

**APPENDIX A:
TRAFFIC COUNTS**

All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-030 OAKPORT-SB I 880RAMP-T

Site Code : 00000000

Start Date : 03/12/2009

Page No : 1

Groups Printed- Unshifted

Start Time	SB I-880 ON RAMP Southbound										OAKPORT ST. Westbound										Northbound										OAKPORT ST. Eastbound									
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total	
07:00	0	0	0	0	0	0	0	0	17	0	12	5	0	0	0	0	0	0	0	0	228	36	0	0	0	0	0	264	0	281	0	0	0	0	0	0	281			
07:15	0	0	0	0	0	0	0	0	23	0	11	11	0	0	0	0	0	0	286	0	261	25	0	0	0	0	0	286	0	309	0	0	0	0	0	0	309			
07:30	0	0	0	0	0	0	0	0	34	0	23	11	0	0	0	0	0	0	301	0	270	31	0	0	0	0	0	335	0	335	0	0	0	0	0	0	335			
07:45	0	0	0	0	0	0	0	0	26	0	20	6	0	0	0	0	0	0	330	0	291	39	0	0	0	0	0	330	0	356	0	0	0	0	0	0	356			
Total	0	0	0	0	0	0	0	0	100	0	67	33	0	0	0	0	0	0	1181	0	1050	131	0	0	0	0	0	1181	0	1281	0	0	0	0	0	0	1281			
08:00	0	0	0	0	0	0	0	0	22	0	18	4	0	0	0	0	0	0	301	0	265	36	0	0	0	0	0	301	0	323	0	0	0	0	0	0	323			
08:15	0	0	0	0	0	0	0	0	19	0	16	3	0	0	0	0	0	0	325	0	288	37	0	0	0	0	0	325	0	344	0	0	0	0	0	0	344			
08:30	0	0	0	0	0	0	0	0	19	0	16	3	0	0	0	0	0	0	300	0	267	33	0	0	0	0	0	300	0	319	0	0	0	0	0	0	319			
08:45	0	0	0	0	0	0	0	0	22	0	14	8	0	0	0	0	0	0	213	0	189	24	0	0	0	0	0	213	0	235	0	0	0	0	0	0	235			
Total	0	0	0	0	0	0	0	0	82	0	64	18	0	0	0	0	0	0	1139	0	1009	130	0	0	0	0	0	1139	0	1221	0	0	0	0	0	0	1221			

*** BREAK ***

16:00	0	0	0	0	0	0	0	0	39	0	31	8	0	0	0	0	0	0	264	0	240	24	0	0	0	0	0	264	0	303	0	0	0	0	0	0	303
16:15	0	0	0	0	0	0	0	0	45	0	36	9	0	0	0	0	0	0	263	0	242	21	0	0	0	0	0	263	0	308	0	0	0	0	0	0	308
16:30	0	0	0	0	0	0	0	0	54	0	41	13	0	0	0	0	0	0	256	0	235	21	0	0	0	0	0	256	0	310	0	0	0	0	0	0	310
16:45	0	0	0	0	0	0	0	0	47	0	42	5	0	0	0	0	0	0	247	0	222	25	0	0	0	0	0	247	0	294	0	0	0	0	0	0	294
Total	0	0	0	0	0	0	0	0	185	0	150	35	0	0	0	0	0	0	1030	0	939	91	0	0	0	0	0	1030	0	1215	0	0	0	0	0	0	1215
17:00	0	0	0	0	0	0	0	0	46	0	35	11	0	0	0	0	0	0	278	0	260	18	0	0	0	0	0	278	0	324	0	0	0	0	0	0	324
17:15	0	0	0	0	0	0	0	0	37	0	33	4	0	0	0	0	0	0	268	0	235	33	0	0	0	0	0	268	0	305	0	0	0	0	0	0	305
17:30	0	0	0	0	0	0	0	0	39	0	33	6	0	0	0	0	0	0	242	0	201	41	0	0	0	0	0	242	0	281	0	0	0	0	0	0	281
17:45	0	0	0	0	0	0	0	0	29	0	27	2	0	0	0	0	0	0	235	0	201	34	0	0	0	0	0	235	0	264	0	0	0	0	0	0	264
Total	0	0	0	0	0	0	0	0	151	0	128	23	0	0	0	0	0	0	1023	0	897	126	0	0	0	0	0	1023	0	1174	0	0	0	0	0	0	1174
Grand Total	0	0	0	0	0	0	0	0	518	0	409	109	0	0	0	0	0	0	4373	0	3895	478	0	0	0	0	0	4373	0	4891	0	0	0	0	0	0	4891
Approach %	0	0	0	0	0	0	0	0	10.6	0	79	21	0	0	0	0	0	0	89.4	0	89.1	10.9	0	0	0	0	0	89.4	0	100	0	0	0	0	0	0	100
Total %	0	0	0	0	0	0	0	0	10.6	0	8.4	2.2	0	0	0	0	0	0	89.4	0	79.6	9.8	0	0	0	0	0	89.4	0	100	0	0	0	0	0	0	100

Start Time	SB I-880 ON RAMP Southbound										OAKPORT ST. Westbound										Northbound										OAKPORT ST. Eastbound									
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
07:45	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:00	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
08:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% App. Total	0	0	0	0	0	0	0	0	23.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.545	.000	.000	.000	.000	.000	.000	.000	.000	.000	.743	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.957	.917	.000	.952	.000	.952	.000	.954			

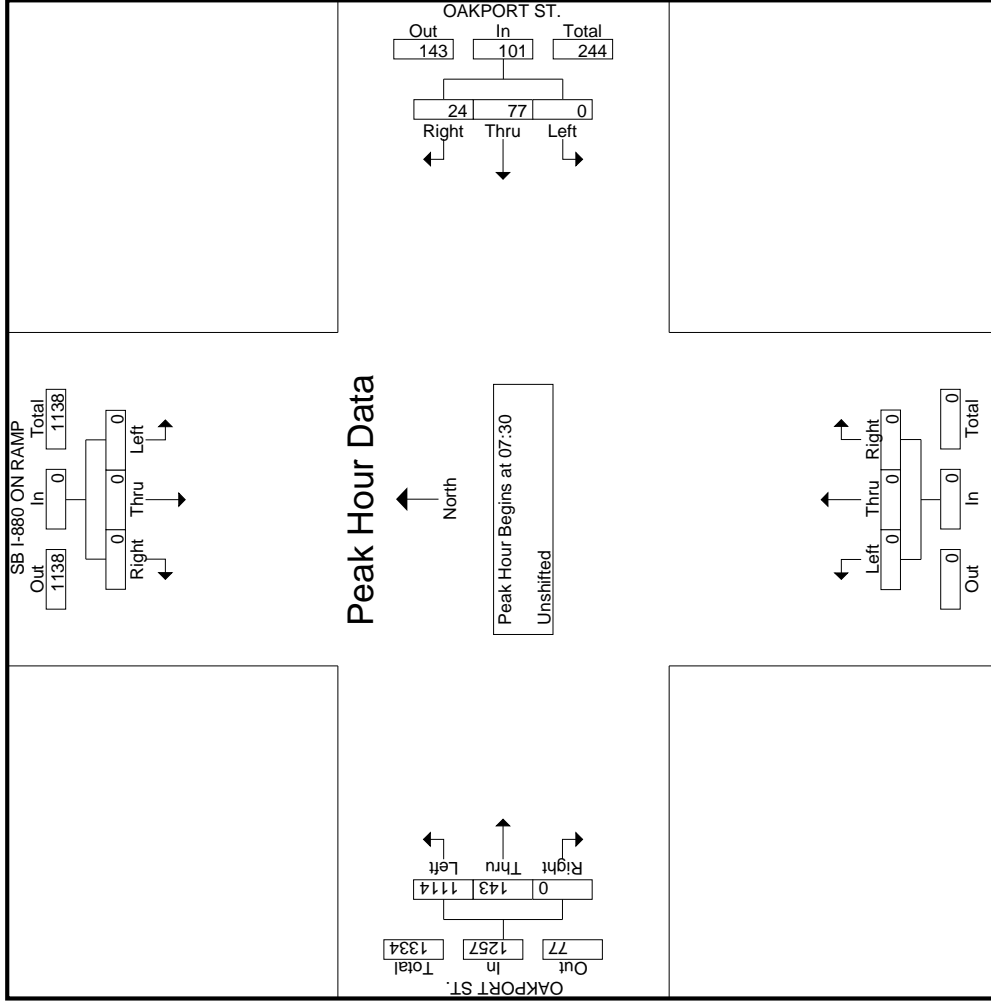
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-030 OAKPORT-SB I 880RAMP-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:15

16:15	0	0	0	0	36	9	45	0	0	0	242	21	0	0	263	308
16:30	0	0	0	0	41	13	54	0	0	0	235	21	0	0	256	310
16:45	0	0	0	0	42	5	47	0	0	0	222	25	0	0	247	294
17:00	0	0	0	0	35	11	46	0	0	0	260	18	0	0	278	324
Total Volume	0	0	0	0	154	38	192	0	0	0	959	85	0	0	1044	1236
% App. Total	0	0	0	0	80.2	19.8	88.9	0	0	0	91.9	8.1	0	0	93.9	95.4
PHF	.000	.000	.000	.000	.917	.731	.889	.000	.000	.000	.922	.850	.000	.000	.939	.954

All Traffic Data

(916) 771-8700

F (916) 786-2879

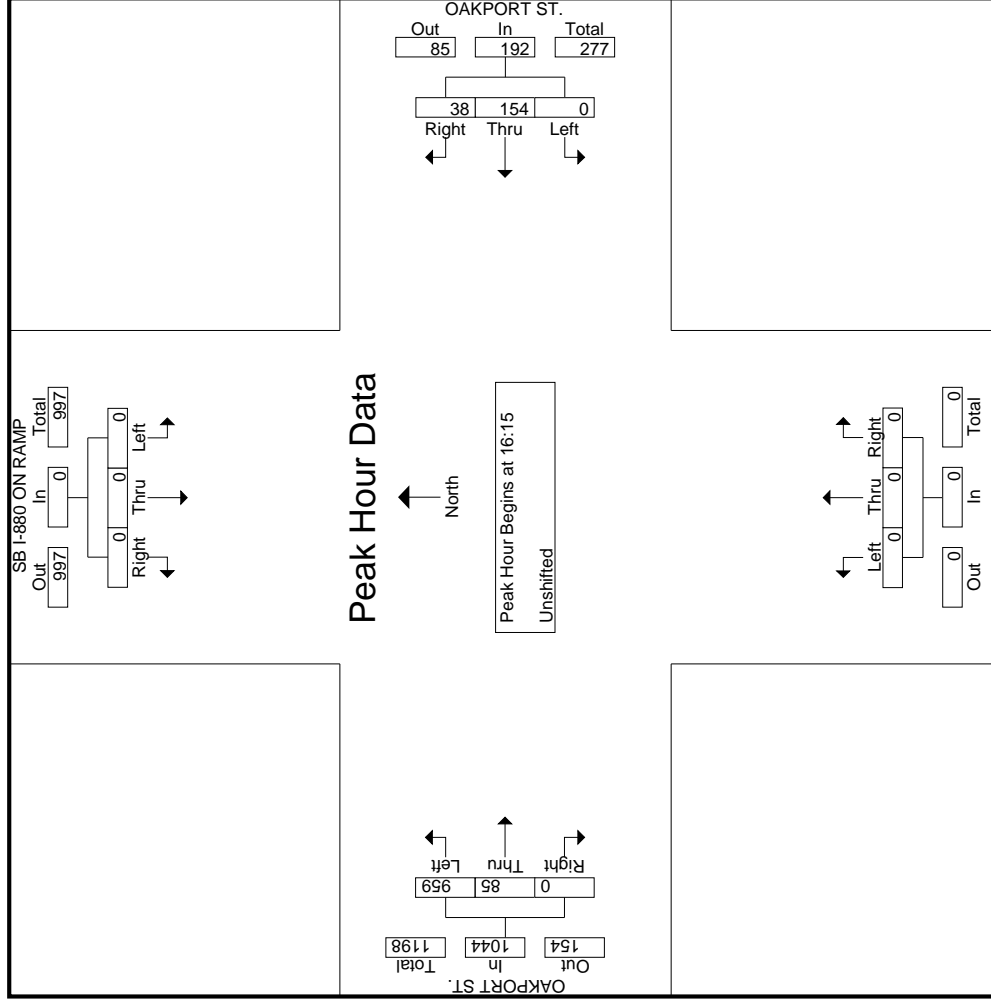
OAKLAND

File Name : 09-7109-030 OAKPORT-SB I 880RAMP-T

Site Code : 00000000

Start Date : 03/12/2009

Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-029 NB I-880 RAMP-COLISEUM-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 1

Groups Printed- Unshifted

Start Time	46TH ST. Southbound												COLISEUM WAY Westbound												COLISEUM WAY Eastbound											
	Southbound				Westbound				Northbound				Northbound				Eastbound				Eastbound															
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds												
07:00	0	0	0	0	0	23	0	0	23	146	0	19	0	165	0	21	0	0	21	0	209	0	209													
07:15	0	0	0	0	0	34	0	0	34	170	0	14	0	184	0	15	0	0	15	0	233	0	233													
07:30	0	0	0	4	0	29	0	0	29	174	0	17	0	191	0	23	0	0	23	4	243	4	247													
07:45	0	0	0	1	0	41	0	0	41	181	1	21	0	203	0	35	0	0	35	1	279	1	280													
Total	0	0	0	5	0	127	0	0	127	671	1	71	0	743	0	94	0	0	94	5	964	5	969													
08:00	0	0	0	0	0	35	0	0	35	172	0	15	0	187	0	32	0	0	32	0	254	0	254													
08:15	0	0	0	1	0	30	0	0	30	160	0	16	0	176	0	25	0	0	25	1	231	1	232													
08:30	0	0	0	1	0	24	0	0	24	148	0	11	0	159	0	23	0	0	23	1	206	1	207													
08:45	0	0	0	0	0	26	0	0	26	152	0	24	0	176	0	29	0	0	29	0	231	0	231													
Total	0	0	0	2	0	115	0	0	115	632	0	66	0	698	0	109	0	0	109	2	922	2	924													

BREAK

16:00	0	0	0	0	0	46	0	0	46	199	0	32	1	231	0	11	0	0	11	1	288	1	289
16:15	0	0	0	0	0	37	0	0	37	221	0	28	0	249	0	19	0	0	19	0	305	0	305
16:30	0	0	0	0	0	53	0	0	53	224	0	32	0	256	0	21	0	0	21	0	330	0	330
16:45	0	0	0	0	0	36	0	0	36	227	0	50	0	277	0	15	0	0	15	0	328	0	328
Total	0	0	0	0	0	172	0	0	172	871	0	142	1	1013	0	66	0	0	66	1	1251	1	1252
17:00	0	0	0	0	0	58	0	0	58	211	0	30	0	241	0	19	0	0	19	0	318	0	318
17:15	0	0	0	0	0	49	1	0	50	212	0	37	0	249	1	24	0	0	25	0	324	0	324
17:30	0	0	0	0	0	38	0	0	38	214	0	24	0	238	0	10	0	0	10	0	286	0	286
17:45	0	0	0	0	0	26	0	0	26	237	0	18	0	255	0	10	0	0	10	0	291	0	291
Total	0	0	0	0	0	171	1	0	172	874	0	109	0	983	1	63	0	0	64	0	1219	0	1219
Grand Total	0	0	0	7	0	585	1	0	586	3048	1	388	1	3437	1	332	0	0	333	8	4356	8	4364
Approach %	0	0	0	0	0	99.8	0.2	0	88.7	88.7	0	11.3	0	78.9	0.3	99.7	0	0	7.6	0.2	99.8	0.2	99.8
Total %	0	0	0	0	0	13.4	0	0	13.5	70	0	8.9	0	78.9	0	7.6	0	0	7.6	0.2	99.8	0.2	99.8

Start Time	46TH ST. Southbound												COLISEUM WAY Westbound												COLISEUM WAY Eastbound											
	Southbound				Westbound				Northbound				Northbound				Eastbound				Eastbound															
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds												
07:15	0	0	0	0	0	34	0	0	34	170	0	14	0	184	0	15	0	0	15	0	233	0	233													
07:30	0	0	0	0	0	29	0	0	29	174	0	17	0	191	0	23	0	0	23	0	243	0	243													
07:45	0	0	0	0	0	41	0	0	41	181	1	21	0	203	0	35	0	0	35	0	279	0	279													
08:00	0	0	0	0	0	35	0	0	35	172	0	15	0	187	0	32	0	0	32	0	254	0	254													
Total Volume	0	0	0	0	0	139	0	0	139	697	1	67	0	765	0	105	0	0	105	0	1009	0	1009													
% App. Total	0	0	0	0	0	100	0	0	100	91.1	0.1	8.8	0	94.2	0	100	0	0	100	0	904	0	904													
PHF	.000	.000	.000	.000	.000	.848	.000	.000	.848	.963	.250	.798	.942	.000	.750	.000	.000	.750	.000	.750	.000	.750	.904													

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

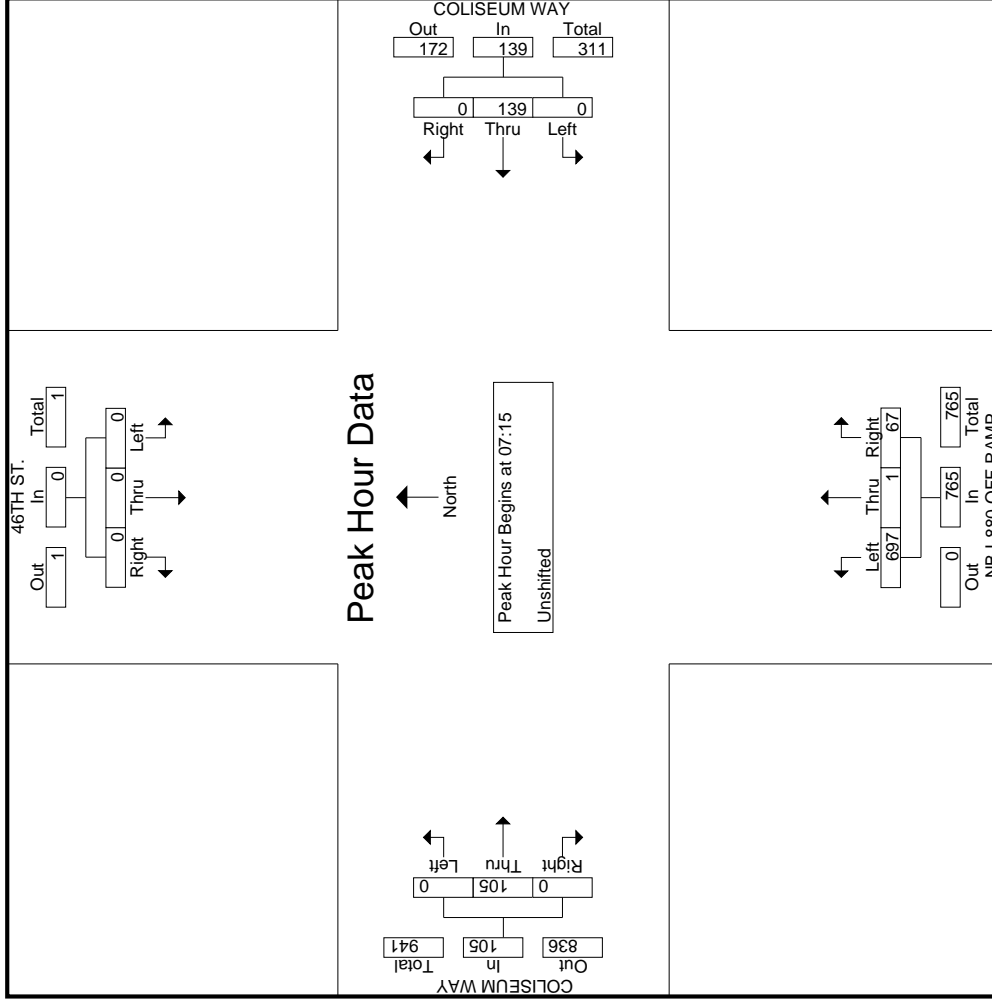
Peak Hour for Entire Intersection Begins at 07:15

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-029 NB I-880 RAMP-COLISEUM-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



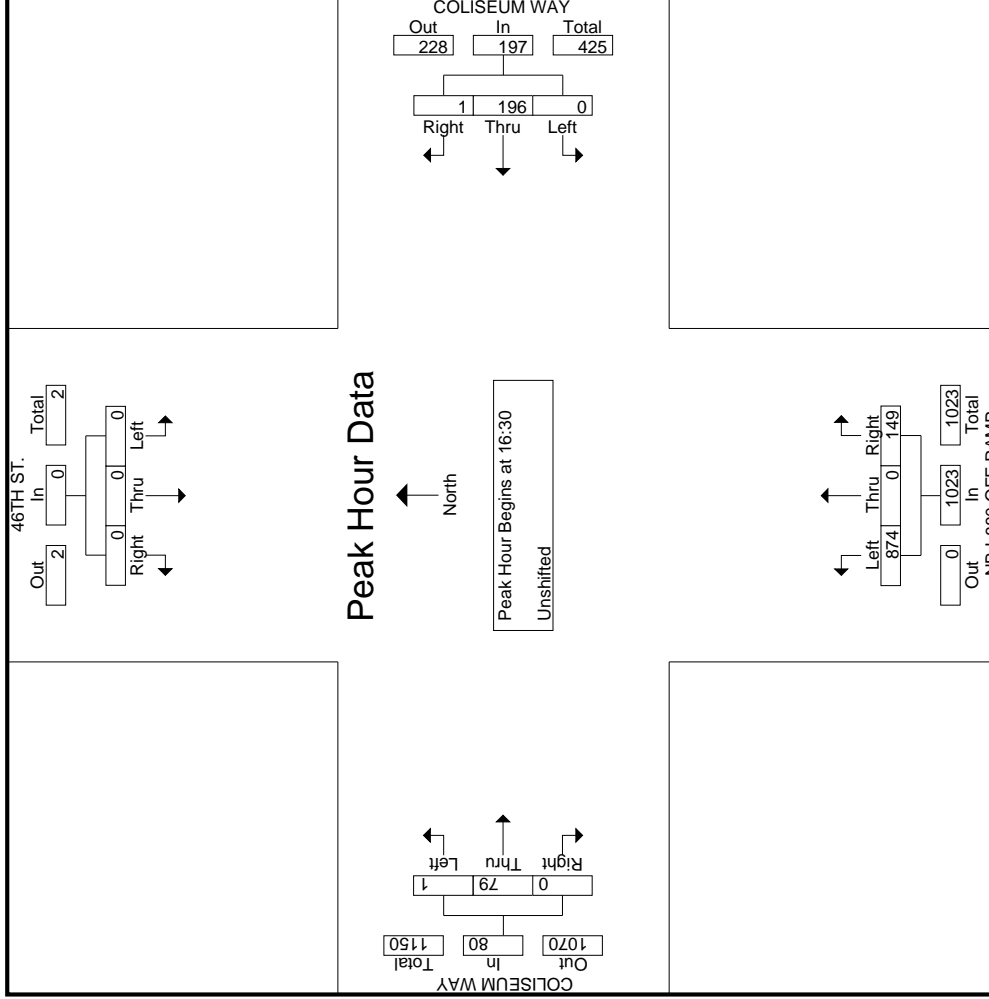
Time	PHF	0.000	.000	.000	.000	.845	.250	.849	.963	.923	.745	.000	14.6	1.2	98.8	.823	.000	.800	.985
16:30	0	0	0	0	0	53	0	53	224	256	32	0	0	0	21	0	0	21	330
16:45	0	0	0	0	0	36	0	36	227	277	50	0	0	0	15	0	0	15	328
17:00	0	0	0	0	0	58	0	58	211	241	30	0	0	0	19	0	0	19	318
17:15	0	0	0	0	0	49	1	50	212	249	37	0	0	1	24	0	0	25	324
Total Volume	0	0	0	0	0	196	1	197	874	1023	149	0	0	1	79	0	0	80	1300
% App. Total	0	0	0	0	0	99.5	0.5	100.0	85.4	92.3	14.6	.000	0	1.2	98.8	.000	0	.800	.985

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-029 NB I-880 RAMP-COLISEUM-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-028 HIGH-FERNSIDE-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 1

Groups Printed- Unshifted

Start Time	HIGH ST. Southbound						FERNESIDE BLVD. Westbound						HIGH ST. Northbound						FERNESIDE BLVD. Eastbound								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total						
07:00	36	44	13	3	93		1	48	65	0	114		5	109	2	0	116		20	9	4	0	33		3	356	359
07:15	31	85	5	1	121		1	68	68	0	137		7	121	1	1	129		16	18	6	0	40		2	427	429
07:30	41	84	12	0	137		0	101	64	0	165		23	124	1	3	148		26	29	12	0	67		3	517	520
07:45	41	99	9	0	149		1	107	49	0	157		24	151	1	0	176		39	42	11	0	92		0	574	574
Total	149	312	39	4	500		3	324	246	0	573		59	505	5	4	569		101	98	33	0	232		8	1874	1882
08:00	68	101	12	0	181		0	105	48	0	153		30	187	3	0	220		12	45	9	0	66		0	620	620
08:15	50	97	17	0	164		0	118	53	0	171		26	169	0	0	195		30	39	9	0	78		0	608	608
08:30	51	90	26	1	167		0	111	57	0	168		30	146	2	0	178		29	32	1	0	62		1	575	576
08:45	54	99	21	0	174		0	101	65	0	166		22	126	2	0	150		29	44	3	0	76		0	566	566
Total	223	387	76	1	686		0	435	223	0	658		108	628	7	0	743		100	160	22	0	282		1	2369	2370

BREAK

16:00	85	113	18	1	216		3	44	66	5	113		5	67	4	2	76		25	56	12	1	93		9	498	507
16:15	52	120	26	1	198		1	50	57	0	108		8	92	6	2	106		20	59	8	2	87		5	499	504
16:30	60	138	22	0	220		3	42	55	0	100		4	89	4	0	97		18	67	10	0	95		0	512	512
16:45	68	129	10	2	207		2	45	64	1	111		9	81	6	1	96		22	59	10	1	91		5	505	510
Total	265	500	76	4	841		9	181	242	6	432		26	329	20	5	375		85	241	40	4	366		19	2014	2033
17:00	62	133	20	4	215		1	42	53	0	96		19	103	4	0	126		37	66	17	0	120		4	557	561
17:15	53	129	20	0	202		0	51	69	0	120		16	101	1	1	118		47	89	19	0	155		1	595	596
17:30	72	146	14	0	232		1	54	44	0	99		7	79	1	2	87		19	89	14	0	122		2	540	542
17:45	65	170	23	1	258		1	45	50	1	96		15	76	2	0	93		17	96	18	0	131		2	578	580
Total	252	578	77	5	907		3	192	216	1	411		57	359	8	3	424		120	340	68	0	528		9	2270	2279
Grand Total	889	1777	268	14	2934		15	1132	927	7	2074		250	1821	40	12	2111		406	839	163	4	1408		37	8527	8564
Approach %	30.3	60.6	9.1				0.7	54.6	44.7		24.3		11.8	86.3	1.9		24.8		28.8	59.6	11.6		16.5		0.4	99.6	
Total %	10.4	20.8	3.1		34.4		0.2	13.3	10.9		24.3		2.9	21.4	0.5		24.8		4.8	9.8	1.9		16.5				

Start Time	HIGH ST. Southbound						FERNESIDE BLVD. Westbound						HIGH ST. Northbound						FERNESIDE BLVD. Eastbound											
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:45	41	99	9		149		1	107	49		157		24	151		1	176		39	42		11	92		9	66	574			
08:00	68	101	12		181		0	105	48		153		30	187		3	220		12	45		9	620		9	66	620			
08:15	50	97	17		164		0	118	53		171		26	169		0	195		30	39		9	608		9	78	608			
08:30	51	90	26		167		0	111	57		168		30	146		2	178		29	32		1	575		1	62	575			
Total Volume	210	387	64		661		1	441	207		649		110	653		6	769		110	158		30	298		30	298	2377			
% App. Total	31.8	58.5	9.7				0.2	68	31.9		24.3		14.3	84.9		0.8	36.9		4.8	9.8		53	10.1		0.4	99.6				
PHF	.772	.958	.615		.913		.250	.934	.908		.949		.917	.873		.500	.874		.705	.878		.682	.810				.958			

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

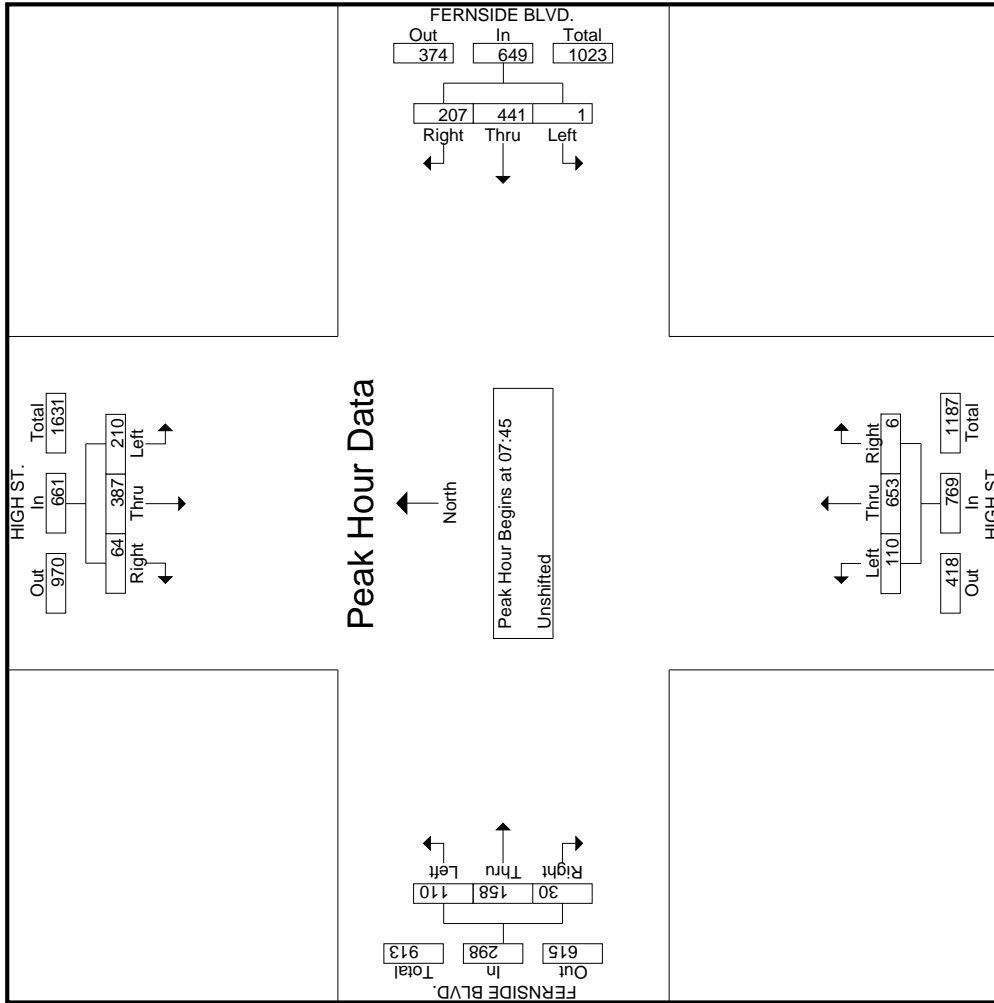
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-028 HIGH-FERNSIDE-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

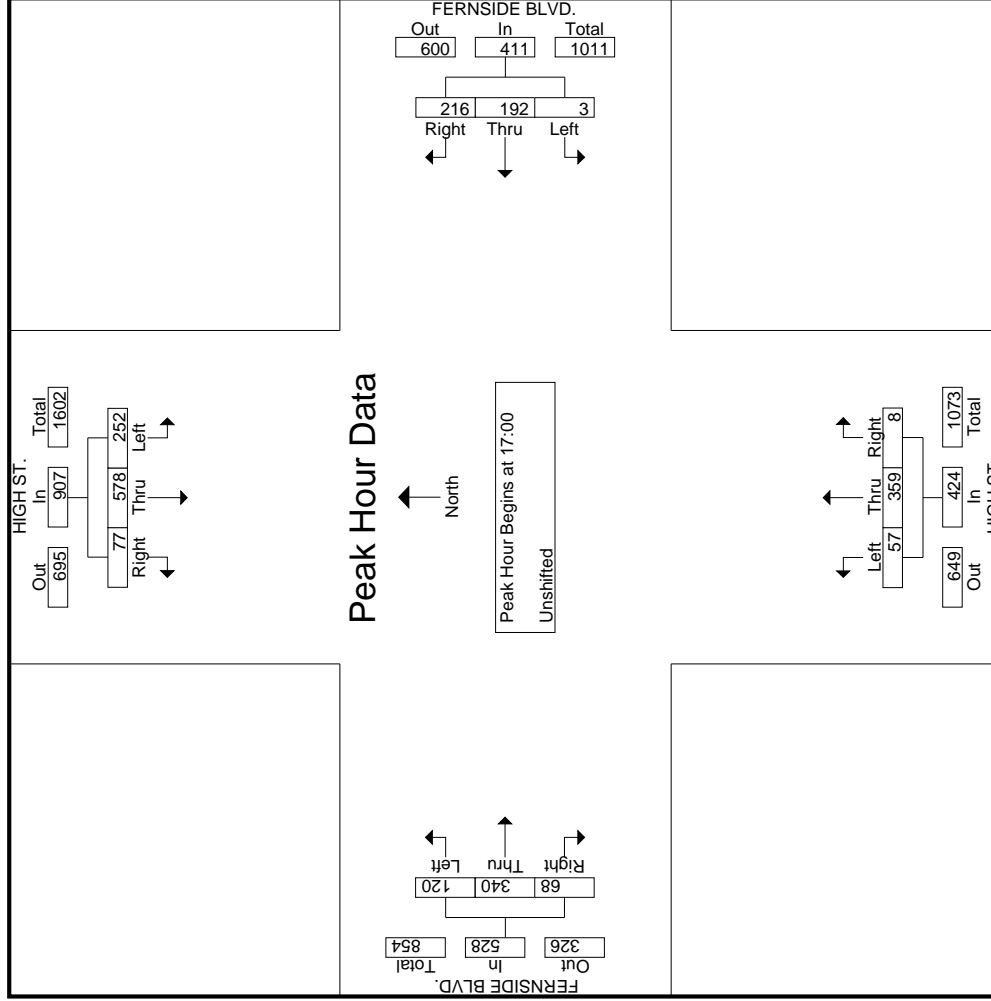
17:00	62	133	20	215	1	42	53	96	19	103	4	126	37	66	17	120	557
17:15	53	129	20	202	0	51	69	120	16	101	1	118	47	89	19	155	595
17:30	72	146	14	232	1	54	44	99	7	79	1	87	19	89	14	122	540
17:45	65	170	23	258	1	45	50	96	15	76	2	93	17	96	18	131	578
Total Volume	252	578	77	907	3	192	216	411	57	359	8	424	120	340	68	528	2270
% App. Total	27.8	63.7	8.5	100.0	0.7	46.7	52.6	100.0	13.4	84.7	1.9	100.0	22.7	64.4	12.9	100.0	100.0
PHF	.875	.850	.837	.879	.750	.889	.783	.856	.750	.871	.500	.841	.638	.885	.895	.852	.954

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-028 HIGH-FERNSIDE-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-027 HIGH-OAKPORT-T

Site Code : 00000000

Start Date : 03/12/2009

Page No : 1

Groups Printed- Unshifted

Start Time	HIGH ST. Southbound						OAKPORT ST. Westbound						HIGH ST. Northbound						SB-1880 OFF RAMP Eastbound									
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total					
07:00	47	52	58	0	157		1	0	10	0	11		0	116	103	0	219		26	114	36	1	176		1	563		564
07:15	48	64	52	0	164		1	0	11	0	12		0	122	123	0	245		11	120	47	0	178		0	599		599
07:30	76	82	86	0	244		3	2	17	0	22		0	125	120	0	245		14	111	63	0	188		0	699		699
07:45	81	88	82	0	251		8	1	10	0	19		0	123	132	0	255		10	125	59	0	194		0	719		719
Total	252	286	278	0	816		13	3	48	0	64		0	486	478	0	964		61	470	205	1	736		1	2580		2581
08:00	70	105	97	0	272		2	0	15	0	17		0	152	139	0	291		31	110	70	0	211		0	791		791
08:15	73	102	94	0	269		6	0	9	0	15		0	165	135	0	300		34	121	75	0	230		0	814		814
08:30	65	108	97	0	270		4	0	10	0	14		0	165	131	0	296		18	111	62	0	191		0	771		771
08:45	48	105	93	0	246		4	0	12	0	16		0	149	86	0	235		37	92	66	0	195		0	692		692
Total	256	420	381	0	1057		16	0	46	0	62		0	631	491	0	1122		120	434	273	0	827		0	3068		3068

BREAK

16:00	70	101	72	0	243		10	0	28	0	38		0	165	101	0	266		14	91	87	0	192		0	739		739
16:15	62	105	87	0	254		9	1	27	0	37		0	187	101	0	288		16	86	79	0	181		0	760		760
16:30	60	104	95	0	259		16	1	33	0	50		0	203	105	0	308		13	90	85	0	188		0	805		805
16:45	76	102	90	0	268		10	1	35	1	46		0	199	90	0	289		22	79	81	0	182		1	785		786
Total	268	412	344	0	1024		45	3	123	1	171		0	754	397	0	1151		65	346	332	0	743		1	3089		3090
17:00	69	109	84	0	262		8	2	25	3	35		0	213	97	1	310		14	109	85	0	208		4	815		819
17:15	54	108	86	0	248		14	2	22	0	38		0	217	112	0	329		8	99	92	0	199		0	814		814
17:30	58	120	83	0	261		5	3	26	0	34		0	179	100	1	279		6	92	89	0	187		1	761		762
17:45	53	131	69	0	253		15	0	12	0	27		0	180	83	0	263		12	96	107	0	215		0	758		758
Total	234	468	322	0	1024		42	7	85	3	134		0	789	392	2	1181		40	396	373	0	809		5	3148		3153

Grand Total 1010 1586 1325 0 3921 116 13 302 4 431 0 2660 1758 2 4418 286 1646 1183 1 3115 7 11885 11892

Approach % 25.8 40.4 33.8 26.9 3 70.1 9.2 52.8 38 2.4 13.8 10 37.2 2.4 13.8 10 26.2 0.1 99.9

Total % 8.5 13.3 11.1 1 0.1 2.5 3.6 0 22.4 14.8 0 22.4 14.8 37.2 2.4 13.8 10 26.2 0.1 99.9

Start Time	HIGH ST. Southbound						OAKPORT ST. Westbound						HIGH ST. Northbound						SB-1880 OFF RAMP Eastbound						
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		
07:45	81	88	82		251		8	1	10	19		0	123	132		255		10	125	59		194			719
08:00	70	105	97		272		2	0	15	17		0	152	139		291		31	110	70		211			791
08:15	73	102	94		269		6	0	9	15		0	165	135		300		34	121	75		230			814
08:30	65	108	97		270		4	0	10	14		0	165	131		296		18	111	62		191			771
Total Volume	289	403	370		1062		20	1	44	65		0	605	537		1142		93	467	266		826			3095
% App. Total	27.2	37.9	34.8		30.8		30.8	1.5	67.7	30.8		0	53	47		11.3		11.3	56.5	32.2		82.6			3095
PHF	.892	.933	.954		.976		.625	.250	.733	.855		.000	.917	.966		.952		.684	.934	.887		.898			.951

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

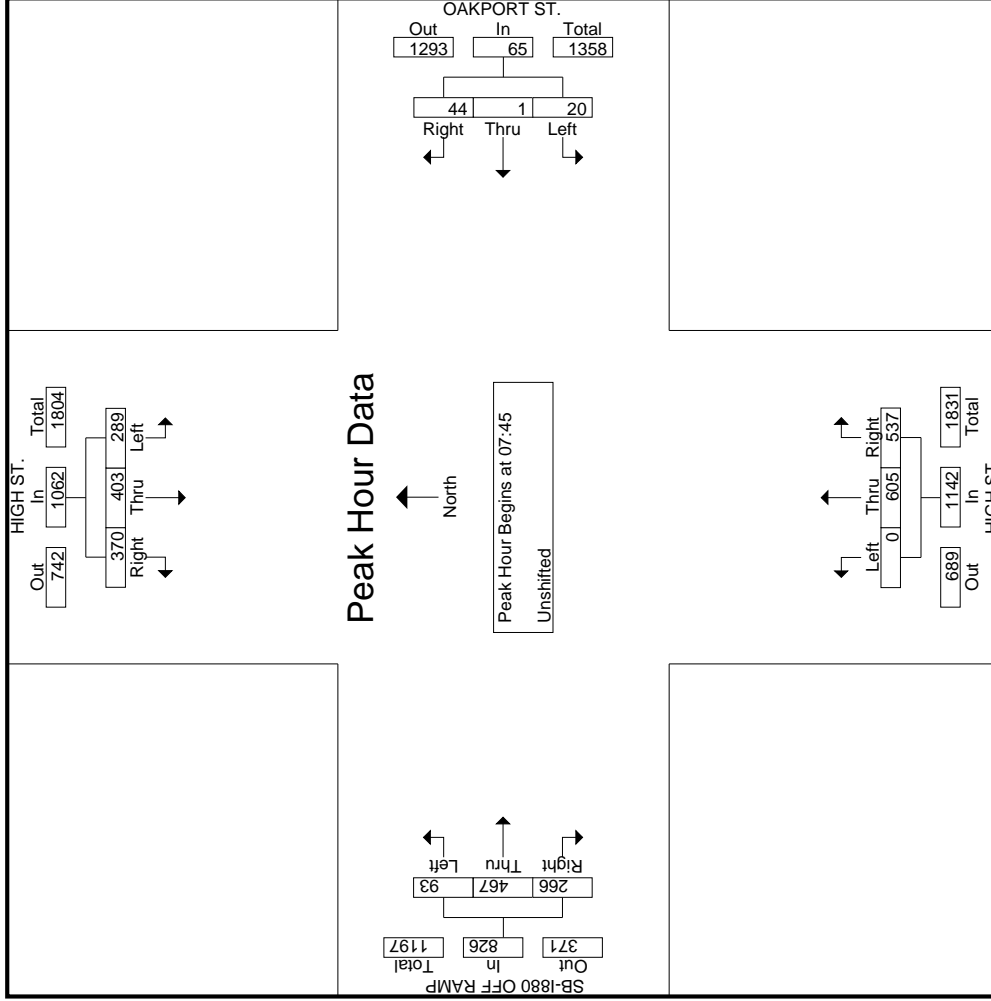
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-027 HIGH-OAKPORT-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:30

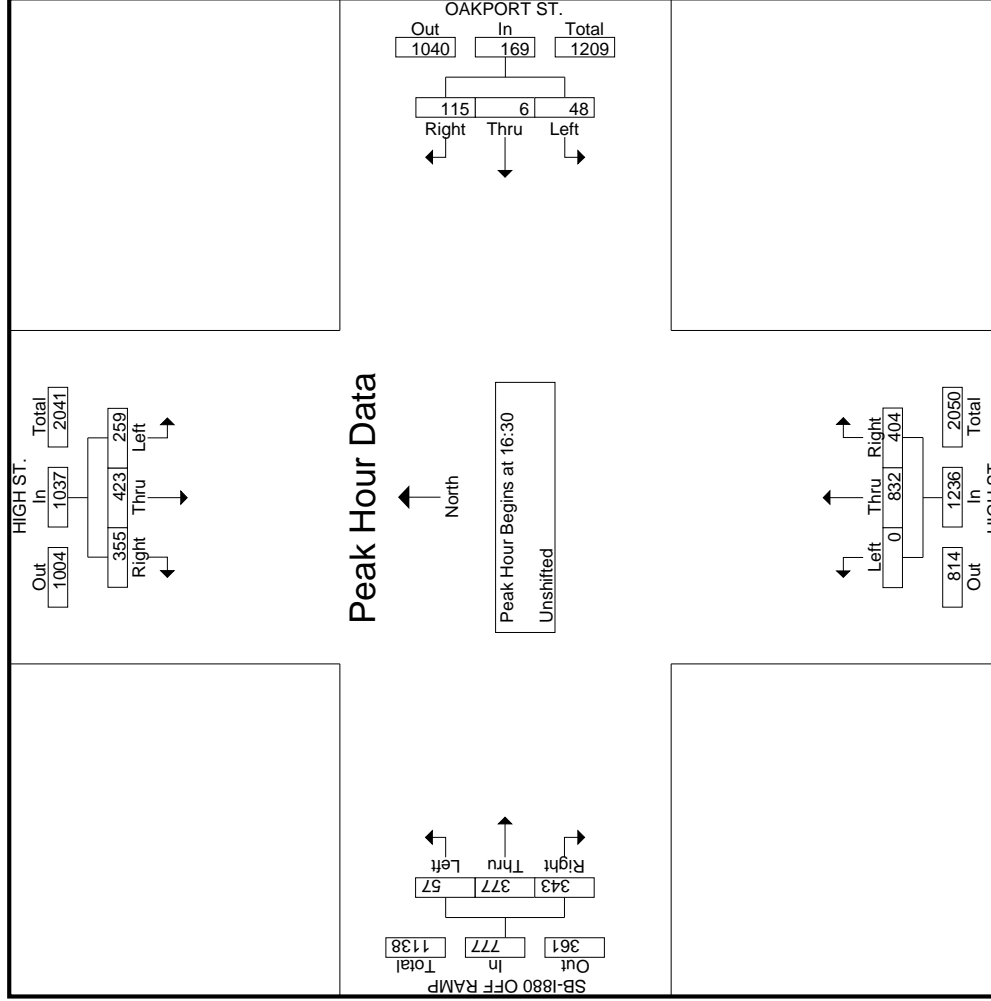
16:30	60	104	95	16	1	33	50	0	203	105	308	13	85	188	805
16:45	76	102	90	10	1	35	46	0	199	90	289	22	79	182	785
17:00	69	109	84	8	2	25	35	0	213	97	310	14	109	208	815
17:15	54	108	86	14	2	22	38	0	217	112	329	8	99	199	814
Total Volume	259	423	355	48	6	115	169	0	832	404	1236	57	377	777	3219
% App. Total	.25	40.8	34.2	28.4	3.6	68	0	0	67.3	32.7	7.3	48.5	44.1	208	815
PHF	.852	.970	.934	.750	.750	.821	.845	.000	.959	.902	.939	.648	.865	.932	.987

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-027 HIGH-OAKPORT-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-026 HIGH-COLISEUM-T
 Site Code : 00000000
 Start Date : 03/11/2009
 Page No : 1

Groups Printed- Unshifted

Start Time	HIGH ST. Southbound						COLISEUM WAY Westbound						HIGH ST. Northbound						NB I-880 ON RAMP Eastbound							
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total			
07:00	3	87	15	0	105		88	33	42	1	163		87	40	14	0	141		0	0	0	0	0	1	409	410
07:15	2	97	16	0	115		81	60	42	3	183		99	45	13	0	157		0	0	0	0	0	3	455	458
07:30	1	130	22	1	153		99	60	45	2	204		91	51	19	0	161		0	0	0	1	1	4	518	522
07:45	3	158	20	0	181		102	66	50	2	218		80	64	27	0	171		0	0	0	4	6	6	570	576
Total	9	472	73	1	554		370	219	179	8	768		357	200	73	0	630		0	0	0	5	14	14	1952	1966
08:00	2	139	19	0	160		100	58	54	1	212		106	81	30	0	217		0	0	0	1	2	2	589	591
08:15	3	140	9	0	152		108	50	42	4	200		108	85	14	0	207		0	0	0	3	7	7	559	566
08:30	4	140	14	2	158		89	51	43	7	183		92	86	16	0	194		0	0	0	6	15	15	535	550
08:45	3	156	22	0	181		91	49	41	2	181		85	98	18	0	201		0	0	0	5	7	7	563	570
Total	12	575	64	2	651		388	208	180	14	776		391	350	78	0	819		0	0	0	15	31	31	2246	2277

BREAK

16:00	2	121	25	0	148		109	87	56	6	252		100	93	9	0	202		0	0	0	0	6	6	602	608
16:15	2	105	20	3	127		126	83	60	1	269		105	95	6	0	206		0	0	0	0	4	4	602	606
16:30	1	120	23	0	144		124	93	69	2	286		115	106	11	0	232		0	0	2	2	4	4	662	666
16:45	4	119	30	0	153		115	94	60	1	269		94	96	14	0	204		0	0	1	1	2	2	626	628
Total	9	465	98	3	572		474	357	245	10	1076		414	390	40	0	844		0	0	3	3	16	16	2492	2508
17:00	1	137	24	0	162		125	91	51	4	267		108	103	16	0	227		0	0	3	3	7	7	656	663
17:15	4	147	26	1	177		123	95	44	0	262		109	96	19	0	224		0	0	5	5	6	6	663	669
17:30	6	141	20	0	167		106	87	57	1	250		127	99	6	0	232		0	0	7	7	8	8	649	657
17:45	2	134	20	0	156		119	79	59	1	257		110	88	3	0	201		0	0	1	1	2	2	614	616
Total	13	559	90	1	662		473	352	211	6	1036		454	386	44	0	884		0	0	16	16	23	23	2582	2605
Grand Total	43	2071	325	7	2439		1705	1136	815	38	3656		1616	1326	235	0	3177		0	0	39	39	84	84	9272	9356
Approach %	1.8	84.9	13.3				46.6	31.1	22.3		39.4		50.9	41.7	7.4		34.3		0	0	0	0	0.9	0.9	99.1	
Total %	0.5	22.3	3.5		26.3		18.4	12.3	8.8				17.4	14.3	2.5				0	0	0	0				

Start Time	HIGH ST. Southbound						COLISEUM WAY Westbound						HIGH ST. Northbound						NB I-880 ON RAMP Eastbound						
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		
07:45	3	158	20		181		102	66	50		218		80	64	27		171		0	0	0	0	0	0	570
08:00	2	139	19		160		100	58	54		212		106	81	30		217		0	0	0	0	0	0	589
08:15	3	140	9		152		108	50	42		200		108	85	14		207		0	0	0	0	0	0	559
08:30	4	140	14		158		89	51	43		183		92	86	16		194		0	0	0	0	0	0	535
Total Volume	12	577	62		651		399	225	189		813		386	316	87		789		0	0	0	0	0	0	2253
% App. Total	1.8	88.6	9.5				49.1	27.7	23.2		34.3		48.9	40.1	11				0	0	0	0	0	0	956
PHF	.750	.913	.775		.899		.924	.852	.875		.932		.894	.919	.725		.909		.000	.000	.000	.000	.000	.000	.956

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

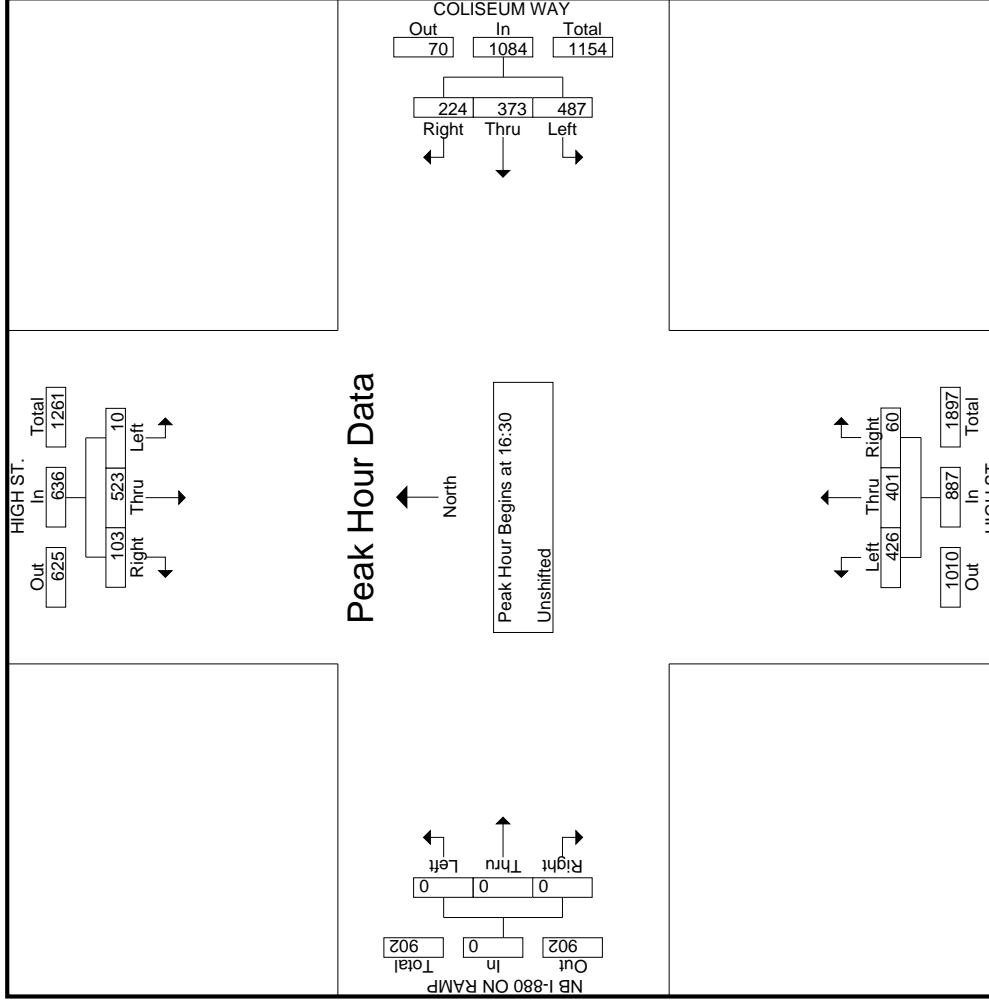
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-026 HIGH-COLISEUM-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-025 HIGH-SAN LEANDRO-T
 Site Code : 00000000
 Start Date : 03/11/2009
 Page No : 1

Groups Printed- Unshifted

Start Time	HIGH ST. Southbound						SAN LEANDRO ST. Westbound						HIGH ST. Northbound						SAN LEANDRO ST. Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:00	11	87	12	2	110	16	44	6	5	66	12	50	11	1	73	5	39	21	0	65	8	314	322	
07:15	8	92	8	1	108	18	58	7	11	83	26	40	13	1	79	3	41	16	0	60	13	330	343	
07:30	12	120	15	2	147	15	99	5	9	119	18	59	8	1	85	6	47	19	6	72	18	423	441	
07:45	23	125	16	0	164	32	156	6	10	194	34	64	12	0	110	10	78	32	8	120	18	588	606	
Total	54	424	51	5	529	81	357	24	35	462	90	213	44	3	347	24	205	88	14	317	57	1655	1712	
08:00	18	110	14	0	142	24	213	10	2	247	37	94	16	0	147	5	74	23	1	102	3	638	641	
08:15	14	112	14	0	140	17	200	11	2	228	30	79	6	1	115	4	104	25	3	133	6	616	622	
08:30	14	116	14	0	144	20	168	9	3	197	32	83	15	3	130	6	77	20	3	103	9	574	583	
08:45	17	137	15	2	169	27	111	9	2	147	31	89	19	5	139	4	85	25	0	114	9	569	578	
Total	63	475	57	2	595	88	692	39	9	819	130	345	56	9	531	19	340	93	7	452	27	2397	2424	

BREAK

16:00	12	75	23	0	110	21	122	11	2	154	21	112	20	1	153	11	138	34	1	183	4	600	604
16:15	9	73	14	0	96	22	122	18	3	162	21	116	24	1	161	10	113	21	1	144	5	563	568
16:30	16	93	17	0	126	26	138	13	4	177	27	136	15	3	178	5	138	25	0	168	7	649	656
16:45	14	104	12	0	130	16	119	26	5	161	35	97	23	1	155	9	149	31	2	189	8	635	643
Total	51	345	66	0	462	85	501	68	14	654	104	461	82	6	647	35	538	111	4	684	24	2447	2471
17:00	21	101	21	0	143	29	153	22	3	204	19	117	17	2	153	5	144	36	2	185	7	685	692
17:15	12	117	11	1	140	27	106	16	1	149	25	108	15	5	148	10	111	36	3	157	10	594	604
17:30	14	106	20	0	140	17	120	12	2	149	27	98	26	3	151	12	185	26	0	223	5	663	668
17:45	16	98	14	2	128	28	95	23	2	146	31	101	16	1	148	6	148	35	5	189	10	611	621
Total	63	422	66	3	551	101	474	73	8	648	102	424	74	11	600	33	588	133	10	754	32	2553	2585
Grand Total	231	1666	240	10	2137	355	2024	204	66	2583	426	1443	256	29	2125	111	1671	425	35	2207	140	9052	9192
Approach %	10.8	78	11.2			13.7	78.4	7.9			20	67.9	12			5	75.7	19.3				1.5	98.5
Total %	2.6	18.4	2.7		23.6	3.9	22.4	2.3		28.5	4.7	15.9	2.8		23.5	1.2	18.5	4.7		24.4			

Start Time	HIGH ST. Southbound						SAN LEANDRO ST. Westbound						HIGH ST. Northbound						SAN LEANDRO ST. Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
	Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total				Exclu. Total	Inclu. Total	Int. Total			
07:45	23	125	16	0	164	32	156	6	10	194	34	64	12	0	110	10	78	32	8	120	18	588		
08:00	18	110	14	0	142	24	213	10	2	247	37	94	16	0	147	5	74	23	1	102	3	638		
08:15	14	112	14	0	140	17	200	11	2	228	30	79	6	1	115	4	104	25	3	133	6	616		
08:30	14	116	14	0	144	20	168	9	3	197	32	83	15	3	130	6	77	20	3	103	9	574		
08:45	17	137	15	2	169	27	111	9	2	147	31	89	19	5	139	4	85	25	0	114	9	569		
Total	63	475	57	2	595	88	692	39	9	819	130	345	56	9	531	19	340	93	7	452	27	2397		
PHF	.750	.926	.906			.899	.865	.818		.877	.899	.851	.766		.854	.625	.800	.781		.861	.947			

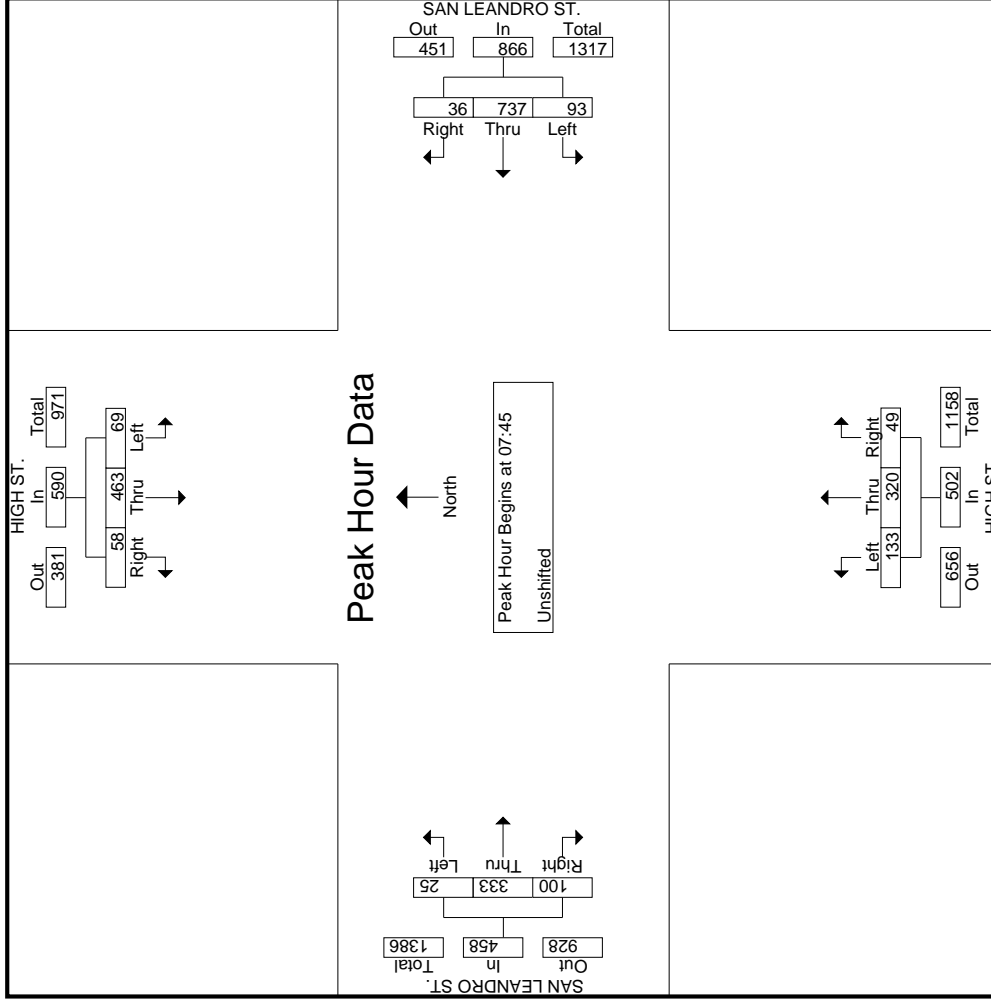
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-025 HIGH-SAN LEANDRO-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

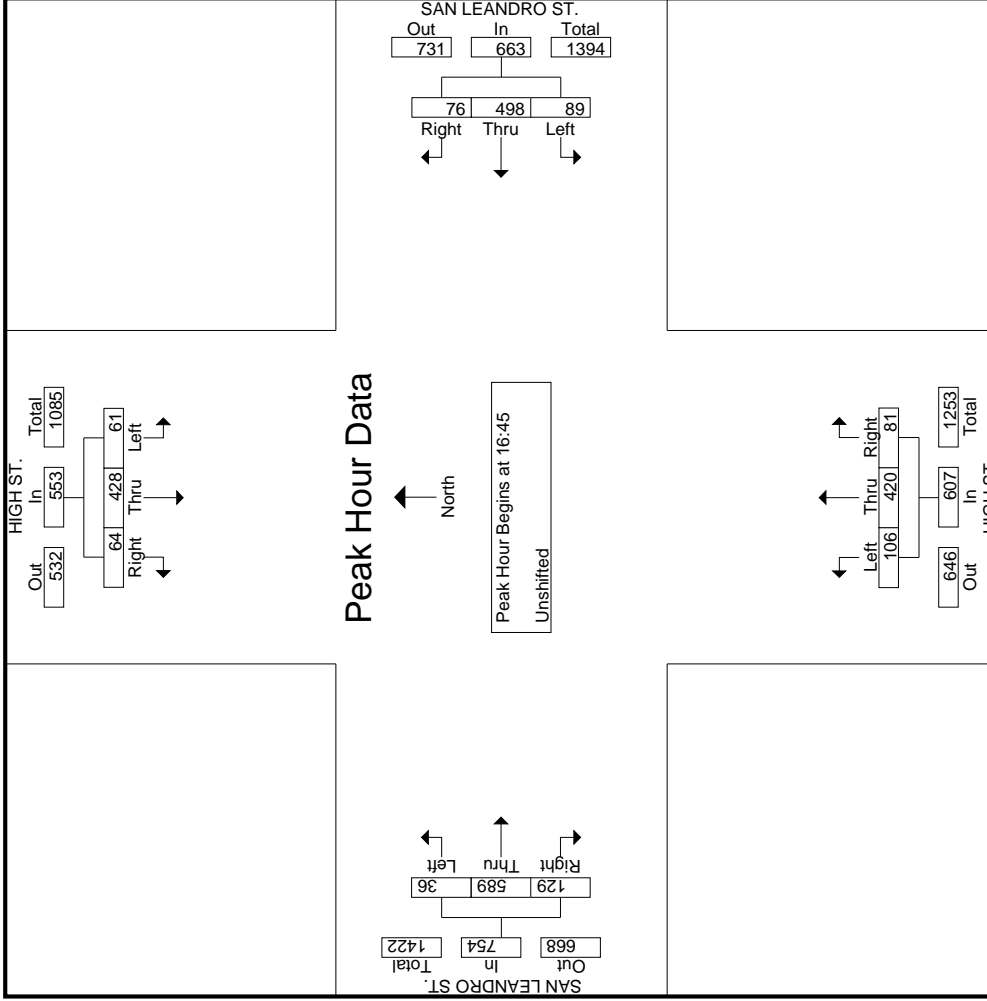
16:45	14	104	12	130	16	119	26	161	35	97	23	149	31	189	635
17:00	21	101	21	143	29	153	22	204	19	117	17	144	36	185	685
17:15	12	117	11	140	27	106	16	149	25	108	15	111	36	157	594
17:30	14	106	20	140	17	120	12	149	27	98	26	185	26	223	663
Total Volume	61	428	64	553	89	498	76	663	106	420	81	589	129	754	2577
% App. Total	11	77.4	11.6	96.7	13.4	75.1	11.5	17.5	69.2	13.3	4.8	78.1	17.1	84.5	94.1
PHF	.726	.915	.762	.967	.767	.814	.731	.813	.757	.897	.779	.796	.896	.845	.941

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-025 HIGH-SAN LEANDRO-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-024 HIGH-12TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 1

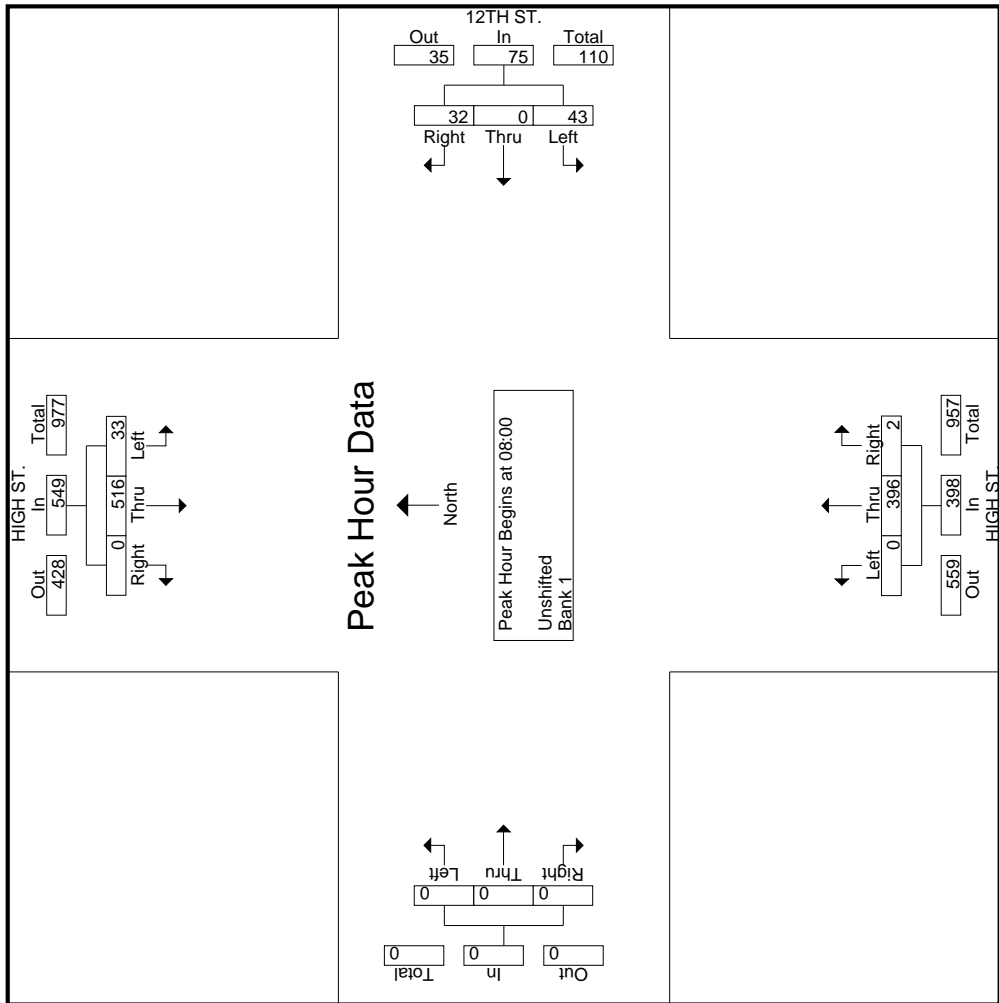
Groups Printed- Unshifted - Bank 1

Start Time	HIGH ST.												12TH ST.												HIGH ST.											
	Southbound						Westbound						Southbound						Westbound						Northbound						Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
07:00	7	78	0	11	85	4	0	6	0	10	0	52	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	11	147	0	158				
07:15	3	86	0	13	89	3	0	6	0	9	0	53	2	2	2	55	0	0	0	0	0	0	0	0	0	0	0	15	153	0	168					
07:30	3	128	0	21	131	8	0	12	0	20	0	67	2	4	69	0	0	0	0	0	0	0	0	0	0	0	25	220	0	245						
07:45	9	141	0	18	150	3	0	15	0	18	0	77	0	1	77	0	0	0	0	0	0	0	0	0	0	0	19	245	0	264						
Total	22	433	0	63	455	18	0	39	0	57	0	249	4	7	253	0	0	0	0	0	0	0	0	0	0	70	765	0	835							
08:00	9	123	0	13	132	15	0	6	0	21	0	119	0	0	119	0	0	0	0	0	0	0	0	0	0	0	13	272	0	285						
08:15	8	117	0	7	125	8	0	11	0	19	0	90	1	1	91	0	0	0	0	0	0	0	0	0	0	0	8	235	0	243						
08:30	6	129	0	10	135	9	0	9	1	18	0	92	0	1	92	0	0	0	0	0	0	0	0	0	0	12	245	0	257							
08:45	10	147	0	8	157	11	0	6	10	17	0	95	1	2	96	0	0	0	0	0	0	0	0	0	0	20	270	0	290							
Total	33	516	0	38	549	43	0	32	11	75	0	396	2	4	398	0	0	0	0	0	0	0	0	0	53	1022	0	1075								
BREAK																																				
16:00	8	85	0	6	93	8	0	12	1	20	0	144	2	5	146	0	0	0	0	0	0	0	0	0	0	0	12	259	0	271						
16:15	7	78	0	7	85	7	0	14	1	21	0	155	1	8	156	0	0	0	0	0	0	0	0	0	0	0	16	262	0	278						
16:30	6	95	0	3	101	14	0	11	1	25	0	156	3	8	159	0	0	0	0	0	0	0	0	0	0	12	285	0	297							
16:45	5	104	0	1	109	15	0	16	0	31	0	138	1	11	139	0	0	0	0	0	0	0	0	0	0	12	279	0	291							
Total	26	362	0	17	388	44	0	53	3	97	0	593	7	32	600	0	0	0	0	0	0	0	0	0	52	1085	0	1137								
17:00	6	114	0	3	120	13	0	18	0	31	0	148	2	7	150	0	0	0	0	0	0	0	0	0	0	10	301	0	311							
17:15	9	110	0	1	119	9	0	14	2	23	0	126	1	4	127	0	0	0	0	0	0	0	0	0	0	7	269	0	276							
17:30	7	114	0	2	121	13	0	11	1	24	0	121	2	5	123	0	0	0	0	0	0	0	0	0	0	8	268	0	276							
17:45	7	105	0	1	112	5	0	23	2	28	0	122	0	9	122	0	0	0	0	0	0	0	0	0	12	262	0	274								
Total	29	443	0	7	472	40	0	66	5	106	0	517	5	25	522	0	0	0	0	0	0	0	0	0	37	1100	0	1137								
Grand Total	110	1754	0	125	1864	145	0	190	19	335	0	1755	18	68	1773	0	0	0	0	0	0	0	0	0	212	3972	0	4184								
Approach %	5.9	94.1	0	0	43.3	3.7	0	56.7	1	8.4	0	44.2	0.5	44.6	0	0	0	0	0	0	0	0	0	0	5.1	94.9	0	0								
Total %	1.10	17.54	0	0.92	197.9	145	0	190	89.5	99.4	0	1755	18	80.9	182.8	0	0	0	0	0	0	0	0	0	0	0	0	0	41.59							
% Unshifted	100	100	0	92	99.5	100	0	100	89.5	99.4	0	100	100	80.9	99.3	0	0	0	0	0	0	0	0	0	0	0	0	0	99.4							
Bank 1	0	0	0	8	0.5	0	0	0	10.5	0.6	2	0	0	19.1	0.7	13	0	0	0	0	0	0	0	0	0	0	0	0	25							
% Bank 1	0	0	0	8	0.5	0	0	0	10.5	0.6	2	0	0	19.1	0.7	13	0	0	0	0	0	0	0	0	0	0	0	0	0.6							

Start Time	HIGH ST. Southbound						12TH ST. Westbound						HIGH ST. Northbound						Eastbound											
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total						
	08:00	9	123	0	123	0	0	15	0	6	21	0	21	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	8	117	0	7	125	8	0	11	0	19	0	90	1	1	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
08:30	6	129	0	10	135	9	0	9	1	18	0	92	0	1	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
08:45	10	147	0	8	157	11	0	6	10	17	0	95	1	2	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270
Total Volume	33	516	0	38	549	43	0	32	11	75	0	396	2	4	398	0	0	0	0	0	0	0	0	0	53	1022	0	1075		

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:00

PHF	.825	.878	.000	.874	.717	.000	.727	.893	.000	.832	.500	.836	.000	.000	.000	.939
-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------



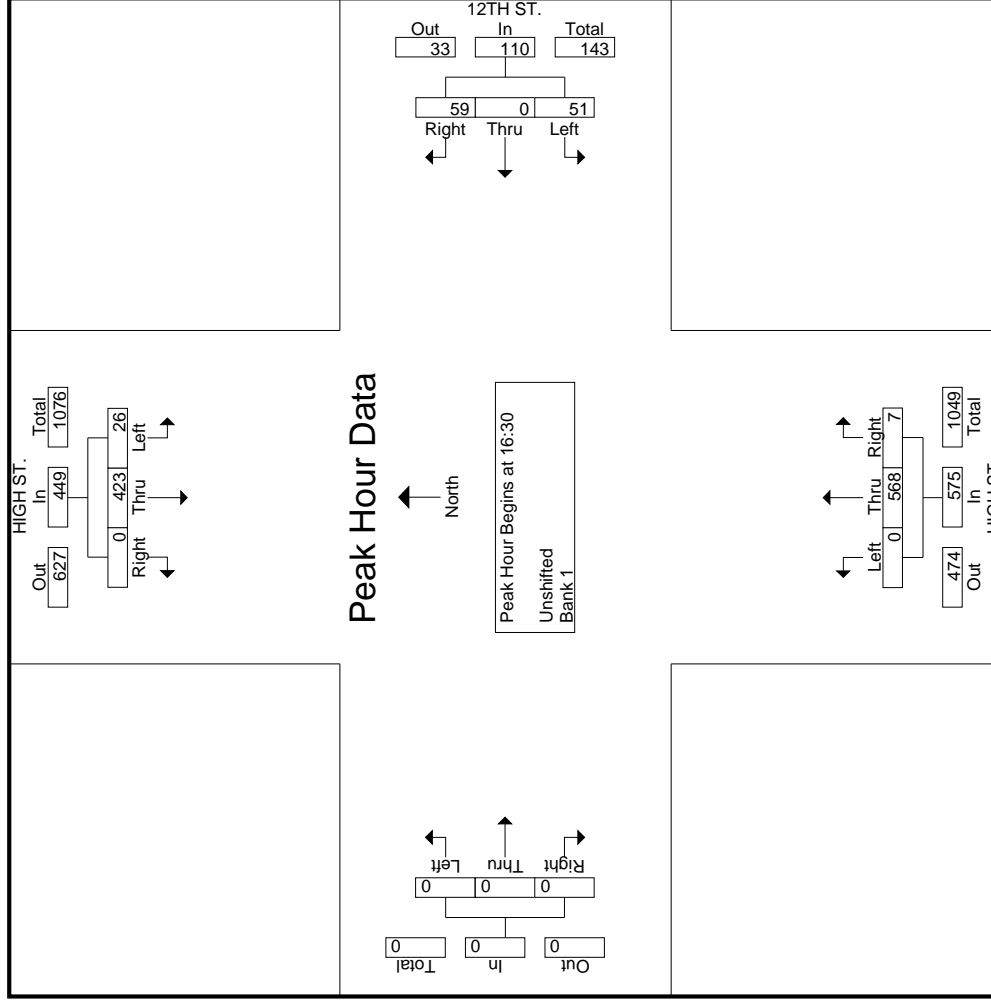
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 16:30																
16:30	6	95	0	101	14	0	11	25	0	156	3	159	0	0	0	285
16:45	5	104	0	109	15	0	16	31	0	138	1	139	0	0	0	279
17:00	6	114	0	120	13	0	18	31	0	148	2	150	0	0	0	301
17:15	9	110	0	119	9	0	14	23	0	126	1	127	0	0	0	269
Total Volume	26	423	0	449	51	0	59	110	0	568	7	575	0	0	0	1134
% App. Total	5.8	94.2	0	46.4	46.4	0	53.6	98.8	0	98.8	1.2	99.0	0	0	0	100.0
PHF	.722	.928	.000	.935	.850	.000	.819	.887	.000	.910	.583	.904	.000	.000	.000	.942

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-024 HIGH-12TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-023 HIGH-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 1

Groups Printed- Unshifted

Start Time	HIGH ST. Southbound						14TH ST. Westbound						HIGH ST. Northbound						14TH ST. Eastbound								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
07:00	11	57	12	12	80		24	105	12	17	141		9	43	3	2	55		8	74	7	20	89		51	365	416
07:15	11	69	8	42	88		12	114	10	26	136		8	46	5	4	59		3	65	11	20	79		92	362	454
07:30	8	91	13	22	112		31	174	11	37	216		8	67	6	18	81		6	83	14	39	103		116	512	628
07:45	12	113	24	30	149		26	228	28	22	282		9	82	7	3	98		14	96	9	31	119		86	648	734
Total	42	330	57	106	429		93	621	61	102	775		34	238	21	27	293		31	318	41	110	390		345	1887	2232
08:00	10	112	27	15	149		18	243	25	15	286		17	98	11	3	126		12	117	7	10	136		43	697	740
08:15	14	91	33	21	138		29	195	16	13	240		13	83	5	3	101		13	101	10	6	124		43	603	646
08:30	12	105	17	17	134		28	195	17	15	240		10	85	8	3	103		11	135	5	29	151		64	628	692
08:45	9	115	24	21	148		30	199	13	13	242		10	87	9	17	106		14	124	13	16	151		67	647	714
Total	45	423	101	74	569		105	832	71	56	1008		50	353	33	26	436		50	477	35	61	562		217	2575	2792

BREAK

16:00	18	62	25	15	105		17	221	36	28	274		18	126	14	14	158		26	192	12	19	230		76	767	843
16:15	14	60	20	16	94		15	226	32	19	273		12	135	18	11	165		21	199	13	15	233		61	765	826
16:30	12	81	25	17	118		14	220	29	23	263		14	140	11	13	165		22	194	10	21	226		74	772	846
16:45	16	84	27	17	127		20	215	30	25	265		13	117	23	23	153		22	204	4	36	230		101	775	876
Total	60	287	97	65	444		66	882	127	95	1075		57	518	66	61	641		91	789	39	91	919		312	3079	3391
17:00	16	91	18	20	125		22	228	31	14	281		16	135	13	9	164		20	196	10	17	226		60	796	856
17:15	21	95	16	24	132		23	206	23	26	252		11	116	15	15	142		19	226	6	23	251		88	777	865
17:30	20	80	30	12	130		26	190	38	20	254		9	110	10	18	129		18	207	17	23	242		73	755	828
17:45	20	78	24	21	122		29	201	44	37	274		22	103	16	15	141		19	199	9	25	227		98	764	862
Total	77	344	88	77	509		100	825	136	97	1061		58	464	54	57	576		76	828	42	88	946		319	3092	3411
Grand Total	224	1384	343	322	1951		364	3160	395	350	3919		199	1573	174	171	1946		248	2412	157	350	2817		1193	10633	11826
Approach %	11.5	70.9	17.6				9.3	80.6	10.1			10.2	80.8	8.9			18.3		8.8	85.6	5.6				10.1	89.9	
Total %	2.1	13	3.2		18.3		3.4	29.7	3.7		36.9		1.9	14.8	1.6				2.3	22.7	1.5			26.5			

Start Time	HIGH ST. Southbound						14TH ST. Westbound						HIGH ST. Northbound						14TH ST. Eastbound						
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		
07:45	12	113	24		149		26	228		28	282		9	82	7		7		98	96	9		119		648
08:00	10	112	27		149		18	243		25	286		17	98	11		11		126	117	7		136		697
08:15	14	91	33		138		29	195		16	240		13	83	5		5		101	101	10		124		603
08:30	12	105	17		134		28	195		17	240		10	85	8		8		103	103	5		151		628
Total Volume	48	421	101		570		101	861		86	1048		49	348	31		31		428	449	31		550		2576
% App. Total	8.4	73.9	17.7				9.6	82.2		8.2			11.4	81.3	7.2		7.2		9.4	84.7	5.8				9.24
PHF	.857	.931	.765		.956		.871	.886		.768	.916		.721	.888	.705		.705		.849	.831	.775		.877		

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

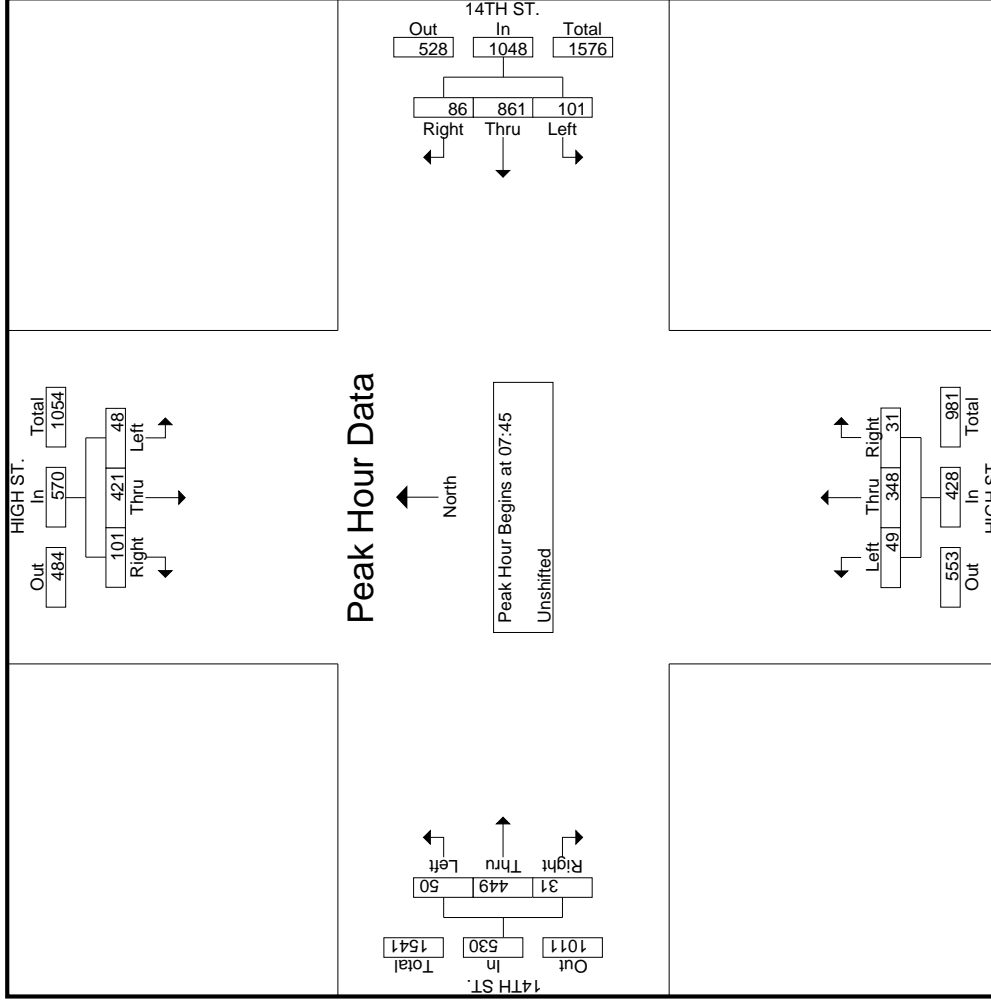
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-023 HIGH-14TH-T
 Site Code : 00000000
 Start Date : 03/11/2009
 Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 16:30

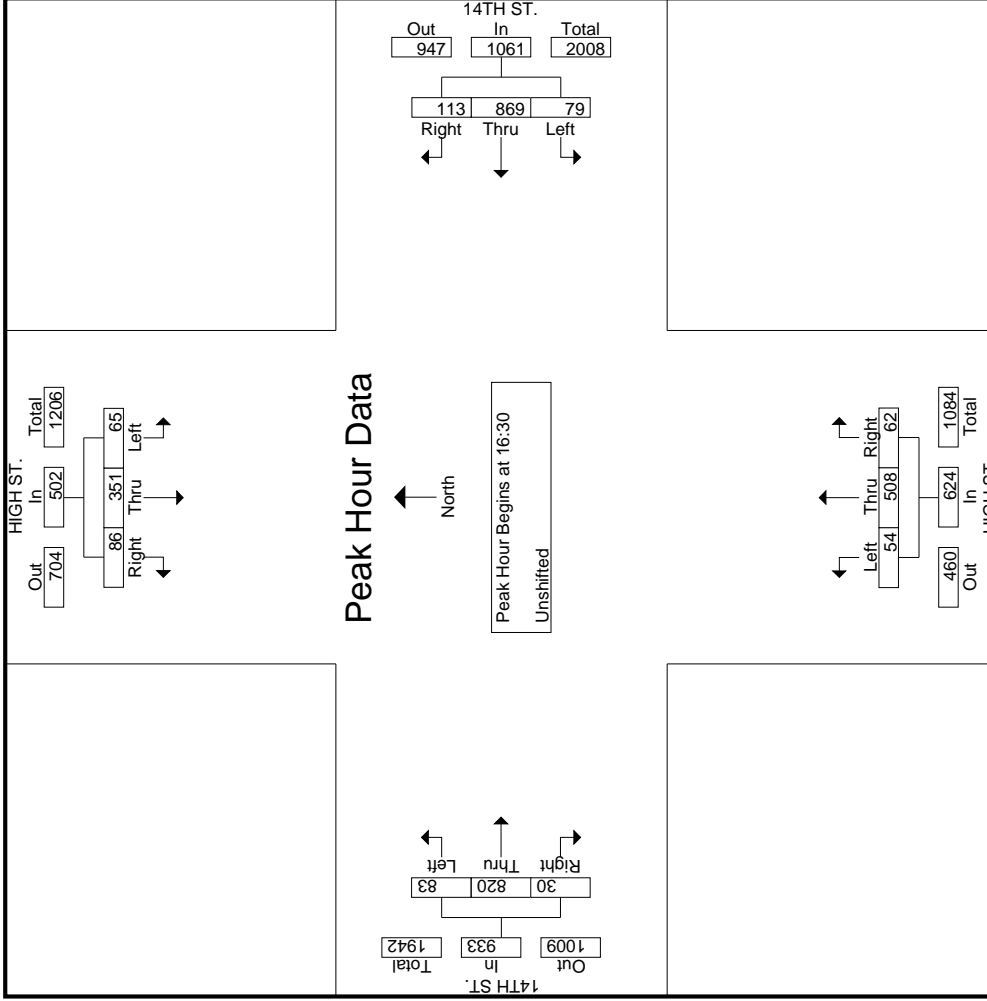
16:30	12	81	25	118	14	220	29	263	14	140	11	165	22	194	10	226	772
16:45	16	84	27	127	20	215	30	265	13	117	23	153	22	204	4	230	775
17:00	16	91	18	125	22	228	31	281	16	135	13	164	20	196	10	226	796
17:15	21	95	16	132	23	206	23	252	11	116	15	142	19	226	6	251	777
Total Volume	65	351	86	502	79	869	113	1061	54	508	62	624	83	820	30	933	3120
% App. Total	12.9	69.9	17.1	95.1	7.4	81.9	10.7	94.4	8.7	81.4	9.9	94.5	8.9	87.9	3.2	92.9	980
PHF	.774	.924	.796	.951	.859	.953	.911	.944	.844	.907	.674	.943	.943	.907	.750	.929	.980

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-023 HIGH-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-022 42ND-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 1

Groups Printed- Unshifted

Start Time	42ND AVE. Southbound						14TH ST. Westbound						42ND AVE. Northbound						14TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:00	3	67	19	12	89	29	102	1	4	132	21	19	9	1	49	8	77	46	5	131	22	401	423
07:15	1	108	20	11	129	32	100	2	11	134	25	31	12	1	68	7	67	32	9	106	32	437	469	
07:30	4	130	32	20	166	47	156	1	9	204	29	28	12	4	69	13	88	53	7	154	40	593	633	
07:45	6	154	60	25	220	47	204	3	3	254	47	41	13	5	101	16	105	45	4	166	37	741	778	
Total	14	459	131	68	604	155	562	7	27	724	122	119	46	11	287	44	337	176	25	557	131	2172	2303	
08:00	9	148	68	17	225	51	208	5	14	264	42	52	19	3	113	28	112	30	2	170	36	772	808	
08:15	5	145	86	10	236	43	224	8	8	275	36	55	16	2	107	18	101	37	1	156	21	774	795	
08:30	9	136	65	19	210	41	189	6	10	236	35	37	13	3	85	37	128	31	6	196	38	727	765	
08:45	8	109	54	11	171	28	191	3	11	222	39	38	15	3	92	22	123	30	4	175	29	660	689	
Total	31	538	273	57	842	163	812	22	43	997	152	182	63	11	397	105	464	128	13	697	124	2933	3057	

BREAK

16:00	7	98	46	34	151	30	224	7	14	261	76	114	19	6	209	38	210	19	4	267	58	888	946
16:15	16	95	27	20	138	50	220	12	18	282	56	92	21	6	169	49	205	28	2	282	46	871	917
16:30	8	74	34	14	116	44	211	9	13	264	50	87	21	7	158	42	200	18	25	260	59	798	857
16:45	4	88	27	18	119	35	201	6	14	242	80	105	24	5	209	34	187	30	11	251	48	821	869
Total	35	355	134	86	524	159	856	34	59	1049	262	398	85	24	745	163	802	95	42	1060	211	3378	3589
17:00	14	71	27	7	112	38	204	11	3	253	67	112	23	13	202	38	206	29	5	273	28	840	868
17:15	7	97	38	10	142	31	188	6	11	225	49	95	20	9	164	49	224	20	7	293	37	824	861
17:30	12	93	35	9	140	38	174	13	8	225	47	94	26	8	167	53	197	26	6	276	31	808	839
17:45	6	59	39	13	104	38	193	6	10	237	39	69	26	5	134	33	197	34	0	264	28	739	767
Total	39	320	139	39	498	145	759	36	32	940	202	370	95	35	667	173	824	109	18	1106	124	3211	3335
Grand Total	119	1672	677	250	2468	622	2989	99	161	3710	738	1069	289	81	2096	485	2427	508	98	3420	590	11694	12284
Approach %	4.8	67.7	27.4			16.8	80.6	2.7		31.7	35.2	51	13.8		17.9	14.2	71	14.9		29.2	4.8	95.2	
Total %	1	14.3	5.8		21.1	5.3	25.6	0.8		31.7	6.3	9.1	2.5		17.9	4.1	20.8	4.3		29.2	4.8	95.2	

Start Time	42ND AVE. Southbound						14TH ST. Westbound						42ND AVE. Northbound						14TH ST. Eastbound						
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	
	07:45	6	154	60	25	220	47	204	3	3	254	47	41	13	5	1029	182	825	22	21	944	.806	.946	.811	.944
08:00	9	148	68	10	236	51	208	5	8	275	43	36	16	6	236	43	189	65	210	891	3.3	65.4	31.3	891	
08:15	5	145	86	19	210	43	224	6	10	236	41	189	65	6	236	41	189	65	6	236	41	189	65	6	236
08:30	9	136	65	19	210	41	189	6	10	236	35	37	13	3	92	22	123	30	4	175	29	660	689		
Total Volume	29	583	279	65	946	177	802	21	43	1049	152	182	63	11	397	105	464	128	13	697	124	2933	3057		
% App. Total	3.3	65.4	31.3		21.1	5.3	25.6	0.8		31.7	6.3	9.1	2.5		17.9	4.1	20.8	4.3		29.2	4.8	95.2			
PHF	.806	.946	.811		.944	.892	.921	.688		.935	.851	.841	.803		.803	.898	.871	.794		.878	.974				

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

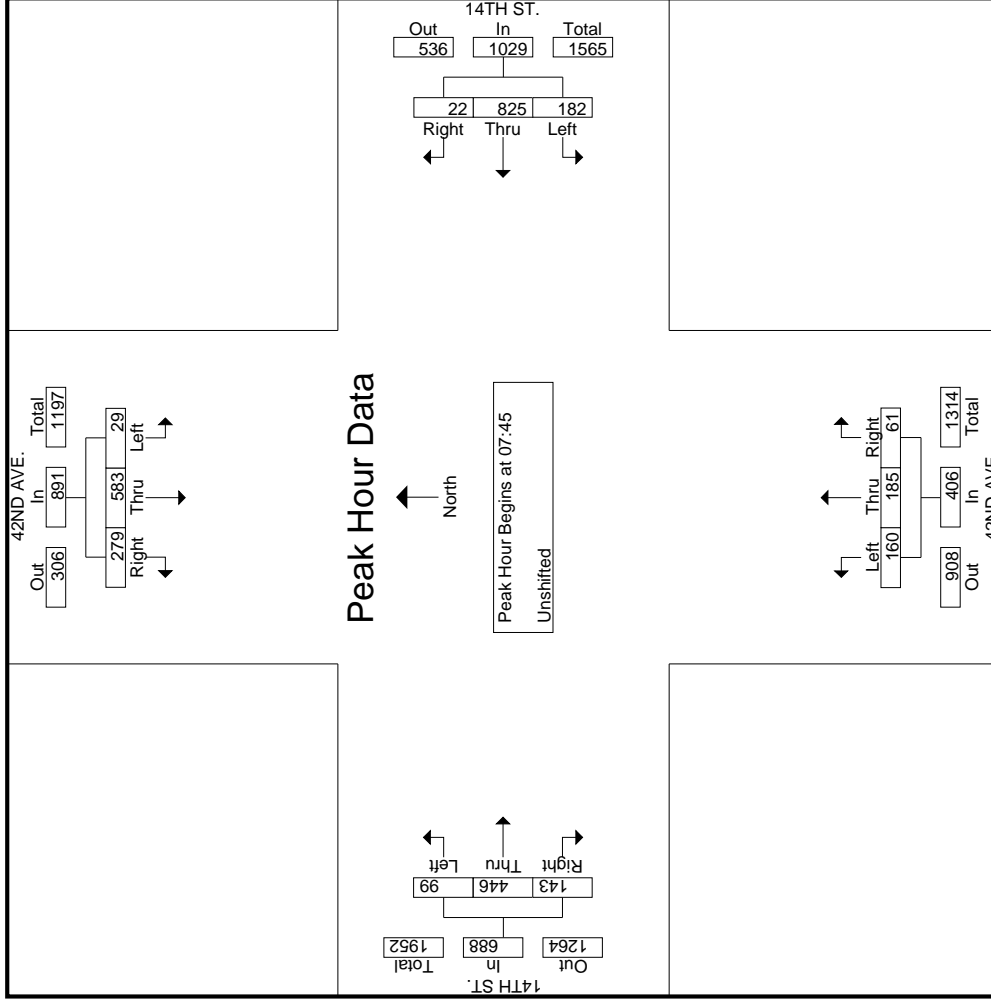
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-022 42ND-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:00

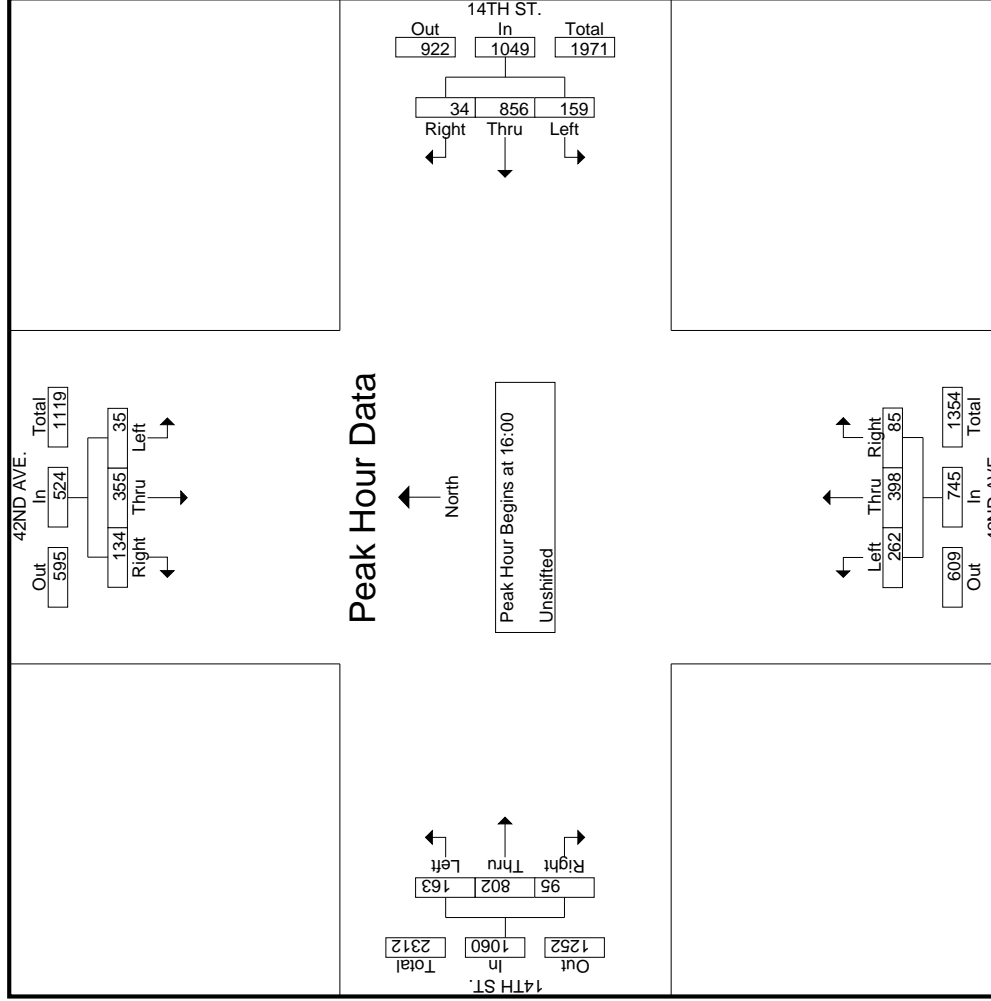
16:00	7	98	46	151	30	224	7	261	76	114	19	210	38	267	888
16:15	16	95	27	138	50	220	12	282	56	92	21	169	49	282	871
16:30	8	74	34	116	44	211	9	264	50	87	21	200	42	260	798
16:45	4	88	27	119	35	201	6	242	80	105	24	187	34	251	821
Total Volume	35	355	134	524	159	856	34	1049	262	398	85	802	163	1060	3378
% App. Total	6.7	67.7	25.6	81.6	15.2	81.6	3.2	53.4	35.2	53.4	11.4	75.7	15.4	75.7	9
PHF	.547	.906	.728	.868	.795	.955	.708	.930	.819	.873	.885	.955	.832	.940	.951

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-022 42ND-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-021 TILDEN-BLANDING-F
 Site Code : 00000000
 Start Date : 03/12/2009
 Page No : 1

Groups Printed- Unshifted

Start Time	TILDEN WAY Southbound						FERNESIDE BLVD. Westbound						TILDEN WAY Northbound						BLANDING AVE. Eastbound											
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:00	19	58	29	1	106		5	26	41	0	72		2	65	10	1	77		5	4	0	0	9		2	264	2	264	266	
07:15	15	84	23	2	122		6	29	54	1	89		2	74	8	0	84		9	11	2	3	22		6	317	6	317	323	
07:30	26	115	34	0	175		10	64	79	5	153		5	77	18	3	100		15	21	1	0	37		8	465	8	465	473	
07:45	31	141	49	1	221		14	59	89	3	162		3	93	43	0	139		13	16	1	4	30		8	552	8	552	560	
Total	91	398	135	4	624		35	178	263	9	476		12	309	79	4	400		42	52	4	7	98		24	1598	24	1598	1622	
08:00	36	127	42	1	205		15	76	98	0	189		2	122	14	2	138		16	18	1	0	35		3	567	3	567	570	
08:15	44	105	51	2	200		14	92	85	2	191		6	124	22	2	152		11	17	2	1	30		7	573	7	573	580	
08:30	23	109	44	1	176		14	85	88	0	187		4	106	16	0	126		14	20	3	2	37		3	526	3	526	529	
08:45	28	105	47	2	180		16	67	67	2	150		3	96	11	0	110		14	27	0	0	41		4	481	4	481	485	
Total	131	446	184	6	761		59	320	338	4	717		15	448	63	4	526		55	82	6	3	143		17	2147	17	2147	2164	

BREAK

16:00	51	134	46	4	231		10	39	28	3	77		7	80	21	0	108		31	36	8	2	75		9	491	9	491	500
16:15	56	132	56	0	244		18	31	36	2	85		7	95	15	0	117		31	29	12	4	72		6	518	6	518	524
16:30	54	125	64	3	243		12	38	25	6	75		4	103	15	1	122		31	45	5	2	81		12	521	12	521	533
16:45	62	157	64	3	283		8	36	26	1	70		6	93	29	1	128		27	27	8	2	62		7	543	7	543	550
Total	223	548	230	10	1001		48	144	115	12	307		24	371	80	2	475		120	137	33	10	290		34	2073	34	2073	2107
17:00	67	152	43	2	262		15	38	36	3	89		1	105	28	3	134		29	44	4	0	77		8	562	8	562	570
17:15	87	164	60	4	311		21	43	35	0	99		16	115	53	0	184		36	35	12	2	83		6	677	6	677	683
17:30	84	178	48	2	310		13	46	21	1	80		5	86	21	0	112		28	44	2	3	74		6	576	6	576	582
17:45	75	177	66	2	318		18	49	22	1	89		8	94	28	1	130		27	42	10	3	79		7	616	7	616	623
Total	313	671	217	10	1201		67	176	114	5	357		30	400	130	4	560		120	165	28	8	313		27	2431	27	2431	2458
Grand Total	758	2063	766	30	3587		209	818	830	30	1857		81	1528	352	14	1961		337	436	71	28	844		102	8249	102	8249	8351
Approach %	21.1	57.5	21.4				11.3	44	44.7		22.5		4.1	77.9	18		23.8		39.9	51.7	8.4		10.2		1.2	98.8			
Total %	9.2	25	9.3		43.5		2.5	9.9	10.1				1	18.5	4.3				4.1	5.3	0.9								

Start Time	TILDEN WAY Southbound						FERNESIDE BLVD. Westbound						TILDEN WAY Northbound						BLANDING AVE. Eastbound											
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:45	31	141	49		221		14	59	89		162		3	93		43		139		13	16	1	30		1	30		30	552	
08:00	36	127	42		205		15	76	98		189		2	122	14		138		138		16	18	1	35		1	35		567	
08:15	44	105	51		200		14	92	85		191		6	124	22		152		152		11	17	2	30		2	30		573	
08:30	23	109	44		176		14	85	88		187		4	106	16		126		126		14	20	3	37		3	37		526	
Total Volume	134	482	186		802		57	312	360		729		15	445	95		555		555		54	71	7	132		7	132		2218	
% App. Total	16.7	60.1	23.2				7.8	42.8	49.4				2.7	80.2	17.1				40.9		53.8	5.3								
PHF	.761	.855	.912		.907		.950	.848	.918		.954		.625	.897	.552		.913		.844		.888	.583		.892					.968	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

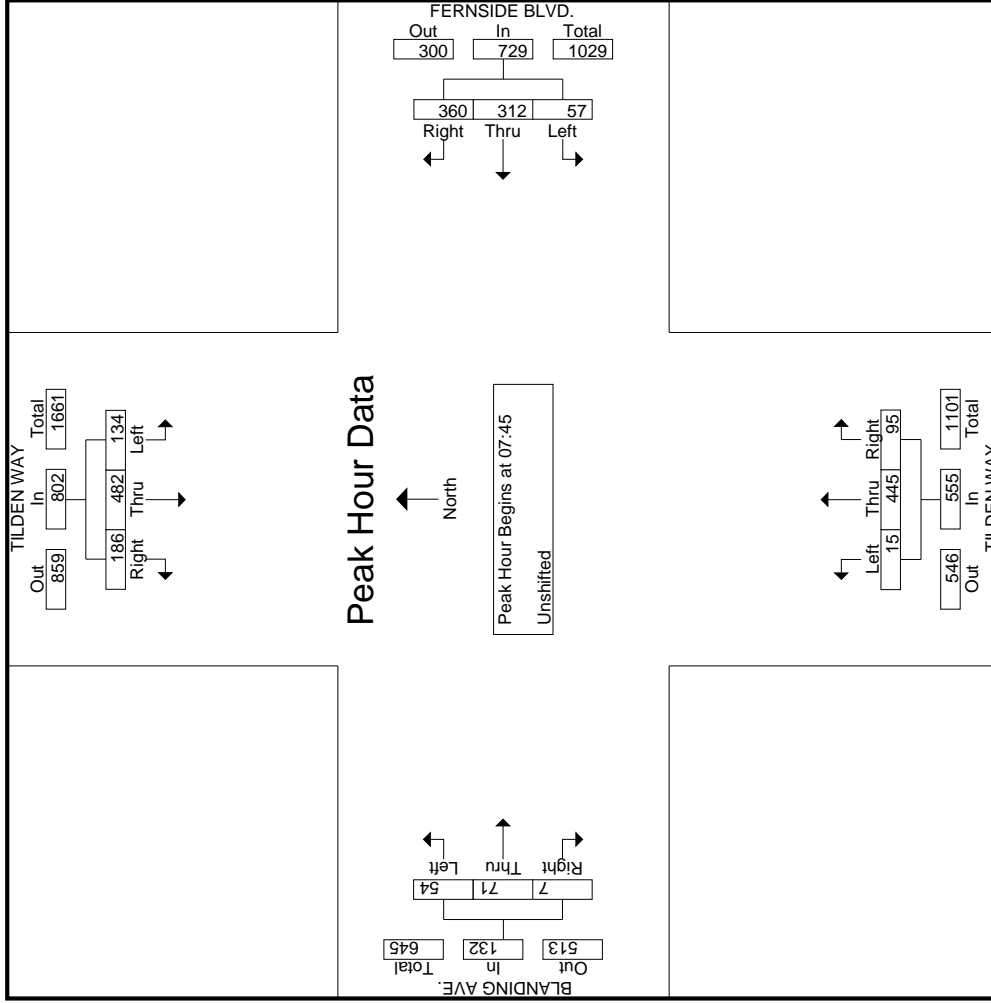
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-021 TILDEN-BLANDING-F
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	67	152	43	38	36	89	1	105	28	29	44	4	562
17:15	87	164	60	43	35	99	16	115	53	36	35	12	677
17:30	84	178	48	46	21	80	5	86	21	28	44	2	576
17:45	75	177	66	49	22	89	8	94	28	27	42	10	616
Total Volume	313	671	217	176	114	357	30	400	130	120	165	28	2431
% App. Total	26.1	55.9	18.1	18.8	49.3	31.9	5.4	71.4	23.2	38.3	52.7	8.9	
PHF	.899	.942	.822	.798	.898	.792	.469	.870	.613	.833	.938	.583	.898

All Traffic Data

(916) 771-8700

F (916) 786-2879

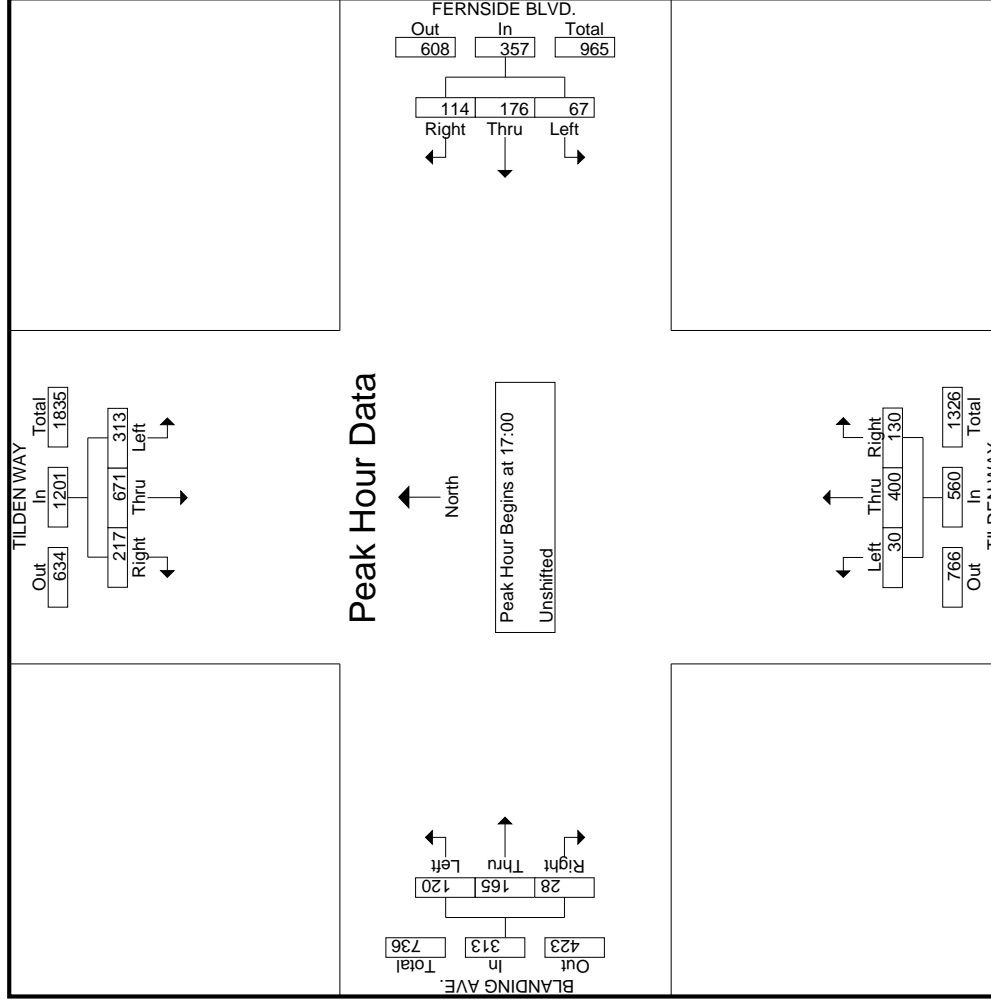
OAKLAND

File Name : 09-7109-021 TILDEN-BLANDING-F

Site Code : 00000000

Start Date : 03/12/2009

Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-020 FRUITVALE-ALAMEDA -T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 1

Start Time	Groups Printed- Unshifted																							
	FRUITVALE AVE, Southbound				ALAMEDA AVE, Westbound				FRUITVALE AVE, Northbound				Eastbound											
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclb. Total	Inclu. Total	Int. Total	
07:00	5	65	0	3	70	41	0	11	1	52	0	92	22	0	114	0	0	0	0	0	4	236	240	
07:15	8	85	0	0	93	41	0	9	0	50	0	113	30	2	143	0	0	0	1	0	3	286	289	
07:30	13	103	0	2	116	73	0	13	1	86	0	129	34	2	163	0	0	0	0	0	5	365	370	
07:45	13	140	0	1	153	88	0	11	0	99	0	170	33	5	203	0	0	0	0	0	6	455	461	
Total	39	393	0	6	432	243	0	44	2	287	0	504	119	9	623	0	0	0	1	0	18	1342	1360	
08:00	8	136	0	3	144	81	0	10	0	91	0	188	43	2	231	0	0	0	1	0	6	466	472	
08:15	12	129	0	2	141	72	0	20	0	92	0	182	53	3	235	0	0	0	0	0	5	468	473	
08:30	13	117	0	0	130	63	0	9	1	72	0	173	40	0	213	0	0	0	0	0	1	415	416	
08:45	12	97	0	2	109	76	0	19	0	95	0	142	39	0	181	0	0	0	0	0	2	385	387	
Total	45	479	0	7	524	292	0	58	1	350	0	685	175	5	860	0	0	0	1	0	14	1734	1748	
*** BREAK ***																								
16:00	20	156	0	6	176	71	0	20	1	91	0	98	46	1	144	0	0	0	0	0	8	411	419	
16:15	16	168	0	8	184	68	0	19	0	87	0	107	52	0	159	0	0	0	0	0	8	430	438	
16:30	28	171	0	5	199	76	0	18	2	94	0	109	46	0	155	0	0	0	0	0	7	448	455	
16:45	15	205	0	3	220	73	0	19	2	92	0	109	45	1	154	0	0	0	0	0	6	466	472	
Total	79	700	0	22	779	288	0	76	5	364	0	423	189	2	612	0	0	0	0	0	29	1755	1784	
17:00	16	202	0	6	218	72	0	26	5	98	0	122	50	4	172	0	0	0	0	0	15	488	503	
17:15	15	230	0	5	245	79	0	14	3	93	0	139	46	1	185	0	0	0	0	0	9	523	532	
17:30	18	235	0	0	253	79	0	17	0	96	0	99	49	3	148	0	0	0	0	0	3	497	500	
17:45	7	240	0	5	247	78	0	17	1	95	0	101	50	1	151	0	0	0	0	0	7	493	500	
Total	56	907	0	16	963	308	0	74	9	382	0	461	195	9	656	0	0	0	0	0	34	2001	2035	
Grand Total	219	2479	0	51	2698	1131	0	252	17	1383	0	2073	678	25	2751	0	0	0	2	0	95	6832	6927	
Approach %	8.1	91.9	0	0	0	81.8	0	18.2	0	75.4	0	75.4	24.6	0	40.3	0	0	0	0	0	1.4	98.6	0	
Total %	3.2	36.3	0	0	39.5	16.6	0	3.7	0	20.2	0	30.3	9.9	0	40.3	0	0	0	0	0	0	0	0	
Start Time	FRUITVALE AVE, Southbound												ALAMEDA AVE, Westbound				FRUITVALE AVE, Northbound				Eastbound			
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds
07:45	13	140	0	1	153	88	0	11	0	99	0	170	33	5	203	0	0	0	0	0	6	455	461	
08:00	8	136	0	3	144	81	0	10	0	91	0	188	43	2	231	0	0	0	1	0	6	466	472	
08:15	12	129	0	2	141	72	0	20	0	92	0	182	53	3	235	0	0	0	0	0	5	468	473	
08:30	13	117	0	0	130	63	0	9	1	72	0	173	40	0	213	0	0	0	0	0	1	415	416	
08:45	12	97	0	2	109	76	0	19	0	95	0	142	39	0	181	0	0	0	0	0	2	385	387	
Total	45	479	0	7	524	292	0	58	1	350	0	685	175	5	860	0	0	0	1	0	14	1734	1748	
07:45	13	140	0	1	153	88	0	11	0	99	0	170	33	5	203	0	0	0	0	0	6	455	461	
08:00	8	136	0	3	144	81	0	10	0	91	0	188	43	2	231	0	0	0	1	0	6	466	472	
08:15	12	129	0	2	141	72	0	20	0	92	0	182	53	3	235	0	0	0	0	0	5	468	473	
08:30	13	117	0	0	130	63	0	9	1	72	0	173	40	0	213	0	0	0	0	0	1	415	416	
08:45	12	97	0	2	109	76	0	19	0	95	0	142	39	0	181	0	0	0	0	0	2	385	387	
Total	45	479	0	7	524	292	0	58	1	350	0	685	175	5	860	0	0	0	1	0	14	1734	1748	
PHF	.885	.932	.000	.000	.928	.928	.864	.000	.625	.894	.000	.948	.797	.938	.000	.000	.000	.000	.000	.000	.000	.964	.964	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

07:45 13 140 0 1 153 88 0 11 0 99 0 170 33 5 203 0 0 0 0 0 6 455 461

08:00 8 136 0 3 144 81 0 10 0 91 0 188 43 2 231 0 0 0 0 1 0 6 466 472

08:15 12 129 0 2 141 72 0 20 0 92 0 182 53 3 235 0 0 0 0 0 0 5 468 473

08:30 13 117 0 0 130 63 0 9 1 72 0 173 40 0 213 0 0 0 0 0 0 1 415 416

08:45 12 97 0 2 109 76 0 19 0 95 0 142 39 0 181 0 0 0 0 0 0 2 385 387

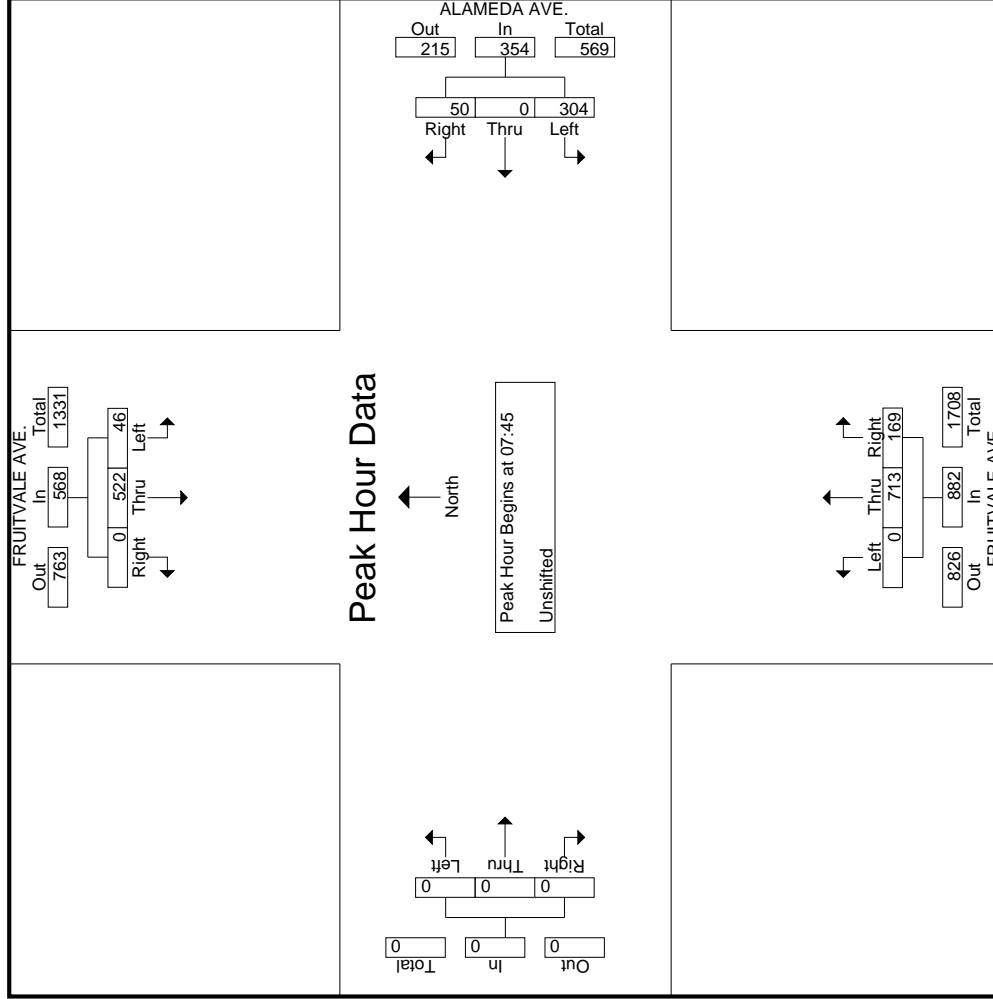
Total 45 479 0 7 524 292 0 58 1 350 0 685 175 5 860 0 0 0 0 1 0 14 1734 1748

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-020 FRUITVALE-ALAMEDA -T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

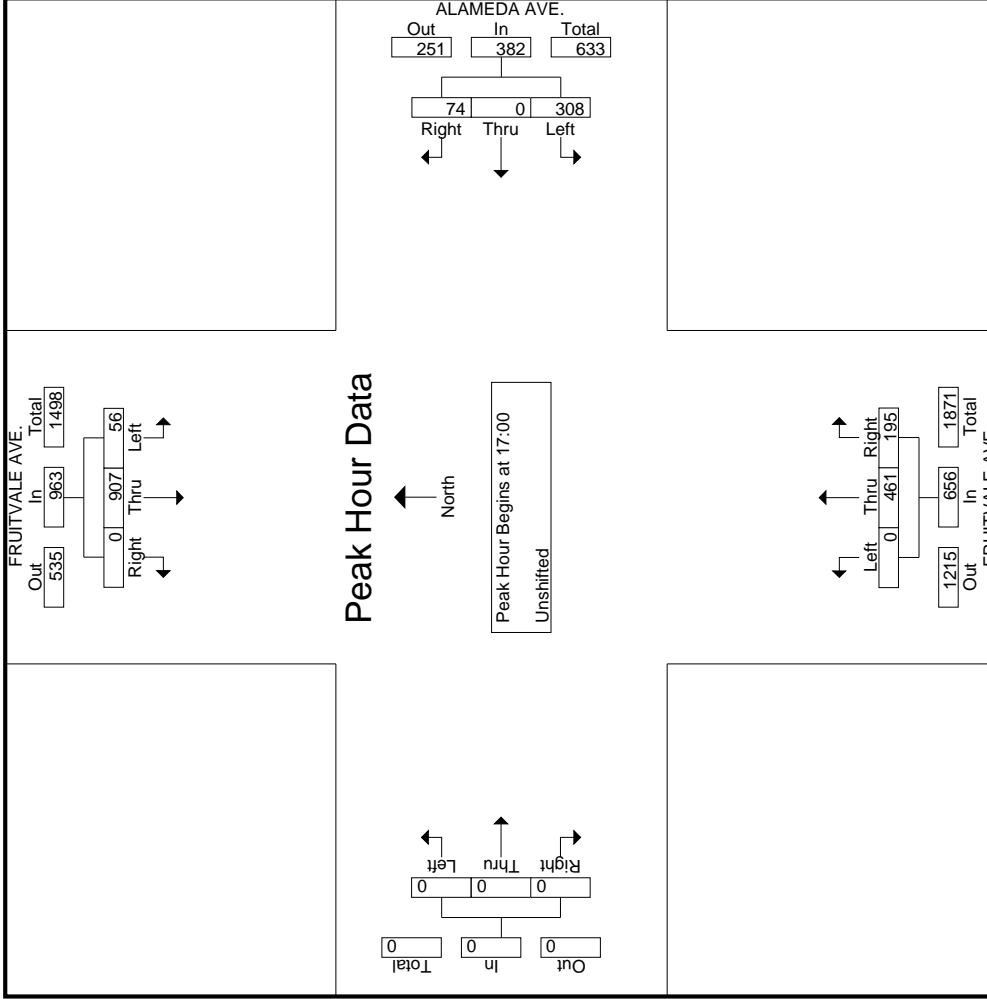
17:00	16	202	0	218	72	0	0	26	98	0	122	172	0	0	0	0	488
17:15	15	230	0	245	79	0	0	14	93	0	139	46	0	0	0	0	523
17:30	18	235	0	253	79	0	0	17	96	0	99	49	0	0	0	0	497
17:45	7	240	0	247	78	0	0	17	95	0	101	50	0	0	0	0	493
Total Volume	56	907	0	963	308	0	0	74	382	0	461	195	0	0	0	0	2001
% App. Total	5.8	94.2	0	80.6	29.7	0	0	19.4	70.3	0	829	29.7	0	0	0	0	2001
PHF	.778	.945	.000	.952	.975	.000	.712	.974	.000	.829	.975	.886	.000	.000	.000	.000	.957

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-020 FRUITVALE-ALAMEDA -T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-019 FRUITVALE-8TH-T

Site Code : 00000000

Start Date : 03/12/2009

Page No : 1

Groups Printed- Unshifted

Start Time	FRUITVALE AVE. Southbound										8TH ST. Westbound										FRUITVALE AVE. Northbound										ELMWOOD AVE. Eastbound									
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total												
07:00	7	48	0	0	55	0	0	21	3	24	0	97	3	0	100	18	6	24	1	48	4	224	4	224	228															
07:15	14	58	0	0	72	1	0	13	2	14	0	125	1	1	126	22	5	28	4	55	7	267	7	267	274															
07:30	21	90	0	0	111	3	0	17	7	20	0	154	0	0	154	14	9	30	2	53	9	338	9	338	347															
07:45	20	116	0	0	136	1	0	17	5	18	0	172	1	2	173	31	12	37	0	80	7	407	7	407	414															
Total	62	312	0	0	374	5	0	68	17	73	0	548	5	3	553	85	32	119	7	236	27	1236	27	1236	1263															
08:00	16	105	0	0	121	3	0	16	6	19	0	197	0	2	197	26	7	29	2	62	10	399	10	399	409															
08:15	22	100	0	0	122	0	0	18	4	18	0	196	4	0	200	28	9	36	0	73	4	413	4	413	417															
08:30	15	93	0	0	108	7	0	19	3	26	0	169	6	0	175	23	16	34	1	73	4	382	4	382	386															
08:45	33	84	0	0	117	1	0	28	4	29	0	154	2	1	156	45	7	31	1	83	6	385	6	385	391															
Total	86	382	0	0	468	11	0	81	17	92	0	716	12	3	728	122	39	130	4	291	24	1579	24	1579	1603															
*** BREAK ***																																								
16:00	19	95	0	0	114	0	0	29	6	29	0	109	6	1	115	62	15	78	0	155	7	413	7	413	420															
16:15	26	113	0	0	139	0	0	26	10	26	0	119	4	1	123	59	24	74	1	157	12	445	12	445	457															
16:30	27	105	0	0	132	1	0	27	4	28	0	116	6	1	122	46	17	81	2	144	7	426	7	426	433															
16:45	21	106	0	0	127	1	0	26	6	27	0	119	3	0	122	53	25	109	1	187	7	463	7	463	470															
Total	93	419	0	0	512	2	0	108	26	110	0	463	19	3	482	220	81	342	4	643	33	1747	33	1747	1780															
17:00	19	113	0	0	132	3	0	29	9	32	0	138	4	1	142	39	22	96	4	157	14	463	14	463	477															
17:15	24	129	0	0	153	1	0	33	3	34	0	153	6	0	159	36	25	97	2	158	5	504	5	504	509															
17:30	33	145	0	0	178	1	0	20	8	21	0	121	5	1	126	41	16	99	0	156	9	481	9	481	490															
17:45	25	147	0	0	172	1	0	23	10	24	0	116	4	4	120	51	15	100	10	166	24	482	24	482	506															
Total	101	534	0	0	635	6	0	105	30	111	0	528	19	6	547	167	78	392	16	637	52	1930	52	1930	1982															
Grand Total	342	1647	0	0	1989	24	0	362	90	386	0	2255	55	15	2310	594	230	983	31	1807	136	6492	136	6492	6628															
Approach %	17.2	82.8	0	0		6.2	0	93.8			0	97.6	2.4		35.6	32.9	12.7	54.4																						
Total %	5.3	25.4	0	0	30.6	0.4	0	5.6		5.9	0	34.7	0.8			9.1	3.5	15.1		27.8	2.1	97.9																		
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																																								
Peak Hour for Entire Intersection Begins at 07:45																																								
07:45	20	116	0	0	136	1	0	17	0	17	0	172	0	1	173	1	173	31	12	37	80	407	80	407	407															
08:00	16	105	0	0	121	3	0	16	6	19	0	197	0	2	197	0	197	26	7	29	62	399	62	399	399															
08:15	22	100	0	0	122	0	0	18	4	18	0	196	4	0	200	28	9	36	0	73	4	413	4	413	413															
08:30	15	93	0	0	108	7	0	19	3	26	0	169	6	0	175	23	16	34	1	73	4	382	4	382	382															
Total Volume	73	414	0	0	487	11	0	70	17	81	0	734	11	6	745	108	44	136	288																					
% App. Total	15	85	0	0		13.6	0	86.4			0	98.5	1.5		37.5	15.3	47.2	.871	.688	.919	.900	.969																		
PHF	.830	.892	.000	.000	.895	.393	.000	.921	.000	.779	.000	.931	.458		.931	.871	.688	.919	.900	.969																				

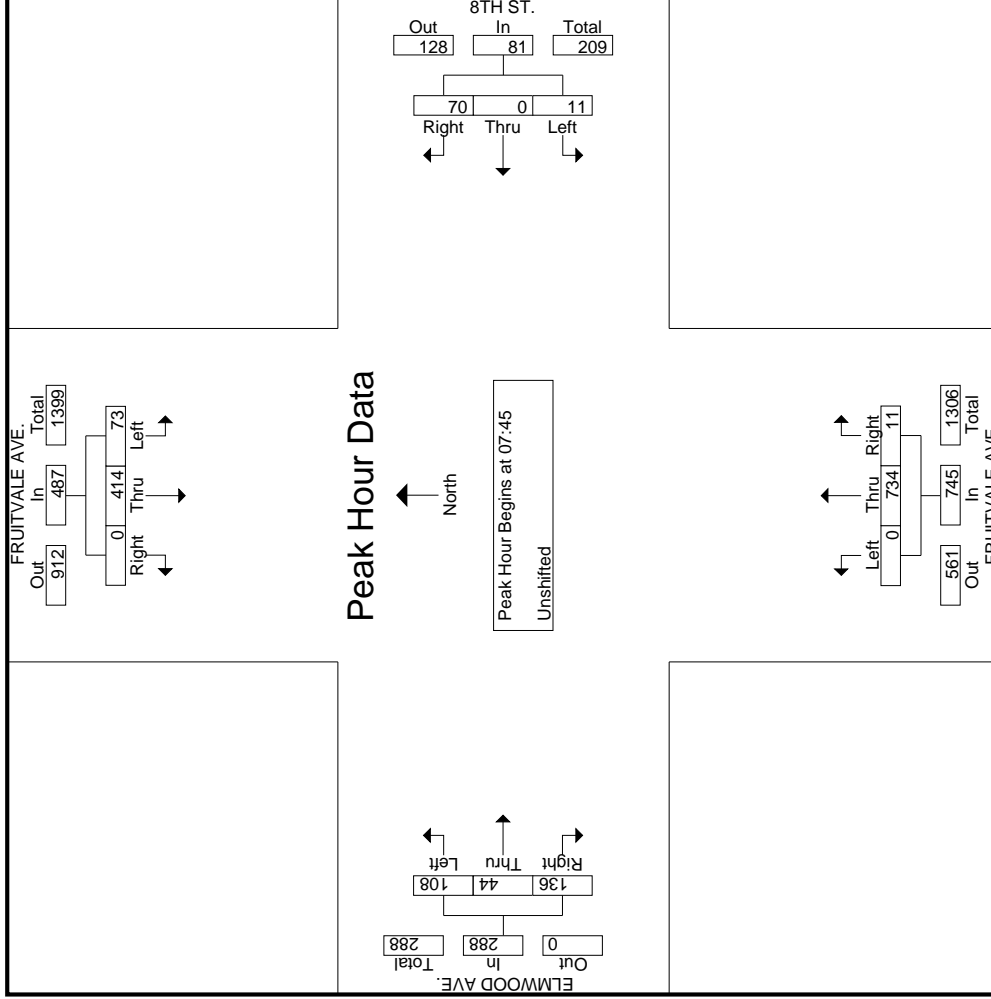
Start Time	FRUITVALE AVE. Southbound										8TH ST. Westbound										FRUITVALE AVE. Northbound										ELMWOOD AVE. Eastbound									
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total												
07:45	20	116	0	0	136	1	0	17	0	17	0	172	0	1	173	1	173	31	12	37	80	407	80	407	407															
08:00	16	105	0	0	121	3	0	16	6	19	0	197	0	2	197	0	197	26	7	29	62	399	62	399	399															
08:15	22	100	0	0	122	0	0	18	4	18	0	196	4	0	200	28	9	36	0	73	4	413	4	413	413															
08:30	15	93	0	0	108	7	0	19	3	26	0	169	6	0	175	23	16	34	1	73	4	382	4	382	382															
Total Volume	73	414	0	0	487	11	0	70	17	81	0	734	11	6	745	108	44	136	288																					
% App. Total	15	85	0	0		13.6	0	86.4			0	98.5	1.5		37.5	15.3	47.2	.871	.688	.919	.900	.969																		
PHF	.830	.892	.000	.000	.895	.393	.000	.921	.000	.779	.000	.931	.458		.931	.871	.688	.919	.900	.969																				

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-019 FRUITVALE-8TH-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

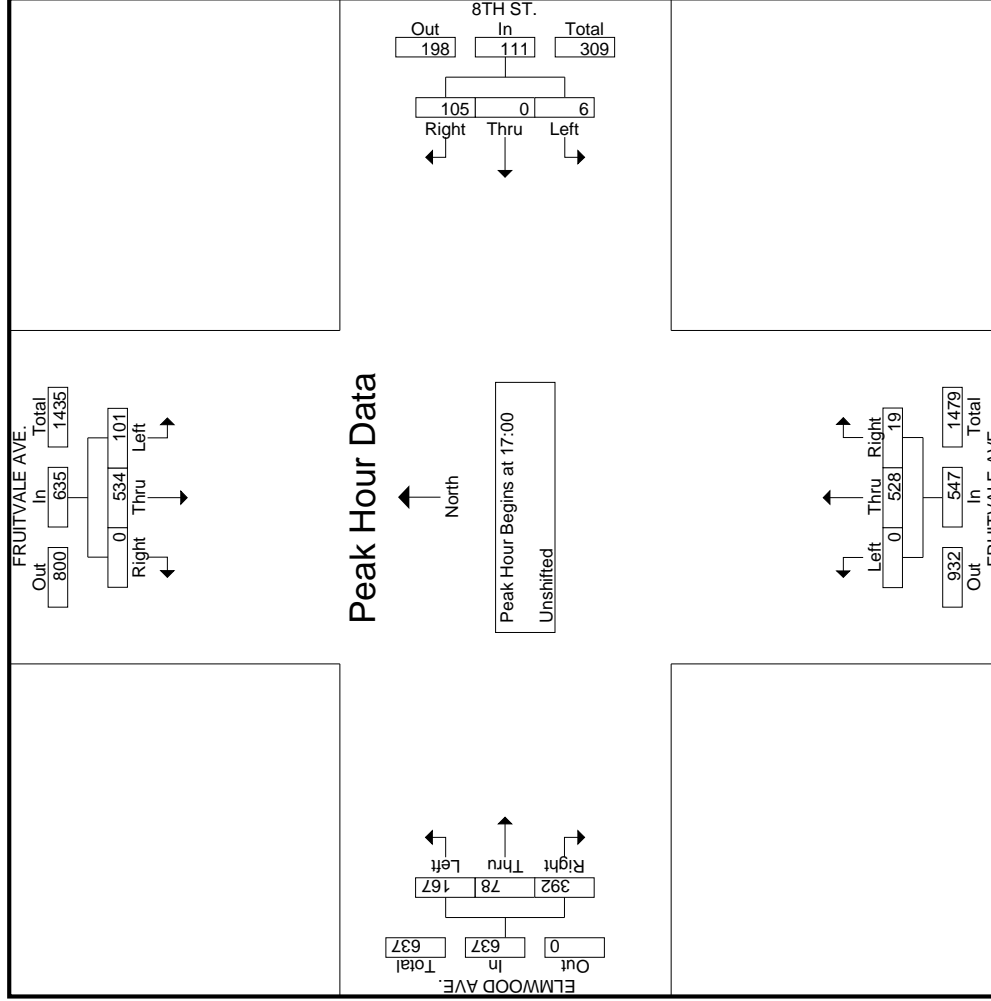
17:00	19	113	0	132	3	0	29	32	0	138	4	39	22	96	157	463
17:15	24	129	0	153	1	0	33	34	0	153	6	36	25	97	158	504
17:30	33	145	0	178	1	0	20	21	0	121	5	41	16	99	156	481
17:45	25	147	0	172	1	0	23	24	0	116	4	51	15	100	166	482
Total Volume	101	534	0	635	6	0	105	111	0	528	19	167	78	392	637	1930
% App. Total	15.9	84.1	0	89.2	5.4	0	94.6	96.5	0	96.5	3.5	26.2	12.2	61.5	61.5	95.9
PHF	.765	.908	.000	.892	.500	.000	.795	.816	.000	.863	.792	.819	.780	.980	.959	.957

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-019 FRUITVALE-8TH-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 3

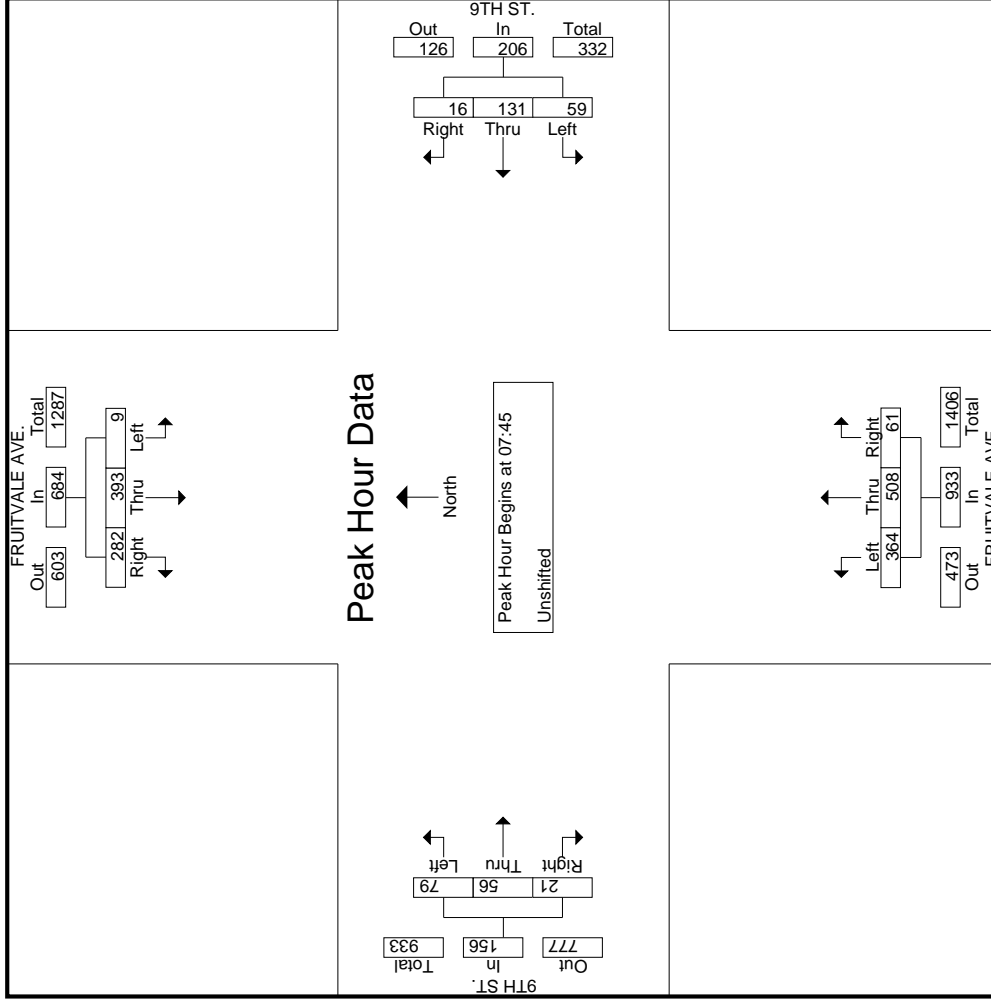


All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-018 FRUITVALE-9TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	3	106	48	157	18	7	3	28	61	109	29	199	45	30	8	83	467
17:15	4	135	45	184	10	8	4	22	48	133	32	213	50	29	11	90	509
17:30	5	132	45	182	12	4	3	19	51	108	23	182	55	23	14	92	475
17:45	6	136	46	188	20	7	4	31	51	123	21	195	53	27	11	91	505
Total Volume	18	509	184	711	60	26	14	100	211	473	105	789	203	109	44	356	1956
% App. Total	2.5	71.6	25.9	94.5	60	26	14	26.7	59.9	13.3	13.3	78.9	57	30.6	12.4	12.4	
PHF	.750	.936	.958	.945	.750	.813	.875	.806	.865	.889	.820	.926	.923	.908	.786	.967	.961

All Traffic Data

(916) 771-8700

F (916) 786-2879

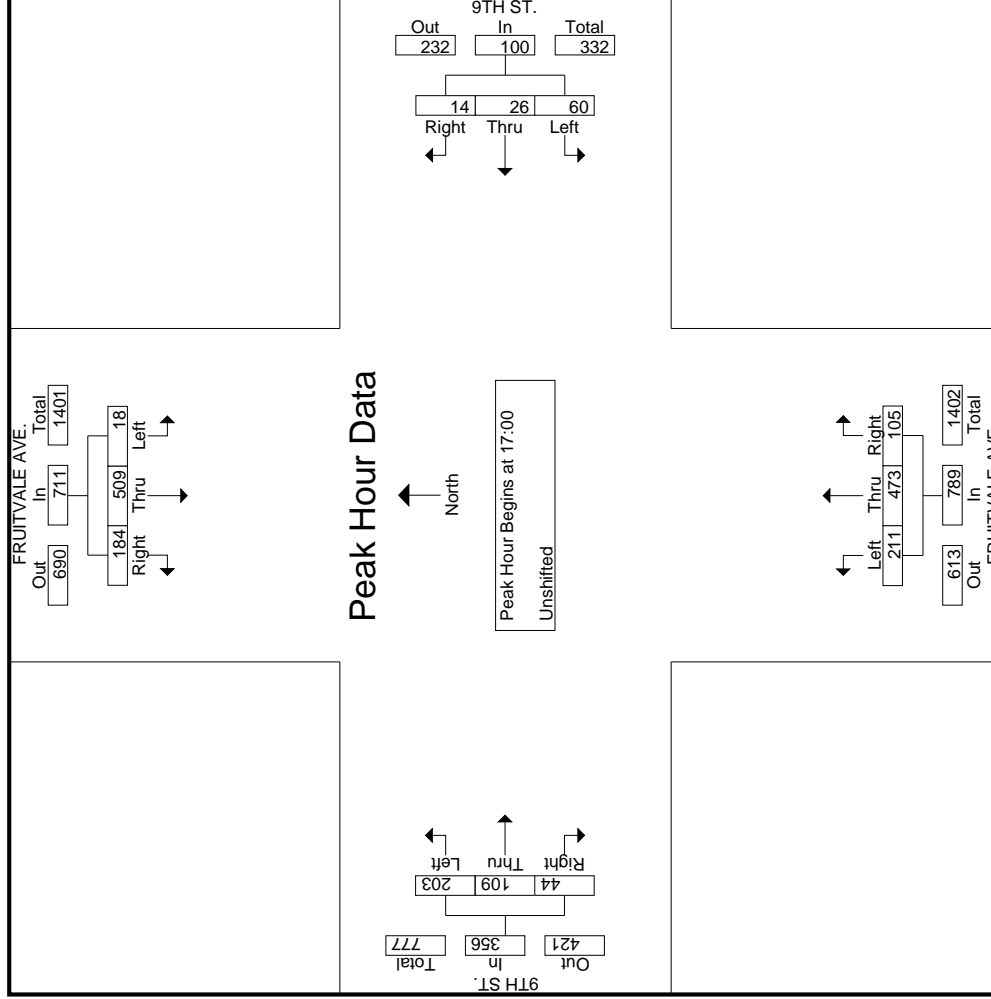
OAKLAND

File Name : 09-7109-018 FRUITVALE-9TH-T

Site Code : 00000000

Start Date : 03/11/2009

Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-017 FRUITVALE-10TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 1

Groups Printed- Unshifted

Start Time	FRUITVALE AVE. Southbound						SAN LEANDRO ST. Westbound						FRUITVALE AVE. Northbound						10TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:00	37	57	0	1	94	27	0	38	14	65	8	57	24	0	0	89	0	0	0	2	0	17	248
07:15	27	64	1	4	92	32	0	56	6	88	10	71	30	0	111	0	0	3	5	3	15	294	309	
07:30	29	98	1	9	128	45	0	80	6	125	14	73	27	0	114	0	0	2	1	2	16	369	385	
07:45	46	126	0	6	172	60	0	115	7	175	10	74	30	0	114	0	0	1	2	1	15	462	477	
Total	139	345	2	20	486	164	0	289	33	453	42	275	111	0	428	0	0	6	10	6	63	1373	1436	
08:00	63	95	1	13	159	59	0	118	10	177	13	109	45	0	167	0	0	3	0	3	23	506	529	
08:15	63	97	0	2	160	68	0	124	10	192	11	118	34	0	163	0	0	3	1	3	13	518	531	
08:30	65	93	1	8	159	63	0	114	6	177	12	103	45	0	160	0	0	1	2	1	16	497	513	
08:45	59	102	1	9	162	57	0	108	1	165	4	96	40	0	140	0	0	1	0	2	12	468	480	
Total	250	387	3	32	640	247	0	464	27	711	40	426	164	0	630	0	1	7	5	8	64	1989	2053	

BREAK

16:00	85	106	3	2	194	48	1	70	2	119	1	133	45	0	179	2	3	6	9	11	13	503	516
16:15	81	129	2	8	212	48	0	88	12	136	0	114	43	0	157	1	5	5	15	11	35	516	551
16:30	90	105	0	8	195	55	0	100	17	155	0	124	44	0	168	0	2	5	9	7	34	525	559
16:45	97	112	1	6	210	58	1	90	8	149	0	130	35	0	165	2	4	4	10	10	24	534	558
Total	353	452	6	24	811	209	2	348	39	559	1	501	167	0	669	5	14	20	43	39	106	2078	2184
17:00	112	113	1	4	226	53	1	77	15	131	1	115	46	0	162	1	3	3	7	7	26	526	552
17:15	108	119	0	3	227	57	0	92	7	149	2	147	32	0	181	0	7	5	9	12	19	569	588
17:30	106	128	1	3	235	58	1	78	8	137	0	135	41	0	176	1	3	9	8	13	19	561	580
17:45	105	110	0	2	215	57	0	73	5	130	2	116	64	0	182	0	1	15	2	16	9	543	552
Total	431	470	2	12	903	225	2	320	35	547	5	513	183	0	701	2	14	32	26	48	73	2199	2272

Grand Total	1173	1654	13	88	2840	845	4	1421	134	2270	88	1715	625	0	2428	7	29	65	84	101	306	7639	7945
Approach %	41.3	58.2	0.5			37.2	0.2	62.6		29.7	3.6	70.6	25.7		31.8	6.9	28.7	64.4		1.3	3.9	96.1	
Total %	15.4	21.7	0.2		37.2	11.1	0.1	18.6			1.2	22.5	8.2			0.1	0.4	0.9					

Start Time	FRUITVALE AVE. Southbound						SAN LEANDRO ST. Westbound						FRUITVALE AVE. Northbound						10TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	08:00	63	95	0	0	159	63	0	118	10	177	13	109	45	0	167	0	0	3	0	3	23	506	529
08:15	63	97	0	2	160	68	0	124	10	192	11	118	34	0	163	0	0	3	1	3	13	518	531	
08:30	65	93	1	8	159	63	0	114	6	177	12	103	45	0	160	0	0	1	2	1	16	497	513	
08:45	59	102	1	9	162	57	0	108	1	165	4	96	40	0	140	0	0	1	0	2	12	468	480	
Total Volume	250	387	3	32	640	247	0	464	27	711	40	426	164	0	630	0	1	7	5	8	64	1989	2053	
% App. Total	39.1	60.5	0.5			34.7	0	65.3		29.7	6.3	67.6	26		31.8	12.5	87.5							
PHF	.962	.949	.750		.988	.908	.000	.935	.926	.926	.769	.903	.911	.943	.000	.250	.583	.667					.960	

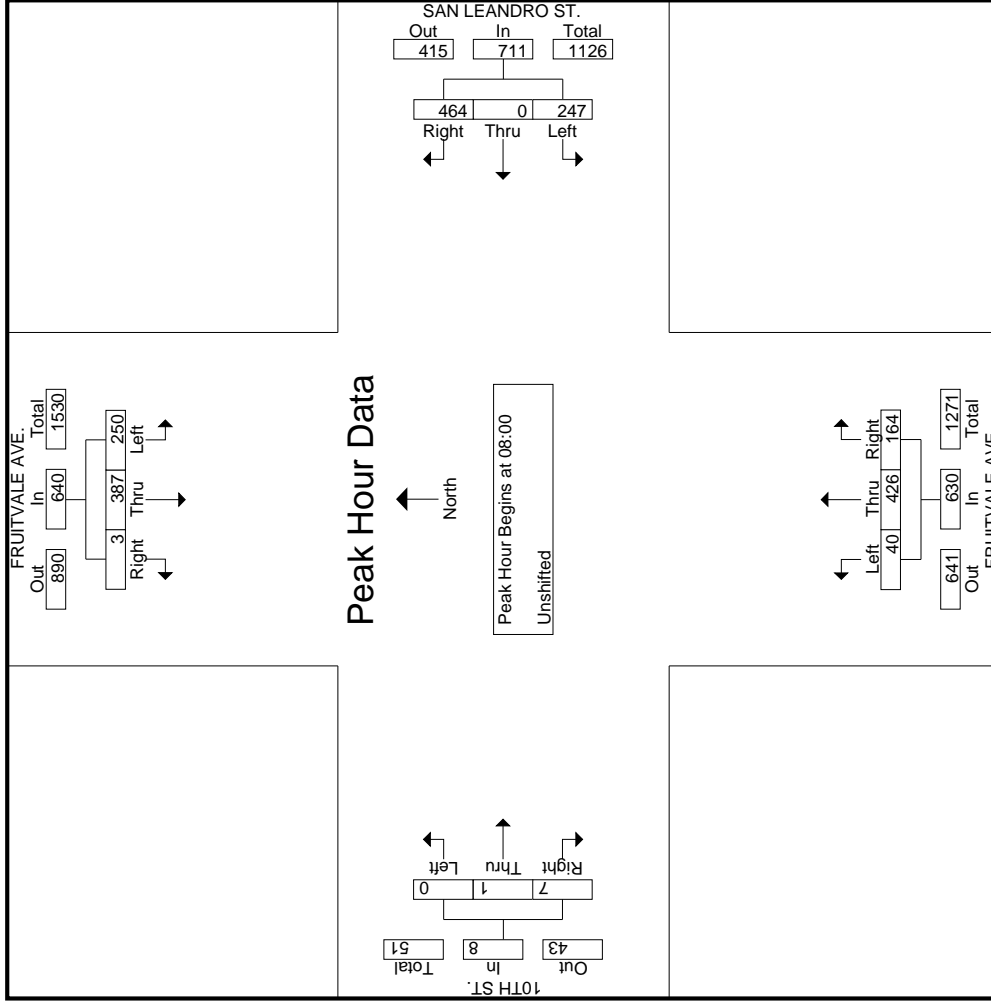
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:00

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-017 FRUITVALE-10TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

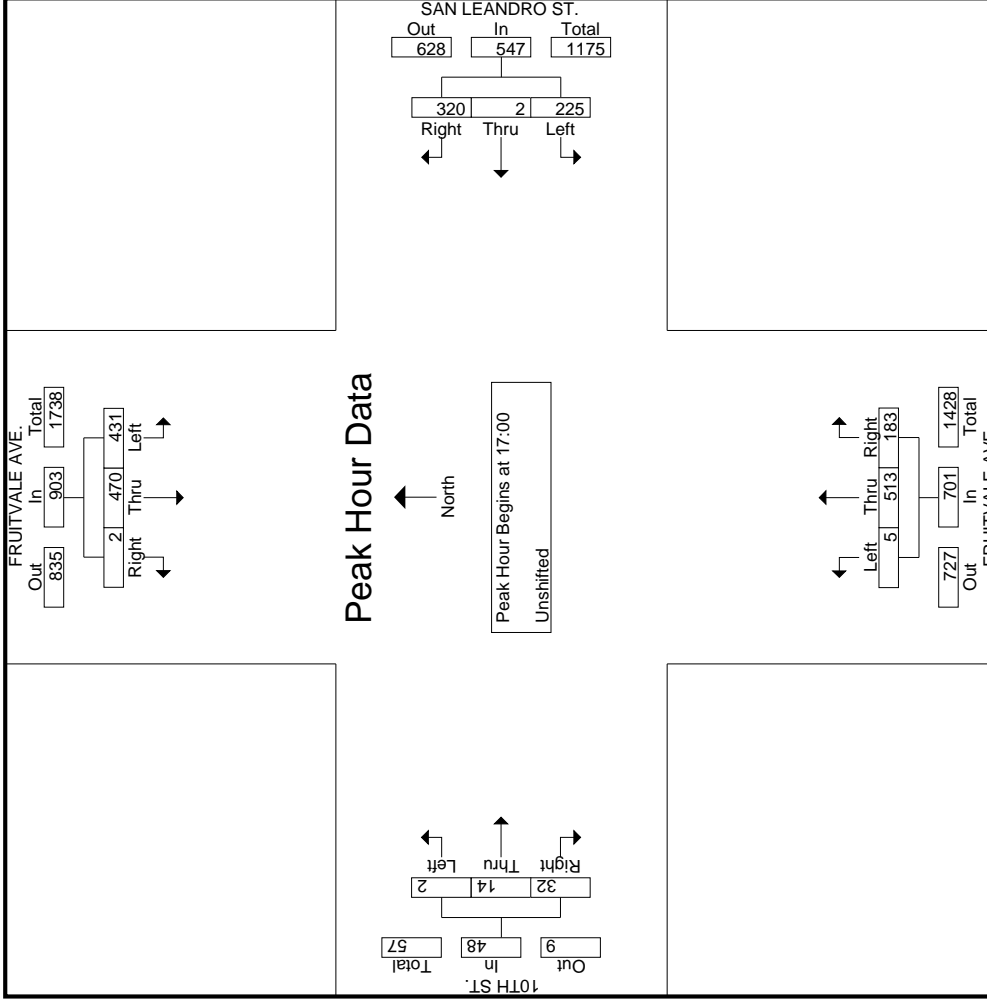
Time	17:00	17:15	17:30	17:45	Total Volume	% App. Total	PHF
10TH ST. (Northbound)	112	108	106	105	431	47.7	.962
FRUITVALE AVE. (Westbound)	113	119	128	110	470	52	.918
FRUITVALE AVE. (Eastbound)	131	149	137	130	547	61.1	.970
SAN LEANDRO ST. (Southbound)	77	92	78	73	320	35.5	.870
Total	433	568	549	518	2018	100.0	1.000
% App. Total	21.2	28.1	27.2	25.5	100.0	100.0	1.000
PHF	.962	.918	.970	.870	.962	.918	.962

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-017 FRUITVALE-10TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-016 FRUITVALE-12TH-T

Site Code : 00000000

Start Date : 03/11/2009

Page No : 1

Groups Printed- Unshifted - Bank 1

Start Time	FRUITVALE AVE.												FRUITVALE AVE.												FRUITVALE AVE.																						
	Southbound						Westbound						Northbound						Eastbound						12TH ST.																						
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total																	
07:00	6	59	11	6	76	4	21	2	3	27	39	41	12	24	92	7	16	21	0	44	33	239	272	7	16	21	0	44	33	5	18	25	2	48	36	14	28	31	6	73	50	17	34	39	9	90	90
07:15	5	67	14	2	86	8	25	3	5	36	58	60	16	27	134	5	18	25	2	48	36	304	340	5	18	25	2	48	36	14	28	31	6	73	50	17	34	39	9	90	90						
07:30	12	87	12	5	111	6	28	6	5	40	62	69	19	34	150	14	28	31	6	73	50	374	424	14	28	31	6	73	50	14	28	31	6	73	50	17	34	39	9	90	90						
07:45	8	115	22	3	145	16	47	1	10	64	89	86	15	68	190	17	34	39	9	90	90	489	579	17	34	39	9	90	90	17	34	39	9	90	90	17	34	39	9	90	90						
Total	31	328	59	16	418	34	121	12	23	167	248	256	62	153	566	43	96	116	17	255	209	1406	1615	43	96	116	17	255	209	43	96	116	17	255	209	43	96	116	17	255	209						
08:00	6	106	19	4	131	8	54	4	6	66	105	95	29	54	229	15	51	42	13	108	77	534	611	15	51	42	13	108	77	15	51	42	13	108	77	15	51	42	13	108	77						
08:15	9	96	27	2	132	9	60	10	4	79	108	110	33	72	251	22	60	52	1	134	79	596	675	22	60	52	1	134	79	22	60	52	1	134	79	22	60	52	1	134	79						
08:30	15	95	22	2	132	9	39	9	14	57	105	91	35	23	231	20	56	56	2	132	41	552	593	20	56	56	2	132	41	20	56	56	2	132	41	20	56	56	2	132	41						
08:45	10	105	22	5	137	15	28	8	3	51	93	83	32	26	208	24	46	42	4	112	38	508	546	24	46	42	4	112	38	24	46	42	4	112	38	24	46	42	4	112	38						
Total	40	402	90	13	532	41	181	31	27	253	411	379	129	175	919	81	213	192	20	486	235	2190	2425	81	213	192	20	486	235	81	213	192	20	486	235	81	213	192	20	486	235						

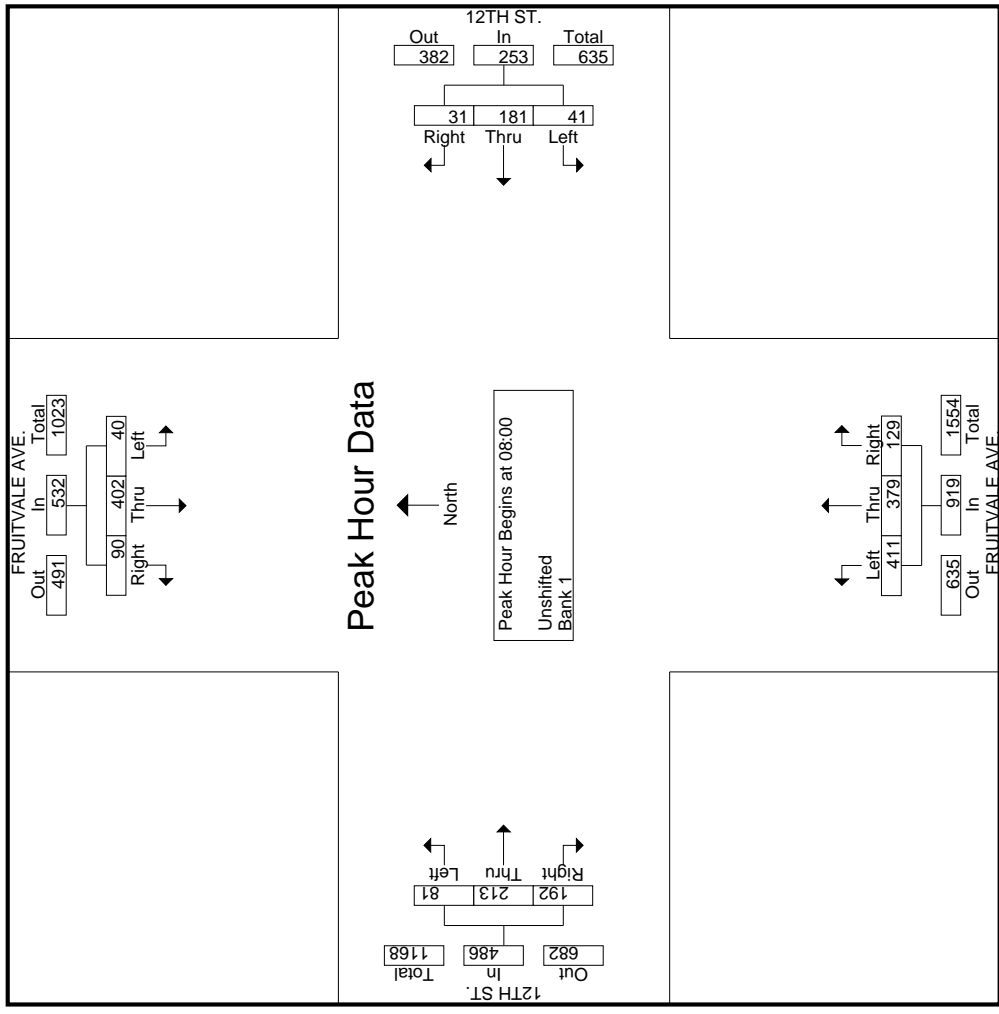
BREAK

16:00	19	111	11	7	141	17	35	14	5	66	57	123	38	10	218	25	60	70	15	155	37	580	617	25	60	70	15	155	37	25	60	70	15	155	37	25	60	70	15	155	37
16:15	16	106	4	10	126	22	50	16	3	88	56	120	24	17	200	26	61	86	6	173	36	587	623	26	61	86	6	173	36	26	61	86	6	173	36	26	61	86	6	173	36
16:30	17	90	9	4	116	25	39	8	2	72	84	109	32	9	225	26	59	95	7	180	22	593	615	26	59	95	7	180	22	26	59	95	7	180	22	26	59	95	7	180	22
16:45	14	91	6	11	111	19	44	15	2	78	63	143	34	10	240	22	66	96	3	184	26	613	639	22	66	96	3	184	26	22	66	96	3	184	26	22	66	96	3	184	26
Total	66	398	30	32	494	83	168	53	12	304	260	495	128	46	883	99	246	347	31	692	121	2373	2494	99	246	347	31	692	121	99	246	347	31	692	121	99	246	347	31	692	121
17:00	12	100	10	10	122	25	50	13	3	88	63	120	27	7	210	33	86	102	15	221	35	641	676	33	86	102	15	221	35	33	86	102	15	221	35	33	86	102	15	221	35
17:15	18	90	14	10	122	26	37	16	9	79	63	145	43	28	251	40	72	106	8	218	55	670	725	40	72	106	8	218	55	40	72	106	8	218	55	40	72	106	8	218	55
17:30	13	86	12	5	111	39	44	14	8	97	58	139	30	37	227	40	86	110	3	236	53	671	724	40	86	110	3	236	53	40	86	110	3	236	53	40	86	110	3	236	53
17:45	20	100	5	13	125	27	42	13	1	82	61	140	31	51	232	41	65	89	2	195	67	634	701	41	65	89	2	195	67	41	65	89	2	195	67	41	65	89	2	195	67
Total	63	376	41	38	480	117	173	56	21	346	245	544	131	123	920	154	309	407	28	870	210	2616	2826	154	309	407	28	870	210	154	309	407	28	870	210	154	309	407	28	870	210

Grand Total	200	1504	220	99	1924	275	643	152	83	1070	1164	1674	450	497	3288	377	864	1062	96	2303	775	8585	9360	377	864	1062	96	2303	775	377	864	1062	96	2303	775	377	864	1062	96	2303	775
Approch %	10.4	78.2	11.4			25.7	60.1	14.2			35.4	50.9	13.7			16.4	37.5	46.1						16.4	37.5	46.1				16.4	37.5	46.1				16.4	37.5	46.1			
Total %	2.3	17.5	2.6			3.2	7.5	1.8			12.5	13.6	19.5	5.2		38.3	4.4	10.1	12.4			8.3	91.7	4.4	10.1	12.4				4.4	10.1	12.4				4.4	10.1	12.4			
Unshifted	200	1504	220		2012	275	643	152		1146	1164	1674	450		3768	377	864	1062					9300	377	864	1062			2374	377	864	1062			2374	377	864	1062			2374
% Unshifted	100	100	100	88.9	99.5	100	100	100	91.6	99.4	100	100	100	96.6	99.6	100	100	100	74				99.4	100	100	100	74		99	100	100	100	74		99	100	100	100	74		99
Bank 1	0	0	0		11	0	0	0		7	0	0	0		17	0	0	0					60	0	0	0			25	0	0	0			25	0	0	0			25
% Bank 1	0	0	0	11.1	0.5	0	0	0	8.4	0.6	0	0	0	3.4	0.4	0	0	0	26				0.6	0	0	0	26		1	0	0	0	26		1	0	0	0	26		1

Start Time	FRUITVALE AVE.												FRUITVALE AVE.												12TH ST.																
	Southbound						Westbound						Northbound						Eastbound																						
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total											
08:00	6	106	19	4	131	131	8	54	4	6	66	105	95	29	229	15	51	42	13	108	77	534	611	15	51	42	13	108	77	15	51	42	13	108	77	15	51	42	13	108	77
08:15	9	96	27	2	132	132	9	60	10	4	79	108	110	33	251	22	60	52	1	134	79	596	675	22	60	52	1	134	79	22	60	52	1	134	79	22	60	52	1	134	79
08:30	15	95	22	2	132	132	9	39	9	14	57	105	91	35	231	20	56	56	2	132	41	552	593	20	56	56	2	132	41	20	56	56	2	132	41	20	56	56	2	132	41
08:45	10	105	22	5	137	137	15	28	8	3	51	93	83	32	208	24	46	42	4	112	38	508	546	24	46	42	4	112	38	24	46	42	4	112	38	24	46	42	4	112	38
Total Volume	40	402	90	13	532	532	41	181	31	27	253	411	379	129	919	81	213	192	20	486	235	2190	2425	81	213	192	20	486	235	81	213	192	20	486	235	81	213	192	20	486	235

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 17:00

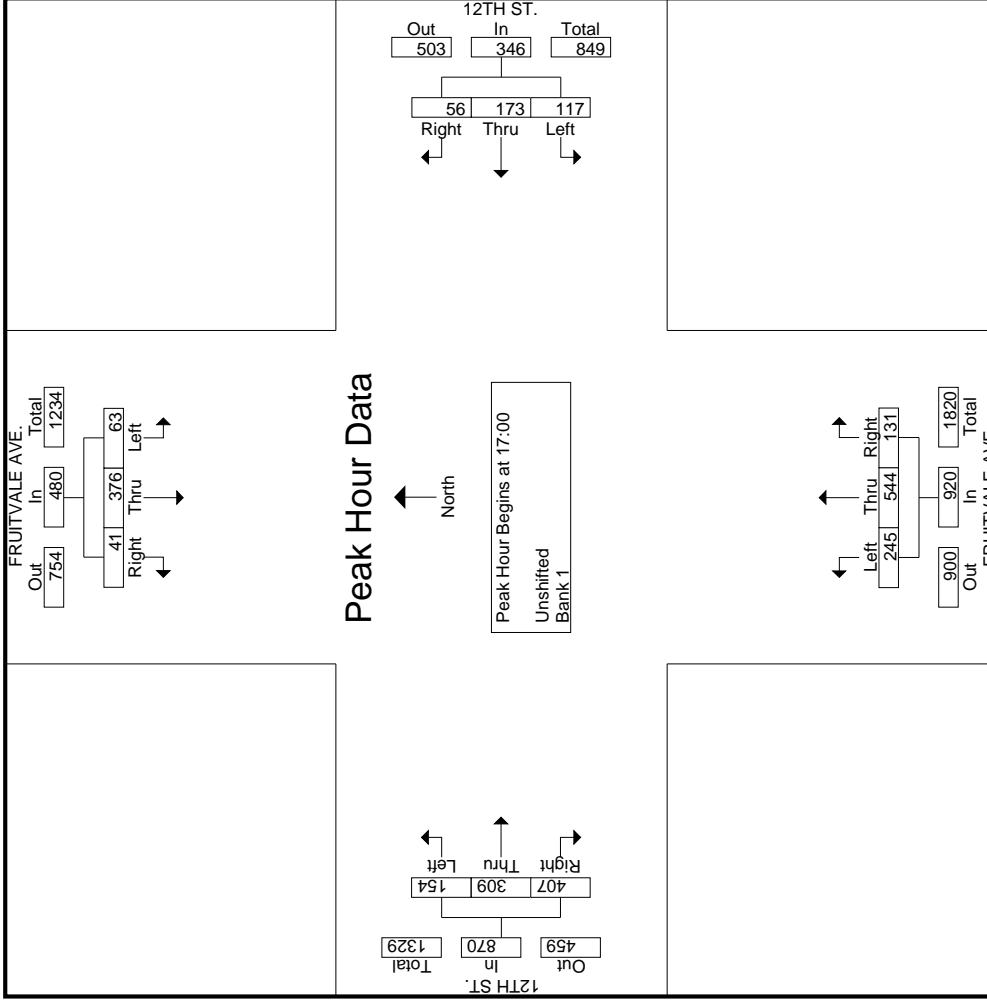
17:00	12	100	10	122	25	50	13	88	63	120	27	210	33	102	221
17:15	18	90	14	122	26	37	16	79	63	145	43	251	40	72	670
17:30	13	86	12	111	39	44	14	97	58	139	30	227	40	86	671
17:45	20	100	5	125	27	42	13	82	61	140	31	232	41	65	634
Total Volume	63	376	41	480	117	173	56	346	245	544	131	920	154	309	407
% App. Total	13.1	78.3	8.5	33.8	50	16.2	16.2	26.6	59.1	14.2	14.2	17.7	35.5	46.8	870
PHF	.788	.940	.732	.960	.750	.865	.875	.892	.972	.938	.762	.916	.939	.898	.925

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-016 FRUITVALE-12TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-015 FRUITVALE-14TH-T

Site Code : 00000000

Start Date : 03/11/2009

Page No : 1

Groups Printed- Unshifted

Start Time	FRUITVALE AVE. Southbound						FRUITVALE AVE. Northbound						FRUITVALE AVE. Eastbound											
	Left		Right		Peds		Left		Right		Peds		Left		Right		Peds							
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total						
07:00	9	79	58	12	11	79	12	69	12	9	93	2	48	4	12	54	3	42	2	7	47	39	273	312
07:15	10	87	60	17	28	87	16	72	17	14	105	3	57	8	10	68	3	50	5	19	58	71	318	389
07:30	10	107	83	14	14	107	28	116	14	15	158	2	68	12	23	82	8	69	3	8	80	60	427	487
07:45	11	135	101	23	17	135	37	180	13	12	230	3	89	8	19	100	13	87	13	29	113	77	578	655
Total	40	408	302	66	70	408	93	437	56	50	586	10	262	32	64	304	27	248	23	63	298	247	1596	1843
08:00	12	115	88	15	34	115	42	227	28	20	297	5	98	12	28	115	11	91	6	34	108	116	635	751
08:15	5	113	89	19	40	113	31	225	24	32	280	5	111	16	33	132	14	91	11	16	116	121	641	762
08:30	12	119	94	13	38	119	26	197	28	32	251	4	99	19	32	122	19	113	15	25	147	127	639	766
08:45	14	119	96	9	35	119	32	166	30	21	228	7	95	11	26	113	13	99	9	18	121	100	581	681
Total	43	466	367	56	147	466	131	815	110	105	1056	21	403	58	119	482	57	394	41	93	492	464	2496	2960

BREAK

16:00	1	104	85	18	57	104	34	134	34	25	202	0	144	20	44	164	28	170	26	48	224	174	694	868
16:15	1	109	87	21	41	109	22	138	28	31	188	2	138	22	43	162	29	177	11	32	217	147	676	823
16:30	9	106	75	22	46	106	19	129	34	34	182	1	136	20	47	157	23	154	17	13	194	140	639	779
16:45	3	102	74	25	40	102	18	156	26	27	200	2	149	27	50	178	31	193	18	24	242	141	722	863
Total	14	421	321	86	184	421	93	557	122	117	772	5	567	89	184	661	111	694	72	117	877	602	2731	3333
17:00	2	106	91	13	27	106	21	132	28	33	181	2	136	29	41	167	15	196	22	23	233	124	687	811
17:15	3	98	81	14	29	98	19	128	26	35	173	4	156	29	40	189	18	199	20	24	237	128	697	825
17:30	4	88	78	6	51	88	22	107	20	38	149	2	159	27	46	188	22	197	13	20	232	155	657	812
17:45	3	109	92	14	47	109	19	141	33	38	193	4	156	25	38	185	27	139	14	23	180	146	667	813
Total	12	401	342	47	154	401	81	508	107	144	696	12	607	110	165	729	82	731	69	90	882	553	2708	3261
Grand Total	109	1696	1332	255	555	1696	398	2317	395	416	3110	48	1839	289	532	2176	277	2067	205	363	2549	1866	9531	11397
Approach %	6.4	78.5	15	2.7	17.8	32.6	2.2	84.5	13.3	3	22.8	2.9	21.7	2.2	26.7	16.4	83.6							
Total %	1.1	14	1.1	2.7	17.8	32.6	4.2	24.3	4.1	4.1	32.6	0.5	19.3	3	22.8	2.9	21.7	2.2	2.2	26.7	16.4	83.6		

Start Time	FRUITVALE AVE. Southbound						FRUITVALE AVE. Northbound						FRUITVALE AVE. Eastbound											
	Left		Right		Peds		Left		Right		Peds		Left		Right		Peds							
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total						
08:00	12	15	88	15	19	15	115	42	227	28	297	5	98	12	115	11	91	6	34	108	116	635	641	
08:15	5	19	89	19	13	19	113	31	225	24	280	5	111	16	116	14	91	11	16	116	121	641	762	
08:30	12	13	94	13	13	13	119	26	197	28	251	4	99	19	122	19	113	15	25	147	127	639	766	
08:45	14	9	96	9	9	9	119	32	166	30	228	7	95	11	113	13	99	9	18	121	100	581	681	
Total Volume	43	56	367	56	56	56	466	131	815	110	1056	21	403	58	119	482	57	394	41	93	492	464	2496	
% App. Total	9.2	78.8	12	12	12	12	979	12.4	77.2	10.4	889	4.4	83.6	12	11.6	80.1	8.3	26.7	16.4	83.6				
PHF	.768	.956	.737	.737	.737	.737	.979	.780	.898	.917	.889	.750	.908	.763	.913	.750	.872	.683	.837	.837	.837	.837	.837	.973

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

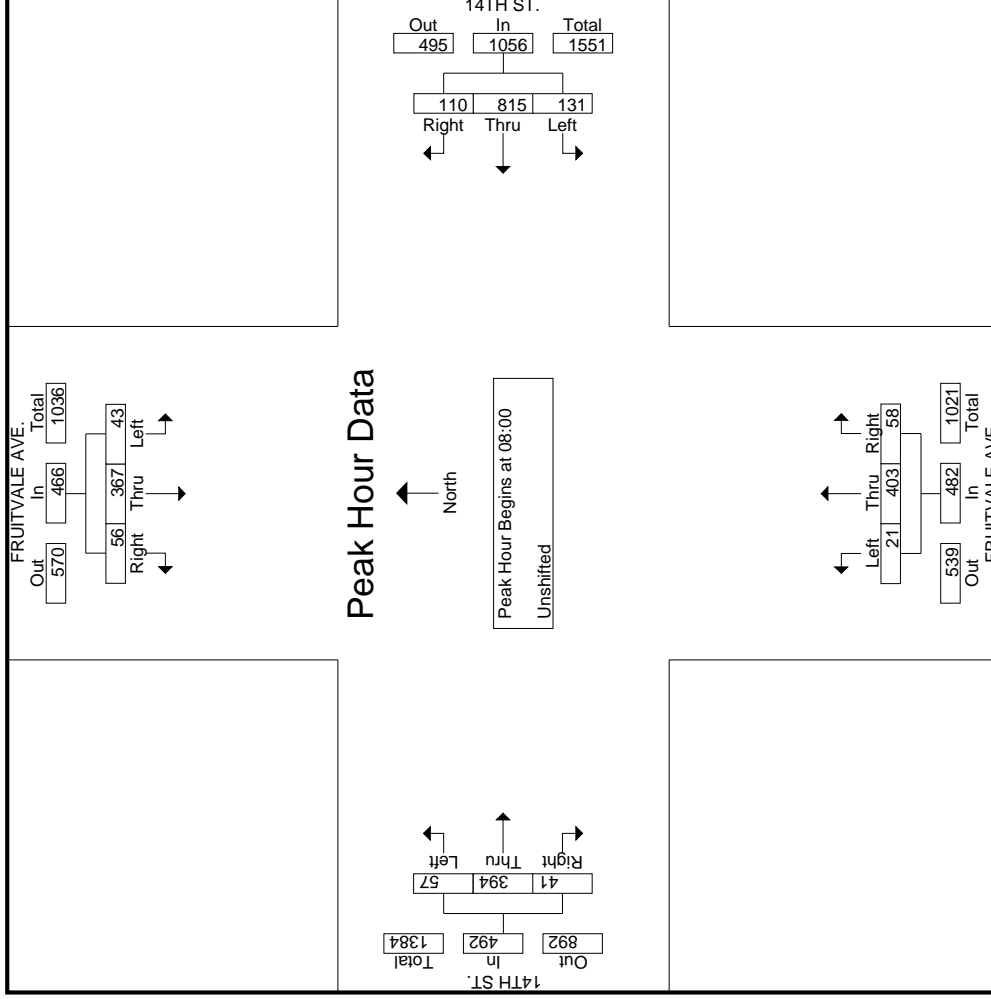
Peak Hour for Entire Intersection Begins at 08:00

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-015 FRUITVALE-14TH-T
Site Code : 00000000
Start Date : 03/11/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

16:45	3	74	25	18	156	26	200	2	149	27	178	31	193	18	242	722
17:00	2	91	13	21	132	28	181	2	136	29	167	15	196	22	233	687
17:15	3	81	14	19	128	26	173	4	156	29	189	18	199	20	237	697
17:30	4	78	6	22	107	20	149	2	159	27	188	22	197	13	232	657
Total Volume	12	324	58	80	523	100	703	10	600	112	722	86	785	73	944	2763
% App. Total	3	82.2	14.7	11.4	74.4	14.2	83.1	1.4	83.1	15.5	9.1	83.2	7.7	8.30	9.75	.957
PHF	.750	.890	.580	.909	.838	.893	.879	.625	.943	.966	.955	.694	.986	.830	.975	.957

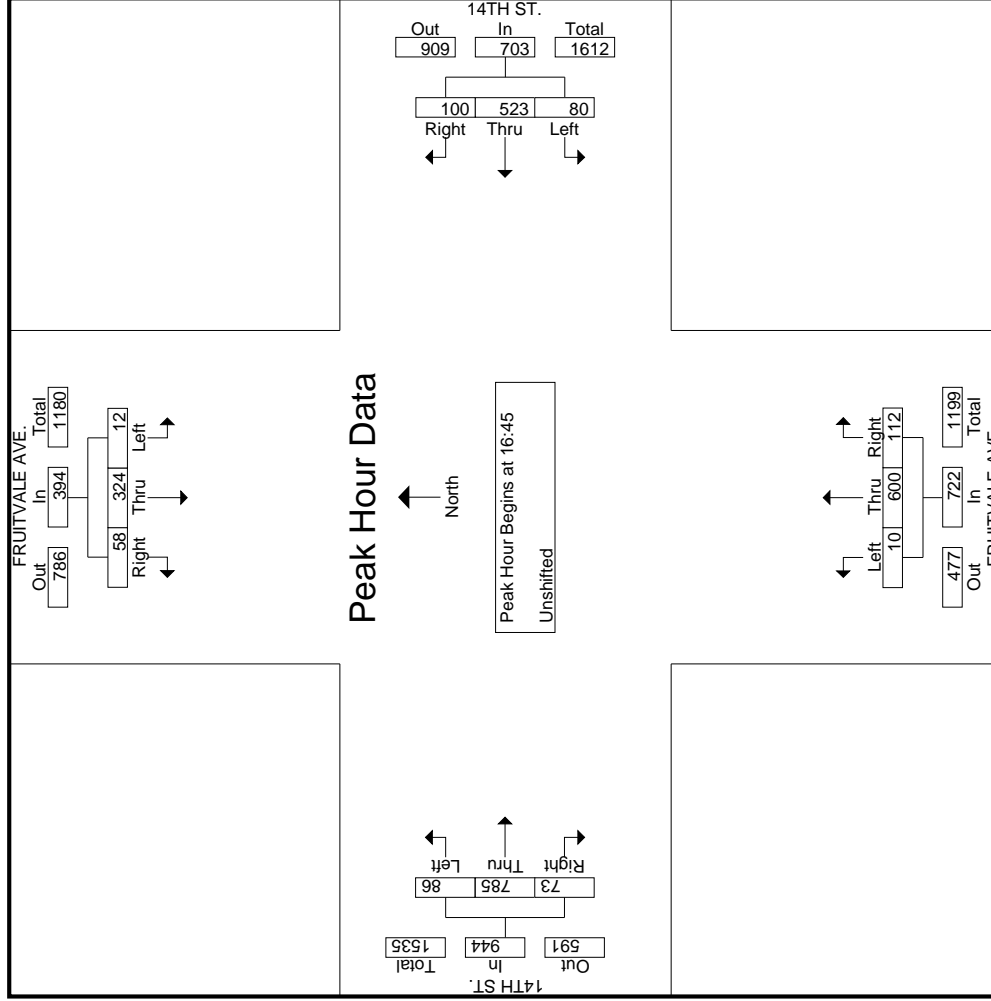
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-015 FRUITVALE-14TH-T
 Site Code : 00000000
 Start Date : 03/11/2009
 Page No : 3

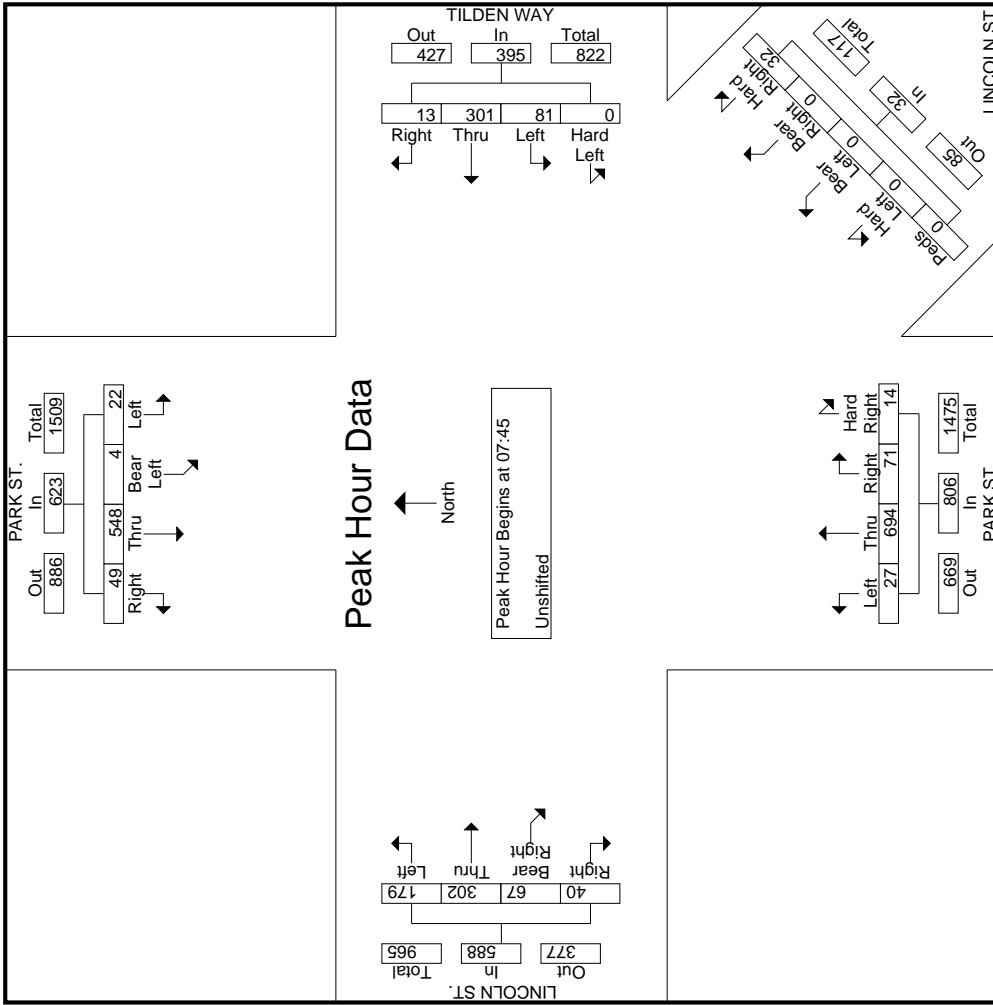


All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-014 PARK-LINCOLN-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	21	1	186	26	234	0	24	74	9	107	0	0	0	0	0	0	0	0	12	0	12	3	141	17	4	165	56	71	16	22	165	683
17:15	19	4	198	34	255	0	28	82	6	116	0	0	0	14	0	0	0	0	14	14	134	10	134	24	3	171	38	78	8	20	144	700
17:30	20	2	224	26	272	0	39	86	7	132	0	0	0	10	0	0	0	0	10	8	143	10	143	16	4	171	43	70	16	27	156	741
17:45	14	2	206	40	262	0	35	87	7	129	0	0	0	14	0	0	0	0	14	14	140	14	140	17	3	174	27	67	16	23	133	712
Total Volume	74	9	814	126	1023	0	126	329	29	484	0	0	0	50	0	0	0	0	50	35	558	74	14	681	164	286	56	92	598	2836		
% App. Total	7.2	0.9	79.6	12.3	100.0	0	26	68	6	47.3	0	0	0	5.1	0	0	0	0	5.1	81.9	10.9	2.1	27.4	47.8	9.4	15.4	27.4	47.8	9.4	15.4	2836	
PHF	.881	.563	.908	.788	.940	.000	.808	.945	.806	.917	.000	.000	.000	.893	.000	.000	.000	.000	.893	.625	.976	.771	.875	.978	.732	.917	.875	.852	.906	.957		

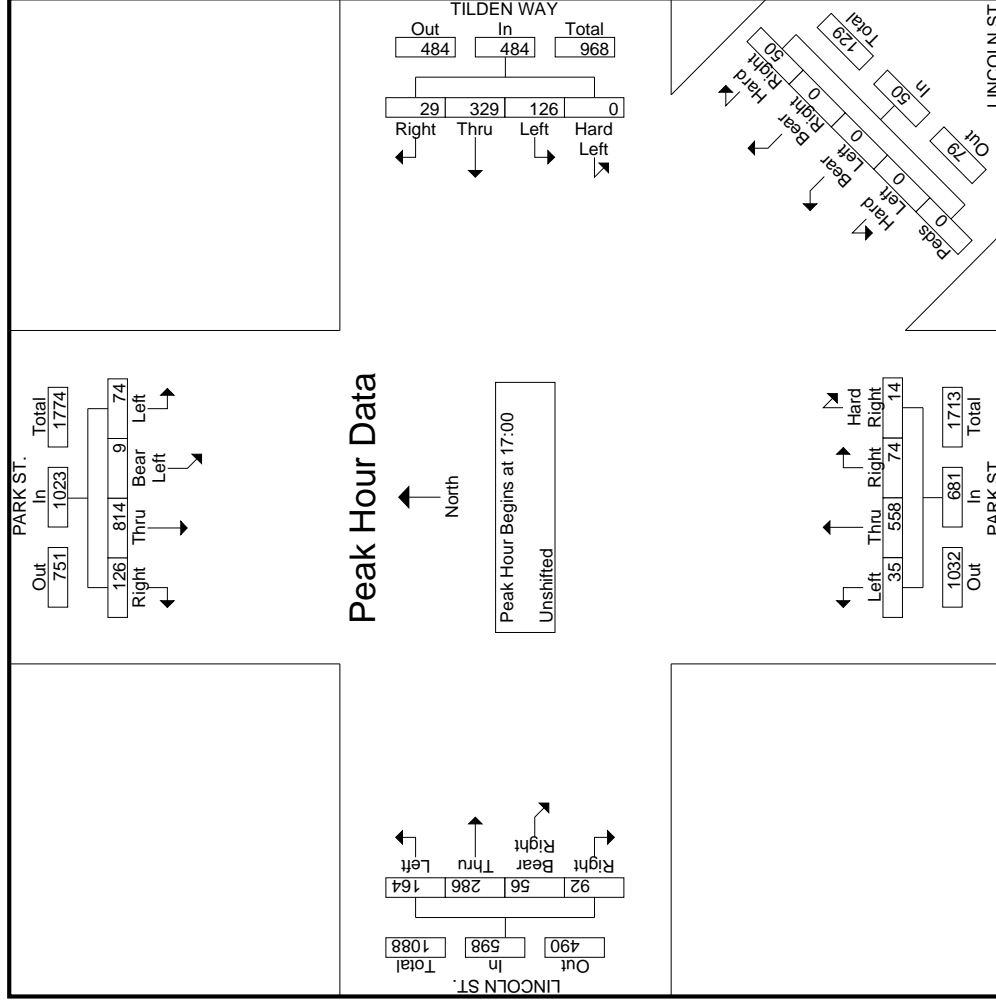
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-014 PARK-LINCOLN-T
 Site Code : 00000000
 Start Date : 03/12/2009
 Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-013 29TH+23RD-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 1

Groups Printed- Unshifted

Start Time	29TH AVE. Southbound						GLASSCOCK ST. Westbound						29TH AVE. Northbound						23RD AVE. Eastbound						
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	
	07:00	0	0	0	0	0	3	0	0	3	0	0	0	306	1	0	0	307	19	0	130	1	149	1	459
07:15	0	0	0	0	0	12	0	0	12	0	0	349	2	1	351	14	0	167	0	181	0	181	1	544	545
07:30	0	0	0	0	0	15	0	0	15	0	0	465	0	0	465	10	0	199	0	209	0	209	1	689	690
07:45	0	0	0	0	0	11	0	0	11	0	0	505	3	0	508	13	0	271	1	284	0	284	2	803	805
Total	0	0	0	0	0	41	0	0	41	0	0	1625	6	1	1631	56	0	767	2	823	0	823	5	2495	2500
08:00	0	0	0	0	0	8	0	0	8	0	0	560	0	0	560	14	0	232	3	246	0	246	7	814	821
08:15	0	0	0	0	0	9	0	0	9	0	0	567	1	0	568	13	0	227	0	240	0	240	1	817	818
08:30	0	0	0	0	0	7	0	0	7	0	0	523	3	0	526	38	0	184	0	222	0	222	5	755	760
08:45	0	0	0	0	0	12	0	0	12	0	0	438	2	0	440	29	0	212	3	241	0	241	6	693	699
Total	0	0	0	0	0	36	0	0	36	0	0	2088	6	0	2094	94	0	855	6	949	0	949	19	3079	3098
*** BREAK ***																									
16:00	0	0	0	0	0	3	0	0	3	0	0	297	4	0	301	48	0	327	1	375	0	375	4	685	689
16:15	0	0	0	0	0	6	0	0	6	0	0	353	6	0	359	38	0	330	1	368	0	368	2	733	735
16:30	0	0	0	0	0	2	0	0	2	0	0	332	1	1	333	36	0	355	0	391	0	391	1	726	727
16:45	0	0	0	0	0	2	0	0	2	0	0	336	5	0	341	36	0	364	2	400	0	400	2	743	745
Total	0	0	0	0	0	19	0	0	19	0	0	1318	16	1	1334	158	0	1376	4	1534	0	1534	9	2887	2896
17:00	0	0	0	0	0	6	0	0	6	0	0	386	5	0	391	46	0	412	0	458	0	458	1	855	856
17:15	0	0	0	0	0	7	0	0	7	0	0	354	19	0	373	70	0	415	0	485	0	485	0	865	865
17:30	0	0	0	0	0	2	0	0	2	0	0	371	2	0	373	49	0	459	0	508	0	508	0	883	883
17:45	0	0	0	0	0	5	0	0	5	0	0	324	4	0	328	52	0	402	6	454	0	454	6	787	793
Total	0	0	0	0	0	20	0	0	20	0	0	1435	30	0	1465	217	0	1688	6	1905	0	1905	7	3390	3397
Grand Total	0	0	0	0	0	116	0	0	116	0	0	6466	58	2	6524	525	0	4686	18	5211	0	5211	40	11851	11891
Approach %	0	0	0	0	0	1	0	0	1	0	0	99.1	0.9	0	10.1	0	0	89.9	0	44	0	44	0.3	99.7	
Total %	0	0	0	0	0	1	0	0	1	0	0	54.6	0.5	0	55.1	4.4	0	39.5	0	44	0	44	0.3	99.7	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:45																									
07:45	0	0	0	0	0	11	0	0	11	0	0	11	0	0	11	0	0	13	0	271	0	271	0	284	803
08:00	0	0	0	0	0	8	0	0	8	0	0	560	0	0	560	0	0	14	0	232	0	232	0	246	814
08:15	0	0	0	0	0	9	0	0	9	0	0	567	1	0	567	1	0	13	0	227	0	227	0	240	817
08:30	0	0	0	0	0	7	0	0	7	0	0	523	3	0	526	38	0	184	0	222	0	222	0	240	755
Total Volume	0	0	0	0	0	35	0	0	35	0	0	2155	7	0	2162	78	0	914	0	992	0	992	0	1014	3189
% App. Total	0	0	0	0	0	100	0	0	100	0	0	99.7	0.3	0	9.2	0	0	7.9	0	44	0	44	0.3	99.7	
PHF	.000	.000	.000	.000	.000	.795	.000	.000	.795	.000	.000	.952	.000	.950	.583	.952	.513	.843	.873	.976					

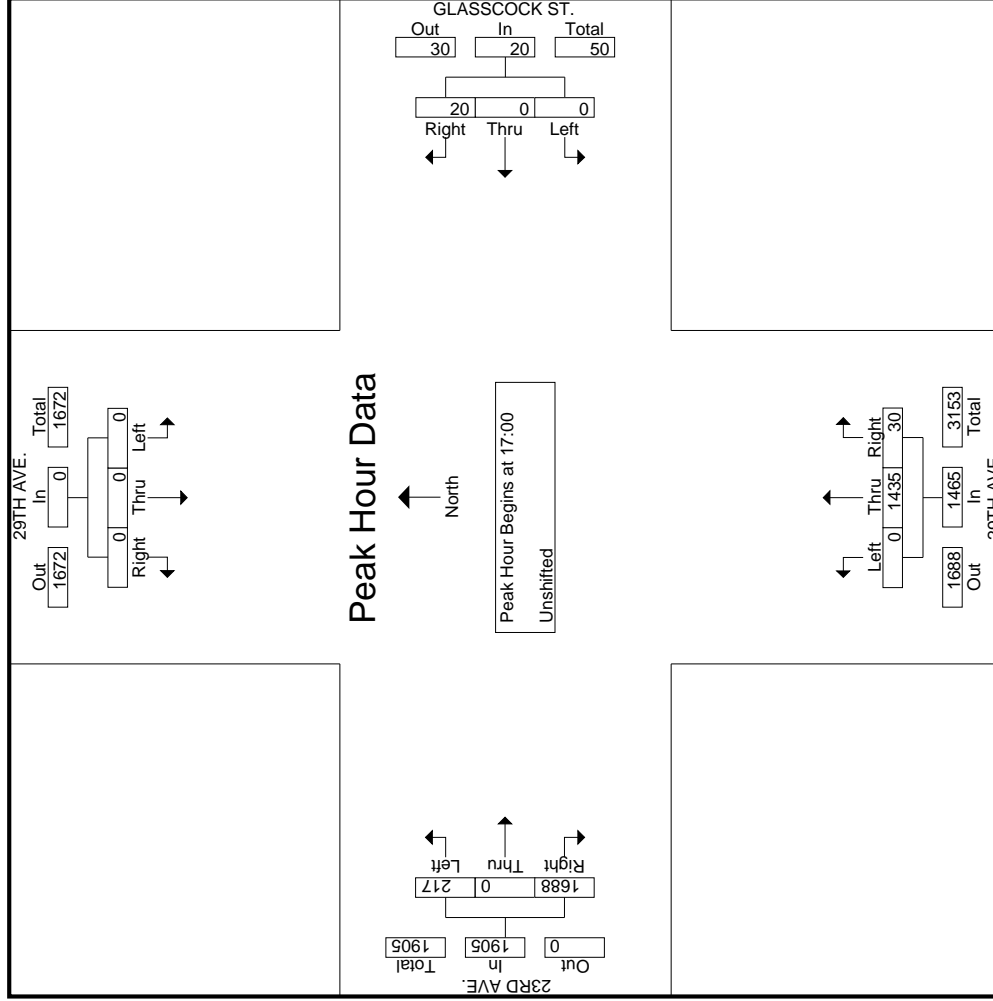
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-013 29TH+23RD-T
 Site Code : 00000000
 Start Date : 03/12/2009
 Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-012 29TH-FORD-T

Site Code : 00000000

Start Date : 03/12/2009

Page No : 1

Groups Printed- Unshifted

Start Time	29TH AVE. Southbound												29TH AVE. Northbound												FORD ST. Eastbound											
	Southwestbound				Westbound				Eastbound				Southwestbound				Westbound				Eastbound				Southwestbound				Westbound				Eastbound			
	Hand Left	Thru	Right	Peds	App. Total	Hand Left	Thru	Right	Peds	App. Total	Hand Right	Thru	Left	App. Total	Hand Left	Thru	Right	Peds	App. Total	Bear Left	Thru	Right	Peds	App. Total	Bear Left	Thru	Right	Peds	App. Total	Exch. Total	Inch. Total	Int. Total				
07:00	2	1	0	33	0	36	0	0	0	0	7	1	1	0	9	189	15	116	3	1	323	0	0	0	1	1	369	370								
16:15	3	1	0	39	0	43	0	0	0	14	238	20	123	1	14	238	20	123	1	0	382	0	0	1	1	440	440									
07:30	3	0	0	51	0	54	0	0	0	13	307	41	133	1	13	307	41	133	1	0	482	0	0	2	2	551	551									
07:45	2	0	0	70	0	72	0	0	0	17	334	37	141	7	17	334	37	141	7	0	525	0	0	0	0	626	626									
Total	10	2	0	193	5	203	0	0	0	53	1068	123	513	8	53	1068	123	513	8	1	1712	0	0	4	4	1974	1987									
08:00	2	1	0	55	0	58	0	0	0	21	344	72	143	1	21	344	72	143	1	0	560	0	0	3	3	642	645									
08:15	1	0	0	42	0	43	0	0	0	17	394	70	128	3	2	394	70	128	3	2	595	0	0	2	2	657	662									
08:30	0	0	0	48	3	48	0	0	0	26	361	53	136	3	0	26	361	53	136	3	0	553	0	0	0	8	627	635								
08:45	2	0	0	52	2	54	0	0	0	18	318	35	117	5	3	18	318	35	117	5	0	475	0	0	5	547	552									
Total	5	1	0	197	5	203	0	0	0	82	1417	230	524	12	3	82	1417	230	524	12	3	2183	0	0	5	5	2473	2494								
BREAK																																				
16:00	1	0	0	63	0	64	0	0	0	11	190	53	106	7	0	11	190	53	106	7	0	356	0	0	0	0	431	434								
16:15	2	0	0	55	1	57	0	0	0	2	1	1	4	0	2	1	1	4	0	0	392	0	0	0	0	2	460	462								
16:30	4	0	0	69	0	73	0	0	0	14	214	43	103	7	0	14	214	43	103	7	0	367	0	0	2	454	456									
16:45	1	1	0	60	0	62	0	0	0	13	208	48	115	1	0	13	208	48	115	1	0	372	0	0	2	7	449	456								
Total	8	1	0	247	1	256	0	0	0	37	4	8	13	8	13	37	4	8	13	8	13	1487	0	0	2	2	1794	1808								
17:00	0	0	0	67	1	67	0	0	0	18	224	55	136	9	0	18	224	55	136	9	0	424	0	0	2	2	511	512								
17:15	1	0	0	65	1	67	0	0	0	18	227	55	136	3	0	18	227	55	136	3	0	424	0	0	2	3	507	507								
17:30	1	1	0	65	0	67	0	0	0	11	234	57	107	6	1	11	234	57	107	6	1	404	0	0	2	2	484	486								
17:45	1	0	0	60	1	61	0	0	0	11	214	52	104	5	4	11	214	52	104	5	4	375	0	0	4	4	451	462								
Total	2	2	0	254	3	258	0	0	0	58	909	231	453	23	5	58	909	231	453	23	5	1616	0	0	11	11	1943	1960								
Grand Total	25	6	0	891	14	922	0	0	0	242	4245	776	1915	62	9	242	4245	776	1915	62	9	6998	0	0	22	22	8184	8249								
Approach %	2.7	0.7	0	96.6		11.3				76.9	12	11.2	0.9		3	76.9	12	11.2	0.9		100	0	0	0	0	0.3	0.8	99.2								
Total %	0.3	0.1	0	10.9						2.3	0.4	0.3	0.8			2.3	0.4	0.3	0.8		85.5	0	0	0	0	0.3	0.8									

Start Time	29TH AVE. Southbound												29TH AVE. Northbound												FORD ST. Eastbound											
	Hand Left	Thru	Right	Peds	App. Total	Hand Left	Thru	Right	Peds	App. Total	Hand Right	Thru	Left	App. Total	Hand Left	Thru	Right	Peds	App. Total	Bear Left	Thru	Right	Peds	App. Total	Bear Left	Thru	Right	Peds	App. Total	Exch. Total	Inch. Total	Int. Total				
	07:45	2	0	0	70	72	0	0	0	0	4	17	334	47	141	3	525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	614				
08:00	2	1	0	55	58	0	0	0	0	1	21	344	72	143	1	560	0	0	0	0	0	0	0	0	0	0	0	3	3	642						
08:15	1	0	0	42	43	0	0	0	0	2	17	394	70	128	3	595	0	0	0	0	0	0	0	0	0	0	2	2	657							
08:30	0	0	0	48	48	0	0	0	0	1	26	361	53	136	3	553	0	0	0	0	0	0	0	0	0	0	0	0	0	627						
Total Volume	5	1	0	215	221	0	0	0	0	8	81	1433	242	548	10	2233	0	0	0	0	0	0	0	0	0	0	5	5	2540							
% App. Total	2.3	0.5	0	97.3		0	0	0	0	9.9	0.4	64.2	10.8	24.5	0.4	93.8	0	0	0	0	0	0	0	0	0	0	100	100	967							
PHF	.625	.250	.000	.768	.767	.000	.000	.000	.000	.779	.500	.909	.840	.958	.833	.938	.000	.000	.000	.000	.000	.417	.417	.417	.417	.417	.417	.417	.417	.967						

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45

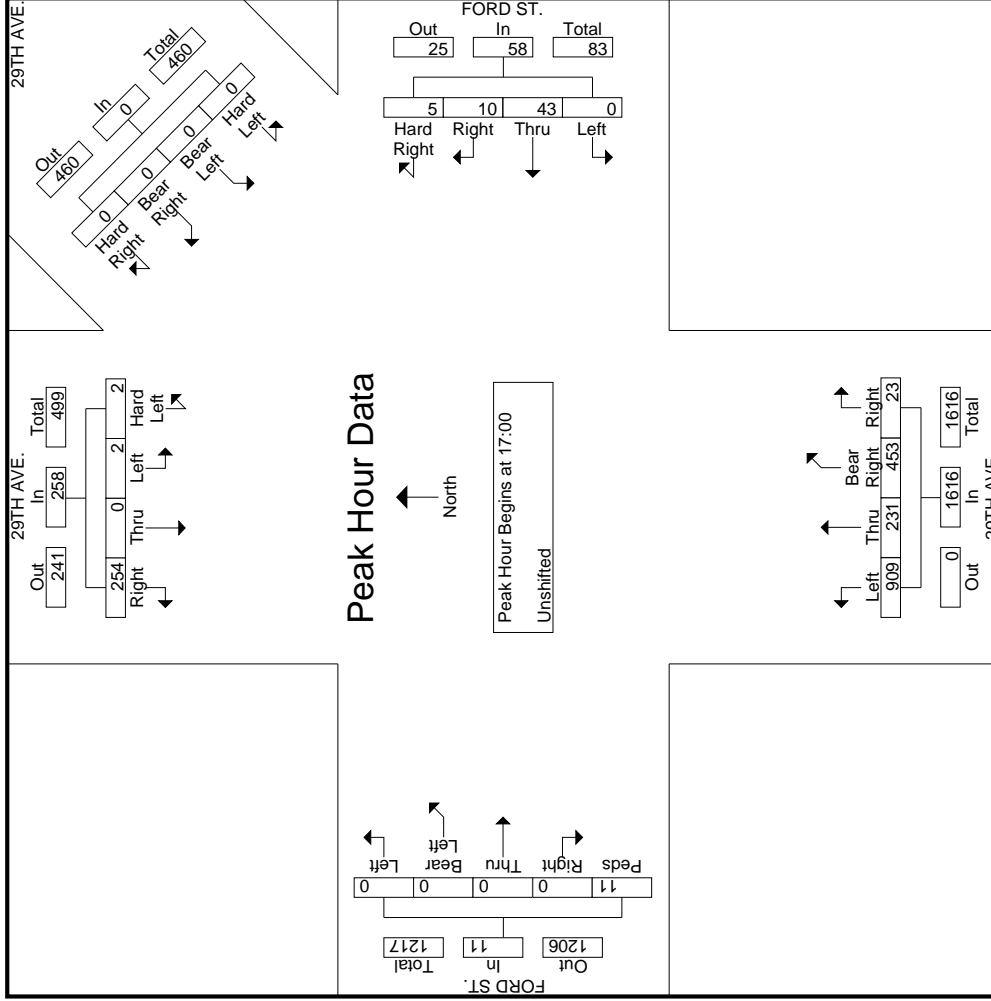
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-012 29TH-FORD-T
 Site Code : 00000000
 Start Date : 03/12/2009
 Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-011 23RD-FORD-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 1

Groups Printed- Unshifted

Start Time	23RD AVE. Southbound						FORD ST. Westbound						23RD AVE. Northbound						KENNEDY ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:00	0	43	1	0	44	0	32	18	176	3	226	0	0	0	0	0	0	77	4	347	0	77	4
07:15	0	58	3	0	61	0	35	17	254	0	306	0	0	0	0	0	89	0	456	0	89	0	456	
07:30	0	71	4	0	75	0	47	27	305	3	379	0	0	0	0	0	100	1	554	5	100	5	554	
07:45	0	89	4	0	93	0	51	27	340	2	418	0	0	0	0	0	141	1	652	3	141	3	652	
Total	0	261	12	0	273	0	165	89	1075	8	1329	0	0	0	0	0	407	2	2009	12	407	12	2009	
08:00	0	89	2	0	91	0	38	28	353	1	419	0	0	0	0	0	107	5	617	7	107	7	617	
08:15	0	79	4	1	83	0	36	49	361	0	446	0	0	0	0	0	141	0	670	1	141	1	670	
08:30	0	64	2	0	66	0	29	56	340	0	425	0	0	0	0	0	136	0	627	0	136	0	627	
08:45	0	67	0	0	67	0	44	39	307	0	390	0	0	0	0	0	132	0	589	0	132	0	589	
Total	0	299	8	1	307	0	147	172	1361	1	1680	0	0	0	0	0	516	5	2503	8	516	8	2503	

BREAK

16:00	0	138	4	1	142	0	47	11	206	0	264	0	0	0	0	0	209	0	615	1	209	1	615
16:15	0	124	6	0	130	0	51	24	238	2	313	0	0	0	0	0	207	1	650	3	207	3	650
16:30	0	135	4	0	139	0	54	20	227	1	301	0	0	0	0	0	211	1	653	2	211	2	653
16:45	0	127	1	0	128	0	66	10	203	0	279	0	0	0	0	0	212	1	619	1	212	1	619
Total	0	524	15	1	539	0	218	65	874	3	1157	0	0	0	0	0	839	3	2535	7	839	7	2535
17:00	0	149	2	2	151	0	69	21	220	0	310	0	0	0	0	0	251	1	712	3	251	3	712
17:15	0	151	2	1	153	0	62	17	234	1	313	0	0	0	0	0	273	1	744	5	273	5	744
17:30	0	184	1	1	185	0	63	18	238	0	319	0	0	0	0	0	266	2	773	3	266	3	770
17:45	0	169	3	0	172	0	58	18	205	0	281	0	0	0	0	0	239	2	694	2	239	2	692
Total	0	653	8	4	661	0	252	74	897	1	1223	0	0	0	0	0	1029	6	2913	13	1029	13	2913

Grand Total	0	1737	43	6	1780	0	782	400	4207	13	5389	0	0	0	0	0	2791	16	9960	40	2791	40	9960
Approach %	0	97.6	2.4		17.9		14.5	7.4	78.1		54.1						100		99.6	0.4	28		99.6
Total %	0	17.4	0.4		17.9		7.9	4	42.2		54.1						28		99.6	0.4	28		99.6

Start Time	23RD AVE. Southbound						FORD ST. Westbound						23RD AVE. Northbound						KENNEDY ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:45	0	89	2	0	91	0	33	27	340	0	418	0	0	0	0	0	0	141	0	141	0	141	0
08:00	0	89	2	0	91	0	33	28	353	0	419	0	0	0	0	0	0	107	0	107	0	107	0	107
08:15	0	79	4	1	83	0	36	49	361	0	446	0	0	0	0	0	141	0	617	1	141	1	617	
08:30	0	64	2	0	66	0	29	56	340	0	425	0	0	0	0	0	136	0	627	0	136	0	627	
Total Volume	0	321	12	0	333	0	154	160	1394	1708	1708	0	0	0	0	0	525	0	2566	525	525	525	2566	
% App. Total	0	96.4	3.6		17.9		9	9.4	81.6		81.6						100		99.6	0.4	100		99.6	
PHF	.000	.902	.750		.895		.755	.714	.965	.957	.957	.000	.000	.000	.000	.000	.000	.931	.931	.931	.931	.931	.931	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

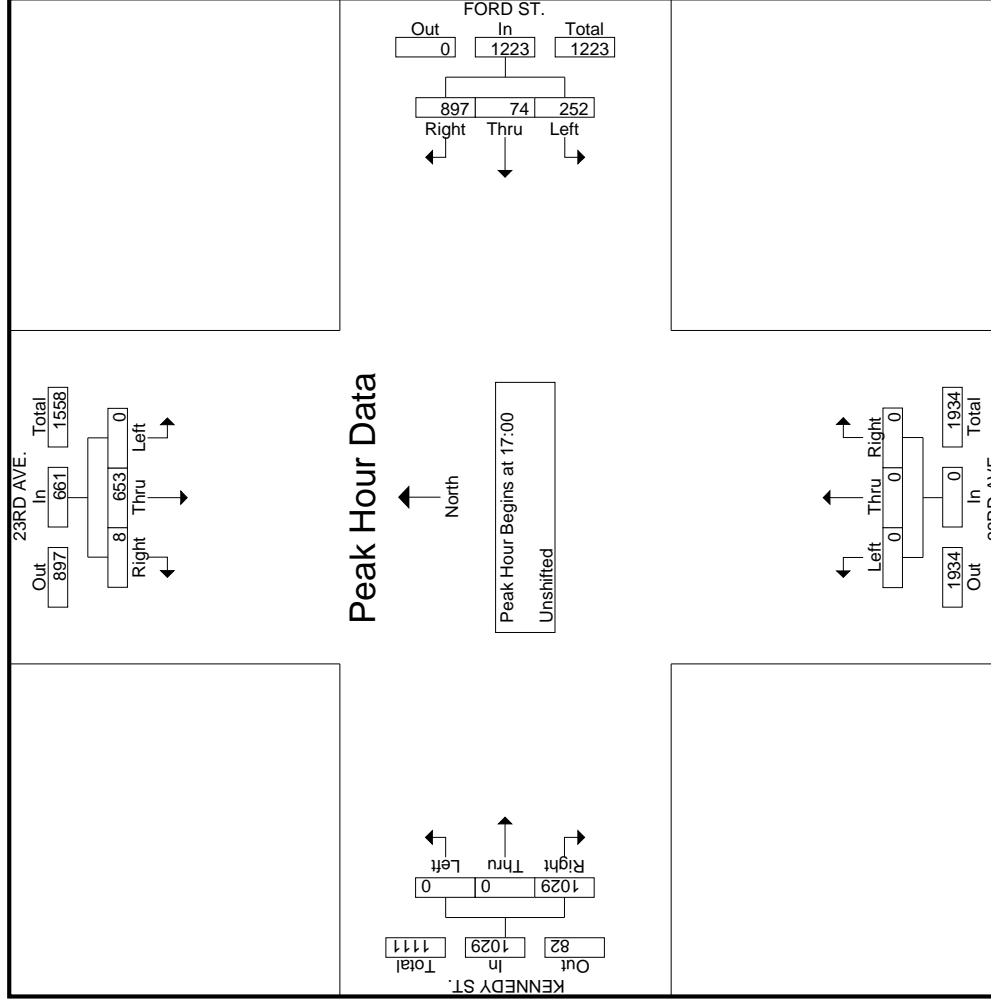
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-011 23RD-FORD-T
Site Code : 00000000
Start Date : 03/12/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-010 NB I-880 RAMP-9TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 1

Groups Printed- Unshifted

Start Time	29TH AVE. Southbound										E. 9TH ST. Westbound						NB I-880 OFF RAMP Northbound						E. 8TH ST. Eastbound													
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Exclu. Total		Inclu. Total		Int. Total	
07:00	0	0	0	0	0	0	0	0	97	19	26	34	0	79	0	4	0	0	4	0	4	0	0	0	0	0	0	0	0	0	180	0	180	0	180	
07:15	0	0	0	0	0	0	0	142	20	33	39	0	92	0	3	0	0	3	0	3	0	0	0	0	0	0	0	0	237	0	237	0	237			
07:30	0	0	0	0	0	0	0	181	20	30	41	0	91	2	7	0	0	9	0	7	0	0	0	0	0	0	0	0	281	0	281	0	281			
07:45	0	0	0	0	0	0	0	201	19	30	38	0	87	3	5	0	0	8	0	5	0	0	0	0	0	0	0	0	296	0	296	0	296			
Total	0	0	0	0	0	0	0	621	78	119	152	0	349	5	19	0	0	24	0	19	0	0	0	0	0	0	0	0	994	0	994	0	994			
08:00	0	0	0	0	0	0	0	213	14	31	15	0	60	6	1	0	0	7	0	1	0	0	0	0	0	0	0	0	280	0	280	0	280			
08:15	0	0	0	0	0	0	0	207	29	27	23	0	79	8	7	0	0	15	0	7	0	0	0	0	0	0	0	0	301	0	301	0	301			
08:30	0	0	0	0	0	0	0	197	17	23	17	0	57	3	5	0	0	8	0	5	0	0	0	0	0	0	0	0	262	0	262	0	262			
08:45	0	0	0	0	0	0	0	195	18	21	19	0	58	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	256	0	256	0	256			
Total	0	0	0	0	0	0	0	812	78	102	74	0	254	20	13	0	0	33	0	13	0	0	0	0	0	0	0	0	1099	0	1099	0	1100			

*** BREAK ***

16:00	0	0	0	0	0	0	0	110	19	65	84	0	168	1	7	0	0	8	0	0	0	0	0	0	0	0	0	0	286	0	286	0	286
16:15	0	0	0	0	0	0	0	132	21	44	70	0	135	0	5	0	0	5	0	5	0	0	0	0	0	0	0	0	272	0	272	0	272
16:30	0	0	0	0	0	0	0	121	17	50	90	0	157	0	6	0	0	6	0	6	0	0	0	0	0	0	0	0	284	0	284	0	284
16:45	0	0	0	0	0	0	0	106	24	49	70	0	143	0	3	0	0	3	0	3	0	0	0	0	0	0	0	0	252	0	252	0	252
Total	0	0	0	0	0	0	0	469	81	208	314	0	603	1	21	0	0	22	0	21	0	0	0	0	0	0	0	0	1094	0	1094	0	1095
17:00	0	0	0	0	0	0	0	107	20	32	88	0	140	0	9	0	0	9	0	9	0	0	0	0	0	0	0	0	256	0	256	0	256
17:15	0	0	0	0	0	0	0	128	22	72	98	0	192	0	7	0	0	7	0	7	0	0	0	0	0	0	0	0	327	0	327	0	328
17:30	0	0	0	0	0	0	0	129	25	41	106	0	172	0	9	0	0	9	0	9	0	0	0	0	0	0	0	0	310	0	310	0	310
17:45	0	0	0	0	0	0	0	132	19	35	65	0	119	0	11	0	0	11	0	11	0	0	0	0	0	0	0	0	262	0	262	0	262
Total	0	0	0	0	0	0	0	496	86	180	357	0	623	0	36	0	0	36	0	36	0	0	0	0	0	0	0	0	1155	0	1155	0	1156
Grand Total	0	0	0	0	0	0	0	2398	323	609	897	0	1829	26	89	0	0	115	0	89	0	0	0	0	0	0	0	0	4342	0	4342	0	4345
Approach %	0	0	0	0	0	0	0	55.2	17.7	33.3	49		42.1	22.6	77.4	0		77.4	0										0		0		
Total %	0	0	0	0	0	0	0	55.2	7.4	14	20.7		42.1	0.6	2	0		2	0										0.1	99.9			

Start Time	29TH AVE. Southbound						E. 9TH ST. Westbound						NB I-880 OFF RAMP Northbound						E. 8TH ST. Eastbound																	
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Exclu. Total		Inclu. Total		Int. Total	
07:30	0	0	0	0	0	0	0	181	0	172	9	0	41	20	30	41	0	91	2	7	0	0	0	0	0	0	0	0	9	0	9	0	9			
07:45	0	0	0	0	0	0	0	201	0	188	13	0	38	19	30	38	0	87	3	5	0	0	0	0	0	0	0	0	8	0	8	0	8			
08:00	0	0	0	0	0	0	0	213	0	184	29	0	15	14	31	15	0	60	6	1	0	0	0	0	0	0	0	0	7	0	7	0	7			
08:15	0	0	0	0	0	0	0	207	0	168	39	0	23	29	27	23	0	79	8	7	0	0	0	0	0	0	0	0	15	0	15	0	15			
Total Volume	0	0	0	0	0	0	0	802	0	712	90	0	117	82	118	117	0	317	19	20	0	0	0	0	0	0	0	0	39	0	39	0	39			
% App. Total	0	0	0	0	0	0	0	11.2	0	88.8	11.2	0	36.9	25.9	37.2	36.9	0	48.7	51.3	0	0	0	0	0	0	0	0	0	650	0	650	0	652			
PHF	.000	.000	.000	.000	.000	.000	.000	.941	.000	.947	.577	.000	.713	.707	.952	.713	.000	.871	.594	.714	.000	.000	.000	.000	.000	.000	.000	.000	.650	.000	.650	.000	.962			

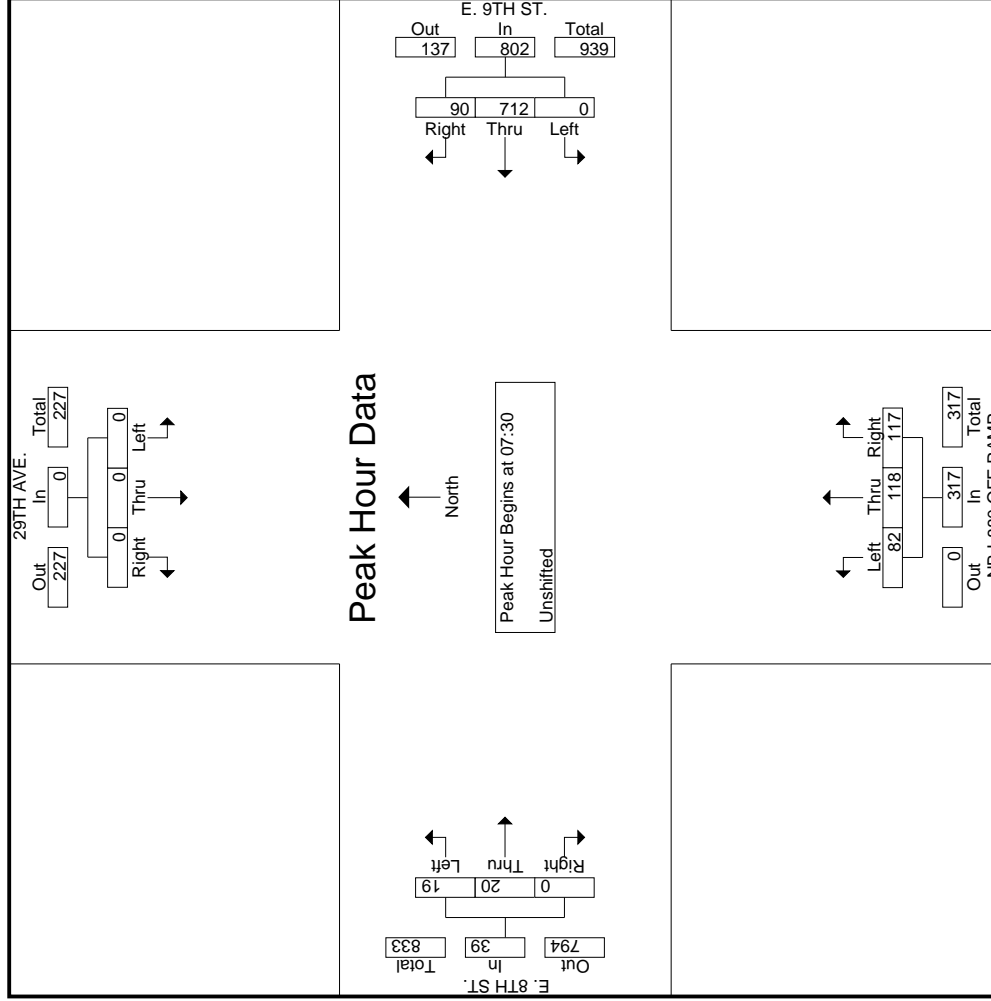
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700
F (916) 786-2879

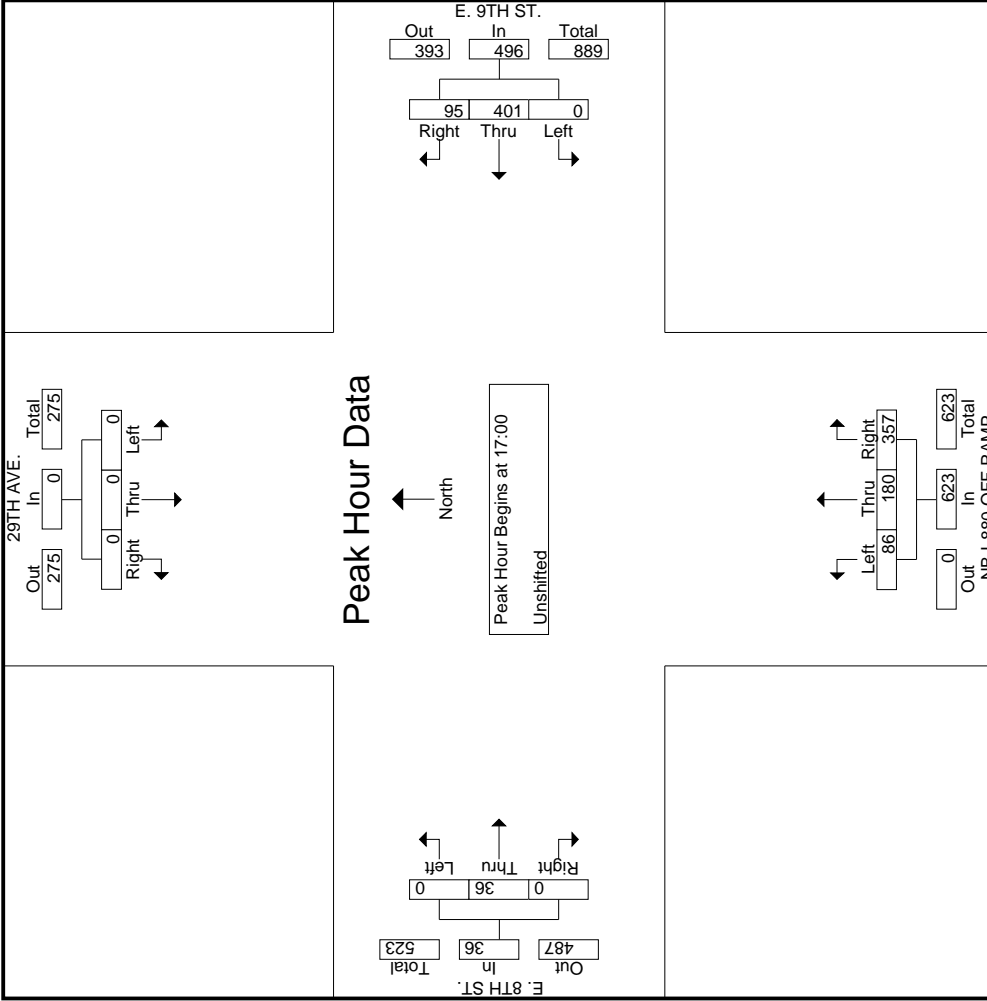
OAKLAND

File Name : 09-7109-010 NB I-880 RAMP-9TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Time	Out	In	Total	Right	Thru	Left	PHF
17:00	0	0	0	0	0	0	.000
17:15	0	0	0	0	0	0	.000
17:30	0	0	0	0	0	0	.000
17:45	0	0	0	0	0	0	.000
Total Volume	0	0	0	0	0	0	.000
% App. Total	0	0	0	0	0	0	.000
PHF	0	0	0	0	0	0	.000
	21	107	20	32	88	140	.818
	25	128	22	72	98	192	.818
	23	129	25	41	106	172	.818
	26	132	19	35	65	119	.818
	95	496	86	180	357	623	.818
	19.2	939	13.8	28.9	57.3	84.2	.818
	.913	.939	.860	.625	.842	.811	.818
	.946	.946	.946	.946	.946	.946	.883

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-009 LISBON-8TH-T
 Site Code : 00000000
 Start Date : 03/10/2009
 Page No : 1

Groups Printed- Unshifted

Start Time	LISBON AVE. Southbound						E. 8TH ST. Westbound						Northbound						NB I-880 ON RAMP Eastbound						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclb. Total	Inclu. Total	Int. Total		
07:00	1	0	3	0	4	0	82	14	0	96	0	0	0	0	0	0	0	0	0	0	0	100	100	100	
07:15	3	0	8	0	11	0	163	7	0	170	0	0	0	0	0	0	0	0	0	0	0	181	181	181	
07:30	4	0	10	0	14	0	199	4	0	203	0	0	0	0	0	0	0	0	0	0	0	217	217	217	
07:45	2	0	8	0	10	0	197	6	0	203	0	0	0	0	0	0	0	0	0	0	0	213	213	213	
Total	10	0	29	0	39	0	641	31	0	672	0	0	0	0	0	0	0	0	0	0	0	711	711	711	
08:00	5	0	8	0	13	0	195	4	0	199	0	0	0	0	0	0	0	0	0	0	0	212	212	212	
08:15	7	0	9	0	16	0	190	10	0	200	0	0	0	0	0	0	0	0	0	0	0	216	216	216	
08:30	2	0	10	0	12	0	200	11	0	211	0	0	0	0	0	0	0	0	0	0	0	223	223	223	
08:45	4	0	12	0	16	0	177	15	0	192	0	0	0	0	0	0	0	0	0	0	0	208	208	208	
Total	18	0	39	0	57	0	762	40	0	802	0	0	0	0	0	0	0	0	0	0	0	859	859	859	
*** BREAK ***																									
16:00	4	0	11	0	15	0	97	14	0	111	0	0	0	0	0	0	0	0	0	0	0	126	126	126	
16:15	2	0	3	0	5	0	131	8	0	139	0	0	0	0	0	0	0	0	0	0	0	144	144	144	
16:30	4	0	5	0	9	0	104	6	0	110	0	0	0	0	0	0	0	0	0	0	0	119	119	119	
16:45	2	0	1	0	3	0	110	7	0	117	0	0	0	0	0	0	0	0	0	0	0	120	120	120	
Total	12	0	20	0	32	0	442	35	0	477	0	0	0	0	0	0	0	0	0	0	0	509	509	509	
17:00	7	0	4	0	11	0	109	14	0	123	0	0	0	0	0	0	0	0	0	0	0	134	134	134	
17:15	3	0	6	0	9	0	122	11	0	133	0	0	0	0	0	0	0	0	0	0	0	142	142	142	
17:30	3	0	3	0	6	0	123	17	0	140	0	0	0	0	0	0	0	0	0	0	0	146	146	146	
17:45	6	0	3	0	9	0	122	6	0	128	0	0	0	0	0	0	0	0	0	0	0	137	137	137	
Total	19	0	16	0	35	0	476	48	0	524	0	0	0	0	0	0	0	0	0	0	0	559	559	559	
Grand Total	59	0	104	0	163	0	2321	154	0	2475	0	0	0	0	0	0	0	0	0	0	0	2638	2638	2638	
Approach %	36.2	0	63.8	0	6.2	0	93.8	6.2	0	93.8	0	0	0	0	0	0	0	0	0	0	0	100	100	100	
Total %	2.2	0	3.9	0	6.2	0	88	5.8	0	93.8	0	0	0	0	0	0	0	0	0	0	0	100	100	100	
*** BREAK ***																									
Start Time	LISBON AVE. Southbound						E. 8TH ST. Westbound						Northbound						NB I-880 ON RAMP Eastbound						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
07:45	2	0	0	0	8	0	197	6	0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213
08:00	5	0	8	0	13	0	195	4	0	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212
08:15	7	0	9	0	16	0	190	10	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216
08:30	2	0	10	0	12	0	200	11	0	211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	223
08:45	4	0	12	0	16	0	177	15	0	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208
Total	16	0	35	0	51	0	782	31	0	813	0	0	0	0	0	0	0	0	0	0	0	0	0	0	864
% App. Total	31.4	0	68.6	0	6.2	0	96.2	3.8	0	96.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96.9
PHF	.571	.000	.875	.000	.797	.000	.978	.705	.963	.963	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.969	

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

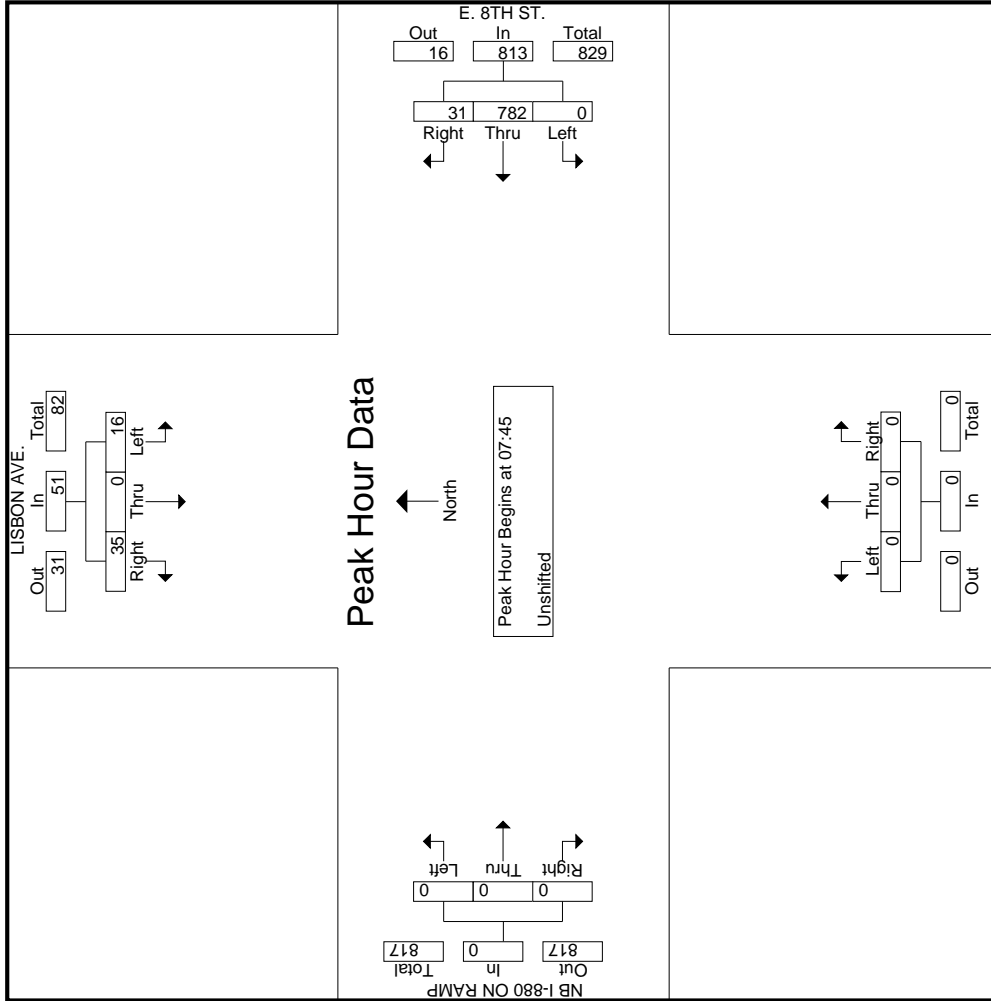
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-009 LISBON-8TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

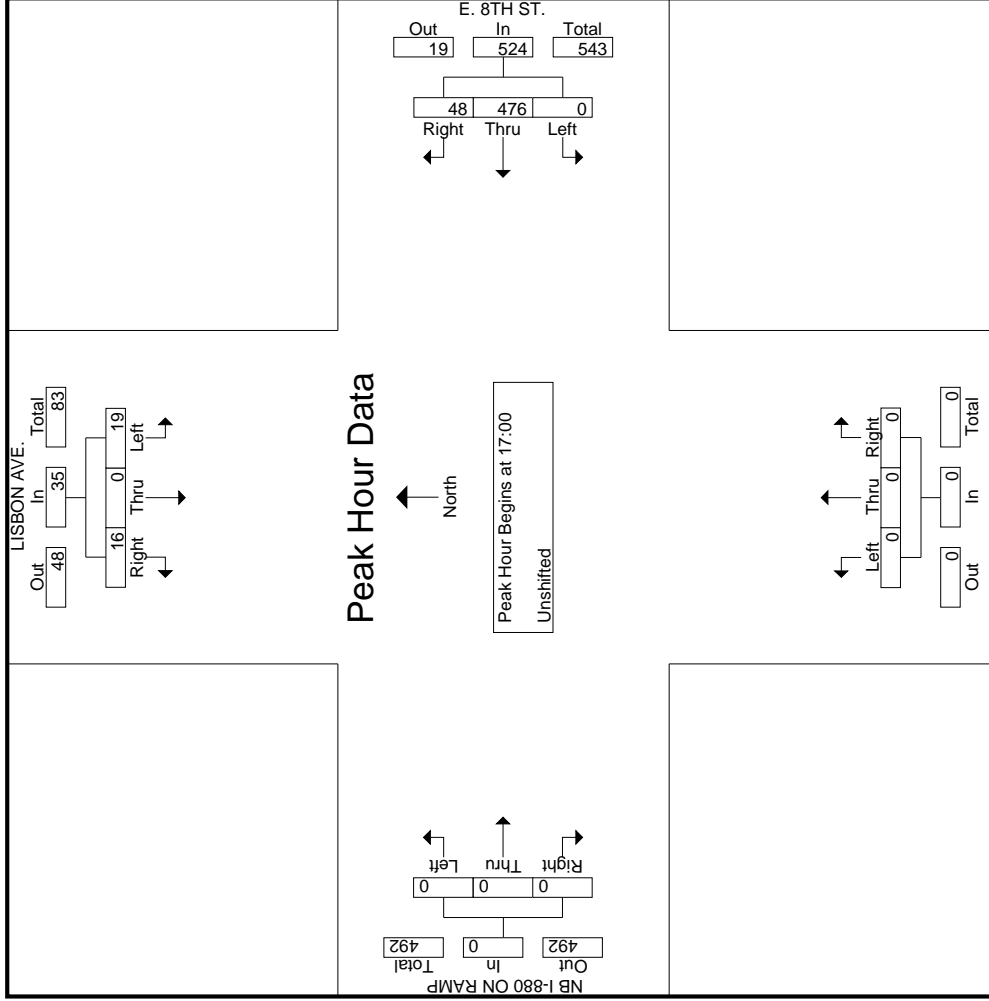
Time	17:00	17:15	17:30	17:45	Total Volume	% App. Total	PHF	17:00	17:15	17:30	17:45	Total	% App. Total	PHF
17:00	7	3	3	6	19	54.3	.679	11	9	6	9	35	7.95	.795
17:15	0	0	0	3	0	0	0	14	11	17	6	48	9.2	.967
17:30	0	0	0	0	0	0	0	109	123	133	140	524	936	.936
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	7	3	3	6	19	54.3	.679	11	9	6	9	35	7.95	.795
% App. Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PHF	.679	.000	.667	.667	.667	.667	.667	.936	.706	.967	.000	.936	.000	.936

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-009 LISBON-8TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-008 29TH AVE-12TH ST-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 1

Groups Printed- Unshifted

Start Time	29TH AVE. Southbound						12TH ST. Westbound						29TH AVE. Northbound						12TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:00	4	25	6	3	35	6	50	3	0	59	9	21	18	2	48	0	28	2	3	30	8	172	180
07:15	2	30	5	7	37	21	65	7	2	93	14	30	16	1	60	4	40	7	4	51	14	241	255	
07:30	6	52	12	4	70	16	107	7	3	130	26	37	28	6	91	3	53	16	3	72	16	363	379	
07:45	9	66	16	9	91	18	143	11	2	172	25	42	26	20	93	4	80	13	1	97	32	453	485	
Total	21	173	39	23	233	61	365	28	7	454	74	130	88	29	292	11	201	38	11	250	70	1229	1299	
08:00	12	69	19	22	100	28	171	25	7	224	34	52	34	17	120	5	93	18	2	116	48	560	608	
08:15	15	69	20	25	104	30	171	20	3	221	53	49	46	6	148	6	99	26	0	131	34	604	638	
08:30	11	55	18	6	84	20	164	9	1	193	42	40	32	14	114	8	99	13	0	120	21	511	532	
08:45	11	40	20	16	71	18	148	10	4	176	25	30	20	7	75	7	66	21	3	94	30	416	446	
Total	49	233	77	69	359	96	654	64	15	814	154	171	132	44	457	26	357	78	5	461	133	2091	2224	

BREAK

16:00	9	36	8	13	53	18	83	12	9	113	39	80	30	10	149	8	159	36	3	203	35	518	553
16:15	13	37	6	14	56	22	86	19	13	127	41	80	25	2	146	6	170	36	4	212	33	541	574
16:30	13	58	4	7	75	21	84	27	7	132	27	74	44	6	145	6	192	40	2	238	22	590	612
16:45	9	40	10	5	59	20	99	19	8	138	24	39	28	5	91	4	148	22	2	174	20	462	482
Total	44	171	28	39	243	81	352	77	37	510	131	273	127	23	531	24	669	134	11	827	110	2111	2221
17:00	14	41	10	11	65	17	99	17	9	133	53	69	39	5	161	13	160	50	3	223	28	582	610
17:15	28	48	18	6	94	31	87	41	2	159	60	77	76	9	213	22	177	65	3	264	20	730	750
17:30	20	59	10	13	89	23	80	16	0	119	44	67	49	16	160	9	155	32	2	196	31	564	595
17:45	9	48	8	9	65	20	80	17	5	117	40	65	34	4	139	6	131	45	1	182	19	503	522
Total	71	196	46	39	313	91	346	91	16	528	197	278	198	34	673	50	623	192	9	865	98	2379	2477
Grand Total	185	773	190	170	1148	329	1717	260	75	2306	556	852	545	130	1953	111	1850	442	36	2403	411	7810	8221
Approach %	16.1	67.3	16.6		14.7	14.3	74.5	11.3		29.5	28.5	43.6	27.9		25	4.6	77	18.4		30.8	5	95	
Total %	2.4	9.9	2.4		14.7	4.2	22	3.3		29.5	7.1	10.9	7		25	1.4	23.7	5.7		30.8	5	95	

Start Time	29TH AVE. Southbound						12TH ST. Westbound						29TH AVE. Northbound						12TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	07:45	9	66	16		91	18	143	11		172	25	42	26		93	4	80	13		97	13	97	453
08:00	12	69	19		100	28	171	25		224	34	52	34		120	5	93	18		116	18	116	560	
08:15	15	69	20		104	30	171	20		221	53	49	46		148	6	99	26		131	26	131	604	
08:30	11	55	18		84	20	164	9		193	42	40	32		114	8	99	13		120	13	120	511	
Total Volume	47	259	73		379	96	649	65		810	154	183	138		475	23	371	70		464	70	464	2128	
% App. Total	12.4	68.3	19.3		19.3	11.9	80.1	8		8	32.4	38.5	29.1		25	5	80	15.1		30.8	5	95		
PHF	.783	.938	.913		.911	.800	.949	.650		.904	.726	.880	.750		.802	.719	.937	.673		.885	.673	.885	.881	

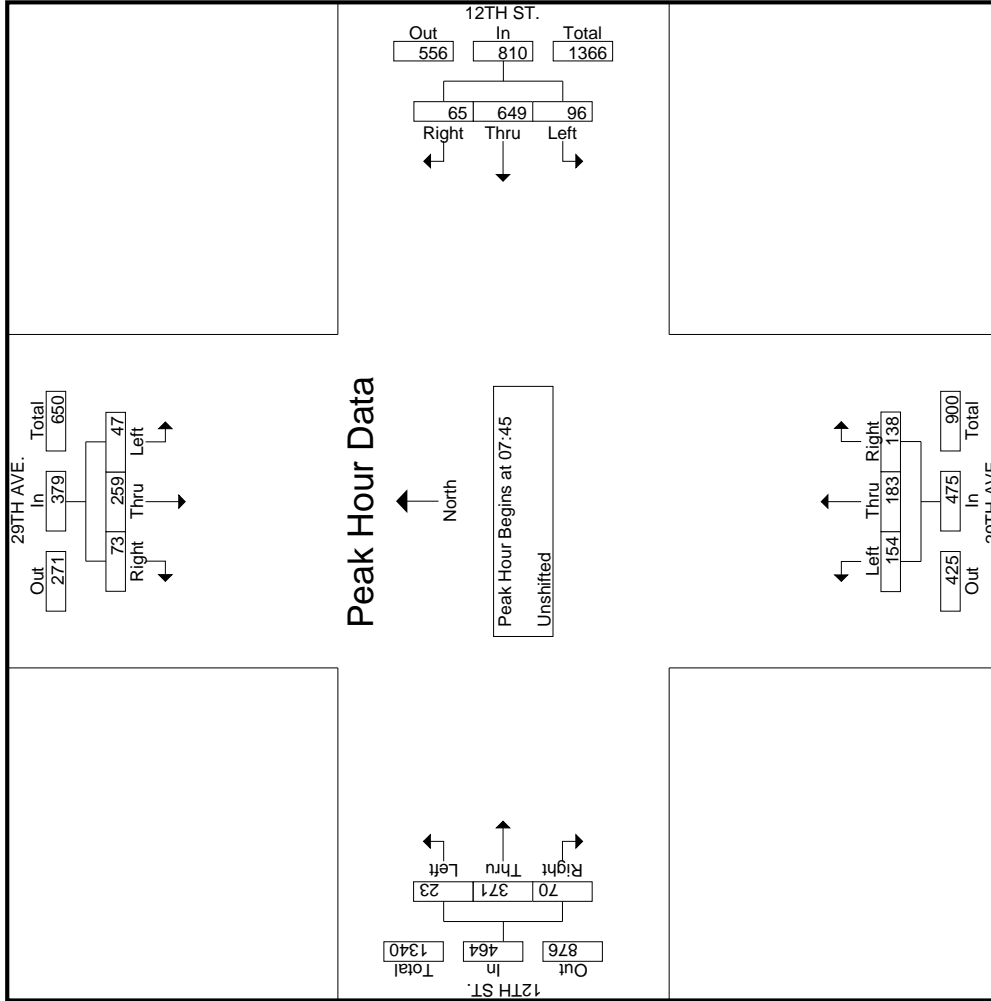
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-008 29TH AVE-12TH ST-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	14	41	10	17	99	133	53	13	50	223	582
17:15	28	48	18	41	87	159	60	22	65	264	730
17:30	20	59	10	16	80	119	44	9	32	196	564
17:45	9	48	8	17	80	117	40	6	45	182	503
Total Volume	71	196	46	91	346	528	197	50	623	865	2379
% App. Total	22.7	62.6	14.7	17.2	65.5	17.2	29.3	5.8	72	22.2	65.8
PHF	.634	.831	.639	.555	.874	.830	.821	.568	.880	.819	.815

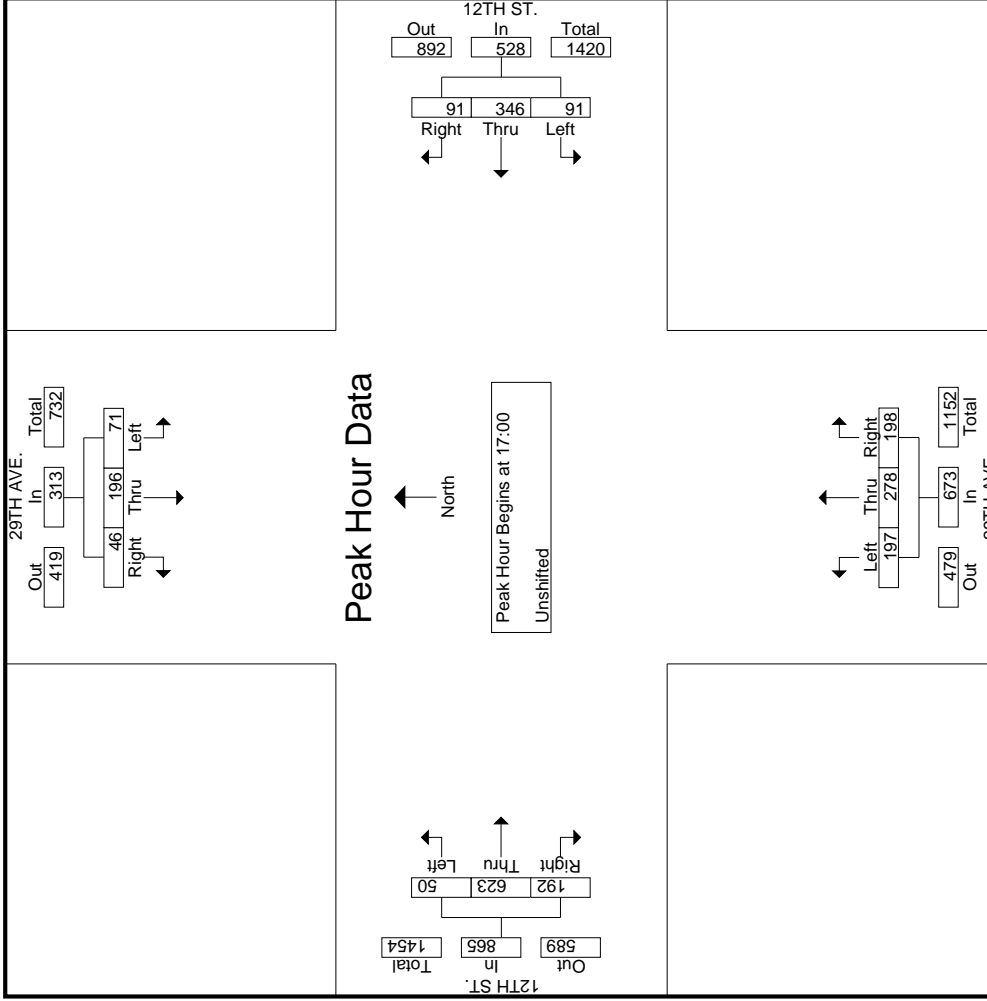
All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-008 29TH AVE-12TH ST-T
 Site Code : 00000000
 Start Date : 03/10/2009
 Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-007 29TH AVE-14TH-T

Site Code : 00000000

Start Date : 03/10/2009

Page No : 1

Groups Printed- Unshifted

Start Time	29TH AVE. Southbound						14TH ST. Westbound						29TH AVE. Northbound						14TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:00	2	13	2	3	17	8	44	1	6	53	12	7	3	4	22	0	49	12	12	61	25	153	178	
07:15	3	12	1	14	16	16	74	4	7	94	20	9	8	1	37	0	54	10	12	64	34	211	245	
07:30	3	25	3	5	31	27	110	1	5	138	17	10	14	2	41	1	68	22	18	91	30	301	331	
07:45	9	46	2	11	57	36	141	9	28	186	19	13	16	14	48	0	79	21	20	100	73	391	464	
Total	17	96	8	33	121	87	369	15	46	471	68	39	41	21	148	1	250	65	62	316	162	1056	1218	
08:00	13	41	7	33	61	45	163	9	35	217	24	33	21	9	78	17	94	21	25	132	102	488	590	
08:15	22	39	1	40	62	37	162	14	24	213	23	31	18	14	72	4	107	25	40	136	118	483	601	
08:30	17	31	4	14	52	35	138	8	22	181	18	16	17	21	51	2	100	16	34	118	91	402	493	
08:45	2	24	3	34	29	40	132	5	26	177	21	12	10	13	43	3	103	6	40	112	113	361	474	
Total	54	135	15	121	204	157	595	36	107	788	86	92	66	57	244	26	404	68	139	498	424	1734	2158	

BREAK

16:00	3	15	9	26	27	25	118	2	33	145	38	22	30	13	90	0	164	13	30	177	102	439	541
16:15	6	19	7	15	32	18	121	5	40	144	35	30	26	15	91	5	170	21	23	196	93	463	556
16:30	8	25	5	20	38	24	131	5	35	160	34	26	27	15	87	3	169	25	20	197	90	482	572
16:45	5	14	8	10	27	34	117	7	44	158	28	14	25	8	67	7	142	12	33	161	95	413	508
Total	22	73	29	71	124	101	487	19	152	607	135	92	108	51	335	15	645	71	106	731	380	1797	2177
17:00	17	21	3	6	41	27	115	12	37	154	27	33	31	20	91	4	209	19	34	232	97	518	615
17:15	12	31	7	19	50	34	123	6	61	163	35	49	33	36	117	7	176	27	35	210	151	540	691
17:30	11	32	13	19	56	24	101	11	38	136	29	36	30	29	95	6	233	29	35	268	121	555	676
17:45	6	19	4	10	29	23	107	15	36	145	35	26	25	9	86	4	160	23	39	187	94	447	541
Total	46	103	27	54	176	108	446	44	172	598	126	144	119	94	389	21	778	98	143	897	463	2060	2523
Grand Total	139	407	79	279	625	453	1897	114	477	2464	415	367	334	223	1116	63	2077	302	450	2442	1429	6647	8076
Approach %	22.2	65.1	12.6			18.4	77	4.6		37.1	37.2	32.9	29.9		16.8	2.6	85.1	12.4		36.7	17.7	82.3	
Total %	2.1	6.1	1.2		9.4	6.8	28.5	1.7		37.1	6.2	5.5	5		16.8	0.9	31.2	4.5		36.7	17.7	82.3	

Start Time	29TH AVE. Southbound						14TH ST. Westbound						29TH AVE. Northbound						14TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:45	9	46	2	11	57	36	141	9	28	186	19	13	16	14	48	0	79	21	20	100	73	391	464	
08:00	13	41	7	33	61	45	163	9	35	217	24	33	21	9	78	17	94	21	25	132	102	488	590	
08:15	22	39	1	40	62	37	162	14	24	213	23	31	18	14	72	4	107	25	40	136	118	483	601	
08:30	17	31	4	14	52	35	138	8	22	181	18	16	17	21	51	2	100	16	34	118	91	402	493	
Total Volume	61	157	14	61	232	153	604	40	152	797	84	93	72	43	249	23	380	83	139	486	176	716	893	
% App. Total	26.3	67.7	6			19.2	75.8	5		37.1	33.7	37.3	28.9		16.8	4.7	78.2	17.1		36.7	17.7	82.3		
PHF	.693	.853	.500			.850	.926	.714		.918	.875	.705	.857		.798	.338	.888	.830		.893	.904			

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700

F (916) 786-2879

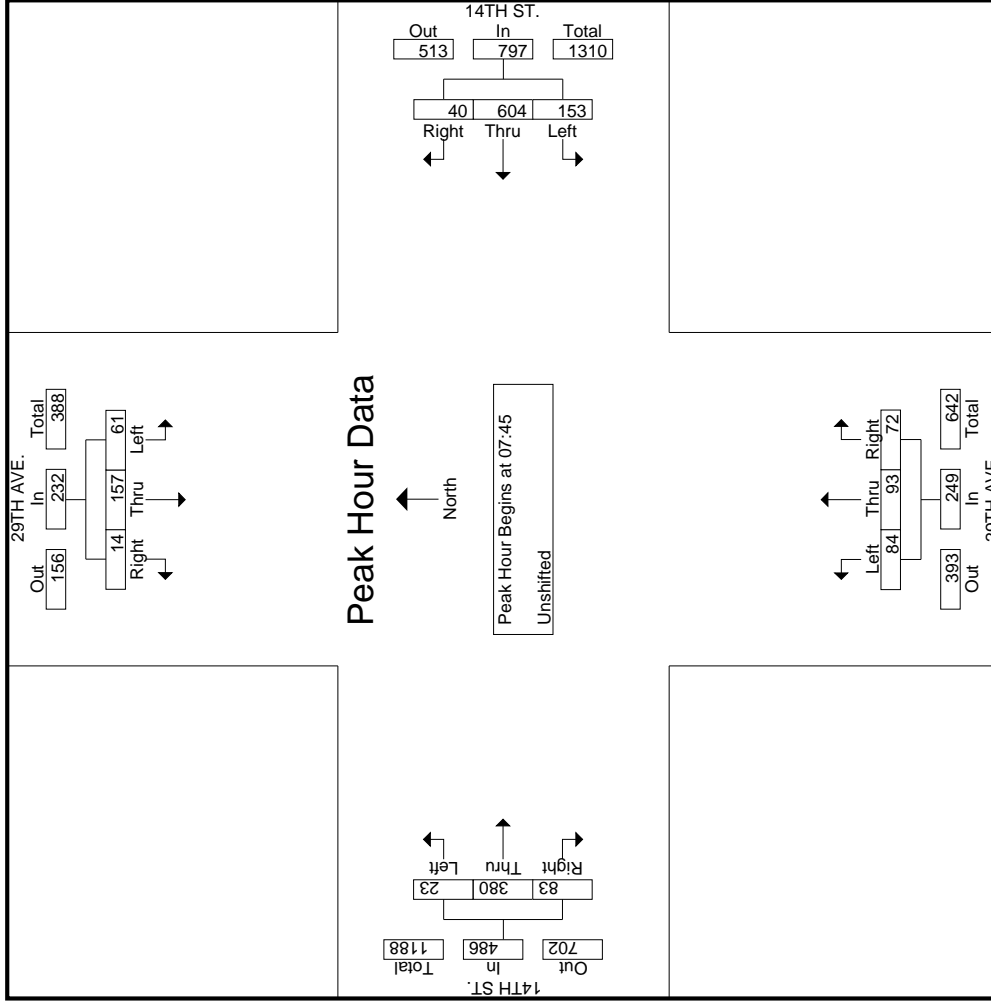
OAKLAND

File Name : 09-7109-007 29TH AVE-14TH-T

Site Code : 00000000

Start Date : 03/10/2009

Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

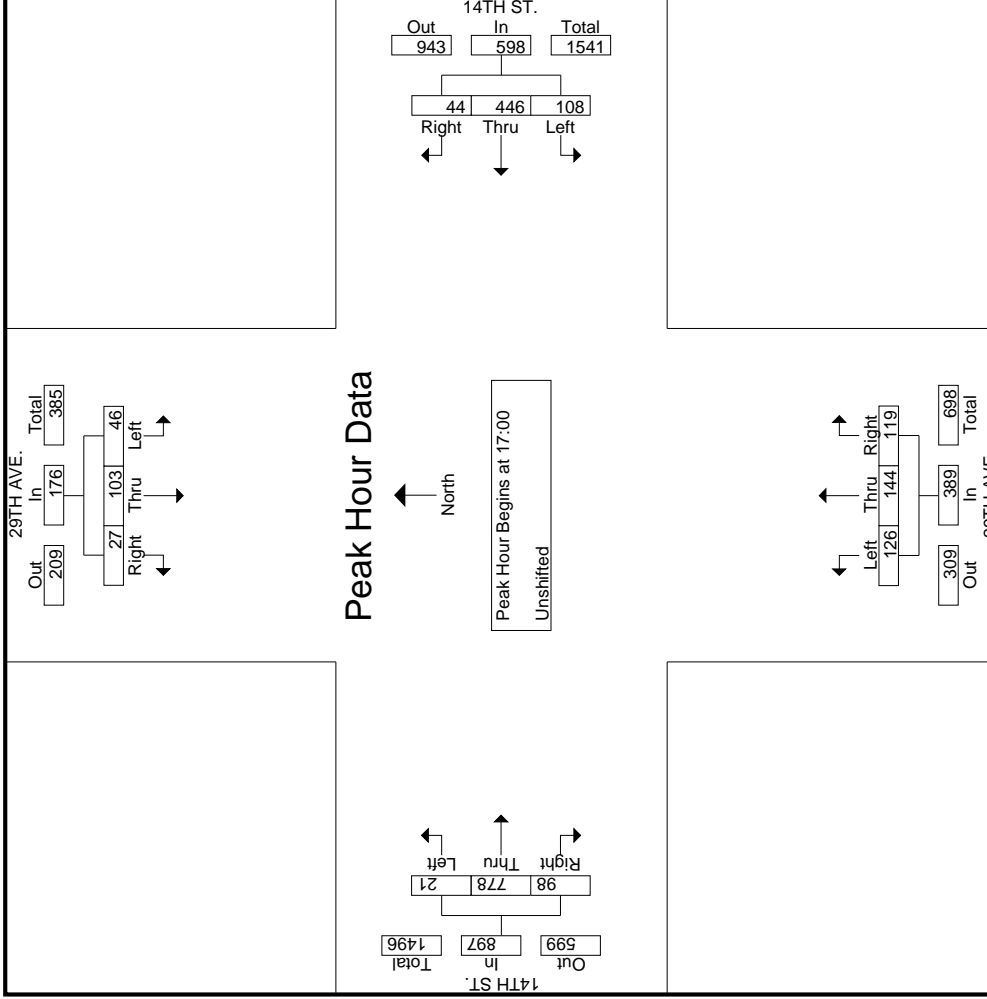
17:00	17	21	3	41	27	115	12	154	27	33	31	91	4	209	19	232	518
17:15	12	31	7	50	34	123	6	163	35	49	33	117	7	176	27	210	540
17:30	11	32	13	56	24	101	11	136	29	36	30	95	6	233	29	268	555
17:45	6	19	4	29	23	107	15	145	35	26	25	86	4	160	23	187	447
Total Volume	46	103	27	176	108	446	44	598	126	144	119	389	21	778	98	897	2060
% App. Total	26.1	58.5	15.3	78.6	18.1	74.6	7.4	32.4	37	30.6	30.6	86.7	2.3	86.7	10.9	86.7	2060
PHF	.676	.805	.519	.786	.794	.907	.733	.917	.900	.735	.902	.831	.750	.835	.845	.837	.928

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-007 29TH AVE-14TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-006 KENNEDY-SB I880 RAMP-T
 Site Code : 00000000
 Start Date : 03/10/2009
 Page No : 1

Groups Printed- Unshifted

Start Time	KENNEDY ST. Southbound						SB I-880 ON RAMP Westbound						KENNEDY ST. Northbound						Eastbound								
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total				
07:00	8	78	0	0	86		0	0	0	0	0		2	20	75	0	97		0	0	0	0	0		0	183	183
07:15	14	92	0	0	106		0	0	0	0	0		1	27	88	0	116		0	0	0	0	0		0	222	222
07:30	10	124	0	1	134		0	0	0	0	0		1	35	106	1	142		0	0	0	1	0		4	276	280
07:45	5	136	0	3	141		0	0	0	0	0		0	39	112	1	151		0	0	0	1	0		6	292	298
Total	37	430	0	4	467		0	0	0	2	0		4	121	381	2	506		0	0	0	2	0		10	973	983
08:00	9	138	0	0	147		0	0	0	0	0		0	29	98	0	127		0	0	0	0	0		0	274	274
08:15	15	129	0	0	144		0	0	0	1	0		1	51	107	2	159		0	0	0	0	0		3	303	306
08:30	15	121	0	0	136		0	0	0	0	0		2	51	111	0	164		0	0	0	0	0		0	300	300
08:45	22	144	0	0	166		0	0	0	0	0		0	56	94	0	150		0	0	0	1	0		1	316	317
Total	61	532	0	0	593		0	0	0	1	0		3	187	410	2	600		0	0	0	1	0		4	1193	1197

*** BREAK ***

16:00	37	139	0	1	176		0	0	0	0	0		0	16	106	0	122		0	0	0	0		1	298	299	
16:15	33	126	0	1	159		0	0	0	0	0		1	30	114	0	145		0	0	0	0		1	304	305	
16:30	28	129	0	2	157		0	0	0	0	0		1	19	112	0	132		0	0	0	1	0		3	289	292
16:45	51	207	0	2	258		0	0	0	0	0		0	15	102	0	117		0	0	0	0		2	375	377	
Total	149	601	0	6	750		0	0	0	0	0		2	80	434	0	516		0	0	0	1	0		7	1266	1273
17:00	39	227	0	2	266		0	0	0	0	0		0	18	118	0	136		0	0	0	0		2	402	404	
17:15	39	235	0	1	274		0	0	0	0	0		0	17	148	0	165		0	0	0	0		1	439	440	
17:30	29	239	0	0	268		0	0	0	1	0		0	24	145	0	169		0	0	0	1	0		2	437	439
17:45	25	194	0	1	219		0	0	0	0	0		1	12	119	1	132		0	0	0	1	0		3	351	354
Total	132	895	0	4	1027		0	0	0	1	0		1	71	530	1	602		0	0	0	2	0		8	1629	1637
Grand Total	379	2458	0	14	2837		0	0	0	4	0		10	459	1755	5	2224		0	0	0	6	0		29	5061	5090
Approach %	13.4	86.6	0	0	56.1		0	0	0	0	0		0.4	20.6	78.9		43.9		0	0	0	0		0.6	99.4		
Total %	7.5	48.6	0	0	56.1		0	0	0	0	0		0.2	9.1	34.7		43.9		0	0	0	0		0			

Start Time	KENNEDY ST. Southbound						SB I-880 ON RAMP Westbound						KENNEDY ST. Northbound						Eastbound							
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total			
08:00	9	138	0	0	147		0	0	0	0	0		0	0	0	0	98		0	0	0	0		0	0	274
08:15	15	129	0	0	144		0	0	0	1	0		1	51	107	2	159		0	0	0	0		0	0	303
08:30	15	121	0	0	136		0	0	0	0	0		2	51	111	0	164		0	0	0	0		0	0	300
08:45	22	144	0	0	166		0	0	0	0	0		0	56	94	0	150		0	0	0	1		0	0	316
Total Volume	61	532	0	0	593		0	0	0	0	0		3	187	410	2	600		0	0	0	0		0	0	1193
% App. Total	10.3	89.7	0	0	56.1		0	0	0	0	0		0.5	31.2	68.3		43.9		0	0	0	0		0	0	99.4
PHF	.693	.924	.000	.000	.893		.000	.000	.000	.000	.000		.375	.835	.923		.915		.000	.000	.000	.000		.000	.000	.944

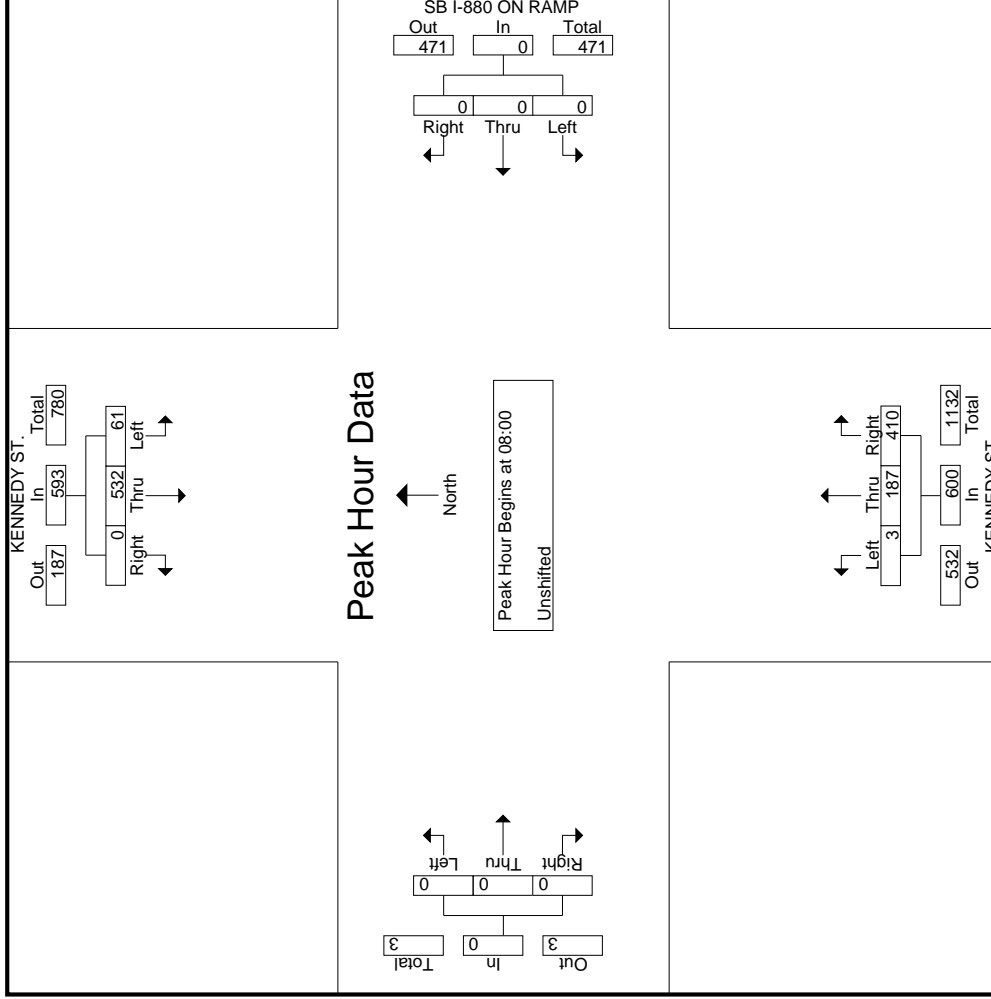
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-006 KENNEDY-SB I880 RAMP-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

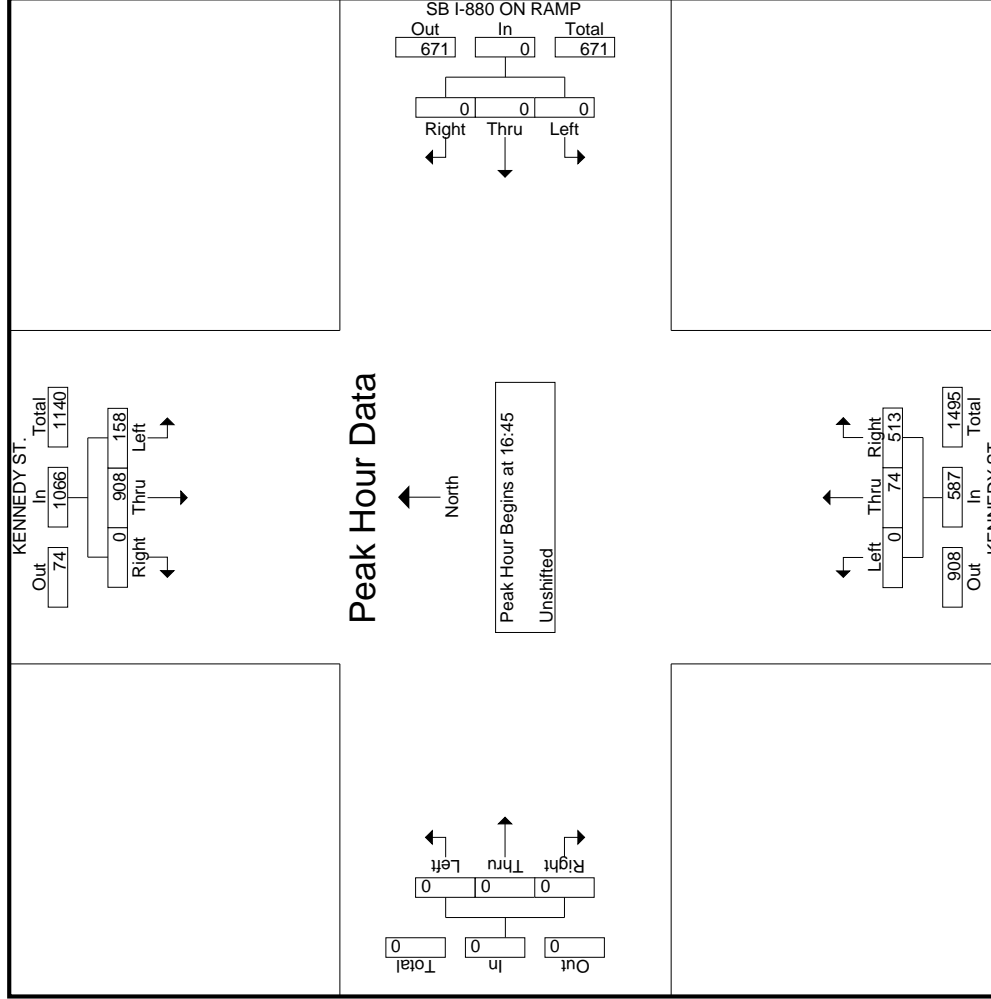
16:45	51	207	0	258	0	0	0	0	0	15	102	117	0	0	0	0	375
17:00	39	227	0	266	0	0	0	0	0	18	118	136	0	0	0	0	402
17:15	39	235	0	274	0	0	0	0	0	17	148	165	0	0	0	0	439
17:30	29	239	0	268	0	0	0	0	0	24	145	169	0	0	0	0	437
Total Volume	158	908	0	1066	0	0	0	0	0	74	513	587	0	0	0	0	1653
% App. Total	14.8	85.2	0	0	0	0	0	0	0	12.6	87.4	0	0	0	0	0	0
PHF	.775	.950	.000	.973	.000	.000	.000	.000	.000	.771	.867	.868	.000	.000	.000	.000	.941

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-006 KENNEDY-SB I880 RAMP-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-005 KENNEDY-DENNISON-T

Site Code : 00000000

Start Date : 03/10/2009

Page No : 1

Groups Printed- Unshifted

Start Time	SB I-880 OFF RAMP Southbound						Westbound						KENNEDY ST. Northbound						DENNISON ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total	
	07:00	0	77	25	0	102	0	0	0	0	0	10	0	0	0	10	0	0	7	0	7	0	0	119
07:15	0	91	22	0	113	0	0	0	0	0	18	0	0	0	18	0	0	19	0	19	0	0	150	150
07:30	0	113	22	0	135	0	0	0	0	0	22	0	0	0	22	0	0	15	0	15	0	0	172	172
07:45	0	130	21	0	151	0	0	0	0	0	27	0	0	0	27	0	0	6	0	6	0	0	184	184
Total	0	411	90	0	501	0	0	0	0	0	77	0	0	0	77	0	0	47	0	47	0	0	625	625
08:00	0	120	23	0	143	0	0	0	0	0	25	0	0	0	25	0	0	22	0	22	0	0	190	190
08:15	0	106	21	0	127	0	0	0	0	0	38	0	0	0	38	0	0	37	0	37	0	0	202	202
08:30	0	105	12	0	117	0	0	0	0	0	29	0	0	0	29	0	0	30	0	30	0	0	176	176
08:45	0	120	9	0	129	0	0	0	0	0	43	0	0	0	43	0	0	40	0	40	0	0	212	212
Total	0	451	65	0	516	0	0	0	0	0	135	0	0	0	135	0	0	129	0	129	0	0	780	780

*** BREAK ***

16:00	0	88	3	0	91	0	0	0	0	0	13	0	0	0	13	0	0	64	0	64	0	0	168	168
16:15	0	108	2	0	110	0	0	0	0	0	20	0	0	0	20	0	0	43	0	43	0	0	173	173
16:30	0	97	4	0	101	0	0	0	0	0	8	0	0	0	8	0	0	49	0	49	0	0	158	158
16:45	0	159	2	0	161	0	0	0	0	0	12	0	0	0	12	0	0	82	0	82	0	0	255	255
Total	0	452	11	0	463	0	0	0	0	0	53	0	0	0	53	0	0	238	0	238	0	0	754	754
17:00	0	154	11	0	165	0	0	0	0	0	12	0	0	0	12	0	0	71	0	71	0	0	248	248
17:15	0	172	7	0	179	0	0	0	0	0	10	0	0	0	10	0	0	49	0	49	0	0	238	238
17:30	0	207	4	0	211	0	0	0	0	0	19	0	0	0	19	0	0	38	0	38	0	0	268	268
17:45	0	159	8	0	167	0	0	0	0	0	8	0	0	0	8	0	0	43	0	43	0	0	218	218
Total	0	692	30	0	722	0	0	0	0	0	49	0	0	0	49	0	0	201	0	201	0	0	972	972

Grand Total	0	2006	196	0	2202	0	0	0	0	0	314	0	0	0	314	0	0	615	0	615	0	0	3131	3131
Approach %	0	91.1	8.9			0	0	0	0	0	100	0	0	0	100	0	0	100	0	100	0	0	100	100
Total %	0	64.1	6.3		70.3	0	0	0	0	0	10	0	0	0	10	0	0	19.6	0	19.6	0	0	100	100

Start Time	SB I-880 OFF RAMP Southbound						Westbound						KENNEDY ST. Northbound						DENNISON ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total	
	08:00	0	120	23	0	143	0	0	0	0	0	25	0	0	0	25	0	0	22	0	22	0	0	190
08:15	0	106	21	0	127	0	0	0	0	0	38	0	0	0	38	0	0	37	0	37	0	0	202	202
08:30	0	105	12	0	117	0	0	0	0	0	29	0	0	0	29	0	0	30	0	30	0	0	176	176
08:45	0	120	9	0	129	0	0	0	0	0	43	0	0	0	43	0	0	40	0	40	0	0	212	212
Total Volume	0	451	65	0	516	0	0	0	0	0	135	0	0	0	135	0	0	129	0	129	0	0	780	780
% App. Total	0	87.4	12.6			0	0	0	0	0	100	0	0	0	100	0	0	100	0	100	0	0	100	100
PHF	.000	.940	.707		.902	.000	.000	.000	.000	.000	.785	.000	.000	.000	.785	.000	.000	.806	.000	.806	.000	.000	.806	.920

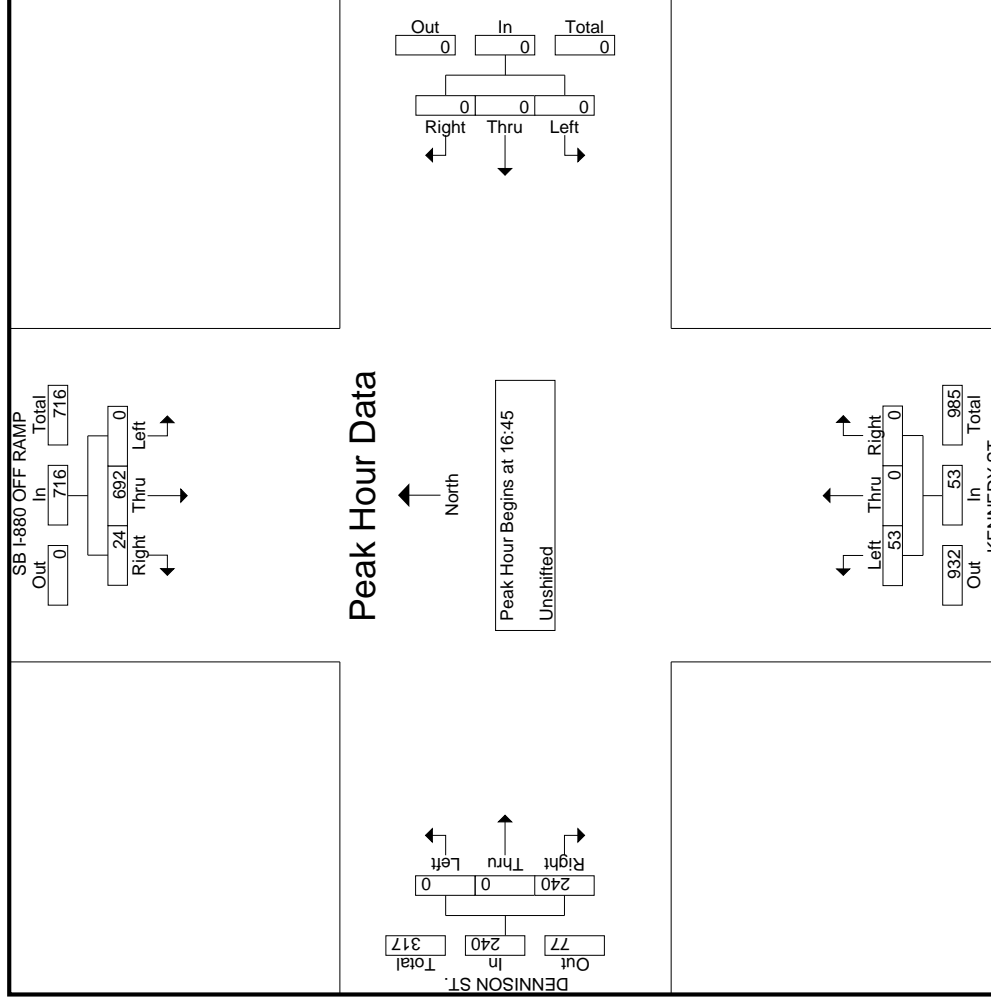
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-005 KENNEDY-DENNISON-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-004 23RD -11TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 1

Groups Printed- Unshifted

Start Time	23RD AVE. Southbound						11TH ST. Westbound						23RD AVE. Northbound						NB I-880 ON RAMP Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:00	3	96	55	2	154	2	7	0	2	9	61	69	8	0	138	0	0	0	0	0	4	301	4	305
07:15	7	100	66	0	173	6	5	3	0	14	63	70	9	0	142	0	0	0	0	0	0	329	0	329
07:30	2	151	79	0	232	6	1	3	0	10	80	118	3	0	201	0	0	0	0	0	0	443	0	443
07:45	9	171	70	0	250	6	5	6	0	17	65	139	6	0	210	0	0	0	0	0	0	477	0	477
Total	21	518	270	2	809	20	18	12	2	50	269	396	26	0	691	0	0	0	0	0	4	1550	4	1554
08:00	8	174	91	0	273	1	8	5	0	14	50	146	6	0	202	0	0	0	0	0	0	489	0	489
08:15	4	156	81	0	241	3	2	4	0	9	45	147	6	0	198	0	0	0	0	0	0	448	0	448
08:30	5	152	73	1	230	2	1	3	1	6	40	141	5	0	186	0	0	0	0	0	2	422	2	424
08:45	6	124	56	0	186	7	6	3	0	16	43	127	13	0	183	0	0	0	0	0	0	385	0	385
Total	23	606	301	1	930	13	17	15	1	45	178	561	30	0	769	0	0	0	0	0	2	1744	2	1746

BREAK

16:00	8	153	42	0	203	4	3	3	2	10	72	180	14	0	266	0	0	0	0	0	2	479	2	481
16:15	7	172	56	0	235	13	7	5	0	25	76	162	6	0	244	0	0	0	0	0	0	504	0	504
16:30	11	177	64	0	252	7	3	5	2	15	63	180	12	0	255	0	0	0	0	0	2	522	2	524
16:45	12	155	64	0	231	4	6	5	1	15	62	175	9	0	246	0	0	0	0	0	1	492	1	493
Total	38	657	226	0	921	28	19	18	5	65	273	697	41	0	1011	0	0	0	0	0	5	1997	5	2002
17:00	5	215	45	0	265	4	6	12	1	22	76	223	18	0	317	0	0	0	0	0	1	604	1	605
17:15	6	212	51	0	269	4	3	7	0	14	75	203	7	0	285	0	0	0	0	0	0	568	0	568
17:30	7	191	49	0	247	7	0	5	0	12	81	200	8	0	289	0	0	0	0	0	0	548	0	548
17:45	7	165	46	0	218	8	3	6	0	17	80	150	12	0	242	0	0	0	0	0	0	477	0	477
Total	25	783	191	0	999	23	12	30	1	65	312	776	45	0	1133	0	0	0	0	0	1	2197	1	2198
Grand Total	107	2564	988	3	3659	84	66	75	9	225	1032	2430	142	0	3604	0	0	0	0	0	12	7488	12	7500
Approach %	2.9	70.1	27			37.3	29.3	33.3		3	28.6	67.4	3.9		48.1						0.2	99.8		
Total %	1.4	34.2	13.2		48.9	1.1	0.9	1			13.8	32.5	1.9											

Start Time	23RD AVE. Southbound						11TH ST. Westbound						23RD AVE. Northbound						NB I-880 ON RAMP Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
07:30	2	151	79		232		6	1	3	10	80	118	3	0	201	0	0	0	0	0	0	443	0	443
07:45	9	171	70		250		6	5	6	17	65	139	6	0	210	0	0	0	0	0	0	477	0	477
08:00	8	174	91		273		1	8	5	14	50	146	6	0	202	0	0	0	0	0	0	489	0	489
08:15	4	156	81		241		3	2	4	9	45	147	6	0	198	0	0	0	0	0	0	448	0	448
Total Volume	23	652	321		996		16	16	18	50	240	550	21	0	811	0	0	0	0	0	0	1857	0	1857
% App. Total	2.3	65.5	32.2		48.9		32	32	36	3	29.6	67.8	2.6											
PHF	.639	.937	.882		.912		.667	.500	.750	.735	.750	.935	.875		.965						.000	.000	.000	.949

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

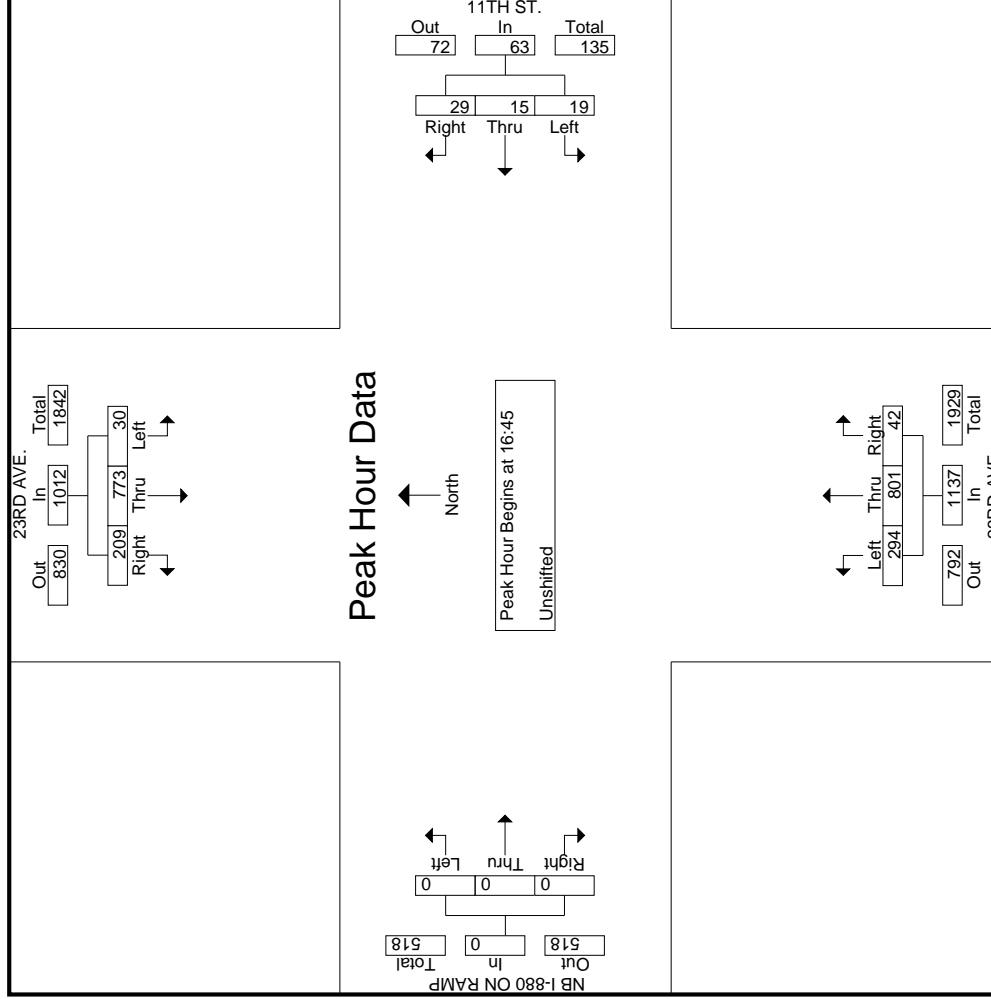
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-004 23RD -11TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700

F (916) 786-2879

OAKLAND

File Name : 09-7109-003 22ND-12TH-T
 Site Code : 00000000
 Start Date : 03/10/2009
 Page No : 1

Groups Printed- Unshifted

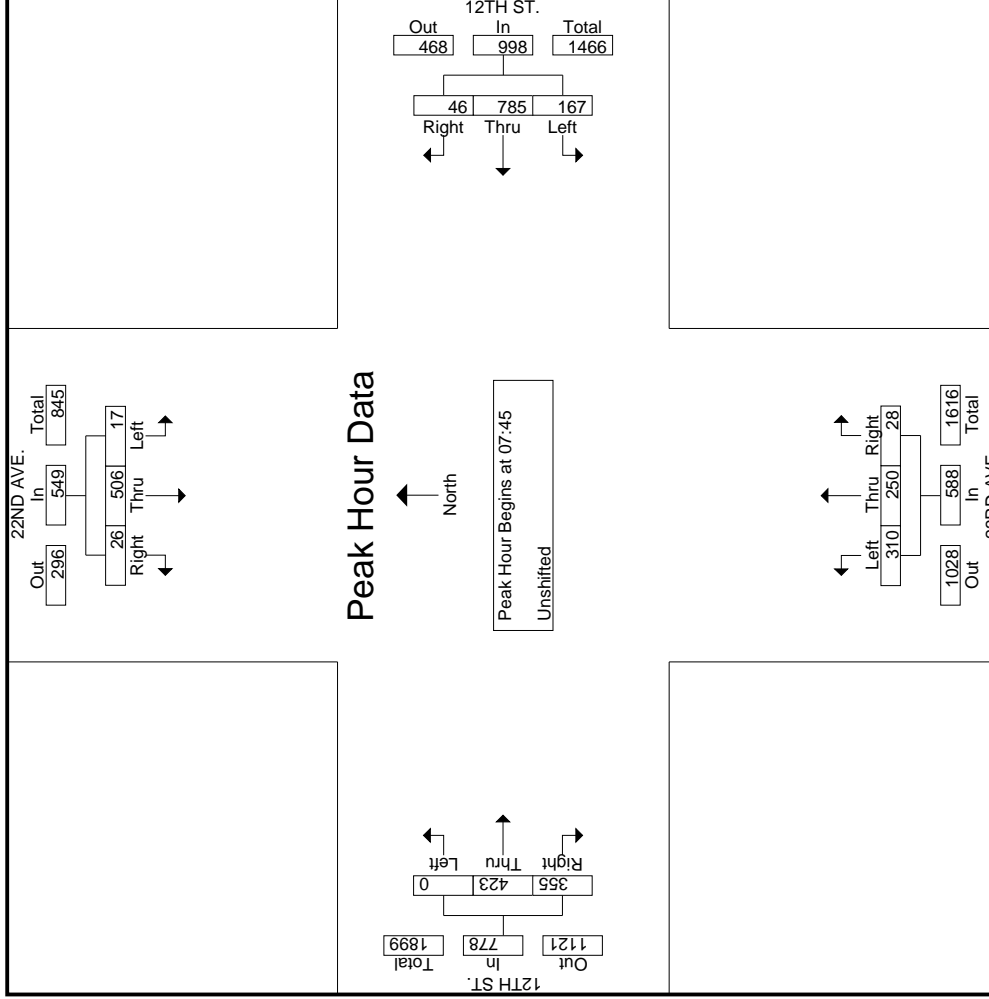
Start Time	22ND AVE. Southbound										12TH ST. Westbound										23RD AVE. Northbound										12TH ST. Eastbound																				
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total												
07:00	3	68	2	0	73	23	45	3	1	71	32	29	1	0	62	0	33	62	95	0	33	62	0	95	1	301	302	0	35	59	0	94	0	365	365	0	49	73	0	122	2	569	571	0	84	87	0	171	3	1908	1911
07:15	1	100	4	0	105	28	59	7	0	94	34	35	3	0	72	0	35	59	94	0	35	59	0	94	0	365	365	0	49	73	0	122	2	569	571	0	84	87	0	171	3	1908	1911								
07:30	3	146	6	2	155	43	120	7	0	170	63	54	5	0	122	0	49	73	122	0	49	73	0	122	2	569	571	0	84	87	0	171	3	1908	1911																
07:45	1	131	4	0	136	45	175	6	0	226	60	66	14	0	140	0	84	87	171	0	84	87	0	171	3	1908	1911	0	84	87	0	171	3	1908	1911																
Total	8	445	16	2	469	139	399	23	1	561	189	184	23	0	396	0	201	281	482	0	201	281	0	482	3	1908	1911	0	201	281	0	482	3	1908	1911																
08:00	4	151	7	0	162	46	197	15	0	258	84	69	3	0	156	0	105	98	203	0	105	98	0	203	0	779	779	0	105	98	0	203	0	779	779																
08:15	8	113	3	0	124	36	212	15	0	263	74	66	6	0	146	0	115	88	203	0	115	88	0	203	0	736	736	0	115	88	0	203	0	736	736																
08:30	4	111	12	0	127	40	201	10	0	251	92	49	5	0	146	0	119	82	201	0	119	82	0	201	0	725	725	0	119	82	0	201	0	725	725																
08:45	1	80	5	1	86	42	163	11	0	216	66	60	6	0	132	0	77	63	140	0	77	63	0	140	1	574	575	0	77	63	0	140	1	574	575																
Total	17	455	27	1	499	164	773	51	0	988	316	244	20	0	580	0	416	331	747	0	416	331	0	747	1	2814	2815	0	416	331	0	747	1	2814	2815																
*** BREAK ***																																																			
16:00	7	64	7	3	78	33	95	17	0	145	72	92	20	0	184	0	182	101	283	0	182	101	0	283	3	690	693	0	182	101	0	283	3	690	693																
16:15	6	110	0	0	116	34	75	11	0	120	66	93	13	0	172	0	208	101	309	0	208	101	0	309	0	717	717	0	208	101	0	309	0	717	717																
16:30	2	86	0	0	88	45	81	9	1	135	75	104	12	1	191	0	254	127	381	0	254	127	0	381	2	795	797	0	254	127	0	381	2	795	797																
16:45	5	106	4	0	115	41	72	17	0	130	62	109	12	0	183	0	212	100	312	0	212	100	0	312	0	740	740	0	212	100	0	312	0	740	740																
Total	20	366	11	3	397	153	323	54	1	530	275	398	57	1	730	0	856	429	1285	0	856	429	0	1285	5	2942	2947	0	856	429	0	1285	5	2942	2947																
17:00	6	93	1	0	100	41	121	13	1	175	86	118	38	0	242	0	195	134	329	0	195	134	0	329	1	846	847	0	195	134	0	329	1	846	847																
17:15	2	103	0	1	105	29	99	22	0	150	67	108	29	0	204	0	221	142	363	0	221	142	0	363	1	822	823	0	221	142	0	363	1	822	823																
17:30	8	94	0	1	102	32	94	17	0	143	85	101	18	0	204	0	176	118	294	0	176	118	0	294	1	743	744	0	176	118	0	294	1	743	744																
17:45	8	98	1	1	107	39	87	13	0	139	60	87	12	0	159	0	135	75	210	0	135	75	0	210	1	615	616	0	135	75	0	210	1	615	616																
Total	24	388	2	3	414	141	401	65	1	607	298	414	97	0	809	0	727	469	1196	0	727	469	0	1196	4	3026	3030	0	727	469	0	1196	4	3026	3030																
Grand Total	69	1654	56	9	1779	597	1896	193	3	2686	1078	1240	197	1	2515	0	2200	1510	3710	0	2200	1510	0	3710	13	10690	10703	0	2200	1510	0	3710	13	10690	10703																
Approach %	3.9	93	3.1			22.2	70.6	7.2			42.9	49.3	7.8		23.5	0	59.3	40.7		0	59.3	40.7			0.1	99.9		0	59.3	40.7			0.1	99.9																	
Total %	0.6	15.5	0.5		16.6	5.6	17.7	1.8		25.1	10.1	11.6	1.8			0	20.6	14.1	34.7	0	20.6	14.1		34.7				0	20.6	14.1		34.7																			
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																																																			
Peak Hour for Entire Intersection Begins at 07:45																																																			
07:45	1	131	4	0	136	45	175	6	0	226	60	66	14	0	140	0	84	87	171	0	84	87	0	171	3	1908	1911	0	84	87	0	171	3	1908	1911																
08:00	4	151	7	0	162	46	197	15	0	258	84	69	3	0	156	0	105	98	203	0	105	98	0	203	0	779	779	0	105	98	0	203	0	779	779																
08:15	8	113	3	0	124	36	212	15	0	263	74	66	6	0	146	0	115	88	203	0	115	88	0	203	0	736	736	0	115	88	0	203	0	736	736																
08:30	4	111	12	0	127	40	201	10	0	251	92	49	5	0	146	0	119	82	201	0	119	82	0	201	0	725	725	0	119	82	0	201	0	725	725																
08:45	1	80	5	1	86	42	163	11	0	216	66	60	6	0	132	0	77	63	140	0	77	63	0	140	1	574	575	0	77	63	0	140	1	574	575																
Total Volume	17	506	26	2	549	167	785	46	0	998	310	250	28	0	588	0	423	355	778	0	423	355	0	778	778	2913	2913	0	423	355	0	778	778	2913	2913																
% App. Total	3.1	92.2	4.7			16.7	78.7	4.6			52.7	42.5	4.8		23.5	0	54.4	45.6		0	54.4	45.6				99.9	99.9	0	54.4	45.6				99.9	99.9																
PHF	.531	.838	.542		.847	.908	.926	.767		.949	.842	.906	.500		.942	.000	.889	.906	.958	.000	.889	.906	.942	.958	.958	.935	.935	.000	.889	.906	.942	.958	.958	.935	.935																

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-003 22ND-12TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:30

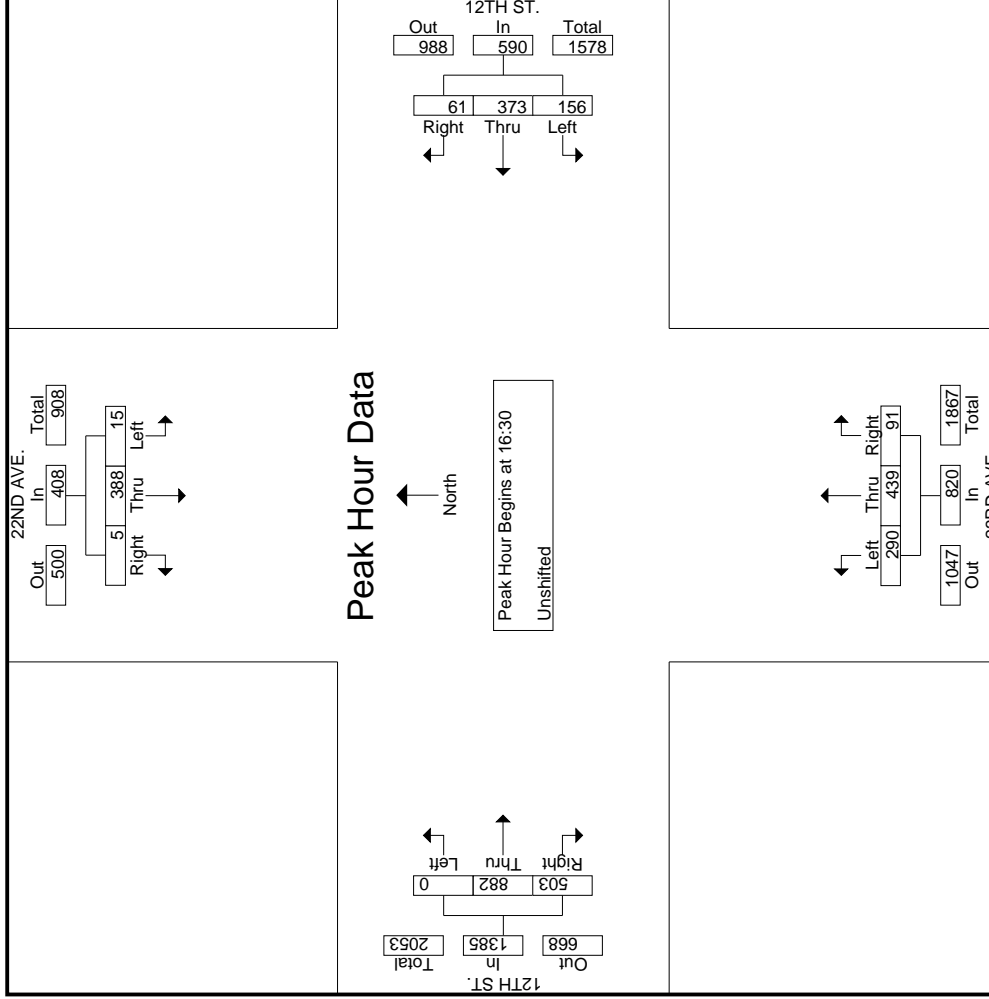
16:30	2	86	0	88	45	81	9	135	75	104	12	191	0	254	127	381	795
16:45	5	106	4	115	41	72	17	130	62	109	12	183	0	212	100	312	740
17:00	6	93	1	100	41	121	13	175	86	118	38	242	0	195	134	329	846
17:15	2	103	0	105	29	99	22	150	67	108	29	204	0	221	142	363	822
Total Volume	15	388	5	408	156	373	61	590	290	439	91	820	0	882	503	1385	3203
% App. Total	3.7	95.1	1.2	100.0	26.4	63.2	10.3	35.4	53.5	30.5	11.1	36.3	0	63.7	36.3	99.9	99.9
PHF	.625	.915	.313	.887	.867	.771	.693	.843	.843	.930	.599	.847	.000	.868	.886	.909	.947

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-003 22ND-12TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-002 22ND-14TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 1

Groups Printed- Unshifted

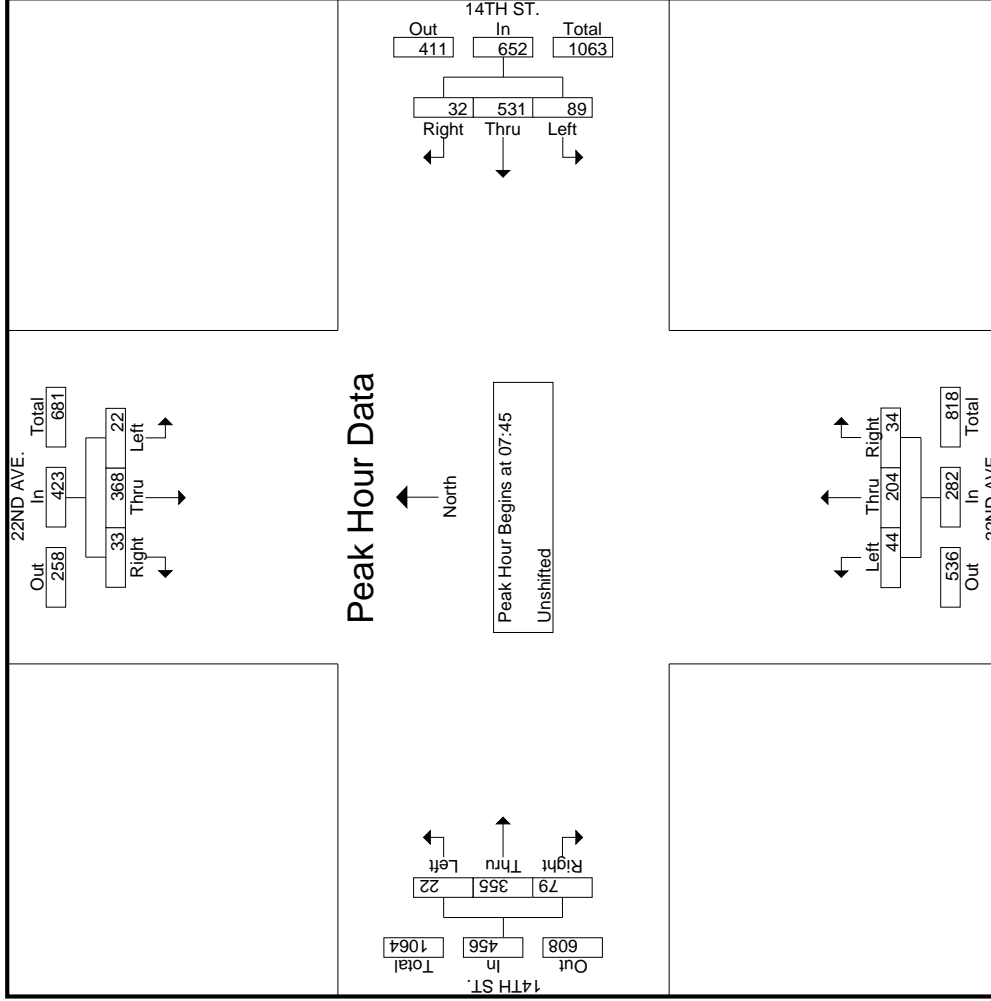
Start Time	22ND AVE. Southbound						14TH ST. Westbound						22ND AVE. Northbound						14TH ST. Eastbound					
	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total
	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total	Inclu. Total
07:00	2	53	2	3	57	12	55	0	2	67	3	23	4	4	30	2	43	6	2	51	11	205	216	
07:15	2	59	5	2	66	21	59	4	0	84	4	31	4	0	39	1	57	17	1	75	3	264	267	
07:30	5	95	6	4	106	26	100	4	0	130	8	40	9	1	57	2	68	14	0	84	5	377	382	
07:45	4	100	9	6	113	14	121	5	0	140	9	54	4	0	67	6	80	21	0	107	6	427	433	
Total	13	307	22	15	342	73	335	13	2	421	24	148	21	5	193	11	248	58	3	317	25	1273	1298	
08:00	4	99	9	9	112	28	136	9	1	173	15	56	11	1	82	2	93	24	0	119	11	486	497	
08:15	10	89	9	1	108	19	140	11	0	170	14	54	9	0	77	3	96	15	0	114	1	469	470	
08:30	4	80	6	4	90	28	134	7	0	169	6	40	10	3	56	11	86	19	1	116	8	431	439	
08:45	8	59	9	6	76	15	121	11	2	147	18	38	8	7	64	6	80	13	2	99	17	386	403	
Total	26	327	33	20	386	90	531	38	3	659	53	188	38	11	279	22	355	71	3	448	37	1772	1809	
*** BREAK ***																								
16:00	11	44	6	12	61	12	114	11	10	137	15	75	6	9	96	7	150	19	0	176	31	470	501	
16:15	5	68	10	6	83	14	119	14	3	147	24	66	9	4	99	8	163	30	2	201	15	530	545	
16:30	8	41	15	8	64	11	116	11	1	138	14	80	14	4	108	8	156	31	2	195	15	505	520	
16:45	13	72	20	6	105	14	122	10	0	146	16	88	8	0	112	12	158	20	0	190	6	553	559	
Total	37	225	51	32	313	51	471	46	14	568	69	309	37	17	415	35	627	100	4	762	67	2058	2125	
17:00	9	56	7	7	72	21	106	18	1	145	10	95	11	6	116	6	180	21	2	207	16	540	556	
17:15	11	56	3	12	70	17	118	11	1	146	25	96	8	5	129	8	168	29	1	205	19	550	569	
17:30	12	56	10	12	78	14	113	10	2	137	15	85	10	1	110	8	171	29	0	208	15	533	548	
17:45	6	66	5	5	77	22	104	10	1	136	16	76	16	1	108	6	156	20	0	182	7	503	510	
Total	38	234	25	36	297	74	441	49	5	564	66	352	45	13	463	28	675	99	3	802	57	2126	2183	
Grand Total	114	1093	131	103	1338	288	1778	146	24	2212	212	997	141	46	1350	96	1905	328	13	2329	186	7229	7415	
Approach %	8.5	81.7	9.8			13	80.4	6.6		30.6	15.7	73.9	10.4		18.7	4.1	81.8	14.1		32.2	2.5	97.5		
Total %	1.6	15.1	1.8			4	24.6	2			2.9	13.8	2			1.3	26.4	4.5						
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																								
Peak Hour for Entire Intersection Begins at 07:45																								
Start Time	22ND AVE. Southbound						14TH ST. Westbound						22ND AVE. Northbound						14TH ST. Eastbound					
07:45	4	100	9	9	113	14	121	5	5	140	9	54	4	4	67	6	80	21	107	427				
08:00	4	99	9	9	112	28	136	9	9	173	15	56	11	11	82	2	93	24	119	486				
08:15	10	89	9	9	108	19	140	11	1	170	14	54	9	0	77	3	96	15	114	469				
08:30	4	80	6	4	90	28	134	7	0	169	6	40	10	3	56	11	86	19	1	431				
08:30	4	80	6	4	90	28	134	7	0	169	6	40	10	3	56	11	86	19	1	431				
08:30	4	80	6	4	90	28	134	7	0	169	6	40	10	3	56	11	86	19	1	431				
Total Volume	22	368	33	33	423	89	531	32	32	652	44	204	34	34	282	22	355	79	456	1813				
% App. Total	5.2	87	7.8			13.7	81.4	4.9		30.6	15.6	72.3	12.1		18.7	4.1	81.8	14.1		32.2	2.5	97.5		
PHF	.550	.920	.917		.936	.795	.948	.727		.942	.733	.911	.773		.860	.500	.924	.823		.958	.933			

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-002 22ND-14TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

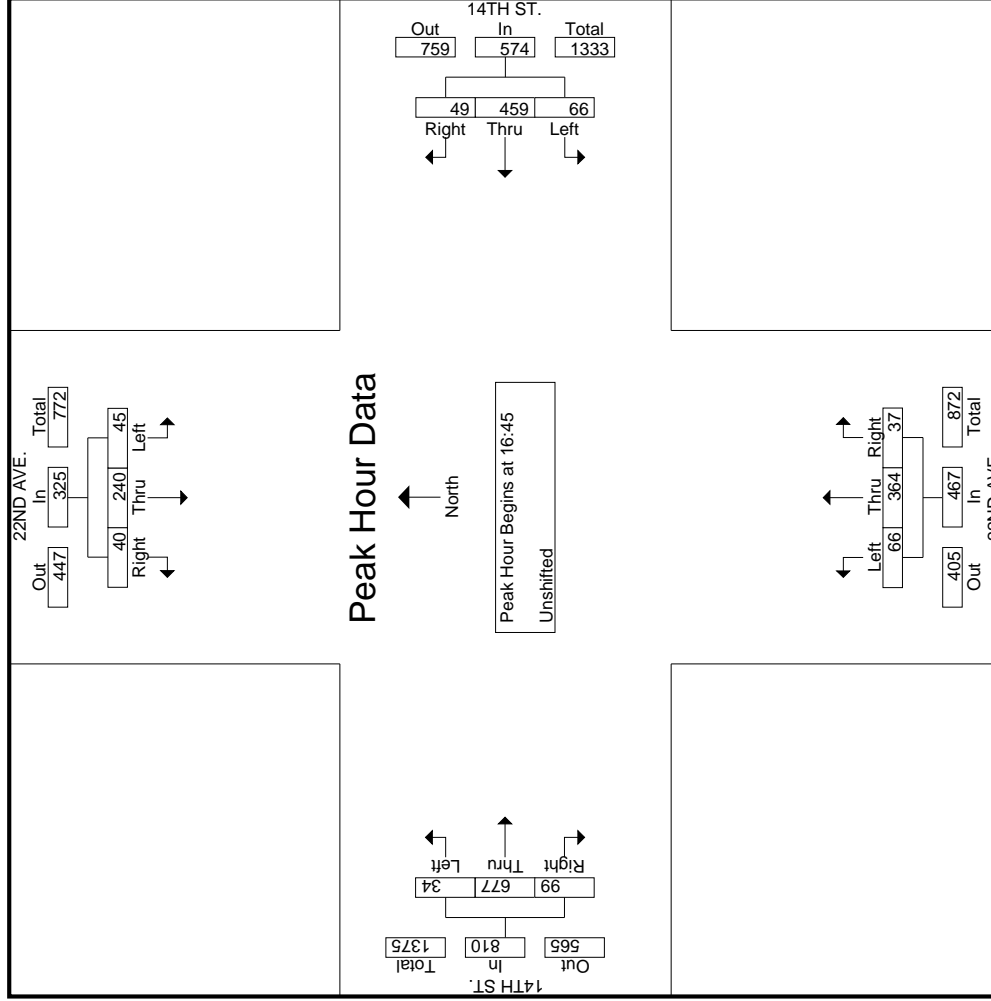
16:45	13	72	20	14	122	10	146	16	88	12	158	20	190	553
17:00	9	56	7	21	106	18	145	10	95	6	180	21	207	540
17:15	11	56	3	17	118	11	146	25	96	8	168	29	205	550
17:30	12	56	10	14	113	10	137	15	85	8	171	29	208	533
Total Volume	45	240	40	66	459	49	574	66	364	34	677	99	810	2176
% App. Total	13.8	73.8	12.3	11.5	80	8.5	14.1	77.9	7.9	4.2	83.6	12.2	97.4	984
PHF	.865	.833	.500	.774	.941	.681	.983	.660	.948	.708	.940	.853	.974	.984

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-002 22ND-14TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3



All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-001 EMBARCADERO-16TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 1

Groups Printed- Unshifted

Start Time	EMBARCADERO Southbound						16TH AVE. Westbound						EMBARCADERO Northbound						16TH AVE. Eastbound																	
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Exclu. Total		Inclu. Total		Int. Total	
07:00	9	57	0	1	66	13	0	7	1	20	0	10	5	0	15	0	1	0	2	0	1	1	0	0	2	2	103	2	105	0	0	105				
07:15	10	41	0	0	51	20	0	8	0	28	0	13	2	0	15	1	0	0	1	0	1	0	0	0	1	0	95	0	95	0	0	95				
07:30	21	69	0	2	90	26	0	11	0	37	1	21	7	0	29	0	0	0	0	0	0	0	0	0	0	2	156	2	158	0	0	158				
07:45	26	54	1	0	81	35	0	18	0	53	1	35	5	0	40	0	1	0	0	0	0	1	0	0	0	2	175	0	175	0	0	175				
Total	66	221	1	3	288	94	0	44	1	138	1	79	19	0	99	1	1	2	0	4	4	4	4	4	4	4	529	4	533	0	0	533				
08:00	24	73	0	1	97	26	0	19	0	45	0	37	14	0	51	0	1	0	0	1	1	1	0	0	1	1	194	1	195	0	0	195				
08:15	18	69	0	3	87	48	0	12	0	60	0	39	19	0	58	0	1	1	0	2	3	207	210	0	0	207	3	207	0	0	210					
08:30	32	62	1	0	95	28	0	12	0	40	0	47	17	0	64	0	0	0	0	0	0	199	199	0	0	199	0	199	0	0	199					
08:45	27	81	1	1	109	27	1	15	0	43	0	34	17	0	51	0	0	0	0	0	1	203	204	0	0	203	1	203	0	0	204					
Total	101	285	2	5	388	129	1	58	0	188	0	157	67	0	224	0	2	1	0	3	5	803	808	0	0	803	5	803	0	0	808					

BREAK

16:00	27	87	1	0	115	21	1	18	0	40	1	46	24	0	71	0	0	0	0	0	0	0	0	0	0	0	226	0	226	0	0	226
16:15	39	77	0	2	116	23	0	10	0	33	4	38	28	0	70	0	3	2	0	5	2	224	226	0	0	224	2	224	0	0	226	
16:30	29	98	0	0	127	27	1	13	0	41	1	52	29	0	82	0	1	1	0	2	0	252	252	0	0	252	0	252	0	0	252	
16:45	44	107	2	0	153	28	1	6	0	35	2	33	27	0	62	0	0	2	0	2	0	252	252	0	0	252	0	252	0	0	252	
Total	139	369	3	2	511	99	3	47	0	149	8	169	108	0	285	0	4	5	0	9	2	954	956	0	0	954	2	954	0	0	956	
17:00	55	95	1	1	151	22	0	8	1	30	1	32	44	0	77	0	2	3	0	5	2	263	265	0	0	263	2	263	0	0	265	
17:15	55	58	0	1	113	26	2	10	1	38	2	49	35	0	86	0	2	0	0	2	2	239	241	0	0	239	2	239	0	0	241	
17:30	47	66	0	0	113	23	0	11	0	34	1	38	36	0	75	0	0	1	0	1	0	223	223	0	0	223	0	223	0	0	223	
17:45	28	66	0	0	94	12	0	10	0	22	1	38	27	0	66	0	2	3	0	5	0	187	187	0	0	187	0	187	0	0	187	
Total	185	285	1	2	471	83	2	39	2	124	5	157	142	0	304	0	6	7	0	13	4	912	916	0	0	912	4	912	0	0	916	

Grand Total	491	1160	7	12	1658	405	6	188	3	599	14	562	336	0	912	1	13	15	0	29	15	3198	3213	0	0	3198	15	3198	0	0	3213	
Approach %	29.6	70	0.4			67.6	1	31.4		18.7	1.5	61.6	36.8		28.5	3.4	44.8	51.7		0.9	0.5	99.5			0.5	99.5						
Total %	15.4	36.3	0.2		51.8	12.7	0.2	5.9			0.4	17.6	10.5			0	0.4	0.5														

Start Time	EMBARCADERO Southbound						16TH AVE. Westbound						EMBARCADERO Northbound						16TH AVE. Eastbound																	
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Exclu. Total		Inclu. Total		Int. Total	
08:00	24	73	0	0	97	26	0	19	0	45	0	37	14	0	51	0	1	0	0	1	1	194	194	0	0	1	1	194	0	0	194					
08:15	18	69	0	3	87	48	0	12	0	60	0	39	19	0	58	0	1	1	0	2	3	207	210	0	0	2	3	207	0	0	210					
08:30	32	62	1	0	95	28	0	12	0	40	0	47	17	0	64	0	0	0	0	0	0	199	199	0	0	0	0	199	0	0	199					
08:45	27	81	1	1	109	27	1	15	0	43	0	34	17	0	51	0	0	0	0	0	1	203	204	0	0	1	203	0	0	203						
Total	101	285	2	5	388	129	1	58	0	188	0	157	67	0	224	0	2	1	0	3	5	803	808	0	0	5	803	0	0	808						
PHF	.789	.880	.500		.890	.672	.250	.763		.783	.000	.835	.882		.875	.000	.875	.250		.375						.375						.970				

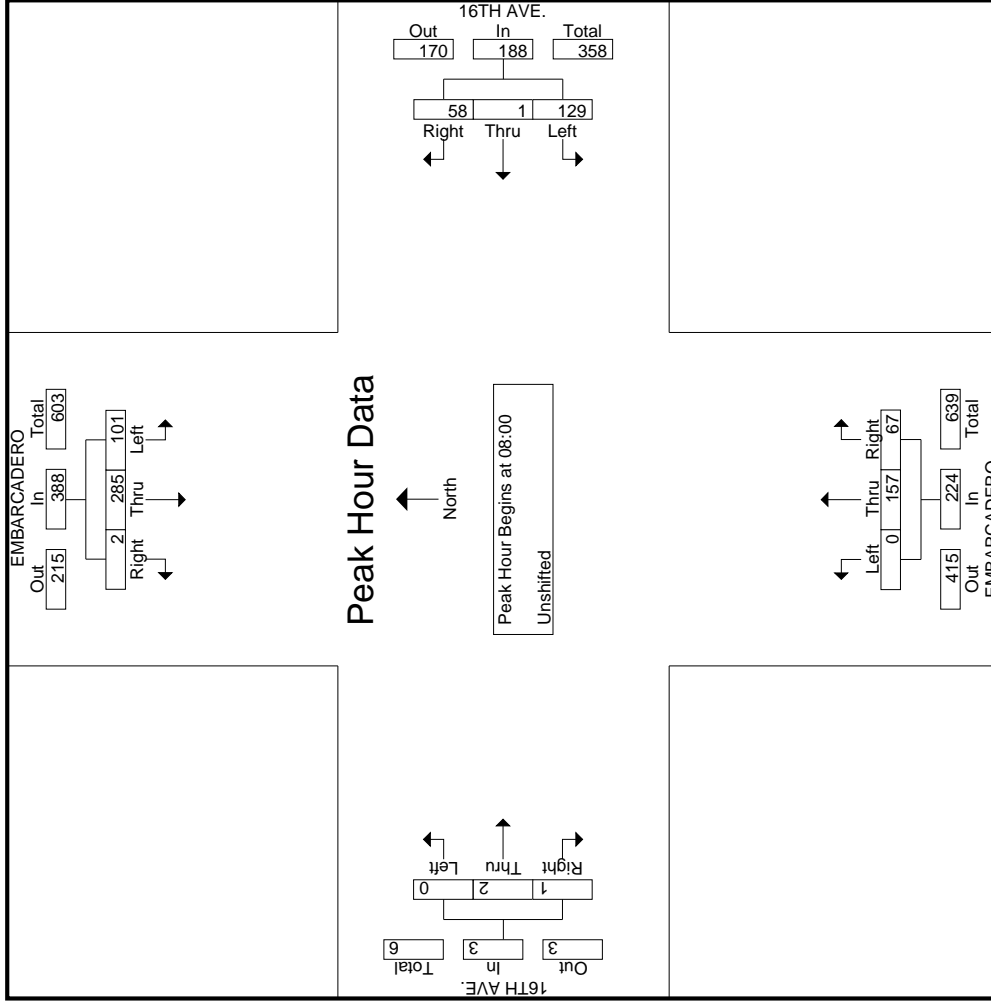
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:00

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-001 EMBARCADERO-16TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:30

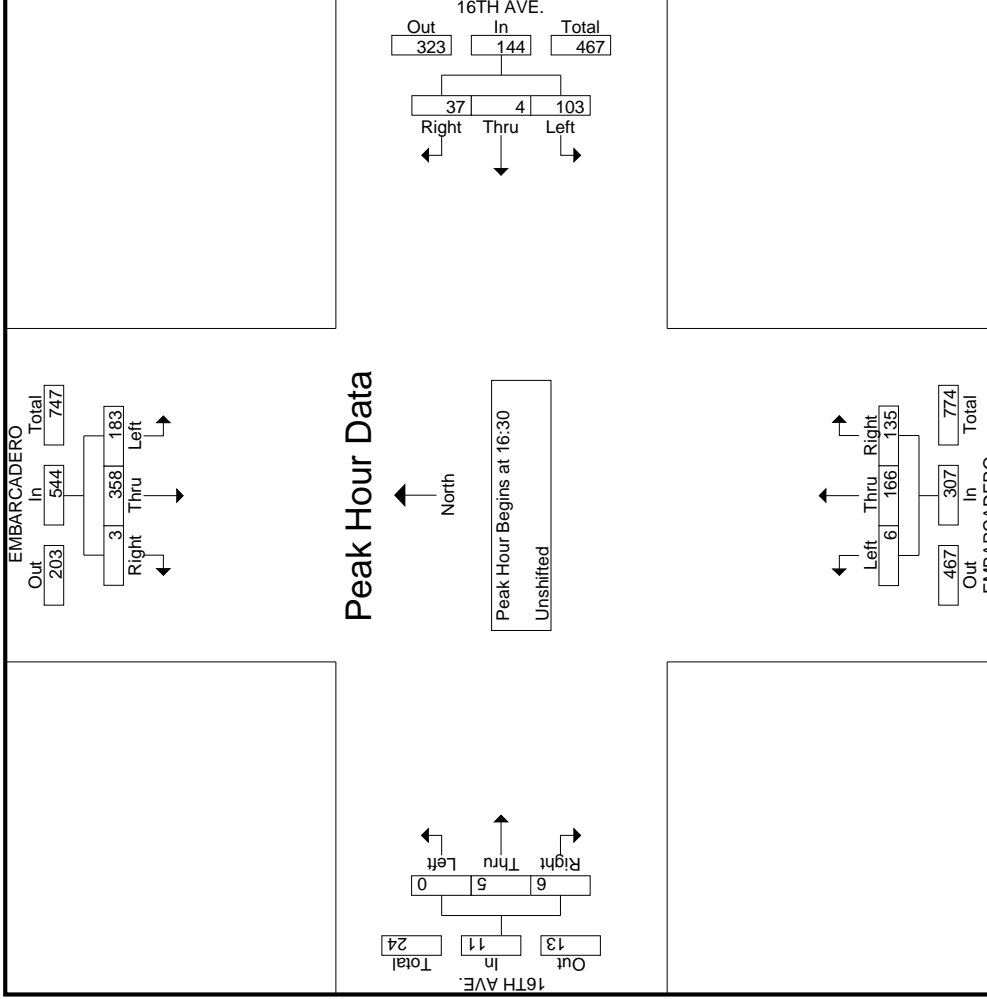
16:30	29	98	0	127	27	1	13	41	1	52	29	82	0	0	1	1	2	252
16:45	44	107	2	153	28	1	6	35	2	33	27	62	0	0	0	2	2	252
17:00	55	95	1	151	22	0	8	30	1	32	44	77	0	0	2	3	5	263
17:15	55	58	0	113	26	2	10	38	2	49	35	86	0	0	2	0	2	239
Total Volume	183	358	3	544	103	4	37	144	6	166	135	307	0	0	5	6	11	1006
% App. Total	33.6	65.8	0.6	88.9	71.5	2.8	25.7	44	2	54.1	44	.892	.000	0	45.5	54.5	.550	.956
PHF	.832	.836	.375	.889	.920	.500	.712	.878	.750	.798	.767	.892	.000	.625	.500	.550	.550	.956

All Traffic Data

(916) 771-8700
F (916) 786-2879

OAKLAND

File Name : 09-7109-001 EMBARCADERO-16TH-T
Site Code : 00000000
Start Date : 03/10/2009
Page No : 3















APPENDIX B:
TECHNICAL CALCULATIONS
(HCM LOS Calculations, SimTraffic Results)

HCM Unsignalized Intersection Capacity Analysis

1: 16th Ave & Embarcadero

Existing AM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	137	61	158	55	100	258
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	146	65	168	59	106	274
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		1				
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	655	168			227	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	655	168			227	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	63	93			92	
cM capacity (veh/h)	397	876			1342	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	211	168	59	106	274	
Volume Left	146	0	0	106	0	
Volume Right	65	0	59	0	0	
cSH	525	1700	1700	1342	1700	
Volume to Capacity	0.40	0.10	0.03	0.08	0.16	
Queue Length 95th (ft)	48	0	0	6	0	
Control Delay (s)	16.4	0.0	0.0	7.9	0.0	
Lane LOS	C			A		
Approach Delay (s)	16.4	0.0		2.2		
Approach LOS	C					
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization			31.4%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

2: International Blvd & 22nd Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	
Volume (vph)	22	355	79	89	531	32	44	204	34	22	368	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.97			0.99			0.98			0.99	
Flt Protected		1.00			0.99			0.99			1.00	
Satd. Flow (prot)		3439			3490			3448			3489	
Flt Permitted		0.91			0.84			0.85			0.93	
Satd. Flow (perm)		3145			2934			2946			3247	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	24	382	85	96	571	34	47	219	37	24	396	35
RTOR Reduction (vph)	0	32	0	0	7	0	0	20	0	0	12	0
Lane Group Flow (vph)	0	459	0	0	694	0	0	283	0	0	443	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		14.9			14.9			10.8			10.8	
Effective Green, g (s)		14.9			14.9			10.8			10.8	
Actuated g/C Ratio		0.44			0.44			0.32			0.32	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1391			1297			944			1041	
v/s Ratio Prot												
v/s Ratio Perm		0.15			0.24			0.10			0.14	
v/c Ratio		0.33			0.54			0.30			0.43	
Uniform Delay, d1		6.1			6.9			8.6			9.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.4			0.2			0.3	
Delay (s)		6.3			7.3			8.8			9.3	
Level of Service		A			A			A			A	
Approach Delay (s)		6.3			7.3			8.8			9.3	
Approach LOS		A			A			A			A	

Intersection Summary

HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	33.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

3: E 12th St & 22nd Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑	↑↑↑		↑	↑	↑		↑↑	
Volume (vph)	0	423	355	167	785	46	310	250	28	17	506	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.0	5.0		4.0	6.0	6.0		5.5	
Lane Util. Factor		0.91	1.00	1.00	0.91		1.00	1.00	1.00		0.95	
Frt		1.00	0.85	1.00	0.99		1.00	1.00	0.85		0.99	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)		5085	1583	1770	5043		1770	1863	1583		3509	
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.94	
Satd. Flow (perm)		5085	1583	1770	5043		1770	1863	1583		3297	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	455	382	180	844	49	333	269	30	18	544	28
RTOR Reduction (vph)	0	0	204	0	8	0	0	0	12	0	4	0
Lane Group Flow (vph)	0	455	178	180	885	0	333	269	18	0	586	0
Turn Type			Perm	Prot			Prot		Perm	Perm		
Protected Phases		4		3	8		5	2			6	
Permitted Phases			4						2	6		
Actuated Green, G (s)		15.0	15.0	10.1	29.1		17.5	38.0	38.0		17.0	
Effective Green, g (s)		15.0	15.0	10.1	29.1		17.5	38.0	38.0		17.0	
Actuated g/C Ratio		0.19	0.19	0.13	0.37		0.22	0.49	0.49		0.22	
Clearance Time (s)		5.0	5.0	4.0	5.0		4.0	6.0	6.0		5.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)		977	304	229	1879		397	906	770		718	
v/s Ratio Prot		0.09		c0.10	0.18		c0.19	0.14				
v/s Ratio Perm			c0.11						0.01		c0.18	
v/c Ratio		0.47	0.58	0.79	0.47		0.84	0.30	0.02		0.82	
Uniform Delay, d1		28.0	28.7	33.0	18.6		29.0	12.0	10.4		29.1	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		0.1	1.8	15.0	0.1		13.8	0.1	0.0		6.8	
Delay (s)		28.1	30.6	47.9	18.7		42.7	12.1	10.4		35.8	
Level of Service		C	C	D	B		D	B	B		D	
Approach Delay (s)		29.2			23.6			28.2			35.8	
Approach LOS		C			C			C			D	

Intersection Summary

HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	18.5
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

4: E 11th St & 23rd Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔		↔	↔		↔	↕	↕
Volume (vph)	0	0	0	12	16	18	200	573	23	26	653	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	1.00		1.00	0.95	
Frt					0.95		1.00	0.99		1.00	0.95	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1742		1770	1852		1770	3367	
Flt Permitted					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1742		1770	1852		1770	3367	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	13	17	19	213	610	24	28	695	335
RTOR Reduction (vph)	0	0	0	0	18	0	0	2	0	0	67	0
Lane Group Flow (vph)	0	0	0	0	31	0	213	632	0	28	963	0
Turn Type					Perm			Prot			Prot	
Protected Phases						8		5	2 9		1	6 9
Permitted Phases					8				2 9			6 9
Actuated Green, G (s)						3.7		20.5	32.0		10.7	22.2
Effective Green, g (s)						3.7		20.5	32.0		10.7	22.2
Actuated g/C Ratio						0.06		0.35	0.55		0.18	0.38
Clearance Time (s)						4.0		4.0			4.0	
Vehicle Extension (s)						3.0		3.0			3.0	
Lane Grp Cap (vph)						110		621	1015		324	1280
v/s Ratio Prot								0.12	c0.34		0.02	c0.29
v/s Ratio Perm						0.02						
v/c Ratio						0.28		0.34	0.62		0.09	0.75
Uniform Delay, d1						26.1		14.0	9.1		19.8	15.7
Progression Factor						1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2						1.4		0.3	1.2		0.1	2.5
Delay (s)						27.5		14.3	10.3		19.9	18.3
Level of Service						C		B	B		B	B
Approach Delay (s)		0.0				27.5		11.3			18.3	
Approach LOS		A				C		B			B	

Intersection Summary

HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	58.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis

6: SB 880 On & Kennedy St

Existing AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑
Volume (veh/h)	0	0	170	428	44	524
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	177	446	46	546
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	765	311			623	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	765	311			623	
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	100			95	
cM capacity (veh/h)	323	684			954	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	118	505	228	364
Volume Left	0	0	46	0
Volume Right	0	446	0	0
cSH	1700	1700	954	1700
Volume to Capacity	0.07	0.30	0.05	0.21
Queue Length 95th (ft)	0	0	4	0
Control Delay (s)	0.0	0.0	2.2	0.0
Lane LOS			A	
Approach Delay (s)	0.0		0.8	
Approach LOS				

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		40.9%	ICU Level of Service
Analysis Period (min)		15	A

HCM Signalized Intersection Capacity Analysis

7: International Blvd & 29th Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	380	83	153	604	40	84	93	72	61	157	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.93			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1770	3444		1770	3507		1770	1741			1823	
Flt Permitted	0.95	1.00		0.95	1.00		0.51	1.00			0.87	
Satd. Flow (perm)	1770	3444		1770	3507		943	1741			1605	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	26	422	92	170	671	44	93	103	80	68	174	16
RTOR Reduction (vph)	0	20	0	0	5	0	0	33	0	0	3	0
Lane Group Flow (vph)	26	494	0	170	710	0	93	150	0	0	255	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	2		1	2			3			3	
Permitted Phases							3			3		
Actuated Green, G (s)	10.6	23.8		10.6	23.8		14.7	14.7			14.7	
Effective Green, g (s)	10.6	23.8		10.6	23.8		14.7	14.7			14.7	
Actuated g/C Ratio	0.18	0.40		0.18	0.40		0.25	0.25			0.25	
Clearance Time (s)	3.0	3.0		3.0	3.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	317	1387		317	1412		235	433			399	
v/s Ratio Prot	0.01	0.14		c0.10	c0.20			0.09				
v/s Ratio Perm							0.10				c0.16	
v/c Ratio	0.08	0.36		0.54	0.50		0.40	0.35			0.64	
Uniform Delay, d1	20.2	12.3		22.0	13.2		18.5	18.3			19.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.0	0.1		0.9	0.1		0.4	0.2			2.5	
Delay (s)	20.2	12.4		22.9	13.3		18.9	18.4			22.3	
Level of Service	C	B		C	B		B	B			C	
Approach Delay (s)		12.7			15.2			18.6			22.3	
Approach LOS		B			B			B			C	






















Intersection Summary

HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

8: E 12th St & 29th Ave

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	371	70	96	649	65	154	183	138	47	259	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	5.0	3.0	3.0		5.0	5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3491		1770	1743			3512	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.54	1.00			0.81	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3491		1012	1743			2867	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	26	422	80	109	738	74	175	208	157	53	294	83
RTOR Reduction (vph)	0	0	57	0	11	0	0	50	0	0	0	59
Lane Group Flow (vph)	26	422	23	109	801	0	175	315	0	0	347	24
Turn Type	Prot	custom		Prot				Perm			Perm	Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			4				4			8		8
Actuated Green, G (s)	0.7	16.3	12.9	4.1	19.7		12.9	12.9			12.9	12.9
Effective Green, g (s)	0.7	16.3	12.9	4.1	19.7		12.9	12.9			12.9	12.9
Actuated g/C Ratio	0.02	0.37	0.29	0.09	0.44		0.29	0.29			0.29	0.29
Clearance Time (s)	3.0	3.0	5.0	3.0	3.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	4.0	2.0	2.0	4.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	28	1302	461	164	1552		295	508			835	461
v/s Ratio Prot	0.01	0.12		c0.06	c0.23			c0.18				
v/s Ratio Perm			0.01				0.17				0.12	0.02
v/c Ratio	0.93	0.32	0.05	0.66	0.52		0.59	0.62			0.42	0.05
Uniform Delay, d1	21.8	10.0	11.3	19.4	8.9		13.5	13.6			12.7	11.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	136.4	0.2	0.0	7.6	0.4		2.1	1.7			0.1	0.0
Delay (s)	158.2	10.2	11.3	27.1	9.3		15.6	15.3			12.8	11.3
Level of Service	F	B	B	C	A		B	B			B	B
Approach Delay (s)		17.7			11.4			15.4			12.5	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM Average Control Delay			13.8	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			44.3	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			65.8%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: NB 880 On & Lisbon Ave

Existing AM




















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑		↘	↗
Volume (veh/h)	0	0	782	31	16	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	806	32	16	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	838				822	822
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	838				822	822
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	90
cM capacity (veh/h)	796				344	374
Direction, Lane #	WB 1	SB 1				
Volume Total	838	53				
Volume Left	0	16				
Volume Right	32	36				
cSH	1700	545				
Volume to Capacity	0.49	0.10				
Queue Length 95th (ft)	0	8				
Control Delay (s)	0.0	15.8				
Lane LOS		C				
Approach Delay (s)	0.0	15.8				
Approach LOS		C				
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			53.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

10: E 8th St & 29th Ave

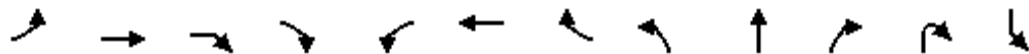
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	18	0	0	719	99	79	111	93	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	19	0	0	757	104	83	117	98	0	0	0
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	40	861	233	65	0							
Volume Left (vph)	21	0	83	0	0							
Volume Right (vph)	0	104	33	65	0							
Hadj (s)	0.14	-0.04	0.11	-0.67	0.00							
Departure Headway (s)	5.9	4.9	6.6	5.8	6.6							
Degree Utilization, x	0.07	1.16	0.42	0.10	0.00							
Capacity (veh/h)	586	738	542	612	540							
Control Delay (s)	9.4	106.0	13.1	8.3	9.6							
Approach Delay (s)	9.4	106.0	12.0		0.0							
Approach LOS	A	F	B		A							
Intersection Summary												
Delay			79.5									
HCM Level of Service			F									
Intersection Capacity Utilization			62.6%		ICU Level of Service	B						
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis

14: Lincoln Ave & Park St

Existing AM



Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL
Lane Configurations		↑↑		↑	↑	↑↑			↑↑			
Volume (vph)	179	302	67	40	81	301	13	27	694	71	14	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7		4.7	4.7	4.7			4.7			
Lane Util. Factor		0.91		0.91	1.00	0.95			0.95			
Frt		0.98		0.85	1.00	0.99			0.98			
Flt Protected		0.98		1.00	0.95	1.00			1.00			
Satd. Flow (prot)		3272		1441	1770	3517			3477			
Flt Permitted		0.74		1.00	0.38	1.00			0.92			
Satd. Flow (perm)		2455		1441	701	3517			3210			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	318	71	42	85	317	14	28	731	75	15	27
RTOR Reduction (vph)	0	1	0	15	0	5	0	0	2	0	0	0
Lane Group Flow (vph)	0	580	0	23	85	326	0	0	847	0	0	0
Turn Type	Perm			Perm	Perm			Perm				Perm
Protected Phases		2				2			4			
Permitted Phases	2			2	2			4				4
Actuated Green, G (s)		21.3		21.3	21.3	21.3			23.2			
Effective Green, g (s)		21.3		21.3	21.3	21.3			23.2			
Actuated g/C Ratio		0.40		0.40	0.40	0.40			0.43			
Clearance Time (s)		4.7		4.7	4.7	4.7			4.7			
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0			
Lane Grp Cap (vph)		970		569	277	1390			1382			
v/s Ratio Prot						0.09						
v/s Ratio Perm		c0.24		0.02	0.12				c0.26			
v/c Ratio		0.60		0.04	0.31	0.23			0.61			
Uniform Delay, d1		12.9		10.0	11.2	10.9			11.9			
Progression Factor		1.00		1.00	1.00	1.00			1.00			
Incremental Delay, d2		1.0		0.0	0.6	0.1			0.8			
Delay (s)		13.9		10.1	11.9	11.0			12.7			
Level of Service		B		B	B	B			B			
Approach Delay (s)		13.7				11.1			12.7			
Approach LOS		B				B			B			

Intersection Summary

HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	9.4
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

14: Lincoln Ave & Park St

Existing AM

























Movement	SBT	SBR
Lane Configurations	↕ ↗	
Volume (vph)	548	49
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.7	
Lane Util. Factor	0.95	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3490	
Flt Permitted	0.90	
Satd. Flow (perm)	3158	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	577	52
RTOR Reduction (vph)	10	0
Lane Group Flow (vph)	646	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	23.2	
Effective Green, g (s)	23.2	
Actuated g/C Ratio	0.43	
Clearance Time (s)	4.7	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1359	
v/s Ratio Prot		
v/s Ratio Perm	0.20	
v/c Ratio	0.48	
Uniform Delay, d1	11.0	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	11.3	
Level of Service	B	
Approach Delay (s)	11.3	
Approach LOS	B	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

15: International Blvd & Fruitvale Blvd























Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	57	382	45	136	829	93	17	397	55	40	372	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	3484		1770	3486			3470			3448	
Flt Permitted	0.95	1.00		0.95	1.00			0.93			0.89	
Satd. Flow (perm)	1770	3484		1770	3486			3232			3068	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	59	394	46	140	855	96	18	409	57	41	384	72
RTOR Reduction (vph)	0	10	0	0	10	0	0	13	0	0	17	0
Lane Group Flow (vph)	59	430	0	140	941	0	0	471	0	0	480	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	3.5	20.9		8.1	25.5			17.2			17.2	
Effective Green, g (s)	3.5	20.9		8.1	25.5			17.2			17.2	
Actuated g/C Ratio	0.06	0.36		0.14	0.44			0.30			0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	106	1251		246	1527			955			907	
v/s Ratio Prot	0.03	0.12		c0.08	c0.27							
v/s Ratio Perm								0.15			c0.16	
v/c Ratio	0.56	0.34		0.57	0.62			0.49			0.53	
Uniform Delay, d1	26.6	13.6		23.4	12.6			16.9			17.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	6.2	0.2		3.0	0.7			0.4			0.6	
Delay (s)	32.8	13.8		26.4	13.3			17.3			17.7	
Level of Service	C	B		C	B			B			B	
Approach Delay (s)		16.0			15.0			17.3			17.7	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM Average Control Delay			16.2			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			58.2			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			69.4%			ICU Level of Service					C	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

16: E 12th St & Fruitvale Blvd

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	201	189	42	200	24	407	382	112	38	412	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.91	0.91	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85		0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		1.00	
Satd. Flow (prot)	1770	1863	2787	1770	3483		1610	3343	1583		3439	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00		1.00	
Satd. Flow (perm)	1770	1863	2787	1770	3483		1610	3343	1583		3439	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	81	221	208	46	220	26	447	420	123	42	453	99
RTOR Reduction (vph)	0	0	162	0	14	0	0	0	58	0	24	0
Lane Group Flow (vph)	81	221	46	46	232	0	282	585	65	0	570	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	6.2	13.9	13.9	2.7	10.4		15.2	15.2	15.2		14.4	
Effective Green, g (s)	6.2	13.9	13.9	2.7	10.4		15.2	15.2	15.2		14.4	
Actuated g/C Ratio	0.10	0.22	0.22	0.04	0.17		0.24	0.24	0.24		0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	176	416	623	77	582		393	817	387		796	
v/s Ratio Prot	c0.05	c0.12		0.03	0.07		c0.18	0.17			c0.17	
v/s Ratio Perm			0.02						0.04			
v/c Ratio	0.46	0.53	0.07	0.60	0.40		0.72	0.72	0.17		0.72	
Uniform Delay, d1	26.4	21.3	19.1	29.2	23.1		21.5	21.5	18.5		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	1.9	1.3	0.1	11.9	0.4		6.1	3.0	0.2		3.1	
Delay (s)	28.3	22.6	19.1	41.1	23.6		27.7	24.5	18.7		25.1	
Level of Service	C	C	B	D	C		C	C	B		C	
Approach Delay (s)		22.1			26.3			24.7			25.1	
Approach LOS		C			C			C			C	



















Intersection Summary

HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	62.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

17: San Leandro St & Fruitvale Blvd



















Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	8	250	0	471	46	404	154	237	411	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5		4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95		0.91	0.91	
Frt		0.86			1.00	0.85		0.96		1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1611			1770	1583		3391		1610	3378	
Flt Permitted		1.00			0.75	1.00		0.88		0.95	0.94	
Satd. Flow (perm)		1611			1402	1583		3012		1610	3174	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	0	8	260	0	491	48	421	160	247	428	2
RTOR Reduction (vph)	0	6	0	0	0	350	0	35	0	0	0	0
Lane Group Flow (vph)	0	2	0	0	260	141	0	594	0	220	457	0
Turn Type	Perm			Perm		Perm	Perm			Prot		
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6					
Actuated Green, G (s)		19.8			19.8	19.8		21.0		15.8	40.8	
Effective Green, g (s)		19.8			19.8	19.8		21.0		15.8	40.8	
Actuated g/C Ratio		0.29			0.29	0.29		0.30		0.23	0.59	
Clearance Time (s)		4.5			4.5	4.5		4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		462			402	454		915		368	1921	
v/s Ratio Prot		0.00								c0.14	0.05	
v/s Ratio Perm					c0.19	0.09		c0.20			0.09	
v/c Ratio		0.00			0.65	0.31		0.65		0.60	0.24	
Uniform Delay, d1		17.6			21.6	19.3		20.9		23.8	6.7	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.0			3.6	0.4		1.6		2.6	0.1	
Delay (s)		17.6			25.1	19.7		22.5		26.4	6.8	
Level of Service		B			C	B		C		C	A	
Approach Delay (s)		17.6			21.6			22.5			13.2	
Approach LOS		B			C			C			B	
Intersection Summary												
HCM Average Control Delay			19.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			69.1				Sum of lost time (s)		12.5			
Intersection Capacity Utilization			61.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

18: E 9th St & Fruitvale Blvd



















Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	56	21	59	131	16	364	508	61	9	393	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.99		1.00	0.98		1.00	0.94	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1784			1817		1770	1833		1770	1746	
Flt Permitted		0.59			0.85		0.16	1.00		0.44	1.00	
Satd. Flow (perm)		1080			1559		293	1833		816	1746	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	59	22	62	138	17	383	535	64	9	414	297
RTOR Reduction (vph)	0	7	0	0	3	0	0	4	0	0	26	0
Lane Group Flow (vph)	0	157	0	0	214	0	383	595	0	9	685	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.1			16.1		65.9	60.9		45.9	44.9	
Effective Green, g (s)		16.1			16.1		65.9	60.9		45.9	44.9	
Actuated g/C Ratio		0.18			0.18		0.73	0.68		0.51	0.50	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		193			279		494	1240		427	871	
v/s Ratio Prot							c0.15	0.32		0.00	0.39	
v/s Ratio Perm		c0.15			0.14		c0.42			0.01		
v/c Ratio		0.82			0.77		0.78	0.48		0.02	0.79	
Uniform Delay, d1		35.5			35.2		17.5	7.0		10.9	18.6	
Progression Factor		1.00			1.00		0.76	0.70		1.00	1.00	
Incremental Delay, d2		22.6			11.8		7.2	1.3		0.0	7.1	
Delay (s)		58.1			47.0		20.6	6.2		10.9	25.7	
Level of Service		E			D		C	A		B	C	
Approach Delay (s)		58.1			47.0			11.8			25.5	
Approach LOS		E			D			B			C	
Intersection Summary												
HCM Average Control Delay			23.8				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			83.0%				ICU Level of Service			E		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

19: Elmwood Ave & Fruitvale Blvd

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	44	136	11	0	70	0	734	11	73	414	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95		1.00	1.00	
Fr _t		1.00	0.85		0.88			1.00		1.00	1.00	
Fl _t Protected		0.97	1.00		0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1799	1583		1634			3532		1770	1863	
Fl _t Permitted		0.74	1.00		0.96			1.00		0.33	1.00	
Satd. Flow (perm)		1375	1583		1572			3532		616	1863	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	111	45	140	11	0	72	0	757	11	75	427	0
RTOR Reduction (vph)	0	0	116	0	60	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	156	24	0	23	0	0	767	0	75	427	0
Turn Type	Perm		Perm	Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8						6		
Actuated Green, G (s)		15.2	15.2		15.2			58.4		66.8	66.8	
Effective Green, g (s)		15.2	15.2		15.2			58.4		66.8	66.8	
Actuated g/C Ratio		0.17	0.17		0.17			0.65		0.74	0.74	
Clearance Time (s)		4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		232	267		265			2292		514	1383	
v/s Ratio Prot								c0.22		0.01	c0.23	
v/s Ratio Perm		c0.11	0.01		0.01					0.10		
v/c Ratio		0.67	0.09		0.09			0.33		0.15	0.31	
Uniform Delay, d ₁		35.1	31.6		31.5			7.1		5.0	3.9	
Progression Factor		1.00	1.00		1.00			1.00		0.78	0.77	
Incremental Delay, d ₂		7.5	0.1		0.1			0.4		0.1	0.4	
Delay (s)		42.5	31.7		31.7			7.5		4.0	3.3	
Level of Service		D	C		C			A		A	A	
Approach Delay (s)		37.4			31.7			7.5			3.4	
Approach LOS		D			C			A			A	
Intersection Summary												
HCM Average Control Delay			12.8								HCM Level of Service	B
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			90.0								Sum of lost time (s)	8.0
Intersection Capacity Utilization			49.8%								ICU Level of Service	A
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

20: Alameda Ave &

Existing AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	304	50	713	169	46	522
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3438		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3438		1770	3539
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	317	52	743	176	48	544
RTOR Reduction (vph)	0	40	17	0	0	0
Lane Group Flow (vph)	317	12	902	0	48	544
Turn Type		Perm			Prot	
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	21.5	21.5	53.0		5.5	62.5
Effective Green, g (s)	21.5	21.5	53.0		5.5	62.5
Actuated g/C Ratio	0.24	0.24	0.59		0.06	0.69
Clearance Time (s)	3.0	3.0	4.0		3.0	3.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	423	378	2025		108	2458
v/s Ratio Prot	c0.18		c0.26		c0.03	0.15
v/s Ratio Perm		0.01				
v/c Ratio	0.75	0.03	0.45		0.44	0.22
Uniform Delay, d1	31.8	26.3	10.3		40.8	5.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	7.1	0.0	0.7		2.9	0.2
Delay (s)	38.9	26.3	11.0		43.7	5.2
Level of Service	D	C	B		D	A
Approach Delay (s)	37.1		11.0			8.3
Approach LOS	D		B			A






















Intersection Summary

HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

21: Blanding Ave & Tilden Wy

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	54	71	7	57	312	360	15	445	95	134	482	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		0.93		1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.98	1.00		1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1823	1583		1732		1770	3539	1583	1770	3391	
Flt Permitted		0.72	1.00		0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1342	1583		1687		1770	3539	1583	1770	3391	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	56	73	7	59	322	371	15	459	98	138	497	192
RTOR Reduction (vph)	0	0	3	0	49	0	0	0	35	0	46	0
Lane Group Flow (vph)	0	129	4	0	703	0	15	459	63	138	643	0
Turn Type	Perm		Perm	Perm			Prot		Perm	Prot		
Protected Phases		4		8			5	2		1	6	
Permitted Phases	4		4	8				2				
Actuated Green, G (s)		32.6	32.6		32.6		0.6	15.6	15.6	7.0	22.0	
Effective Green, g (s)		32.6	32.6		32.6		0.6	15.6	15.6	7.0	22.0	
Actuated g/C Ratio		0.51	0.51		0.51		0.01	0.24	0.24	0.11	0.34	
Clearance Time (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		681	804		857		17	860	385	193	1162	
v/s Ratio Prot							0.01	0.13		c0.08	c0.19	
v/s Ratio Perm		0.10	0.00		c0.42				0.04			
v/c Ratio		0.19	0.00		0.82		0.88	0.53	0.16	0.72	0.55	
Uniform Delay, d1		8.6	7.8		13.3		31.8	21.1	19.2	27.6	17.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.1	0.0		6.3		159.7	0.6	0.2	11.9	0.6	
Delay (s)		8.7	7.8		19.6		191.5	21.8	19.4	39.5	17.7	
Level of Service		A	A		B		F	C	B	D	B	
Approach Delay (s)		8.7			19.6			25.8			21.3	
Approach LOS		A			B			C			C	

Intersection Summary

HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	64.2	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

22: International Blvd & 42nd Ave

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Volume (vph)	99	446	143	182	825	22	160	185	61	29	583	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3525		1770	3408		1770	3367	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3525		1770	3408		1770	3367	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	102	460	147	188	851	23	165	191	63	30	601	288
RTOR Reduction (vph)	0	35	0	0	2	0	0	33	0	0	63	0
Lane Group Flow (vph)	102	572	0	188	872	0	165	221	0	30	826	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	6.1	22.7		12.1	28.7		10.5	33.4		2.8	25.7	
Effective Green, g (s)	6.1	22.7		12.1	28.7		10.5	33.4		2.8	25.7	
Actuated g/C Ratio	0.07	0.26		0.14	0.33		0.12	0.38		0.03	0.29	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	123	885		245	1156		212	1301		57	989	
v/s Ratio Prot	0.06	0.17		c0.11	c0.25		c0.09	0.06		0.02	c0.25	
v/s Ratio Perm												
v/c Ratio	0.83	0.65		0.77	0.75		0.78	0.17		0.53	0.84	
Uniform Delay, d1	40.2	28.8		36.3	26.3		37.4	17.9		41.7	28.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	34.8	1.6		13.4	2.8		16.3	0.1		8.5	6.2	
Delay (s)	75.0	30.5		49.7	29.1		53.7	17.9		50.2	35.1	
Level of Service	E	C		D	C		D	B		D	D	
Approach Delay (s)		36.9			32.8			32.0			35.6	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

23: International Blvd & High St

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↗	↖
Volume (vph)	50	449	31	101	861	86	49	348	31	48	421	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.99			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)	1770	3505		1770	3491			3481			3431	
Flt Permitted	0.22	1.00		0.46	1.00			0.84			0.88	
Satd. Flow (perm)	402	3505		854	3491			2938			3042	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	488	34	110	936	93	53	378	34	52	458	110
RTOR Reduction (vph)	0	8	0	0	11	0	0	11	0	0	35	0
Lane Group Flow (vph)	54	514	0	110	1018	0	0	454	0	0	585	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	2		6		6		8		8		4	
Permitted Phases	2		6		6		8		8		4	
Actuated Green, G (s)	26.2	26.2		26.2	26.2			15.6			15.6	
Effective Green, g (s)	26.2	26.2		26.2	26.2			15.6			15.6	
Actuated g/C Ratio	0.52	0.52		0.52	0.52			0.31			0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	209	1826		445	1818			911			943	
v/s Ratio Prot		0.15			c0.29							
v/s Ratio Perm	0.13			0.13				0.15			c0.19	
v/c Ratio	0.26	0.28		0.25	0.56			0.50			0.62	
Uniform Delay, d1	6.7	6.8		6.6	8.2			14.2			14.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.7	0.1		0.3	0.4			0.4			1.3	
Delay (s)	7.3	6.9		6.9	8.5			14.6			16.1	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		6.9			8.4			14.6			16.1	
Approach LOS		A			A			B			B	

Intersection Summary

HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	50.3	Sum of lost time (s)	8.5
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis

24: E 12th St PI & High St

Existing AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	35	41	378	1	32	510
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)	38	45	411	1	35	554
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			194			316
pX, platoon unblocked	0.93					
vC, conflicting volume	758	206			412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	593	206			412	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	94			97	
cM capacity (veh/h)	395	800			1143	

















Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	83	274	138	220	370
Volume Left	38	0	0	35	0
Volume Right	45	0	1	0	0
cSH	543	1700	1700	1143	1700
Volume to Capacity	0.15	0.16	0.08	0.03	0.22
Queue Length 95th (ft)	13	0	0	2	0
Control Delay (s)	12.8	0.0	0.0	1.5	0.0
Lane LOS	B			A	
Approach Delay (s)	12.8	0.0		0.6	
Approach LOS	B				

Intersection Summary					
Average Delay			1.3		
Intersection Capacity Utilization		40.0%		ICU Level of Service	A
Analysis Period (min)			15		

HCM Signalized Intersection Capacity Analysis

25: High St &

















Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	333	100	93	737	36	133	320	49	69	463	58
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	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.97			0.99			0.99			0.99	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		3414			3498			3441			3467	
Flt Permitted		0.86			0.79			0.63			0.82	
Satd. Flow (perm)		2930			2777			2203			2859	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	351	105	98	776	38	140	337	52	73	487	61
RTOR Reduction (vph)	0	28	0	0	4	0	0	9	0	0	9	0
Lane Group Flow (vph)	0	454	0	0	908	0	0	521	0	0	613	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		37.5			37.5			47.5			47.5	
Effective Green, g (s)		37.5			37.5			47.5			47.5	
Actuated g/C Ratio		0.39			0.39			0.50			0.50	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1157			1096			1102			1430	
v/s Ratio Prot												
v/s Ratio Perm		0.16			0.33			0.24			0.21	
v/c Ratio		0.39			0.83			0.47			0.43	
Uniform Delay, d1		20.6			25.9			15.5			15.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			5.3			1.5			0.9	
Delay (s)		20.8			31.2			17.0			16.1	
Level of Service		C			C			B			B	
Approach Delay (s)		20.8			31.2			17.0			16.1	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			22.6				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			95.0				Sum of lost time (s)			10.0		
Intersection Capacity Utilization			84.9%				ICU Level of Service				E	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

26: High St &

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	399	225	189	386	316	87	12	577	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Flt					0.97		1.00	0.97			0.99	
Flt Protected					0.98		0.95	1.00			1.00	
Satd. Flow (prot)					3334		1770	3424			3485	
Flt Permitted					0.98		0.95	1.00			0.94	
Satd. Flow (perm)					3334		1770	3424			3295	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	0	0	416	234	197	402	329	91	12	601	65
RTOR Reduction (vph)	0	0	0	0	33	0	0	23	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	814	0	402	397	0	0	670	0
Turn Type					Perm		Prot				Perm	
Protected Phases						8		5	2			6
Permitted Phases					8						6	
Actuated Green, G (s)					30.0		24.8	56.0			26.7	
Effective Green, g (s)					30.0		24.8	56.0			26.7	
Actuated g/C Ratio					0.32		0.26	0.59			0.28	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					1053		462	2018			926	
v/s Ratio Prot							c0.23	0.12				
v/s Ratio Perm					0.24						c0.20	
v/c Ratio					0.77		0.87	0.20			0.72	
Uniform Delay, d1					29.4		33.6	9.1			30.8	
Progression Factor					1.00		1.10	0.49			1.00	
Incremental Delay, d2					3.6		11.8	0.1			4.9	
Delay (s)					33.0		48.8	4.6			35.7	
Level of Service					C		D	A			D	
Approach Delay (s)		0.0			33.0			26.2			35.7	
Approach LOS		A			C			C			D	
Intersection Summary												
HCM Average Control Delay			31.4		HCM Level of Service						C	
HCM Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			95.0		Sum of lost time (s)					13.5		
Intersection Capacity Utilization			74.8%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

27: SB 880 Off & High St

Existing AM



Movement	EBL	EBT	EBR2	WBL2	WBL	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↔		↔	↔	↔↔		↔	↔↔	
Volume (vph)	93	467	266	20	1	44	605	537	289	403	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.5	4.5		3.5	4.5	
Lane Util. Factor		0.95	1.00		1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	0.93		1.00	0.93	
Flt Protected		0.99	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		3510	1583		1770	1583	3290		1770	3285	
Flt Permitted		0.99	1.00		0.22	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		3510	1583		413	1583	3290		1770	3285	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	492	280	21	1	46	637	565	304	424	389
RTOR Reduction (vph)	0	0	0	0	0	35	59	0	0	0	0
Lane Group Flow (vph)	0	590	280	0	22	11	1143	0	304	813	0
Turn Type	Perm		Free	custom	custom	custom			Prot		
Protected Phases		4					2		1	6	
Permitted Phases	4		Free	8	8	8					
Actuated Green, G (s)		22.1	95.0		22.1	22.1	39.6		20.8	63.9	
Effective Green, g (s)		22.1	95.0		22.1	22.1	39.6		20.8	63.9	
Actuated g/C Ratio		0.23	1.00		0.23	0.23	0.42		0.22	0.67	
Clearance Time (s)		4.5			4.5	4.5	4.5		3.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		817	1583		96	368	1371		388	2210	
v/s Ratio Prot							c0.35		c0.17	0.25	
v/s Ratio Perm		0.17	0.18		0.05	0.01					
v/c Ratio		0.72	0.18		0.23	0.03	0.83		0.78	0.37	
Uniform Delay, d1		33.6	0.0		29.5	28.2	24.8		35.0	6.8	
Progression Factor		1.00	1.00		1.00	1.00	1.00		0.74	1.96	
Incremental Delay, d2		3.2	0.2		1.2	0.0	6.1		7.8	0.4	
Delay (s)		36.8	0.2		30.8	28.2	30.8		33.8	13.6	
Level of Service		D	A		C	C	C		C	B	
Approach Delay (s)		25.0					30.8			19.1	
Approach LOS		C					C			B	

Intersection Summary

HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: Fernside Blvd & High St

Existing AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	110	158	30	1	441	207	110	653	6	210	387	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			3.5	3.5		3.8		3.0	3.8	3.8
Lane Util. Factor	1.00	1.00			0.95	1.00		1.00		1.00	0.95	0.95
Frt	1.00	0.98			1.00	0.85		1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	1819			3539	1583		1848		1770	1765	1504
Flt Permitted	0.32	1.00			0.95	1.00		0.88		0.95	1.00	1.00
Satd. Flow (perm)	596	1819			3379	1583		1629		1770	1765	1504
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	165	31	1	459	216	115	680	6	219	403	67
RTOR Reduction (vph)	0	0	0	0	0	167	0	0	0	0	1	19
Lane Group Flow (vph)	115	196	0	0	460	49	0	801	0	219	409	41
Turn Type	Perm			Perm		Perm	Perm			Prot		Perm
Protected Phases		3			3			6		5	2	
Permitted Phases	3			3		3	6					2
Actuated Green, G (s)	18.5	18.5			18.5	18.5		43.1		10.0	56.1	56.1
Effective Green, g (s)	18.5	18.5			18.5	18.5		43.1		10.0	56.1	56.1
Actuated g/C Ratio	0.23	0.23			0.23	0.23		0.53		0.12	0.68	0.68
Clearance Time (s)	3.5	3.5			3.5	3.5		3.8		3.0	3.8	3.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	135	411			763	358		857		216	1209	1030
v/s Ratio Prot		0.11								c0.12	0.23	
v/s Ratio Perm	c0.19				0.14	0.03		c0.49				0.03
v/c Ratio	0.85	0.48			0.60	0.14		0.93		1.01	0.34	0.04
Uniform Delay, d1	30.4	27.5			28.4	25.3		18.1		36.0	5.3	4.2
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	37.3	0.9			1.4	0.2		16.9		64.9	0.2	0.0
Delay (s)	67.7	28.4			29.8	25.5		34.9		100.8	5.5	4.2
Level of Service	E	C			C	C		C		F	A	A
Approach Delay (s)		42.9			28.4			34.9			35.7	
Approach LOS		D			C			C			D	

Intersection Summary

HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	81.9	Sum of lost time (s)	10.3
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: Fernside Blvd & High St

Existing AM



Movement	NEL	NER2
Lane Configurations		
Volume (vph)	0	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Fr't		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	0	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type	custom	
Protected Phases	4	
Permitted Phases		2
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)	0.0	
Approach LOS	A	
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

99: E 12th St PI &

Existing AM















Movement	EBT	NEL2	NEL	NER
Lane Configurations				
Volume (vph)	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)				
Lane Util. Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	0	0	0
Turn Type		Perm		Perm
Protected Phases	4		2	
Permitted Phases		2		2
Actuated Green, G (s)				
Effective Green, g (s)				
Actuated g/C Ratio				
Clearance Time (s)				
Vehicle Extension (s)				
Lane Grp Cap (vph)				
v/s Ratio Prot				
v/s Ratio Perm				
v/c Ratio				
Uniform Delay, d1				
Progression Factor				
Incremental Delay, d2				
Delay (s)				
Level of Service				
Approach Delay (s)	0.0		0.0	
Approach LOS	A		A	

Intersection Summary				
HCM Average Control Delay		0.0	HCM Level of Service	A
HCM Volume to Capacity ratio		0.00		
Actuated Cycle Length (s)		24.5	Sum of lost time (s)	0.0
Intersection Capacity Utilization		0.0%	ICU Level of Service	A
Analysis Period (min)		15		
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis

1: Int

















Existing PM

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	99	35	152	142	201	326
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	106	38	163	153	216	351
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		1				
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	946	163			316	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	946	163			316	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	56	96			83	
cM capacity (veh/h)	240	881			1244	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	144	163	153	216	351	
Volume Left	106	0	0	216	0	
Volume Right	38	0	153	0	0	
cSH	310	1700	1700	1244	1700	
Volume to Capacity	0.46	0.10	0.09	0.17	0.21	
Queue Length 95th (ft)	58	0	0	16	0	
Control Delay (s)	26.3	0.0	0.0	8.5	0.0	
Lane LOS	D			A		
Approach Delay (s)	26.3	0.0		3.2		
Approach LOS	D					
Intersection Summary						
Average Delay			5.5			
Intersection Capacity Utilization			34.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

2: Int













Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	677	99	66	459	49	66	364	37	45	240	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		0.98			0.99			0.99			0.98	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		3467			3474			3472			3450	
Flt Permitted		0.92			0.82			0.86			0.85	
Satd. Flow (perm)		3193			2853			3021			2970	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	35	691	101	67	468	50	67	371	38	46	245	41
RTOR Reduction (vph)	0	20	0	0	13	0	0	11	0	0	19	0
Lane Group Flow (vph)	0	807	0	0	572	0	0	465	0	0	313	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.1			17.1			12.0			12.0	
Effective Green, g (s)		17.1			17.1			12.0			12.0	
Actuated g/C Ratio		0.46			0.46			0.32			0.32	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1472			1315			977			961	
v/s Ratio Prot												
v/s Ratio Perm		c0.25			0.20			c0.15			0.11	
v/c Ratio		0.55			0.44			0.48			0.33	
Uniform Delay, d1		7.2			6.7			10.0			9.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.4			0.2			0.4			0.2	
Delay (s)		7.6			7.0			10.4			9.7	
Level of Service		A			A			B			A	
Approach Delay (s)		7.6			7.0			10.4			9.7	
Approach LOS		A			A			B			A	
Intersection Summary												
HCM Average Control Delay			8.4			HCM Level of Service					A	
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			37.1			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			74.7%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: Int



















Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑		↖	↑	↗		↕	↘
Volume (vph)	0	804	494	143	386	69	300	436	97	21	396	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	4.0	5.0		4.0	6.0	6.0		5.5	
Lane Util. Factor		0.91	1.00	1.00	0.91		1.00	1.00	1.00		0.95	
Frt		1.00	0.85	1.00	0.98		1.00	1.00	0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00	1.00		1.00	
Satd. Flow (prot)		5085	1583	1770	4970		1770	1863	1583		3524	
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.91	
Satd. Flow (perm)		5085	1583	1770	4970		1770	1863	1583		3209	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	865	531	154	415	74	323	469	104	23	426	5
RTOR Reduction (vph)	0	0	134	0	28	0	0	0	28	0	1	0
Lane Group Flow (vph)	0	865	397	154	461	0	323	469	76	0	453	0
Turn Type			Perm	Prot			Prot		Perm	Perm		
Protected Phases		4		3	8		5	2			6	
Permitted Phases			4						2	6		
Actuated Green, G (s)		24.3	24.3	8.1	36.4		17.3	36.5	36.5		15.7	
Effective Green, g (s)		24.3	24.3	8.1	36.4		17.3	36.5	36.5		15.7	
Actuated g/C Ratio		0.29	0.29	0.10	0.43		0.21	0.44	0.44		0.19	
Clearance Time (s)		5.0	5.0	4.0	5.0		4.0	6.0	6.0		5.5	
Vehicle Extension (s)		2.0	2.0	2.0	2.0		2.0	2.0	2.0		2.0	
Lane Grp Cap (vph)		1473	458	171	2156		365	810	689		600	
v/s Ratio Prot		0.17		c0.09	0.09		c0.18	0.25				
v/s Ratio Perm			c0.25						0.05		c0.14	
v/c Ratio		0.59	0.87	0.90	0.21		0.88	0.58	0.11		0.76	
Uniform Delay, d1		25.5	28.3	37.5	14.8		32.3	17.9	14.1		32.3	
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		0.4	15.3	40.9	0.0		21.1	0.6	0.0		4.8	
Delay (s)		25.9	43.6	78.4	14.8		53.5	18.5	14.1		37.1	
Level of Service		C	D	E	B		D	B	B		D	
Approach Delay (s)		32.6			30.1			30.6			37.1	
Approach LOS		C			C			C			D	
Intersection Summary												
HCM Average Control Delay			32.2				HCM Level of Service		C			
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			83.9				Sum of lost time (s)		18.5			
Intersection Capacity Utilization			75.2%				ICU Level of Service		D			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

4: Int

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	19	15	29	294	801	42	30	773	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	1.00		1.00	0.95	
Flt					0.94		1.00	0.99		1.00	0.97	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1720		1770	1849		1770	3426	
Flt Permitted					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)					1720		1770	1849		1770	3426	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	21	16	32	320	871	46	33	840	227
RTOR Reduction (vph)	0	0	0	0	30	0	0	2	0	0	31	0
Lane Group Flow (vph)	0	0	0	0	39	0	320	915	0	33	1036	0
Turn Type				Perm			Prot			Prot		
Protected Phases					8		5	2 9		1	6 9	
Permitted Phases				8				2 9			6 9	
Actuated Green, G (s)					4.0		26.4	37.7		6.9	18.2	
Effective Green, g (s)					4.0		26.4	37.7		6.9	18.2	
Actuated g/C Ratio					0.07		0.44	0.62		0.11	0.30	
Clearance Time (s)					4.0		4.0			4.0		
Vehicle Extension (s)					3.0		3.0			3.0		
Lane Grp Cap (vph)					114		771	1150		202	1029	
v/s Ratio Prot							0.18	c0.49		0.02	c0.30	
v/s Ratio Perm					0.02							
v/c Ratio					0.34		0.42	0.80		0.16	1.01	
Uniform Delay, d1					27.0		11.8	8.6		24.2	21.2	
Progression Factor					1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2					1.8		0.4	3.9		0.4	29.6	
Delay (s)					28.8		12.1	12.5		24.6	50.8	
Level of Service					C		B	B		C	D	
Approach Delay (s)		0.0			28.8			12.4			50.0	
Approach LOS		A			C			B			D	
Intersection Summary												
HCM Average Control Delay			30.1		HCM Level of Service					C		
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			60.6		Sum of lost time (s)				12.0			
Intersection Capacity Utilization			61.7%		ICU Level of Service				B			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Unsignalized Intersection Capacity Analysis

6: Int

Existing PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑↑
Volume (veh/h)	0	0	74	513	158	908
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	79	546	168	966
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1171	312			624	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1171	312			624	
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	100			82	
cM capacity (veh/h)	153	684			953	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	52	572	490	644
Volume Left	0	0	168	0
Volume Right	0	546	0	0
cSH	1700	1700	953	1700
Volume to Capacity	0.03	0.34	0.18	0.38
Queue Length 95th (ft)	0	0	16	0
Control Delay (s)	0.0	0.0	4.7	0.0
Lane LOS			A	
Approach Delay (s)	0.0		2.0	
Approach LOS				

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization		55.0%	ICU Level of Service
Analysis Period (min)		15	B

HCM Signalized Intersection Capacity Analysis

7: Int

Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	760	87	119	456	36	119	132	119	45	98	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.93			0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1770	3484		1770	3500		1770	1730			1795	
Flt Permitted	0.95	1.00		0.95	1.00		0.59	1.00			0.75	
Satd. Flow (perm)	1770	3484		1770	3500		1092	1730			1371	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	26	835	96	131	501	40	131	145	131	49	108	34
RTOR Reduction (vph)	0	9	0	0	6	0	0	39	0	0	9	0
Lane Group Flow (vph)	26	922	0	131	535	0	131	237	0	0	182	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	1	2		1	2			3			3	
Permitted Phases							3			3		
Actuated Green, G (s)	7.7	27.9		7.7	27.9		13.9	13.9			13.9	
Effective Green, g (s)	7.7	27.9		7.7	27.9		13.9	13.9			13.9	
Actuated g/C Ratio	0.13	0.47		0.13	0.47		0.23	0.23			0.23	
Clearance Time (s)	3.0	3.0		3.0	3.0		4.0	4.0			4.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lane Grp Cap (vph)	229	1634		229	1641		255	404			320	
v/s Ratio Prot	0.01	c0.26		c0.07	0.15			c0.14				
v/s Ratio Perm							0.12				0.13	
v/c Ratio	0.11	0.56		0.57	0.33		0.51	0.59			0.57	
Uniform Delay, d1	22.9	11.4		24.4	9.9		19.9	20.2			20.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.3		2.1	0.0		0.7	1.4			1.4	
Delay (s)	23.0	11.7		26.5	9.9		20.6	21.7			21.5	
Level of Service	C	B		C	A		C	C			C	
Approach Delay (s)		12.0			13.2			21.3			21.5	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			14.9			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			59.5			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			67.5%			ICU Level of Service					C	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

8: Int

Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	48	640	169	91	365	93	181	252	192	71	188	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	5.0	3.0	3.0		5.0	5.0			5.0	5.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3432		1770	1742			3491	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.56	1.00			0.60	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3432		1035	1742			2129	1583
Peak-hour factor, PHF	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Adj. Flow (vph)	60	800	211	114	456	116	226	315	240	89	235	60
RTOR Reduction (vph)	0	0	135	0	36	0	0	47	0	0	0	38
Lane Group Flow (vph)	60	800	76	114	536	0	226	508	0	0	324	22
Turn Type	Prot		custom	Prot			Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases			4				4			8		8
Actuated Green, G (s)	2.6	18.8	19.1	4.3	20.5		19.1	19.1			19.1	19.1
Effective Green, g (s)	2.6	18.8	19.1	4.3	20.5		19.1	19.1			19.1	19.1
Actuated g/C Ratio	0.05	0.35	0.36	0.08	0.39		0.36	0.36			0.36	0.36
Clearance Time (s)	3.0	3.0	5.0	3.0	3.0		5.0	5.0			5.0	5.0
Vehicle Extension (s)	2.0	4.0	2.0	2.0	4.0		2.0	2.0			2.0	2.0
Lane Grp Cap (vph)	87	1251	568	143	1322		372	625			764	568
v/s Ratio Prot	0.03	c0.23		c0.06	0.16			c0.29				
v/s Ratio Perm			0.05				0.22				0.15	0.01
v/c Ratio	0.69	0.64	0.13	0.80	0.41		0.61	0.81			0.42	0.04
Uniform Delay, d1	24.9	14.4	11.5	24.0	11.9		14.0	15.4			12.9	11.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	16.6	1.2	0.0	24.2	0.3		1.9	7.5			0.1	0.0
Delay (s)	41.5	15.6	11.5	48.3	12.2		15.9	22.9			13.0	11.1
Level of Service	D	B	B	D	B		B	C			B	B
Approach Delay (s)		16.2			18.2			20.9			12.7	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			17.5			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			53.2			Sum of lost time (s)			11.0			
Intersection Capacity Utilization			70.0%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: Int

Existing PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑		↘	↗
Volume (veh/h)	0	0	464	49	15	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	499	53	16	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	552				525	525
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	552				525	525
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	97
cM capacity (veh/h)	1018				513	552

















Direction, Lane #	WB 1	SB 1
Volume Total	552	31
Volume Left	0	16
Volume Right	53	15
cSH	1700	991
Volume to Capacity	0.32	0.03
Queue Length 95th (ft)	0	2
Control Delay (s)	0.0	12.0
Lane LOS		B
Approach Delay (s)	0.0	12.0
Approach LOS		B

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		37.4%	ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis

10: Int


















Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	28	0	0	385	85	91	194	362	0	0	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	32	0	0	438	97	103	220	411	0	0	0
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	32	534	735	0								
Volume Left (vph)	0	0	103	0								
Volume Right (vph)	0	97	411	0								
Hadj (s)	0.03	-0.07	-0.27	0.00								
Departure Headway (s)	6.9	5.8	5.4	6.8								
Degree Utilization, x	0.06	0.86	1.09	0.00								
Capacity (veh/h)	500	534	675	506								
Control Delay (s)	10.3	33.6	84.6	9.8								
Approach Delay (s)	10.3	33.6	84.6	0.0								
Approach LOS	B	D	F	A								
Intersection Summary												
Delay			61.9									
HCM Level of Service			F									
Intersection Capacity Utilization			69.5%	ICU Level of Service	C							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis

14: Int

Existing PM

												
Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL
Lane Configurations												
Volume (vph)	163	287	61	82	117	311	27	35	567	80	13	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.7		4.7	4.7	4.7			4.7			
Lane Util. Factor		0.91		0.91	1.00	0.95			0.95			
Frt		0.98		0.85	1.00	0.99			0.98			
Flt Protected		0.98		1.00	0.95	1.00			1.00			
Satd. Flow (prot)		3271		1441	1770	3496			3459			
Flt Permitted		0.73		1.00	0.38	1.00			0.87			
Satd. Flow (perm)		2435		1441	707	3496			3005			
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	173	305	65	87	124	331	29	37	603	85	14	95
RTOR Reduction (vph)	0	2	0	33	0	11	0	0	2	0	0	0
Lane Group Flow (vph)	0	550	0	45	124	349	0	0	737	0	0	0
Turn Type	Perm			Perm	Perm			Perm				Perm
Protected Phases		2				2			4			
Permitted Phases	2			2	2			4				4
Actuated Green, G (s)		21.5		21.5	21.5	21.5			27.3			
Effective Green, g (s)		21.5		21.5	21.5	21.5			27.3			
Actuated g/C Ratio		0.37		0.37	0.37	0.37			0.47			
Clearance Time (s)		4.7		4.7	4.7	4.7			4.7			
Vehicle Extension (s)		3.0		3.0	3.0	3.0			3.0			
Lane Grp Cap (vph)		900		532	261	1291			1410			
v/s Ratio Prot						0.10						
v/s Ratio Perm		c0.23		0.03	0.18				0.25			
v/c Ratio		0.61		0.08	0.48	0.27			0.52			
Uniform Delay, d1		14.9		11.9	14.0	12.9			10.9			
Progression Factor		1.00		1.00	1.00	1.00			1.00			
Incremental Delay, d2		1.2		0.1	1.4	0.1			0.4			
Delay (s)		16.2		12.0	15.4	13.0			11.2			
Level of Service		B		B	B	B			B			
Approach Delay (s)		15.7				13.6			11.2			
Approach LOS		B				B			B			
Intersection Summary												
HCM Average Control Delay			14.5			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			58.2			Sum of lost time (s)			9.4			
Intersection Capacity Utilization			88.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

14: Int

Existing PM

























Movement	SBT	SBR
Lane Configurations	↕ ↗	
Volume (vph)	798	109
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.7	
Lane Util. Factor	0.95	
Frt	0.98	
Flt Protected	1.00	
Satd. Flow (prot)	3466	
Flt Permitted	0.81	
Satd. Flow (perm)	2808	
Peak-hour factor, PHF	0.94	0.94
Adj. Flow (vph)	849	116
RTOR Reduction (vph)	13	0
Lane Group Flow (vph)	1047	0
Turn Type		
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	27.3	
Effective Green, g (s)	27.3	
Actuated g/C Ratio	0.47	
Clearance Time (s)	4.7	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1317	
v/s Ratio Prot		
v/s Ratio Perm	c0.37	
v/c Ratio	0.79	
Uniform Delay, d1	13.1	
Progression Factor	1.00	
Incremental Delay, d2	3.4	
Delay (s)	16.5	
Level of Service	B	
Approach Delay (s)	16.5	
Approach LOS	B	
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

15: Int

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	86	785	73	80	523	100	10	600	112	12	324	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	3494		1770	3454			3454			3456	
Flt Permitted	0.95	1.00		0.95	1.00			0.95			0.93	
Satd. Flow (perm)	1770	3494		1770	3454			3280			3220	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	90	818	76	83	545	104	10	625	117	12	338	60
RTOR Reduction (vph)	0	8	0	0	18	0	0	17	0	0	16	0
Lane Group Flow (vph)	90	886	0	83	631	0	0	735	0	0	394	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	6.5	25.5		6.2	25.2			22.4			22.4	
Effective Green, g (s)	6.5	25.5		6.2	25.2			22.4			22.4	
Actuated g/C Ratio	0.10	0.39		0.09	0.38			0.34			0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	174	1348		166	1317			1112			1091	
v/s Ratio Prot	c0.05	c0.25		0.05	0.18							
v/s Ratio Perm								c0.22			0.12	
v/c Ratio	0.52	0.66		0.50	0.48			0.66			0.36	
Uniform Delay, d1	28.3	16.7		28.5	15.5			18.6			16.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.6	1.2		2.4	0.3			1.5			0.2	
Delay (s)	30.9	17.9		30.8	15.8			20.1			16.7	
Level of Service	C	B		C	B			C			B	
Approach Delay (s)		19.1			17.5			20.1			16.7	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			18.6			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			66.1			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			65.8%			ICU Level of Service					C	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

16: Int



















Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	310	414	109	175	58	247	547	134	57	367	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95		0.91	0.91	1.00		0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85		0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	2787	1770	3406		1610	3383	1583		3470	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.99	
Satd. Flow (perm)	1770	1863	2787	1770	3406		1610	3383	1583		3470	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	139	320	427	112	180	60	255	564	138	59	378	43
RTOR Reduction (vph)	0	0	321	0	51	0	0	0	65	0	11	0
Lane Group Flow (vph)	139	320	106	112	189	0	229	590	73	0	469	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	11.0	16.2	16.2	4.5	9.7		15.1	15.1	15.1		13.6	
Effective Green, g (s)	11.0	16.2	16.2	4.5	9.7		15.1	15.1	15.1		13.6	
Actuated g/C Ratio	0.17	0.25	0.25	0.07	0.15		0.23	0.23	0.23		0.21	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	298	461	690	122	505		372	781	365		722	
v/s Ratio Prot	0.08	c0.17		c0.06	0.06		0.14	c0.17			c0.14	
v/s Ratio Perm			0.04						0.05			
v/c Ratio	0.47	0.69	0.15	0.92	0.37		0.62	0.76	0.20		0.65	
Uniform Delay, d1	24.6	22.3	19.2	30.3	25.1		22.5	23.4	20.3		23.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.2	4.5	0.1	56.1	0.5		3.0	4.2	0.3		2.0	
Delay (s)	25.7	26.8	19.3	86.4	25.6		25.6	27.6	20.5		25.7	
Level of Service	C	C	B	F	C		C	C	C		C	
Approach Delay (s)		23.1			44.9			26.1			25.7	
Approach LOS		C			D			C			C	
Intersection Summary												
HCM Average Control Delay			27.5				HCM Level of Service		C			
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			65.4				Sum of lost time (s)		16.0			
Intersection Capacity Utilization			63.9%				ICU Level of Service		B			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

17: Int



















Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	17	21	229	0	337	3	527	154	423	472	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	4.5		4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95		0.91	0.91	
Frt		0.93			1.00	0.85		0.97		1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00		0.95	0.99	
Satd. Flow (prot)		1729			1770	1583		3419		1610	3351	
Flt Permitted		0.97			0.73	1.00		0.95		0.95	0.66	
Satd. Flow (perm)		1691			1357	1583		3259		1610	2248	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4	18	22	239	0	351	3	549	160	441	492	3
RTOR Reduction (vph)	0	16	0	0	0	263	0	31	0	0	0	0
Lane Group Flow (vph)	0	28	0	0	239	88	0	681	0	304	632	0
Turn Type	Perm			Perm		Perm	Perm			Prot		
Protected Phases		4			4			6		5	2	
Permitted Phases	4			4		4	6					
Actuated Green, G (s)		18.4			18.4	18.4		22.8		19.4	46.2	
Effective Green, g (s)		18.4			18.4	18.4		22.8		19.4	46.2	
Actuated g/C Ratio		0.25			0.25	0.25		0.31		0.27	0.63	
Clearance Time (s)		4.5			4.5	4.5		4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		426			342	398		1016		427	1713	
v/s Ratio Prot										c0.19	0.10	
v/s Ratio Perm		0.02			c0.18	0.06		c0.21			0.14	
v/c Ratio		0.06			0.70	0.22		0.67		0.71	0.37	
Uniform Delay, d1		20.8			24.8	21.7		21.9		24.3	6.5	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.1			6.1	0.3		1.8		5.5	0.1	
Delay (s)		20.9			31.0	22.0		23.6		29.9	6.6	
Level of Service		C			C	C		C		C	A	
Approach Delay (s)		20.9			25.6			23.6			14.1	
Approach LOS		C			C			C			B	
Intersection Summary												
HCM Average Control Delay			20.2				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			73.1				Sum of lost time (s)		12.5			
Intersection Capacity Utilization			66.3%				ICU Level of Service		C			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

18: Int



















Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	108	41	52	28	14	212	473	99	15	491	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.97		1.00	0.96	
Flt Protected		0.97			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1782			1776		1770	1814		1770	1785	
Flt Permitted		0.78			0.74		0.13	1.00		0.36	1.00	
Satd. Flow (perm)		1435			1343		238	1814		677	1785	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	200	115	44	55	30	15	226	503	105	16	522	200
RTOR Reduction (vph)	0	6	0	0	7	0	0	7	0	0	15	0
Lane Group Flow (vph)	0	353	0	0	93	0	226	601	0	16	707	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		24.5			24.5		57.5	51.5		44.9	42.9	
Effective Green, g (s)		24.5			24.5		57.5	51.5		44.9	42.9	
Actuated g/C Ratio		0.27			0.27		0.64	0.57		0.50	0.48	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		391			366		332	1038		362	851	
v/s Ratio Prot							c0.08	0.33		0.00	c0.40	
v/s Ratio Perm		c0.25			0.07		0.35			0.02		
v/c Ratio		0.90			0.25		0.68	0.58		0.04	0.83	
Uniform Delay, d1		31.6			25.6		14.7	12.3		11.7	20.4	
Progression Factor		1.00			1.00		1.59	0.58		1.00	1.00	
Incremental Delay, d2		23.5			0.4		5.4	2.3		0.1	9.3	
Delay (s)		55.1			26.0		28.9	9.4		11.7	29.7	
Level of Service		E			C		C	A		B	C	
Approach Delay (s)		55.1			26.0			14.7			29.3	
Approach LOS		E			C			B			C	
Intersection Summary												
HCM Average Control Delay			27.7				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			81.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

19: Int

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	88	401	6	0	108	0	531	18	97	493	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00			0.95		1.00	1.00	
Fr _t		1.00	0.85		0.87			1.00		1.00	1.00	
Fl _t Protected		0.97	1.00		1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1804	1583		1620			3522		1770	1863	
Fl _t Permitted		0.71	1.00		0.98			1.00		0.40	1.00	
Satd. Flow (perm)		1320	1583		1599			3522		742	1863	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	178	93	422	6	0	114	0	559	19	102	519	0
RTOR Reduction (vph)	0	0	218	0	83	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	271	204	0	37	0	0	576	0	102	519	0
Turn Type	Perm		Perm	Perm						pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8						6		
Actuated Green, G (s)		24.6	24.6		24.6			48.7		57.4	57.4	
Effective Green, g (s)		24.6	24.6		24.6			48.7		57.4	57.4	
Actuated g/C Ratio		0.27	0.27		0.27			0.54		0.64	0.64	
Clearance Time (s)		4.0	4.0		4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		361	433		437			1906		527	1188	
v/s Ratio Prot								0.16		0.01	c0.28	
v/s Ratio Perm		c0.21	0.13		0.02					0.11		
v/c Ratio		0.75	0.47		0.09			0.30		0.19	0.44	
Uniform Delay, d ₁		29.9	27.3		24.3			11.3		8.7	8.2	
Progression Factor		1.00	1.00		1.00			1.00		0.41	0.40	
Incremental Delay, d ₂		8.5	0.8		0.1			0.4		0.1	0.7	
Delay (s)		38.4	28.1		24.4			11.7		3.7	4.0	
Level of Service		D	C		C			B		A	A	
Approach Delay (s)		32.1			24.4			11.7			3.9	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay			17.1								HCM Level of Service	B
HCM Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			90.0								Sum of lost time (s)	8.0
Intersection Capacity Utilization			67.8%								ICU Level of Service	C
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

20: Int

Existing PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	303	76	469	190	64	872
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	4.0		3.0	3.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
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)	1770	1583	3386		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3386		1770	3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	322	81	499	202	68	928
RTOR Reduction (vph)	0	61	35	0	0	0
Lane Group Flow (vph)	322	20	666	0	68	928
Turn Type		Perm			Prot	
Protected Phases	3		2		1	6
Permitted Phases		3				
Actuated Green, G (s)	22.0	22.0	50.3		7.7	62.0
Effective Green, g (s)	22.0	22.0	50.3		7.7	62.0
Actuated g/C Ratio	0.24	0.24	0.56		0.09	0.69
Clearance Time (s)	3.0	3.0	4.0		3.0	3.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	433	387	1892		151	2438
v/s Ratio Prot	c0.18		0.20		0.04	c0.26
v/s Ratio Perm		0.01				
v/c Ratio	0.74	0.05	0.35		0.45	0.38
Uniform Delay, d1	31.4	26.0	10.9		39.1	5.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.8	0.1	0.5		2.1	0.5
Delay (s)	38.2	26.1	11.4		41.3	6.4
Level of Service	D	C	B		D	A
Approach Delay (s)	35.7		11.4			8.7
Approach LOS	D		B			A






















Intersection Summary

HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

21: Int

























Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	150	26	57	163	118	28	399	131	300	651	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		0.95		1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.98	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1822	1583		1760		1770	3539	1583	1770	3407	
Flt Permitted		0.62	1.00		0.88		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1154	1583		1554		1770	3539	1583	1770	3407	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	138	172	30	66	187	136	32	459	151	345	748	247
RTOR Reduction (vph)	0	0	20	0	26	0	0	0	53	0	36	0
Lane Group Flow (vph)	0	310	10	0	363	0	32	459	98	345	960	0
Turn Type	Perm		Perm	Perm			Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Actuated Green, G (s)		21.3	21.3		21.3		1.6	16.3	16.3	17.2	31.9	
Effective Green, g (s)		21.3	21.3		21.3		1.6	16.3	16.3	17.2	31.9	
Actuated g/C Ratio		0.33	0.33		0.33		0.03	0.26	0.26	0.27	0.50	
Clearance Time (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		385	528		519		44	904	404	477	1704	
v/s Ratio Prot							0.02	0.13		c0.19	c0.28	
v/s Ratio Perm		c0.27	0.01		0.23				0.06			
v/c Ratio		0.81	0.02		0.70		0.73	0.51	0.24	0.72	0.56	
Uniform Delay, d1		19.4	14.2		18.5		30.9	20.3	18.9	21.1	11.1	
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		11.6	0.0		4.1		45.3	0.5	0.3	5.4	0.4	
Delay (s)		31.0	14.3		22.6		76.2	20.8	19.2	26.5	11.5	
Level of Service		C	B		C		E	C	B	C	B	
Approach Delay (s)		29.5			22.6			23.2			15.4	
Approach LOS		C			C			C			B	
Intersection Summary												
HCM Average Control Delay			20.0				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			63.8				Sum of lost time (s)			6.0		
Intersection Capacity Utilization			75.0%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

22: Int























Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	174	814	105	142	767	36	243	406	93	37	349	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3479		1770	3515		1770	3440		1770	3397	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3479		1770	3515		1770	3440		1770	3397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	178	831	107	145	783	37	248	414	95	38	356	130
RTOR Reduction (vph)	0	11	0	0	4	0	0	22	0	0	43	0
Lane Group Flow (vph)	178	927	0	145	816	0	248	487	0	38	443	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	10.1	26.4		8.1	24.4		13.8	28.5		3.4	18.1	
Effective Green, g (s)	10.1	26.4		8.1	24.4		13.8	28.5		3.4	18.1	
Actuated g/C Ratio	0.12	0.32		0.10	0.29		0.17	0.34		0.04	0.22	
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	216	1108		173	1035		295	1183		73	742	
v/s Ratio Prot	c0.10	c0.27		0.08	0.23		c0.14	0.14		0.02	c0.13	
v/s Ratio Perm												
v/c Ratio	0.82	0.84		0.84	0.79		0.84	0.41		0.52	0.60	
Uniform Delay, d1	35.5	26.2		36.8	26.9		33.5	20.8		39.0	29.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.8	5.6		28.3	4.1		18.9	0.2		6.5	1.3	
Delay (s)	57.3	31.9		65.0	30.9		52.4	21.0		45.5	30.4	
Level of Service	E	C		E	C		D	C		D	C	
Approach Delay (s)		35.9			36.1			31.3			31.5	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM Average Control Delay			34.2				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			82.9				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			74.6%				ICU Level of Service		D			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis

23: Int

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (vph)	79	833	37	91	839	122	49	478	61	73	350	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.99		1.00	0.98			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.99	
Satd. Flow (prot)	1770	3517		1770	3472			3470			3421	
Flt Permitted	0.23	1.00		0.27	1.00			0.88			0.77	
Satd. Flow (perm)	432	3517		502	3472			3049			2663	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	81	859	38	94	865	126	51	493	63	75	361	94
RTOR Reduction (vph)	0	5	0	0	18	0	0	16	0	0	33	0
Lane Group Flow (vph)	81	892	0	94	973	0	0	591	0	0	497	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	26.6	26.6		26.6	26.6			15.5			15.5	
Effective Green, g (s)	26.6	26.6		26.6	26.6			15.5			15.5	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.31			0.31	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	227	1849		264	1825			934			816	
v/s Ratio Prot		0.25		c0.28								
v/s Ratio Perm	0.19			0.19				c0.19			0.19	
v/c Ratio	0.36	0.48		0.36	0.53			0.63			0.61	
Uniform Delay, d1	7.0	7.6		7.0	7.9			15.1			15.0	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.0	0.2		0.8	0.3			1.4			1.3	
Delay (s)	8.0	7.8		7.8	8.2			16.5			16.3	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)		7.8			8.2			16.5			16.3	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM Average Control Delay			11.0			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			50.6			Sum of lost time (s)				8.5		
Intersection Capacity Utilization			93.4%			ICU Level of Service					F	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Unsignalized Intersection Capacity Analysis

24: Int

Existing PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	59	533	6	27	442
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	54	63	573	6	29	475
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			194			316
pX, platoon unblocked	0.98					
vC, conflicting volume	872	290			580	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831	290			580	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	91			97	
cM capacity (veh/h)	293	707			990	

















Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	117	382	197	187	317
Volume Left	54	0	0	29	0
Volume Right	63	0	6	0	0
cSH	429	1700	1700	990	1700
Volume to Capacity	0.27	0.22	0.12	0.03	0.19
Queue Length 95th (ft)	27	0	0	2	0
Control Delay (s)	16.5	0.0	0.0	1.6	0.0
Lane LOS	C			A	
Approach Delay (s)	16.5	0.0		0.6	
Approach LOS	C				

Intersection Summary					
Average Delay			1.9		
Intersection Capacity Utilization		44.3%		ICU Level of Service	A
Analysis Period (min)			15		

HCM Signalized Intersection Capacity Analysis

25: Int

















Existing PM

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	36	589	129	89	498	76	106	420	81	61	428	64	
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		
Lane Util. Factor		0.95			0.95			0.95			0.95		
Frt		0.97			0.98			0.98			0.98		
Flt Protected		1.00			0.99			0.99			0.99		
Satd. Flow (prot)		3440			3455			3438			3459		
Flt Permitted		0.88			0.62			0.72			0.81		
Satd. Flow (perm)		3018			2159			2509			2818		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Adj. Flow (vph)	38	627	137	95	530	81	113	447	86	65	455	68	
RTOR Reduction (vph)	0	19	0	0	11	0	0	11	0	0	10	0	
Lane Group Flow (vph)	0	783	0	0	695	0	0	635	0	0	578	0	
Turn Type	Perm			Perm			Perm			Perm			
Protected Phases		2			6			8			4		
Permitted Phases	2			6			8			4			
Actuated Green, G (s)		35.3			35.3			49.7			49.7		
Effective Green, g (s)		35.3			35.3			49.7			49.7		
Actuated g/C Ratio		0.37			0.37			0.52			0.52		
Clearance Time (s)		5.0			5.0			5.0			5.0		
Vehicle Extension (s)		3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)		1121			802			1313			1474		
v/s Ratio Prot													
v/s Ratio Perm		0.26			c0.32			c0.25			0.21		
v/c Ratio		0.70			0.87			0.48			0.39		
Uniform Delay, d1		25.3			27.7			14.5			13.6		
Progression Factor		1.00			1.00			1.00			1.00		
Incremental Delay, d2		1.9			9.7			1.3			0.8		
Delay (s)		27.2			37.4			15.7			14.4		
Level of Service		C			D			B			B		
Approach Delay (s)		27.2			37.4			15.7			14.4		
Approach LOS		C			D			B			B		
Intersection Summary													
HCM Average Control Delay			24.4									HCM Level of Service	C
HCM Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			95.0									Sum of lost time (s)	10.0
Intersection Capacity Utilization			89.8%									ICU Level of Service	E
Analysis Period (min)			15										
c	Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

26: Int

Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	469	367	212	438	394	55	15	544	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Flt					0.97		1.00	0.98			0.98	
Flt Protected					0.98		0.95	1.00			1.00	
Satd. Flow (prot)					3357		1770	3474			3455	
Flt Permitted					0.98		0.95	1.00			0.94	
Satd. Flow (perm)					3357		1770	3474			3247	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	479	374	216	447	402	56	15	555	102
RTOR Reduction (vph)	0	0	0	0	24	0	0	11	0	0	15	0
Lane Group Flow (vph)	0	0	0	0	1045	0	447	447	0	0	657	0
Turn Type				Perm			Prot			Perm		
Protected Phases					8		5	2			6	
Permitted Phases				8						6		
Actuated Green, G (s)					34.2		25.2	51.8			22.1	
Effective Green, g (s)					34.2		25.2	51.8			22.1	
Actuated g/C Ratio					0.36		0.27	0.55			0.23	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					1209		470	1894			755	
v/s Ratio Prot							c0.25	0.13				
v/s Ratio Perm					0.31						c0.20	
v/c Ratio					0.86		0.95	0.24			0.87	
Uniform Delay, d1					28.2		34.3	11.3			35.1	
Progression Factor					1.00		0.88	0.37			1.00	
Incremental Delay, d2					6.6		23.7	0.2			13.0	
Delay (s)					34.9		53.8	4.4			48.1	
Level of Service					C		D	A			D	
Approach Delay (s)		0.0			34.9			28.8			48.1	
Approach LOS		A			C			C			D	
Intersection Summary												
HCM Average Control Delay			36.1		HCM Level of Service						D	
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			95.0		Sum of lost time (s)					13.5		
Intersection Capacity Utilization			84.7%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

27: Int

Existing PM



Movement	EBL	EBT	EBR2	WBL2	WBL	WBR	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↘	↗	↕↕		↗	↕↕	
Volume (vph)	50	379	347	37	8	108	808	399	257	439	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.5	4.5		3.5	4.5	
Lane Util. Factor		0.95	1.00		1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	0.95		1.00	0.93	
Flt Protected		0.99	1.00		0.95	1.00	1.00		0.95	1.00	
Satd. Flow (prot)		3519	1583		1770	1583	3364		1770	3306	
Flt Permitted		0.99	1.00		0.31	1.00	1.00		0.95	1.00	
Satd. Flow (perm)		3519	1583		569	1583	3364		1770	3306	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	52	391	358	38	8	111	833	411	265	453	354
RTOR Reduction (vph)	0	0	0	0	0	90	59	0	0	0	0
Lane Group Flow (vph)	0	443	358	0	46	21	1185	0	265	807	0
Turn Type	Perm		Free	custom	custom	custom			Prot		
Protected Phases		4					2		1	6	
Permitted Phases	4		Free	8	8	8					
Actuated Green, G (s)		18.1	95.0		18.1	18.1	44.4		20.0	67.9	
Effective Green, g (s)		18.1	95.0		18.1	18.1	44.4		20.0	67.9	
Actuated g/C Ratio		0.19	1.00		0.19	0.19	0.47		0.21	0.71	
Clearance Time (s)		4.5			4.5	4.5	4.5		3.5	4.5	
Vehicle Extension (s)		3.0			3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		670	1583		108	302	1572		373	2363	
v/s Ratio Prot							c0.35		c0.15	0.24	
v/s Ratio Perm		0.13	0.23		0.08	0.01					
v/c Ratio		0.66	0.23		0.43	0.07	0.75		0.71	0.34	
Uniform Delay, d1		35.6	0.0		33.9	31.5	20.8		34.8	5.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00		0.69	2.30	
Incremental Delay, d2		2.5	0.3		2.7	0.1	3.4		3.4	0.2	
Delay (s)		38.1	0.3		36.6	31.6	24.2		27.4	12.0	
Level of Service		D	A		D	C	C		C	B	
Approach Delay (s)		21.2					24.2			15.8	
Approach LOS		C					C			B	

Intersection Summary

HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: Int

Existing PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	125	303	60	4	192	230	51	364	12	255	537	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5			3.5	3.5		3.8		3.0	3.8	3.8
Lane Util. Factor	1.00	1.00			0.95	1.00		1.00		1.00	0.95	0.95
Frt	1.00	0.98			1.00	0.85		1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	1817			3536	1583		1845		1770	1766	1504
Flt Permitted	0.61	1.00			0.95	1.00		0.88		0.95	1.00	1.00
Satd. Flow (perm)	1139	1817			3358	1583		1633		1770	1766	1504
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	329	65	4	209	250	55	396	13	277	584	70
RTOR Reduction (vph)	0	0	0	0	0	187	0	1	0	0	0	20
Lane Group Flow (vph)	136	394	0	0	213	63	0	463	0	277	591	43
Turn Type	Perm			Perm		Perm	Perm			Prot		Perm
Protected Phases		3			3			6		5	2	
Permitted Phases	3			3		3	6					2
Actuated Green, G (s)	18.8	18.8			18.8	18.8		25.7		13.2	41.9	41.9
Effective Green, g (s)	18.8	18.8			18.8	18.8		25.7		13.2	41.9	41.9
Actuated g/C Ratio	0.25	0.25			0.25	0.25		0.34		0.18	0.56	0.56
Clearance Time (s)	3.5	3.5			3.5	3.5		3.8		3.0	3.8	3.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	287	457			845	398		562		313	991	844
v/s Ratio Prot		c0.22								c0.16	0.33	
v/s Ratio Perm	0.12				0.06	0.04		c0.28				0.03
v/c Ratio	0.47	0.86			0.25	0.16		0.82		0.88	0.60	0.05
Uniform Delay, d1	23.7	26.7			22.3	21.8		22.4		30.0	10.8	7.4
Progression Factor	1.00	1.00			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	15.3			0.2	0.2		9.5		24.3	1.0	0.0
Delay (s)	25.0	42.0			22.5	22.0		31.9		54.3	11.8	7.4
Level of Service	C	D			C	C		C		D	B	A
Approach Delay (s)		37.7			22.2			31.9			24.2	
Approach LOS		D			C			C			C	

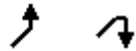
Intersection Summary

HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

28: Int

Existing PM



Movement	NEL	NER2
Lane Configurations		
Volume (vph)	0	0
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	0	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type	custom	
Protected Phases	4	
Permitted Phases		2
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)	0.0	
Approach LOS	A	
Intersection Summary		

HCM Signalized Intersection Capacity Analysis

99: Int

Existing PM



Movement	EBT	NEL2	NEL	NER
Lane Configurations				
Volume (vph)	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)				
Lane Util. Factor				
Fr t				
Fl t Protected				
Satd. Flow (prot)				
Fl t Permitted				
Satd. Flow (perm)				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	0	0	0
Turn Type		Perm		Perm
Protected Phases	4		2	
Permitted Phases		2		2
Actuated Green, G (s)				
Effective Green, g (s)				
Actuated g/C Ratio				
Clearance Time (s)				
Vehicle Extension (s)				
Lane Grp Cap (vph)				
v/s Ratio Prot				
v/s Ratio Perm				
v/c Ratio				
Uniform Delay, d1				
Progression Factor				
Incremental Delay, d2				
Delay (s)				
Level of Service				
Approach Delay (s)	0.0		0.0	
Approach LOS	A		A	

Intersection Summary				
HCM Average Control Delay		0.0	HCM Level of Service	A
HCM Volume to Capacity ratio		0.00		
Actuated Cycle Length (s)		24.5	Sum of lost time (s)	0.0
Intersection Capacity Utilization		0.0%	ICU Level of Service	A
Analysis Period (min)		15		
c Critical Lane Group				

5: Int Performance by movement

Movement	EBR	NBL	SBT	SBR	All
Delay / Veh (s)	1.2	7.9	1.4	6.8	3.0
Vehicles Entered	100	125	461	69	755
Vehicles Exited	100	125	462	69	756
Hourly Exit Rate	100	125	462	69	756
Input Volume	95	119	461	77	752
% of Volume	106	105	100	89	101
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

6: Int Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	0.2	0.8	4.2	0.3	0.6
Vehicles Entered	152	435	43	522	1152
Vehicles Exited	152	436	44	524	1156
Hourly Exit Rate	152	436	44	524	1156
Input Volume	170	428	44	524	1166
% of Volume	89	102	101	100	99
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

9: Int Performance by movement

Movement	WBT	WBR	SBL	SBR	All
Delay / Veh (s)	1.3	0.8	7.4	5.6	1.5
Vehicles Entered	851	27	7	34	919
Vehicles Exited	849	27	7	34	917
Hourly Exit Rate	849	27	7	34	917
Input Volume	782	31	16	35	864
% of Volume	109	88	43	98	106
Denied Entry Before	0	0	0	0	0
Denied Entry After	1	0	0	0	1

10: Int Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Delay / Veh (s)	6.6	5.0	72.8	79.8	7.1	7.9	3.7	53.2
Vehicles Entered	19	25	690	83	77	116	98	1108
Vehicles Exited	20	25	686	83	77	115	98	1104
Hourly Exit Rate	20	25	686	83	77	115	98	1104
Input Volume	20	18	719	99	79	111	93	1139
% of Volume	99	137	95	84	97	104	106	97
Denied Entry Before	0	0	0	0	0	0	0	0
Denied Entry After	0	0	28	5	0	0	0	33

11: Int Performance by movement

Movement	EBR	WBL	WBT	WBR	SBT	SBR	All
Delay / Veh (s)	1.5	4.6	6.0	3.6	44.9	0.1	8.3
Vehicles Entered	523	163	145	1349	298	15	2493
Vehicles Exited	522	163	144	1350	302	15	2496
Hourly Exit Rate	522	163	144	1350	302	15	2496
Input Volume	525	154	160	1379	321	12	2551
% of Volume	99	106	90	98	94	122	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

12: Int Performance by movement

Movement	WBR	NBL	NBT	NBR	SBR	All
Delay / Veh (s)	6.5	3.2	1.2	0.5	1.6	2.3
Vehicles Entered	14	1435	253	538	222	2462
Vehicles Exited	14	1435	253	539	222	2463
Hourly Exit Rate	14	1435	253	539	222	2463
Input Volume	11	1478	242	548	215	2495
% of Volume	124	97	104	98	103	99
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0

13: Int Performance by movement

Movement	EBL	EBR	WBR	NBT	NBR	All
Delay / Veh (s)	8.0	2.1	765.3	13.2	12.5	15.6
Vehicles Entered	63	927	28	2144	8	3170
Vehicles Exited	63	927	21	2144	8	3163
Hourly Exit Rate	63	927	21	2144	8	3163
Input Volume	78	922	35	2155	7	3197
% of Volume	81	101	60	100	114	99
Denied Entry Before	0	0	0	1	0	1
Denied Entry After	0	0	0	0	0	0

18: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Delay / Veh (s)	66.4	63.3	62.8	43.2	43.2	33.1	27.8	7.4	4.5	24.4	29.5	25.2
Vehicles Entered	75	53	19	57	151	12	384	579	45	10	405	270
Vehicles Exited	77	52	19	56	146	13	380	581	45	10	403	270
Hourly Exit Rate	77	52	19	56	146	13	380	581	45	10	403	270
Input Volume	79	56	21	59	131	16	364	508	61	9	393	282
% of Volume	97	93	89	95	111	80	104	114	74	111	103	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: Int Performance by movement

Movement	All
Delay / Veh (s)	25.7
Vehicles Entered	2060
Vehicles Exited	2052
Hourly Exit Rate	2052
Input Volume	1980
% of Volume	104
Denied Entry Before	0
Denied Entry After	0

19: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	32.6	31.2	3.8	37.9	12.6	23.3	21.5	18.3	5.2	17.5
Vehicles Entered	102	43	123	8	72	809	16	80	417	1670
Vehicles Exited	104	43	122	8	72	807	16	80	417	1669
Hourly Exit Rate	104	43	122	8	72	807	16	80	417	1669
Input Volume	108	44	136	11	70	734	11	73	414	1602
% of Volume	96	98	90	71	102	110	142	109	101	104
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	3	0	0	0	3

25: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Delay / Veh (s)	45.6	22.3	13.6	38.4	26.1	19.6	29.0	15.2	8.3	31.1	21.2	21.7
Vehicles Entered	31	300	95	93	750	41	133	285	56	60	470	55
Vehicles Exited	32	294	93	94	754	41	130	283	58	61	467	55
Hourly Exit Rate	32	294	93	94	754	41	130	283	58	61	467	55
Input Volume	25	333	100	93	737	36	133	324	49	69	463	58
% of Volume	129	88	93	101	102	115	98	87	118	88	101	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	1	0	0	0	0	0	0	0

25: Int Performance by movement

Movement	All
Delay / Veh (s)	23.3
Vehicles Entered	2369
Vehicles Exited	2362
Hourly Exit Rate	2362
Input Volume	2419
% of Volume	98
Denied Entry Before	0
Denied Entry After	1

26: Int Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Delay / Veh (s)	39.9	32.4	26.4	29.8	5.7	3.9	32.9	49.4	43.5	33.2
Vehicles Entered	423	247	195	340	275	89	22	565	67	2223
Vehicles Exited	424	253	199	340	275	89	22	571	73	2246
Hourly Exit Rate	424	253	199	340	275	89	22	571	73	2246
Input Volume	399	225	189	386	316	87	12	582	62	2258
% of Volume	106	112	105	88	87	103	180	98	118	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0

27: Int Performance by movement

Movement	EBL	EBT	EBR2	WBL2	WBR	NBT	NBR	SBL	SBT	SBR	All
Delay / Veh (s)	37.5	33.8	9.7	54.9	7.8	35.1	38.3	37.9	5.8	7.4	25.5
Vehicles Entered	94	440	264	21	52	505	476	278	401	378	2909
Vehicles Exited	92	448	264	21	52	513	479	278	402	378	2927
Hourly Exit Rate	92	448	264	21	52	513	479	278	402	378	2927
Input Volume	93	467	266	20	44	605	537	289	403	370	3095
% of Volume	99	96	99	104	119	85	89	96	100	102	95
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

28: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	68.9	25.8	20.4	58.2	27.8	9.7	577.6	568.5	552.0	44.9	13.1	183.5
Vehicles Entered	104	137	25	2	425	209	108	509	7	206	401	2133
Vehicles Exited	106	138	25	2	432	207	104	493	7	205	397	2116
Hourly Exit Rate	106	138	25	2	432	207	104	493	7	205	397	2116
Input Volume	110	158	30	1	441	207	110	653	6	210	387	2314
% of Volume	96	87	83	200	98	100	94	75	112	98	103	91
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	22	126	2	0	0	150

29: Int Performance by movement

Movement	EBT	NBT	NBR	All
Delay / Veh (s)	10.0	0.8	0.4	2.0
Vehicles Entered	104	619	67	790
Vehicles Exited	103	618	67	788
Hourly Exit Rate	103	618	67	788
Input Volume	115	661	63	839
% of Volume	90	94	106	94
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

30: Int Performance by movement

Movement	EBT	EBR	NBL	NBR	All
Delay / Veh (s)	3.5	2.9	122.6	87.0	11.3
Vehicles Entered	1158	125	85	14	1382
Vehicles Exited	1158	125	80	13	1376
Hourly Exit Rate	1158	125	80	13	1376
Input Volume	1111	145	70	16	1342
% of Volume	104	86	114	80	102
Denied Entry Before	1	0	0	0	1
Denied Entry After	4	0	0	0	4

100: Int Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	12.8	3.6	1.6	1.6	6.8	2.6	3.7
Vehicles Entered	89	43	158	151	201	726	1368
Vehicles Exited	90	42	157	150	200	722	1361
Hourly Exit Rate	90	42	157	150	200	722	1361
Input Volume	99	35	152	142	201	722	1350
% of Volume	91	121	103	105	100	100	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

127: Int Performance by movement

Movement	WBT	All
Delay / Veh (s)	0.8	0.8
Vehicles Entered	666	666
Vehicles Exited	664	664
Hourly Exit Rate	664	664
Input Volume	673	673
% of Volume	99	99
Denied Entry Before	0	0
Denied Entry After	0	0

Total Network Performance

Delay / Veh (s)	49.7
Vehicles Entered	17508
Vehicles Exited	17487
Hourly Exit Rate	17487
Input Volume	50254
% of Volume	35
Denied Entry Before	2
Denied Entry After	192

5: Int Performance by movement

Movement	EBR	NBL	SBT	SBR	All
Delay / Veh (s)	4.1	8.4	1.9	6.5	2.9
Vehicles Entered	235	55	685	28	1003
Vehicles Exited	234	56	684	28	1002
Hourly Exit Rate	234	56	684	28	1002
Input Volume	240	53	692	24	1010
% of Volume	97	106	99	115	99
Denied Entry Before	0	0	0	1	1
Denied Entry After	0	0	0	0	0

6: Int Performance by movement

Movement	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	0.3	1.1	6.3	0.9	1.4
Vehicles Entered	60	544	169	926	1699
Vehicles Exited	61	543	168	925	1697
Hourly Exit Rate	61	543	168	925	1697
Input Volume	74	513	158	908	1653
% of Volume	82	106	106	102	103
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

9: Int Performance by movement

Movement	WBT	WBR	SBL	SBR	All
Delay / Veh (s)	0.7	0.6	7.4	5.5	1.0
Vehicles Entered	421	59	19	14	513
Vehicles Exited	420	59	19	14	512
Hourly Exit Rate	420	59	19	14	512
Input Volume	464	49	15	14	542
% of Volume	91	120	125	98	94
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

10: Int Performance by movement

Movement	EBT	WBT	WBR	NBL	NBT	NBR	All
Delay / Veh (s)	4.8	10.8	10.4	8.5	9.3	4.5	8.3
Vehicles Entered	25	379	101	114	190	330	1139
Vehicles Exited	25	380	100	114	189	330	1138
Hourly Exit Rate	25	380	100	114	189	330	1138
Input Volume	28	385	85	91	194	362	1146
% of Volume	88	99	117	126	97	91	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

11: Int Performance by movement

Movement	WBL2	WBL	WBR	SBT	SBR	NER2	All
Delay / Veh (s)	16.8	19.5	2.7	29.3	0.2	6.2	11.5
Vehicles Entered	279	72	880	625	7	1028	2891
Vehicles Exited	276	69	880	627	7	1034	2893
Hourly Exit Rate	276	69	880	627	7	1034	2893
Input Volume	260	66	885	611	6	1002	2830
% of Volume	106	105	99	103	117	103	102
Denied Entry Before	0	0	0	0	0	2	2
Denied Entry After	0	0	0	0	0	0	0

12: Int Performance by movement

Movement	NBL	NBT	NBR	SBR	All
Delay / Veh (s)	3.4	1.0	0.4	1.6	2.1
Vehicles Entered	957	244	452	275	1928
Vehicles Exited	957	243	453	274	1927
Hourly Exit Rate	957	243	453	274	1927
Input Volume	957	228	464	254	1902
% of Volume	100	107	98	108	101
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

13: Int Performance by movement

Movement	EBL	EBR	NBT	NBR	All
Delay / Veh (s)	8.0	3.7	2.3	0.8	3.3
Vehicles Entered	196	1741	1459	32	3428
Vehicles Exited	197	1736	1458	32	3423
Hourly Exit Rate	197	1736	1458	32	3423
Input Volume	201	1672	1447	31	3351
% of Volume	98	104	101	104	102
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

18: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Delay / Veh (s)	56.2	49.6	45.0	39.8	25.2	17.8	21.6	6.5	5.2	26.9	24.9	24.4
Vehicles Entered	169	104	42	58	27	16	210	458	96	16	508	186
Vehicles Exited	163	103	41	56	27	17	211	460	96	16	506	187
Hourly Exit Rate	163	103	41	56	27	17	211	460	96	16	506	187
Input Volume	188	108	41	52	28	14	212	498	99	15	491	188
% of Volume	87	95	101	108	96	119	100	92	97	105	103	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

18: Int Performance by movement

Movement	All
Delay / Veh (s)	24.0
Vehicles Entered	1890
Vehicles Exited	1883
Hourly Exit Rate	1883
Input Volume	1935
% of Volume	97
Denied Entry Before	0
Denied Entry After	0

19: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	29.6	24.7	5.0	44.0	7.7	15.7	11.8	12.7	6.8	12.2
Vehicles Entered	178	86	375	3	124	461	22	105	498	1852
Vehicles Exited	176	87	376	3	125	461	22	104	498	1852
Hourly Exit Rate	176	87	376	3	125	461	22	104	498	1852
Input Volume	169	88	401	6	108	531	18	97	487	1905
% of Volume	104	99	94	50	116	87	121	107	102	97
Denied Entry Before	0	0	0	0	0	1	0	0	0	1
Denied Entry After	0	0	0	0	0	0	0	0	0	0

25: Int Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Delay / Veh (s)	39.8	23.9	20.4	72.4	28.8	18.6	27.7	14.6	9.5	32.5	21.7	14.7
Vehicles Entered	35	575	133	105	492	88	122	414	79	59	416	66
Vehicles Exited	34	576	135	107	490	86	121	413	79	60	416	66
Hourly Exit Rate	34	576	135	107	490	86	121	413	79	60	416	66
Input Volume	36	589	129	89	498	76	106	421	81	61	428	64
% of Volume	95	98	105	120	98	114	114	98	98	98	97	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

25: Int Performance by movement

Movement	All
Delay / Veh (s)	24.5
Vehicles Entered	2584
Vehicles Exited	2583
Hourly Exit Rate	2583
Input Volume	2577
% of Volume	100
Denied Entry Before	0
Denied Entry After	0

26: Int Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Delay / Veh (s)	154.1	113.4	93.2	42.0	8.3	6.9	59.5	141.2	142.0	95.7
Vehicles Entered	451	373	226	396	400	42	18	536	108	2550
Vehicles Exited	438	365	215	398	400	42	18	511	104	2491
Hourly Exit Rate	438	365	215	398	400	42	18	511	104	2491
Input Volume	469	367	212	438	395	55	15	544	100	2595
% of Volume	93	99	102	91	101	76	118	94	104	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	7	1	8

27: Int Performance by movement

Movement	EBL	EBT	EBR2	WBL2	WBL	WBR	NBT	NBR	SBL	SBT	SBR	All
Delay / Veh (s)	40.2	34.4	10.6	65.5	57.3	12.7	183.6	121.1	36.7	3.9	5.1	69.1
Vehicles Entered	47	414	374	33	6	118	679	413	215	340	392	3031
Vehicles Exited	47	410	375	32	6	120	670	414	218	341	393	3026
Hourly Exit Rate	47	410	375	32	6	120	670	414	218	341	393	3026
Input Volume	50	379	347	37	8	108	729	399	257	343	413	3069
% of Volume	94	108	108	87	75	111	92	104	85	99	95	99
Denied Entry Before	0	0	0	0	0	0	4	1	0	0	0	5
Denied Entry After	0	0	1	0	0	0	21	15	0	0	0	37

28: Int Performance by movement

Movement	EBL	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Delay / Veh (s)	46.6	36.5	25.3	22.0	8.3	60.4	53.3	55.5	54.0	21.8	16.5	34.6
Vehicles Entered	146	305	56	173	220	54	376	16	268	521	63	2198
Vehicles Exited	147	314	56	177	220	52	376	17	272	517	64	2212
Hourly Exit Rate	147	314	56	177	220	52	376	17	272	517	64	2212
Input Volume	125	303	60	192	230	51	364	12	255	537	64	2192
% of Volume	118	104	94	92	96	101	103	139	107	96	100	101
Denied Entry Before	0	0	0	0	0	0	0	0	3	2	0	5
Denied Entry After	0	0	0	0	1	0	0	0	0	4	1	6

29: Int Performance by movement

Movement	EBT	NBT	NBR	All
Delay / Veh (s)	24.5	1.5	0.5	3.0
Vehicles Entered	80	873	145	1098
Vehicles Exited	80	872	145	1097
Hourly Exit Rate	80	872	145	1097
Input Volume	68	864	141	1074
% of Volume	117	101	103	102
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0

30: Int Performance by movement

Movement	EBT	EBR	NBL	NBR	All
Delay / Veh (s)	2.4	1.8	57.4	29.2	9.4
Vehicles Entered	918	124	138	31	1211
Vehicles Exited	920	124	141	31	1216
Hourly Exit Rate	920	124	141	31	1216
Input Volume	918	117	143	26	1204
% of Volume	100	106	99	118	101
Denied Entry Before	0	0	0	0	0
Denied Entry After	0	0	0	0	0

100: Int Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	14.9	3.9	2.3	1.4	7.5	2.3	3.3
Vehicles Entered	91	39	149	151	214	1522	2166
Vehicles Exited	91	38	147	151	212	1517	2156
Hourly Exit Rate	91	38	147	151	212	1517	2156
Input Volume	99	35	152	142	201	1472	2100
% of Volume	92	109	97	106	106	103	103
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0

127: Int Performance by movement

Movement	WBT	WBR	All
Delay / Veh (s)	0.8	1.3	1.2
Vehicles Entered	269	598	867
Vehicles Exited	267	597	864
Hourly Exit Rate	267	597	864
Input Volume	305	600	905
% of Volume	87	100	95
Denied Entry Before	0	0	0
Denied Entry After	0	0	0

Total Network Performance

Delay / Veh (s)	41.0
Vehicles Entered	18904
Vehicles Exited	18845
Hourly Exit Rate	18845
Input Volume	52437
% of Volume	36
Denied Entry Before	14
Denied Entry After	51