.0		99.4	18.8	18.7	23.0	14.9	14.8
Level of Service	C	B		C	B		F	B	B	C	B	B
Approach Delay (s)		18.2			17.4			30.1			19.5	
Approach LOS		B			B			C			B	

Intersection Summary

HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	30.0
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Near-Term (2014)
AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	97	17	178	70	20	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3436	1441	3376		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3436	1441	3376		1770	3539
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.88	0.88
Adj. Flow (vph)	113	20	200	79	23	152
RTOR Reduction (vph)	2	16	39	0	0	0
Lane Group Flow (vph)	113	2	240	0	23	152
Confl. Peds. (#/hr)				4		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	4.0	4.0	11.3		0.5	16.8
Effective Green, g (s)	4.0	4.0	11.3		0.5	16.8
Actuated g/C Ratio	0.13	0.13	0.37		0.02	0.55
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	446	187	1239		29	1930
v/s Ratio Prot	c0.03		c0.07		c0.01	
v/s Ratio Perm		0.00				0.04
v/c Ratio	0.25	0.01	0.19		0.79	0.08
Uniform Delay, d1	12.1	11.7	6.6		15.1	3.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0		79.5	0.0
Delay (s)	12.4	11.7	6.7		94.6	3.3
Level of Service	B	B	A		F	A
Approach Delay (s)	12.3		6.7			15.3
Approach LOS	B		A			B

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	30.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	44	50	77	59	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3193		1762	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3193		1762	1485
Peak-hour factor, PHF	0.73	0.73	0.81	0.81	0.92	0.92
Adj. Flow (vph)	88	60	62	95	64	40
RTOR Reduction (vph)	0	0	72	0	2	29
Lane Group Flow (vph)	88	60	85	0	66	7
Confl. Peds. (#/hr)				3	1	2
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	2.3	14.6	7.3		5.5	5.5
Effective Green, g (s)	2.3	14.6	7.3		5.5	5.5
Actuated g/C Ratio	0.08	0.49	0.24		0.18	0.18
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	135	1717	774		322	271
v/s Ratio Prot	c0.05	0.02	c0.03		c0.04	
v/s Ratio Perm						0.00
v/c Ratio	0.65	0.03	0.11		0.20	0.02
Uniform Delay, d1	13.5	4.1	8.9		10.4	10.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.3	0.0	0.0		0.1	0.0
Delay (s)	21.8	4.1	8.9		10.6	10.1
Level of Service	C	A	A		B	B
Approach Delay (s)		14.6	8.9		10.4	
Approach LOS		B	A		B	

Intersection Summary

HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	30.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑	↗	↘	↗	
Volume (vph)	6	518	238	10	577	0	197	0	28	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1551	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1551	1770	3539		3433		1583			
Peak-hour factor, PHF	0.75	0.75	0.75	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	8	691	317	12	687	0	246	0	35	0	0	0
RTOR Reduction (vph)	0	0	201	0	0	0	0	0	27	0	0	0
Lane Group Flow (vph)	8	691	116	12	687	0	246	0	8	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	0.6	15.4	15.4	0.8	15.6		9.7		9.7			
Effective Green, g (s)	0.6	15.4	15.4	0.8	15.6		9.7		9.7			
Actuated g/C Ratio	0.01	0.36	0.36	0.02	0.37		0.23		0.23			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	25	1291	566	34	1308		789		364			
v/s Ratio Prot	0.00	c0.20		c0.01	0.19		c0.07					
v/s Ratio Perm			0.07						0.01			
v/c Ratio	0.32	0.54	0.20	0.35	0.53		0.31		0.02			
Uniform Delay, d1	20.6	10.6	9.2	20.4	10.4		13.5		12.6			
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2	7.3	0.2	0.1	6.2	0.2		0.2		0.0			
Delay (s)	27.9	10.8	9.3	26.7	10.6		13.7		12.6			
Level of Service	C	B	A	C	B		B		B			
Approach Delay (s)		10.4			10.9			13.6			0.0	
Approach LOS		B			B			B			A	

Intersection Summary

HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	42.2	Sum of lost time (s)	16.3
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Near-Term (2014)
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Volume (vph)	423	123	16	371	262	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frbp, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1563	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1563	1770	3539	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.78	0.78	0.72	0.72
Adj. Flow (vph)	516	150	21	476	364	124
RTOR Reduction (vph)	0	108	0	0	0	79
Lane Group Flow (vph)	516	42	21	476	364	45
Confl. Peds. (#/hr)		2				
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	13.6	13.6	1.0	19.6	17.4	17.4
Effective Green, g (s)	13.6	13.6	1.0	19.6	17.4	17.4
Actuated g/C Ratio	0.28	0.28	0.02	0.41	0.36	0.36
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	996	440	37	1436	638	570
v/s Ratio Prot	c0.15		0.01	c0.13	c0.21	
v/s Ratio Perm		0.03				0.03
v/c Ratio	0.52	0.10	0.57	0.33	0.57	0.08
Uniform Delay, d1	14.6	12.8	23.4	9.9	12.4	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	22.0	0.0	1.5	0.1
Delay (s)	14.8	12.8	45.5	9.9	13.9	10.3
Level of Service	B	B	D	A	B	B
Approach Delay (s)	14.3			11.4	13.0	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	17.6
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑↑		↙	↖	↗		↕	
Volume (vph)	4	681	813	121	602	1	766	0	167	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.95	0.95	0.95	0.75	0.75	0.75
Adj. Flow (vph)	4	757	903	133	662	1	806	0	176	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	121	0	1	0
Lane Group Flow (vph)	4	757	903	133	663	0	403	403	55	0	2	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	0.8	28.0	89.0	10.9	38.1		27.9	27.9	27.9		0.9	
Effective Green, g (s)	0.8	28.0	89.0	10.9	38.1		27.9	27.9	27.9		0.9	
Actuated g/C Ratio	0.01	0.31	1.00	0.12	0.43		0.31	0.31	0.31		0.01	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	16	1113	1583	217	2176		527	527	488		18	
v/s Ratio Prot	0.00	0.21		0.08	0.13		c0.24	0.24			0.00	
v/s Ratio Perm			c0.57						0.04			
v/c Ratio	0.25	0.68	0.57	0.61	0.30		0.76	0.76	0.11		0.11	
Uniform Delay, d1	43.8	26.6	0.0	37.0	16.7		27.6	27.6	21.7		43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.0	1.4	1.5	3.6	0.0		6.5	6.5	0.1		2.7	
Delay (s)	46.8	28.0	1.5	40.6	16.8		34.1	34.1	21.8		46.4	
Level of Service	D	C	A	D	B		C	C	C		D	
Approach Delay (s)		13.7			20.8			31.9			46.4	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	5.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	734	40	180	742	17	27	0	118	23	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.88	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3508		1770	3539	1583	1770	1583		1770	1641	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3508		1770	3539	1583	1770	1583		1770	1641	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	18	807	44	194	798	18	33	0	146	27	6	23
RTOR Reduction (vph)	0	3	0	0	0	5	0	139	0	0	22	0
Lane Group Flow (vph)	18	848	0	194	798	13	33	7	0	27	7	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	2.4	66.9		23.5	88.0	88.0	4.2	5.7		3.9	5.4	
Effective Green, g (s)	2.4	66.9		23.5	88.0	88.0	4.2	5.7		3.9	5.4	
Actuated g/C Ratio	0.02	0.56		0.20	0.73	0.73	0.04	0.05		0.03	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	35	1956		347	2595	1161	62	75		58	74	
v/s Ratio Prot	0.01	c0.24		c0.11	0.23		c0.02	c0.00		0.02	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.51	0.43		0.56	0.31	0.01	0.53	0.09		0.47	0.10	
Uniform Delay, d1	58.2	15.5		43.6	5.5	4.3	56.9	54.7		57.0	55.0	
Progression Factor	0.85	0.92		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	0.6		1.1	0.3	0.0	4.3	0.2		2.1	0.2	
Delay (s)	54.0	14.9		44.7	5.8	4.3	61.3	54.9		59.2	55.2	
Level of Service	D	B		D	A	A	E	D		E	E	
Approach Delay (s)		15.7			13.3			56.1			57.1	
Approach LOS		B			B			E			E	

Intersection Summary		
HCM Average Control Delay	19.0	HCM Level of Service
HCM Volume to Capacity ratio	0.43	B
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	52.2%	15.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	339	100	413	276	97	100	44	366	89	29	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3419		1770	3390		1770	1863	1560	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3419		1770	3390		1770	1863	1560	1770	1863	1562
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90	0.82	0.82	0.82
Adj. Flow (vph)	82	361	106	439	294	103	111	49	407	109	35	56
RTOR Reduction (vph)	0	19	0	0	21	0	0	0	368	0	0	52
Lane Group Flow (vph)	82	448	0	439	376	0	111	49	39	109	35	4
Confl. Peds. (#/hr)						1			2			1
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	7.7	44.9		33.3	70.5		12.3	11.6	11.6	10.2	9.5	9.5
Effective Green, g (s)	7.7	44.9		33.3	70.5		12.3	11.6	11.6	10.2	9.5	9.5
Actuated g/C Ratio	0.06	0.37		0.28	0.59		0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	114	1279		491	1992		181	180	151	150	147	124
v/s Ratio Prot	0.05	c0.13		c0.25	0.11		c0.06	c0.03		0.06	0.02	
v/s Ratio Perm									0.03			0.00
v/c Ratio	0.72	0.35		0.89	0.19		0.61	0.27	0.26	0.73	0.24	0.04
Uniform Delay, d1	55.1	27.0		41.7	11.5		51.6	50.3	50.2	53.5	51.9	51.0
Progression Factor	1.00	1.00		0.87	0.64		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.5	0.8		17.6	0.2		4.3	0.3	0.3	13.8	0.3	0.0
Delay (s)	71.6	27.8		53.9	7.5		55.9	50.6	50.6	67.3	52.2	51.1
Level of Service	E	C		D	A		E	D	D	E	D	D
Approach Delay (s)		34.3			31.9			51.6			60.1	
Approach LOS		C			C			D			E	

Intersection Summary

HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Near-Term (2014)
PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↙	↙	↕↔		↙	↕↕
Volume (vph)	391	29	445	290	62	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3312		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3312		1770	3539
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.95	0.95
Adj. Flow (vph)	430	32	500	326	65	395
RTOR Reduction (vph)	1	24	119	0	0	0
Lane Group Flow (vph)	432	5	707	0	65	395
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	13.9	13.9	44.7		6.4	56.1
Effective Green, g (s)	13.9	13.9	44.7		6.4	56.1
Actuated g/C Ratio	0.17	0.17	0.56		0.08	0.70
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	598	250	1851		142	2482
v/s Ratio Prot	c0.13		c0.21		c0.04	
v/s Ratio Perm		0.00				0.11
v/c Ratio	0.72	0.02	0.38		0.46	0.16
Uniform Delay, d1	31.2	27.4	9.9		35.1	4.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.0	0.6		0.9	0.1
Delay (s)	35.5	27.4	10.5		36.0	4.2
Level of Service	D	C	B		D	A
Approach Delay (s)	35.0		10.5			8.7
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Near-Term (2014)
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	224	94	77	191	260	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3128		1757	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3128		1757	1485
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.91	0.91
Adj. Flow (vph)	264	111	89	220	286	264
RTOR Reduction (vph)	0	0	182	0	3	168
Lane Group Flow (vph)	264	111	127	0	309	70
Confl. Peds. (#/hr)				5		1
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.8	28.2	9.4		15.9	15.9
Effective Green, g (s)	13.8	28.2	9.4		15.9	15.9
Actuated g/C Ratio	0.26	0.52	0.17		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	451	1845	543		516	436
v/s Ratio Prot	c0.15	0.03	c0.04		c0.18	
v/s Ratio Perm						0.05
v/c Ratio	0.59	0.06	0.23		0.60	0.16
Uniform Delay, d1	17.6	6.4	19.3		16.4	14.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.1		1.3	0.1
Delay (s)	18.9	6.4	19.3		17.6	14.2
Level of Service	B	A	B		B	B
Approach Delay (s)		15.2	19.3		16.1	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	54.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	647	231	14	564	0	164	0	37	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1549	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1549	1770	3539		3433		1583			
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	26	711	254	16	641	0	184	0	42	0	0	0
RTOR Reduction (vph)	0	0	69	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	26	711	185	16	641	0	184	0	4	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	4.8	80.0	80.0	3.1	78.3		10.6		10.6			
Effective Green, g (s)	4.8	80.0	80.0	3.1	78.3		10.6		10.6			
Actuated g/C Ratio	0.04	0.73	0.73	0.03	0.71		0.10		0.10			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	77	2574	1127	50	2519		331		153			
v/s Ratio Prot	c0.01	c0.20		0.01	0.18		c0.05					
v/s Ratio Perm			0.12						0.00			
v/c Ratio	0.34	0.28	0.16	0.32	0.25		0.56		0.03			
Uniform Delay, d1	51.1	5.1	4.6	52.4	5.6		47.5		45.0			
Progression Factor	1.00	1.00	1.00	0.92	0.87		1.00		1.00			
Incremental Delay, d2	2.6	0.3	0.3	3.7	0.2		2.0		0.1			
Delay (s)	53.7	5.4	5.0	52.1	5.1		49.5		45.1			
Level of Service	D	A	A	D	A		D		D			
Approach Delay (s)		6.5			6.2			48.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary

HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Near-Term (2014)
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	431	202	37	449	109	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.99	0.99	0.98	0.98
Adj. Flow (vph)	490	230	37	454	111	23
RTOR Reduction (vph)	0	74	0	0	0	20
Lane Group Flow (vph)	490	156	37	454	111	3
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	74.5	74.5	6.0	85.5	13.2	13.2
Effective Green, g (s)	74.5	74.5	6.0	85.5	13.2	13.2
Actuated g/C Ratio	0.68	0.68	0.05	0.78	0.12	0.12
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	2397	1072	97	2751	212	190
v/s Ratio Prot	c0.14		c0.02	0.13	c0.06	
v/s Ratio Perm		0.10				0.00
v/c Ratio	0.20	0.15	0.38	0.17	0.52	0.01
Uniform Delay, d1	6.6	6.4	50.2	3.1	45.4	42.7
Progression Factor	0.55	0.16	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	3.4	0.1	3.0	0.0
Delay (s)	3.9	1.3	53.6	3.3	48.5	42.7
Level of Service	A	A	D	A	D	D
Approach Delay (s)	3.0			7.1	47.5	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	499	977	218	507	0	833	2	254	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.93	0.93	0.93	0.38	0.38	0.38
Adj. Flow (vph)	14	525	1028	248	576	0	896	2	273	5	3	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	180	0	8	0
Lane Group Flow (vph)	14	525	1028	248	576	0	448	450	93	0	8	0
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	1.1	21.6	92.1	15.4	35.9		31.4	31.4	31.4		2.4	
Effective Green, g (s)	1.1	21.6	92.1	15.4	35.9		31.4	31.4	31.4		2.4	
Actuated g/C Ratio	0.01	0.23	1.00	0.17	0.39		0.34	0.34	0.34		0.03	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	21	830	1583	296	1982		573	575	540		45	
v/s Ratio Prot	0.01	0.15		c0.14	0.11		0.27	c0.27			0.00	
v/s Ratio Perm			c0.65						0.06			
v/c Ratio	0.67	0.63	0.65	0.84	0.29		0.78	0.78	0.17		0.18	
Uniform Delay, d1	45.3	31.7	0.0	37.1	19.3		27.3	27.3	21.3		43.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	47.8	1.2	2.1	17.6	0.0		6.9	6.9	0.2		2.0	
Delay (s)	93.2	32.8	2.1	54.7	19.4		34.1	34.1	21.4		45.8	
Level of Service	F	C	A	D	B		C	C	C		D	
Approach Delay (s)		13.2			30.0			31.2			45.8	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	5.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	962	49	198	974	19	32	3	86	21	5	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3510		1770	3539	1583	1770	1594		1770	1667	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3510		1770	3539	1583	1770	1594		1770	1667	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.84	0.84	0.84	0.77	0.77	0.77
Adj. Flow (vph)	9	1002	51	218	1070	21	38	4	102	27	6	14
RTOR Reduction (vph)	0	2	0	0	0	6	0	96	0	0	13	0
Lane Group Flow (vph)	9	1051	0	218	1070	15	38	10	0	27	7	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	0.8	40.8		12.8	52.8	52.8	3.4	4.5		2.0	3.1	
Effective Green, g (s)	1.8	40.8		13.8	52.8	52.8	3.4	4.5		3.0	3.1	
Actuated g/C Ratio	0.02	0.51		0.17	0.66	0.66	0.04	0.06		0.04	0.04	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	40	1788		305	2333	1043	75	90		66	65	
v/s Ratio Prot	0.01	c0.30		c0.12	0.30		c0.02	c0.01		0.02	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.23	0.59		0.71	0.46	0.01	0.51	0.11		0.41	0.10	
Uniform Delay, d1	38.5	13.8		31.3	6.7	4.7	37.5	35.9		37.7	37.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.3		6.5	0.1	0.0	2.0	0.2		1.5	0.2	
Delay (s)	39.5	14.1		37.8	6.7	4.7	39.5	36.1		39.2	37.4	
Level of Service	D	B		D	A	A	D	D		D	D	
Approach Delay (s)		14.3			11.9			37.0			38.4	
Approach LOS		B			B			D			D	

Intersection Summary

HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	453	131	467	331	216	126	67	422	137	86	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3410		1770	3330		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3410		1770	3330		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	119	467	135	492	348	227	138	74	464	161	101	85
RTOR Reduction (vph)	0	19	0	0	68	0	0	0	421	0	0	76
Lane Group Flow (vph)	119	583	0	492	507	0	138	74	43	161	101	9
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	11.7	23.9		38.0	50.2		12.7	9.8	9.8	14.4	11.5	11.5
Effective Green, g (s)	11.7	23.9		38.0	50.2		12.7	9.8	9.8	14.4	11.5	11.5
Actuated g/C Ratio	0.11	0.23		0.36	0.47		0.12	0.09	0.09	0.14	0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	195	768		634	1576		212	172	146	240	202	172
v/s Ratio Prot	0.07	c0.17		c0.28	0.15		0.08	0.04		c0.09	c0.05	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.61	0.76		0.78	0.32		0.65	0.43	0.29	0.67	0.50	0.05
Uniform Delay, d1	45.0	38.4		30.3	17.4		44.6	45.5	44.9	43.6	44.6	42.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.9	3.9		5.4	0.0		5.4	0.6	0.4	5.7	0.7	0.0
Delay (s)	49.0	42.3		35.7	17.4		49.9	46.1	45.3	49.3	45.3	42.5
Level of Service	D	D		D	B		D	D	D	D	D	D
Approach Delay (s)		43.4			25.8			46.4			46.5	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	106.1	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Near-Term (2014)
SAT Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↙	↙	↕↔		↙	↕↕
Volume (vph)	416	25	601	291	65	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3352		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3352		1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.94	0.94
Adj. Flow (vph)	438	26	633	306	69	480
RTOR Reduction (vph)	1	17	53	0	0	0
Lane Group Flow (vph)	440	6	886	0	69	480
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	14.3	14.3	22.2		5.7	32.9
Effective Green, g (s)	14.3	14.3	22.2		5.7	32.9
Actuated g/C Ratio	0.25	0.25	0.39		0.10	0.58
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	860	360	1301		176	2036
v/s Ratio Prot	c0.13		c0.26		c0.04	
v/s Ratio Perm		0.00				0.14
v/c Ratio	0.51	0.02	0.68		0.39	0.24
Uniform Delay, d1	18.4	16.2	14.6		24.1	6.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.0	1.2		0.5	0.0
Delay (s)	19.0	16.2	15.7		24.7	6.0
Level of Service	B	B	B		C	A
Approach Delay (s)	18.8		15.7			8.3
Approach LOS	B		B			A

Intersection Summary

HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	57.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Near-Term (2014)
SAT Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	215	78	102	305	268	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3110		1757	1484
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3110		1757	1484
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.88	0.88
Adj. Flow (vph)	244	89	111	332	305	277
RTOR Reduction (vph)	0	0	273	0	3	174
Lane Group Flow (vph)	244	89	170	0	330	75
Confl. Peds. (#/hr)				2		3
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.4	28.2	9.8		16.6	16.6
Effective Green, g (s)	13.4	28.2	9.8		16.6	16.6
Actuated g/C Ratio	0.24	0.51	0.18		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	433	1821	556		532	450
v/s Ratio Prot	c0.14	0.03	c0.05		c0.19	
v/s Ratio Perm						0.05
v/c Ratio	0.56	0.05	0.31		0.62	0.17
Uniform Delay, d1	18.1	6.6	19.5		16.4	14.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	0.1		1.6	0.1
Delay (s)	19.1	6.6	19.7		18.0	14.1
Level of Service	B	A	B		B	B
Approach Delay (s)		15.8	19.7		16.3	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	556	163	32	496	1	194	6	39	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Peak-hour factor, PHF	0.78	0.78	0.78	0.91	0.91	0.91	0.80	0.80	0.80	0.66	0.66	0.66
Adj. Flow (vph)	110	713	209	35	545	1	242	8	49	0	0	64
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	33	0	59	0
Lane Group Flow (vph)	110	713	81	35	546	0	242	8	16	0	5	0
Confl. Peds. (#/hr)									1			3
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	5.9	26.1	26.1	2.6	22.8		11.5	22.2	22.2		5.7	
Effective Green, g (s)	5.9	26.1	26.1	2.6	22.8		11.5	22.2	22.2		5.7	
Actuated g/C Ratio	0.09	0.39	0.39	0.04	0.34		0.17	0.33	0.33		0.08	
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	155	1375	615	68	1200		587	615	516		132	
v/s Ratio Prot	c0.06	c0.20		0.02	0.15		c0.07	0.00			0.00	
v/s Ratio Perm			0.05						c0.01			
v/c Ratio	0.71	0.52	0.13	0.51	0.46		0.41	0.01	0.03		0.04	
Uniform Delay, d1	29.8	15.7	13.2	31.7	17.3		24.8	15.1	15.2		28.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	13.9	0.1	0.0	6.4	0.1		0.5	0.0	0.0		0.1	
Delay (s)	43.7	15.9	13.3	38.1	17.4		25.3	15.1	15.2		28.4	
Level of Service	D	B	B	D	B		C	B	B		C	
Approach Delay (s)		18.3			18.7			23.4			28.4	
Approach LOS		B			B			C			C	

Intersection Summary

HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	67.2	Sum of lost time (s)	16.3
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Near-Term (2014)
SAT Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	409	139	24	424	147	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.90	0.90
Adj. Flow (vph)	435	148	27	471	163	20
RTOR Reduction (vph)	0	104	0	0	0	16
Lane Group Flow (vph)	435	44	27	471	163	4
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	10.7	10.7	1.0	16.7	7.9	7.9
Effective Green, g (s)	10.7	10.7	1.0	16.7	7.9	7.9
Actuated g/C Ratio	0.30	0.30	0.03	0.47	0.22	0.22
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1055	472	49	1646	389	348
v/s Ratio Prot	c0.12		0.02	c0.13	c0.09	
v/s Ratio Perm		0.03				0.00
v/c Ratio	0.41	0.09	0.55	0.29	0.42	0.01
Uniform Delay, d1	10.1	9.1	17.2	5.9	12.0	10.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	15.5	0.0	1.0	0.0
Delay (s)	10.2	9.1	32.7	6.0	13.0	11.0
Level of Service	B	A	C	A	B	B
Approach Delay (s)	9.9			7.4	12.8	
Approach LOS	A			A	B	

Intersection Summary

HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	35.9	Sum of lost time (s)	17.6
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

NEAR-TERM (2014) PLUS PROJECT INTERSECTION LOS ANALYSIS WORKSHEETS

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	760	325	62	746	0	218	0	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.0	5.0	6.3		5.0	5.0	5.0			
Lane Util. Factor		0.95	1.00	1.00	0.91		0.95	0.95	1.00			
Frbp, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	0.98			
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		3539	1583	1770	5085		1681	1681	1559			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		3539	1583	1770	5085		1681	1681	1559			
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	905	387	74	888	0	240	0	65	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	50	0	0	0
Lane Group Flow (vph)	0	905	387	74	888	0	120	120	15	0	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)		21.6	56.6	6.0	32.6		12.7	12.7	12.7			
Effective Green, g (s)		21.6	56.6	6.0	32.6		12.7	12.7	12.7			
Actuated g/C Ratio		0.38	1.00	0.11	0.58		0.22	0.22	0.22			
Clearance Time (s)		6.3		5.0	6.3		5.0	5.0	5.0			
Vehicle Extension (s)		2.0		2.0	2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1351	1583	188	2929		377	377	350			
v/s Ratio Prot		c0.26		0.04	0.17		0.07	0.07				
v/s Ratio Perm			c0.24						0.01			
v/c Ratio		0.67	0.24	0.39	0.30		0.32	0.32	0.04			
Uniform Delay, d1		14.5	0.0	23.6	6.2		18.3	18.3	17.2			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		1.0	0.4	0.5	0.0		0.5	0.5	0.0			
Delay (s)		15.5	0.4	24.1	6.2		18.8	18.8	17.2			
Level of Service		B	A	C	A		B	B	B			
Approach Delay (s)		11.0			7.6			18.5			0.0	
Approach LOS		B			A			B			A	

Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	6.3
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	23	302	313	74
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	25	328	340	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				601	512	
pX, platoon unblocked						
vC, conflicting volume	595	154	421			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	595	154	421			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	98			
cM capacity (veh/h)	426	865	1135			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	25	164	164	136	136	148
Volume Left	0	25	0	0	0	0	0
Volume Right	37	0	0	0	0	0	80
cSH	865	1135	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.02	0.10	0.10	0.08	0.08	0.09
Queue Length 95th (ft)	3	2	0	0	0	0	0
Control Delay (s)	9.3	8.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A					
Approach Delay (s)	9.3	0.6			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	17.7%		ICU Level of Service A
Analysis Period (min)	15		

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	245	6	30	325	28	1	0	16	73	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3524		1770	3539	1583	1770	1563		1770	1583	
Peak-hour factor, PHF	0.69	0.69	0.69	0.93	0.93	0.93	0.71	0.71	0.71	0.58	0.58	0.58
Adj. Flow (vph)	39	355	9	32	349	30	1	0	23	126	0	33
RTOR Reduction (vph)	0	1	0	0	0	19	0	22	0	0	27	0
Lane Group Flow (vph)	39	363	0	32	349	11	1	1	0	126	6	0
Confl. Peds. (#/hr)			3						1			
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	1.8	17.0		1.7	16.9	16.9	0.5	2.4		6.7	8.6	
Effective Green, g (s)	2.8	17.0		2.7	16.9	16.9	0.5	2.4		7.7	8.6	
Actuated g/C Ratio	0.06	0.36		0.06	0.35	0.35	0.01	0.05		0.16	0.18	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	104	1253		100	1251	560	19	78		285	285	
v/s Ratio Prot	c0.02	c0.10		0.02	0.10		0.00	0.00		c0.07	c0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.38	0.29		0.32	0.28	0.02	0.05	0.01		0.44	0.02	
Uniform Delay, d1	21.7	11.1		21.7	11.1	10.1	23.4	21.6		18.1	16.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.0		0.7	0.0	0.0	0.4	0.0		0.4	0.0	
Delay (s)	22.5	11.1		22.3	11.1	10.1	23.8	21.6		18.5	16.1	
Level of Service	C	B		C	B	B	C	C		B	B	
Approach Delay (s)		12.2			11.9			21.7			18.0	
Approach LOS		B			B			C			B	

Intersection Summary

HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	129	24	126	138	85	15	18	84	64	18	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3450		1770	3337		1770	1863	1583	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3450		1770	3337		1770	1863	1583	1770	1863	1562
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.84	0.84	0.84	0.71	0.71	0.71
Adj. Flow (vph)	53	163	30	133	145	89	18	21	100	90	25	44
RTOR Reduction (vph)	0	11	0	0	62	0	0	0	84	0	0	33
Lane Group Flow (vph)	53	182	0	133	172	0	18	21	16	90	25	11
Confl. Peds. (#/hr)			2									2
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	3.4	13.0		6.7	16.3		0.7	8.4	8.4	5.6	13.3	13.3
Effective Green, g (s)	3.4	13.0		6.7	16.3		0.7	8.4	8.4	5.6	13.3	13.3
Actuated g/C Ratio	0.06	0.24		0.12	0.30		0.01	0.16	0.16	0.10	0.25	0.25
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	112	835		221	1013		23	291	248	185	461	387
v/s Ratio Prot	0.03	c0.05		c0.08	c0.05		0.01	c0.01		c0.05	c0.01	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.47	0.22		0.60	0.17		0.78	0.07	0.06	0.49	0.05	0.03
Uniform Delay, d1	24.3	16.3		22.2	13.7		26.4	19.3	19.3	22.7	15.4	15.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.0		3.1	0.0		88.7	0.0	0.0	0.7	0.0	0.0
Delay (s)	25.4	16.3		25.4	13.8		115.1	19.4	19.3	23.4	15.4	15.3
Level of Service	C	B		C	B		F	B	B	C	B	B
Approach Delay (s)		18.3			18.0			31.7			19.9	
Approach LOS		B			B			C			B	

Intersection Summary

HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	30.0
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↙	↕↘		↙	↕↘
Volume (vph)	97	17	188	70	20	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3436	1441	3383		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3436	1441	3383		1770	3539
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.88	0.88
Adj. Flow (vph)	113	20	211	79	23	162
RTOR Reduction (vph)	2	16	36	0	0	0
Lane Group Flow (vph)	113	2	254	0	23	162
Confl. Peds. (#/hr)				4		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	3.9	3.9	11.5		0.5	17.0
Effective Green, g (s)	3.9	3.9	11.5		0.5	17.0
Actuated g/C Ratio	0.13	0.13	0.37		0.02	0.55
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	434	182	1259		29	1947
v/s Ratio Prot	c0.03		c0.08		c0.01	
v/s Ratio Perm		0.00				0.05
v/c Ratio	0.26	0.01	0.20		0.79	0.08
Uniform Delay, d1	12.2	11.8	6.6		15.1	3.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0		79.5	0.0
Delay (s)	12.5	11.8	6.6		94.7	3.3
Level of Service	B	B	A		F	A
Approach Delay (s)	12.4		6.6			14.6
Approach LOS	B		A			B

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	30.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Near-Term (2014)+Project
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	66	44	50	82	71	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3184		1764	1485
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3184		1764	1485
Peak-hour factor, PHF	0.73	0.73	0.81	0.81	0.92	0.92
Adj. Flow (vph)	90	60	62	101	77	42
RTOR Reduction (vph)	0	0	78	0	2	32
Lane Group Flow (vph)	90	60	85	0	79	6
Confl. Peds. (#/hr)				3	1	2
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	3.9	16.2	7.3		5.3	5.3
Effective Green, g (s)	3.9	16.2	7.3		5.3	5.3
Actuated g/C Ratio	0.12	0.51	0.23		0.17	0.17
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	219	1820	738		297	250
v/s Ratio Prot	c0.05	0.02	c0.03		c0.04	
v/s Ratio Perm						0.00
v/c Ratio	0.41	0.03	0.12		0.27	0.03
Uniform Delay, d1	12.7	3.8	9.6		11.4	10.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.0	0.0		0.2	0.0
Delay (s)	13.2	3.8	9.6		11.6	11.0
Level of Service	B	A	A		B	B
Approach Delay (s)		9.4	9.6		11.4	
Approach LOS		A	A		B	

Intersection Summary

HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	31.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑	↗	↘	↗	
Volume (vph)	6	526	247	10	585	0	214	0	28	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1551	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1551	1770	3539		3433		1583			
Peak-hour factor, PHF	0.75	0.75	0.75	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	8	701	329	12	696	0	268	0	35	0	0	0
RTOR Reduction (vph)	0	0	207	0	0	0	0	0	27	0	0	0
Lane Group Flow (vph)	8	701	122	12	696	0	268	0	8	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	0.6	16.0	16.0	0.8	16.2		10.0		10.0			
Effective Green, g (s)	0.6	16.0	16.0	0.8	16.2		10.0		10.0			
Actuated g/C Ratio	0.01	0.37	0.37	0.02	0.38		0.23		0.23			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	25	1314	576	33	1330		797		367			
v/s Ratio Prot	0.00	c0.20		c0.01	0.20		c0.08					
v/s Ratio Perm			0.08						0.01			
v/c Ratio	0.32	0.53	0.21	0.36	0.52		0.34		0.02			
Uniform Delay, d1	21.0	10.6	9.2	20.9	10.5		13.8		12.8			
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2	7.3	0.2	0.1	6.7	0.2		0.3		0.0			
Delay (s)	28.3	10.8	9.3	27.6	10.6		14.0		12.8			
Level of Service	C	B	A	C	B		B		B			
Approach Delay (s)		10.5			10.9			13.9			0.0	
Approach LOS		B			B			B			A	

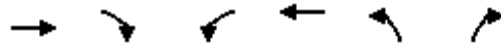
Intersection Summary

HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	16.3
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Near-Term (2014)+Project
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Volume (vph)	425	128	16	373	268	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frbp, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1563	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1563	1770	3539	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.78	0.78	0.72	0.72
Adj. Flow (vph)	518	156	21	478	372	124
RTOR Reduction (vph)	0	112	0	0	0	79
Lane Group Flow (vph)	518	44	21	478	372	45
Confl. Peds. (#/hr)		2				
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	13.7	13.7	1.0	19.7	17.7	17.7
Effective Green, g (s)	13.7	13.7	1.0	19.7	17.7	17.7
Actuated g/C Ratio	0.28	0.28	0.02	0.40	0.36	0.36
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	996	440	36	1432	643	575
v/s Ratio Prot	c0.15		0.01	c0.14	c0.21	
v/s Ratio Perm		0.03				0.03
v/c Ratio	0.52	0.10	0.58	0.33	0.58	0.08
Uniform Delay, d1	14.7	12.9	23.6	10.0	12.5	10.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	25.4	0.1	1.5	0.1
Delay (s)	15.0	13.0	49.0	10.0	14.0	10.2
Level of Service	B	B	D	B	B	B
Approach Delay (s)	14.5			11.7	13.1	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	17.6
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	681	846	144	602	1	797	0	182	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5084		1681	1681	1556		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.95	0.95	0.95	0.75	0.75	0.75
Adj. Flow (vph)	4	757	940	158	662	1	839	0	192	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	131	0	1	0
Lane Group Flow (vph)	4	757	940	158	663	0	419	420	61	0	2	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm		Split	
Protected Phases	5	2		1	6		4	4			8	8
Permitted Phases			Free						4			
Actuated Green, G (s)	0.8	28.3	92.3	12.3	39.8		29.5	29.5	29.5		0.9	
Effective Green, g (s)	0.8	28.3	92.3	12.3	39.8		29.5	29.5	29.5		0.9	
Actuated g/C Ratio	0.01	0.31	1.00	0.13	0.43		0.32	0.32	0.32		0.01	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	15	1085	1583	236	2192		537	537	497		17	
v/s Ratio Prot	0.00	0.21		0.09	0.13		0.25	c0.25			0.00	
v/s Ratio Perm			c0.59						0.04			
v/c Ratio	0.27	0.70	0.59	0.67	0.30		0.78	0.78	0.12		0.12	
Uniform Delay, d1	45.5	28.2	0.0	38.1	17.2		28.5	28.5	22.2		45.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.5	1.6	1.6	5.5	0.0		7.2	7.3	0.1		3.1	
Delay (s)	48.9	29.8	1.6	43.5	17.2		35.7	35.8	22.4		48.4	
Level of Service	D	C	A	D	B		D	D	C		D	
Approach Delay (s)		14.3			22.3			33.2			48.4	
Approach LOS		B			C			C			D	

Intersection Summary

HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	92.3	Sum of lost time (s)	5.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	39	31	902	915	77
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	42	34	980	995	84
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				614	519	
pX, platoon unblocked	0.86					
vC, conflicting volume	1594	373	1078			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1362	373	1078			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	95			
cM capacity (veh/h)	113	624	642			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	34	490	490	398	398	283
Volume Left	0	34	0	0	0	0	0
Volume Right	42	0	0	0	0	0	84
cSH	624	642	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.05	0.29	0.29	0.23	0.23	0.17
Queue Length 95th (ft)	5	4	0	0	0	0	0
Control Delay (s)	11.2	10.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.2	0.4			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	29.4%		ICU Level of Service A
Analysis Period (min)		15	

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	730	40	180	746	33	27	0	118	102	5	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3507		1770	3539	1583	1770	1583		1770	1617	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3507		1770	3539	1583	1770	1583		1770	1617	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	43	802	44	194	802	35	33	0	146	119	6	44
RTOR Reduction (vph)	0	3	0	0	0	12	0	137	0	0	39	0
Lane Group Flow (vph)	43	843	0	194	802	23	33	9	0	119	11	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	5.7	59.8		23.5	77.6	77.6	4.2	7.2		9.5	12.5	
Effective Green, g (s)	5.7	59.8		23.5	77.6	77.6	4.2	7.2		9.5	12.5	
Actuated g/C Ratio	0.05	0.50		0.20	0.65	0.65	0.04	0.06		0.08	0.10	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	84	1748		347	2289	1024	62	95		140	168	
v/s Ratio Prot	0.02	c0.24		c0.11	0.23		0.02	c0.01		c0.07	0.01	
v/s Ratio Perm						0.01						
v/c Ratio	0.51	0.48		0.56	0.35	0.02	0.53	0.09		0.85	0.06	
Uniform Delay, d1	55.8	19.9		43.6	9.7	7.6	56.9	53.3		54.5	48.5	
Progression Factor	0.85	0.88		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.8		1.1	0.4	0.0	4.3	0.2		34.4	0.1	
Delay (s)	49.5	18.3		44.7	10.1	7.6	61.3	53.5		88.9	48.5	
Level of Service	D	B		D	B	A	E	D		F	D	
Approach Delay (s)		19.8			16.5			54.9			77.0	
Approach LOS		B			B			D			E	

Intersection Summary

HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	350	100	427	286	97	100	44	375	89	29	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3421		1770	3393		1770	1863	1560	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3421		1770	3393		1770	1863	1560	1770	1863	1562
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90	0.82	0.82	0.82
Adj. Flow (vph)	82	372	106	454	304	103	111	49	417	109	35	56
RTOR Reduction (vph)	0	19	0	0	21	0	0	0	377	0	0	52
Lane Group Flow (vph)	82	459	0	454	386	0	111	49	40	109	35	4
Confl. Peds. (#/hr)						1			2			1
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	7.7	43.4		34.8	70.5		12.3	11.6	11.6	10.2	9.5	9.5
Effective Green, g (s)	7.7	43.4		34.8	70.5		12.3	11.6	11.6	10.2	9.5	9.5
Actuated g/C Ratio	0.06	0.36		0.29	0.59		0.10	0.10	0.10	0.08	0.08	0.08
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	114	1237		513	1993		181	180	151	150	147	124
v/s Ratio Prot	0.05	c0.13		c0.26	0.11		c0.06	c0.03		0.06	0.02	
v/s Ratio Perm									0.03			0.00
v/c Ratio	0.72	0.37		0.88	0.19		0.61	0.27	0.27	0.73	0.24	0.04
Uniform Delay, d1	55.1	28.2		40.7	11.5		51.6	50.3	50.3	53.5	51.9	51.0
Progression Factor	1.00	1.00		0.83	0.55		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.5	0.9		15.6	0.2		4.3	0.3	0.3	13.8	0.3	0.0
Delay (s)	71.6	29.1		49.2	6.5		55.9	50.6	50.6	67.3	52.2	51.1
Level of Service	E	C		D	A		E	D	D	E	D	D
Approach Delay (s)		35.3			29.0			51.6			60.1	
Approach LOS		D			C			D			E	

Intersection Summary

HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↙	↙	↕↔		↘	↕↕
Volume (vph)	391	29	454	290	62	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3314		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3314		1770	3539
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.95	0.95
Adj. Flow (vph)	430	32	510	326	65	403
RTOR Reduction (vph)	1	24	113	0	0	0
Lane Group Flow (vph)	432	5	723	0	65	403
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	13.9	13.9	44.7		6.4	56.1
Effective Green, g (s)	13.9	13.9	44.7		6.4	56.1
Actuated g/C Ratio	0.17	0.17	0.56		0.08	0.70
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	598	250	1852		142	2482
v/s Ratio Prot	c0.13		c0.22		c0.04	
v/s Ratio Perm		0.00				0.11
v/c Ratio	0.72	0.02	0.39		0.46	0.16
Uniform Delay, d1	31.2	27.4	10.0		35.1	4.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.3	0.0	0.6		0.9	0.1
Delay (s)	35.5	27.4	10.6		36.0	4.2
Level of Service	D	C	B		D	A
Approach Delay (s)	35.0		10.6			8.6
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	226	94	77	196	271	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3125		1757	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3125		1757	1485
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.91	0.91
Adj. Flow (vph)	266	111	89	225	298	265
RTOR Reduction (vph)	0	0	186	0	3	167
Lane Group Flow (vph)	266	111	128	0	322	71
Confl. Peds. (#/hr)				5		1
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	14.0	28.4	9.4		16.4	16.4
Effective Green, g (s)	14.0	28.4	9.4		16.4	16.4
Actuated g/C Ratio	0.26	0.52	0.17		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	452	1834	536		526	444
v/s Ratio Prot	c0.15	0.03	c0.04		c0.18	
v/s Ratio Perm						0.05
v/c Ratio	0.59	0.06	0.24		0.61	0.16
Uniform Delay, d1	17.9	6.6	19.6		16.5	14.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.1		1.5	0.1
Delay (s)	19.1	6.6	19.7		18.0	14.2
Level of Service	B	A	B		B	B
Approach Delay (s)		15.4	19.7		16.4	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	654	239	14	572	0	180	0	37	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1549	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1549	1770	3539		3433		1583			
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	26	719	263	16	650	0	202	0	42	0	0	0
RTOR Reduction (vph)	0	0	72	0	0	0	0	0	38	0	0	0
Lane Group Flow (vph)	26	719	191	16	650	0	202	0	4	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	4.8	79.7	79.7	3.1	78.0		10.9		10.9			
Effective Green, g (s)	4.8	79.7	79.7	3.1	78.0		10.9		10.9			
Actuated g/C Ratio	0.04	0.72	0.72	0.03	0.71		0.10		0.10			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	77	2564	1122	50	2509		340		157			
v/s Ratio Prot	c0.01	c0.20		0.01	0.18		c0.06					
v/s Ratio Perm			0.12						0.00			
v/c Ratio	0.34	0.28	0.17	0.32	0.26		0.59		0.03			
Uniform Delay, d1	51.1	5.2	4.8	52.4	5.7		47.4		44.8			
Progression Factor	1.00	1.00	1.00	0.93	0.89		1.00		1.00			
Incremental Delay, d2	2.6	0.3	0.3	3.7	0.2		2.8		0.1			
Delay (s)	53.7	5.5	5.1	52.2	5.3		50.2		44.8			
Level of Service	D	A	A	D	A		D		D			
Approach Delay (s)		6.6			6.5			49.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary

HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Volume (vph)	433	207	37	451	114	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.99	0.99	0.98	0.98
Adj. Flow (vph)	492	235	37	456	116	23
RTOR Reduction (vph)	0	76	0	0	0	20
Lane Group Flow (vph)	492	159	37	456	116	3
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	74.2	74.2	6.0	85.2	13.5	13.5
Effective Green, g (s)	74.2	74.2	6.0	85.2	13.5	13.5
Actuated g/C Ratio	0.67	0.67	0.05	0.77	0.12	0.12
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	2387	1068	97	2741	217	194
v/s Ratio Prot	c0.14		c0.02	0.13	c0.07	
v/s Ratio Perm		0.10				0.00
v/c Ratio	0.21	0.15	0.38	0.17	0.53	0.01
Uniform Delay, d1	6.8	6.5	50.2	3.2	45.3	42.4
Progression Factor	0.55	0.15	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.3	3.4	0.1	3.2	0.0
Delay (s)	3.9	1.2	53.6	3.3	48.5	42.4
Level of Service	A	A	D	A	D	D
Approach Delay (s)	3.0			7.1	47.5	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Near-Term (2014)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	499	1020	248	507	0	873	2	274	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.93	0.93	0.93	0.38	0.38	0.38
Adj. Flow (vph)	14	525	1074	282	576	0	939	2	295	5	3	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	185	0	8	0
Lane Group Flow (vph)	14	525	1074	282	576	0	469	472	110	0	8	0
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	1.2	21.7	94.3	15.3	35.8		33.6	33.6	33.6		2.4	
Effective Green, g (s)	1.2	21.7	94.3	15.3	35.8		33.6	33.6	33.6		2.4	
Actuated g/C Ratio	0.01	0.23	1.00	0.16	0.38		0.36	0.36	0.36		0.03	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	23	814	1583	287	1930		599	601	564		44	
v/s Ratio Prot	0.01	0.15		c0.16	0.11		0.28	c0.28			0.00	
v/s Ratio Perm			c0.68						0.07			
v/c Ratio	0.61	0.64	0.68	0.98	0.30		0.78	0.79	0.20		0.19	
Uniform Delay, d1	46.3	32.8	0.0	39.4	20.5		27.1	27.1	21.0		45.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	27.4	1.3	2.4	47.9	0.0		6.6	6.7	0.2		2.1	
Delay (s)	73.7	34.1	2.4	87.3	20.5		33.7	33.8	21.2		47.0	
Level of Service	E	C	A	F	C		C	C	C		D	
Approach Delay (s)		13.3			42.5			30.8			47.0	
Approach LOS		B			D			C			D	

Intersection Summary

HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	94.3	Sum of lost time (s)	5.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↑↑	↑↑↓	
Volume (veh/h)	0	52	37	1109	1169	99
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	57	40	1205	1271	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				601	512	
pX, platoon unblocked	0.76					
vC, conflicting volume	2008	477	1378			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1695	477	1378			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	92			
cM capacity (veh/h)	58	534	493			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	57	40	603	603	508	508	362
Volume Left	0	40	0	0	0	0	0
Volume Right	57	0	0	0	0	0	108
cSH	534	493	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.08	0.35	0.35	0.30	0.30	0.21
Queue Length 95th (ft)	9	7	0	0	0	0	0
Control Delay (s)	12.5	12.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	12.5	0.4			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization	34.8%		ICU Level of Service A
Analysis Period (min)		15	

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Near-Term (2014)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	957	49	198	975	45	32	3	86	122	5	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3510		1770	3539	1583	1770	1594		1770	1612	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3510		1770	3539	1583	1770	1594		1770	1612	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.84	0.84	0.84	0.77	0.77	0.77
Adj. Flow (vph)	41	997	51	218	1071	49	38	4	102	158	6	52
RTOR Reduction (vph)	0	2	0	0	0	18	0	93	0	0	43	0
Lane Group Flow (vph)	41	1046	0	218	1071	31	38	13	0	158	15	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	3.9	37.7		14.4	48.2	48.2	3.7	8.0		11.5	15.8	
Effective Green, g (s)	4.9	37.7		15.4	48.2	48.2	3.7	8.0		12.5	15.8	
Actuated g/C Ratio	0.05	0.41		0.17	0.53	0.53	0.04	0.09		0.14	0.17	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	95	1445		298	1862	833	71	139		242	278	
v/s Ratio Prot	0.02	c0.30		c0.12	0.30		0.02	c0.01		c0.09	0.01	
v/s Ratio Perm						0.02						
v/c Ratio	0.43	0.72		0.73	0.58	0.04	0.54	0.09		0.65	0.05	
Uniform Delay, d1	42.0	22.6		36.1	14.7	10.5	43.1	38.5		37.5	31.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.5		7.7	0.3	0.0	3.8	0.1		4.8	0.0	
Delay (s)	43.1	24.1		43.9	15.0	10.5	46.9	38.6		42.2	31.7	
Level of Service	D	C		D	B	B	D	D		D	C	
Approach Delay (s)		24.8			19.5			40.8			39.4	
Approach LOS		C			B			D			D	

Intersection Summary

HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Near-Term (2014)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	467	131	485	344	216	126	67	433	137	86	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3413		1770	3335		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3413		1770	3335		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	119	481	135	511	362	227	138	74	476	161	101	85
RTOR Reduction (vph)	0	18	0	0	60	0	0	0	433	0	0	76
Lane Group Flow (vph)	119	598	0	511	529	0	138	74	43	161	101	9
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	11.8	24.6		41.9	54.7		12.8	10.0	10.0	14.5	11.7	11.7
Effective Green, g (s)	11.8	24.6		41.9	54.7		12.8	10.0	10.0	14.5	11.7	11.7
Actuated g/C Ratio	0.11	0.22		0.38	0.49		0.12	0.09	0.09	0.13	0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	188	756		668	1643		204	168	143	231	196	167
v/s Ratio Prot	0.07	c0.18		c0.29	0.16		0.08	0.04		c0.09	c0.05	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.63	0.79		0.76	0.32		0.68	0.44	0.30	0.70	0.52	0.05
Uniform Delay, d1	47.5	40.8		30.2	17.0		47.1	47.8	47.2	46.1	47.0	44.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.0	5.3		4.7	0.0		6.8	0.7	0.4	7.2	1.0	0.0
Delay (s)	52.6	46.1		34.9	17.0		53.9	48.5	47.7	53.3	47.9	44.7
Level of Service	D	D		C	B		D	D	D	D	D	D
Approach Delay (s)		47.1			25.3			49.0			49.6	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	111.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘	↙	↕↘		↙	↕↕
Volume (vph)	416	25	613	291	65	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3354		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3354		1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.94	0.94
Adj. Flow (vph)	438	26	645	306	69	491
RTOR Reduction (vph)	1	17	51	0	0	0
Lane Group Flow (vph)	440	6	900	0	69	491
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	14.3	14.3	22.5		5.7	33.2
Effective Green, g (s)	14.3	14.3	22.5		5.7	33.2
Actuated g/C Ratio	0.25	0.25	0.39		0.10	0.58
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	855	358	1312		175	2043
v/s Ratio Prot	c0.13		c0.27		c0.04	
v/s Ratio Perm		0.00				0.14
v/c Ratio	0.51	0.02	0.69		0.39	0.24
Uniform Delay, d1	18.6	16.3	14.6		24.3	6.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.0	1.2		0.5	0.0
Delay (s)	19.1	16.3	15.8		24.8	6.0
Level of Service	B	B	B		C	A
Approach Delay (s)	19.0		15.8			8.3
Approach LOS	B		B			A

Intersection Summary

HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	217	78	102	311	282	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.89		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3109		1757	1484
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3109		1757	1484
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.88	0.88
Adj. Flow (vph)	247	89	111	338	320	280
RTOR Reduction (vph)	0	0	279	0	3	174
Lane Group Flow (vph)	247	89	170	0	345	78
Confl. Peds. (#/hr)				2		3
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.7	28.5	9.8		17.2	17.2
Effective Green, g (s)	13.7	28.5	9.8		17.2	17.2
Actuated g/C Ratio	0.25	0.51	0.18		0.31	0.31
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	435	1811	547		543	458
v/s Ratio Prot	c0.14	0.03	c0.05		c0.20	
v/s Ratio Perm						0.05
v/c Ratio	0.57	0.05	0.31		0.64	0.17
Uniform Delay, d1	18.4	6.8	20.0		16.6	14.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	0.1		1.8	0.1
Delay (s)	19.4	6.8	20.1		18.4	14.1
Level of Service	B	A	C		B	B
Approach Delay (s)		16.1	20.1		16.6	
Approach LOS		B	C		B	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Near-Term (2014)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑	↗	↘	↗	
Volume (vph)	86	565	174	32	506	1	214	6	39	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3538		3433	1863	1563		1561	
Peak-hour factor, PHF	0.78	0.78	0.78	0.91	0.91	0.91	0.80	0.80	0.80	0.66	0.66	0.66
Adj. Flow (vph)	110	724	223	35	556	1	268	8	49	0	0	64
RTOR Reduction (vph)	0	0	140	0	0	0	0	0	33	0	59	0
Lane Group Flow (vph)	110	724	83	35	557	0	268	8	16	0	5	0
Confl. Peds. (#/hr)									1			3
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	5.9	25.5	25.5	4.1	23.7		12.1	22.8	22.8		5.7	
Effective Green, g (s)	5.9	25.5	25.5	4.1	23.7		12.1	22.8	22.8		5.7	
Actuated g/C Ratio	0.09	0.37	0.37	0.06	0.34		0.18	0.33	0.33		0.08	
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	152	1314	588	106	1221		605	618	519		130	
v/s Ratio Prot	c0.06	c0.20		0.02	0.16		c0.08	0.00			0.00	
v/s Ratio Perm			0.05						c0.01			
v/c Ratio	0.72	0.55	0.14	0.33	0.46		0.44	0.01	0.03		0.04	
Uniform Delay, d1	30.6	17.1	14.3	31.0	17.5		25.3	15.4	15.5		29.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	15.6	0.3	0.0	1.8	0.1		0.5	0.0	0.0		0.1	
Delay (s)	46.3	17.4	14.4	32.8	17.6		25.8	15.4	15.5		29.1	
Level of Service	D	B	B	C	B		C	B	B		C	
Approach Delay (s)		19.7			18.5			24.0			29.1	
Approach LOS		B			B			C			C	

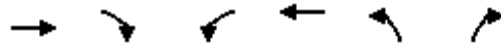
Intersection Summary

HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Near-Term (2014)+Project
SAT Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	412	145	24	427	154	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.90	0.90
Adj. Flow (vph)	438	154	27	474	171	20
RTOR Reduction (vph)	0	108	0	0	0	16
Lane Group Flow (vph)	438	46	27	474	171	4
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	10.9	10.9	1.0	16.9	8.0	8.0
Effective Green, g (s)	10.9	10.9	1.0	16.9	8.0	8.0
Actuated g/C Ratio	0.30	0.30	0.03	0.47	0.22	0.22
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1066	477	49	1652	391	350
v/s Ratio Prot	c0.12		0.02	c0.13	c0.10	
v/s Ratio Perm		0.03				0.00
v/c Ratio	0.41	0.10	0.55	0.29	0.44	0.01
Uniform Delay, d1	10.1	9.1	17.4	5.9	12.2	11.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	15.5	0.0	1.1	0.0
Delay (s)	10.2	9.1	32.9	6.0	13.2	11.0
Level of Service	B	A	C	A	B	B
Approach Delay (s)	9.9			7.4	13.0	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	36.2	Sum of lost time (s)	17.6
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

LONG-TERM (2030) INTERSECTION LOS ANALYSIS WORKSHEETS

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1119	355	42	1313	0	270	0	47	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.0	5.0	6.3		5.0	5.0	5.0			
Lane Util. Factor		0.95	1.00	1.00	0.91		0.95	0.95	1.00			
Frbp, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	0.98			
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		3539	1583	1770	5085		1681	1681	1558			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		3539	1583	1770	5085		1681	1681	1558			
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1332	423	50	1563	0	297	0	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	42	0	0	0
Lane Group Flow (vph)	0	1332	423	50	1563	0	148	149	10	0	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free							4		
Actuated Green, G (s)		36.3	70.2	4.1	45.4		13.5	13.5	13.5			
Effective Green, g (s)		36.3	70.2	4.1	45.4		13.5	13.5	13.5			
Actuated g/C Ratio		0.52	1.00	0.06	0.65		0.19	0.19	0.19			
Clearance Time (s)		6.3		5.0	6.3		5.0	5.0	5.0			
Vehicle Extension (s)		2.0		2.0	2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1830	1583	103	3289		323	323	300			
v/s Ratio Prot		c0.38		0.03	c0.31		0.09	c0.09				
v/s Ratio Perm			0.27						0.01			
v/c Ratio		0.73	0.27	0.49	0.48		0.46	0.46	0.03			
Uniform Delay, d1		13.1	0.0	32.0	6.3		25.1	25.1	23.0			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		1.3	0.4	1.3	0.0		1.0	1.0	0.0			
Delay (s)		14.4	0.4	33.3	6.4		26.1	26.2	23.1			
Level of Service		B	A	C	A		C	C	C			
Approach Delay (s)		11.0			7.2			25.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary		
HCM Average Control Delay	10.7	HCM Level of Service B
HCM Volume to Capacity ratio	0.68	
Actuated Cycle Length (s)	70.2	Sum of lost time (s) 17.6
Intersection Capacity Utilization	55.0%	ICU Level of Service A
Analysis Period (min)	15	

c Critical Lane Group

Vallejo Chick-fil-A TIA
 3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗	↖	↗		↖	↗	
Volume (vph)	14	268	6	30	320	16	1	0	16	13	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3525		1770	3539	1583	1770	1563		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3525		1770	3539	1583	1770	1563		1770	1583	
Peak-hour factor, PHF	0.69	0.69	0.69	0.93	0.93	0.93	0.71	0.71	0.71	0.58	0.58	0.58
Adj. Flow (vph)	20	388	9	32	344	17	1	0	23	22	0	7
RTOR Reduction (vph)	0	1	0	0	0	8	0	22	0	0	7	0
Lane Group Flow (vph)	20	396	0	32	344	9	1	1	0	22	0	0
Confl. Peds. (#/hr)			3						1			
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	0.5	25.0		0.6	25.1	25.1	0.4	2.3		0.5	2.4	
Effective Green, g (s)	1.5	25.0		1.6	25.1	25.1	0.4	2.3		1.5	2.4	
Actuated g/C Ratio	0.03	0.52		0.03	0.52	0.52	0.01	0.05		0.03	0.05	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	55	1821		59	1835	821	15	74		55	78	
v/s Ratio Prot	0.01	c0.11		c0.02	0.10		0.00	c0.00		c0.01	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.36	0.22		0.54	0.19	0.01	0.07	0.01		0.40	0.00	
Uniform Delay, d1	23.0	6.4		23.0	6.2	5.6	23.8	22.0		23.0	21.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.0		5.4	0.0	0.0	0.7	0.0		1.7	0.0	
Delay (s)	24.5	6.4		28.4	6.2	5.6	24.5	22.0		24.7	21.9	
Level of Service	C	A		C	A	A	C	C		C	C	
Approach Delay (s)		7.3			8.0			22.1			24.0	
Approach LOS		A			A			C			C	

Intersection Summary

HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	48.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	138	29	130	148	85	15	18	90	64	18	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3439		1770	3346		1770	1863	1583	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3439		1770	3346		1770	1863	1583	1770	1863	1562
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.84	0.84	0.84	0.71	0.71	0.71
Adj. Flow (vph)	53	175	37	137	156	89	18	21	107	90	25	44
RTOR Reduction (vph)	0	12	0	0	58	0	0	0	91	0	0	34
Lane Group Flow (vph)	53	200	0	137	187	0	18	21	16	90	25	10
Confl. Peds. (#/hr)			2									2
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	3.6	14.4		9.9	20.7		0.7	8.9	8.9	5.8	14.0	14.0
Effective Green, g (s)	3.6	14.4		9.9	20.7		0.7	8.9	8.9	5.8	14.0	14.0
Actuated g/C Ratio	0.06	0.24		0.17	0.35		0.01	0.15	0.15	0.10	0.24	0.24
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	108	839		297	1174		21	281	239	174	442	371
v/s Ratio Prot	0.03	c0.06		c0.08	0.06		0.01	c0.01		c0.05	0.01	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.49	0.24		0.46	0.16		0.86	0.07	0.07	0.52	0.06	0.03
Uniform Delay, d1	26.8	17.9		22.1	13.2		29.1	21.5	21.5	25.3	17.4	17.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1		0.4	0.0		126.5	0.0	0.0	1.1	0.0	0.0
Delay (s)	28.1	18.0		22.6	13.2		155.6	21.6	21.5	26.4	17.4	17.3
Level of Service	C	B		C	B		F	C	C	C	B	B
Approach Delay (s)		20.0			16.6			38.1			22.4	
Approach LOS		B			B			D			C	

Intersection Summary

HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Long-Term (2030)
AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↗	↕↔		↖	↕↕
Volume (vph)	98	17	232	100	20	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3436	1441	3367		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3436	1441	3367		1770	3539
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.88	0.88
Adj. Flow (vph)	114	20	261	112	23	158
RTOR Reduction (vph)	2	16	43	0	0	0
Lane Group Flow (vph)	114	2	330	0	23	158
Confl. Peds. (#/hr)				4		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	3.9	3.9	12.3		0.5	17.8
Effective Green, g (s)	3.9	3.9	12.3		0.5	17.8
Actuated g/C Ratio	0.12	0.12	0.39		0.02	0.56
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	423	177	1306		28	1987
v/s Ratio Prot	c0.03		c0.10		c0.01	
v/s Ratio Perm		0.00				0.04
v/c Ratio	0.27	0.01	0.25		0.82	0.08
Uniform Delay, d1	12.6	12.2	6.6		15.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0		92.8	0.0
Delay (s)	13.0	12.2	6.6		108.3	3.2
Level of Service	B	B	A		F	A
Approach Delay (s)	12.9		6.6			16.6
Approach LOS	B		A			B

Intersection Summary

HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Long-Term (2030)
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	72	86	57	77	67	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3209		1763	1485
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3209		1763	1485
Peak-hour factor, PHF	0.73	0.73	0.81	0.81	0.92	0.92
Adj. Flow (vph)	99	118	70	95	73	40
RTOR Reduction (vph)	0	0	73	0	3	30
Lane Group Flow (vph)	99	118	92	0	74	6
Confl. Peds. (#/hr)				3	1	2
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	4.0	16.5	7.5		5.2	5.2
Effective Green, g (s)	4.0	16.5	7.5		5.2	5.2
Actuated g/C Ratio	0.13	0.52	0.24		0.16	0.16
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	223	1842	759		289	244
v/s Ratio Prot	c0.06	0.03	c0.03		c0.04	
v/s Ratio Perm						0.00
v/c Ratio	0.44	0.06	0.12		0.26	0.02
Uniform Delay, d1	12.8	3.8	9.5		11.6	11.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.0	0.0		0.2	0.0
Delay (s)	13.3	3.8	9.5		11.7	11.1
Level of Service	B	A	A		B	B
Approach Delay (s)		8.1	9.5		11.5	
Approach LOS		A	A		B	

Intersection Summary

HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑		↙↗	↑	↗	↙	↗	
Volume (vph)	6	722	240	11	857	0	312	0	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1550	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1550	1770	3539		3433		1583			
Peak-hour factor, PHF	0.75	0.75	0.75	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	8	963	320	13	1020	0	390	0	62	0	0	0
RTOR Reduction (vph)	0	0	134	0	0	0	0	0	48	0	0	0
Lane Group Flow (vph)	8	963	186	13	1020	0	390	0	14	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	0.7	26.2	26.2	1.0	26.5		13.0		13.0			
Effective Green, g (s)	0.7	26.2	26.2	1.0	26.5		13.0		13.0			
Actuated g/C Ratio	0.01	0.46	0.46	0.02	0.47		0.23		0.23			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	22	1641	719	31	1660		790		364			
v/s Ratio Prot	0.00	0.27		c0.01	c0.29		c0.11					
v/s Ratio Perm			0.12						0.01			
v/c Ratio	0.36	0.59	0.26	0.42	0.61		0.49		0.04			
Uniform Delay, d1	27.7	11.2	9.2	27.5	11.2		18.9		16.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2	9.9	0.3	0.1	8.9	0.5		0.5		0.0			
Delay (s)	37.6	11.5	9.3	36.4	11.7		19.4		16.9			
Level of Service	D	B	A	D	B		B		B			
Approach Delay (s)		11.1			12.0			19.0			0.0	
Approach LOS		B			B			B			A	

Intersection Summary

HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Long-Term (2030)
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	1160	334	21	716	375	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frbp, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1561	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1561	1770	3539	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.78	0.78	0.72	0.72
Adj. Flow (vph)	1415	407	27	918	521	124
RTOR Reduction (vph)	0	172	0	0	0	82
Lane Group Flow (vph)	1415	235	27	918	521	42
Confl. Peds. (#/hr)	2					
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	35.8	35.8	3.1	43.9	28.5	28.5
Effective Green, g (s)	35.8	35.8	3.1	43.9	28.5	28.5
Actuated g/C Ratio	0.43	0.43	0.04	0.52	0.34	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1514	668	66	1856	603	539
v/s Ratio Prot	c0.40		0.02	c0.26	c0.29	
v/s Ratio Perm		0.15				0.03
v/c Ratio	0.93	0.35	0.41	0.49	0.86	0.08
Uniform Delay, d1	22.8	16.1	39.4	12.8	25.8	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.9	0.1	5.5	0.1	12.6	0.1
Delay (s)	33.7	16.2	45.0	12.9	38.4	18.8
Level of Service	C	B	D	B	D	B
Approach Delay (s)	29.8			13.8	34.7	
Approach LOS	C			B	C	

Intersection Summary

HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	17.6
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1255	840	123	931	1	796	0	177	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1681	1555		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1681	1555		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.95	0.95	0.95	0.75	0.75	0.75
Adj. Flow (vph)	4	1394	933	135	1023	1	838	0	186	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	132	0	1	0
Lane Group Flow (vph)	4	1394	933	135	1024	0	419	419	54	0	2	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	1.0	39.8	103.9	11.3	50.1		30.4	30.4	30.4		1.1	
Effective Green, g (s)	1.0	39.8	103.9	11.3	50.1		30.4	30.4	30.4		1.1	
Actuated g/C Ratio	0.01	0.38	1.00	0.11	0.48		0.29	0.29	0.29		0.01	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	17	1356	1583	193	2452		492	492	455		19	
v/s Ratio Prot	0.00	c0.39		0.08	0.20		c0.25	0.25			0.00	
v/s Ratio Perm			c0.59						0.04			
v/c Ratio	0.24	1.03	0.59	0.70	0.42		0.85	0.85	0.12		0.11	
Uniform Delay, d1	51.1	32.1	0.0	44.7	17.4		34.6	34.6	26.9		50.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.6	31.9	1.6	8.6	0.0		13.3	13.3	0.1		2.5	
Delay (s)	53.7	63.9	1.6	53.3	17.5		47.9	47.9	27.1		53.4	
Level of Service	D	E	A	D	B		D	D	C		D	
Approach Delay (s)		39.0			21.7			44.1			53.4	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	103.9	Sum of lost time (s)	11.3
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↖	↗	
Volume (vph)	22	731	40	180	808	20	27	0	118	70	5	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3508		1770	3539	1583	1770	1583		1770	1629	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3508		1770	3539	1583	1770	1583		1770	1629	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	24	803	44	194	869	22	33	0	146	81	6	31
RTOR Reduction (vph)	0	3	0	0	0	7	0	139	0	0	29	0
Lane Group Flow (vph)	24	844	0	194	869	15	33	7	0	81	8	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	3.7	63.2		23.5	83.0	83.0	4.2	6.1		7.2	9.1	
Effective Green, g (s)	3.7	63.2		23.5	83.0	83.0	4.2	6.1		7.2	9.1	
Actuated g/C Ratio	0.03	0.53		0.20	0.69	0.69	0.04	0.05		0.06	0.08	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	55	1848		347	2448	1095	62	80		106	124	
v/s Ratio Prot	0.01	c0.24		c0.11	0.25		0.02	0.00		c0.05	c0.01	
v/s Ratio Perm						0.01						
v/c Ratio	0.44	0.46		0.56	0.35	0.01	0.53	0.09		0.76	0.07	
Uniform Delay, d1	57.1	17.7		43.6	7.6	5.8	56.9	54.3		55.6	51.5	
Progression Factor	0.85	0.89		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.7	0.7		1.1	0.4	0.0	4.3	0.2		24.9	0.1	
Delay (s)	50.0	16.5		44.7	8.0	5.8	61.3	54.5		80.5	51.6	
Level of Service	D	B		D	A	A	E	D		F	D	
Approach Delay (s)		17.4			14.5			55.7			71.4	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	361	105	435	332	97	107	44	379	89	29	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3419		1770	3409		1770	1863	1560	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3419		1770	3409		1770	1863	1560	1770	1863	1562
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90	0.82	0.82	0.82
Adj. Flow (vph)	82	384	112	463	353	103	119	49	421	109	35	56
RTOR Reduction (vph)	0	20	0	0	17	0	0	0	379	0	0	52
Lane Group Flow (vph)	82	477	0	463	439	0	119	49	42	109	35	4
Confl. Peds. (#/hr)						1			2			1
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	7.7	42.0		35.9	70.2		12.5	11.9	11.9	10.2		9.6
Effective Green, g (s)	7.7	42.0		35.9	70.2		12.5	11.9	11.9	10.2		9.6
Actuated g/C Ratio	0.06	0.35		0.30	0.59		0.10	0.10	0.10	0.08		0.08
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5		1.5
Lane Grp Cap (vph)	114	1197		530	1994		184	185	155	150		149
v/s Ratio Prot	0.05	c0.14		c0.26	0.13		c0.07	0.03		0.06		0.02
v/s Ratio Perm									c0.03			0.00
v/c Ratio	0.72	0.40		0.87	0.22		0.65	0.26	0.27	0.73		0.23
Uniform Delay, d1	55.1	29.5		39.9	11.9		51.6	50.0	50.0	53.5		51.8
Progression Factor	1.00	1.00		0.82	0.56		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	16.5	1.0		13.9	0.2		5.7	0.3	0.3	13.8		0.3
Delay (s)	71.6	30.4		46.8	6.9		57.4	50.3	50.4	67.3		52.1
Level of Service	E	C		D	A		E	D	D	E		D
Approach Delay (s)		36.3			27.0			51.8				60.1
Approach LOS		D			C			D				E

Intersection Summary

HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Long-Term (2030)
PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↙	↙	↕↔		↙	↕↕
Volume (vph)	513	33	473	309	66	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3311		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3311		1770	3539
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.95	0.95
Adj. Flow (vph)	564	36	531	347	69	526
RTOR Reduction (vph)	1	26	124	0	0	0
Lane Group Flow (vph)	567	6	754	0	69	526
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	14.9	14.9	43.6		6.5	55.1
Effective Green, g (s)	14.9	14.9	43.6		6.5	55.1
Actuated g/C Ratio	0.19	0.19	0.55		0.08	0.69
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	641	268	1804		144	2437
v/s Ratio Prot	c0.16		c0.23		c0.04	
v/s Ratio Perm		0.00				0.15
v/c Ratio	0.88	0.02	0.42		0.48	0.22
Uniform Delay, d1	31.7	26.6	10.7		35.1	4.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	13.8	0.0	0.7		0.9	0.2
Delay (s)	45.5	26.6	11.4		36.0	4.8
Level of Service	D	C	B		D	A
Approach Delay (s)	44.5		11.4			8.4
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Long-Term (2030)
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	224	106	109	203	260	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.90		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3163		1756	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3163		1756	1485
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.91	0.91
Adj. Flow (vph)	264	125	125	233	286	278
RTOR Reduction (vph)	0	0	191	0	4	177
Lane Group Flow (vph)	264	125	167	0	310	73
Confl. Peds. (#/hr)				5		1
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.9	28.7	9.8		16.0	16.0
Effective Green, g (s)	13.9	28.7	9.8		16.0	16.0
Actuated g/C Ratio	0.25	0.52	0.18		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	450	1857	567		514	434
v/s Ratio Prot	c0.15	0.04	c0.05		c0.18	
v/s Ratio Perm						0.05
v/c Ratio	0.59	0.07	0.29		0.60	0.17
Uniform Delay, d1	17.9	6.4	19.5		16.6	14.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.1		1.4	0.1
Delay (s)	19.1	6.4	19.6		18.0	14.5
Level of Service	B	A	B		B	B
Approach Delay (s)		15.1	19.6		16.4	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗	↘	↖	↗	
Volume (vph)	24	1083	379	17	718	0	321	0	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1549	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1549	1770	3539		3433		1583			
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	26	1190	416	19	816	0	361	0	82	0	0	0
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	73	0	0	0
Lane Group Flow (vph)	26	1190	326	19	816	0	361	0	9	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	4.8	78.5	78.5	3.2	76.9		12.0		12.0			
Effective Green, g (s)	4.8	78.5	78.5	3.2	76.9		12.0		12.0			
Actuated g/C Ratio	0.04	0.71	0.71	0.03	0.70		0.11		0.11			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	77	2526	1105	51	2474		375		173			
v/s Ratio Prot	c0.01	c0.34		0.01	0.23		c0.11					
v/s Ratio Perm			0.21						0.01			
v/c Ratio	0.34	0.47	0.30	0.37	0.33		0.96		0.05			
Uniform Delay, d1	51.1	6.8	5.7	52.4	6.5		48.8		43.9			
Progression Factor	1.00	1.00	1.00	0.85	1.79		1.00		1.00			
Incremental Delay, d2	2.6	0.6	0.7	4.2	0.3		36.5		0.1			
Delay (s)	53.7	7.4	6.4	48.9	11.9		85.3		44.0			
Level of Service	D	A	A	D	B		F		D			
Approach Delay (s)		7.9			12.8			77.6			0.0	
Approach LOS		A			B			E			A	

Intersection Summary

HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Long-Term (2030)
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Volume (vph)	1022	395	42	902	225	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.99	0.99	0.98	0.98
Adj. Flow (vph)	1161	449	42	911	230	23
RTOR Reduction (vph)	0	165	0	0	0	19
Lane Group Flow (vph)	1161	284	42	911	230	4
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	67.4	67.4	6.2	78.6	20.1	20.1
Effective Green, g (s)	67.4	67.4	6.2	78.6	20.1	20.1
Actuated g/C Ratio	0.61	0.61	0.06	0.71	0.18	0.18
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	2168	970	100	2529	323	289
v/s Ratio Prot	c0.33		0.02	c0.26	c0.13	
v/s Ratio Perm		0.18				0.00
v/c Ratio	0.54	0.29	0.42	0.36	0.71	0.01
Uniform Delay, d1	12.3	10.1	50.2	6.0	42.2	36.8
Progression Factor	0.68	0.24	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.7	3.9	0.4	7.7	0.0
Delay (s)	9.2	3.1	54.0	6.4	50.0	36.9
Level of Service	A	A	D	A	D	D
Approach Delay (s)	7.5			8.5	48.8	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	971	1050	244	816	0	891	2	278	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.93	0.93	0.93	0.38	0.38	0.38
Adj. Flow (vph)	14	1022	1105	277	927	0	958	2	299	5	3	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	196	0	8	0
Lane Group Flow (vph)	14	1022	1105	277	927	0	479	481	103	0	8	0
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	2.4	38.3	112.4	15.0	50.9		35.1	35.1	35.1		2.7	
Effective Green, g (s)	2.4	38.3	112.4	15.0	50.9		35.1	35.1	35.1		2.7	
Actuated g/C Ratio	0.02	0.34	1.00	0.13	0.45		0.31	0.31	0.31		0.02	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	38	1206	1583	236	2303		525	527	494		41	
v/s Ratio Prot	0.01	c0.29		c0.16	0.18		0.28	c0.29			0.00	
v/s Ratio Perm			c0.70						0.07			
v/c Ratio	0.37	0.85	0.70	1.17	0.40		0.91	0.91	0.21		0.20	
Uniform Delay, d1	54.3	34.3	0.0	48.7	20.6		37.2	37.2	28.4		53.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.2	5.5	2.6	113.6	0.0		20.2	20.2	0.2		2.4	
Delay (s)	56.4	39.8	2.6	162.3	20.6		57.4	57.4	28.6		56.2	
Level of Service	E	D	A	F	C		E	E	C		E	
Approach Delay (s)		20.7			53.2			50.5			56.2	
Approach LOS		C			D			D			E	

Intersection Summary

HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	16.3
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	1041	49	198	1056	19	32	3	86	38	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3512		1770	3539	1583	1770	1594		1770	1627	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3512		1770	3539	1583	1770	1594		1770	1627	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.84	0.84	0.84	0.77	0.77	0.77
Adj. Flow (vph)	19	1084	51	218	1160	21	38	4	102	49	6	32
RTOR Reduction (vph)	0	2	0	0	0	6	0	97	0	0	30	0
Lane Group Flow (vph)	19	1133	0	218	1160	15	38	9	0	49	8	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	1.9	40.4		13.2	51.7	51.7	3.4	4.4		3.8	4.8	
Effective Green, g (s)	2.9	40.4		14.2	51.7	51.7	3.4	4.4		4.8	4.8	
Actuated g/C Ratio	0.04	0.49		0.17	0.63	0.63	0.04	0.05		0.06	0.06	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	63	1735		307	2237	1001	74	86		104	95	
v/s Ratio Prot	0.01	c0.32		c0.12	0.33		0.02	c0.01		c0.03	0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.65		0.71	0.52	0.02	0.51	0.11		0.47	0.08	
Uniform Delay, d1	38.5	15.5		31.9	8.2	5.6	38.4	36.8		37.3	36.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.7		6.3	0.1	0.0	2.5	0.2		1.2	0.1	
Delay (s)	39.4	16.1		38.2	8.3	5.6	40.9	37.0		38.5	36.6	
Level of Service	D	B		D	A	A	D	D		D	D	
Approach Delay (s)		16.5			12.9			38.1			37.6	
Approach LOS		B			B			D			D	

Intersection Summary

HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	522	131	480	409	226	130	67	431	143	86	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3424		1770	3350		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3424		1770	3350		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	119	538	135	505	431	238	143	74	474	168	101	89
RTOR Reduction (vph)	0	15	0	0	46	0	0	0	431	0	0	79
Lane Group Flow (vph)	119	658	0	505	623	0	143	74	43	168	101	10
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	12.0	27.3		41.3	56.6		13.4	10.4	10.4	15.2	12.2	12.2
Effective Green, g (s)	12.0	27.3		41.3	56.6		13.4	10.4	10.4	15.2	12.2	12.2
Actuated g/C Ratio	0.11	0.24		0.36	0.50		0.12	0.09	0.09	0.13	0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	186	819		640	1660		208	170	144	236	199	169
v/s Ratio Prot	0.07	c0.19		c0.29	0.19		0.08	0.04		c0.09	c0.05	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.64	0.80		0.79	0.38		0.69	0.44	0.30	0.71	0.51	0.06
Uniform Delay, d1	49.0	40.9		32.6	17.8		48.4	49.1	48.5	47.4	48.2	45.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	5.4		5.9	0.1		7.3	0.7	0.4	8.2	0.7	0.1
Delay (s)	54.3	46.3		38.5	17.9		55.7	49.8	48.9	55.6	48.9	45.9
Level of Service	D	D		D	B		E	D	D	E	D	D
Approach Delay (s)		47.5			26.8			50.4			51.3	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.2	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
5: Turner Pkwy & Admiral Callaghan Ln

Long-Term (2030)
SAT Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	536	25	638	312	65	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3440	1441	3350		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3440	1441	3350		1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.94	0.94
Adj. Flow (vph)	564	26	672	328	69	628
RTOR Reduction (vph)	1	17	53	0	0	0
Lane Group Flow (vph)	566	6	947	0	69	628
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	17.7	17.7	24.9		5.9	35.8
Effective Green, g (s)	17.7	17.7	24.9		5.9	35.8
Actuated g/C Ratio	0.28	0.28	0.39		0.09	0.56
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	959	402	1314		164	1995
v/s Ratio Prot	c0.16		c0.28		0.04	
v/s Ratio Perm		0.00				c0.18
v/c Ratio	0.59	0.02	0.72		0.42	0.31
Uniform Delay, d1	19.8	16.6	16.4		27.2	7.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	1.7		0.6	0.0
Delay (s)	20.8	16.6	18.0		27.8	7.4
Level of Service	C	B	B		C	A
Approach Delay (s)	20.6		18.0			9.4
Approach LOS	C		B			A

Intersection Summary

HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
6: Turner Pkwy & Plaza Dr

Long-Term (2030)
SAT Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	215	106	151	320	271	246
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.90		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3150		1757	1484
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3150		1757	1484
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.88	0.88
Adj. Flow (vph)	244	120	164	348	308	280
RTOR Reduction (vph)	0	0	283	0	3	176
Lane Group Flow (vph)	244	120	229	0	333	76
Confl. Peds. (#/hr)				2		3
Turn Type	Prot				Perm	
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.6	29.0	10.4		16.9	16.9
Effective Green, g (s)	13.6	29.0	10.4		16.9	16.9
Actuated g/C Ratio	0.24	0.52	0.19		0.30	0.30
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	431	1836	586		531	449
v/s Ratio Prot	c0.14	0.03	c0.07		c0.19	
v/s Ratio Perm						0.05
v/c Ratio	0.57	0.07	0.39		0.63	0.17
Uniform Delay, d1	18.6	6.7	20.0		16.8	14.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	0.2		1.7	0.1
Delay (s)	19.6	6.7	20.1		18.5	14.4
Level of Service	B	A	C		B	B
Approach Delay (s)		15.3	20.1		16.7	
Approach LOS		B	C		B	

Intersection Summary

HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘↗	↑	↗	↘	↗	
Volume (vph)	86	910	275	35	628	1	372	6	63	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3538		3433	1863	1563		1560	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3538		3433	1863	1563		1560	
Peak-hour factor, PHF	0.78	0.78	0.78	0.91	0.91	0.91	0.80	0.80	0.80	0.66	0.66	0.66
Adj. Flow (vph)	110	1167	353	38	690	1	465	8	79	0	0	64
RTOR Reduction (vph)	0	0	131	0	0	0	0	0	52	0	58	0
Lane Group Flow (vph)	110	1167	222	38	691	0	465	8	27	0	6	0
Confl. Peds. (#/hr)									1			3
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	5.3	37.1	37.1	4.5	36.3		16.6	29.5	29.5		7.9	
Effective Green, g (s)	5.3	37.1	37.1	4.5	36.3		16.6	29.5	29.5		7.9	
Actuated g/C Ratio	0.06	0.42	0.42	0.05	0.42		0.19	0.34	0.34		0.09	
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	107	1502	672	91	1469		652	629	528		141	
v/s Ratio Prot	c0.06	c0.33		0.02	0.20		c0.14	0.00			0.00	
v/s Ratio Perm			0.14						c0.02			
v/c Ratio	1.03	0.78	0.33	0.42	0.47		0.71	0.01	0.05		0.04	
Uniform Delay, d1	41.1	21.6	16.8	40.2	18.6		33.2	19.3	19.5		36.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	94.8	2.4	0.1	3.1	0.1		3.7	0.0	0.0		0.1	
Delay (s)	135.8	24.0	16.9	43.3	18.7		36.9	19.3	19.6		36.4	
Level of Service	F	C	B	D	B		D	B	B		D	
Approach Delay (s)		30.0			19.9			34.1			36.4	
Approach LOS		C			B			C			D	

Intersection Summary

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Long-Term (2030)
SAT Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	896	258	24	807	277	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.90	0.90
Adj. Flow (vph)	953	274	27	897	308	20
RTOR Reduction (vph)	0	170	0	0	0	14
Lane Group Flow (vph)	953	104	27	897	308	6
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	22.7	22.7	2.5	30.2	18.2	18.2
Effective Green, g (s)	22.7	22.7	2.5	30.2	18.2	18.2
Actuated g/C Ratio	0.38	0.38	0.04	0.51	0.30	0.30
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1346	602	74	1790	540	483
v/s Ratio Prot	c0.27		0.02	c0.25	c0.17	
v/s Ratio Perm		0.07				0.00
v/c Ratio	0.71	0.17	0.36	0.50	0.57	0.01
Uniform Delay, d1	15.7	12.3	27.8	9.8	17.5	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	4.1	0.1	1.7	0.0
Delay (s)	17.1	12.3	32.0	9.8	19.2	14.5
Level of Service	B	B	C	A	B	B
Approach Delay (s)	16.0			10.5	18.9	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	17.6
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

LONG-TERM (2030) PLUS PROJECT INTERSECTION LOS ANALYSIS WORKSHEETS

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1119	370	52	1313	0	298	0	61	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	4.0	5.0	6.3		5.0	5.0	5.0			
Lane Util. Factor		0.95	1.00	1.00	0.91		0.95	0.95	1.00			
Frbp, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	0.98			
Flpb, ped/bikes		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		3539	1583	1770	5085		1681	1681	1558			
Flt Permitted		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		3539	1583	1770	5085		1681	1681	1558			
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	0	1332	440	62	1563	0	327	0	67	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	54	0	0	0
Lane Group Flow (vph)	0	1332	440	62	1563	0	163	164	13	0	0	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)		36.0	72.2	5.8	46.8		14.1	14.1	14.1			
Effective Green, g (s)		36.0	72.2	5.8	46.8		14.1	14.1	14.1			
Actuated g/C Ratio		0.50	1.00	0.08	0.65		0.20	0.20	0.20			
Clearance Time (s)		6.3		5.0	6.3		5.0	5.0	5.0			
Vehicle Extension (s)		2.0		2.0	2.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1765	1583	142	3296		328	328	304			
v/s Ratio Prot		c0.38		0.04	c0.31		0.10	c0.10				
v/s Ratio Perm			0.28						0.01			
v/c Ratio		0.75	0.28	0.44	0.47		0.50	0.50	0.04			
Uniform Delay, d1		14.6	0.0	31.6	6.5		25.9	25.9	23.6			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		1.7	0.4	0.8	0.0		1.2	1.2	0.1			
Delay (s)		16.2	0.4	32.4	6.5		27.1	27.1	23.6			
Level of Service		B	A	C	A		C	C	C			
Approach Delay (s)		12.3			7.5			26.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary

HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	72.2	Sum of lost time (s)	17.6
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	34	23	329	384	74
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	37	25	358	417	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)				601	512	
pX, platoon unblocked						
vC, conflicting volume	686	179	498			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	686	179	498			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	98			
cM capacity (veh/h)	372	833	1062			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	25	179	179	167	167	164
Volume Left	0	25	0	0	0	0	0
Volume Right	37	0	0	0	0	0	80
cSH	833	1062	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.02	0.11	0.11	0.10	0.10	0.10
Queue Length 95th (ft)	3	2	0	0	0	0	0
Control Delay (s)	9.5	8.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A					
Approach Delay (s)	9.5	0.6			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		19.1%	ICU Level of Service A
Analysis Period (min)		15	

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	264	6	30	327	28	1	0	16	73	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3525		1770	3539	1583	1770	1563		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3525		1770	3539	1583	1770	1563		1770	1583	
Peak-hour factor, PHF	0.69	0.69	0.69	0.93	0.93	0.93	0.71	0.71	0.71	0.58	0.58	0.58
Adj. Flow (vph)	39	383	9	32	352	30	1	0	23	126	0	33
RTOR Reduction (vph)	0	1	0	0	0	20	0	21	0	0	26	0
Lane Group Flow (vph)	39	391	0	32	352	10	1	2	0	126	7	0
Confl. Peds. (#/hr)			3						1			
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	1.7	17.6		1.6	17.5	17.5	0.5	4.3		6.7	10.5	
Effective Green, g (s)	2.7	17.6		2.6	17.5	17.5	0.5	4.3		7.7	10.5	
Actuated g/C Ratio	0.05	0.35		0.05	0.35	0.35	0.01	0.09		0.15	0.21	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	95	1236		92	1234	552	18	134		271	331	
v/s Ratio Prot	c0.02	c0.11		0.02	0.10		0.00	0.00		c0.07	c0.00	
v/s Ratio Perm						0.01						
v/c Ratio	0.41	0.32		0.35	0.29	0.02	0.06	0.01		0.46	0.02	
Uniform Delay, d1	23.0	11.9		23.0	11.8	10.7	24.6	21.0		19.4	15.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.1		0.8	0.0	0.0	0.5	0.0		0.5	0.0	
Delay (s)	24.0	12.0		23.8	11.9	10.7	25.1	21.0		19.8	15.8	
Level of Service	C	B		C	B	B	C	C		B	B	
Approach Delay (s)		13.1			12.7			21.2			19.0	
Approach LOS		B			B			C			B	

Intersection Summary

HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	143	29	143	157	85	15	18	94	64	18	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3441		1770	3353		1770	1863	1583	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3441		1770	3353		1770	1863	1583	1770	1863	1562
Peak-hour factor, PHF	0.79	0.79	0.79	0.95	0.95	0.95	0.84	0.84	0.84	0.71	0.71	0.71
Adj. Flow (vph)	53	181	37	151	165	89	18	21	112	90	25	44
RTOR Reduction (vph)	0	12	0	0	55	0	0	0	95	0	0	34
Lane Group Flow (vph)	53	206	0	151	199	0	18	21	17	90	25	10
Confl. Peds. (#/hr)			2									2
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	3.6	14.6		10.4	21.4		0.7	8.8	8.8	5.9	14.0	14.0
Effective Green, g (s)	3.6	14.6		10.4	21.4		0.7	8.8	8.8	5.9	14.0	14.0
Actuated g/C Ratio	0.06	0.24		0.17	0.36		0.01	0.15	0.15	0.10	0.23	0.23
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	107	842		308	1202		21	275	233	175	437	366
v/s Ratio Prot	0.03	c0.06		c0.09	0.06		0.01	c0.01		c0.05	0.01	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.50	0.24		0.49	0.17		0.86	0.08	0.07	0.51	0.06	0.03
Uniform Delay, d1	27.2	18.1		22.3	13.1		29.5	21.9	21.9	25.5	17.7	17.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	0.1		0.4	0.0		126.5	0.0	0.0	1.1	0.0	0.0
Delay (s)	28.5	18.2		22.7	13.1		156.0	22.0	22.0	26.6	17.7	17.6
Level of Service	C	B		C	B		F	C	C	C	B	B
Approach Delay (s)		20.2			16.7			37.9			22.7	
Approach LOS		C			B			D			C	

Intersection Summary		
HCM Average Control Delay	21.9	HCM Level of Service C
HCM Volume to Capacity ratio	0.31	
Actuated Cycle Length (s)	59.7	Sum of lost time (s) 20.0
Intersection Capacity Utilization	37.6%	ICU Level of Service A
Analysis Period (min)	15	

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	98	17	236	100	20	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3436	1441	3368		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3436	1441	3368		1770	3539
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.88	0.88
Adj. Flow (vph)	114	20	265	112	23	167
RTOR Reduction (vph)	2	16	42	0	0	0
Lane Group Flow (vph)	114	2	335	0	23	167
Confl. Peds. (#/hr)				4		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	3.9	3.9	12.4		0.5	17.9
Effective Green, g (s)	3.9	3.9	12.4		0.5	17.9
Actuated g/C Ratio	0.12	0.12	0.39		0.02	0.56
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	421	177	1313		28	1992
v/s Ratio Prot	c0.03		c0.10		c0.01	
v/s Ratio Perm		0.00				0.05
v/c Ratio	0.27	0.01	0.26		0.82	0.08
Uniform Delay, d1	12.7	12.3	6.6		15.6	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0		92.8	0.0
Delay (s)	13.0	12.3	6.6		108.4	3.2
Level of Service	B	B	A		F	A
Approach Delay (s)	12.9		6.6			15.9
Approach LOS	B		A			B

Intersection Summary

HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	31.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	73	86	57	79	77	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.91		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3205		1765	1485
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3205		1765	1485
Peak-hour factor, PHF	0.73	0.73	0.81	0.81	0.92	0.92
Adj. Flow (vph)	100	118	70	98	84	41
RTOR Reduction (vph)	0	0	75	0	2	31
Lane Group Flow (vph)	100	118	93	0	86	6
Confl. Peds. (#/hr)				3	1	2
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	4.0	16.5	7.5		5.3	5.3
Effective Green, g (s)	4.0	16.5	7.5		5.3	5.3
Actuated g/C Ratio	0.13	0.52	0.24		0.17	0.17
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	223	1836	756		294	248
v/s Ratio Prot	c0.06	0.03	c0.03		c0.05	
v/s Ratio Perm						0.00
v/c Ratio	0.45	0.06	0.12		0.29	0.02
Uniform Delay, d1	12.9	3.8	9.6		11.6	11.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.0	0.0		0.2	0.0
Delay (s)	13.4	3.8	9.6		11.8	11.1
Level of Service	B	A	A		B	B
Approach Delay (s)		8.2	9.6		11.6	
Approach LOS		A	A		B	

Intersection Summary

HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	31.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)+Project
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗	↘	↖	↗	↘
Volume (vph)	6	728	248	11	860	0	319	0	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1550	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1550	1770	3539		3433		1583			
Peak-hour factor, PHF	0.75	0.75	0.75	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92
Adj. Flow (vph)	8	971	331	13	1024	0	399	0	62	0	0	0
RTOR Reduction (vph)	0	0	135	0	0	0	0	0	48	0	0	0
Lane Group Flow (vph)	8	971	196	13	1024	0	399	0	14	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	0.7	26.9	26.9	1.0	27.2		13.2		13.2			
Effective Green, g (s)	0.7	26.9	26.9	1.0	27.2		13.2		13.2			
Actuated g/C Ratio	0.01	0.47	0.47	0.02	0.47		0.23		0.23			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	22	1659	726	31	1677		789		364			
v/s Ratio Prot	0.00	0.27		c0.01	c0.29		c0.12					
v/s Ratio Perm			0.13						0.01			
v/c Ratio	0.36	0.59	0.27	0.42	0.61		0.51		0.04			
Uniform Delay, d1	28.1	11.2	9.3	27.9	11.2		19.3		17.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Incremental Delay, d2	9.9	0.3	0.1	8.9	0.5		0.5		0.0			
Delay (s)	38.1	11.5	9.3	36.8	11.6		19.8		17.2			
Level of Service	D	B	A	D	B		B		B			
Approach Delay (s)		11.1			12.0			19.4			0.0	
Approach LOS		B			B			B			A	

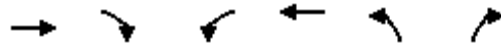
Intersection Summary

HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Long-Term (2030)+Project
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Volume (vph)	1162	338	21	717	377	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frbp, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1561	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1561	1770	3539	1770	1583
Peak-hour factor, PHF	0.82	0.82	0.78	0.78	0.72	0.72
Adj. Flow (vph)	1417	412	27	919	524	124
RTOR Reduction (vph)	0	174	0	0	0	82
Lane Group Flow (vph)	1417	238	27	919	524	42
Confl. Peds. (#/hr)		2				
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	35.8	35.8	3.1	43.9	28.6	28.6
Effective Green, g (s)	35.8	35.8	3.1	43.9	28.6	28.6
Actuated g/C Ratio	0.43	0.43	0.04	0.52	0.34	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1512	667	65	1854	604	540
v/s Ratio Prot	c0.40		0.02	c0.26	c0.30	
v/s Ratio Perm		0.15				0.03
v/c Ratio	0.94	0.36	0.42	0.50	0.87	0.08
Uniform Delay, d1	22.9	16.2	39.5	12.8	25.8	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.1	0.1	5.8	0.1	12.9	0.1
Delay (s)	34.1	16.3	45.2	12.9	38.7	18.8
Level of Service	C	B	D	B	D	B
Approach Delay (s)	30.1			13.8	34.9	
Approach LOS	C			B	C	

Intersection Summary

HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	17.6
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1255	858	136	931	1	800	0	179	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1681	1555		1750	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1681	1555		1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.95	0.95	0.95	0.75	0.75	0.75
Adj. Flow (vph)	4	1394	953	149	1023	1	842	0	188	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	133	0	1	0
Lane Group Flow (vph)	4	1394	953	149	1024	0	421	421	55	0	2	0
Confl. Peds. (#/hr)									6			
Turn Type	Prot		Free	Prot			Split		Perm		Split	
Protected Phases	5	2		1	6		4	4			8	8
Permitted Phases			Free						4			
Actuated Green, G (s)	1.0	39.7	104.9	12.1	50.8		30.7	30.7	30.7		1.1	
Effective Green, g (s)	1.0	39.7	104.9	12.1	50.8		30.7	30.7	30.7		1.1	
Actuated g/C Ratio	0.01	0.38	1.00	0.12	0.48		0.29	0.29	0.29		0.01	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	17	1339	1583	204	2463		492	492	455		18	
v/s Ratio Prot	0.00	c0.39		0.08	0.20		c0.25	0.25			0.00	
v/s Ratio Perm			c0.60						0.04			
v/c Ratio	0.24	1.04	0.60	0.73	0.42		0.86	0.86	0.12		0.11	
Uniform Delay, d1	51.6	32.6	0.0	44.8	17.5		35.0	35.0	27.2		51.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.6	36.0	1.7	11.0	0.0		13.6	13.6	0.1		2.7	
Delay (s)	54.2	68.6	1.7	55.8	17.5		48.6	48.6	27.3		54.2	
Level of Service	D	E	A	E	B		D	D	C		D	
Approach Delay (s)		41.4			22.4			44.7			54.2	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	104.9	Sum of lost time (s)	11.3
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↖	↑↑	↑↑↓	
Volume (veh/h)	0	39	31	905	944	77
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	42	34	984	1026	84
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)				614	519	
pX, platoon unblocked	0.86					
vC, conflicting volume	1627	384	1110			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1401	384	1110			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	95			
cM capacity (veh/h)	107	614	625			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	34	492	492	410	410	289
Volume Left	0	34	0	0	0	0	0
Volume Right	42	0	0	0	0	0	84
cSH	614	625	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.05	0.29	0.29	0.24	0.24	0.17
Queue Length 95th (ft)	6	4	0	0	0	0	0
Control Delay (s)	11.3	11.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.3	0.4			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		30.0%	ICU Level of Service A
Analysis Period (min)		15	

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	725	40	180	798	33	27	0	118	102	5	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3507		1770	3539	1583	1770	1583		1770	1617	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3507		1770	3539	1583	1770	1583		1770	1617	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	43	797	44	194	858	35	33	0	146	119	6	44
RTOR Reduction (vph)	0	3	0	0	0	12	0	137	0	0	39	0
Lane Group Flow (vph)	43	838	0	194	858	23	33	9	0	119	11	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	5.7	59.8		23.5	77.6	77.6	4.2	7.2		9.5	12.5	
Effective Green, g (s)	5.7	59.8		23.5	77.6	77.6	4.2	7.2		9.5	12.5	
Actuated g/C Ratio	0.05	0.50		0.20	0.65	0.65	0.04	0.06		0.08	0.10	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	84	1748		347	2289	1024	62	95		140	168	
v/s Ratio Prot	0.02	c0.24		c0.11	0.24		0.02	c0.01		c0.07	0.01	
v/s Ratio Perm						0.01						
v/c Ratio	0.51	0.48		0.56	0.37	0.02	0.53	0.09		0.85	0.06	
Uniform Delay, d1	55.8	19.8		43.6	9.9	7.6	56.9	53.3		54.5	48.5	
Progression Factor	0.85	0.88		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.8		1.1	0.5	0.0	4.3	0.2		34.4	0.1	
Delay (s)	49.4	18.3		44.7	10.4	7.6	61.3	53.5		88.9	48.5	
Level of Service	D	B		D	B	A	E	D		F	D	
Approach Delay (s)		19.8			16.4			54.9			77.0	
Approach LOS		B			B			D			E	

Intersection Summary

HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	367	105	437	333	97	107	44	384	89	29	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3421		1770	3409		1770	1863	1560	1770	1863	1562
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3421		1770	3409		1770	1863	1560	1770	1863	1562
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90	0.82	0.82	0.82
Adj. Flow (vph)	82	390	112	465	354	103	119	49	427	109	35	56
RTOR Reduction (vph)	0	20	0	0	17	0	0	0	385	0	0	52
Lane Group Flow (vph)	82	482	0	465	440	0	119	49	42	109	35	4
Confl. Peds. (#/hr)						1			2			1
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	7.7	41.7		36.2	70.2		12.5	11.9	11.9	10.2		9.6
Effective Green, g (s)	7.7	41.7		36.2	70.2		12.5	11.9	11.9	10.2		9.6
Actuated g/C Ratio	0.06	0.35		0.30	0.59		0.10	0.10	0.10	0.08		0.08
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0		5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5		1.5
Lane Grp Cap (vph)	114	1189		534	1994		184	185	155	150		149
v/s Ratio Prot	0.05	c0.14		c0.26	0.13		c0.07	0.03		0.06		0.02
v/s Ratio Perm									c0.03			0.00
v/c Ratio	0.72	0.41		0.87	0.22		0.65	0.26	0.27	0.73		0.23
Uniform Delay, d1	55.1	29.7		39.7	11.9		51.6	50.0	50.0	53.5		51.8
Progression Factor	1.00	1.00		0.81	0.55		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	16.5	1.0		13.5	0.2		5.7	0.3	0.3	13.8		0.3
Delay (s)	71.6	30.8		45.5	6.7		57.4	50.3	50.4	67.3		52.1
Level of Service	E	C		D	A		E	D	D	E		D
Approach Delay (s)		36.5			26.3			51.8				60.1
Approach LOS		D			C			D				E

Intersection Summary

HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	513	33	478	309	66	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.94		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3439	1441	3313		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3439	1441	3313		1770	3539
Peak-hour factor, PHF	0.91	0.91	0.89	0.89	0.95	0.95
Adj. Flow (vph)	564	36	537	347	69	527
RTOR Reduction (vph)	1	26	121	0	0	0
Lane Group Flow (vph)	567	6	763	0	69	527
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	14.9	14.9	43.6		6.5	55.1
Effective Green, g (s)	14.9	14.9	43.6		6.5	55.1
Actuated g/C Ratio	0.19	0.19	0.55		0.08	0.69
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	641	268	1806		144	2437
v/s Ratio Prot	c0.16		c0.23		c0.04	
v/s Ratio Perm		0.00				0.15
v/c Ratio	0.88	0.02	0.42		0.48	0.22
Uniform Delay, d1	31.7	26.6	10.8		35.1	4.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	13.8	0.0	0.7		0.9	0.2
Delay (s)	45.5	26.6	11.5		36.0	4.8
Level of Service	D	C	B		D	A
Approach Delay (s)	44.5		11.5			8.4
Approach LOS	D		B			A

Intersection Summary

HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	225	106	109	206	261	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.90		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3161		1756	1485
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3161		1756	1485
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.91	0.91
Adj. Flow (vph)	265	125	125	237	287	278
RTOR Reduction (vph)	0	0	195	0	4	177
Lane Group Flow (vph)	265	125	167	0	311	73
Confl. Peds. (#/hr)				5		1
Turn Type	Prot					Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	14.0	28.8	9.8		16.1	16.1
Effective Green, g (s)	14.0	28.8	9.8		16.1	16.1
Actuated g/C Ratio	0.26	0.52	0.18		0.29	0.29
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	451	1857	564		515	435
v/s Ratio Prot	c0.15	0.04	c0.05		c0.18	
v/s Ratio Perm						0.05
v/c Ratio	0.59	0.07	0.30		0.60	0.17
Uniform Delay, d1	17.9	6.4	19.6		16.7	14.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.0	0.1		1.4	0.1
Delay (s)	19.2	6.4	19.7		18.0	14.5
Level of Service	B	A	B		B	B
Approach Delay (s)		15.1	19.7		16.5	
Approach LOS		B	B		B	

Intersection Summary

HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	54.9	Sum of lost time (s)	15.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)+Project
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	1084	380	17	722	0	330	0	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97		1.00			
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00		1.00			
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Frt	1.00	1.00	0.85	1.00	1.00		1.00		0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (prot)	1770	3539	1549	1770	3539		3433		1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95		1.00			
Satd. Flow (perm)	1770	3539	1549	1770	3539		3433		1583			
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	26	1191	418	19	820	0	371	0	82	0	0	0
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	73	0	0	0
Lane Group Flow (vph)	26	1191	328	19	820	0	371	0	9	0	0	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	4.8	78.5	78.5	3.2	76.9		12.0		12.0			
Effective Green, g (s)	4.8	78.5	78.5	3.2	76.9		12.0		12.0			
Actuated g/C Ratio	0.04	0.71	0.71	0.03	0.70		0.11		0.11			
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0		5.0			
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0		3.0			
Lane Grp Cap (vph)	77	2526	1105	51	2474		375		173			
v/s Ratio Prot	c0.01	c0.34		0.01	0.23		c0.11					
v/s Ratio Perm			0.21						0.01			
v/c Ratio	0.34	0.47	0.30	0.37	0.33		0.99		0.05			
Uniform Delay, d1	51.1	6.8	5.7	52.4	6.5		48.9		43.9			
Progression Factor	1.00	1.00	1.00	0.85	1.79		1.00		1.00			
Incremental Delay, d2	2.6	0.6	0.7	4.2	0.3		43.1		0.1			
Delay (s)	53.7	7.4	6.4	48.8	11.9		92.1		44.0			
Level of Service	D	A	A	D	B		F		D			
Approach Delay (s)		7.9			12.8			83.4			0.0	
Approach LOS		A			B			F			A	

Intersection Summary

HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Volume (vph)	1022	396	42	903	228	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.88	0.88	0.99	0.99	0.98	0.98
Adj. Flow (vph)	1161	450	42	912	233	23
RTOR Reduction (vph)	0	166	0	0	0	19
Lane Group Flow (vph)	1161	284	42	912	233	4
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	67.2	67.2	6.2	78.4	20.3	20.3
Effective Green, g (s)	67.2	67.2	6.2	78.4	20.3	20.3
Actuated g/C Ratio	0.61	0.61	0.06	0.71	0.18	0.18
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	2162	967	100	2522	327	292
v/s Ratio Prot	c0.33		0.02	c0.26	c0.13	
v/s Ratio Perm		0.18				0.00
v/c Ratio	0.54	0.29	0.42	0.36	0.71	0.01
Uniform Delay, d1	12.4	10.1	50.2	6.1	42.1	36.7
Progression Factor	0.68	0.24	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.7	3.9	0.4	7.7	0.0
Delay (s)	9.3	3.2	54.0	6.5	49.8	36.7
Level of Service	A	A	D	A	D	D
Approach Delay (s)	7.6			8.6	48.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Vallejo Chick-fil-A TIA
1: Columbus Pkwy & Admiral Callaghan Ln

Long-Term (2030)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑↑		↙	↑	↗		↕	
Volume (vph)	13	971	1071	258	816	0	911	2	288	2	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	4.0	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (prot)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.95	1.00		0.98	
Satd. Flow (perm)	1770	3539	1583	1770	5085		1681	1686	1583		1710	
Peak-hour factor, PHF	0.95	0.95	0.95	0.88	0.88	0.88	0.93	0.93	0.93	0.38	0.38	0.38
Adj. Flow (vph)	14	1022	1127	293	927	0	980	2	310	5	3	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	199	0	8	0
Lane Group Flow (vph)	14	1022	1127	293	927	0	490	492	111	0	8	0
Turn Type	Prot		Free	Prot			Split		Perm	Split		
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases			Free						4			
Actuated Green, G (s)	2.4	38.3	112.4	15.0	50.9		35.1	35.1	35.1		2.7	
Effective Green, g (s)	2.4	38.3	112.4	15.0	50.9		35.1	35.1	35.1		2.7	
Actuated g/C Ratio	0.02	0.34	1.00	0.13	0.45		0.31	0.31	0.31		0.02	
Clearance Time (s)	5.0	6.3		5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	38	1206	1583	236	2303		525	527	494		41	
v/s Ratio Prot	0.01	c0.29		c0.17	0.18		0.29	c0.29			0.00	
v/s Ratio Perm			c0.71						0.07			
v/c Ratio	0.37	0.85	0.71	1.24	0.40		0.93	0.93	0.23		0.20	
Uniform Delay, d1	54.3	34.3	0.0	48.7	20.6		37.5	37.5	28.6		53.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	2.2	5.5	2.8	139.3	0.0		23.8	23.8	0.2		2.4	
Delay (s)	56.4	39.8	2.8	188.0	20.6		61.3	61.3	28.8		56.2	
Level of Service	E	D	A	F	C		E	E	C		E	
Approach Delay (s)		20.6			60.8			53.5			56.2	
Approach LOS		C			E			D			E	

Intersection Summary

HCM Average Control Delay	40.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	16.3
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗	↘	↑↑	↑↑↓	
Volume (veh/h)	0	52	37	1178	1248	99
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	57	40	1280	1357	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)				601	512	
pX, platoon unblocked	0.73					
vC, conflicting volume	2131	506	1464			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1810	506	1464			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	91			
cM capacity (veh/h)	47	512	457			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	57	40	640	640	543	543	379
Volume Left	0	40	0	0	0	0	0
Volume Right	57	0	0	0	0	0	108
cSH	512	457	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.09	0.38	0.38	0.32	0.32	0.22
Queue Length 95th (ft)	9	7	0	0	0	0	0
Control Delay (s)	12.9	13.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	12.9	0.4			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		36.3%	ICU Level of Service A
Analysis Period (min)		15	

Vallejo Chick-fil-A TIA
3: Admiral Callaghan Ln & Auto Club Pkwy

Long-Term (2030)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	1032	49	198	1048	45	32	3	86	132	5	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0		4.0	5.0	5.0	5.0	5.0		4.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frbp, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3512		1770	3539	1583	1770	1594		1770	1608	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3512		1770	3539	1583	1770	1594		1770	1608	
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.84	0.84	0.84	0.77	0.77	0.77
Adj. Flow (vph)	41	1075	51	218	1152	49	38	4	102	171	6	62
RTOR Reduction (vph)	0	2	0	0	0	17	0	93	0	0	51	0
Lane Group Flow (vph)	41	1124	0	218	1152	32	38	13	0	171	17	0
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Actuated Green, G (s)	3.9	37.8		14.5	48.4	48.4	3.7	8.1		12.2	16.6	
Effective Green, g (s)	4.9	37.8		15.5	48.4	48.4	3.7	8.1		13.2	16.6	
Actuated g/C Ratio	0.05	0.41		0.17	0.52	0.52	0.04	0.09		0.14	0.18	
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lane Grp Cap (vph)	94	1434		296	1850	827	71	139		252	288	
v/s Ratio Prot	0.02	c0.32		c0.12	0.33		0.02	c0.01		c0.10	0.01	
v/s Ratio Perm						0.02						
v/c Ratio	0.44	0.78		0.74	0.62	0.04	0.54	0.09		0.68	0.06	
Uniform Delay, d1	42.5	23.8		36.6	15.6	10.8	43.6	38.9		37.7	31.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.2	2.7		8.0	0.5	0.0	3.8	0.1		5.6	0.0	
Delay (s)	43.7	26.5		44.6	16.1	10.8	47.4	39.0		43.3	31.6	
Level of Service	D	C		D	B	B	D	D		D	C	
Approach Delay (s)		27.1			20.3			41.2			40.0	
Approach LOS		C			C			D			D	

Intersection Summary

HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
4: Admiral Callaghan Ln & Plaza Dr

Long-Term (2030)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	529	131	489	415	226	130	67	436	143	86	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frbp, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3425		1770	3352		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3425		1770	3352		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.95	0.95	0.95	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	119	545	135	515	437	238	143	74	479	168	101	89
RTOR Reduction (vph)	0	15	0	0	43	0	0	0	436	0	0	80
Lane Group Flow (vph)	119	665	0	515	632	0	143	74	43	168	101	9
Confl. Peds. (#/hr)			1									
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7		4
Permitted Phases									8			4
Actuated Green, G (s)	12.0	27.6		43.4	59.0		13.4	10.4	10.4	15.1	12.1	12.1
Effective Green, g (s)	12.0	27.6		43.4	59.0		13.4	10.4	10.4	15.1	12.1	12.1
Actuated g/C Ratio	0.10	0.24		0.37	0.51		0.12	0.09	0.09	0.13	0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	1.5
Lane Grp Cap (vph)	182	811		659	1698		204	166	141	229	193	164
v/s Ratio Prot	0.07	c0.19		c0.29	0.19		0.08	0.04		c0.09	c0.05	
v/s Ratio Perm									0.03			0.01
v/c Ratio	0.65	0.82		0.78	0.37		0.70	0.45	0.30	0.73	0.52	0.06
Uniform Delay, d1	50.3	42.1		32.4	17.5		49.6	50.3	49.7	48.8	49.5	47.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.3	6.2		5.5	0.1		8.6	0.7	0.4	10.0	1.2	0.1
Delay (s)	56.5	48.3		37.9	17.5		58.2	51.0	50.1	58.8	50.6	47.1
Level of Service	E	D		D	B		E	D	D	E	D	D
Approach Delay (s)		49.5			26.3			51.9			53.6	
Approach LOS		D			C			D			D	

Intersection Summary

HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	116.5	Sum of lost time (s)	15.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	536	25	644	312	65	596
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	0.97	0.91	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	3440	1441	3351		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	3440	1441	3351		1770	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.94	0.94
Adj. Flow (vph)	564	26	678	328	69	634
RTOR Reduction (vph)	1	17	52	0	0	0
Lane Group Flow (vph)	566	6	954	0	69	634
Confl. Peds. (#/hr)				3		
Turn Type		Perm			Prot	
Protected Phases	4		2		1	
Permitted Phases		4				6
Actuated Green, G (s)	17.7	17.7	25.0		5.9	35.9
Effective Green, g (s)	17.7	17.7	25.0		5.9	35.9
Actuated g/C Ratio	0.28	0.28	0.39		0.09	0.56
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0		2.0	2.0
Lane Grp Cap (vph)	957	401	1317		164	1998
v/s Ratio Prot	c0.16		c0.28		0.04	
v/s Ratio Perm		0.00				c0.18
v/c Ratio	0.59	0.02	0.72		0.42	0.32
Uniform Delay, d1	19.8	16.6	16.4		27.2	7.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.0	1.7		0.6	0.0
Delay (s)	20.8	16.7	18.1		27.9	7.4
Level of Service	C	B	B		C	A
Approach Delay (s)	20.7		18.1			9.4
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay		16.1	HCM Level of Service B
HCM Volume to Capacity ratio		0.64	
Actuated Cycle Length (s)		63.6	Sum of lost time (s) 15.0
Intersection Capacity Utilization		60.6%	ICU Level of Service B
Analysis Period (min)		15	

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	217	106	151	323	282	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0		5.0	5.0
Lane Util. Factor	1.00	0.95	0.95		1.00	0.95
Frbp, ped/bikes	1.00	1.00	0.99		1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.90		0.99	0.85
Flt Protected	0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1770	3539	3149		1757	1484
Flt Permitted	0.95	1.00	1.00		0.96	1.00
Satd. Flow (perm)	1770	3539	3149		1757	1484
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.88	0.88
Adj. Flow (vph)	247	120	164	351	320	281
RTOR Reduction (vph)	0	0	286	0	3	175
Lane Group Flow (vph)	247	120	229	0	345	78
Confl. Peds. (#/hr)				2		3
Turn Type	Prot				Perm	
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	13.9	29.4	10.5		17.4	17.4
Effective Green, g (s)	13.9	29.4	10.5		17.4	17.4
Actuated g/C Ratio	0.24	0.52	0.18		0.31	0.31
Clearance Time (s)	5.0	5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.0	1.0	1.0		2.0	2.0
Lane Grp Cap (vph)	433	1832	582		538	455
v/s Ratio Prot	c0.14	0.03	c0.07		c0.20	
v/s Ratio Perm						0.05
v/c Ratio	0.57	0.07	0.39		0.64	0.17
Uniform Delay, d1	18.8	6.8	20.3		17.0	14.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.0	0.2		2.0	0.1
Delay (s)	20.0	6.8	20.5		19.0	14.5
Level of Service	B	A	C		B	B
Approach Delay (s)		15.7	20.5		17.1	
Approach LOS		B	C		B	

Intersection Summary

HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	15.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
7: Columbus Pkwy & N Ascot Pkwy

Long-Term (2030)+Project
SAT Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	915	281	35	633	1	382	6	63	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.99		0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3538		3433	1863	1563		1560	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3538		3433	1863	1563		1560	
Peak-hour factor, PHF	0.78	0.78	0.78	0.91	0.91	0.91	0.80	0.80	0.80	0.66	0.66	0.66
Adj. Flow (vph)	110	1173	360	38	696	1	478	8	79	0	0	64
RTOR Reduction (vph)	0	0	133	0	0	0	0	0	52	0	58	0
Lane Group Flow (vph)	110	1173	227	38	697	0	478	8	27	0	6	0
Confl. Peds. (#/hr)									1			3
Turn Type	Prot		Perm	Prot			Prot		Perm	Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Actuated Green, G (s)	5.3	37.0	37.0	4.5	36.2		17.2	30.1	30.1		7.9	
Effective Green, g (s)	5.3	37.0	37.0	4.5	36.2		17.2	30.1	30.1		7.9	
Actuated g/C Ratio	0.06	0.42	0.42	0.05	0.41		0.20	0.34	0.34		0.09	
Clearance Time (s)	5.0	6.3	6.3	5.0	6.3		5.0	5.0	5.0		5.0	
Vehicle Extension (s)	3.0	2.0	2.0	3.0	2.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	107	1490	666	91	1457		672	638	535		140	
v/s Ratio Prot	c0.06	c0.33		0.02	0.20		c0.14	0.00			0.00	
v/s Ratio Perm			0.14						c0.02			
v/c Ratio	1.03	0.79	0.34	0.42	0.48		0.71	0.01	0.05		0.04	
Uniform Delay, d1	41.3	22.0	17.2	40.4	18.9		33.0	19.1	19.3		36.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	94.8	2.6	0.1	3.1	0.1		3.6	0.0	0.0		0.1	
Delay (s)	136.1	24.7	17.3	43.5	19.0		36.6	19.1	19.4		36.7	
Level of Service	F	C	B	D	B		D	B	B		D	
Approach Delay (s)		30.5			20.3			33.9			36.7	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Vallejo Chick-fil-A TIA
8: Columbus Pkwy & Redwood Pkwy

Long-Term (2030)+Project
SAT Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Volume (vph)	897	261	24	808	280	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.90	0.90
Adj. Flow (vph)	954	278	27	898	311	20
RTOR Reduction (vph)	0	172	0	0	0	14
Lane Group Flow (vph)	954	106	27	898	311	6
Turn Type		Perm	Prot			Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	22.7	22.7	2.5	30.2	18.3	18.3
Effective Green, g (s)	22.7	22.7	2.5	30.2	18.3	18.3
Actuated g/C Ratio	0.38	0.38	0.04	0.51	0.31	0.31
Clearance Time (s)	6.3	6.3	5.0	6.3	5.0	5.0
Vehicle Extension (s)	2.0	2.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	1343	601	74	1787	542	484
v/s Ratio Prot	c0.27		0.02	c0.25	c0.18	
v/s Ratio Perm		0.07				0.00
v/c Ratio	0.71	0.18	0.36	0.50	0.57	0.01
Uniform Delay, d1	15.8	12.3	27.9	9.8	17.5	14.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.1	4.1	0.1	1.8	0.0
Delay (s)	17.3	12.4	32.0	9.9	19.2	14.5
Level of Service	B	B	C	A	B	B
Approach Delay (s)	16.2			10.5	18.9	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	17.6
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

QUEUING SUMMARY

Queuing Summary

Vallejo Chick-Fil-A Project

Scenarios Analyzed	Turning Movement	Columbus Pkwy												Admiral Callaghan Ln												Turner Pkwy									
		Admiral Callaghan Ln				N Ascot Pkwy				Redwood Pkwy				Project Driveway				Auto Club Wy				Plaza Dr				Admiral Callaghan Ln				Plaza Dr					
		Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM
Existing	EBL	205	-	<25	29	215	<25	46	179	/	/	/	/	/	/	/	/	130	<25	29	<25	255	60	117	169	/	/	/	/	220	70	212	207		
	EBR	/	/	/	/	225	<25	25	31	225	29	<25	31	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	52	154	297	195	<25	34	56	255	26	57	24	/	/	/	/	220	42	217	180	260	122	534	604	250	42	148	146	/	/	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	76	394	388	225	68	94	95	220	162	121	73	/	/	/	/	/	/	/	/	200	31	154	192	/	/	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	65	-	-	-	/	/	/	/	/	/	/	/	55	<25	49	34	110	77	130	208	320	29	67	73	155	51	253	262		
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	43	/	/	/	/	/	/	/	/	/	/	/	/		
Near-Term	EBL	205	-	<25	29	215	<25	46	187	/	/	/	/	/	/	/	/	130	<25	29	<25	255	60	117	169	/	/	/	/	220	70	212	207		
	EBR	/	/	/	/	225	<25	25	31	225	30	<25	33	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	52	156	308	195	<25	34	58	255	26	57	25	/	/	/	/	220	42	217	180	260	122	534	607	250	42	152	152	/	/	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	80	413	438	225	70	99	110	220	166	127	85	/	/	/	/	/	/	/	/	200	31	156	192	/	/	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	65	-	-	-	/	/	/	/	/	/	/	/	55	<25	49	34	110	77	130	208	320	29	67	73	155	51	253	262		
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	43	/	/	/	/	/	/	/	/	/	/	/	/		
Near-Term + Project	EBL	205	<25	<25	29	215	<25	46	190	/	/	/	/	/	/	/	/	130	39	57	60	255	60	117	171	/	/	/	/	220	71	215	214		
	EBR	/	/	/	/	225	<25	25	31	225	31	<25	34	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	77	196	361	195	<25	34	58	255	26	57	25	/	/	/	/	220	45	217	206	260	135	561	655	250	42	152	152	/	/	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	98	455	471	225	75	107	121	220	170	131	89	125	<25	<25	<25	/	/	/	/	200	30	156	195	/	/	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	65	-	-	-	/	/	/	/	/	/	/	/	55	74	183	135	110	78	130	211	320	29	67	73	155	60	265	276		
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	43	/	/	/	/	/	/	/	/	/	/	/	/		
Near-Term + Project + Mitigation	EBL	205	<25	<25	33	/	/	/	/	/	/	/	/	/	/	/	/	130	39	58	47	255	60	114	148	/	/	/	/	/	/	/	/		
	EBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	74	179	300	/	/	/	/	/	/	/	/	/	/	/	/	220	45	217	236	260	135	511	566	/	/	/	/	/	/	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	92	421	527	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	200	30	167	212	/	/	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	140	74	142	153	110	78	130	258	/	/	/	/	/	/	/	/		
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	40	/	/	/	/	/	/	/	/	/	/	/	/		

Queuing Summary

Vallejo Chick-Fil-A Project

Scenarios Analyzed	Turning Movement	Columbus Pkwy												Admiral Callaghan Ln												Turner Pkwy							
		Admiral Callaghan Ln				N Ascot Pkwy				Redwood Pkwy				Project Driveway				Auto Club Wy				Plaza Dr				Admiral Callaghan Ln				Plaza Dr			
		Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT	Link	AM	PM	SAT
Long-Term	EBL	205	<25	<25	32	215	<25	46	194	/	/	/	/	/	/	/	/	130	<25	35	33	255	61	117	176	/	/	/	/	220	76	212	208
	EBR	/	/	/	/	225	39	59	118	225	94	<25	46	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	67	159	402	195	20	34	63	255	36	63	39	/	/	/	/	220	42	217	185	260	140	577	673	250	43	232	196	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	115	455	571	225	105	223	205	220	299	225	226	/	/	/	/	/	/	/	/	200	31	172	207	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	65	-	-	-	/	/	/	/	/	/	/	/	55	<25	109	52	110	78	130	239	320	29	70	77	155	58	255	265
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	43	/	/	/	/	/	/		
Long-Term + Project	EBL	205	<25	<25	32	215	<25	46	194	/	/	/	/	/	/	/	130	39	58	41	255	61	117	176	/	/	/	/	220	77	213	247	
	EBR	/	/	/	/	225	41	59	121	225	95	<25	47	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	67	175	429	195	20	34	63	255	36	63	39	/	/	/	/	220	45	217	218	260	152	579	698	250	43	232	196	/	/		
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	128	460	592	225	108	230	211	220	300	227	228	125	<25	<25	<25	/	/	/	/	200	31	172	208	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	65	-	-	-	/	/	/	/	/	/	/	/	55	74	183	171	110	79	130	241	320	29	70	77	155	65	256	348
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	44	/	/	/	/	/	/		
Long-Term + Project + Mitigation	EBL	205	<25	<25	34	/	/	/	/	/	/	/	/	/	/	/	130	39	58	44	255	61	114	148	/	/	/	/	/	/			
	EBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	WBL	220	65	170	342	/	/	/	/	/	/	/	/	/	/	/	220	45	217	236	260	152	532	581	/	/	/	/	/	/			
	WBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	NBL	400	120	418	594	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	200	31	184	222	/	/	/	/	/	/		
	NBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/		
	SBL	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	140	74	142	163	110	79	130	271	/	/	/	/	/	/		
	SBR	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	110	<25	29	40	/	/	/	/	/	/		

Notes

1. 95th percentile queue lengths presented above are measured in feet.
2. Locations where queues exceed lane storage by more than one car (i.e. 25 feet) are shown in **BOLD**.
3. Shaded cells represent significant impacts.