Hercules Circulation Element

Traffic-Related Appendices

- Count Data
- Travel Model
- Intersection LOS Worksheets

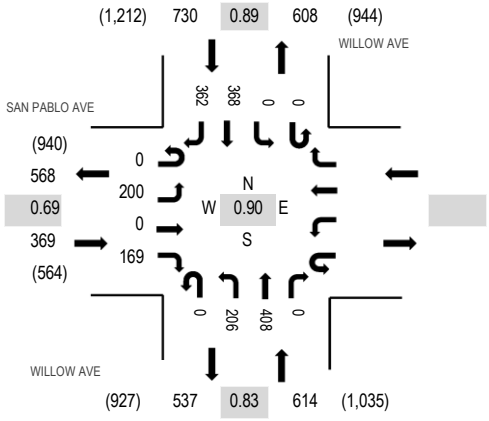
Count Data

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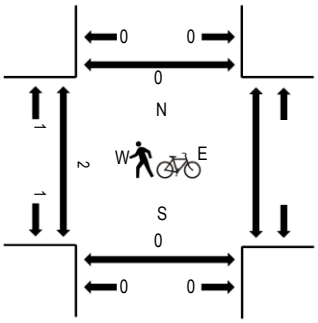
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Location: 1 WILLOW AVE & SAN PABLO AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	13	0	31					0	48	36	0	0	0	64	49	241	1,352	0		0	0
7:15 AM	0	33	0	25					0	44	50	0	0	0	63	42	257	1,511	0		0	0
7:30 AM	0	58	0	36					0	56	76	0	0	0	69	81	376	1,713	0		0	0
7:45 AM	0	82	0	51					0	70	95	0	0	0	83	97	478	1,688	0		0	0
8:00 AM	0	35	0	42					0	33	99	0	0	0	97	94	400	1,459	2		0	0
8:15 AM	0	25	0	40					0	47	138	0	0	0	119	90	459		0		0	0
8:30 AM	0	35	0	18					0	55	79	0	0	0	109	55	351		1		0	0
8:45 AM	0	24	0	16					0	43	66	0	0	0	64	36	249		0		2	0

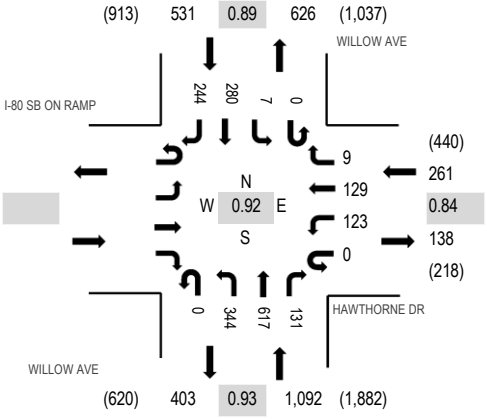
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	1	0	0	0	2	0	3
Lights	0	199	0	166					0	200	397	0	0	0	364	350	1,676
Mediums	0	1	0	3					0	6	10	0	0	0	2	12	34
Total	0	200	0	169					0	206	408	0	0	0	368	362	1,713

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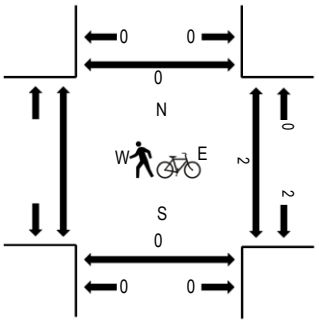
Location: 2 WILLOW AVE & HAWTHORNE DR AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	I-80 SB ON RAMP Eastbound				HAWTHORNE DR Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM					0	15	36	0	0	82	93	10	0	2	33	54	325	1,648		1	0	0
7:15 AM					0	25	35	0	0	81	91	34	0	0	43	48	357	1,756		0	0	0
7:30 AM					0	34	44	0	0	95	139	48	0	1	45	46	452	1,884		0	0	0
7:45 AM					0	47	38	0	0	87	140	53	0	2	80	67	514	1,779		1	0	0
8:00 AM					0	29	32	2	0	69	151	16	0	0	68	66	433	1,587		0	0	0
8:15 AM					0	13	15	7	0	93	187	14	0	4	87	65	485			1	0	0
8:30 AM					0	4	24	3	0	68	116	15	0	7	48	62	347			2	0	0
8:45 AM					0	11	26	0	0	81	108	11	0	1	38	46	322			0	0	0

Peak Rolling Hour Flow Rates

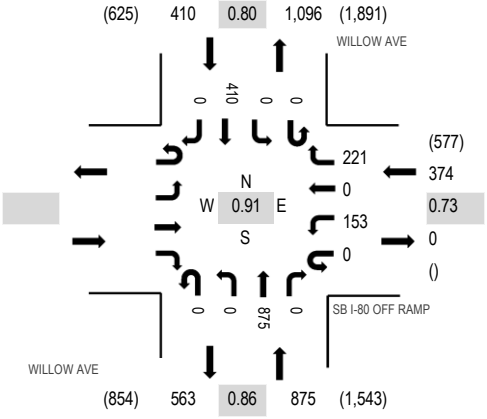
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	2	1	3
Lights					0	123	129	9	0	344	600	131	0	7	272	243	1,858
Mediums					0	0	0	0	0	0	17	0	0	0	6	0	23
Total					0	123	129	9	0	344	617	131	0	7	280	244	1,884

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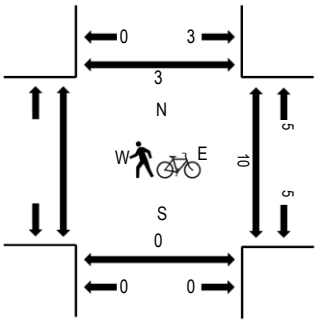
Location: 3 WILLOW AVE & SB I-80 OFF RAMP AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SB I-80 OFF RAMP Eastbound				SB I-80 OFF RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM					0	28	0	34	0	0	154	0	0	0	48	0	264	1,414		2	0	0
7:15 AM					0	19	0	40	0	0	173	0	0	0	70	0	302	1,537		4	0	0
7:30 AM					0	30	0	59	0	0	226	0	0	0	78	0	393	1,659		1	0	0
7:45 AM					0	56	0	72	0	0	199	0	0	0	128	0	455	1,515		4	0	2
8:00 AM					0	47	0	46	0	0	196	0	0	0	98	0	387	1,331		2	0	0
8:15 AM					0	20	0	44	0	0	254	0	0	0	106	0	424			3	0	1
8:30 AM					0	14	0	22	0	0	166	0	0	0	47	0	249			3	0	0
8:45 AM					0	15	0	31	0	0	175	0	0	0	50	0	271			2	0	1

Peak Rolling Hour Flow Rates

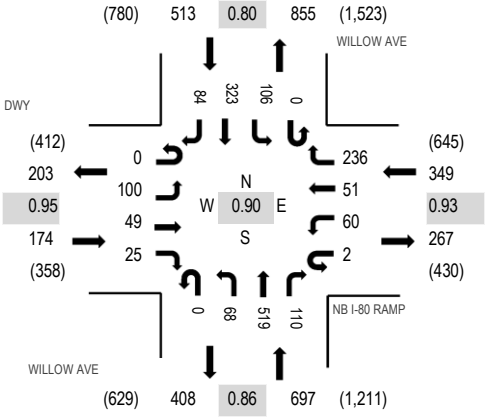
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	1	0	0	0	0	0	1
Lights					0	152	0	220	0	0	855	0	0	0	403	0	1,630
Mediums					0	1	0	1	0	0	19	0	0	0	7	0	28
Total					0	153	0	221	0	0	875	0	0	0	410	0	1,659

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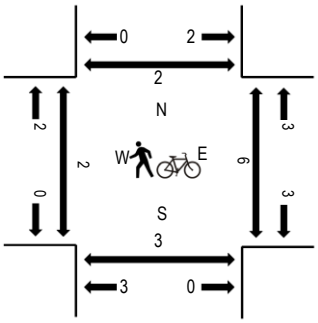
Location: 4 WILLOW AVE & NB I-80 RAMP AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				NB I-80 RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	33	12	3	1	14	12	24	0	16	83	18	0	16	30	26	288	1,517	2	1	0	1
7:15 AM	0	24	15	7	0	12	13	36	0	22	120	18	0	29	33	13	342	1,644	0	3	0	1
7:30 AM	0	23	11	2	1	10	11	53	0	14	137	51	0	40	41	13	407	1,733	0	1	0	0
7:45 AM	0	22	10	7	0	22	13	64	0	21	126	34	0	32	99	30	480	1,657	1	0	0	2
8:00 AM	0	28	14	7	0	13	15	52	0	19	107	17	0	22	104	17	415	1,477	0	2	2	0
8:15 AM	0	27	14	9	1	15	12	67	0	14	149	8	0	12	79	24	431		1	3	1	0
8:30 AM	0	22	10	15	0	17	15	64	0	23	91	6	0	12	33	23	331		2	2	2	2
8:45 AM	0	27	13	3	0	21	8	59	0	26	85	6	0	7	33	12	300		0	1	0	1

Peak Rolling Hour Flow Rates

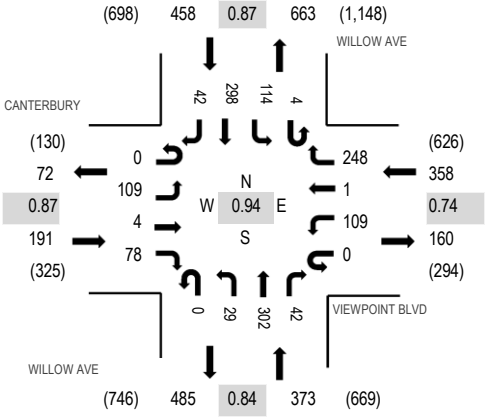
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Lights	0	99	45	25	2	58	50	227	0	67	510	110	0	106	317	83	1,699
Mediums	0	1	4	0	0	2	0	8	0	1	9	0	0	0	6	1	32
Total	0	100	49	25	2	60	51	236	0	68	519	110	0	106	323	84	1,733

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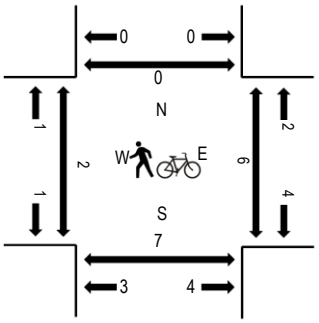
Location: 5 WILLOW AVE & VIEWPOINT BLVD AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CANTERBURY Eastbound				VIEWPOINT BLVD Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	28	0	19	0	32	3	55	0	3	28	13	0	11	27	11	230	1,181	1	0	2	0
7:15 AM	0	24	2	18	0	22	0	57	0	2	62	8	0	15	35	8	253	1,284	0	2	2	0
7:30 AM	0	32	3	15	0	34	0	98	0	3	69	10	2	17	40	7	330	1,380	1	3	3	0
7:45 AM	0	35	0	22	0	34	0	58	0	10	68	7	1	34	88	11	368	1,290	0	0	0	0
8:00 AM	0	22	1	25	0	23	1	44	0	7	69	14	1	31	86	9	333	1,137	1	3	4	0
8:15 AM	0	20	0	16	0	18	0	48	0	9	96	11	0	32	84	15	349		0	0	0	0
8:30 AM	0	16	1	6	1	15	0	31	0	12	71	14	1	28	36	8	240		1	1	2	1
8:45 AM	0	11	0	9	0	16	1	35	0	4	65	14	1	27	26	6	215		0	1	1	1

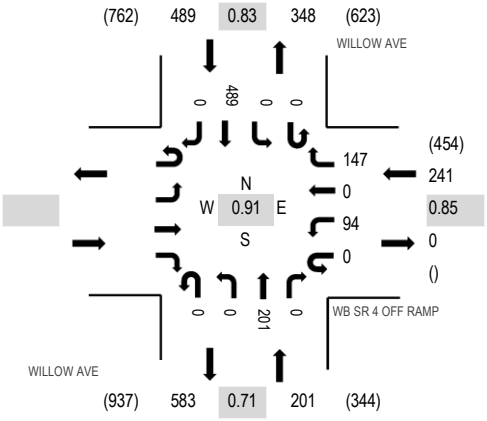
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	108	3	77	0	106	1	246	0	29	297	40	4	111	297	40	1,359
Mediums	0	1	1	1	0	3	0	2	0	0	5	2	0	3	1	2	21
Total	0	109	4	78	0	109	1	248	0	29	302	42	4	114	298	42	1,380

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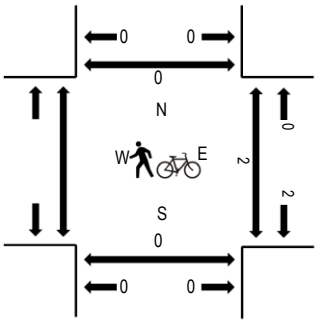
Location: 6 WILLOW AVE & WB SR 4 OFF RAMP AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound				WB SR 4 OFF RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM					0	17	0	18	0	0	20	0	0	0	77	0	132	743		0	0	0
7:15 AM					0	23	0	31	0	0	37	0	0	0	84	0	175	849		1	0	0
7:30 AM					0	27	0	36	0	0	40	0	0	0	90	0	193	931		1	0	0
7:45 AM					0	28	0	32	0	0	35	0	0	0	148	0	243	890		1	0	0
8:00 AM					0	16	0	33	0	0	51	0	0	0	138	0	238	817		0	0	0
8:15 AM					0	23	0	46	0	0	75	0	0	0	113	0	257			0	0	0
8:30 AM					0	15	0	38	0	0	49	0	0	0	50	0	152			0	0	0
8:45 AM					0	26	0	45	0	0	37	0	0	0	62	0	170			0	0	0

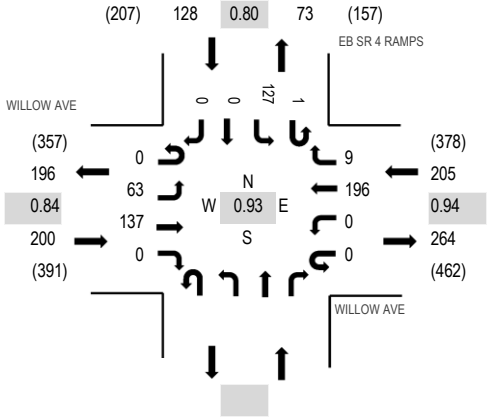
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	0	0	0
Lights					0	90	0	145	0	0	200	0	0	0	485	0	920
Mediums					0	4	0	2	0	0	1	0	0	0	4	0	11
Total					0	94	0	147	0	0	201	0	0	0	489	0	931

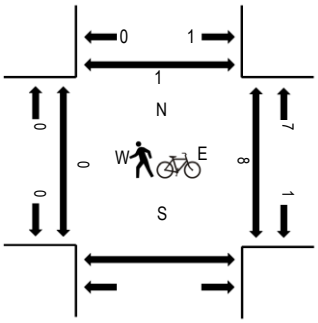
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Location: 7 EB SR 4 RAMPS & WILLOW AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	WILLOW AVE Eastbound				WILLOW AVE Westbound				Northbound				EB SR 4 RAMPS Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	18	27	0	0	0	39	5					0	25	0	0	114	502	0	4		0
7:15 AM	0	24	42	0	0	0	50	3					0	11	0	0	130	532	0	3		0
7:30 AM	0	19	33	0	0	0	53	2					1	20	0	0	128	533	0	4		0
7:45 AM	0	16	27	0	0	0	51	3					0	33	0	0	130	498	0	1		0
8:00 AM	0	18	42	0	0	0	42	2					0	40	0	0	144	474	0	2		1
8:15 AM	0	10	35	0	0	0	50	2					0	34	0	0	131		0	1		0
8:30 AM	0	13	21	0	0	0	36	4					0	19	0	0	93		0	1		2
8:45 AM	0	17	29	0	0	0	36	0					0	24	0	0	106		0	6		0

Peak Rolling Hour Flow Rates

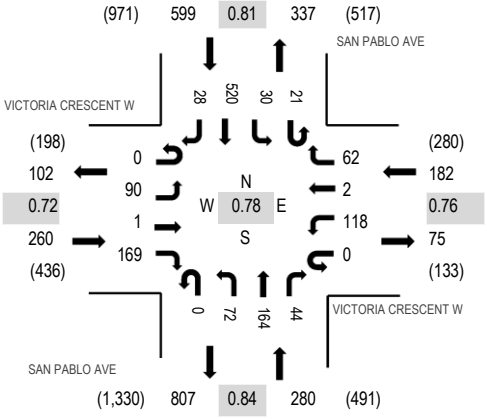
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	63	119	0	0	0	173	7					1	121	0	0	484
Mediums	0	0	18	0	0	0	23	2					0	6	0	0	49
Total	0	63	137	0	0	0	196	9					1	127	0	0	533

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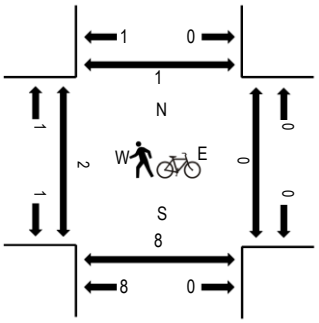
Location: 8 SAN PABLO AVE & VICTORIA CRESCENT W AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	VICTORIA CRESCENT W Eastbound				VICTORIA CRESCENT W Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	17	0	40	0	19	0	7	0	9	12	3	2	2	92	4	207	1,184	0	0	3	0
7:15 AM	0	17	0	34	0	28	0	9	0	17	26	12	3	4	82	5	237	1,281	1	0	0	1
7:30 AM	0	20	0	40	0	37	0	16	0	8	44	7	6	8	126	2	314	1,321	0	0	2	0
7:45 AM	0	35	0	57	0	38	1	22	0	19	56	14	8	8	161	7	426	1,233	0	0	2	0
8:00 AM	0	20	1	42	0	18	1	15	0	21	33	13	4	4	122	10	304	994	0	0	3	0
8:15 AM	0	15	0	30	0	25	0	9	0	24	31	10	3	10	111	9	277		2	0	1	1
8:30 AM	0	8	0	29	0	6	0	3	0	26	34	18	2	7	85	8	226		2	0	0	0
8:45 AM	0	7	0	24	0	19	0	7	0	20	24	10	2	2	65	7	187		3	0	2	2

Peak Rolling Hour Flow Rates

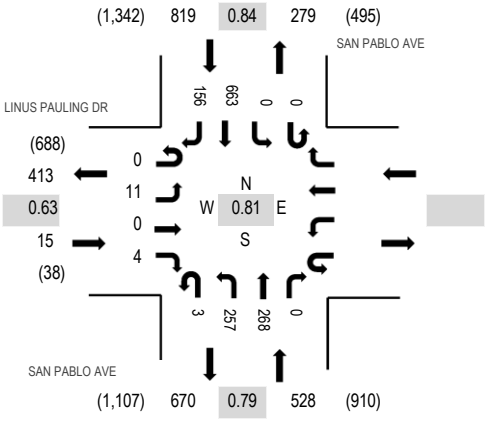
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	89	1	162	0	117	2	62	0	70	161	44	21	30	504	28	1,291
Mediums	0	1	0	7	0	1	0	0	0	2	3	0	0	0	16	0	30
Total	0	90	1	169	0	118	2	62	0	72	164	44	21	30	520	28	1,321

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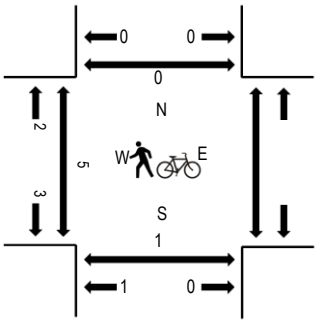
Location: 9 SAN PABLO AVE & LINUS PAULING DR AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	LINUS PAULING DR Eastbound				Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	2					2	22	24	0	0	0	127	21	198	1,194	0		0	0
7:15 AM	0	1	0	3					0	41	58	0	0	0	116	24	243	1,317	0		0	0
7:30 AM	0	2	0	0					0	61	59	0	0	0	172	40	334	1,362	1		0	0
7:45 AM	0	3	0	2					1	86	82	0	0	0	188	57	419	1,295	1		0	0
8:00 AM	0	2	0	2					0	51	65	0	0	0	170	31	321	1,096	3		0	0
8:15 AM	0	4	0	0					2	59	62	0	0	0	133	28	288		0		0	0
8:30 AM	0	3	0	7					0	53	75	0	0	0	98	31	267		0		0	0
8:45 AM	0	3	0	4					0	55	52	0	0	0	78	28	220		1		0	0

Peak Rolling Hour Flow Rates

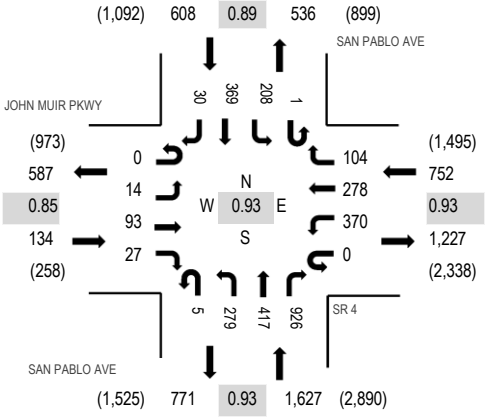
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					1	0	0	0	0	0	1	0	2
Lights	0	9	0	4					2	255	264	0	0	0	642	155	1,331
Mediums	0	2	0	0					0	2	4	0	0	0	20	1	29
Total	0	11	0	4					3	257	268	0	0	0	663	156	1,362

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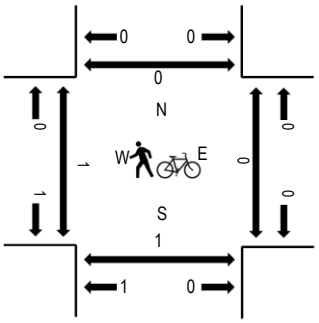
Location: 10 SAN PABLO AVE & SR 4 AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				SR 4 Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	13	6	0	119	43	17	2	24	36	181	0	43	80	1	566	2,785	0	0	0	0
7:15 AM	0	8	15	5	1	130	50	23	0	36	66	219	0	51	70	2	676	3,015	0	0	0	0
7:30 AM	0	10	20	3	0	102	40	31	0	37	71	231	0	70	82	4	701	3,077	1	0	2	0
7:45 AM	0	9	19	2	0	97	70	40	0	77	119	226	0	61	112	10	842	3,121	1	0	1	0
8:00 AM	0	0	36	6	0	99	67	24	1	64	90	227	0	61	113	8	796	2,950	0	0	0	0
8:15 AM	0	2	21	10	0	103	66	18	3	62	99	221	0	41	87	5	738		0	0	0	0
8:30 AM	0	3	17	9	0	71	75	22	1	76	109	252	1	45	57	7	745		0	0	0	0
8:45 AM	0	3	25	15	0	99	67	21	1	82	76	201	0	41	40	0	671		0	0	0	0

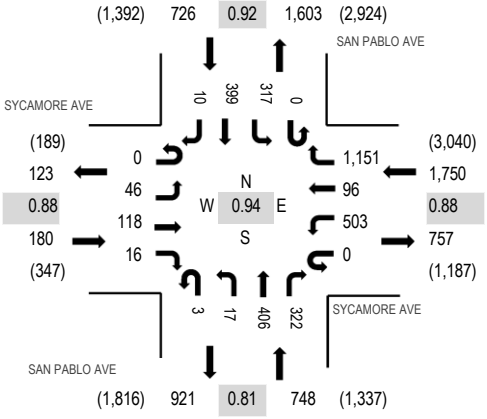
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	2	0	1	0	0	1	3	0	1	0	0	9
Lights	0	14	88	25	0	357	277	102	5	276	413	912	1	205	353	30	3,058
Mediums	0	0	4	2	0	11	1	1	0	3	3	11	0	2	16	0	54
Total	0	14	93	27	0	370	278	104	5	279	417	926	1	208	369	30	3,121

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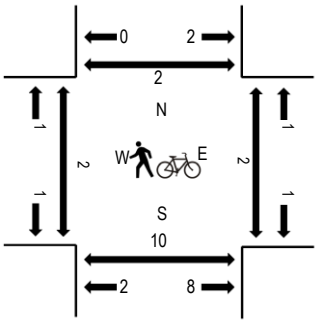
Location: 11 SAN PABLO AVE & SYCAMORE AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	19	16	8	0	91	7	169	0	5	72	51	0	45	147	4	634	2,921	0	0	2	1
7:15 AM	0	26	23	5	0	108	14	202	0	1	95	35	0	43	114	1	667	3,189	1	1	2	0
7:30 AM	0	13	19	4	0	124	11	222	0	2	126	47	0	57	112	0	737	3,402	0	0	2	0
7:45 AM	0	14	43	3	0	115	15	266	1	4	127	109	0	89	96	1	883	3,404	0	1	2	1
8:00 AM	0	16	38	6	0	116	24	284	0	5	103	104	0	108	96	2	902	3,195	1	0	2	0
8:15 AM	0	10	26	3	0	151	33	314	1	2	83	64	0	77	112	4	880		0	1	2	0
8:30 AM	0	6	11	4	0	121	24	287	1	6	93	45	0	43	95	3	739		1	0	4	1
8:45 AM	0	18	14	2	0	81	13	248	1	2	111	41	0	39	98	6	674		1	3	2	0

Peak Rolling Hour Flow Rates

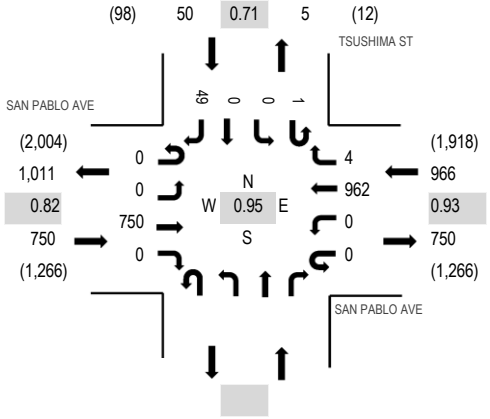
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	4
Lights	0	46	116	16	0	487	94	1,135	3	17	402	308	0	302	386	9	3,321
Mediums	0	0	2	0	0	16	2	15	0	0	3	14	0	14	12	1	79
Total	0	46	118	16	0	503	96	1,151	3	17	406	322	0	317	399	10	3,404

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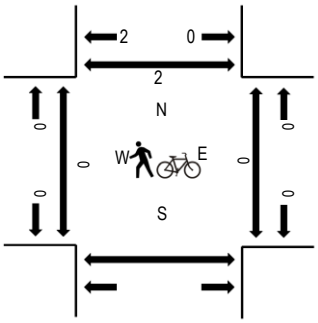
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Location: 12 TSUSHIMA ST & SAN PABLO AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				SAN PABLO AVE Westbound				TSUSHIMA ST Northbound				TSUSHIMA ST Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	126	0	0	0	267	2					0	0	0	14	409	1,721	0	0		0
7:15 AM	0	0	117	0	0	0	275	1					0	0	0	12	405	1,742	0	0		0
7:30 AM	0	0	168	0	0	0	252	2					1	0	0	19	442	1,766	0	0		1
7:45 AM	0	0	229	0	0	0	224	1					0	0	0	11	465	1,697	0	0		0
8:00 AM	0	0	204	0	0	0	216	0					0	0	0	10	430	1,561	0	0		1
8:15 AM	0	0	149	0	0	0	270	1					0	0	0	9	429		0	0		0
8:30 AM	0	0	136	0	0	0	225	1					0	0	0	11	373		0	0		0
8:45 AM	0	0	137	0	0	0	178	3					0	0	0	11	329		0	0		1

Peak Rolling Hour Flow Rates

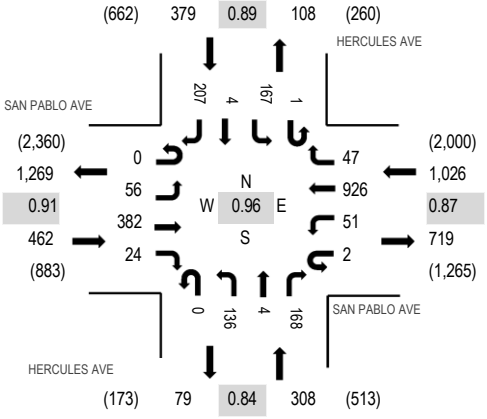
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	2	0					0	0	0	0	3
Lights	0	0	731	0	0	0	933	3					1	0	0	48	1,716
Mediums	0	0	18	0	0	0	27	1					0	0	0	1	47
Total	0	0	750	0	0	0	962	4					1	0	0	49	1,766

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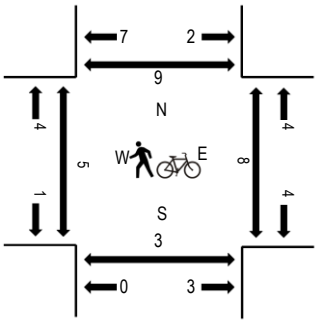
Location: 13 HERCULES AVE & SAN PABLO AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				SAN PABLO AVE Westbound				HERCULES AVE Northbound				HERCULES AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	12	63	5	0	7	243	11	0	38	1	24	0	37	1	38	480	2,131	2	1	0	2
7:15 AM	0	11	57	5	2	5	288	12	0	34	1	32	1	26	2	60	536	2,175	1	3	0	5
7:30 AM	0	15	97	8	0	9	252	4	0	34	0	33	0	37	1	59	549	2,133	2	1	1	0
7:45 AM	0	12	117	6	0	12	203	17	0	39	0	53	0	60	0	47	566	2,065	2	3	1	2
8:00 AM	0	18	111	5	0	25	183	14	0	29	3	50	0	44	1	41	524	1,927	0	1	0	2
8:15 AM	0	12	83	10	0	24	201	29	0	28	0	24	1	44	0	38	494		3	2	1	1
8:30 AM	1	22	87	8	1	23	223	21	0	19	0	21	0	23	0	32	481		2	0	0	0
8:45 AM	0	21	91	6	1	10	159	21	0	27	1	22	0	25	0	44	428		5	1	0	0

Peak Rolling Hour Flow Rates

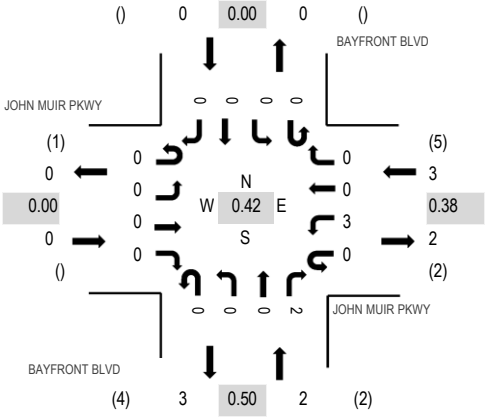
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4
Lights	0	53	363	24	2	49	898	46	0	136	4	168	1	166	4	203	2,117
Mediums	0	3	17	0	0	2	26	1	0	0	0	0	0	1	0	4	54
Total	0	56	382	24	2	51	926	47	0	136	4	168	1	167	4	207	2,175

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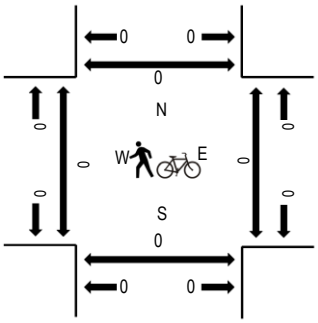
Location: 14 BAYFRONT BLVD & JOHN MUIR PKWY AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				BAYFRONT BLVD Northbound				BAYFRONT BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1		0	0	0	0
8:30 AM	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	3		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		0	0	0	0

Peak Rolling Hour Flow Rates

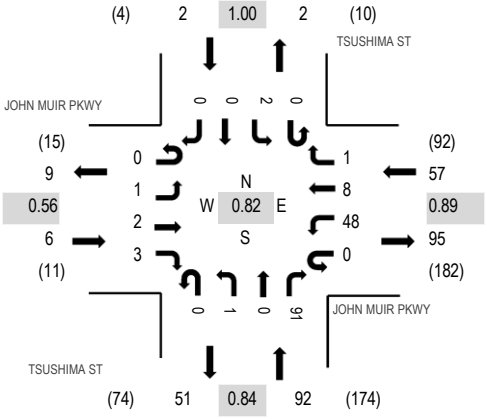
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	5
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	5

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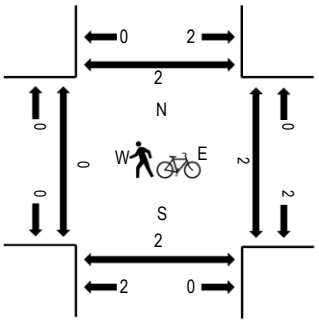
Location: 15 TSUSHIMA ST & JOHN MUIR PKWY AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				TSUSHIMA ST Northbound				TSUSHIMA ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	0	0	5	4	3	0	0	0	14	0	0	0	0	27	133	0	0	0	0
7:15 AM	0	0	0	0	0	4	1	1	0	0	0	26	0	1	0	0	33	154	0	0	0	0
7:30 AM	0	0	0	0	0	7	1	1	0	0	0	25	0	1	0	0	35	153	0	1	2	0
7:45 AM	0	1	0	0	0	14	0	0	0	0	0	22	0	1	0	0	38	157	0	1	1	0
8:00 AM	0	0	0	1	0	12	3	0	0	0	0	31	0	1	0	0	48	148	0	1	1	0
8:15 AM	0	0	1	1	0	10	2	0	0	1	0	17	0	0	0	0	32		0	0	0	2
8:30 AM	0	0	1	1	0	12	3	1	0	0	0	21	0	0	0	0	39		0	0	0	0
8:45 AM	0	1	3	0	0	7	0	1	0	0	0	17	0	0	0	0	29		0	1	1	0

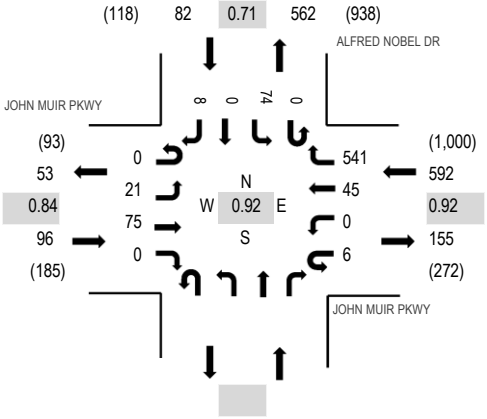
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	1	2	3	0	48	8	1	0	1	0	91	0	2	0	0	157
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	2	3	0	48	8	1	0	1	0	91	0	2	0	0	157

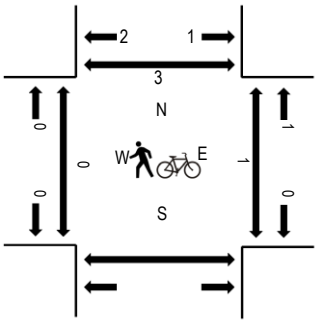
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Location: 16 ALFRED NOBEL DR & JOHN MUIR PKWY AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				Northbound				ALFRED NOBEL DR Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	11	0	2	0	11	56					0	11	0	0	93	533	0	0		0
7:15 AM	0	1	23	0	0	0	7	86					0	6	0	0	123	628	0	0		0
7:30 AM	0	1	29	0	0	0	6	77					0	4	0	2	119	689	0	0		0
7:45 AM	0	4	18	0	1	0	13	149					0	12	0	1	198	759	0	0		0
8:00 AM	0	4	28	0	1	0	13	127					0	12	0	3	188	770	0	0		1
8:15 AM	0	5	15	0	4	0	11	131					0	16	0	2	184		0	0		2
8:30 AM	0	6	15	0	0	0	15	133					0	19	0	1	189		0	1		0
8:45 AM	0	6	17	0	1	0	6	150					0	27	0	2	209		0	0		0

Peak Rolling Hour Flow Rates

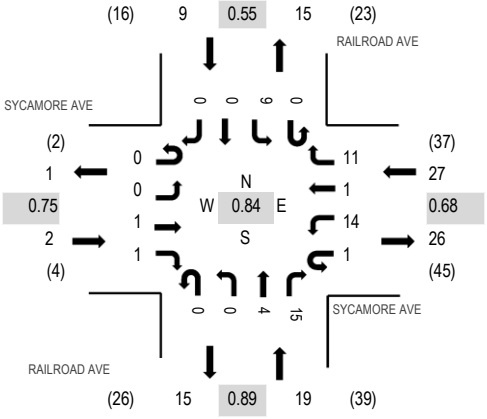
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	0	0	0	1
Lights	0	21	71	0	6	0	43	536					0	69	0	8	754
Mediums	0	0	3	0	0	0	2	5					0	5	0	0	15
Total	0	21	75	0	6	0	45	541					0	74	0	8	770

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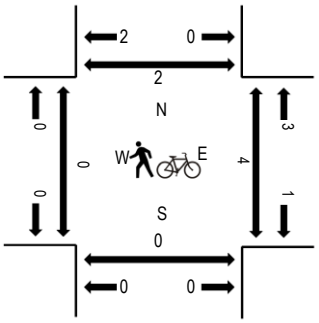
Location: 17 RAILROAD AVE & SYCAMORE AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				RAILROAD AVE Northbound				RAILROAD AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	1	0	0	0	2	0	0	1	2	0	0	1	0	7	39	0	1	0	0
7:15 AM	0	0	0	0	0	1	1	1	0	0	0	3	0	1	2	0	9	49	0	0	0	0
7:30 AM	0	0	0	0	0	2	0	1	0	0	1	6	0	0	2	0	12	55	0	0	0	0
7:45 AM	0	0	1	0	0	2	0	0	0	0	2	5	0	1	0	0	11	56	0	1	0	0
8:00 AM	0	0	1	0	0	3	0	1	0	0	0	7	0	5	0	0	17	57	0	3	0	1
8:15 AM	0	0	0	1	0	5	0	5	0	0	1	3	0	0	0	0	15		0	0	0	1
8:30 AM	0	0	0	0	1	4	0	2	0	0	1	4	0	1	0	0	13		0	1	0	0
8:45 AM	0	0	0	0	0	2	1	3	0	0	2	1	0	3	0	0	12		0	0	0	0

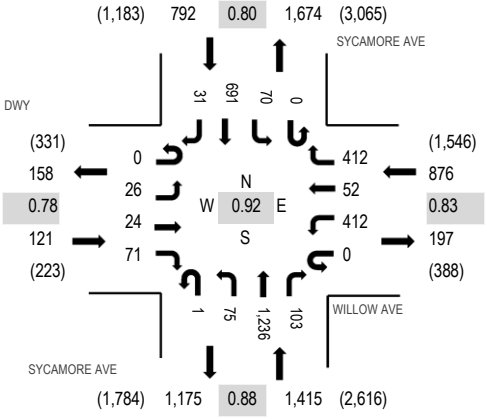
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	1	1	1	12	1	11	0	0	4	14	0	9	0	0	54
Mediums	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	3
Total	0	0	1	1	1	14	1	11	0	0	4	15	0	9	0	0	57

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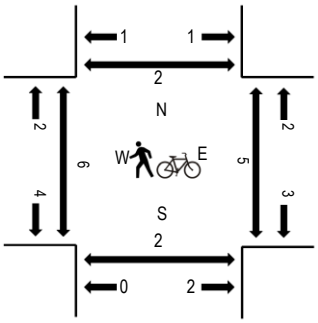
Location: 18 SYCAMORE AVE & WILLOW AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				WILLOW AVE Westbound				SYCAMORE AVE Northbound				SYCAMORE AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	5	5	12	0	33	17	62	0	19	243	31	0	18	89	5	539	2,622	3	1	0	0
7:15 AM	0	2	5	13	0	58	12	94	0	16	249	31	0	23	62	5	570	2,958	3	0	0	0
7:30 AM	0	5	6	12	0	88	6	81	0	18	279	30	0	16	132	6	679	3,204	0	3	0	1
7:45 AM	0	5	9	26	0	128	14	123	0	18	244	20	0	20	219	8	834	3,191	0	0	0	0
8:00 AM	0	8	6	17	0	106	10	98	0	15	347	31	0	14	213	10	875	2,946	3	1	1	0
8:15 AM	0	8	3	16	0	90	22	110	1	24	366	22	0	20	127	7	816		2	1	1	1
8:30 AM	0	10	4	12	0	69	12	101	0	37	304	22	0	15	76	4	666		2	1	0	1
8:45 AM	0	6	7	21	0	88	16	108	0	25	207	17	0	13	76	5	589		3	0	0	0

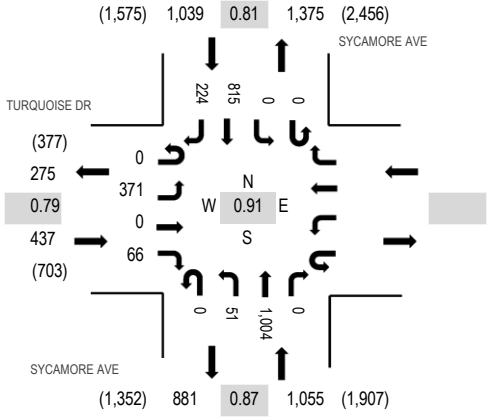
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	3
Lights	0	25	24	71	0	401	52	382	1	75	1,227	102	0	56	681	29	3,126
Mediums	0	1	0	0	0	10	0	30	0	0	8	1	0	14	9	2	75
Total	0	26	24	71	0	412	52	412	1	75	1,236	103	0	70	691	31	3,204

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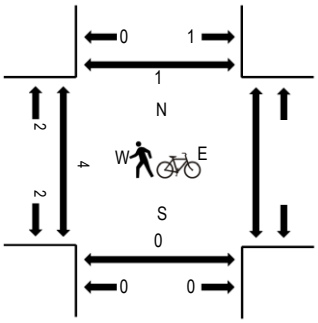
Location: 19 SYCAMORE AVE & TURQUOISE DR AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	TURQUOISE DR Eastbound				Westbound				SYCAMORE AVE Northbound				SYCAMORE AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	53	0	9					0	2	201	0	0	0	102	14	381	1,922	1		0	0
7:15 AM	0	59	0	5					0	4	224	0	0	0	104	20	416	2,229	3		0	0
7:30 AM	0	61	0	1					0	4	238	0	0	0	141	30	475	2,505	2		0	0
7:45 AM	0	67	0	14					0	10	233	0	0	0	284	42	650	2,531	1		0	0
8:00 AM	0	79	0	7					0	18	251	0	0	0	264	69	688	2,263	1		0	0
8:15 AM	0	114	0	25					0	16	290	0	0	0	160	87	692		2		0	1
8:30 AM	0	111	0	20					0	7	230	0	0	0	107	26	501		0		0	0
8:45 AM	0	73	0	5					0	7	172	0	0	0	104	21	382		3		1	0

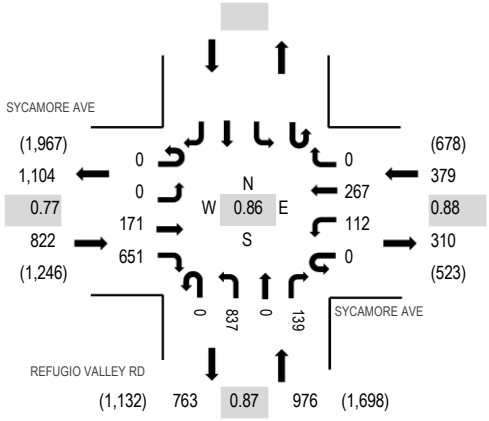
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	2	0	0	0	2	0	4
Lights	0	369	0	63					0	50	993	0	0	0	795	219	2,489
Mediums	0	2	0	3					0	1	9	0	0	0	18	5	38
Total	0	371	0	66					0	51	1,004	0	0	0	815	224	2,531

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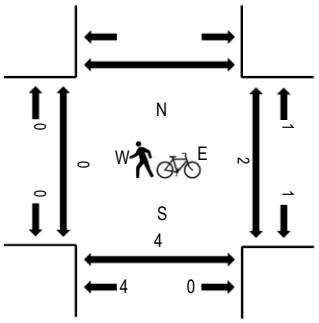
Location: 20 REFUGIO VALLEY RD & SYCAMORE AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				REFUGIO VALLEY RD Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	17	86	0	16	53	0	0	156	0	21					349	1,692	0	0	0	
7:15 AM	0	0	21	77	0	8	66	0	0	157	0	27					356	1,973	0	1	1	
7:30 AM	0	0	20	99	0	14	61	0	0	208	0	28					430	2,177	0	1	2	
7:45 AM	0	0	47	221	0	35	60	0	0	168	0	26					557	2,169	0	0	0	
8:00 AM	0	0	50	215	0	43	55	0	0	228	0	39					630	1,930	0	1	2	
8:15 AM	0	0	54	116	0	20	91	0	0	233	0	46					560		0	0	0	
8:30 AM	0	0	42	79	0	18	70	0	0	184	0	29					422		0	2	3	
8:45 AM	0	0	30	72	0	13	55	0	0	122	0	26					318		0	1	0	

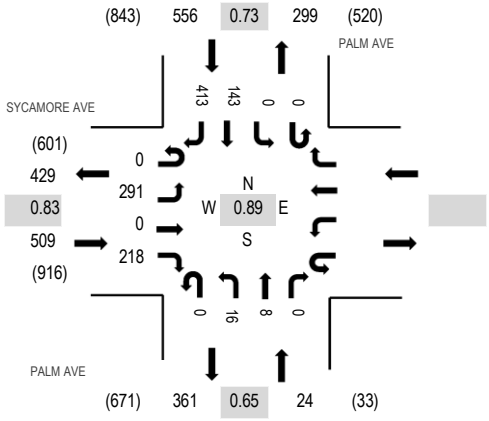
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	0	0	0	0	0	0					2
Lights	0	0	166	642	0	111	261	0	0	833	0	138					2,151
Mediums	0	0	3	9	0	1	6	0	0	4	0	1					24
Total	0	0	171	651	0	112	267	0	0	837	0	139					2,177

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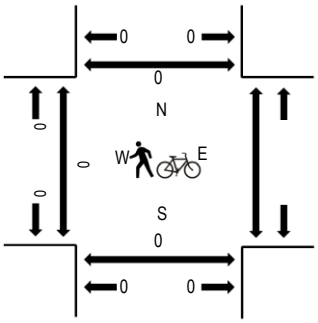
Location: 21 PALM AVE & SYCAMORE AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				Westbound				PALM AVE Northbound				PALM AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	41	0	43					0	0	1	0	0	0	34	40	159	827	0		0	0
7:15 AM	0	54	0	61					0	1	0	0	0	0	40	28	184	975	0		0	0
7:30 AM	0	59	0	63					0	3	1	0	0	0	42	52	220	1,089	0		0	0
7:45 AM	0	59	0	61					0	9	1	0	0	0	29	105	264	1,077	0		0	0
8:00 AM	0	67	0	44					0	2	4	0	0	0	53	137	307	965	0		0	0
8:15 AM	0	106	0	50					0	2	2	0	0	0	19	119	298		0		0	0
8:30 AM	1	74	0	58					0	1	5	0	0	0	20	49	208		0		0	0
8:45 AM	0	45	0	30					0	0	1	0	0	0	24	52	152		0		0	0

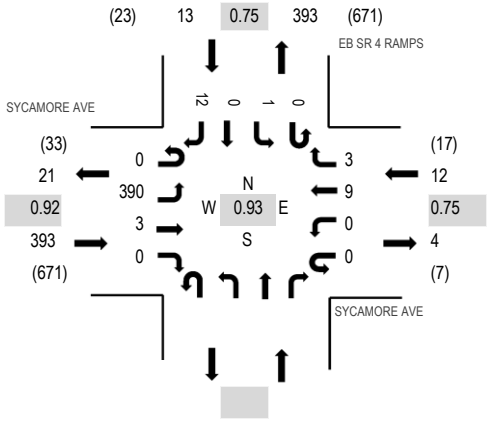
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	288	0	216					0	15	8	0	0	0	143	408	1,078
Mediums	0	3	0	2					0	1	0	0	0	0	0	5	11
Total	0	291	0	218					0	16	8	0	0	0	143	413	1,089

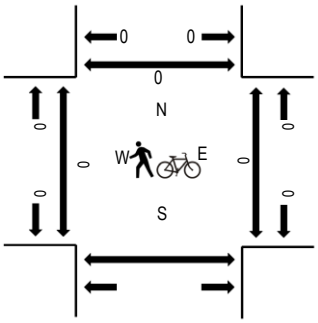
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Location: 22 EB SR 4 RAMPS & SYCAMORE AVE AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				EB SR 4 RAMPS Northbound				EB SR 4 RAMPS Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	73	1	0	0	0	1	0					0	0	0	1	76	393	0	0		0
7:15 AM	0	101	0	0	0	0	2	1					0	0	0	0	104	418	0	0		0
7:30 AM	0	107	0	0	0	0	2	0					0	0	0	3	112	391	0	0		0
7:45 AM	0	90	2	0	0	0	3	0					0	0	0	6	101	358	0	0		0
8:00 AM	0	92	1	0	0	0	2	2					0	1	0	3	101	318	0	0		0
8:15 AM	0	71	0	0	0	0	1	0					0	1	0	4	77		0	0		0
8:30 AM	0	75	0	0	0	0	1	0					0	0	0	3	79		0	0		0
8:45 AM	0	57	1	0	0	0	0	2					0	0	0	1	61		0	0		0

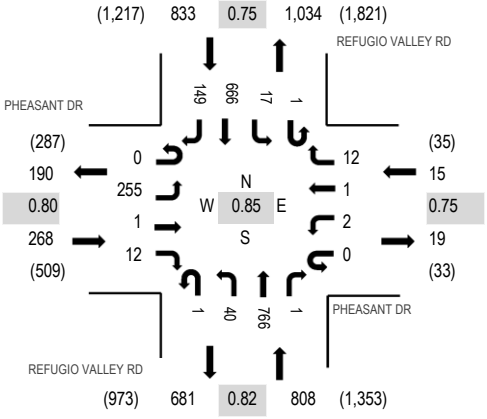
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	2					0	0	0	0	2
Lights	0	389	3	0	0	0	8	1					0	1	0	12	414
Mediums	0	1	0	0	0	0	1	0					0	0	0	0	2
Total	0	390	3	0	0	0	9	3					0	1	0	12	418

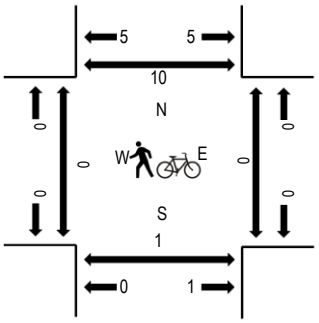
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Location: 23 REFUGIO VALLEY RD & PHEASANT DR AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	PHEASANT DR Eastbound				PHEASANT DR Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	52	0	2	0	0	0	1	0	1	141	0	0	2	81	19	299	1,469	0	0	0	2
7:15 AM	0	59	0	2	0	0	0	5	0	1	147	0	0	1	76	19	310	1,737	0	0	0	1
7:30 AM	0	74	0	4	0	0	0	2	0	1	152	0	0	4	108	16	361	1,924	0	0	0	1
7:45 AM	0	47	0	3	0	0	0	0	0	2	169	0	1	4	240	33	499	1,900	0	0	0	3
8:00 AM	0	54	0	2	0	0	0	6	0	13	223	1	0	5	217	46	567	1,645	0	0	0	1
8:15 AM	0	80	1	3	0	2	1	4	1	24	222	0	0	4	101	54	497		0	0	0	3
8:30 AM	0	67	3	5	0	1	0	8	0	2	151	0	0	3	68	29	337		0	0	1	2
8:45 AM	0	49	1	1	0	0	0	5	0	0	102	0	0	4	56	26	244		0	1	0	1

Peak Rolling Hour Flow Rates

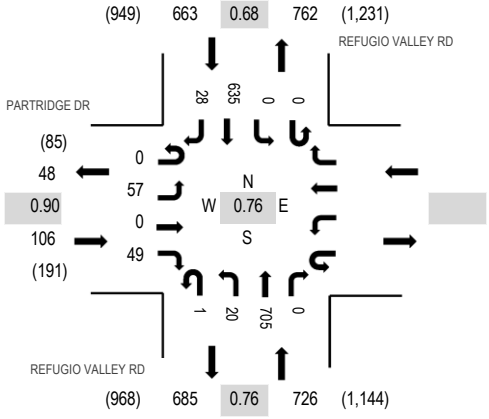
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	252	1	12	0	2	1	12	1	40	764	1	1	17	657	147	1,908
Mediums	0	3	0	0	0	0	0	0	0	0	2	0	0	0	9	2	16
Total	0	255	1	12	0	2	1	12	1	40	766	1	1	17	666	149	1,924

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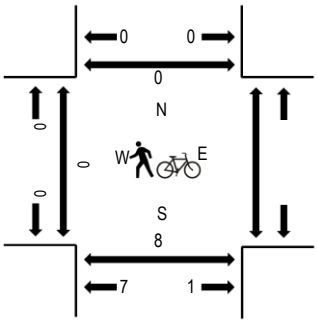
Location: 24 REFUGIO VALLEY RD & PARTRIDGE DR AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PARTRIDGE DR Eastbound				Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	15	0	9					0	4	119	0	0	0	83	3	233	1,151	0		0	0
7:15 AM	0	22	0	9					0	6	108	0	0	0	80	4	229	1,407	0		1	0
7:30 AM	0	20	0	4					0	0	116	0	0	0	109	3	252	1,495	0		4	0
7:45 AM	0	14	0	17					0	3	160	0	0	0	236	7	437	1,440	0		1	0
8:00 AM	0	11	0	22					0	8	234	0	0	0	205	9	489	1,133	0		2	0
8:15 AM	0	12	0	6					1	9	195	0	0	0	85	9	317		0		0	0
8:30 AM	0	16	0	1					0	4	119	0	0	0	52	5	197		1		2	0
8:45 AM	0	13	0	0					0	1	57	0	0	0	49	10	130		0		1	0

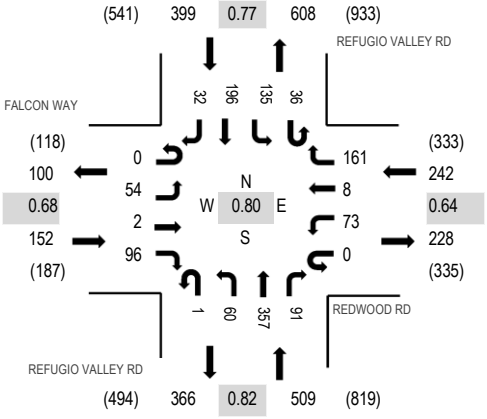
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	56	0	48					1	20	703	0	0	0	628	26	1,482
Mediums	0	1	0	1					0	0	2	0	0	0	7	2	13
Total	0	57	0	49					1	20	705	0	0	0	635	28	1,495

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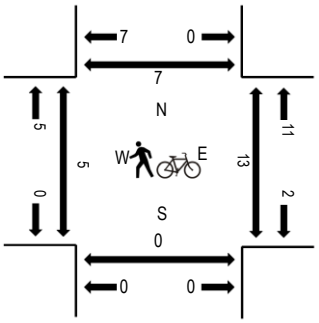
Location: 25 REFUGIO VALLEY RD & REDWOOD RD AM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	FALCON WAY Eastbound				REDWOOD RD Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	0	1	0	3	1	18	0	1	73	11	1	11	22	3	149	768	0	0	0	1
7:15 AM	0	2	0	1	0	2	1	14	0	2	58	11	0	10	12	2	115	1,024	1	0	0	0
7:30 AM	0	10	1	3	0	4	2	20	0	0	77	24	0	20	23	1	185	1,265	0	2	0	5
7:45 AM	0	19	0	14	0	13	2	69	0	3	74	17	14	40	42	12	319	1,302	1	4	0	0
8:00 AM	0	26	1	32	0	23	5	72	0	19	77	20	13	55	50	12	405	1,112	3	1	0	5
8:15 AM	0	7	0	47	0	27	1	16	0	19	97	27	8	38	63	6	356		0	2	0	1
8:30 AM	0	2	1	3	0	10	0	4	1	19	109	27	1	2	41	2	222		1	6	0	1
8:45 AM	0	5	2	6	0	20	3	3	0	0	40	13	0	4	31	2	129		0	5	0	0

Peak Rolling Hour Flow Rates

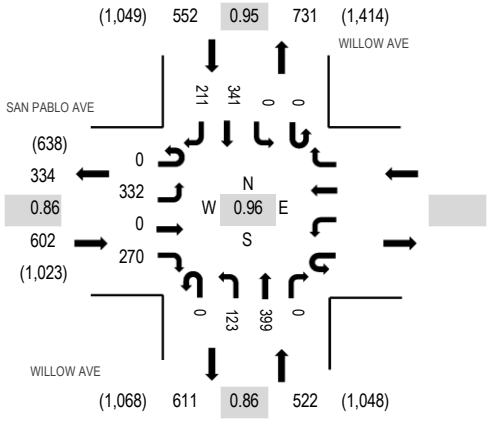
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	52	1	95	0	72	8	161	1	59	357	88	35	134	193	32	1,288
Mediums	0	2	1	1	0	1	0	0	0	1	0	3	1	1	3	0	14
Total	0	54	2	96	0	73	8	161	1	60	357	91	36	135	196	32	1,302

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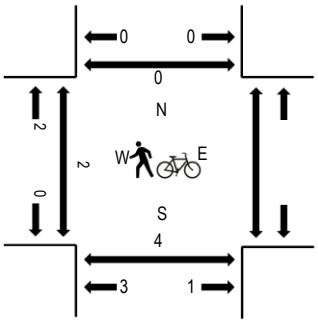
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Location: 1 WILLOW AVE & SAN PABLO AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	58	0	34					0	22	92	0	0	0	73	39	318	1,509	1		0	0
4:15 PM	0	75	0	35					0	20	99	0	0	0	86	60	375	1,627	0		1	0
4:30 PM	0	95	0	72					0	32	95	0	0	0	84	59	437	1,676	0		0	0
4:45 PM	0	66	0	41					0	32	104	0	0	0	79	57	379	1,649	0		1	0
5:00 PM	0	82	0	92					0	30	100	0	0	0	82	50	436	1,611	0		0	0
5:15 PM	0	89	0	65					0	29	100	0	0	0	96	45	424		0		1	0
5:30 PM	0	79	0	41					0	56	105	0	0	0	83	46	410		0		0	0
5:45 PM	0	68	0	31					0	25	107	0	0	0	74	36	341		0		0	0

Peak Rolling Hour Flow Rates

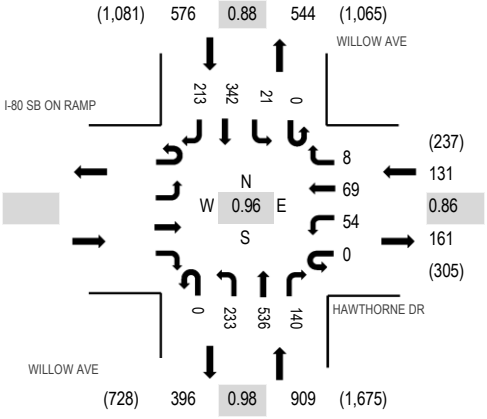
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	0	0					0	0	1	0	0	0	2	0	5
Lights	0	330	0	267					0	116	393	0	0	0	335	202	1,643
Mediums	0	0	0	3					0	7	5	0	0	0	4	9	28
Total	0	332	0	270					0	123	399	0	0	0	341	211	1,676

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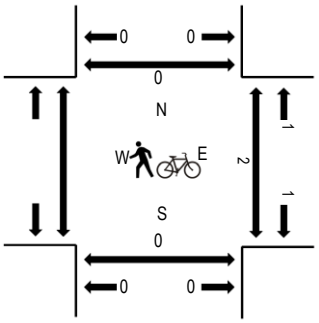
Location: 2 WILLOW AVE & HAWTHORNE DR PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	I-80 SB ON RAMP Eastbound				HAWTHORNE DR Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM					0	12	22	3	0	29	121	34	0	7	57	41	326	1,431		3	0	0
4:15 PM					0	11	16	2	0	28	126	34	0	6	81	41	345	1,528		1	0	0
4:30 PM					0	6	13	2	0	37	134	25	0	10	100	55	382	1,600		0	0	0
4:45 PM					0	10	17	3	0	52	140	35	0	5	64	52	378	1,616		1	0	0
5:00 PM					0	12	19	0	0	62	126	30	0	5	110	59	423	1,562		0	0	0
5:15 PM					0	13	18	1	0	63	128	40	0	4	103	47	417			1	0	0
5:30 PM					0	19	15	4	0	56	142	35	0	7	65	55	398			0	0	0
5:45 PM					0	8	11	0	0	40	133	25	0	3	57	47	324			1	0	0

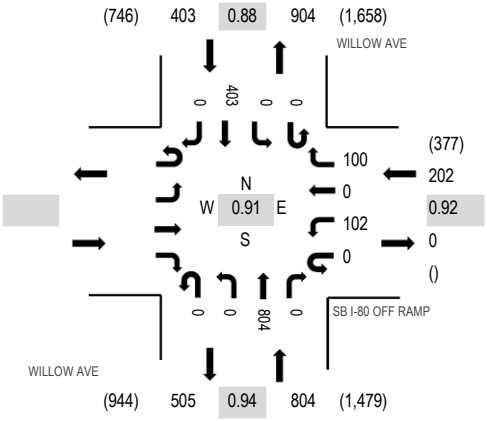
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	1	0	1
Lights					0	54	69	8	0	232	523	140	0	21	339	211	1,597
Mediums					0	0	0	0	0	1	13	0	0	0	2	2	18
Total					0	54	69	8	0	233	536	140	0	21	342	213	1,616

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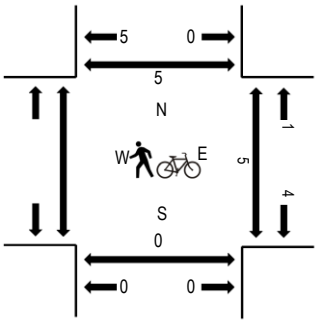
Location: 3 WILLOW AVE & SB I-80 OFF RAMP PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SB I-80 OFF RAMP Eastbound				SB I-80 OFF RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM					0	24	0	17	0	0	165	0	0	0	69	0	275	1,227		2	0	0
4:15 PM					0	22	0	21	0	0	158	0	0	0	98	0	299	1,315		6	0	6
4:30 PM					0	26	0	28	0	0	168	0	0	0	108	0	330	1,404		5	0	2
4:45 PM					0	25	0	20	0	0	196	0	0	0	82	0	323	1,409		2	0	1
5:00 PM					0	25	0	25	0	0	190	0	0	0	123	0	363	1,375		1	0	3
5:15 PM					0	27	0	29	0	0	213	0	0	0	119	0	388			1	0	0
5:30 PM					0	25	0	26	0	0	205	0	0	0	79	0	335			1	0	1
5:45 PM					0	24	0	13	0	0	184	0	0	0	68	0	289			0	0	3

Peak Rolling Hour Flow Rates

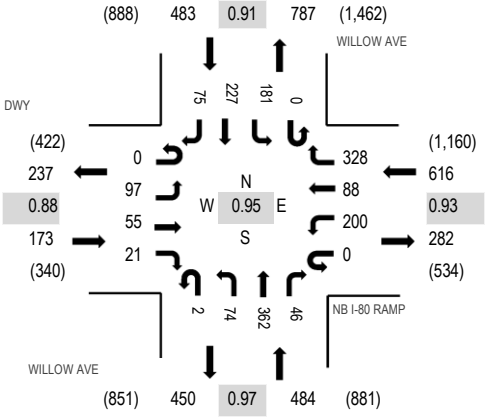
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	0	0	0	0	0	0	0	0	0	1	0	1
Lights					0	100	0	98	0	0	794	0	0	0	400	0	1,392
Mediums					0	2	0	2	0	0	10	0	0	0	2	0	16
Total					0	102	0	100	0	0	804	0	0	0	403	0	1,409

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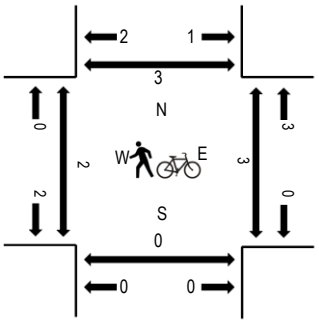
Location: 4 WILLOW AVE & NB I-80 RAMP PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				NB I-80 RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	26	12	4	0	40	19	73	0	21	68	10	0	35	41	14	363	1,529	2	0	0	2
4:15 PM	0	21	12	7	0	39	20	65	0	16	67	16	0	32	56	9	360	1,611	2	1	0	3
4:30 PM	0	24	11	2	0	39	15	69	0	13	75	16	0	60	66	9	399	1,712	0	4	0	0
4:45 PM	0	26	17	6	0	36	24	82	0	11	93	14	0	28	48	22	407	1,756	1	0	0	1
5:00 PM	0	18	13	8	0	46	17	80	1	14	94	13	0	64	61	16	445	1,740	0	0	0	0
5:15 PM	0	27	10	4	0	53	25	82	0	24	87	8	0	50	71	20	461		0	1	0	0
5:30 PM	0	26	15	3	0	65	22	84	1	25	88	11	0	39	47	17	443		1	0	0	2
5:45 PM	0	27	12	9	0	55	14	96	0	20	63	12	1	24	43	15	391		0	0	0	0

Peak Rolling Hour Flow Rates

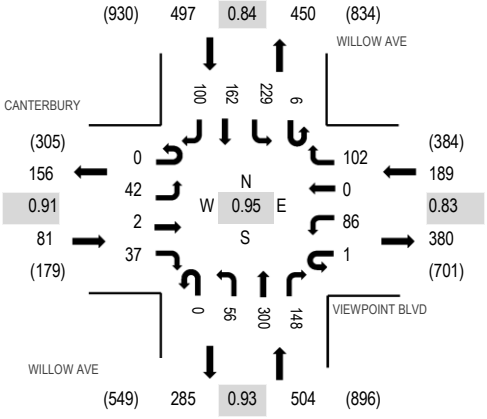
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Lights	0	96	53	21	0	200	87	327	2	72	354	44	0	179	225	73	1,733
Mediums	0	1	2	0	0	0	1	1	0	2	8	2	0	1	2	2	22
Total	0	97	55	21	0	200	88	328	2	74	362	46	0	181	227	75	1,756

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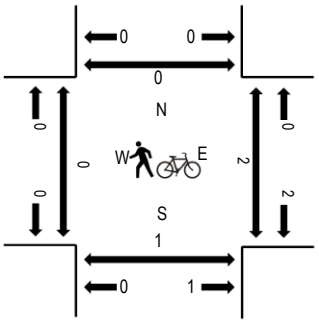
Location: 5 WILLOW AVE & VIEWPOINT BLVD PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CANTERBURY Eastbound				VIEWPOINT BLVD Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	15	1	11	0	25	0	29	1	12	53	32	1	39	36	20	275	1,148	1	0	0	0
4:15 PM	0	16	0	10	0	18	0	21	0	14	57	29	3	49	40	21	278	1,198	0	0	0	0
4:30 PM	0	17	2	4	0	20	1	34	0	18	49	33	0	50	36	22	286	1,253	0	0	0	0
4:45 PM	0	14	1	14	1	31	0	32	0	10	70	37	1	46	33	19	309	1,271	0	1	0	0
5:00 PM	0	10	1	9	0	18	0	25	0	19	72	44	2	56	46	23	325	1,241	0	0	0	0
5:15 PM	0	6	0	4	0	21	0	21	0	11	77	40	2	59	53	39	333		0	0	1	0
5:30 PM	0	12	0	10	0	16	0	24	0	16	81	27	1	68	30	19	304		0	1	0	0
5:45 PM	0	15	1	6	0	20	0	27	0	17	47	30	0	55	37	24	279		0	1	0	0

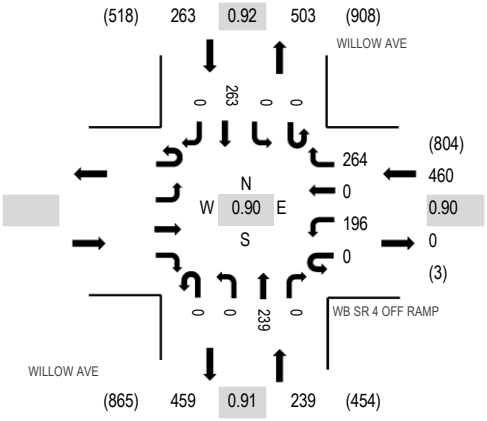
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	41	2	36	1	85	0	100	0	56	291	146	6	227	161	100	1,252
Mediums	0	1	0	1	0	1	0	2	0	0	9	2	0	2	1	0	19
Total	0	42	2	37	1	86	0	102	0	56	300	148	6	229	162	100	1,271

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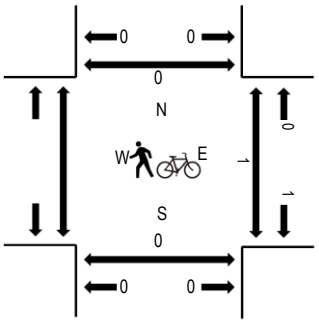
Location: 6 WILLOW AVE & WB SR 4 OFF RAMP PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound				WB SR 4 OFF RAMP Westbound				WILLOW AVE Northbound				WILLOW AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM					0	34	0	37	0	0	64	3	0	0	67	0	205	826		1	0	0
4:15 PM					0	32	0	50	0	0	44	0	0	0	67	0	193	866		0	0	0
4:30 PM					0	33	0	53	0	0	61	0	0	0	58	0	205	939		0	0	0
4:45 PM					0	36	0	60	0	0	54	0	0	0	73	0	223	962		0	0	0
5:00 PM					0	37	0	71	0	0	69	0	0	0	68	0	245	950		1	0	0
5:15 PM					0	69	0	61	0	0	66	0	0	0	70	0	266			0	0	0
5:30 PM					0	54	0	72	0	0	50	0	0	0	52	0	228			0	0	0
5:45 PM					0	52	0	53	0	0	43	0	0	0	63	0	211			0	0	0

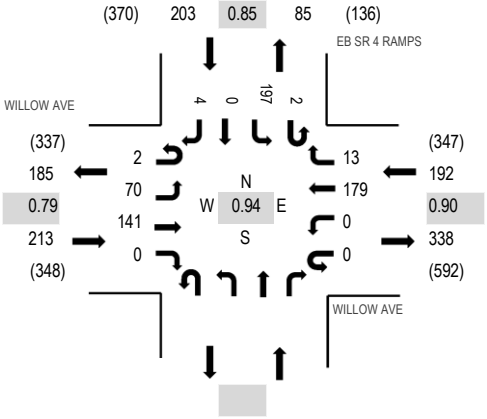
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks					0	1	0	0	0	0	0	0	0	0	0	0	1
Lights					0	191	0	264	0	0	233	0	0	0	260	0	948
Mediums					0	4	0	0	0	0	6	0	0	0	3	0	13
Total					0	196	0	264	0	0	239	0	0	0	263	0	962

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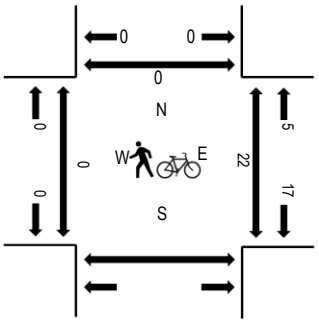
Location: 7 EB SR 4 RAMPS & WILLOW AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	WILLOW AVE Eastbound				WILLOW AVE Westbound				EB SR 4 RAMPS Northbound				EB SR 4 RAMPS Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	9	27	0	0	0	30	2					0	42	0	3	113	473	0	6		0
4:15 PM	0	13	19	0	0	0	32	2					0	28	0	0	94	514	0	8		0
4:30 PM	0	14	23	0	0	0	30	2					0	47	0	0	116	581	0	7		0
4:45 PM	1	12	33	0	0	0	44	0					1	57	0	2	150	608	0	4		0
5:00 PM	0	21	33	0	0	0	43	5					0	51	0	1	154	592	0	6		0
5:15 PM	0	22	45	0	0	0	47	5					0	42	0	0	161		0	7		0
5:30 PM	1	15	30	0	0	0	45	3					1	47	0	1	143		0	5		0
5:45 PM	0	9	21	0	0	0	57	0					0	47	0	0	134		0	2		0

Peak Rolling Hour Flow Rates

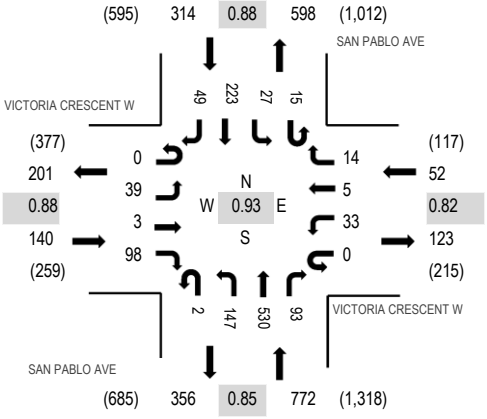
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	2	0	0	3
Lights	2	68	119	0	0	0	156	11					2	187	0	4	549
Mediums	0	2	21	0	0	0	23	2					0	8	0	0	56
Total	2	70	141	0	0	0	179	13					2	197	0	4	608

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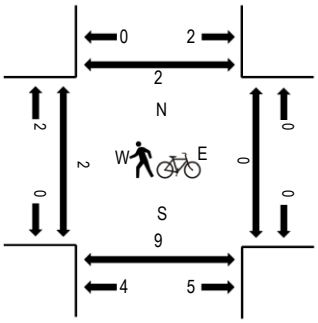
Location: 8 SAN PABLO AVE & VICTORIA CRESCENT W PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	VICTORIA CRESCENT W Eastbound				VICTORIA CRESCENT W Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	5	0	11	0	10	0	3	0	21	75	13	3	6	41	10	198	1,102	0	1	1	0
4:15 PM	0	16	0	25	0	15	0	5	0	32	98	17	1	5	60	6	280	1,246	2	0	11	2
4:30 PM	0	8	1	26	0	5	2	4	0	43	137	24	6	5	64	8	333	1,278	0	0	1	0
4:45 PM	0	10	1	26	0	10	1	3	0	33	97	25	3	7	63	12	291	1,234	1	0	5	2
5:00 PM	0	9	0	23	0	9	0	4	1	35	174	18	2	8	42	17	342	1,187	0	0	1	0
5:15 PM	0	12	1	23	0	9	2	3	1	36	122	26	4	7	54	12	312		1	0	2	0
5:30 PM	0	7	0	21	0	10	1	7	0	39	92	20	3	10	57	22	289		0	0	1	0
5:45 PM	0	6	0	28	0	10	0	4	0	39	84	16	5	5	41	6	244		0	0	1	0

Peak Rolling Hour Flow Rates

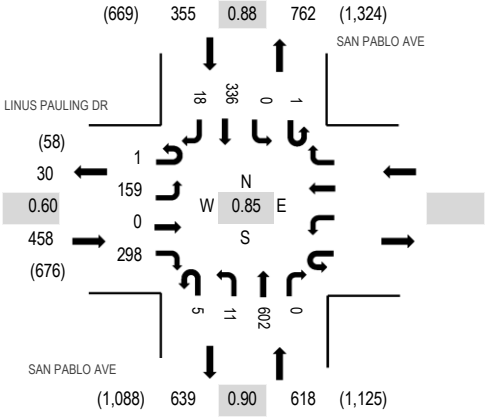
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
Lights	0	39	3	94	0	32	5	13	2	146	524	92	15	26	211	49	1,251
Mediums	0	0	0	3	0	1	0	1	0	1	5	1	0	1	12	0	25
Total	0	39	3	98	0	33	5	14	2	147	530	93	15	27	223	49	1,278

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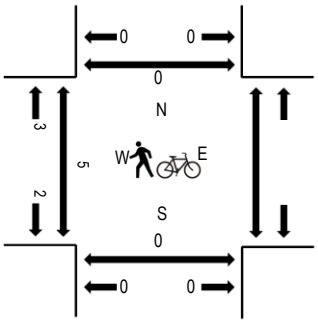
Location: 9 SAN PABLO AVE & LINUS PAULING DR PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	LINUS PAULING DR Eastbound				Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	20	0	34					0	4	97	0	0	0	60	3	218	1,215	1		0	0
4:15 PM	0	17	0	44					1	6	130	0	1	0	94	1	294	1,418	0		0	0
4:30 PM	0	40	0	85					1	6	165	0	0	0	85	8	390	1,431	1		0	0
4:45 PM	0	21	0	54					0	2	133	0	0	0	98	5	313	1,324	1		0	0
5:00 PM	1	72	0	117					1	2	156	0	0	0	71	1	421	1,255	2		0	0
5:15 PM	0	26	0	42					3	1	148	0	1	0	82	4	307		0		0	0
5:30 PM	0	18	0	44					1	3	133	0	0	0	77	7	283		0		0	0
5:45 PM	0	15	0	26					0	1	131	0	0	0	68	3	244		0		0	0

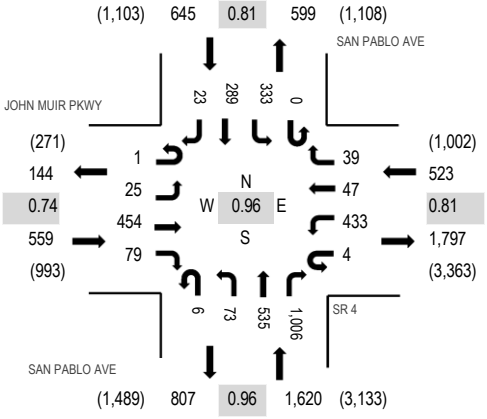
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1					0	1	1	0	0	0	0	0	3
Lights	1	157	0	297					5	10	598	0	1	0	327	12	1,408
Mediums	0	2	0	0					0	0	3	0	0	0	9	6	20
Total	1	159	0	298					5	11	602	0	1	0	336	18	1,431

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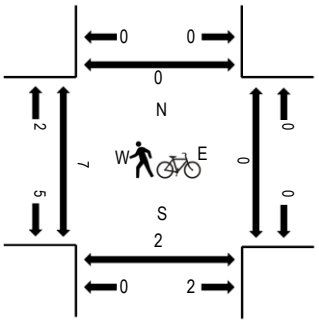
Location: 10 SAN PABLO AVE & SR 4 PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				SR 4 Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	6	93	11	0	78	8	9	0	14	81	248	0	52	47	2	649	3,003	0	0	1	1
4:15 PM	0	9	83	15	0	86	9	11	1	17	115	266	0	58	64	4	738	3,222	0	0	0	0
4:30 PM	0	5	100	23	0	111	17	10	0	22	149	234	0	101	65	5	842	3,347	1	0	0	0
4:45 PM	0	8	90	14	0	96	10	10	0	16	119	279	0	51	76	5	774	3,319	0	0	1	0
5:00 PM	0	7	157	24	1	85	7	7	4	15	122	240	0	112	80	7	868	3,228	3	0	0	0
5:15 PM	1	5	107	18	3	141	13	12	2	20	145	253	0	69	68	6	863		0	0	0	0
5:30 PM	0	4	97	27	0	127	16	17	0	16	128	254	0	70	56	2	814		0	0	0	0
5:45 PM	0	5	66	18	1	94	14	9	2	22	115	234	0	44	56	3	683		0	0	0	0

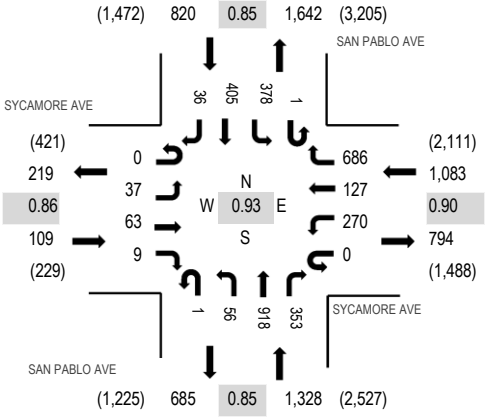
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	2	0	1	0	0	0	3	0	0	0	0	7
Lights	1	25	447	73	4	428	47	37	6	70	533	995	0	331	279	23	3,299
Mediums	0	0	6	6	0	3	0	1	0	3	2	8	0	2	10	0	41
Total	1	25	454	79	4	433	47	39	6	73	535	1,006	0	333	289	23	3,347

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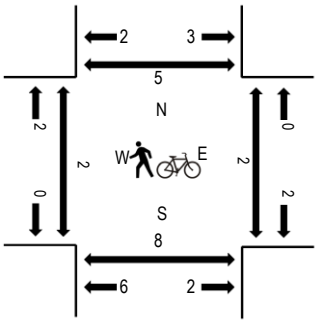
Location: 11 SAN PABLO AVE & SYCAMORE AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				SAN PABLO AVE Northbound				SAN PABLO AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	12	6	1	0	60	18	153	0	12	182	80	0	61	57	11	653	3,076	0	0	7	0
4:15 PM	0	14	18	3	0	50	26	164	0	15	236	80	1	94	77	8	786	3,215	0	1	3	0
4:30 PM	0	14	22	1	0	63	29	196	0	14	227	71	0	80	84	9	810	3,326	0	0	1	0
4:45 PM	0	16	14	3	0	72	26	165	0	7	260	73	1	101	76	13	827	3,340	2	1	4	1
5:00 PM	0	5	15	3	0	65	37	201	0	16	206	62	0	88	88	6	792	3,263	0	0	3	0
5:15 PM	0	6	18	2	0	60	23	156	1	19	264	106	0	99	138	5	897		0	0	0	4
5:30 PM	0	10	16	1	0	73	41	164	0	14	188	112	0	90	103	12	824		0	0	1	0
5:45 PM	0	8	20	1	0	59	42	168	0	11	188	83	0	79	84	7	750		0	0	5	0

Peak Rolling Hour Flow Rates

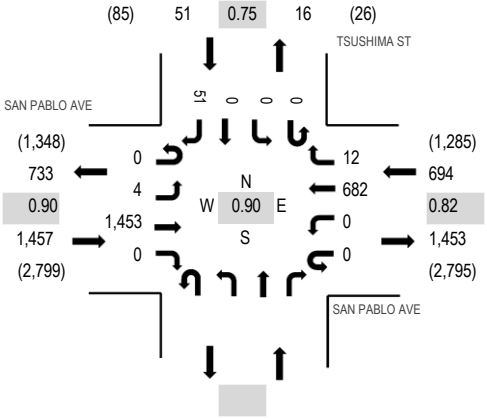
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	3
Lights	0	37	63	9	0	257	126	675	1	56	912	343	0	367	399	36	3,281
Mediums	0	0	0	0	0	13	1	11	0	0	5	10	0	10	6	0	56
Total	0	37	63	9	0	270	127	686	1	56	918	353	1	378	405	36	3,340

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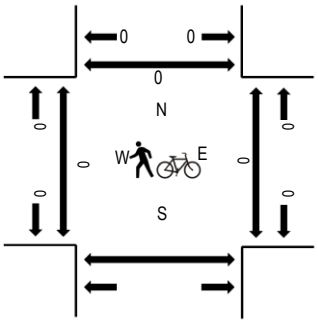
(303) 216-2439
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Location: 12 TSUSHIMA ST & SAN PABLO AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				SAN PABLO AVE Westbound				Northbound				TSUSHIMA ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	287	0	0	0	130	2					0	0	0	4	423	2,045	0	0		0
4:15 PM	0	0	417	0	0	0	109	2					0	0	0	8	536	2,127	0	0		0
4:30 PM	0	2	376	0	0	0	162	4					0	0	0	11	555	2,202	0	0		0
4:45 PM	0	0	371	0	0	0	139	4					0	0	0	17	531	2,179	0	0		0
5:00 PM	0	2	330	0	0	0	161	0					0	0	0	12	505	2,124	0	0		0
5:15 PM	0	0	376	0	0	0	220	4					0	0	0	11	611		0	0		0
5:30 PM	0	0	325	0	0	0	198	2					0	0	0	7	532		0	0		0
5:45 PM	0	0	313	0	0	0	144	4					0	0	0	15	476		0	0		0

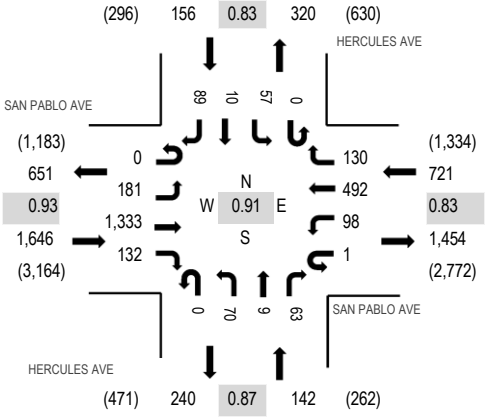
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	0	0	0	1
Lights	0	4	1,433	0	0	0	665	12					0	0	0	50	2,164
Mediums	0	0	19	0	0	0	17	0					0	0	0	1	37
Total	0	4	1,453	0	0	0	682	12					0	0	0	51	2,202

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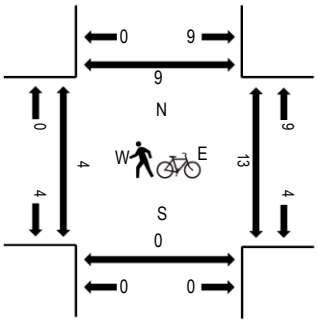
Location: 13 HERCULES AVE & SAN PABLO AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SAN PABLO AVE Eastbound				SAN PABLO AVE Westbound				HERCULES AVE Northbound				HERCULES AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	49	258	28	0	16	91	19	0	7	2	23	0	8	1	19	521	2,475	2	5	1	1
4:15 PM	0	53	365	31	0	31	65	22	0	17	2	11	0	21	1	16	635	2,571	0	2	1	0
4:30 PM	0	47	357	31	0	25	115	25	0	16	2	11	0	20	4	25	678	2,665	1	0	0	0
4:45 PM	0	46	324	25	0	23	99	39	0	23	1	17	0	16	4	24	641	2,637	1	6	0	0
5:00 PM	0	35	311	39	1	23	113	28	0	15	2	18	0	13	1	18	617	2,581	2	3	0	9
5:15 PM	0	53	341	37	0	27	165	38	0	16	4	17	0	8	1	22	729		0	3	0	0
5:30 PM	0	50	305	25	0	31	148	26	0	15	2	13	0	13	2	20	650		0	3	0	0
5:45 PM	3	59	267	25	1	39	98	26	0	13	0	15	0	18	1	20	585		1	4	0	1

Peak Rolling Hour Flow Rates

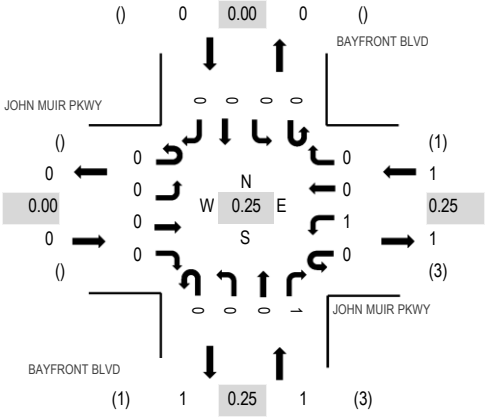
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	178	1,316	132	1	98	473	129	0	69	9	63	0	56	10	88	2,622
Mediums	0	3	16	0	0	0	19	1	0	1	0	0	0	1	0	1	42
Total	0	181	1,333	132	1	98	492	130	0	70	9	63	0	57	10	89	2,665

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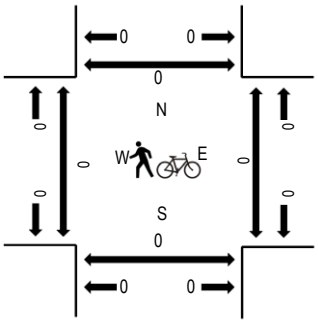
Location: 14 BAYFRONT BLVD & JOHN MUIR PKWY PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				BAYFRONT BLVD Northbound				BAYFRONT BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	2	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0

Peak Rolling Hour Flow Rates

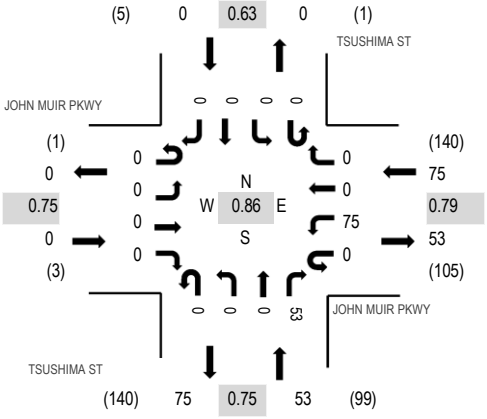
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2

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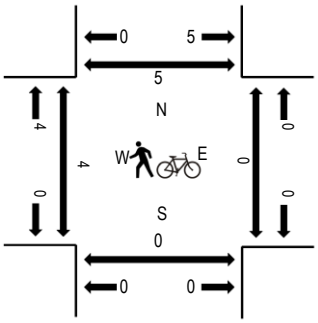
Location: 15 TSUSHIMA ST & JOHN MUIR PKWY PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				TSUSHIMA ST Northbound				TSUSHIMA ST Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	1	0	16	0	1	0	0	0	12	0	1	0	0	31	119	0	0	0	0
4:15 PM	0	0	0	1	0	13	1	0	0	0	0	16	0	2	0	0	33	123	0	1	0	0
4:30 PM	0	0	0	0	0	22	0	0	0	0	0	7	0	1	0	0	30	127	0	1	1	0
4:45 PM	0	0	1	0	0	12	0	0	0	0	0	11	0	1	0	0	25	127	0	0	0	0
5:00 PM	0	0	0	0	0	24	0	0	0	0	0	11	0	0	0	0	35	128	2	0	0	1
5:15 PM	0	0	0	0	0	18	0	0	0	0	0	19	0	0	0	0	37		0	0	0	1
5:30 PM	0	0	0	0	0	14	0	0	0	0	0	16	0	0	0	0	30		2	0	0	2
5:45 PM	0	0	0	0	0	19	0	0	0	0	0	7	0	0	0	0	26		0	0	0	1

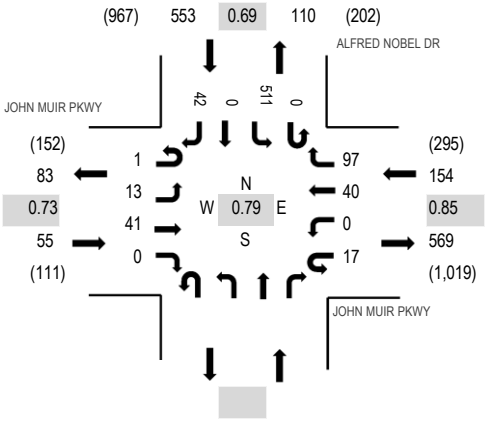
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	75	0	0	0	0	0	53	0	0	0	0	128
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	75	0	0	0	0	0	53	0	0	0	0	128

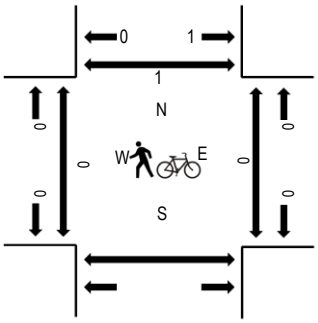
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Location: 16 ALFRED NOBEL DR & JOHN MUIR PKWY PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	JOHN MUIR PKWY Eastbound				JOHN MUIR PKWY Westbound				Northbound				ALFRED NOBEL DR Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	5	10	0	0	0	11	18					0	108	0	5	157	644	0	0		0
4:15 PM	0	0	17	0	1	0	13	17					0	91	0	4	143	727	0	0		0
4:30 PM	1	1	10	0	7	0	11	29					0	110	0	12	181	762	0	0		0
4:45 PM	0	4	8	0	2	0	7	23					0	113	0	6	163	747	0	0		0
5:00 PM	0	3	8	0	3	0	8	18					0	184	0	16	240	729	0	0		0
5:15 PM	0	5	15	0	5	0	14	27					0	104	0	8	178		0	0		1
5:30 PM	0	1	14	0	5	0	10	20					0	109	0	7	166		0	0		0
5:45 PM	0	1	8	0	1	0	15	30					0	86	0	4	145		0	0		0

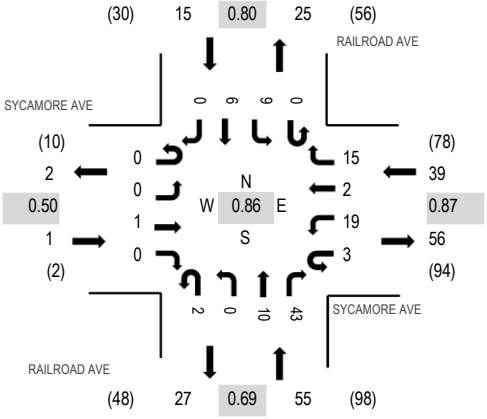
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	1	13	41	0	16	0	40	94					0	500	0	42	747
Mediums	0	0	0	0	1	0	0	3					0	11	0	0	15
Total	1	13	41	0	17	0	40	97					0	511	0	42	762

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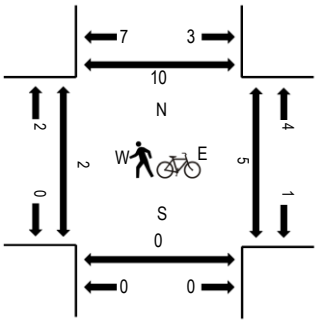
Location: 17 RAILROAD AVE & SYCAMORE AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				RAILROAD AVE Northbound				RAILROAD AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	0	2	6	0	1	5	7	0	3	0	0	24	104	0	3	0	4
4:15 PM	0	0	0	0	0	6	1	6	0	0	3	4	0	3	0	0	23	101	0	3	1	4
4:30 PM	0	0	0	0	0	7	2	3	0	0	2	10	0	1	2	0	27	110	0	1	0	3
4:45 PM	0	0	0	0	1	4	0	4	0	0	2	14	0	4	1	0	30	107	0	4	0	4
5:00 PM	0	0	1	0	1	4	0	6	0	0	1	6	0	1	1	0	21	104	2	0	0	1
5:15 PM	0	0	0	0	1	4	0	2	2	0	5	13	0	3	2	0	32		0	0	0	2
5:30 PM	0	0	0	0	0	5	2	4	0	0	3	6	0	3	1	0	24		5	0	0	2
5:45 PM	0	0	0	1	0	6	0	1	1	2	3	8	0	4	1	0	27		0	3	0	2

Peak Rolling Hour Flow Rates

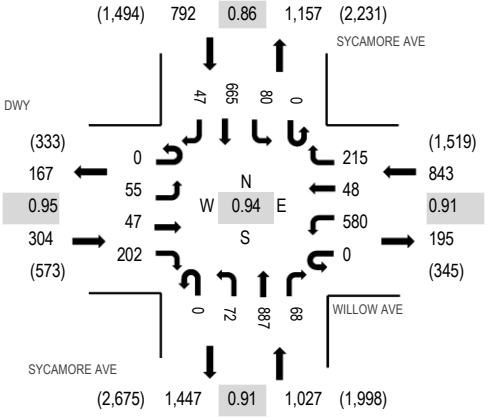
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	1	0	3	19	2	15	2	0	10	43	0	8	6	0	109
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	1	0	3	19	2	15	2	0	10	43	0	9	6	0	110

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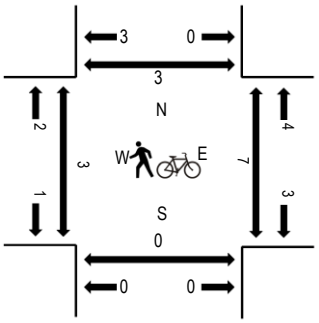
Location: 18 SYCAMORE AVE & WILLOW AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	DWY Eastbound				WILLOW AVE Westbound				SYCAMORE AVE Northbound				SYCAMORE AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	12	4	27	0	102	16	41	0	17	212	9	1	14	128	8	591	2,618	2	0	0	0
4:15 PM	0	9	11	49	0	126	10	41	0	12	188	12	1	15	165	13	652	2,772	1	2	0	2
4:30 PM	0	17	10	54	0	103	11	37	1	17	241	15	0	12	154	15	687	2,851	1	1	1	0
4:45 PM	0	13	8	55	0	122	16	51	0	22	209	16	1	24	142	9	688	2,950	3	0	0	0
5:00 PM	0	20	15	52	0	137	5	39	0	20	245	21	0	22	157	12	745	2,966	0	2	0	1
5:15 PM	0	14	16	55	0	149	17	60	0	15	190	15	0	28	159	13	731		0	2	0	1
5:30 PM	0	8	8	47	0	136	15	54	0	20	244	22	0	20	199	13	786		1	0	0	0
5:45 PM	0	13	8	48	0	158	11	62	0	17	208	10	0	10	150	9	704		2	2	0	1

Peak Rolling Hour Flow Rates

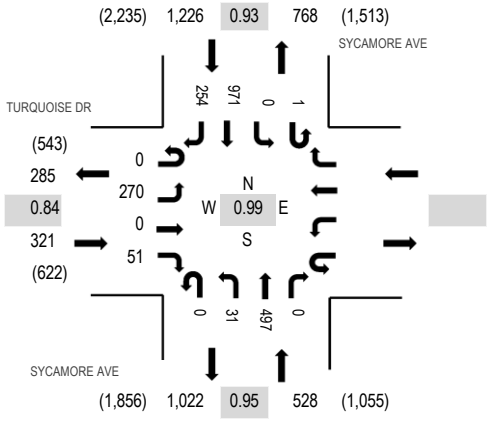
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Lights	0	55	47	202	0	573	48	198	0	72	879	64	0	66	663	47	2,914
Mediums	0	0	0	0	0	7	0	16	0	0	8	4	0	14	2	0	51
Total	0	55	47	202	0	580	48	215	0	72	887	68	0	80	665	47	2,966

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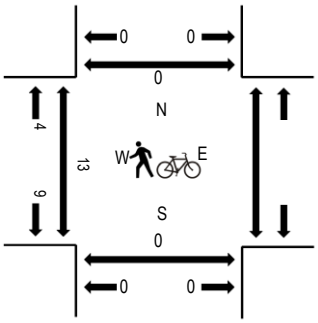
Location: 19 SYCAMORE AVE & TURQUOISE DR PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	TURQUOISE DR Eastbound				TURQUOISE DR Westbound				SYCAMORE AVE Northbound				SYCAMORE AVE Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	47	0	9					0	9	105	0	0	0	178	51	399	1,837	10		0	0
4:15 PM	0	70	0	8					0	7	111	0	0	0	196	45	437	1,957	1		2	0
4:30 PM	0	73	0	19					0	10	137	0	0	0	208	65	512	2,037	1		0	0
4:45 PM	0	63	0	12					0	9	139	0	0	0	204	62	489	2,042	2		0	0
5:00 PM	0	86	0	18					0	6	123	0	0	0	234	52	519	2,075	2		0	0
5:15 PM	0	62	0	13					0	9	130	0	1	0	237	65	517		3		0	0
5:30 PM	0	60	0	10					0	9	132	0	0	0	245	61	517		5		0	0
5:45 PM	0	62	0	10					0	7	112	0	0	0	255	76	522		3		0	0

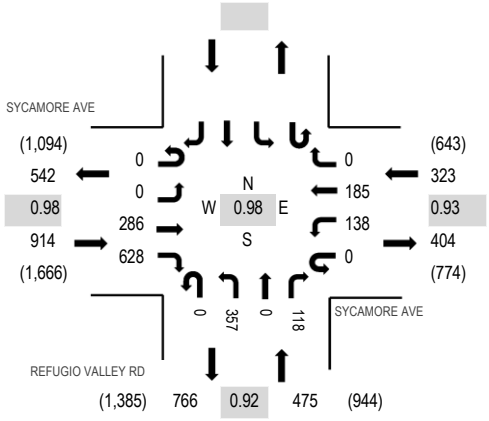
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	268	0	51					0	31	490	0	1	0	966	252	2,059
Mediums	0	2	0	0					0	0	7	0	0	0	5	2	16
Total	0	270	0	51					0	31	497	0	1	0	971	254	2,075

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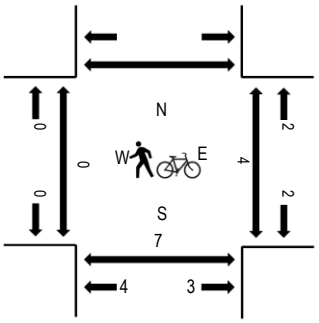
Location: 20 REFUGIO VALLEY RD & SYCAMORE AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				REFUGIO VALLEY RD Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	58	104	0	40	41	0	0	75	0	26					344	1,541	0	1	7	
4:15 PM	0	0	70	114	0	33	40	0	0	82	0	27					366	1,627	0	5	8	
4:30 PM	0	0	76	133	0	22	57	0	0	100	0	34					422	1,683	0	2	1	
4:45 PM	1	0	59	137	0	36	51	0	0	105	0	20					409	1,697	0	0	2	
5:00 PM	0	0	71	152	0	37	44	0	0	92	0	34					430	1,712	0	2	4	
5:15 PM	0	0	84	143	0	37	56	0	0	77	0	25					422		0	1	1	
5:30 PM	0	0	60	170	0	32	53	0	0	93	0	28					436		0	0	1	
5:45 PM	0	0	71	163	0	32	32	0	0	95	0	31					424		0	1	1	

Peak Rolling Hour Flow Rates

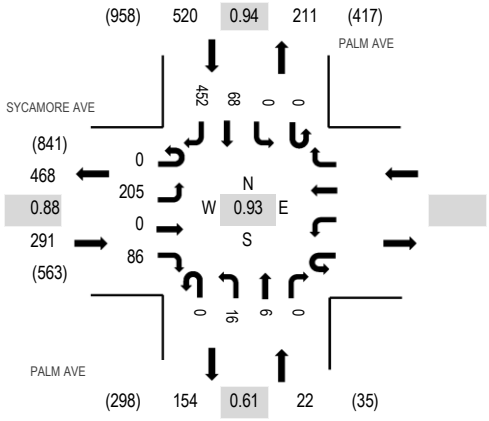
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0					0
Lights	0	0	282	626	0	137	181	0	0	353	0	118					1,697
Mediums	0	0	4	2	0	1	4	0	0	4	0	0					15
Total	0	0	286	628	0	138	185	0	0	357	0	118					1,712

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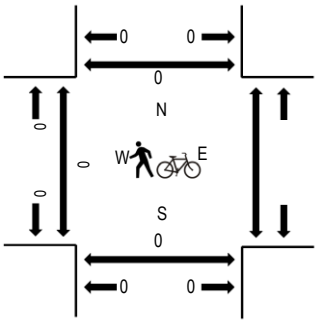
Location: 21 PALM AVE & SYCAMORE AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				Westbound				PALM AVE Northbound				PALM AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	60	0	20					0	4	1	0	0	0	20	89	194	731	0		0	0
4:15 PM	0	44	0	20					0	2	1	0	0	0	17	87	171	736	0		0	0
4:30 PM	0	47	0	17					0	0	4	0	0	0	17	76	161	790	0		0	0
4:45 PM	0	43	0	21					0	7	2	0	0	0	10	122	205	833	0		0	0
5:00 PM	0	59	0	17					0	3	0	0	0	0	22	98	199	825	0		0	0
5:15 PM	0	58	0	25					0	2	2	0	0	0	18	120	225		0		0	0
5:30 PM	0	45	0	23					0	4	2	0	0	0	18	112	204		0		0	0
5:45 PM	0	49	0	15					0	1	0	0	0	0	18	114	197		0		0	0

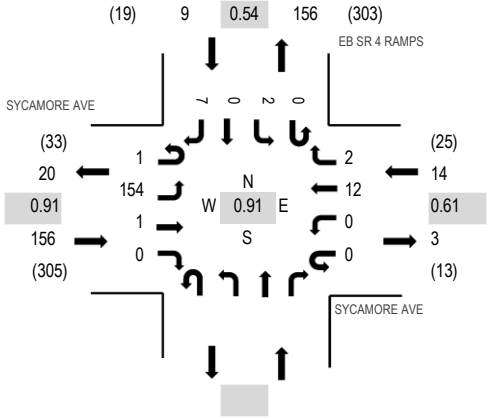
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	205	0	84					0	16	5	0	0	0	66	449	825
Mediums	0	0	0	2					0	0	1	0	0	0	2	3	8
Total	0	205	0	86					0	16	6	0	0	0	68	452	833

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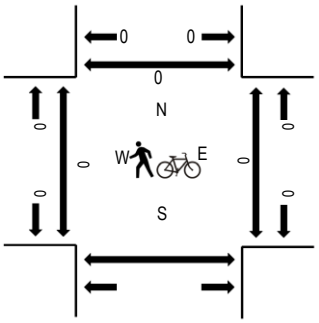
Location: 22 EB SR 4 RAMPS & SYCAMORE AVE PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	SYCAMORE AVE Eastbound				SYCAMORE AVE Westbound				EB SR 4 RAMPS Northbound				EB SR 4 RAMPS Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	41	3	0	0	0	5	2					0	2	0	1	54	174	0	0		0
4:15 PM	0	38	0	0	0	0	4	0					0	1	0	0	43	166	0	0		0
4:30 PM	0	31	1	0	0	0	0	0					0	3	0	3	38	168	0	0		0
4:45 PM	0	30	0	0	0	0	6	0					0	1	0	2	39	179	0	0		0
5:00 PM	0	39	1	0	0	0	3	2					0	0	0	1	46	175	0	0		0
5:15 PM	0	42	0	0	0	0	1	0					0	1	0	1	45		0	0		0
5:30 PM	1	43	0	0	0	0	2	0					0	0	0	3	49		0	0		0
5:45 PM	0	35	0	0	0	0	0	0					0	0	0	0	35		0	0		0

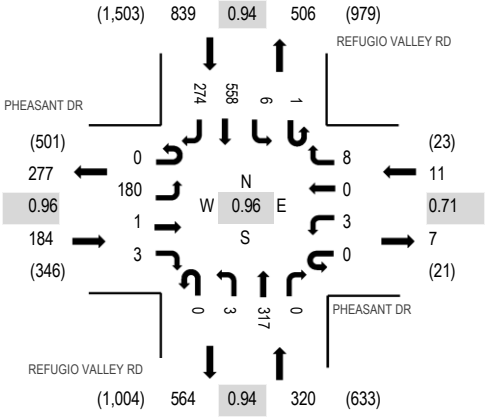
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	1	151	1	0	0	0	12	2					0	2	0	6	175
Mediums	0	3	0	0	0	0	0	0					0	0	0	1	4
Total	1	154	1	0	0	0	12	2					0	2	0	7	179

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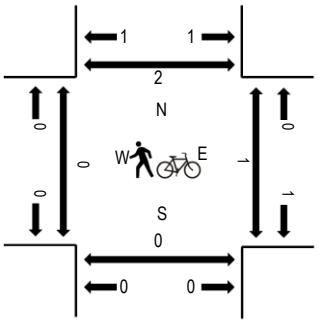
Location: 23 REFUGIO VALLEY RD & PHEASANT DR PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PHEASANT DR Eastbound				PHEASANT DR Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	35	0	2	0	1	0	0	0	2	70	0	1	4	99	53	267	1,151	0	1	1	3
4:15 PM	0	40	2	1	0	0	0	2	0	1	69	0	0	3	95	59	272	1,221	0	2	0	3
4:30 PM	0	43	0	0	0	2	1	3	0	1	86	0	0	1	107	55	299	1,267	0	0	0	2
4:45 PM	0	39	0	0	0	1	0	2	0	1	83	0	0	4	132	51	313	1,319	0	0	1	1
5:00 PM	0	46	1	1	0	1	0	3	0	0	82	0	0	3	132	68	337	1,354	0	0	0	1
5:15 PM	0	44	0	1	0	1	0	3	0	2	73	0	0	0	117	77	318		0	0	0	0
5:30 PM	0	48	0	0	0	1	0	2	0	1	80	0	1	3	145	70	351		0	1	0	1
5:45 PM	0	42	0	1	0	0	0	0	0	0	82	0	0	0	164	59	348		0	0	0	0

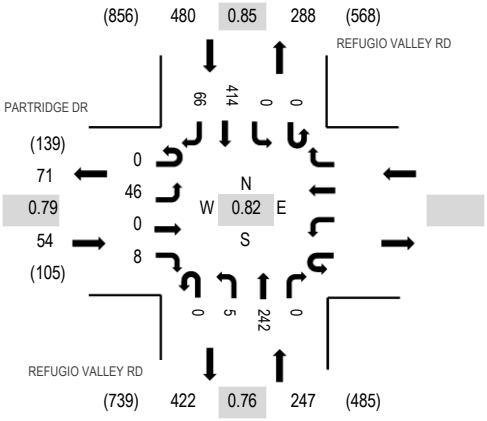
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	180	1	3	0	3	0	8	0	3	314	0	1	6	556	274	1,349
Mediums	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5
Total	0	180	1	3	0	3	0	8	0	3	317	0	1	6	558	274	1,354

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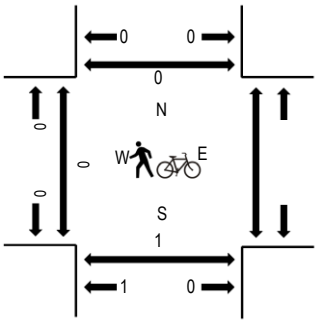
Location: 24 REFUGIO VALLEY RD & PARTRIDGE DR PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PARTRIDGE DR Eastbound				Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	8	0	2					0	0	54	0	0	0	74	8	146	665	0		0	0
4:15 PM	0	10	0	2					1	1	54	0	0	0	61	17	146	697	0		2	0
4:30 PM	0	11	0	1					0	2	64	0	0	0	82	17	177	709	0		5	0
4:45 PM	0	17	0	0					0	0	62	0	0	0	94	23	196	738	0		1	0
5:00 PM	0	12	0	1					0	0	59	0	0	0	90	16	178	781	0		1	0
5:15 PM	0	8	0	1					0	0	40	0	0	0	90	19	158		0		0	0
5:30 PM	0	13	0	2					0	2	65	0	0	0	110	14	206		0		0	0
5:45 PM	0	13	0	4					0	3	78	0	0	0	124	17	239		0		0	0

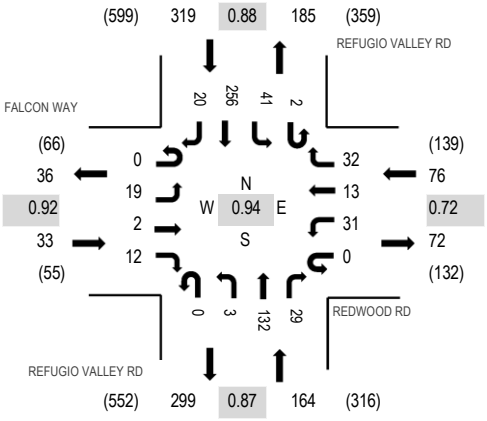
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	46	0	8					0	5	240	0	0	0	412	66	777
Mediums	0	0	0	0					0	0	2	0	0	0	2	0	4
Total	0	46	0	8					0	5	242	0	0	0	414	66	781

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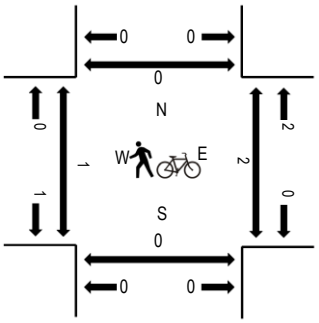
Location: 25 REFUGIO VALLEY RD & REDWOOD RD PM
Date and Start Time: Tuesday, December 6, 2016
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

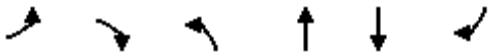
Interval Start Time	FALCON WAY Eastbound				REDWOOD RD Westbound				REFUGIO VALLEY RD Northbound				REFUGIO VALLEY RD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	1	0	0	8	2	5	0	4	27	5	0	13	49	5	120	519	1	0	0	0
4:15 PM	0	5	0	2	0	1	4	5	0	0	24	5	1	7	48	1	103	533	0	0	0	0
4:30 PM	0	3	1	2	0	10	2	9	0	2	41	2	0	16	50	6	144	578	0	0	0	0
4:45 PM	0	4	0	4	0	9	6	13	0	0	42	7	0	10	52	5	152	592	0	0	0	0
5:00 PM	0	5	0	3	0	4	2	5	0	0	27	7	1	13	62	5	134	590	1	0	0	0
5:15 PM	0	3	2	4	0	11	3	7	0	3	30	10	0	12	57	6	148		0	0	0	0
5:30 PM	0	7	0	1	0	7	2	7	0	0	33	5	1	6	85	4	158		0	2	0	0
5:45 PM	0	5	1	1	0	9	1	7	0	0	41	1	0	8	73	3	150		1	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	17	2	12	0	31	13	32	0	3	131	27	2	41	255	20	586
Mediums	0	2	0	0	0	0	0	0	0	0	1	2	0	0	1	0	6
Total	0	19	2	12	0	31	13	32	0	3	132	29	2	41	256	20	592

Level of Service Worksheets

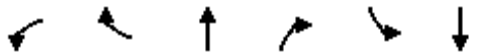
Existing Conditions Intersection Level of Service Reports - AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	169	206	408	368	362
Future Volume (vph)	200	169	206	408	368	362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	5.5	5.5	5.5
Lane Util. Factor	0.97		1.00	0.95	0.95	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	3277		1770	3539	3539	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	3277		1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	200	169	206	408	368	362
RTOR Reduction (vph)	81	0	0	0	0	254
Lane Group Flow (vph)	288	0	206	408	368	108
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases						6
Actuated Green, G (s)	12.7		12.8	33.4	16.6	16.6
Effective Green, g (s)	12.7		12.8	33.4	16.6	16.6
Actuated g/C Ratio	0.23		0.23	0.60	0.30	0.30
Clearance Time (s)	4.0		4.0	5.5	5.5	5.5
Vehicle Extension (s)	4.0		2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	748		407	2125	1056	472
v/s Ratio Prot	c0.09		c0.12	0.12	c0.10	
v/s Ratio Perm						0.07
v/c Ratio	0.39		0.51	0.19	0.35	0.23
Uniform Delay, d1	18.1		18.6	5.0	15.3	14.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5		0.4	0.1	0.3	0.3
Delay (s)	18.6		19.0	5.1	15.5	15.0
Level of Service	B		B	A	B	B
Approach Delay (s)	18.6			9.7	15.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	17.5
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	252	9	617	131	7	280
Future Volume (vph)	252	9	617	131	7	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		5.5		4.0	5.5
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	1.00		0.97		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1769		3446		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1769		3446		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	252	9	617	131	7	280
RTOR Reduction (vph)	1	0	10	0	0	0
Lane Group Flow (vph)	260	0	738	0	7	280
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	15.3		24.9		0.9	29.8
Effective Green, g (s)	15.3		24.9		0.9	29.8
Actuated g/C Ratio	0.28		0.46		0.02	0.55
Clearance Time (s)	4.0		5.5		4.0	5.5
Vehicle Extension (s)	3.0		4.0		3.0	4.0
Lane Grp Cap (vph)	495		1571		29	1931
v/s Ratio Prot	c0.15		c0.21		0.00	c0.08
v/s Ratio Perm						
v/c Ratio	0.53		0.47		0.24	0.15
Uniform Delay, d1	16.6		10.3		26.5	6.1
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.0		0.3		4.3	0.0
Delay (s)	17.6		10.6		30.8	6.2
Level of Service	B		B		C	A
Approach Delay (s)	17.6		10.6			6.8
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

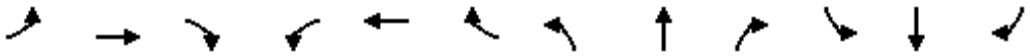
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	153	221	875	0	0	410
Future Volume (vph)	153	221	875	0	0	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7	5.1			5.1
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	153	221	875	0	0	410
RTOR Reduction (vph)	0	58	0	0	0	0
Lane Group Flow (vph)	153	163	875	0	0	410
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	8.4	8.4	15.7			15.7
Effective Green, g (s)	8.4	8.4	15.7			15.7
Actuated g/C Ratio	0.25	0.25	0.46			0.46
Clearance Time (s)	4.7	4.7	5.1			5.1
Vehicle Extension (s)	2.0	2.0	3.0			3.0
Lane Grp Cap (vph)	438	392	1639			1639
v/s Ratio Prot	0.09		c0.25			0.12
v/s Ratio Perm		c0.10				
v/c Ratio	0.35	0.42	0.53			0.25
Uniform Delay, d1	10.5	10.7	6.5			5.5
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.3	0.3			0.1
Delay (s)	10.7	11.0	6.8			5.6
Level of Service	B	B	A			A
Approach Delay (s)	10.8		6.8			5.6
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	33.9	Sum of lost time (s)	9.8
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	49	25	60	51	236	68	519	110	106	323	84
Future Volume (vph)	100	49	25	60	51	236	68	519	110	106	323	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.98			1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected		0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3142			1814	1583	1770	3446		1770	3430	
Flt Permitted		0.77			0.73	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2497			1368	1583	1770	3446		1770	3430	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	49	25	60	51	236	68	519	110	106	323	84
RTOR Reduction (vph)	0	17	0	0	0	191	0	20	0	0	23	0
Lane Group Flow (vph)	0	157	0	0	111	45	68	609	0	106	384	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		7.5			7.1	7.1	3.0	10.8		4.7	12.5	
Effective Green, g (s)		7.5			7.1	7.1	3.0	10.8		4.7	12.5	
Actuated g/C Ratio		0.20			0.19	0.19	0.08	0.29		0.13	0.33	
Clearance Time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Vehicle Extension (s)		0.2			0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		499			259	299	141	992		221	1143	
v/s Ratio Prot							0.04	c0.18		c0.06	0.11	
v/s Ratio Perm		0.06			c0.08	0.03						
v/c Ratio		0.32			0.43	0.15	0.48	0.61		0.48	0.34	
Uniform Delay, d1		12.8			13.4	12.7	16.5	11.5		15.3	9.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.4	0.1	0.9	0.8		0.6	0.1	
Delay (s)		12.9			13.8	12.8	17.5	12.3		15.9	9.4	
Level of Service		B			B	B	B	B		B	A	
Approach Delay (s)		12.9			13.1			12.8			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	14.9
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	15.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	109	4	78	0	109	1	248	0	29	302	42
Peak Hour Factor	0.92	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.92	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	109	4	78	0	109	1	248	0	29	302	42
Number of Lanes	0	1	1	0	0	1	1	1	0	0	2	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	13.5	16.3	15.3
HCM LOS	B	C	C

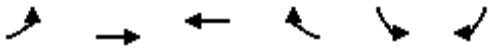
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	0%	100%	0%	100%	0%	0%	53%	0%	0%
Vol Thru, %	78%	100%	0%	0%	5%	0%	100%	0%	47%	100%	0%
Vol Right, %	0%	0%	100%	0%	95%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	201	42	109	82	109	1	248	213	199	42
LT Vol	29	0	0	109	0	109	0	0	114	0	0
Through Vol	101	201	0	0	4	0	1	0	99	199	0
RT Vol	0	0	42	0	78	0	0	248	0	0	42
Lane Flow Rate	130	201	42	109	82	109	1	248	213	199	42
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.29	0.444	0.084	0.266	0.173	0.258	0.002	0.503	0.475	0.428	0.082
Departure Headway (Hd)	8.061	7.947	7.234	8.776	7.61	8.512	8.007	7.3	8.022	7.75	7.038
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	445	451	493	408	469	421	446	491	448	463	507
Service Time	5.837	5.723	5.01	6.555	5.39	6.287	5.781	5.074	5.794	5.522	4.81
HCM Lane V/C Ratio	0.292	0.446	0.085	0.267	0.175	0.259	0.002	0.505	0.475	0.43	0.083
HCM Control Delay	14.1	17	10.7	14.7	12	14.2	10.8	17.3	17.9	16.2	10.4
HCM Lane LOS	B	C	B	B	B	B	B	C	C	C	B
HCM 95th-tile Q	1.2	2.2	0.3	1.1	0.6	1	0	2.8	2.5	2.1	0.3



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	94	147	201	0	0	489
Future Volume (vph)	94	147	201	0	0	489
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	94	147	201	0	0	489

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	94	147	201	245	245
Volume Left (vph)	94	0	0	0	0
Volume Right (vph)	0	147	0	0	0
Hadj (s)	0.53	-0.67	0.03	0.03	0.03
Departure Headway (s)	6.7	5.5	5.6	5.5	5.5
Degree Utilization, x	0.18	0.22	0.31	0.37	0.37
Capacity (veh/h)	501	607	617	633	635
Control Delay (s)	9.9	8.9	11.1	10.5	10.5
Approach Delay (s)	9.3		11.1	10.5	
Approach LOS	A		B	B	

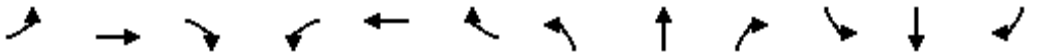
Intersection Summary			
Delay	10.3		
Level of Service	B		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	63	137	196	9	127	0
Future Volume (vph)	63	137	196	9	127	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	63	137	196	9	127	0

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total (vph)	63	137	205	127
Volume Left (vph)	63	0	0	127
Volume Right (vph)	0	0	9	0
Hadj (s)	0.53	0.03	0.01	0.23
Departure Headway (s)	5.6	5.1	4.6	5.1
Degree Utilization, x	0.10	0.19	0.26	0.18
Capacity (veh/h)	630	687	752	662
Control Delay (s)	8.0	8.1	9.2	9.2
Approach Delay (s)	8.0		9.2	9.2
Approach LOS	A		A	A

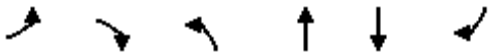
Intersection Summary			
Delay	8.8		
Level of Service	A		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1	169	118	2	62	72	164	44	30	520	28
Future Volume (vph)	90	1	169	118	2	62	72	164	44	30	520	28
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	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.85		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1585		1770	1592		1770	3427		1770	3539	1583
Flt Permitted	0.72	1.00		0.65	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1332	1585		1210	1592		1770	3427		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	1	169	118	2	62	72	164	44	30	520	28
RTOR Reduction (vph)	0	125	0	0	46	0	0	21	0	0	0	17
Lane Group Flow (vph)	90	45	0	118	18	0	72	187	0	30	520	11
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	12.8	12.8		12.8	12.8		4.3	21.5		2.1	19.3	19.3
Effective Green, g (s)	12.8	12.8		12.8	12.8		4.3	21.5		2.1	19.3	19.3
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.09	0.44		0.04	0.39	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.5	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	345	410		313	412		154	1491		75	1382	618
v/s Ratio Prot		0.03			0.01		c0.04	0.05		0.02	c0.15	
v/s Ratio Perm	0.07			c0.10								0.01
v/c Ratio	0.26	0.11		0.38	0.04		0.47	0.13		0.40	0.38	0.02
Uniform Delay, d1	14.5	14.0		15.0	13.7		21.5	8.3		23.0	10.8	9.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2		1.0	0.1		1.6	0.1		1.3	0.4	0.0
Delay (s)	15.1	14.1		16.1	13.8		23.1	8.4		24.3	11.1	9.3
Level of Service	B	B		B	B		C	A		C	B	A
Approach Delay (s)		14.5			15.3			12.2			11.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	49.4	Sum of lost time (s)	13.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

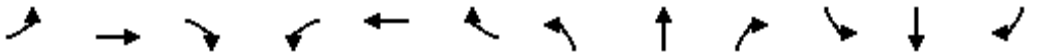
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	4	257	268	663	156
Future Volume (Veh/h)	11	4	257	268	663	156
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	11	4	257	268	663	156
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	1311	332	819			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1311	332	819			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	99	68			
cM capacity (veh/h)	102	664	805			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	11	4	257	134	134	332	332	156
Volume Left	11	0	257	0	0	0	0	0
Volume Right	0	4	0	0	0	0	0	156
cSH	102	664	805	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.01	0.32	0.08	0.08	0.20	0.20	0.09
Queue Length 95th (ft)	9	0	34	0	0	0	0	0
Control Delay (s)	44.4	10.5	11.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B	B					
Approach Delay (s)	35.3		5.7			0.0		
Approach LOS	E							

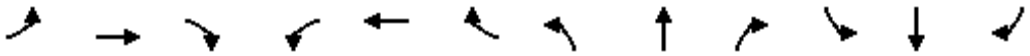
Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	45.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	93	27	370	278	104	279	417	926	208	369	30
Future Volume (vph)	14	93	27	370	278	104	279	417	926	208	369	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Lane Util. Factor	1.00	0.95		0.97	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3420		3433	1787		1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3420		3433	1787		1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	93	27	370	278	104	279	417	926	208	369	30
RTOR Reduction (vph)	0	19	0	0	8	0	0	0	415	0	0	20
Lane Group Flow (vph)	14	101	0	370	374	0	279	417	511	208	369	10
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	2.3	14.2		15.5	26.4		20.8	40.4	40.4	16.4	36.0	36.0
Effective Green, g (s)	2.3	14.2		15.5	26.4		20.8	40.4	40.4	16.4	36.0	36.0
Actuated g/C Ratio	0.02	0.14		0.15	0.26		0.20	0.39	0.39	0.16	0.35	0.35
Clearance Time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Vehicle Extension (s)	2.0	3.0		2.0	5.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	39	471		516	458		357	1388	620	281	1236	553
v/s Ratio Prot	0.01	0.03		c0.11	c0.21		c0.16	0.12		0.12	0.10	
v/s Ratio Perm									c0.32			0.01
v/c Ratio	0.36	0.21		0.72	0.82		0.78	0.30	0.82	0.74	0.30	0.02
Uniform Delay, d1	49.6	39.4		41.7	36.0		38.9	21.6	28.1	41.3	24.3	21.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.2		3.9	12.1		9.8	0.2	9.1	8.8	0.2	0.0
Delay (s)	51.7	39.7		45.6	48.1		48.8	21.7	37.2	50.1	24.5	22.0
Level of Service	D	D		D	D		D	C	D	D	C	C
Approach Delay (s)		40.9			46.9			35.2			33.2	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	103.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

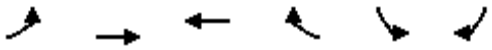
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	118	16	503	96	1151	17	406	322	317	399	10
Future Volume (vph)	46	118	16	503	96	1151	17	406	322	317	399	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.95		0.95	0.95	0.88	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3476		1681	1711	2787	3433	3539	1583	3433	3526	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3476		1681	1711	2787	3433	3539	1583	3433	3526	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	118	16	503	96	1151	17	406	322	317	399	10
RTOR Reduction (vph)	0	8	0	0	0	456	0	0	159	0	1	0
Lane Group Flow (vph)	46	126	0	297	302	695	17	406	163	317	408	0
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	4	4		8	8	1	5	2	8	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	12.7	12.7		31.7	31.7	52.2	7.9	24.6	56.3	20.5	37.2	
Effective Green, g (s)	12.7	12.7		31.7	31.7	52.2	7.9	24.6	56.3	20.5	37.2	
Actuated g/C Ratio	0.11	0.11		0.28	0.28	0.47	0.07	0.22	0.50	0.18	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	201	395		477	486	1304	243	780	799	631	1176	
v/s Ratio Prot	0.03	c0.04		c0.18	0.18	c0.10	0.00	c0.11	0.06	0.09	0.12	
v/s Ratio Perm						0.15			0.04			
v/c Ratio	0.23	0.32		0.62	0.62	0.53	0.07	0.52	0.20	0.50	0.35	
Uniform Delay, d1	44.9	45.4		34.7	34.7	21.0	48.4	38.3	15.2	40.9	28.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	1.3		4.3	4.2	0.5	0.2	1.6	0.4	0.9	0.5	
Delay (s)	46.6	46.7		39.0	38.9	21.5	48.5	39.8	15.6	41.8	28.5	
Level of Service	D	D		D	D	C	D	D	B	D	C	
Approach Delay (s)		46.7			27.5			29.5			34.3	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	111.5	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

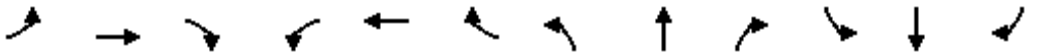
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	750	962	4	0	49
Future Volume (Veh/h)	0	750	962	4	0	49
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	750	962	4	0	49
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	966				1339	483
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	966				1339	483
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	91
cM capacity (veh/h)	709				144	530

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	375	375	641	325	49
Volume Left	0	0	0	0	0
Volume Right	0	0	0	4	49
cSH	1700	1700	1700	1700	530
Volume to Capacity	0.22	0.22	0.38	0.19	0.09
Queue Length 95th (ft)	0	0	0	0	8
Control Delay (s)	0.0	0.0	0.0	0.0	12.5
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.5
Approach LOS					B

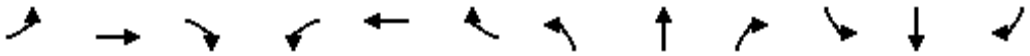
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	382	24	51	926	47	136	4	168	167	4	207
Future Volume (vph)	56	382	24	51	926	47	136	4	168	167	4	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3179		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3179		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	56	382	24	51	926	47	136	4	168	167	4	207
RTOR Reduction (vph)	0	0	15	0	0	30	0	147	0	0	0	168
Lane Group Flow (vph)	56	382	9	51	926	17	0	161	0	167	4	39
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	6.1	27.1	27.1	5.8	26.8	26.8		9.2		13.6	13.6	13.6
Effective Green, g (s)	6.1	27.1	27.1	5.8	26.8	26.8		9.2		13.6	13.6	13.6
Actuated g/C Ratio	0.08	0.37	0.37	0.08	0.37	0.37		0.13		0.19	0.19	0.19
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	148	1319	590	141	1304	583		402		331	348	296
v/s Ratio Prot	c0.03	0.11		0.03	c0.26			c0.05		c0.09	0.00	
v/s Ratio Perm			0.01			0.01						0.02
v/c Ratio	0.38	0.29	0.02	0.36	0.71	0.03		0.40		0.50	0.01	0.13
Uniform Delay, d1	31.5	16.0	14.4	31.7	19.6	14.7		29.2		26.5	24.1	24.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	0.0	0.0	0.6	1.5	0.0		0.2		0.4	0.0	0.1
Delay (s)	32.1	16.1	14.4	32.3	21.2	14.7		29.5		27.0	24.1	24.7
Level of Service	C	B	B	C	C	B		C		C	C	C
Approach Delay (s)		17.9			21.4			29.5			25.7	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	72.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

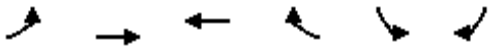
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	3	48	8	1	1	0	91	2	0	0
Future Volume (Veh/h)	1	2	3	48	8	1	1	0	91	2	0	0
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	2	3	48	8	1	1	0	91	2	0	0
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	9			5			106	110	2	198	112	4
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	9			5			106	110	2	198	112	4
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	92	100	100	100
cM capacity (veh/h)	1609			1615			843	755	1080	664	754	1077

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	1	1	4	48	5	4	92	2
Volume Left	1	0	0	48	0	0	1	2
Volume Right	0	0	3	0	0	1	91	0
cSH	1609	1700	1700	1615	1700	1700	1077	664
Volume to Capacity	0.00	0.00	0.00	0.03	0.00	0.00	0.09	0.00
Queue Length 95th (ft)	0	0	0	2	0	0	7	0
Control Delay (s)	7.2	0.0	0.0	7.3	0.0	0.0	8.7	10.4
Lane LOS	A			A			A	B
Approach Delay (s)	1.2			6.1			8.7	10.4
Approach LOS							A	B

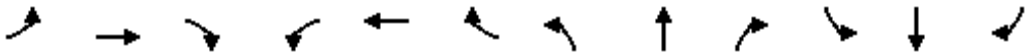
Intersection Summary				
Average Delay	7.5			
Intersection Capacity Utilization	21.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	75	45	541	74	8
Future Volume (Veh/h)	21	75	45	541	74	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	21	75	45	541	74	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						12
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	586				395	293
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	586				395	293
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				87	99
cM capacity (veh/h)	985				570	703

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	21	38	38	30	556	49	33
Volume Left	21	0	0	0	0	49	25
Volume Right	0	0	0	0	541	0	8
cSH	985	1700	1700	1700	1700	570	754
Volume to Capacity	0.02	0.02	0.02	0.02	0.33	0.09	0.04
Queue Length 95th (ft)	2	0	0	0	0	7	3
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	11.9	11.3
Lane LOS	A					B	B
Approach Delay (s)	1.9			0.0		11.7	
Approach LOS						B	

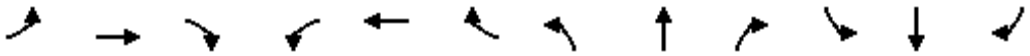
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	1	14	1	11	0	4	15	9	0	0
Future Volume (vph)	0	1	1	14	1	11	0	4	15	9	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1	1	14	1	11	0	4	15	9	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	2	26	19	9
Volume Left (vph)	0	14	0	9
Volume Right (vph)	1	11	15	0
Hadj (s)	-0.27	-0.11	-0.44	0.23
Departure Headway (s)	3.7	3.8	3.5	4.2
Degree Utilization, x	0.00	0.03	0.02	0.01
Capacity (veh/h)	954	924	1009	845
Control Delay (s)	6.7	7.0	6.6	7.3
Approach Delay (s)	6.7	7.0	6.6	7.3
Approach LOS	A	A	A	A

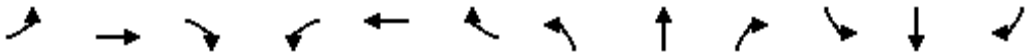
Intersection Summary				
Delay	6.9			
Level of Service	A			
Intersection Capacity Utilization	22.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	24	71	412	52	412	75	1236	103	70	691	31
Future Volume (vph)	26	24	71	412	52	412	75	1236	103	70	691	31
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	5.0		4.0	5.0	
Lane Util. Factor		1.00	1.00	0.97	0.95	0.95	1.00	0.91		1.00	0.95	
Frt		1.00	0.85	1.00	0.88	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1816	1583	3433	1562	1504	1770	5027		1770	3516	
Flt Permitted		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1816	1583	3433	1562	1504	1770	5027		1770	3516	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	26	24	71	412	52	412	75	1236	103	70	691	31
RTOR Reduction (vph)	0	0	66	0	140	182	0	8	0	0	2	0
Lane Group Flow (vph)	0	50	5	412	97	45	75	1331	0	70	720	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		6.9	6.9	19.8	19.8	19.8	8.6	48.0		8.3	47.7	
Effective Green, g (s)		6.9	6.9	19.8	19.8	19.8	8.6	48.0		8.3	47.7	
Actuated g/C Ratio		0.07	0.07	0.20	0.20	0.20	0.09	0.48		0.08	0.48	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		125	109	679	309	297	152	2412		146	1677	
v/s Ratio Prot		c0.03		c0.12	0.06		c0.04	c0.26		0.04	0.20	
v/s Ratio Perm			0.00			0.03						
v/c Ratio		0.40	0.04	0.61	0.31	0.15	0.49	0.55		0.48	0.43	
Uniform Delay, d1		44.6	43.5	36.6	34.3	33.2	43.6	18.4		43.8	17.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.1	0.2	1.5	0.6	0.2	0.9	0.9		0.9	0.2	
Delay (s)		46.7	43.6	38.1	34.9	33.4	44.5	19.3		44.7	17.4	
Level of Service		D	D	D	C	C	D	B		D	B	
Approach Delay (s)		44.9			36.0			20.6			19.8	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

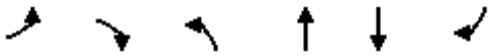
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	1	16	0	117	4	1333	19	113	1076	7
Future Volume (vph)	1	1	1	16	0	117	4	1333	19	113	1076	7
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	5.0		4.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.85		1.00	1.00		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1750		1770	1583		1770	3532		1770	3536	
Flt Permitted		0.86		0.76	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1532		1408	1583		1770	3532		1770	3536	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	1	1	16	0	117	4	1333	19	113	1076	7
RTOR Reduction (vph)	0	1	0	0	109	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	2	0	16	8	0	4	1351	0	113	1083	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4								
Actuated Green, G (s)		6.8		6.8	6.8		1.1	69.5		10.7	79.1	
Effective Green, g (s)		6.8		6.8	6.8		1.1	69.5		10.7	79.1	
Actuated g/C Ratio		0.07		0.07	0.07		0.01	0.70		0.11	0.79	
Clearance Time (s)		4.0		4.0	4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		104		95	107		19	2454		189	2796	
v/s Ratio Prot					0.01		0.00	c0.38		c0.06	0.31	
v/s Ratio Perm		0.00		c0.01								
v/c Ratio		0.02		0.17	0.07		0.21	0.55		0.60	0.39	
Uniform Delay, d1		43.5		43.9	43.7		49.0	7.5		42.6	3.1	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.8	0.3		2.0	0.9		3.4	0.4	
Delay (s)		43.6		44.8	43.9		51.0	8.4		46.0	3.6	
Level of Service		D		D	D		D	A		D	A	
Approach Delay (s)		43.6			44.0			8.6			7.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	371	66	51	1004	815	224
Future Volume (vph)	371	66	51	1004	815	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	371	66	51	1004	815	224
RTOR Reduction (vph)	0	50	0	0	0	99
Lane Group Flow (vph)	371	17	51	1004	815	125
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4				2
Actuated Green, G (s)	25.0	25.0	6.4	66.0	55.6	55.6
Effective Green, g (s)	25.0	25.0	6.4	66.0	55.6	55.6
Actuated g/C Ratio	0.25	0.25	0.06	0.66	0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	442	395	113	2335	1967	880
v/s Ratio Prot	c0.21		0.03	c0.28	0.23	
v/s Ratio Perm		0.01				0.08
v/c Ratio	0.84	0.04	0.45	0.43	0.41	0.14
Uniform Delay, d1	35.6	28.4	45.1	8.1	12.8	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.1	0.0	1.0	0.6	0.6	0.3
Delay (s)	48.7	28.5	46.2	8.7	13.5	11.0
Level of Service	D	C	D	A	B	B
Approach Delay (s)	45.6			10.5	12.9	
Approach LOS	D			B	B	

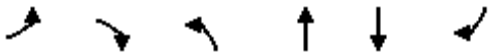
Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	171	651	112	267	837	139
Future Volume (vph)	171	651	112	267	837	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	171	651	112	267	837	139
RTOR Reduction (vph)	0	351	0	0	0	96
Lane Group Flow (vph)	171	300	112	267	837	43
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	46.1	46.1	10.0	60.1	30.9	30.9
Effective Green, g (s)	46.1	46.1	10.0	60.1	30.9	30.9
Actuated g/C Ratio	0.46	0.46	0.10	0.60	0.31	0.31
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	4.0	4.0	2.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1631	729	177	2126	1060	489
v/s Ratio Prot	0.05		c0.06	0.08	c0.24	
v/s Ratio Perm		c0.19				0.03
v/c Ratio	0.10	0.41	0.63	0.13	0.79	0.09
Uniform Delay, d1	15.3	17.9	43.2	8.6	31.6	24.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.7	5.3	0.0	4.0	0.1
Delay (s)	15.4	19.6	48.6	8.6	35.6	24.6
Level of Service	B	B	D	A	D	C
Approach Delay (s)	18.8			20.4	34.0	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

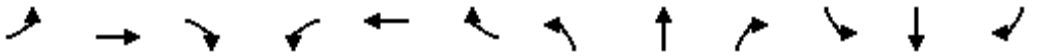
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	291	218	16	8	143	413
Future Volume (vph)	291	218	16	8	143	413
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	291	218	16	8	143	413

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total (vph)	291	218	24	556
Volume Left (vph)	291	0	16	0
Volume Right (vph)	0	218	0	413
Hadj (s)	0.53	-0.67	0.17	-0.41
Departure Headway (s)	6.5	5.3	6.2	4.8
Degree Utilization, x	0.53	0.32	0.04	0.75
Capacity (veh/h)	533	649	528	728
Control Delay (s)	15.4	9.6	9.5	20.5
Approach Delay (s)	12.9		9.5	20.5
Approach LOS	B		A	C

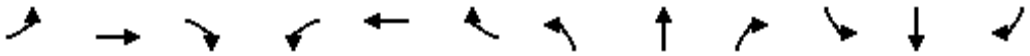
Intersection Summary			
Delay	16.7		
Level of Service	C		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	390	3	0	0	9	3	0	0	0	1	0	12
Future Volume (vph)	390	3	0	0	9	3	0	0	0	1	0	12
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	390	3	0	0	9	3	0	0	0	1	0	12

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	393	9	3	0	1	12
Volume Left (vph)	390	0	0	0	1	0
Volume Right (vph)	0	0	3	0	0	12
Hadj (s)	0.23	0.03	-0.67	0.00	0.53	-0.67
Departure Headway (s)	4.8	4.9	4.1	5.5	6.0	4.8
Degree Utilization, x	0.52	0.01	0.00	0.00	0.00	0.02
Capacity (veh/h)	748	721	843	609	552	684
Control Delay (s)	12.9	6.7	6.0	8.5	7.8	6.7
Approach Delay (s)	12.9	6.5		0.0	6.8	
Approach LOS	B	A		A	A	

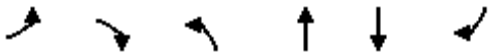
Intersection Summary				
Delay	12.5			
Level of Service	B			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	1	12	2	1	12	40	766	1	17	666	149
Future Volume (vph)	255	1	12	2	1	12	40	766	1	17	666	149
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	
Lane Util. Factor	1.00	0.95	0.95		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87	0.85		0.89		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1542	1504		1651		1770	3539		1770	3442	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1542	1504		1651		1770	3539		1770	3442	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	1	12	2	1	12	40	766	1	17	666	149
RTOR Reduction (vph)	0	4	4	0	12	0	0	0	0	0	13	0
Lane Group Flow (vph)	255	3	2	0	3	0	40	767	0	17	802	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.4	17.4	17.4		0.8		3.7	29.0		1.9	27.2	
Effective Green, g (s)	17.4	17.4	17.4		0.8		3.7	29.0		1.9	27.2	
Actuated g/C Ratio	0.27	0.27	0.27		0.01		0.06	0.45		0.03	0.42	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	473	412	401		20		100	1576		51	1438	
v/s Ratio Prot	c0.14	0.00			c0.00		c0.02	0.22		0.01	c0.23	
v/s Ratio Perm			0.00									
v/c Ratio	0.54	0.01	0.00		0.16		0.40	0.49		0.33	0.56	
Uniform Delay, d1	20.4	17.5	17.5		31.8		29.6	12.8		31.0	14.4	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.0	0.0		1.3		1.0	0.3		1.4	0.6	
Delay (s)	21.0	17.5	17.5		33.2		30.6	13.1		32.4	15.0	
Level of Service	C	B	B		C		C	B		C	B	
Approach Delay (s)		20.8			33.2			14.0			15.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	57	49	20	705	635	28
Future Volume (vph)	57	49	20	705	635	28
Ideal Flow (vphpl)	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	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1701		1770	1863	1863	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1701		1770	1863	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	57	49	20	705	635	28
RTOR Reduction (vph)	36	0	0	0	0	10
Lane Group Flow (vph)	70	0	20	705	635	18
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases						2
Actuated Green, G (s)	5.4		0.7	25.6	20.9	20.9
Effective Green, g (s)	5.4		0.7	25.6	20.9	20.9
Actuated g/C Ratio	0.14		0.02	0.66	0.54	0.54
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0		1.8	3.0	3.0	3.0
Lane Grp Cap (vph)	235		31	1222	998	848
v/s Ratio Prot	c0.04		0.01	c0.38	0.34	
v/s Ratio Perm						0.01
v/c Ratio	0.30		0.65	0.58	0.64	0.02
Uniform Delay, d1	15.1		19.0	3.7	6.4	4.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		29.6	0.7	1.3	0.0
Delay (s)	15.4		48.6	4.4	7.7	4.3
Level of Service	B		D	A	A	A
Approach Delay (s)	15.4			5.6	7.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	39.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

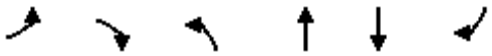
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	152	242	508	363
Demand Flow Rate, veh/h	155	246	518	371
Vehicles Circulating, veh/h	412	480	195	143
Vehicles Exiting, veh/h	102	233	372	583
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	9.8	11.6	7.9
Approach LOS	A	A	B	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	155	246	518	371
Cap Entry Lane, veh/h	748	699	930	979
Entry HV Adj Factor	0.980	0.983	0.980	0.979
Flow Entry, veh/h	152	242	508	363
Cap Entry, veh/h	734	687	912	958
V/C Ratio	0.207	0.352	0.557	0.379
Control Delay, s/veh	7.2	9.8	11.6	7.9
LOS	A	A	B	A
95th %tile Queue, veh	1	2	4	2

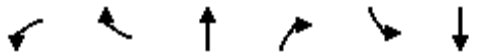
Existing Conditions Intersection Level of Service Reports - PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	332	270	123	399	341	211
Future Volume (vph)	332	270	123	399	341	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	5.5	5.5	5.5
Lane Util. Factor	0.97		1.00	0.95	0.95	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	3280		1770	3539	3539	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	3280		1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	332	270	123	399	341	211
RTOR Reduction (vph)	70	0	0	0	0	154
Lane Group Flow (vph)	532	0	123	399	341	57
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases						6
Actuated Green, G (s)	17.5		10.1	29.2	15.1	15.1
Effective Green, g (s)	17.5		10.1	29.2	15.1	15.1
Actuated g/C Ratio	0.31		0.18	0.52	0.27	0.27
Clearance Time (s)	4.0		4.0	5.5	5.5	5.5
Vehicle Extension (s)	4.0		2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	1021		318	1838	950	425
v/s Ratio Prot	c0.16		c0.07	0.11	c0.10	
v/s Ratio Perm						0.04
v/c Ratio	0.52		0.39	0.22	0.36	0.13
Uniform Delay, d1	15.9		20.3	7.3	16.6	15.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		0.3	0.1	0.3	0.2
Delay (s)	16.5		20.6	7.4	17.0	15.8
Level of Service	B		C	A	B	B
Approach Delay (s)	16.5			10.5	16.5	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	17.5
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	123	8	536	140	21	342
Future Volume (vph)	123	8	536	140	21	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		5.5		4.0	5.5
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	0.99		0.97		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	1765		3429		1770	3539
Flt Permitted	0.96		1.00		0.95	1.00
Satd. Flow (perm)	1765		3429		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	8	536	140	21	342
RTOR Reduction (vph)	2	0	12	0	0	0
Lane Group Flow (vph)	129	0	664	0	21	342
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	10.1		26.6		1.2	31.8
Effective Green, g (s)	10.1		26.6		1.2	31.8
Actuated g/C Ratio	0.20		0.52		0.02	0.62
Clearance Time (s)	4.0		5.5		4.0	5.5
Vehicle Extension (s)	3.0		4.0		3.0	4.0
Lane Grp Cap (vph)	346		1774		41	2189
v/s Ratio Prot	c0.07		c0.19		c0.01	0.10
v/s Ratio Perm						
v/c Ratio	0.37		0.37		0.51	0.16
Uniform Delay, d1	17.9		7.4		24.8	4.1
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.7		0.2		10.4	0.0
Delay (s)	18.6		7.6		35.2	4.2
Level of Service	B		A		D	A
Approach Delay (s)	18.6		7.6			6.0
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

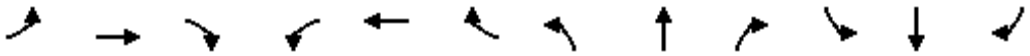
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	100	804	0	0	403
Future Volume (vph)	102	100	804	0	0	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7	5.1			5.1
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	102	100	804	0	0	403
RTOR Reduction (vph)	0	75	0	0	0	0
Lane Group Flow (vph)	102	25	804	0	0	403
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	6.5	6.5	13.6			13.6
Effective Green, g (s)	6.5	6.5	13.6			13.6
Actuated g/C Ratio	0.22	0.22	0.45			0.45
Clearance Time (s)	4.7	4.7	5.1			5.1
Vehicle Extension (s)	2.0	2.0	3.0			3.0
Lane Grp Cap (vph)	384	344	1609			1609
v/s Ratio Prot	c0.06		c0.23			0.11
v/s Ratio Perm		0.02				
v/c Ratio	0.27	0.07	0.50			0.25
Uniform Delay, d1	9.7	9.3	5.7			5.0
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.1	0.0	0.2			0.1
Delay (s)	9.9	9.3	6.0			5.1
Level of Service	A	A	A			A
Approach Delay (s)	9.6		6.0			5.1
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	29.9	Sum of lost time (s)	9.8
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	55	21	200	88	328	74	362	46	181	227	75
Future Volume (vph)	97	55	21	200	88	328	74	362	46	181	227	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.98			1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected		0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3155			1800	1583	1770	3479		1770	3407	
Flt Permitted		0.68			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2217			1273	1583	1770	3479		1770	3407	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	97	55	21	200	88	328	74	362	46	181	227	75
RTOR Reduction (vph)	0	11	0	0	0	229	0	11	0	0	32	0
Lane Group Flow (vph)	0	162	0	0	288	99	74	397	0	181	270	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		16.0			15.6	15.6	3.5	12.1		9.0	17.6	
Effective Green, g (s)		16.0			15.6	15.6	3.5	12.1		9.0	17.6	
Actuated g/C Ratio		0.31			0.30	0.30	0.07	0.23		0.17	0.34	
Clearance Time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Vehicle Extension (s)		0.2			0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		687			384	478	120	815		308	1162	
v/s Ratio Prot							0.04	c0.11		c0.10	0.08	
v/s Ratio Perm		0.07			c0.23	0.06						
v/c Ratio		0.24			0.75	0.21	0.62	0.49		0.59	0.23	
Uniform Delay, d1		13.2			16.2	13.4	23.4	17.1		19.6	12.2	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			7.1	0.1	6.5	0.2		1.8	0.0	
Delay (s)		13.3			23.4	13.5	29.9	17.2		21.4	12.2	
Level of Service		B			C	B	C	B		C	B	
Approach Delay (s)		13.3			18.1			19.2			15.7	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	51.6	Sum of lost time (s)	14.9
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	42	2	37	0	86	0	102	0	56	300	148
Peak Hour Factor	0.92	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.92	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	2	37	0	86	0	102	0	56	300	148
Number of Lanes	0	1	1	0	0	1	1	1	0	0	2	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	2	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.6	12.2	12.7
HCM LOS	B	B	B

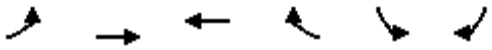
Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	36%	0%	0%	100%	0%	100%	0%	0%	81%	0%	0%
Vol Thru, %	64%	100%	0%	0%	5%	0%	100%	0%	19%	100%	0%
Vol Right, %	0%	0%	100%	0%	95%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	200	148	42	39	86	0	102	283	108	100
LT Vol	56	0	0	42	0	86	0	0	229	0	0
Through Vol	100	200	0	0	2	0	0	0	54	108	0
RT Vol	0	0	148	0	37	0	0	102	0	0	100
Lane Flow Rate	156	200	148	42	39	86	0	102	283	108	100
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.304	0.379	0.252	0.1	0.08	0.197	0	0.199	0.566	0.204	0.169
Departure Headway (Hd)	7.124	6.942	6.231	8.594	7.418	8.242	7.739	7.034	7.321	6.91	6.2
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	522	580	419	485	438	0	513	495	523	582
Service Time	4.824	4.642	3.931	6.304	5.128	5.945	5.442	4.738	5.021	4.61	3.9
HCM Lane V/C Ratio	0.308	0.383	0.255	0.1	0.08	0.196	0	0.199	0.572	0.207	0.172
HCM Control Delay	12.9	13.8	11	12.3	10.8	13	10.4	11.5	19.1	11.4	10.2
HCM Lane LOS	B	B	B	B	B	B	N	B	C	B	B
HCM 95th-tile Q	1.3	1.8	1	0.3	0.3	0.7	0	0.7	3.5	0.8	0.6



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Traffic Volume (vph)	196	264	239	0	0	263
Future Volume (vph)	196	264	239	0	0	263
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	196	264	239	0	0	263

Direction, Lane #	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	196	264	239	132	132
Volume Left (vph)	196	0	0	0	0
Volume Right (vph)	0	264	0	0	0
Hadj (s)	0.53	-0.67	0.03	0.03	0.03
Departure Headway (s)	6.5	5.2	5.9	6.2	6.2
Degree Utilization, x	0.35	0.38	0.39	0.22	0.22
Capacity (veh/h)	534	657	584	554	556
Control Delay (s)	11.7	10.3	12.7	9.7	9.7
Approach Delay (s)	10.9		12.7	9.7	
Approach LOS	B		B	A	

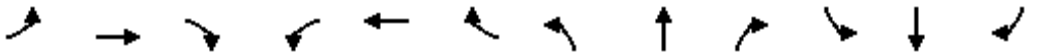
Intersection Summary			
Delay	11.0		
Level of Service	B		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	70	141	179	13	197	4
Future Volume (vph)	70	141	179	13	197	4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	70	141	179	13	197	4

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total (vph)	70	141	192	201
Volume Left (vph)	70	0	0	197
Volume Right (vph)	0	0	13	4
Hadj (s)	0.53	0.03	-0.01	0.22
Departure Headway (s)	5.8	5.3	4.8	5.1
Degree Utilization, x	0.11	0.21	0.26	0.28
Capacity (veh/h)	591	652	708	665
Control Delay (s)	8.3	8.5	9.5	10.1
Approach Delay (s)	8.4		9.5	10.1
Approach LOS	A		A	B

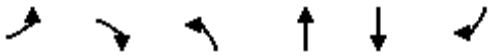
Intersection Summary			
Delay	9.3		
Level of Service	A		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	3	98	33	5	14	147	530	93	27	223	49
Future Volume (vph)	39	3	98	33	5	14	147	530	93	27	223	49
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	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.89		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1592		1770	1657		1770	3460		1770	3539	1583
Flt Permitted	0.75	1.00		0.69	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1388	1592		1288	1657		1770	3460		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	39	3	98	33	5	14	147	530	93	27	223	49
RTOR Reduction (vph)	0	84	0	0	12	0	0	10	0	0	0	29
Lane Group Flow (vph)	39	17	0	33	7	0	147	613	0	27	223	20
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	6.3	6.3		6.3	6.3		7.1	23.9		1.0	17.8	17.8
Effective Green, g (s)	6.3	6.3		6.3	6.3		7.1	23.9		1.0	17.8	17.8
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.16	0.54		0.02	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.5	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	197	226		183	236		284	1870		40	1425	637
v/s Ratio Prot		0.01			0.00		c0.08	c0.18		0.02	0.06	
v/s Ratio Perm	c0.03			0.03								0.01
v/c Ratio	0.20	0.08		0.18	0.03		0.52	0.33		0.68	0.16	0.03
Uniform Delay, d1	16.7	16.4		16.7	16.3		17.0	5.7		21.4	8.4	8.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2		0.6	0.1		1.2	0.2		29.9	0.1	0.0
Delay (s)	17.4	16.6		17.3	16.4		18.2	5.9		51.4	8.5	8.0
Level of Service	B	B		B	B		B	A		D	A	A
Approach Delay (s)		16.8			17.0			8.2			12.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	44.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	159	298	11	602	336	18
Future Volume (Veh/h)	159	298	11	602	336	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	159	298	11	602	336	18
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	659	168	354			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659	168	354			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	60	65	99			
cM capacity (veh/h)	393	847	1201			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	159	298	11	301	301	168	168	18
Volume Left	159	0	11	0	0	0	0	0
Volume Right	0	298	0	0	0	0	0	18
cSH	393	847	1201	1700	1700	1700	1700	1700
Volume to Capacity	0.40	0.35	0.01	0.18	0.18	0.10	0.10	0.01
Queue Length 95th (ft)	48	40	1	0	0	0	0	0
Control Delay (s)	20.2	11.5	8.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B	A					
Approach Delay (s)	14.6		0.1			0.0		
Approach LOS	B							

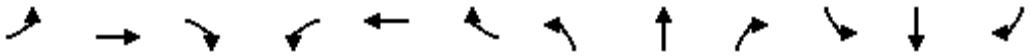
Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	454	79	433	47	39	73	535	1006	333	289	23
Future Volume (veh/h)	25	454	79	433	47	39	73	535	1006	333	289	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	25	454	79	433	47	39	73	535	0	333	289	0
Adj No. of Lanes	1	2	0	2	1	0	1	2	1	1	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	38	615	106	510	317	263	490	785	351	369	481	215
Arrive On Green	0.02	0.20	0.20	0.15	0.34	0.34	0.28	0.22	0.00	0.21	0.14	0.00
Sat Flow, veh/h	1774	3018	522	3442	943	782	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	25	265	268	433	0	86	73	535	0	333	289	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1771	1721	0	1725	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	1.2	11.6	11.7	10.1	0.0	2.9	2.6	11.4	0.0	15.1	6.3	0.0
Cycle Q Clear(g_c), s	1.2	11.6	11.7	10.1	0.0	2.9	2.6	11.4	0.0	15.1	6.3	0.0
Prop In Lane	1.00		0.29	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	360	361	510	0	581	490	785	351	369	481	215
V/C Ratio(X)	0.67	0.74	0.74	0.85	0.00	0.15	0.15	0.68	0.00	0.90	0.60	0.00
Avail Cap(c_a), veh/h	247	558	558	542	0	581	490	2231	998	398	2501	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.1	30.8	30.8	34.2	0.0	19.1	22.5	29.4	0.0	31.8	33.5	0.0
Incr Delay (d2), s/veh	7.3	2.9	3.0	10.8	0.0	0.2	0.1	1.5	0.0	21.1	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.0	6.0	5.6	0.0	1.4	1.3	5.7	0.0	9.6	3.2	0.0
LnGrp Delay(d),s/veh	47.4	33.7	33.9	45.1	0.0	19.4	22.6	30.9	0.0	53.0	35.3	0.0
LnGrp LOS	D	C	C	D		B	C	C		D	D	
Approach Vol, veh/h		558			519			608			622	
Approach Delay, s/veh		34.4			40.8			29.9			44.8	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	23.3	16.2	22.3	27.8	16.2	5.2	33.3
Change Period (Y+Rc), s	3.5	5.0	4.0	* 5.5	5.0	* 5	3.5	5.5
Max Green Setting (Gmax), s	18.5	52.0	13.0	* 26	12.2	* 58	11.5	26.5
Max Q Clear Time (g_c+I1), s	17.1	13.4	12.1	13.7	4.6	8.3	3.2	4.9
Green Ext Time (p_c), s	0.1	4.9	0.1	3.1	2.7	2.9	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	37.4
HCM 2010 LOS	D

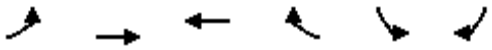
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	63	9	270	127	686	56	918	353	378	405	36
Future Volume (vph)	37	63	9	270	127	686	56	918	353	378	405	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.95		0.95	0.95	0.88	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3473		1681	1737	2787	3433	3539	1583	3433	3496	
Flt Permitted	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3473		1681	1737	2787	3433	3539	1583	3433	3496	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	37	63	9	270	127	686	56	918	353	378	405	36
RTOR Reduction (vph)	0	8	0	0	0	324	0	0	159	0	4	0
Lane Group Flow (vph)	37	64	0	194	203	362	56	918	194	378	437	0
Turn Type	Split	NA		Split	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	
Protected Phases	4	4		8	8	1	5	2	8	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	8.5	8.5		25.2	25.2	42.2	6.5	33.0	58.2	17.0	43.5	
Effective Green, g (s)	8.5	8.5		25.2	25.2	42.2	6.5	33.0	58.2	17.0	43.5	
Actuated g/C Ratio	0.08	0.08		0.24	0.24	0.40	0.06	0.31	0.55	0.16	0.41	
Clearance Time (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	6.0	6.0		6.0	6.0	4.0	4.0	6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	142	279		400	414	1112	211	1104	871	552	1438	
v/s Ratio Prot	c0.02	0.02		0.12	c0.12	0.05	0.02	c0.26	0.05	c0.11	0.12	
v/s Ratio Perm						0.08			0.07			
v/c Ratio	0.26	0.23		0.48	0.49	0.33	0.27	0.83	0.22	0.68	0.30	
Uniform Delay, d1	45.6	45.5		34.7	34.7	21.9	47.3	33.8	12.2	41.8	20.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.7	1.2		2.6	2.6	0.2	0.9	6.4	0.4	3.8	0.3	
Delay (s)	48.4	46.7		37.3	37.3	22.2	48.2	40.1	12.5	45.6	21.3	
Level of Service	D	D		D	D	C	D	D	B	D	C	
Approach Delay (s)		47.3			27.7			33.1			32.5	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	105.7	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

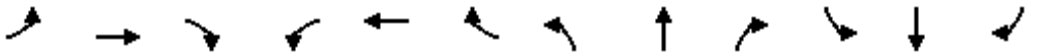
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	1453	682	12	0	51
Future Volume (Veh/h)	4	1453	682	12	0	51
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	1453	682	12	0	51
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	694				1422	347
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	694				1422	347
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	92
cM capacity (veh/h)	897				126	649

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	488	969	455	239	51
Volume Left	4	0	0	0	0
Volume Right	0	0	0	12	51
cSH	897	1700	1700	1700	649
Volume to Capacity	0.00	0.57	0.27	0.14	0.08
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.1	0.0	0.0	0.0	11.0
Lane LOS	A				B
Approach Delay (s)	0.0		0.0		11.0
Approach LOS					B

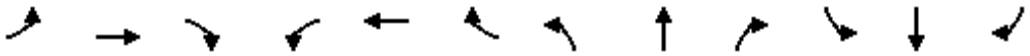
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	1333	132	98	492	130	70	9	63	57	10	89
Future Volume (vph)	181	1333	132	98	492	130	70	9	63	57	10	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3224		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3224		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	181	1333	132	98	492	130	70	9	63	57	10	89
RTOR Reduction (vph)	0	0	25	0	0	51	0	59	0	0	0	83
Lane Group Flow (vph)	181	1333	107	98	492	79	0	83	0	57	10	6
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	18.3	87.8	87.8	11.7	81.2	81.2		7.8		8.7	8.7	8.7
Effective Green, g (s)	18.3	87.8	87.8	11.7	81.2	81.2		7.8		8.7	8.7	8.7
Actuated g/C Ratio	0.14	0.66	0.66	0.09	0.61	0.61		0.06		0.07	0.07	0.07
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	243	2336	1045	155	2160	966		189		115	121	103
v/s Ratio Prot	c0.10	c0.38		0.06	0.14			c0.03		c0.03	0.01	
v/s Ratio Perm			0.07			0.05						0.00
v/c Ratio	0.74	0.57	0.10	0.63	0.23	0.08		0.44		0.50	0.08	0.06
Uniform Delay, d1	55.1	12.3	8.2	58.6	11.7	10.6		60.5		60.0	58.4	58.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	10.3	1.0	0.2	6.0	0.0	0.0		0.6		1.2	0.1	0.1
Delay (s)	65.4	13.3	8.4	64.6	11.7	10.6		61.1		61.3	58.5	58.4
Level of Service	E	B	A	E	B	B		E		E	E	E
Approach Delay (s)		18.7			18.7			61.1			59.4	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

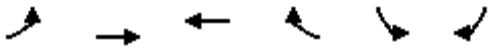
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	75	0	0	0	0	53	0	0	0
Future Volume (Veh/h)	0	0	0	75	0	0	0	0	53	0	0	0
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	75	0	0	0	0	53	0	0	0
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	0			0			150	150	0	203	150	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			150	150	0	203	150	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			100	100	95	100	100	100
cM capacity (veh/h)	1622			1622			775	706	1084	676	706	1084

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	0	0	75	0	0	53	0
Volume Left	0	0	0	75	0	0	0	0
Volume Right	0	0	0	0	0	0	53	0
cSH	1700	1700	1700	1622	1700	1700	1084	1700
Volume to Capacity	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00
Queue Length 95th (ft)	0	0	0	4	0	0	4	0
Control Delay (s)	0.0	0.0	0.0	7.3	0.0	0.0	8.5	0.0
Lane LOS				A			A	A
Approach Delay (s)	0.0			7.3			8.5	0.0
Approach LOS							A	A

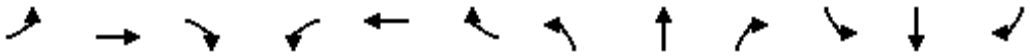
Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	14.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	41	40	97	511	42
Future Volume (Veh/h)	13	41	40	97	511	42
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	13	41	40	97	511	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						12
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	137				135	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				135	68
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				39	96
cM capacity (veh/h)	1445				837	981

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	13	20	20	27	110	341	212
Volume Left	13	0	0	0	0	341	170
Volume Right	0	0	0	0	97	0	42
cSH	1445	1700	1700	1700	1700	837	1044
Volume to Capacity	0.01	0.01	0.01	0.02	0.06	0.41	0.20
Queue Length 95th (ft)	1	0	0	0	0	50	19
Control Delay (s)	7.5	0.0	0.0	0.0	0.0	12.2	10.1
Lane LOS	A					B	B
Approach Delay (s)	1.8			0.0		11.4	
Approach LOS						B	

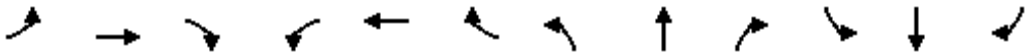
Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	0	19	2	15	0	10	43	9	6	0
Future Volume (vph)	0	1	0	19	2	15	0	10	43	9	6	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	1	0	19	2	15	0	10	43	9	6	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1	36	53	15
Volume Left (vph)	0	19	0	9
Volume Right (vph)	0	15	43	0
Hadj (s)	0.03	-0.11	-0.45	0.15
Departure Headway (s)	4.1	3.9	3.5	4.2
Degree Utilization, x	0.00	0.04	0.05	0.02
Capacity (veh/h)	856	898	1003	848
Control Delay (s)	7.1	7.1	6.7	7.2
Approach Delay (s)	7.1	7.1	6.7	7.2
Approach LOS	A	A	A	A

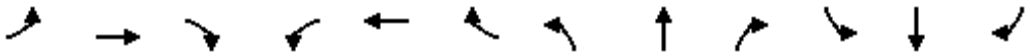
Intersection Summary				
Delay	6.9			
Level of Service	A			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	47	202	580	48	215	72	887	68	80	665	47
Future Volume (vph)	55	47	202	580	48	215	72	887	68	80	665	47
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	5.0		4.0	5.0	
Lane Util. Factor		1.00	1.00	0.97	0.95	0.95	1.00	0.91		1.00	0.95	
Frt		1.00	0.85	1.00	0.90	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1814	1583	3433	1598	1504	1770	5031		1770	3504	
Flt Permitted		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1814	1583	3433	1598	1504	1770	5031		1770	3504	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	55	47	202	580	48	215	72	887	68	80	665	47
RTOR Reduction (vph)	0	0	182	0	67	97	0	8	0	0	5	0
Lane Group Flow (vph)	0	102	20	580	69	30	72	947	0	80	707	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		9.2	9.2	22.8	22.8	22.8	8.1	37.6		8.4	37.9	
Effective Green, g (s)		9.2	9.2	22.8	22.8	22.8	8.1	37.6		8.4	37.9	
Actuated g/C Ratio		0.10	0.10	0.24	0.24	0.24	0.09	0.40		0.09	0.40	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		175	153	823	383	360	150	1991		156	1397	
v/s Ratio Prot		c0.06		c0.17	0.04		0.04	0.19		c0.05	c0.20	
v/s Ratio Perm			0.01			0.02						
v/c Ratio		0.58	0.13	0.70	0.18	0.08	0.48	0.48		0.51	0.51	
Uniform Delay, d1		41.1	39.2	33.0	28.7	28.0	41.4	21.4		41.3	21.5	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		4.9	0.4	2.8	0.2	0.1	0.9	0.8		1.2	0.4	
Delay (s)		45.9	39.6	35.8	28.9	28.1	42.3	22.2		42.5	21.9	
Level of Service		D	D	D	C	C	D	C		D	C	
Approach Delay (s)		41.7			33.5			23.6			24.0	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0		
Intersection Capacity Utilization	59.8%	ICU Level of Service	B		
Analysis Period (min)	15				

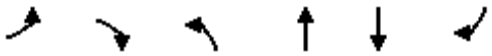
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	4	12	36	5	234	7	959	38	210	1057	18
Future Volume (vph)	19	4	12	36	5	234	7	959	38	210	1057	18
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	5.0		4.0	5.0	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.85		1.00	0.99		1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1730		1770	1589		1770	3519		1770	3530	
Flt Permitted		0.35		0.88	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		616		1640	1589		1770	3519		1770	3530	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	19	4	12	36	5	234	7	959	38	210	1057	18
RTOR Reduction (vph)	0	11	0	0	212	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	24	0	36	27	0	7	995	0	210	1074	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4								
Actuated Green, G (s)		8.9		8.9	8.9		1.2	57.5		15.6	71.9	
Effective Green, g (s)		8.9		8.9	8.9		1.2	57.5		15.6	71.9	
Actuated g/C Ratio		0.09		0.09	0.09		0.01	0.61		0.16	0.76	
Clearance Time (s)		4.0		4.0	4.0		4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0		3.0	3.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		57		153	148		22	2129		290	2671	
v/s Ratio Prot					0.02		0.00	c0.28		c0.12	0.30	
v/s Ratio Perm		c0.04		0.02								
v/c Ratio		0.42		0.24	0.18		0.32	0.47		0.72	0.40	
Uniform Delay, d1		40.6		39.9	39.7		46.5	10.3		37.7	4.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.0		0.8	0.6		3.0	0.7		7.4	0.5	
Delay (s)		45.6		40.7	40.3		49.5	11.1		45.0	4.5	
Level of Service		D		D	D		D	B		D	A	
Approach Delay (s)		45.6			40.3			11.3			11.1	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	51	31	497	971	254
Future Volume (vph)	270	51	31	497	971	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	270	51	31	497	971	254
RTOR Reduction (vph)	0	40	0	0	0	96
Lane Group Flow (vph)	270	11	31	497	971	158
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.6	19.6	4.3	66.4	58.1	58.1
Effective Green, g (s)	19.6	19.6	4.3	66.4	58.1	58.1
Actuated g/C Ratio	0.21	0.21	0.05	0.70	0.61	0.61
Clearance Time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	365	326	80	2473	2164	968
v/s Ratio Prot	c0.15		c0.02	0.14	c0.27	
v/s Ratio Perm		0.01				0.10
v/c Ratio	0.74	0.03	0.39	0.20	0.45	0.16
Uniform Delay, d1	35.3	30.1	44.1	5.0	9.9	8.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.7	0.0	1.1	0.2	0.7	0.4
Delay (s)	43.0	30.2	45.2	5.2	10.6	8.3
Level of Service	D	C	D	A	B	A
Approach Delay (s)	40.9			7.5	10.1	
Approach LOS	D			A	B	

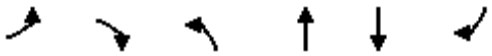
Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	286	628	138	185	357	118
Future Volume (vph)	286	628	138	185	357	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	286	628	138	185	357	118
RTOR Reduction (vph)	0	264	0	0	0	99
Lane Group Flow (vph)	286	364	138	185	357	19
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	55.1	55.1	11.7	70.8	15.2	15.2
Effective Green, g (s)	55.1	55.1	11.7	70.8	15.2	15.2
Actuated g/C Ratio	0.58	0.58	0.12	0.75	0.16	0.16
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	4.0	4.0	2.0	4.0	3.0	3.0
Lane Grp Cap (vph)	2052	918	217	2637	549	253
v/s Ratio Prot	0.08		c0.08	0.05	c0.10	
v/s Ratio Perm		c0.23				0.01
v/c Ratio	0.14	0.40	0.64	0.07	0.65	0.07
Uniform Delay, d1	9.1	10.9	39.6	3.3	37.4	33.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.3	4.4	0.0	2.8	0.1
Delay (s)	9.3	12.2	44.1	3.3	40.2	34.0
Level of Service	A	B	D	A	D	C
Approach Delay (s)	11.3			20.7	38.6	
Approach LOS	B			C	D	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

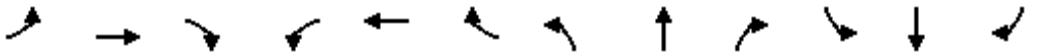
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	205	86	16	6	68	452
Future Volume (vph)	205	86	16	6	68	452
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	205	86	16	6	68	452

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total (vph)	205	86	22	520
Volume Left (vph)	205	0	16	0
Volume Right (vph)	0	86	0	452
Hadj (s)	0.53	-0.67	0.18	-0.49
Departure Headway (s)	6.3	5.1	5.5	4.3
Degree Utilization, x	0.36	0.12	0.03	0.62
Capacity (veh/h)	543	664	600	816
Control Delay (s)	11.5	7.6	8.7	13.8
Approach Delay (s)	10.3		8.7	13.8
Approach LOS	B		A	B

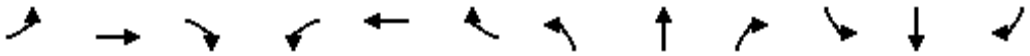
Intersection Summary			
Delay	12.5		
Level of Service	B		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	154	1	0	0	12	2	0	0	0	2	0	7
Future Volume (vph)	154	1	0	0	12	2	0	0	0	2	0	7
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	154	1	0	0	12	2	0	0	0	2	0	7

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	155	12	2	0	2	7
Volume Left (vph)	154	0	0	0	2	0
Volume Right (vph)	0	0	2	0	0	7
Hadj (s)	0.23	0.03	-0.67	0.00	0.53	-0.67
Departure Headway (s)	4.8	4.7	4.0	4.9	5.4	4.2
Degree Utilization, x	0.21	0.02	0.00	0.00	0.00	0.01
Capacity (veh/h)	749	764	899	718	630	806
Control Delay (s)	9.0	6.5	5.8	7.9	7.3	6.1
Approach Delay (s)	9.0	6.4		0.0	6.3	
Approach LOS	A	A		A	A	

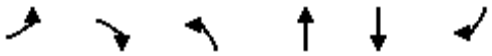
Intersection Summary				
Delay	8.7			
Level of Service	A			
Intersection Capacity Utilization	25.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	1	3	3	0	8	3	317	0	6	558	274
Future Volume (vph)	180	1	3	3	0	8	3	317	0	6	558	274
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	
Lane Util. Factor	1.00	0.95	0.95		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.93	0.85		0.90		1.00	1.00		1.00	0.95	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1637	1504		1657		1770	3539		1770	3364	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1637	1504		1657		1770	3539		1770	3364	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	1	3	3	0	8	3	317	0	6	558	274
RTOR Reduction (vph)	0	1	2	0	11	0	0	0	0	0	36	0
Lane Group Flow (vph)	180	1	0	0	0	0	3	317	0	6	796	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	11.4	11.4	11.4		0.5		0.6	25.1		0.7	25.2	
Effective Green, g (s)	11.4	11.4	11.4		0.5		0.6	25.1		0.7	25.2	
Actuated g/C Ratio	0.21	0.21	0.21		0.01		0.01	0.47		0.01	0.47	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	375	347	319		15		19	1654		23	1578	
v/s Ratio Prot	c0.10	0.00			c0.00		0.00	0.09		c0.00	c0.24	
v/s Ratio Perm			0.00									
v/c Ratio	0.48	0.00	0.00		0.01		0.16	0.19		0.26	0.50	
Uniform Delay, d1	18.6	16.7	16.7		26.4		26.3	8.4		26.2	9.9	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.0	0.0		0.1		1.4	0.1		2.2	0.3	
Delay (s)	18.9	16.7	16.7		26.4		27.7	8.4		28.4	10.3	
Level of Service	B	B	B		C		C	A		C	B	
Approach Delay (s)		18.9			26.4			8.6			10.4	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	46	8	5	242	414	66
Future Volume (vph)	46	8	5	242	414	66
Ideal Flow (vphpl)	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	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1751		1770	1863	1863	1583
Flt Permitted	0.96		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1751		1770	1863	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	46	8	5	242	414	66
RTOR Reduction (vph)	7	0	0	0	0	39
Lane Group Flow (vph)	47	0	5	242	414	27
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases						2
Actuated Green, G (s)	1.7		0.5	14.3	9.8	9.8
Effective Green, g (s)	1.7		0.5	14.3	9.8	9.8
Actuated g/C Ratio	0.07		0.02	0.60	0.41	0.41
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0		1.8	3.0	3.0	3.0
Lane Grp Cap (vph)	124		36	1110	760	646
v/s Ratio Prot	c0.03		0.00	c0.13	c0.22	
v/s Ratio Perm						0.02
v/c Ratio	0.38		0.14	0.22	0.54	0.04
Uniform Delay, d1	10.6		11.5	2.3	5.4	4.3
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7		0.6	0.1	0.8	0.0
Delay (s)	11.3		12.2	2.4	6.2	4.3
Level of Service	B		B	A	A	A
Approach Delay (s)	11.3			2.6	5.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	24.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

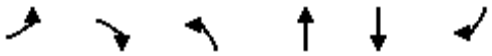
c Critical Lane Group

Intersection	
Intersection Delay, s/veh	5.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	33	76	164	317
Demand Flow Rate, veh/h	33	78	168	323
Vehicles Circulating, veh/h	335	157	63	48
Vehicles Exiting, veh/h	36	74	305	187
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.9	4.6	4.9	6.4
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	33	78	168	323
Cap Entry Lane, veh/h	808	966	1061	1077
Entry HV Adj Factor	0.999	0.971	0.978	0.981
Flow Entry, veh/h	33	76	164	317
Cap Entry, veh/h	807	938	1038	1057
V/C Ratio	0.041	0.081	0.158	0.300
Control Delay, s/veh	4.9	4.6	4.9	6.4
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

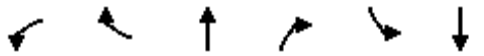
2040 Forecast Intersection Level of Service Reports - AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	309	255	161	518	803	498
Future Volume (vph)	309	255	161	518	803	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	5.5	5.5	5.5
Lane Util. Factor	0.97		1.00	0.95	0.95	1.00
Frt	0.93		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	3279		1770	3539	3539	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	3279		1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	309	255	161	518	803	498
RTOR Reduction (vph)	77	0	0	0	0	221
Lane Group Flow (vph)	487	0	161	518	803	277
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases						6
Actuated Green, G (s)	22.7		15.0	58.0	39.0	39.0
Effective Green, g (s)	22.7		15.0	58.0	39.0	39.0
Actuated g/C Ratio	0.25		0.17	0.64	0.43	0.43
Clearance Time (s)	4.0		4.0	5.5	5.5	5.5
Vehicle Extension (s)	4.0		2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	825		294	2275	1530	684
v/s Ratio Prot	c0.15		c0.09	0.15	c0.23	
v/s Ratio Perm						0.17
v/c Ratio	0.59		0.55	0.23	0.52	0.40
Uniform Delay, d1	29.7		34.5	6.7	18.8	17.6
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3		1.1	0.1	0.4	0.5
Delay (s)	31.0		35.6	6.8	19.2	18.1
Level of Service	C		D	A	B	B
Approach Delay (s)	31.0			13.6	18.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.2	Sum of lost time (s)	17.5
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	249	0	761	160	0	925
Future Volume (vph)	249	0	761	160	0	925
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		5.5			5.5
Lane Util. Factor	1.00		0.95			0.95
Frt	1.00		0.97			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1770		3447			3539
Flt Permitted	0.95		1.00			1.00
Satd. Flow (perm)	1770		3447			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	249	0	761	160	0	925
RTOR Reduction (vph)	0	0	12	0	0	0
Lane Group Flow (vph)	249	0	909	0	0	925
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	14.3		28.8			28.8
Effective Green, g (s)	14.3		28.8			28.8
Actuated g/C Ratio	0.27		0.55			0.55
Clearance Time (s)	4.0		5.5			5.5
Vehicle Extension (s)	3.0		4.0			4.0
Lane Grp Cap (vph)	481		1887			1937
v/s Ratio Prot	c0.14		c0.26			0.26
v/s Ratio Perm						
v/c Ratio	0.52		0.48			0.48
Uniform Delay, d1	16.2		7.3			7.3
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.9		0.3			0.3
Delay (s)	17.2		7.6			7.5
Level of Service	B		A			A
Approach Delay (s)	17.2		7.6			7.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

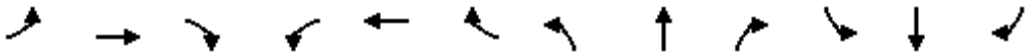
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	149	219	991	0	0	534
Future Volume (vph)	149	219	991	0	0	534
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7	5.1			5.1
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	149	219	991	0	0	534
RTOR Reduction (vph)	0	39	0	0	0	0
Lane Group Flow (vph)	149	180	991	0	0	534
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	9.1	9.1	18.5			18.5
Effective Green, g (s)	9.1	9.1	18.5			18.5
Actuated g/C Ratio	0.24	0.24	0.49			0.49
Clearance Time (s)	4.7	4.7	5.1			5.1
Vehicle Extension (s)	2.0	2.0	3.0			3.0
Lane Grp Cap (vph)	430	385	1750			1750
v/s Ratio Prot	0.08		c0.28			0.15
v/s Ratio Perm		c0.11				
v/c Ratio	0.35	0.47	0.57			0.31
Uniform Delay, d1	11.7	12.1	6.6			5.6
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.3	0.4			0.1
Delay (s)	11.9	12.4	7.1			5.7
Level of Service	B	B	A			A
Approach Delay (s)	12.2		7.1			5.7
Approach LOS	B		A			A

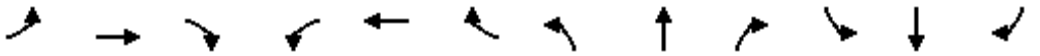
Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	37.4	Sum of lost time (s)	9.8
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	42	34	68	39	191	83	680	125	95	466	81
Future Volume (vph)	98	42	34	68	39	191	83	680	125	95	466	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.97			1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected		0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3119			1805	1583	1770	3457		1770	3461	
Flt Permitted		0.78			0.70	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2487			1307	1583	1770	3457		1770	3461	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	98	42	34	68	39	191	83	680	125	95	466	81
RTOR Reduction (vph)	0	27	0	0	0	157	0	16	0	0	16	0
Lane Group Flow (vph)	0	147	0	0	107	34	83	789	0	95	531	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		7.7			7.3	7.3	3.3	14.1		4.6	15.4	
Effective Green, g (s)		7.7			7.3	7.3	3.3	14.1		4.6	15.4	
Actuated g/C Ratio		0.19			0.18	0.18	0.08	0.34		0.11	0.38	
Clearance Time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Vehicle Extension (s)		0.2			0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		468			233	282	142	1191		199	1303	
v/s Ratio Prot							0.05	c0.23		c0.05	0.15	
v/s Ratio Perm		0.06			c0.08	0.02						
v/c Ratio		0.31			0.46	0.12	0.58	0.66		0.48	0.41	
Uniform Delay, d1		14.3			15.0	14.1	18.1	11.4		17.0	9.4	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.5	0.1	3.9	1.1		0.7	0.1	
Delay (s)		14.5			15.6	14.2	22.1	12.5		17.7	9.5	
Level of Service		B			B	B	C	B		B	A	
Approach Delay (s)		14.5			14.7			13.4			10.7	
Approach LOS		B			B			B			B	

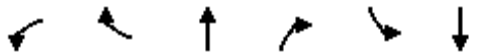
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	40.9	Sum of lost time (s)	14.9
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	2	84	96	0	194	33	572	48	104	507	38
Future Volume (vph)	105	2	84	96	0	194	33	572	48	104	507	38
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
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95	1.00		0.95	1.00
Frt	1.00	0.85		1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00		0.99	1.00
Satd. Flow (prot)	1770	1590		1770		1583		3530	1583		3509	1583
Flt Permitted	0.76	1.00		0.70		1.00		0.91	1.00		0.80	1.00
Satd. Flow (perm)	1410	1590		1306		1583		3225	1583		2823	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	105	2	84	96	0	194	33	572	48	104	507	38
RTOR Reduction (vph)	0	66	0	0	0	130	0	0	24	0	0	19
Lane Group Flow (vph)	105	20	0	96	0	64	0	605	24	0	611	19
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	6.4	6.4		6.4		6.4		14.8	14.8		14.8	14.8
Effective Green, g (s)	6.4	6.4		6.4		6.4		14.8	14.8		14.8	14.8
Actuated g/C Ratio	0.22	0.22		0.22		0.22		0.51	0.51		0.51	0.51
Clearance Time (s)	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
Lane Grp Cap (vph)	309	348		286		346		1634	802		1430	802
v/s Ratio Prot		0.01										
v/s Ratio Perm	c0.07			0.07		0.04		0.19	0.02		c0.22	0.01
v/c Ratio	0.34	0.06		0.34		0.18		0.37	0.03		0.43	0.02
Uniform Delay, d1	9.6	9.0		9.6		9.3		4.4	3.6		4.5	3.6
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.1		0.7		0.3		0.1	0.0		0.2	0.0
Delay (s)	10.3	9.1		10.3		9.5		4.5	3.6		4.7	3.6
Level of Service	B	A		B		A		A	A		A	A
Approach Delay (s)		9.7			9.8			4.4			4.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	29.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

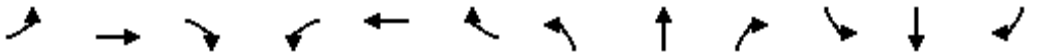
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	165	256	372	0	0	692
Future Volume (vph)	165	256	372	0	0	692
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1863			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	1863			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	165	256	372	0	0	692
RTOR Reduction (vph)	0	196	0	0	0	0
Lane Group Flow (vph)	165	60	372	0	0	692
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	7.0	7.0	14.9			14.9
Effective Green, g (s)	7.0	7.0	14.9			14.9
Actuated g/C Ratio	0.23	0.23	0.50			0.50
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)	414	370	928			1763
v/s Ratio Prot	c0.09		c0.20			0.20
v/s Ratio Perm		0.04				
v/c Ratio	0.40	0.16	0.40			0.39
Uniform Delay, d1	9.7	9.1	4.7			4.7
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.6	0.2	0.3			0.1
Delay (s)	10.3	9.3	5.0			4.8
Level of Service	B	A	A			A
Approach Delay (s)	9.7		5.0			4.8
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	29.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

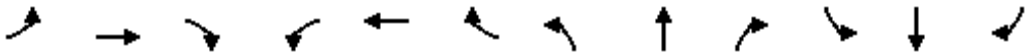
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	1	129	101	1	70	78	348	50	25	618	22
Future Volume (vph)	90	1	129	101	1	70	78	348	50	25	618	22
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	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.85		1.00	0.85		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1585		1770	1587		1770	3473		1770	3539	1583
Flt Permitted	0.71	1.00		0.67	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1324	1585		1255	1587		1770	3473		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	90	1	129	101	1	70	78	348	50	25	618	22
RTOR Reduction (vph)	0	101	0	0	55	0	0	10	0	0	0	12
Lane Group Flow (vph)	90	29	0	101	16	0	78	388	0	25	618	10
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	11.5	11.5		11.5	11.5		4.6	26.8		1.0	23.2	23.2
Effective Green, g (s)	11.5	11.5		11.5	11.5		4.6	26.8		1.0	23.2	23.2
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.09	0.51		0.02	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.5	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	291	348		275	348		155	1779		33	1569	702
v/s Ratio Prot		0.02			0.01		c0.04	c0.11		0.01	c0.17	
v/s Ratio Perm	0.07			c0.08								0.01
v/c Ratio	0.31	0.08		0.37	0.05		0.50	0.22		0.76	0.39	0.01
Uniform Delay, d1	17.1	16.2		17.3	16.1		22.8	7.0		25.5	9.8	8.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1		1.1	0.1		1.9	0.1		59.5	0.3	0.0
Delay (s)	17.9	16.4		18.4	16.2		24.6	7.1		85.1	10.2	8.2
Level of Service	B	B		B	B		C	A		F	B	A
Approach Delay (s)		17.0			17.5			10.0			12.9	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	52.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

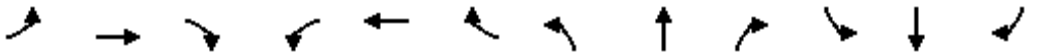
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	6	0	0	0	344	433	0	0	802	108
Future Volume (vph)	12	0	6	0	0	0	344	433	0	0	802	108
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	0.95			0.95	
Frt	1.00	0.85					1.00	1.00			0.98	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	3539			3476	
Flt Permitted	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (perm)	1770	1583					1770	3539			3476	
Peak-hour factor, PHF	1.00	0.92	1.00	0.92	0.92	0.92	1.00	1.00	0.92	0.92	1.00	1.00
Adj. Flow (vph)	12	0	6	0	0	0	344	433	0	0	802	108
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	12	0	0	0	0	0	344	433	0	0	898	0
Turn Type	Prot	NA		Prot			Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	0.9	0.9					14.1	37.2			19.1	
Effective Green, g (s)	0.9	0.9					14.1	37.2			19.1	
Actuated g/C Ratio	0.02	0.02					0.31	0.81			0.41	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	34	30					541	2855			1440	
v/s Ratio Prot	c0.01	0.00					c0.19	0.12			c0.26	
v/s Ratio Perm												
v/c Ratio	0.35	0.00					0.64	0.15			0.62	
Uniform Delay, d1	22.3	22.2					13.8	1.0			10.7	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	6.2	0.1					2.4	0.0			0.8	
Delay (s)	28.5	22.2					16.2	1.0			11.5	
Level of Service	C	C					B	A			B	
Approach Delay (s)		26.4			0.0			7.7			11.5	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	46.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

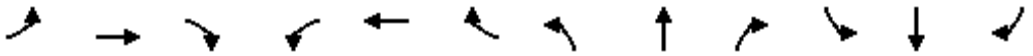
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	275	105	430	291	145	290	577	809	225	527	39
Future Volume (vph)	66	275	105	430	291	145	290	577	809	225	527	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Lane Util. Factor	1.00	0.95		0.97	1.00		1.00	0.95	0.88	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3393		3433	1770		1770	3539	2787	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3393		3433	1770		1770	3539	2787	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	66	275	105	430	291	145	290	577	809	225	527	39
RTOR Reduction (vph)	0	26	0	0	11	0	0	0	575	0	0	29
Lane Group Flow (vph)	66	354	0	430	425	0	290	577	234	225	527	10
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.4	20.3		18.9	30.8		23.2	30.4	30.4	19.0	26.2	26.2
Effective Green, g (s)	7.4	20.3		18.9	30.8		23.2	30.4	30.4	19.0	26.2	26.2
Actuated g/C Ratio	0.07	0.19		0.18	0.29		0.22	0.29	0.29	0.18	0.25	0.25
Clearance Time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Vehicle Extension (s)	2.0	3.0		2.0	5.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	124	655		617	518		390	1023	806	319	882	394
v/s Ratio Prot	0.04	0.10		c0.13	c0.24		c0.16	c0.16		0.13	0.15	
v/s Ratio Perm									0.08			0.01
v/c Ratio	0.53	0.54		0.70	0.82		0.74	0.56	0.29	0.71	0.60	0.02
Uniform Delay, d1	47.2	38.2		40.4	34.6		38.2	31.7	29.0	40.4	34.8	29.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.9		2.8	11.3		6.6	0.9	0.3	5.7	1.3	0.0
Delay (s)	49.4	39.1		43.2	45.8		44.8	32.6	29.3	46.1	36.1	29.8
Level of Service	D	D		D	D		D	C	C	D	D	C
Approach Delay (s)		40.6			44.5			33.1			38.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.1	Sum of lost time (s)	17.5
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

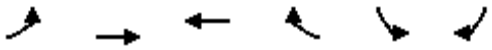
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	105	12	402	157	1181	28	418	320	491	499	26
Future Volume (vph)	42	105	12	402	157	1181	28	418	320	491	499	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	0.95	0.97	0.91	1.00	0.97	0.95	
Frt	1.00	0.98		1.00	0.88	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3485		3433	1566	1504	3433	5085	1583	3433	3513	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3485		3433	1566	1504	3433	5085	1583	3433	3513	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	105	12	402	157	1181	28	418	320	491	499	26
RTOR Reduction (vph)	0	6	0	0	72	445	0	0	252	0	2	0
Lane Group Flow (vph)	42	111	0	402	605	216	28	418	68	491	523	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	12.0	12.0		36.1	36.1	36.1	10.8	24.9	24.9	22.0	36.1	
Effective Green, g (s)	12.0	12.0		36.1	36.1	36.1	10.8	24.9	24.9	22.0	36.1	
Actuated g/C Ratio	0.10	0.10		0.31	0.31	0.31	0.09	0.21	0.21	0.19	0.31	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	181	357		1059	483	464	316	1082	336	645	1083	
v/s Ratio Prot	0.02	c0.03		0.12	c0.39		0.01	c0.08		c0.14	c0.15	
v/s Ratio Perm						0.14			0.04			
v/c Ratio	0.23	0.31		0.38	1.25	0.46	0.09	0.39	0.20	0.76	0.48	
Uniform Delay, d1	48.3	48.7		31.7	40.5	32.7	48.6	39.5	37.9	45.0	32.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.9	1.4		0.6	129.9	2.1	0.2	0.6	0.8	5.6	1.0	
Delay (s)	50.1	50.1		32.3	170.4	34.7	48.8	40.1	38.7	50.6	33.8	
Level of Service	D	D		C	F	C	D	D	D	D	C	
Approach Delay (s)		50.1			86.9			39.9			41.9	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

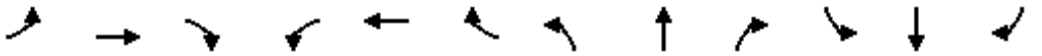
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	213	1763	1820	12	121	116
Future Volume (vph)	213	1763	1820	12	121	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3536		1696	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3536		1696	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	213	1763	1820	12	121	116
RTOR Reduction (vph)	0	0	0	0	40	0
Lane Group Flow (vph)	213	1763	1832	0	197	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	12.0	63.9	47.9		14.2	
Effective Green, g (s)	12.0	63.9	47.9		14.2	
Actuated g/C Ratio	0.14	0.74	0.56		0.16	
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)	246	2626	1967		279	
v/s Ratio Prot	c0.12	0.50	c0.52		c0.12	
v/s Ratio Perm						
v/c Ratio	0.87	0.67	0.93		0.71	
Uniform Delay, d1	36.3	5.7	17.6		34.0	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	25.7	0.7	8.6		7.9	
Delay (s)	62.0	6.4	26.2		41.9	
Level of Service	E	A	C		D	
Approach Delay (s)		12.4	26.2		41.9	
Approach LOS		B	C		D	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	86.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

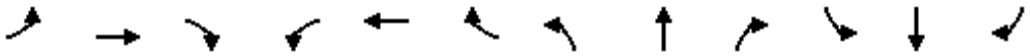


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	177	540	56	28	1045	34	516	10	185	97	4	412
Future Volume (vph)	177	540	56	28	1045	34	516	10	185	97	4	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3282		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.96		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3282		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	177	540	56	28	1045	34	516	10	185	97	4	412
RTOR Reduction (vph)	0	0	31	0	0	22	0	22	0	0	0	159
Lane Group Flow (vph)	177	540	25	28	1045	12	0	689	0	97	4	253
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	17.4	61.8	61.8	3.2	47.6	47.6		33.0		25.7	25.7	25.7
Effective Green, g (s)	17.4	61.8	61.8	3.2	47.6	47.6		33.0		25.7	25.7	25.7
Actuated g/C Ratio	0.12	0.44	0.44	0.02	0.34	0.34		0.23		0.18	0.18	0.18
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	218	1554	695	40	1197	535		769		323	340	289
v/s Ratio Prot	c0.10	0.15		0.02	c0.30			c0.21		0.05	0.00	
v/s Ratio Perm			0.02			0.01						c0.16
v/c Ratio	0.81	0.35	0.04	0.70	0.87	0.02		1.17dl		0.30	0.01	0.87
Uniform Delay, d1	60.1	26.1	22.5	68.3	43.7	31.0		52.2		49.7	47.1	55.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	19.1	0.0	0.0	35.2	7.0	0.0		12.7		0.2	0.0	23.4
Delay (s)	79.2	26.2	22.5	103.4	50.8	31.0		64.9		49.9	47.1	79.4
Level of Service	E	C	C	F	D	C		E		D	D	E
Approach Delay (s)		38.0			51.5			64.9			73.5	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.7	Sum of lost time (s)	17.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

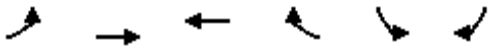
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	279	55	52	74	0	2	0	139	31	0	0
Future Volume (Veh/h)	7	279	55	52	74	0	2	0	139	31	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	7	279	55	52	74	0	2	0	139	31	0	0
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	74			334			462	498	167	470	526	37
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	74			334			462	498	167	470	526	37
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			100	100	84	92	100	100
cM capacity (veh/h)	1524			1222			466	450	848	384	434	1027

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	7	186	148	52	49	25	141	31
Volume Left	7	0	0	52	0	0	2	31
Volume Right	0	0	55	0	0	0	139	0
cSH	1524	1700	1700	1222	1700	1700	838	384
Volume to Capacity	0.00	0.11	0.09	0.04	0.03	0.01	0.17	0.08
Queue Length 95th (ft)	0	0	0	3	0	0	15	7
Control Delay (s)	7.4	0.0	0.0	8.1	0.0	0.0	10.2	15.2
Lane LOS	A			A			B	C
Approach Delay (s)	0.2			3.3			10.2	15.2
Approach LOS							B	C

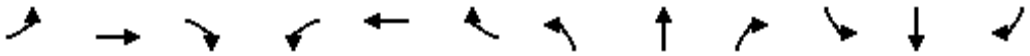
Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	38.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	393	113	497	68	12
Future Volume (Veh/h)	65	393	113	497	68	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	65	393	113	497	68	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						12
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	610				688	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	610				688	305
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				81	98
cM capacity (veh/h)	965				355	691

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	65	196	196	75	535	45	35
Volume Left	65	0	0	0	0	45	23
Volume Right	0	0	0	0	497	0	12
cSH	965	1700	1700	1700	1700	355	542
Volume to Capacity	0.07	0.12	0.12	0.04	0.31	0.13	0.06
Queue Length 95th (ft)	5	0	0	0	0	11	5
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	16.6	13.9
Lane LOS	A					C	B
Approach Delay (s)	1.3			0.0		15.5	
Approach LOS						C	

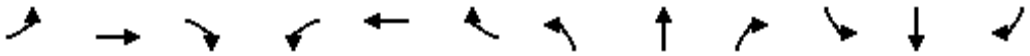
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	0	64	62	31	0	0	143	0	6	0	0
Future Volume (vph)	0	0	64	62	31	0	0	143	0	6	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	64	62	31	0	0	143	0	6	0	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	64	93	143	6
Volume Left (vph)	0	62	0	6
Volume Right (vph)	64	0	0	0
Hadj (s)	-0.57	0.17	0.03	0.23
Departure Headway (s)	3.8	4.5	4.3	4.6
Degree Utilization, x	0.07	0.12	0.17	0.01
Capacity (veh/h)	908	766	807	731
Control Delay (s)	7.1	8.1	8.2	7.7
Approach Delay (s)	7.1	8.1	8.2	7.7
Approach LOS	A	A	A	A

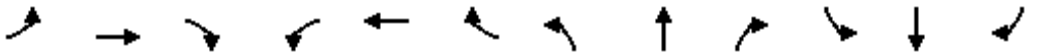
Intersection Summary				
Delay	7.9			
Level of Service	A			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	41	55	479	66	587	57	1053	158	165	735	36
Future Volume (vph)	25	41	55	479	66	587	57	1053	158	165	735	36
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	5.0		4.0	5.0	
Lane Util. Factor		1.00	1.00	0.97	0.95	0.95	1.00	0.91		1.00	0.95	
Frt		1.00	0.85	1.00	0.88	0.85	1.00	0.98		1.00	0.99	
Flt Protected		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1828	1583	3433	1557	1504	1770	4986		1770	3514	
Flt Permitted		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1828	1583	3433	1557	1504	1770	4986		1770	3514	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	41	55	479	66	587	57	1053	158	165	735	36
RTOR Reduction (vph)	0	0	51	0	153	250	0	18	0	0	3	0
Lane Group Flow (vph)	0	66	4	479	177	73	57	1193	0	165	768	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		7.3	7.3	22.5	22.5	22.5	7.7	41.2		12.0	45.5	
Effective Green, g (s)		7.3	7.3	22.5	22.5	22.5	7.7	41.2		12.0	45.5	
Actuated g/C Ratio		0.07	0.07	0.22	0.22	0.22	0.08	0.41		0.12	0.46	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		133	115	772	350	338	136	2054		212	1598	
v/s Ratio Prot		c0.04		c0.14	0.11		0.03	c0.24		c0.09	0.22	
v/s Ratio Perm			0.00			0.05						
v/c Ratio		0.50	0.03	0.62	0.51	0.22	0.42	0.58		0.78	0.48	
Uniform Delay, d1		44.6	43.1	34.9	33.9	31.6	44.0	22.7		42.7	19.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.9	0.1	1.6	1.2	0.3	0.8	1.2		15.0	0.3	
Delay (s)		47.5	43.2	36.5	35.1	31.9	44.8	23.9		57.7	19.3	
Level of Service		D	D	D	D	C	D	C		E	B	
Approach Delay (s)		45.5			34.7			24.9			26.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		

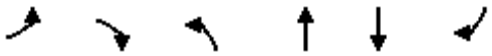
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	1083	0	0	1504	21	207	26	282	17	0	123
Future Volume (vph)	114	1083	0	0	1504	21	207	26	282	17	0	123
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
Lane Util. Factor		0.95			0.95		1.00	0.95	0.95	1.00		1.00
Frt		1.00			1.00		1.00	0.87	0.85	1.00		0.85
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)		3522			3532		1770	1548	1504	1770		1583
Flt Permitted		0.60			1.00		0.95	1.00	1.00	0.61		1.00
Satd. Flow (perm)		2123			3532		1770	1548	1504	1132		1583
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)	124	1177	0	0	1635	23	225	28	307	18	0	134
RTOR Reduction (vph)	0	0	0	0	1	0	0	109	128	0	0	104
Lane Group Flow (vph)	0	1301	0	0	1657	0	225	60	38	18	0	30
Turn Type	Prot	NA			NA		Perm	NA	Perm	Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases							2		2	6		6
Actuated Green, G (s)		35.1			35.1		12.6	12.6	12.6	12.6		12.6
Effective Green, g (s)		35.1			35.1		12.6	12.6	12.6	12.6		12.6
Actuated g/C Ratio		0.63			0.63		0.23	0.23	0.23	0.23		0.23
Clearance Time (s)		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
Lane Grp Cap (vph)		1337			2225		400	350	340	256		358
v/s Ratio Prot					0.47			0.04				
v/s Ratio Perm		c0.61					c0.13		0.02	0.02		0.02
v/c Ratio		0.97			0.74		0.56	0.17	0.11	0.07		0.08
Uniform Delay, d1		9.8			7.2		19.1	17.3	17.1	16.9		17.0
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		18.4			1.4		1.8	0.2	0.1	0.1		0.1
Delay (s)		28.2			8.6		20.9	17.6	17.2	17.1		17.1
Level of Service		C			A		C	B	B	B		B
Approach Delay (s)		28.2			8.6			18.8			17.1	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	412	71	55	1129	809	221
Future Volume (vph)	412	71	55	1129	809	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	412	71	55	1129	809	221
RTOR Reduction (vph)	0	52	0	0	0	102
Lane Group Flow (vph)	412	19	55	1129	809	119
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4				2
Actuated Green, G (s)	26.6	26.6	6.6	64.4	53.8	53.8
Effective Green, g (s)	26.6	26.6	6.6	64.4	53.8	53.8
Actuated g/C Ratio	0.27	0.27	0.07	0.64	0.54	0.54
Clearance Time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	470	421	116	2279	1903	851
v/s Ratio Prot	c0.23		0.03	c0.32	0.23	
v/s Ratio Perm		0.01				0.08
v/c Ratio	0.88	0.04	0.47	0.50	0.43	0.14
Uniform Delay, d1	35.1	27.3	45.0	9.3	13.8	11.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.6	0.0	1.1	0.8	0.7	0.3
Delay (s)	51.7	27.3	46.1	10.1	14.5	11.9
Level of Service	D	C	D	B	B	B
Approach Delay (s)	48.1			11.8	14.0	
Approach LOS	D			B	B	

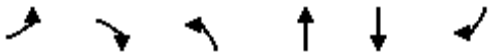
Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	182	629	125	321	904	154
Future Volume (vph)	182	629	125	321	904	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	182	629	125	321	904	154
RTOR Reduction (vph)	0	353	0	0	0	103
Lane Group Flow (vph)	182	276	125	321	904	51
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	43.9	43.9	10.3	58.2	32.8	32.8
Effective Green, g (s)	43.9	43.9	10.3	58.2	32.8	32.8
Actuated g/C Ratio	0.44	0.44	0.10	0.58	0.33	0.33
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	4.0	4.0	2.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1553	694	182	2059	1126	519
v/s Ratio Prot	0.05		c0.07	0.09	c0.26	
v/s Ratio Perm		c0.17				0.03
v/c Ratio	0.12	0.40	0.69	0.16	0.80	0.10
Uniform Delay, d1	16.6	19.1	43.3	9.6	30.7	23.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	1.7	8.3	0.0	4.2	0.1
Delay (s)	16.7	20.8	51.6	9.7	34.9	23.4
Level of Service	B	C	D	A	C	C
Approach Delay (s)	19.9			21.4	33.2	
Approach LOS	B			C	C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

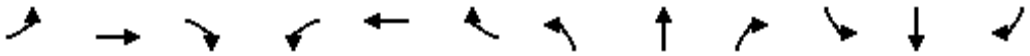
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	323	325	31	0	0	364
Future Volume (vph)	323	325	31	0	0	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0
Lane Util. Factor	1.00	1.00		1.00		1.00
Frt	1.00	0.85		1.00		0.85
Flt Protected	0.95	1.00		0.95		1.00
Satd. Flow (prot)	1770	1583		1770		1583
Flt Permitted	0.95	1.00		0.76		1.00
Satd. Flow (perm)	1770	1583		1410		1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	323	325	31	0	0	364
RTOR Reduction (vph)	0	191	0	0	0	0
Lane Group Flow (vph)	323	134	0	31	0	364
Turn Type	Prot	Perm	Perm	NA		pt+ov
Protected Phases	4			2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	10.9	10.9		7.5		26.4
Effective Green, g (s)	10.9	10.9		7.5		26.4
Actuated g/C Ratio	0.41	0.41		0.28		1.00
Clearance Time (s)	4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0		3.0		
Lane Grp Cap (vph)	730	653		400		1583
v/s Ratio Prot	c0.18					c0.23
v/s Ratio Perm		0.08		0.02		
v/c Ratio	0.44	0.21		0.08		0.23
Uniform Delay, d1	5.6	5.0		6.9		0.0
Progression Factor	1.00	1.00		1.00		1.00
Incremental Delay, d2	0.4	0.2		0.1		0.1
Delay (s)	6.0	5.1		7.0		0.1
Level of Service	A	A		A		A
Approach Delay (s)	5.6			7.0	0.1	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	3.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	26.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

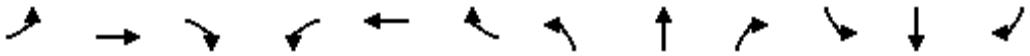
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	163	0	0	0	1	12	0	0	0	3	0	20
Future Volume (vph)	163	0	0	0	1	12	0	0	0	3	0	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	163	0	0	0	1	12	0	0	0	3	0	20

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	163	1	12	0	3	20
Volume Left (vph)	163	0	0	0	3	0
Volume Right (vph)	0	0	12	0	0	20
Hadj (s)	0.23	0.03	-0.67	0.00	0.53	-0.67
Departure Headway (s)	4.8	4.7	4.0	5.0	5.5	4.3
Degree Utilization, x	0.22	0.00	0.01	0.00	0.00	0.02
Capacity (veh/h)	742	754	876	712	628	802
Control Delay (s)	9.1	6.5	5.9	8.0	7.3	6.2
Approach Delay (s)	9.1	5.9		0.0	6.3	
Approach LOS	A	A		A	A	

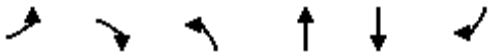
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	25.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	287	1	13	2	1	12	44	807	1	17	645	155
Future Volume (vph)	287	1	13	2	1	12	44	807	1	17	645	155
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	
Lane Util. Factor	1.00	0.95	0.95		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87	0.85		0.89		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1542	1504		1651		1770	3539		1770	3436	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1542	1504		1651		1770	3539		1770	3436	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	287	1	13	2	1	12	44	807	1	17	645	155
RTOR Reduction (vph)	0	4	5	0	12	0	0	0	0	0	13	0
Lane Group Flow (vph)	287	3	2	0	3	0	44	808	0	17	787	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	18.1	18.1	18.1		1.6		3.9	30.4		1.4	27.9	
Effective Green, g (s)	18.1	18.1	18.1		1.6		3.9	30.4		1.4	27.9	
Actuated g/C Ratio	0.27	0.27	0.27		0.02		0.06	0.45		0.02	0.41	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	474	413	403		39		102	1593		36	1420	
v/s Ratio Prot	c0.16	0.00			c0.00		c0.02	0.23		0.01	c0.23	
v/s Ratio Perm			0.00									
v/c Ratio	0.61	0.01	0.00		0.08		0.43	0.51		0.47	0.55	
Uniform Delay, d1	21.6	18.1	18.1		32.2		30.7	13.2		32.7	15.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.0	0.0		0.3		1.1	0.3		3.5	0.6	
Delay (s)	23.1	18.1	18.1		32.6		31.8	13.6		36.2	15.6	
Level of Service	C	B	B		C		C	B		D	B	
Approach Delay (s)		22.9			32.6			14.5			16.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	61	55	7	741	640	10
Future Volume (vph)	61	55	7	741	640	10
Ideal Flow (vphpl)	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	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1699		1770	1863	1863	1583
Flt Permitted	0.97		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1699		1770	1863	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	61	55	7	741	640	10
RTOR Reduction (vph)	38	0	0	0	0	5
Lane Group Flow (vph)	78	0	7	741	640	5
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases						2
Actuated Green, G (s)	5.2		0.5	25.4	20.9	20.9
Effective Green, g (s)	5.2		0.5	25.4	20.9	20.9
Actuated g/C Ratio	0.13		0.01	0.66	0.54	0.54
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0		1.8	3.0	3.0	3.0
Lane Grp Cap (vph)	228		22	1225	1008	857
v/s Ratio Prot	c0.05		0.00	c0.40	0.34	
v/s Ratio Perm						0.00
v/c Ratio	0.34		0.32	0.60	0.63	0.01
Uniform Delay, d1	15.1		18.9	3.7	6.2	4.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3		3.0	0.9	1.3	0.0
Delay (s)	15.5		21.9	4.6	7.5	4.1
Level of Service	B		C	A	A	A
Approach Delay (s)	15.5			4.8	7.5	
Approach LOS	B			A	A	

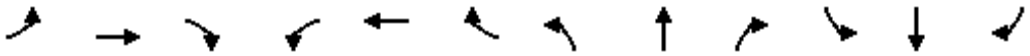
Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	38.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	152	224	551	377
Demand Flow Rate, veh/h	155	228	562	385
Vehicles Circulating, veh/h	430	513	199	127
Vehicles Exiting, veh/h	81	248	386	614
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.4	9.8	12.9	7.9
Approach LOS	A	A	B	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	155	228	562	385
Cap Entry Lane, veh/h	735	676	926	995
Entry HV Adj Factor	0.980	0.982	0.980	0.979
Flow Entry, veh/h	152	224	551	377
Cap Entry, veh/h	721	664	908	974
V/C Ratio	0.211	0.337	0.607	0.387
Control Delay, s/veh	7.4	9.8	12.9	7.9
LOS	A	A	B	A
95th %tile Queue, veh	1	1	4	2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	6	41	100	26	4	142	26	42	1	9	1
Future Volume (vph)	2	6	41	100	26	4	142	26	42	1	9	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	2	6	41	100	26	4	142	26	42	1	9	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	49	130	210	11
Volume Left (vph)	2	100	142	1
Volume Right (vph)	41	4	42	1
Hadj (s)	-0.46	0.17	0.05	0.00
Departure Headway (s)	4.1	4.6	4.4	4.6
Degree Utilization, x	0.06	0.17	0.26	0.01
Capacity (veh/h)	820	732	789	737
Control Delay (s)	7.4	8.6	8.9	7.6
Approach Delay (s)	7.4	8.6	8.9	7.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	38.9%	ICU Level of Service	A	
Analysis Period (min)	15			

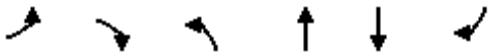


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	73	9	413	131	399	353
Future Volume (vph)	73	9	413	131	399	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.49	1.00
Satd. Flow (perm)	3433	1583	3539	1583	917	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	10	449	142	434	384
RTOR Reduction (vph)	0	9	0	34	0	0
Lane Group Flow (vph)	79	1	449	108	434	384
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	3.6	3.6	36.7	36.7	36.7	36.7
Effective Green, g (s)	3.6	3.6	36.7	36.7	36.7	36.7
Actuated g/C Ratio	0.07	0.07	0.76	0.76	0.76	0.76
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)	255	117	2689	1202	696	2689
v/s Ratio Prot	c0.02		0.13			0.11
v/s Ratio Perm		0.00		0.07	c0.47	
v/c Ratio	0.31	0.01	0.17	0.09	0.62	0.14
Uniform Delay, d1	21.2	20.7	1.6	1.5	2.6	1.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	0.0	0.0	1.7	0.0
Delay (s)	21.9	20.7	1.6	1.5	4.4	1.6
Level of Service	C	C	A	A	A	A
Approach Delay (s)	21.7		1.6			3.1
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	3.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	48.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

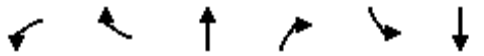
2040 Forecast Intersection Level of Service Reports - PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	261	349	217	484	410	225
Future Volume (vph)	261	349	217	484	410	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	5.5	5.5	5.5
Lane Util. Factor	0.97		1.00	0.95	0.95	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	0.98		0.95	1.00	1.00	1.00
Satd. Flow (prot)	3234		1770	3539	3539	1583
Flt Permitted	0.98		0.95	1.00	1.00	1.00
Satd. Flow (perm)	3234		1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	261	349	217	484	410	225
RTOR Reduction (vph)	127	0	0	0	0	162
Lane Group Flow (vph)	483	0	217	484	410	63
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases						6
Actuated Green, G (s)	18.7		15.1	37.5	18.4	18.4
Effective Green, g (s)	18.7		15.1	37.5	18.4	18.4
Actuated g/C Ratio	0.28		0.23	0.57	0.28	0.28
Clearance Time (s)	4.0		4.0	5.5	5.5	5.5
Vehicle Extension (s)	4.0		2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	920		406	2019	991	443
v/s Ratio Prot	c0.15		c0.12	0.14	c0.12	
v/s Ratio Perm						0.04
v/c Ratio	0.52		0.53	0.24	0.41	0.14
Uniform Delay, d1	19.8		22.2	7.0	19.3	17.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7		0.7	0.1	0.4	0.2
Delay (s)	20.5		22.9	7.1	19.6	17.9
Level of Service	C		C	A	B	B
Approach Delay (s)	20.5			12.0	19.0	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	65.7	Sum of lost time (s)	17.5
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	134	3	789	183	10	554
Future Volume (vph)	134	3	789	183	10	554
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		5.5		4.0	5.5
Lane Util. Factor	1.00		0.95		1.00	0.95
Frt	1.00		0.97		1.00	1.00
Flt Protected	0.95		1.00		0.95	1.00
Satd. Flow (prot)	1771		3439		1770	3539
Flt Permitted	0.95		1.00		0.95	1.00
Satd. Flow (perm)	1771		3439		1770	3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	134	3	789	183	10	554
RTOR Reduction (vph)	1	0	14	0	0	0
Lane Group Flow (vph)	136	0	958	0	10	554
Turn Type	Prot		NA		Prot	NA
Protected Phases	8		2		1	6
Permitted Phases						
Actuated Green, G (s)	10.6		35.2		1.1	40.3
Effective Green, g (s)	10.6		35.2		1.1	40.3
Actuated g/C Ratio	0.18		0.58		0.02	0.67
Clearance Time (s)	4.0		5.5		4.0	5.5
Vehicle Extension (s)	3.0		4.0		3.0	4.0
Lane Grp Cap (vph)	310		2004		32	2361
v/s Ratio Prot	c0.08		c0.28		0.01	c0.16
v/s Ratio Perm						
v/c Ratio	0.44		0.48		0.31	0.23
Uniform Delay, d1	22.2		7.3		29.3	4.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.0		0.2		5.5	0.1
Delay (s)	23.2		7.5		34.8	4.0
Level of Service	C		A		C	A
Approach Delay (s)	23.2		7.5			4.6
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

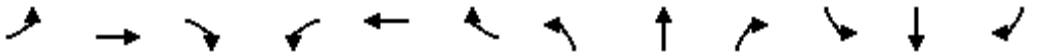
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	147	90	1129	0	0	501
Future Volume (vph)	147	90	1129	0	0	501
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.7	5.1			5.1
Lane Util. Factor	1.00	1.00	0.95			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	3539			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	3539			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	147	90	1129	0	0	501
RTOR Reduction (vph)	0	27	0	0	0	0
Lane Group Flow (vph)	147	63	1129	0	0	501
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	8.0	8.0	19.9			19.9
Effective Green, g (s)	8.0	8.0	19.9			19.9
Actuated g/C Ratio	0.21	0.21	0.53			0.53
Clearance Time (s)	4.7	4.7	5.1			5.1
Vehicle Extension (s)	2.0	2.0	3.0			3.0
Lane Grp Cap (vph)	375	335	1868			1868
v/s Ratio Prot	c0.08		c0.32			0.14
v/s Ratio Perm		0.04				
v/c Ratio	0.39	0.19	0.60			0.27
Uniform Delay, d1	12.8	12.2	6.2			4.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.2	0.1	0.6			0.1
Delay (s)	13.0	12.3	6.7			5.0
Level of Service	B	B	A			A
Approach Delay (s)	12.7		6.7			5.0
Approach LOS	B		A			A

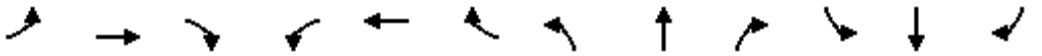
Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	37.7	Sum of lost time (s)	9.8
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	44	19	242	87	509	66	508	45	224	313	84
Future Volume (vph)	111	44	19	242	87	509	66	508	45	224	313	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Lane Util. Factor		0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frt		0.98			1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected		0.97			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3149			1797	1583	1770	3496		1770	3427	
Flt Permitted		0.62			0.67	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2010			1248	1583	1770	3496		1770	3427	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	111	44	19	242	87	509	66	508	45	224	313	84
RTOR Reduction (vph)	0	10	0	0	0	278	0	7	0	0	27	0
Lane Group Flow (vph)	0	164	0	0	329	231	66	546	0	224	370	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		21.0			20.6	20.6	3.5	16.2		11.4	24.1	
Effective Green, g (s)		21.0			20.6	20.6	3.5	16.2		11.4	24.1	
Actuated g/C Ratio		0.33			0.33	0.33	0.06	0.26		0.18	0.38	
Clearance Time (s)		4.7			5.1	5.1	4.7	5.1		4.7	5.1	
Vehicle Extension (s)		0.2			0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		668			407	516	98	897		319	1308	
v/s Ratio Prot							0.04	c0.16		c0.13	0.11	
v/s Ratio Perm		0.08			c0.26	0.15						
v/c Ratio		0.25			0.81	0.45	0.67	0.61		0.70	0.28	
Uniform Delay, d1		15.3			19.4	16.8	29.2	20.7		24.3	13.5	
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			10.6	0.2	13.4	0.8		5.6	0.0	
Delay (s)		15.4			30.1	17.0	42.6	21.5		29.9	13.6	
Level of Service		B			C	B	D	C		C	B	
Approach Delay (s)		15.4			22.1			23.7			19.4	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	63.1	Sum of lost time (s)	14.9
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	1	40	83	0	88	52	493	116	201	336	104
Future Volume (vph)	40	1	40	83	0	88	52	493	116	201	336	104
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
Lane Util. Factor	1.00	1.00		1.00		1.00		0.95	1.00		0.95	1.00
Frt	1.00	0.85		1.00		0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95		1.00		1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	1590		1770		1583		3522	1583		3474	1583
Flt Permitted	0.85	1.00		0.85		1.00		0.88	1.00		0.68	1.00
Satd. Flow (perm)	1585	1590		1585		1583		3132	1583		2408	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	1	40	83	0	88	52	493	116	201	336	104
RTOR Reduction (vph)	0	34	0	0	0	74	0	0	48	0	0	43
Lane Group Flow (vph)	40	7	0	83	0	14	0	545	68	0	537	61
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	4.7	4.7		4.7		4.7		17.8	17.8		17.8	17.8
Effective Green, g (s)	4.7	4.7		4.7		4.7		17.8	17.8		17.8	17.8
Actuated g/C Ratio	0.15	0.15		0.15		0.15		0.58	0.58		0.58	0.58
Clearance Time (s)	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
Lane Grp Cap (vph)	244	245		244		243		1827	923		1405	923
v/s Ratio Prot		0.00										
v/s Ratio Perm	0.03			c0.05		0.01		0.17	0.04		c0.22	0.04
v/c Ratio	0.16	0.03		0.34		0.06		0.30	0.07		0.38	0.07
Uniform Delay, d1	11.2	11.0		11.5		11.0		3.2	2.8		3.4	2.7
Progression Factor	1.00	1.00		1.00		1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0		0.8		0.1		0.1	0.0		0.2	0.0
Delay (s)	11.5	11.0		12.4		11.1		3.3	2.8		3.6	2.8
Level of Service	B	B		B		B		A	A		A	A
Approach Delay (s)		11.3			11.7			3.2			3.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	30.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

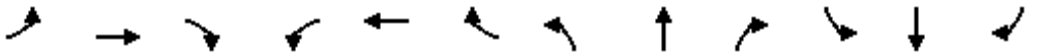
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	222	340	314	0	0	432
Future Volume (vph)	222	340	314	0	0	432
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			0.95
Frt	1.00	0.85	1.00			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1770	1583	1863			3539
Flt Permitted	0.95	1.00	1.00			1.00
Satd. Flow (perm)	1770	1583	1863			3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	222	340	314	0	0	432
RTOR Reduction (vph)	0	232	0	0	0	0
Lane Group Flow (vph)	222	108	314	0	0	432
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	9.1	9.1	11.6			11.6
Effective Green, g (s)	9.1	9.1	11.6			11.6
Actuated g/C Ratio	0.32	0.32	0.40			0.40
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)	561	501	752			1430
v/s Ratio Prot	c0.13		c0.17			0.12
v/s Ratio Perm		0.07				
v/c Ratio	0.40	0.22	0.42			0.30
Uniform Delay, d1	7.7	7.2	6.1			5.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	0.5	0.2	0.4			0.1
Delay (s)	8.1	7.4	6.5			5.9
Level of Service	A	A	A			A
Approach Delay (s)	7.7		6.5			5.9
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	28.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

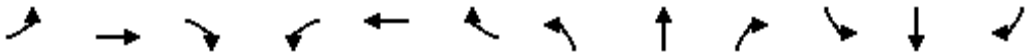
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	3	78	26	5	21	94	512	66	46	279	76
Future Volume (vph)	58	3	78	26	5	21	94	512	66	46	279	76
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	5.0		4.0	5.0	5.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.86		1.00	0.88		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1594		1770	1637		1770	3479		1770	3539	1583
Flt Permitted	0.74	1.00		0.70	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1379	1594		1312	1637		1770	3479		1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	58	3	78	26	5	21	94	512	66	46	279	76
RTOR Reduction (vph)	0	66	0	0	18	0	0	9	0	0	0	42
Lane Group Flow (vph)	58	15	0	26	8	0	94	569	0	46	279	34
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	6.9	6.9		6.9	6.9		4.5	21.6		2.2	19.3	19.3
Effective Green, g (s)	6.9	6.9		6.9	6.9		4.5	21.6		2.2	19.3	19.3
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.10	0.49		0.05	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
Vehicle Extension (s)	4.0	4.0		4.0	4.0		2.5	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	217	251		207	258		182	1719		89	1562	699
v/s Ratio Prot		0.01			0.01		c0.05	c0.16		0.03	0.08	
v/s Ratio Perm	c0.04			0.02								0.02
v/c Ratio	0.27	0.06		0.13	0.03		0.52	0.33		0.52	0.18	0.05
Uniform Delay, d1	16.2	15.6		15.8	15.6		18.6	6.7		20.2	7.4	7.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1		0.4	0.1		1.8	0.2		2.1	0.1	0.1
Delay (s)	17.1	15.8		16.2	15.6		20.4	6.9		22.3	7.5	7.0
Level of Service	B	B		B	B		C	A		C	A	A
Approach Delay (s)		16.3			15.9			8.8			9.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	43.7	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

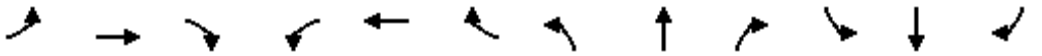
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	0	388	0	0	0	20	570	0	0	354	20
Future Volume (vph)	116	0	388	0	0	0	20	570	0	0	354	20
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	0.95			0.95	
Frt	1.00	0.85					1.00	1.00			0.99	
Flt Protected	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (prot)	1770	1583					1770	3539			3511	
Flt Permitted	0.95	1.00					0.95	1.00			1.00	
Satd. Flow (perm)	1770	1583					1770	3539			3511	
Peak-hour factor, PHF	1.00	0.92	1.00	0.92	0.92	0.92	1.00	1.00	0.92	0.92	1.00	1.00
Adj. Flow (vph)	116	0	388	0	0	0	20	570	0	0	354	20
RTOR Reduction (vph)	0	259	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	116	129	0	0	0	0	20	570	0	0	368	0
Turn Type	Prot	NA		Prot			Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.5	11.2					0.6	14.6			10.0	
Effective Green, g (s)	4.5	11.2					0.6	14.6			10.0	
Actuated g/C Ratio	0.13	0.33					0.02	0.43			0.30	
Clearance Time (s)	4.0	4.0					4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0			3.0	
Lane Grp Cap (vph)	235	524					31	1528			1038	
v/s Ratio Prot	c0.07	c0.08					0.01	c0.16			0.10	
v/s Ratio Perm												
v/c Ratio	0.49	0.25					0.65	0.37			0.35	
Uniform Delay, d1	13.6	8.2					16.5	6.5			9.4	
Progression Factor	1.00	1.00					1.00	1.00			1.00	
Incremental Delay, d2	1.6	0.2					37.9	0.2			0.2	
Delay (s)	15.2	8.5					54.4	6.7			9.6	
Level of Service	B	A					D	A			A	
Approach Delay (s)		10.0			0.0			8.3			9.6	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	33.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

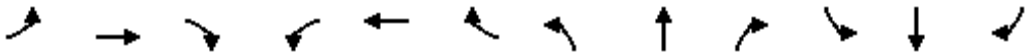
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	578	97	565	114	48	143	531	1101	373	313	46
Future Volume (vph)	29	578	97	565	114	48	143	531	1101	373	313	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Lane Util. Factor	1.00	0.95		0.97	1.00		1.00	0.95	0.88	1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3463		3433	1780		1770	3539	2787	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3463		3433	1780		1770	3539	2787	1770	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	29	578	97	565	114	48	143	531	1101	373	313	46
RTOR Reduction (vph)	0	9	0	0	10	0	0	0	444	0	0	40
Lane Group Flow (vph)	29	666	0	565	152	0	143	531	657	373	313	6
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	3.9	31.2		25.3	51.6		52.8	39.5	39.5	32.8	19.5	19.5
Effective Green, g (s)	3.9	31.2		25.3	51.6		52.8	39.5	39.5	32.8	19.5	19.5
Actuated g/C Ratio	0.03	0.21		0.17	0.36		0.36	0.27	0.27	0.23	0.13	0.13
Clearance Time (s)	3.5	4.0		4.0	5.5		3.5	5.0	5.0	3.5	5.0	5.0
Vehicle Extension (s)	2.0	3.0		2.0	5.0		2.0	4.0	4.0	2.0	4.0	4.0
Lane Grp Cap (vph)	47	743		597	632		643	962	757	399	474	212
v/s Ratio Prot	0.02	c0.19		c0.16	0.09		0.08	0.15		c0.21	0.09	
v/s Ratio Perm									c0.24			0.00
v/c Ratio	0.62	0.90		0.95	0.24		0.22	0.55	0.87	0.93	0.66	0.03
Uniform Delay, d1	70.0	55.5		59.3	33.0		32.0	45.3	50.4	55.2	59.8	54.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.7	13.5		23.9	0.4		0.1	0.8	10.6	28.6	3.8	0.1
Delay (s)	85.7	68.9		83.2	33.5		32.1	46.2	61.0	83.8	63.5	54.7
Level of Service	F	E		F	C		C	D	E	F	E	D
Approach Delay (s)		69.6			72.1			54.3			73.3	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	63.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	145.3	Sum of lost time (s)	17.5
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

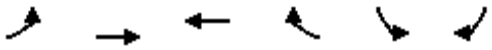
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	110	11	265	165	831	61	938	437	553	396	47
Future Volume (vph)	53	110	11	265	165	831	61	938	437	553	396	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	0.95	0.97	0.91	1.00	0.97	0.95	
Frt	1.00	0.99		1.00	0.90	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3491		3433	1589	1504	3433	5085	1583	3433	3483	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3491		3433	1589	1504	3433	5085	1583	3433	3483	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	53	110	11	265	165	831	61	938	437	553	396	47
RTOR Reduction (vph)	0	5	0	0	42	297	0	0	332	0	6	0
Lane Group Flow (vph)	53	116	0	265	472	185	61	938	105	553	437	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	13.5	13.5		57.5	57.5	57.5	4.8	36.0	36.0	21.0	52.2	
Effective Green, g (s)	13.5	13.5		57.5	57.5	57.5	4.8	36.0	36.0	21.0	52.2	
Actuated g/C Ratio	0.09	0.09		0.38	0.38	0.38	0.03	0.24	0.24	0.14	0.35	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Vehicle Extension (s)	6.0	6.0		6.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	
Lane Grp Cap (vph)	159	314		1315	609	576	109	1220	379	480	1212	
v/s Ratio Prot	0.03	c0.03		0.08	c0.30		0.02	c0.18		c0.16	0.13	
v/s Ratio Perm						0.12			0.07			
v/c Ratio	0.33	0.37		0.20	0.78	0.32	0.56	0.77	0.28	1.15	0.36	
Uniform Delay, d1	64.0	64.2		30.9	40.6	32.5	71.6	53.1	46.4	64.5	36.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	2.1		0.2	7.7	0.9	7.5	4.7	1.8	90.0	0.8	
Delay (s)	67.5	66.3		31.1	48.3	33.4	79.0	57.8	48.2	154.5	37.3	
Level of Service	E	E		C	D	C	E	E	D	F	D	
Approach Delay (s)		66.7			39.0			55.8			102.4	
Approach LOS		E			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	62.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

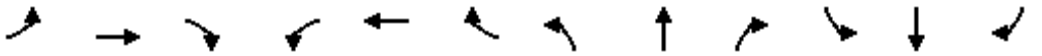
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	361	1703	1708	10	121	127
Future Volume (vph)	361	1703	1708	10	121	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.93	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	3539	3536		1693	
Flt Permitted	0.95	1.00	1.00		0.98	
Satd. Flow (perm)	1770	3539	3536		1693	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	361	1703	1708	10	121	127
RTOR Reduction (vph)	0	0	1	0	54	0
Lane Group Flow (vph)	361	1703	1717	0	194	0
Turn Type	Prot	NA	NA		Prot	
Protected Phases	7	4	8		1	
Permitted Phases						
Actuated Green, G (s)	15.0	53.0	34.0		9.0	
Effective Green, g (s)	15.0	53.0	34.0		9.0	
Actuated g/C Ratio	0.21	0.76	0.49		0.13	
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)	379	2679	1717		217	
v/s Ratio Prot	c0.20	0.48	c0.49		c0.11	
v/s Ratio Perm						
v/c Ratio	0.95	0.64	1.00		0.89	
Uniform Delay, d1	27.1	4.0	18.0		30.0	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	33.9	0.5	21.8		33.7	
Delay (s)	61.0	4.5	39.8		63.8	
Level of Service	E	A	D		E	
Approach Delay (s)		14.4	39.8		63.8	
Approach LOS		B	D		E	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

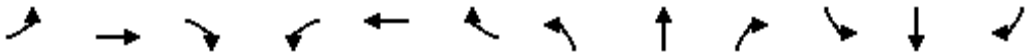
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	436	1530	173	72	565	177	74	11	37	68	14	188
Future Volume (vph)	436	1530	173	72	565	177	74	11	37	68	14	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		3279		1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		3279		1770	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	436	1530	173	72	565	177	74	11	37	68	14	188
RTOR Reduction (vph)	0	0	29	0	0	115	0	35	0	0	0	175
Lane Group Flow (vph)	436	1530	144	72	565	62	0	87	0	68	14	13
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases			2			6						4
Actuated Green, G (s)	52.2	84.9	84.9	13.7	46.4	46.4		7.9		9.5	9.5	9.5
Effective Green, g (s)	52.2	84.9	84.9	13.7	46.4	46.4		7.9		9.5	9.5	9.5
Actuated g/C Ratio	0.39	0.64	0.64	0.10	0.35	0.35		0.06		0.07	0.07	0.07
Clearance Time (s)	4.0	5.0	5.0	4.0	5.0	5.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0		2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	694	2259	1010	182	1234	552		194		126	133	113
v/s Ratio Prot	c0.25	c0.43		0.04	0.16			c0.03		c0.04	0.01	
v/s Ratio Perm			0.09			0.04						0.01
v/c Ratio	0.63	0.68	0.14	0.40	0.46	0.11		0.45		0.54	0.11	0.12
Uniform Delay, d1	32.6	15.3	9.6	55.8	33.6	29.3		60.4		59.6	57.8	57.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.3	1.7	0.3	0.5	0.1	0.0		0.6		2.2	0.1	0.2
Delay (s)	33.9	17.0	9.9	56.3	33.7	29.4		61.1		61.9	57.9	58.0
Level of Service	C	B	A	E	C	C		E		E	E	E
Approach Delay (s)		19.8			34.7			61.1			59.0	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	133.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

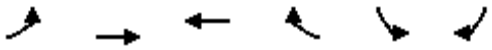
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	134	0	0	0	0	232	0	0	0
Future Volume (Veh/h)	0	0	0	134	0	0	0	0	232	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	0	0	134	0	0	0	0	232	0	0	0
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	0			0			268	268	0	500	268	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			268	268	0	500	268	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			100	100	79	100	100	100
cM capacity (veh/h)	1622			1622			621	584	1084	334	584	1084

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	0	0	134	0	0	232	0
Volume Left	0	0	0	134	0	0	0	0
Volume Right	0	0	0	0	0	0	232	0
cSH	1700	1700	1700	1622	1700	1700	1084	1700
Volume to Capacity	0.00	0.00	0.00	0.08	0.00	0.00	0.21	0.00
Queue Length 95th (ft)	0	0	0	7	0	0	20	0
Control Delay (s)	0.0	0.0	0.0	7.4	0.0	0.0	9.2	0.0
Lane LOS				A			A	A
Approach Delay (s)	0.0			7.4			9.2	0.0
Approach LOS							A	A

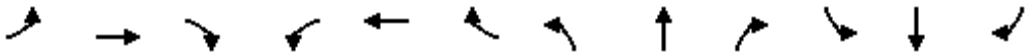
Intersection Summary				
Average Delay	8.6			
Intersection Capacity Utilization	28.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	18	220	207	86	485	58
Future Volume (Veh/h)	18	220	207	86	485	58
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	18	220	207	86	485	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						12
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	293				396	146
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293				396	146
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				15	93
cM capacity (veh/h)	1265				573	874

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	18	110	110	138	155	323	220
Volume Left	18	0	0	0	0	323	162
Volume Right	0	0	0	0	86	0	58
cSH	1265	1700	1700	1700	1700	573	779
Volume to Capacity	0.01	0.06	0.06	0.08	0.09	0.56	0.28
Queue Length 95th (ft)	1	0	0	0	0	87	29
Control Delay (s)	7.9	0.0	0.0	0.0	0.0	19.1	12.6
Lane LOS	A					C	B
Approach Delay (s)	0.6			0.0		16.5	
Approach LOS						C	

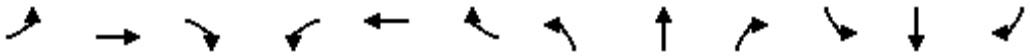
Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	34	0	0	56	0	0	223	12	0	99	0
Future Volume (vph)	0	34	0	0	56	0	0	223	12	0	99	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	34	0	0	56	0	0	223	12	0	99	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	34	56	235	99
Volume Left (vph)	0	0	0	0
Volume Right (vph)	0	0	12	0
Hadj (s)	0.03	0.03	0.00	0.03
Departure Headway (s)	4.8	4.7	4.2	4.4
Degree Utilization, x	0.04	0.07	0.28	0.12
Capacity (veh/h)	693	701	827	781
Control Delay (s)	8.0	8.1	8.8	8.0
Approach Delay (s)	8.0	8.1	8.8	8.0
Approach LOS	A	A	A	A

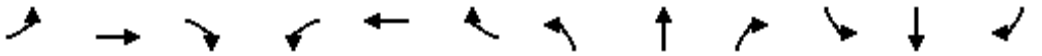
Intersection Summary			
Delay	8.5		
Level of Service	A		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	70	146	334	38	266	51	987	73	201	808	78
Future Volume (vph)	86	70	146	334	38	266	51	987	73	201	808	78
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	5.0		4.0	5.0	
Lane Util. Factor		1.00	1.00	0.97	0.95	0.95	1.00	0.91		1.00	0.95	
Frt		1.00	0.85	1.00	0.89	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1813	1583	3433	1569	1504	1770	5033		1770	3492	
Flt Permitted		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1813	1583	3433	1569	1504	1770	5033		1770	3492	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	86	70	146	334	38	266	51	987	73	201	808	78
RTOR Reduction (vph)	0	0	130	0	98	124	0	8	0	0	6	0
Lane Group Flow (vph)	0	156	16	334	57	25	51	1052	0	201	880	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		10.5	10.5	15.7	15.7	15.7	7.2	35.1		16.7	44.6	
Effective Green, g (s)		10.5	10.5	15.7	15.7	15.7	7.2	35.1		16.7	44.6	
Actuated g/C Ratio		0.11	0.11	0.17	0.17	0.17	0.08	0.37		0.18	0.47	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)		200	174	567	259	248	134	1859		311	1639	
v/s Ratio Prot		c0.09		c0.10	0.04		0.03	0.21		c0.11	c0.25	
v/s Ratio Perm			0.01			0.02						
v/c Ratio		0.78	0.09	0.59	0.22	0.10	0.38	0.57		0.65	0.54	
Uniform Delay, d1		41.1	38.0	36.7	34.4	33.6	41.8	23.9		36.4	17.9	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2		17.7	0.2	1.6	0.4	0.2	0.7	1.3		3.4	0.4	
Delay (s)		58.8	38.2	38.2	34.8	33.8	42.4	25.1		39.8	18.3	
Level of Service		E	D	D	C	C	D	C		D	B	
Approach Delay (s)		48.8			36.4			25.9			22.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

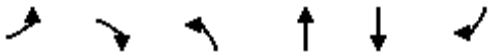
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	915	0	0	974	43	316	182	1019	37	0	244
Future Volume (vph)	212	915	0	0	974	43	316	182	1019	37	0	244
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
Lane Util. Factor		0.95			0.95		1.00	0.95	0.95	1.00		1.00
Frt		1.00			0.99		1.00	0.89	0.85	1.00		0.85
Flt Protected		0.99			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)		3506			3517		1770	1583	1504	1770		1583
Flt Permitted		0.55			1.00		0.95	1.00	1.00	0.22		1.00
Satd. Flow (perm)		1952			3517		1770	1583	1504	414		1583
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)	230	995	0	0	1059	47	343	198	1108	40	0	265
RTOR Reduction (vph)	0	0	0	0	4	0	0	154	360	0	0	178
Lane Group Flow (vph)	0	1225	0	0	1102	0	343	509	283	40	0	87
Turn Type	Prot	NA			NA		Perm	NA	Perm	Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases							2		2	6		6
Actuated Green, G (s)		29.0			29.0		18.0	18.0	18.0	18.0		18.0
Effective Green, g (s)		29.0			29.0		18.0	18.0	18.0	18.0		18.0
Actuated g/C Ratio		0.53			0.53		0.33	0.33	0.33	0.33		0.33
Clearance Time (s)		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
Lane Grp Cap (vph)		1029			1854		579	518	492	135		518
v/s Ratio Prot					0.31			c0.32				
v/s Ratio Perm		c0.63					0.19		0.19	0.10		0.05
v/c Ratio		1.19			0.59		0.59	0.98	0.58	0.30		0.17
Uniform Delay, d1		13.0			8.9		15.4	18.3	15.3	13.8		13.2
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		95.5			0.5		1.6	34.8	1.6	1.2		0.2
Delay (s)		108.5			9.5		17.1	53.2	17.0	15.0		13.3
Level of Service		F			A		B	D	B	B		B
Approach Delay (s)		108.5			9.5			31.5			13.5	
Approach LOS		F			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	283	47	38	490	771	284
Future Volume (vph)	283	47	38	490	771	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1770	3539	3539	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	283	47	38	490	771	284
RTOR Reduction (vph)	0	37	0	0	0	113
Lane Group Flow (vph)	283	10	38	490	771	171
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		1	6	2	
Permitted Phases		4				2
Actuated Green, G (s)	20.3	20.3	4.6	65.7	57.1	57.1
Effective Green, g (s)	20.3	20.3	4.6	65.7	57.1	57.1
Actuated g/C Ratio	0.21	0.21	0.05	0.69	0.60	0.60
Clearance Time (s)	4.0	4.0	4.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	2.0	4.0	4.0	4.0
Lane Grp Cap (vph)	378	338	85	2447	2127	951
v/s Ratio Prot	c0.16		c0.02	0.14	c0.22	
v/s Ratio Perm		0.01				0.11
v/c Ratio	0.75	0.03	0.45	0.20	0.36	0.18
Uniform Delay, d1	35.0	29.6	44.0	5.2	9.7	8.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.9	0.0	1.4	0.2	0.5	0.4
Delay (s)	42.9	29.6	45.3	5.4	10.1	8.9
Level of Service	D	C	D	A	B	A
Approach Delay (s)	41.0			8.3	9.8	
Approach LOS	D			A	A	

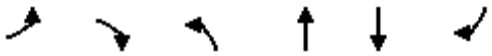
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	117	600	162	150	387	80
Future Volume (vph)	117	600	162	150	387	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	3433	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	3433	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	117	600	162	150	387	80
RTOR Reduction (vph)	0	265	0	0	0	67
Lane Group Flow (vph)	117	335	162	150	387	13
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Actuated Green, G (s)	53.0	53.0	13.0	70.0	16.0	16.0
Effective Green, g (s)	53.0	53.0	13.0	70.0	16.0	16.0
Actuated g/C Ratio	0.56	0.56	0.14	0.74	0.17	0.17
Clearance Time (s)	5.0	5.0	4.0	5.0	4.0	4.0
Vehicle Extension (s)	4.0	4.0	2.0	4.0	3.0	3.0
Lane Grp Cap (vph)	1974	883	242	2607	578	266
v/s Ratio Prot	0.03		c0.09	0.04	c0.11	
v/s Ratio Perm		c0.21				0.01
v/c Ratio	0.06	0.38	0.67	0.06	0.67	0.05
Uniform Delay, d1	9.6	11.8	39.0	3.4	37.0	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.2	5.4	0.0	2.9	0.1
Delay (s)	9.7	13.0	44.3	3.4	40.0	33.2
Level of Service	A	B	D	A	D	C
Approach Delay (s)	12.5			24.7	38.8	
Approach LOS	B			C	D	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

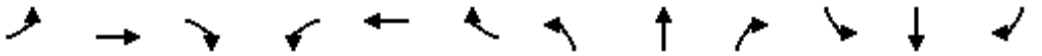
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	221	119	22	1	25	786
Future Volume (vph)	221	119	22	1	25	786
Ideal Flow (vphpl)	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	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1583		1778	1863	1583
Flt Permitted	0.95	1.00		0.85	1.00	1.00
Satd. Flow (perm)	1770	1583		1578	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	221	119	22	1	25	786
RTOR Reduction (vph)	0	79	0	0	0	0
Lane Group Flow (vph)	221	40	0	23	25	786
Turn Type	Prot	Perm	Perm	NA	NA	pt+ov
Protected Phases	4			2	6	6 4
Permitted Phases		4	2			
Actuated Green, G (s)	11.8	11.8		15.3	15.3	35.1
Effective Green, g (s)	11.8	11.8		15.3	15.3	35.1
Actuated g/C Ratio	0.34	0.34		0.44	0.44	1.00
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)	595	532		687	812	1583
v/s Ratio Prot	0.12				0.01	c0.50
v/s Ratio Perm		0.03		0.01		
v/c Ratio	0.37	0.08		0.03	0.03	0.50
Uniform Delay, d1	8.8	7.9		5.7	5.7	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1		0.0	0.0	0.2
Delay (s)	9.2	8.0		5.7	5.7	0.2
Level of Service	A	A		A	A	A
Approach Delay (s)	8.8			5.7	0.4	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	2.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	35.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

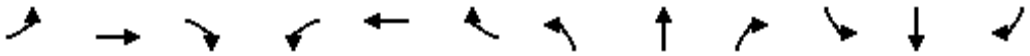
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	1	0	0	126	10	0	0	0	2	0	10
Future Volume (vph)	105	1	0	0	126	10	0	0	0	2	0	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	105	1	0	0	126	10	0	0	0	2	0	10

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	106	126	10	0	2	10
Volume Left (vph)	105	0	0	0	2	0
Volume Right (vph)	0	0	10	0	0	10
Hadj (s)	0.23	0.03	-0.67	0.00	0.53	-0.67
Departure Headway (s)	4.9	4.6	3.9	5.1	5.6	4.4
Degree Utilization, x	0.14	0.16	0.01	0.00	0.00	0.01
Capacity (veh/h)	727	759	905	677	605	766
Control Delay (s)	8.7	7.3	5.8	8.1	7.4	6.3
Approach Delay (s)	8.7	7.2		0.0	6.5	
Approach LOS	A	A		A	A	

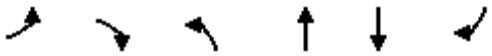
Intersection Summary				
Delay	7.8			
Level of Service	A			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	192	1	3	3	0	8	3	304	0	6	529	300
Future Volume (vph)	192	1	3	3	0	8	3	304	0	6	529	300
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	
Lane Util. Factor	1.00	0.95	0.95		1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.93	0.85		0.90		1.00	1.00		1.00	0.95	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1637	1504		1657		1770	3539		1770	3347	
Flt Permitted	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1637	1504		1657		1770	3539		1770	3347	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	192	1	3	3	0	8	3	304	0	6	529	300
RTOR Reduction (vph)	0	1	2	0	11	0	0	0	0	0	52	0
Lane Group Flow (vph)	192	1	0	0	0	0	3	304	0	6	777	0
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	11.5	11.5	11.5		0.5		0.6	24.0		0.7	24.1	
Effective Green, g (s)	11.5	11.5	11.5		0.5		0.6	24.0		0.7	24.1	
Actuated g/C Ratio	0.22	0.22	0.22		0.01		0.01	0.46		0.01	0.46	
Clearance Time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	2.0	2.0	2.0		2.0		2.0	4.0		2.0	4.0	
Lane Grp Cap (vph)	386	357	328		15		20	1611		23	1530	
v/s Ratio Prot	c0.11	0.00			c0.00		0.00	0.09		c0.00	c0.23	
v/s Ratio Perm			0.00									
v/c Ratio	0.50	0.00	0.00		0.01		0.15	0.19		0.26	0.51	
Uniform Delay, d1	18.1	16.1	16.1		25.9		25.8	8.5		25.7	10.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.0	0.0		0.1		1.3	0.1		2.2	0.4	
Delay (s)	18.4	16.1	16.1		25.9		27.1	8.6		27.9	10.5	
Level of Service	B	B	B		C		C	A		C	B	
Approach Delay (s)		18.4			25.9			8.8			10.6	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	25	4	6	250	384	69
Future Volume (vph)	25	4	6	250	384	69
Ideal Flow (vphpl)	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	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	0.96		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1753		1770	1863	1863	1583
Flt Permitted	0.96		0.95	1.00	1.00	1.00
Satd. Flow (perm)	1753		1770	1863	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	25	4	6	250	384	69
RTOR Reduction (vph)	4	0	0	0	0	41
Lane Group Flow (vph)	25	0	6	250	384	28
Turn Type	Prot		Prot	NA	NA	Perm
Protected Phases	8		1	6	2	
Permitted Phases						2
Actuated Green, G (s)	0.5		0.4	13.2	8.8	8.8
Effective Green, g (s)	0.5		0.4	13.2	8.8	8.8
Actuated g/C Ratio	0.02		0.02	0.61	0.41	0.41
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	2.0		1.8	3.0	3.0	3.0
Lane Grp Cap (vph)	40		32	1133	755	641
v/s Ratio Prot	c0.01		0.00	c0.13	c0.21	
v/s Ratio Perm						0.02
v/c Ratio	0.63		0.19	0.22	0.51	0.04
Uniform Delay, d1	10.5		10.5	1.9	4.8	3.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	20.0		1.0	0.1	0.5	0.0
Delay (s)	30.5		11.5	2.0	5.4	3.9
Level of Service	C		B	A	A	A
Approach Delay (s)	30.5			2.2	5.2	
Approach LOS	C			A	A	

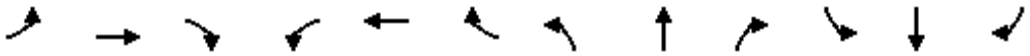
Intersection Summary			
HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	21.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	10	146	173	286
Demand Flow Rate, veh/h	10	149	177	291
Vehicles Circulating, veh/h	357	153	27	104
Vehicles Exiting, veh/h	38	51	340	198
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.7	5.3	4.8	6.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	10	149	177	291
Cap Entry Lane, veh/h	791	970	1100	1018
Entry HV Adj Factor	1.000	0.977	0.978	0.983
Flow Entry, veh/h	10	146	173	286
Cap Entry, veh/h	791	947	1076	1001
V/C Ratio	0.013	0.154	0.161	0.286
Control Delay, s/veh	4.7	5.3	4.8	6.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	1	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	4	17	113	118	91	12	50	10	17	2	15	6
Future Volume (vph)	4	17	113	118	91	12	50	10	17	2	15	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	17	113	118	91	12	50	10	17	2	15	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	134	221	77	23
Volume Left (vph)	4	118	50	2
Volume Right (vph)	113	12	17	6
Hadj (s)	-0.47	0.11	0.03	-0.11
Departure Headway (s)	3.9	4.4	4.7	4.7
Degree Utilization, x	0.15	0.27	0.10	0.03
Capacity (veh/h)	882	791	704	700
Control Delay (s)	7.6	9.0	8.3	7.8
Approach Delay (s)	7.6	9.0	8.3	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	41.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	938	246	344	11	71	523
Future Volume (vph)	938	246	344	11	71	523
Ideal Flow (vphpl)	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	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	3539	1583	1770	3539
Flt Permitted	0.95	1.00	1.00	1.00	0.53	1.00
Satd. Flow (perm)	3433	1583	3539	1583	986	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1020	267	374	12	77	568
RTOR Reduction (vph)	0	154	0	8	0	0
Lane Group Flow (vph)	1020	113	374	4	77	568
Turn Type	Prot	Perm	NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	14.3	14.3	11.4	11.4	11.4	11.4
Effective Green, g (s)	14.3	14.3	11.4	11.4	11.4	11.4
Actuated g/C Ratio	0.42	0.42	0.34	0.34	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)	1456	671	1197	535	333	1197
v/s Ratio Prot	c0.30		0.11			c0.16
v/s Ratio Perm		0.07		0.00	0.08	
v/c Ratio	0.70	0.17	0.31	0.01	0.23	0.47
Uniform Delay, d1	7.9	6.0	8.3	7.4	8.0	8.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.1	0.2	0.0	0.4	0.3
Delay (s)	9.5	6.1	8.4	7.4	8.4	9.1
Level of Service	A	A	A	A	A	A
Approach Delay (s)	8.8		8.4			9.0
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	33.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Travel Model

DKS

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MEMORANDUM

DATE: December 14, 2017

TO: City of Hercules

FROM: DKS Project Team

SUBJECT: Application of CCTA Travel Model for Hercules Circulation Element

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This memorandum describes application of the CCTA Travel Model in analyses for the Hercules Circulation Element update. Land use inputs to the model were reviewed by city staff and adjusted to more accurately represent the build-out scenario for 2040. The roadway network was reviewed and detail added to accurately represent study intersections. The travel model was then run for two different transportation network scenarios (no-build and preferred alternative) to provide inputs to the intersection level-of-service calculations.

LAND USE

Land use inputs to the CCTA Travel Model were reviewed by City of Hercules staff to better reflect the remaining land capacity and expected buildout through 2040.

1. Data from the "P2013" version of the CCTA travel model master land use file was exported to spreadsheet and GIS format for review by City of Hercules staff. To facilitate City review, the number of jobs in each employment category was converted to the equivalent square feet of development using 500 square feet (sf) per retail job, 275 sf per service or other job, and 600 sf per agricultural, manufacturing, or wholesale trade job.
2. City staff reviewed the land use information, focusing on the change in dwelling units and change in square feet of retail, office, and industrial development from 2010 to 2040 in each Transportation Analysis Zone (TAZ).
3. Following the review by City staff, revisions to the land use "deltas" were translated into revised model inputs for each TAZ as follows.
    a. Dwelling units – Revised deltas for 2040 single and multi-family dwelling units (SFDUs, MFDUs) were added to the 2010 values
    b. Total households – Total of revised 2040 SFDUs and MFDUs

c. Total population – Revised total 2040 households times previously existing ratio of total population to total households

d. Employed residents - Revised total 2040 households times previously existing ratio of employed residents to total households

e. Retail jobs – Revised 2040 retail sf divided by 500 sf/job.

f. Office jobs - Service employment was calculated as the revised 2040 office square footage times the previously existing ratio of service employment to total "office" (service and other) employment divided by 275 sf/job. Other employment was calculated in a similar manner.

g. Industrial employment – Manufacturing employment was calculated as the revised 2040 industrial square footage divided by 600 sf/job times the previously existing ratio of manufacturing to total industrial (manufacturing, agricultural, and trade) employment. Agricultural and trade employment were calculated in a similar manner.

4. The master land use file for the CCTA model (CCTA_MasterLandUse_p2013.dbd) was updated with the new 2040 forecast year land use inputs for Hercules. Because the CCTA Travel Model interpolates between land use inputs given in ten year increments, values for 2020 and 2030 were updated as well. The intermediate forecast years were updating by adding one third of the 2010-2040 increment for each variable to the 2020 attributes and two-thirds of the 2010-2040 increment to the 2030 attributes.

Summary of Revisions to Hercules Land Use Inputs

Table 1 compares original and revised population and employment inputs for the forecast year of 2040 within the City of Hercules. Notably, the expected number of SFDUs was revised downward by approximately 1,400, with concurrent impacts to total households, population, and employed residents. While total employment changed by only 177, the City expects relatively more retail and manufacturing jobs to be present.

Table 1. Summary of Land Use Input Revisions

	Original CCTA Inputs	City of Hercules Revised	Difference
Total households	12,900	11,673	(1,227)
Total population	39,974	36,552	(3,422)
Employed residents	17,389	15,535	(1,854)
Single family dwelling units	8,411	6,995	(1,416)
Multi family dwelling units	4,489	4,678	189
Total employment	7,263	7,440	177
Retail employment	1,044	1,605	561
Service Employment	3,157	2,522	(635)
Other Employment	2,007	1,735	(272)
Agricultural Employment	3	3	-
Manufacturing Employment	986	1,480	494
Trade Employment	64	95	31

TRANSPORTATION NETWORK

The master geographic database representing the roadway network in the CCTA model was modified so that all study intersections were adequately represented. The following facilities were added to the no-build scenario network:

- Extension of John Muir Parkway to intersect with Bayfront Boulevard
- Extension of Sycamore Avenue to Railroad Avenue
- Railroad Avenue between Santa Fe Avenue and Sycamore Avenue
- Palm Avenue between Willow Avenue and Sycamore Avenue
- Willow Avenue ramps to/from eastbound SR 4
- Sycamore Avenue ramps to/from westbound SR 4

In addition, various centroid connectors were added or realigned to better represent the intersections of Linus Pauling Drive and San Pablo Avenue, Hawthorne Drive and Willow Avenue.

A version of the roadway geographic database including the preferred alternative was also created. This version incorporated the proposed new off-ramp from eastbound I-80 to Sycamore Avenue and the relocation of the Willow Avenue ramps from eastbound I-80 and to eastbound SR 4.

2040 Buildout Assumptions

CCTA Model Transportation Analysis Zones

City of Hercules Circulation Element Update 2018

32 SFDU
8 MFDU
0 Jobs

355 SFDU
92 MFDU
0 Jobs

37 SFDU
10 MFDU
786 Jobs

135 SFDU
35 MFDU
0 Jobs

21 SFDU
5 MFDU
674 Jobs

0 SFDU
305 MFDU
303 Jobs

6 SFDU
751 MFDU
39 Jobs

0 SFDU
0 MFDU
877 Jobs

127 SFDU
33 MFDU
6 Jobs

140 SFDU
450 MFDU
49 Jobs

75 SFDU
10 MFDU
14 Jobs

11 SFDU
338 MFDU
298 Jobs

264 SFDU
16 MFDU
61 Jobs

29 SFDU
4 MFDU
16 Jobs

406 SFDU
213 MFDU
72 Jobs

83 SFDU
11 MFDU
5 Jobs

80 SFDU
11 MFDU
4 Jobs

12 SFDU
2 MFDU
36 Jobs

186 SFDU
24 MFDU
0 Jobs

0 SFDU
255 MFDU
401 Jobs

0 SFDU
200 MFDU
347 Jobs

243 SFDU
32 MFDU
0 Jobs

57 SFDU
7 MFDU
0 Jobs

122 SFDU
16 MFDU
47 Jobs

33 SFDU
4 MFDU
21 Jobs

55 SFDU
0 MFDU
332 Jobs

0 SFDU
0 MFDU
33 Jobs

0 SFDU
400 MFDU
802 Jobs

0 SFDU
450 MFDU
78 Jobs

300 SFDU
36 MFDU
89 Jobs

24 SFDU
12 MFDU
202 Jobs

39 SFDU
109 MFDU
496 Jobs

0 SFDU
0 MFDU
26 Jobs

130 SFDU
6 MFDU
26 Jobs

476 SFDU
395 MFDU
0 Jobs

527 SFDU
24 MFDU
0 Jobs

876 SFDU
135 MFDU
0 Jobs

3 SFDU
0 MFDU
247 Jobs

573 SFDU
16 MFDU
0 Jobs

187 SFDU
5 MFDU
19 Jobs

180 SFDU
2 MFDU
4 Jobs

636 SFDU
77 MFDU
547 Jobs

535 SFDU
179 MFDU
4 Jobs

N
W E
S

0 0.175 0.35 0.7 Miles

Sources: Contra Costa County GIS, Census

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

2040 Buildout Assumption Calculations

	2010 Model Inputs									2040 Model Inputs													
CCTA_TAZ	Single family dwelling units	Multi family dwelling units	Total Employment	Retail Employment	Service Employment	Other Employment	Agricultural Employment	Mfg. Employment	Trade Employment	Total Households	Single Family Dwelling Units	Revised SFDUs	Multi Family Dwelling Units	Revised MFDUs	Total Employment	Revised Total Employment	Retail Employment	Revised Retail Employment	Service Employment	Other Employment	Revised Service Employment	Revised Other Employment
10236	275	36	89	5	19	37	0	27	1	400	303	300	97	36	135	89	13	5	47	45	29	27
10237	57	7	0	0	0	0	0	0	0	75	58	57	17	7	1	0	0	0	0	0	0	0
10239	83	11	4	0	1	3	0	0	1	184	111	83	73	11	63	5	8	0	34	8	3	1
10241	32	8	0	0	0	0	0	0	0	45	33	32	12	8	0	0	0	0	0	0	0	0
10242	6	1	29	1	9	13	0	5	1	132	45	6	87	751	110	39	12	11	55	21	16	6
10243	243	32	0	0	0	0	0	0	0	298	250	243	48	32	0	0	0	0	0	0	0	0
10244	535	179	4	0	0	0	0	4	0	754	636	535	118	179	4	4	0	0	0	0	0	0
10245	180	2	4	0	0	0	0	4	0	215	214	180	1	2	5	4	0	0	0	0	0	0
10246	122	16	46	25	7	8	0	5	1	203	140	122	63	16	81	47	34	25	28	12	11	5
10247	0	0	42	1	8	21	0	11	1	84	26	55	58	0	95	332	9	273	41	26	29	18
10248	186	24	0	0	0	0	0	0	0	389	241	186	148	24	116	0	17	0	67	12	0	0
10249	120	16	51	0	10	29	0	11	1	363	191	264	172	16	198	61	21	10	94	43	27	12
10250	0	0	877	15	388	257	0	211	6	64	20	0	44	0	937	877	24	15	407	286	379	266
10251	21	5	49	2	6	29	0	11	1	72	35	21	37	5	79	674	7	2	25	34	15	20
10252	37	10	787	12	411	196	0	163	4	52	38	37	14	10	800	786	13	12	400	219	392	215
10253	355	92	0	0	0	0	0	0	0	747	421	355	326	92	71	0	16	0	36	15	0	0
10254	135	35	0	0	0	0	0	0	0	266	161	135	105	35	47	0	8	0	31	6	0	0
10255	0	0	30	1	3	18	0	5	1	448	139	140	309	450	206	49	34	21	106	53	14	7
10256	0	0	0	0	0	0	0	0	0	128	40	0	88	255	51	401	10	110	30	10	218	73
10257	0	0	34	18	5	5	0	5	0	74	23	0	51	0	81	33	27	18	37	10	8	2
10258	476	395	0	0	0	0	0	0	0	1165	527	476	638	395	79	0	14	0	54	8	0	0
10259	636	77	547	91	340	116	0	0	0	806	756	636	50	77	675	547	97	91	481	97	379	77
10260	573	16	0	0	0	0	0	0	0	691	681	573	10	16	13	0	1	0	12	0	0	0
10261	187	5	20	2	17	0	0	0	0	225	222	187	3	5	48	19	3	2	44	0	17	0
10262	876	135	0	0	0	0	0	0	0	969	862	876	107	135	0	0	0	0	0	0	0	0
10263	527	24	0	0	0	0	0	0	0	518	511	527	7	24	361	0	91	0	205	56	0	0
10264	0	0	4	0	0	0	0	4	0	0	0	0	0	0	4	4	0	0	0	0	0	0
10265	0	0	26	3	1	19	0	0	3	187	59	0	128	0	116	26	36	3	46	30	12	8
10266	39	9	496	5	98	376	1	10	6	288	114	39	174	109	626	496	48	5	162	399	137	337
10267	24	12	192	69	24	89	0	2	6	382	132	24	250	12	380	202	145	81	111	114	56	57
10268	0	0	56	8	7	37	0	1	3	214	67	0	147	200	157	347	45	208	59	49	74	61
10269	0	0	127	49	16	60	0	2	2	255	80	0	175	400	247	802	93	449	77	73	179	170
10270	406	213	72	15	5	48	0	1	2	771	462	406	309	213	240	72	83	15	59	93	21	32
10271	0	0	1	1	0	0	0	0	0	421	180	0	241	450	164	78	59	41	85	19	30	7
10275	0	0	475	1	52	32	0	390	0	0	0	0	0	0	373	475	0	1	0	54	0	84
10301	3	0	247	27	105	108	2	4	1	6	6	3	0	0	274	247	29	27	148	91	132	81
10366	80	11	4	0	1	3	0	0	0	147	97	80	50	11	36	4	4	0	19	6	3	1
10367	11	2	4	0	1	3	0	0	1	92	36	11	56	338	54	298	7	20	29	8	217	60
10368	29	4	15	1	6	8	0	0	1	119	56	29	63	4	71	16	9	1	37	13	10	4
10369	75	10	13	0	5	8	0	0	1	161	99	75	62	10	62	14	7	0	32	13	9	4
10370	0	0	22	1	7	8	0	5	1	34	9	0	25	305	38	303	3	155	15	11	82	60
10371	33	4	21	0	5	10	0	5	1	71	42	33	29	4	39	21	3	0	16	14	8	7
10372	12	2	34	1	6	16	0	11	1	65	28	12	37	2	67	36	5	1	25	19	13	10
10373	127	33	6	0	0	5	0	0	1	185	132	127	53	33	7	6	0	0	0	6	0	5
10374	130	6	26	3	1	19	0	0	3	135	128	130	7	6	52	26	9	3	3	34	2	18
	6,631	1,432	4,454	357	1,564	1,581	3	897	51	12,900	8,411	6,995	4,489	4,678	7,263	7,440	1,044	1,605	3,157	2,007	2,522	1,735

2040 Buildout A

	2040 Model Inputs						Land Use Change 2010-2040					
CCTA_TAZ	Agricultural Employment	Mfg. Employment	Trade Employment	Revised Agricultural Employment	Revised Mfg. Employment	Revised Trade Employment	Projected new SFDU	Projected new MFDU	Projected Total new DUs	Projected Retail SF (500 per job)	Projected Office SF (275 per job)	Projected Industrial SF (600 per job)
10236	0	29	1	0	27	1	25	0	25	0	0	0
10237	0	0	0	0	0	0	0	0	0	0	0	0
10239	0	11	1	0	1	0	0	0	0	0	0	0
10241	0	0	0	0	0	0	0	0	0	0	0	0
10242	0	20	1	0	6	0	0	750	750	5,000	0	0
10243	0	0	0	0	0	0	0	0	0	0	0	0
10244	0	4	0	0	4	0	0	0	0	0	0	0
10245	0	4	1	0	3	1	0	0	0	0	0	0
10246	0	7	1	0	5	1	0	0	0	0	0	0
10247	0	18	1	0	11	1	55	0	55	136,000	5,000	0
10248	0	20	1	0	0	0	0	0	0	0	0	0
10249	0	38	2	0	11	1	144	0	144	5,000	0	0
10250	0	215	6	0	211	6	0	0	0	0	0	0
10251	0	12	1	0	588	49	0	0	0	0	0	375,000
10252	0	164	4	0	163	4	0	0	0	0	0	0
10253	0	4	0	0	0	0	0	0	0	0	0	0
10254	0	2	0	0	0	0	0	0	0	0	0	0
10255	0	11	1	0	6	1	140	450	590	10,000	0	0
10256	0	2	0	0	0	0	0	255	255	55,000	80,000	0
10257	0	7	0	0	5	0	0	0	0	0	0	0
10258	0	3	0	0	0	0	0	0	0	0	0	0
10259	0	0	0	0	0	0	0	0	0	0	0	0
10260	0	0	0	0	0	0	0	0	0	0	0	0
10261	0	0	1	0	0	0	0	0	0	0	0	0
10262	0	0	0	0	0	0	0	0	0	0	0	0
10263	0	4	4	0	0	0	0	0	0	0	0	0
10264	0	4	0	0	4	0	0	0	0	0	0	0
10265	0	1	3	0	1	2	0	0	0	0	0	0
10266	1	10	7	1	9	7	0	100	100	0	0	0
10267	0	3	7	0	2	6	0	0	0	6,000	0	0
10268	0	1	3	0	1	3	0	200	200	100,000	25,000	0
10269	0	2	2	0	2	2	0	400	400	200,000	75,000	0
10270	0	2	2	0	2	2	0	0	0	0	0	0
10271	0	0	0	0	0	0	0	450	450	20,000	10,000	0
10275	0	319	0	0	390	0	0	0	0	0	0	0
10301	2	4	1	2	4	1	0	0	0	0	0	0
10366	0	6	1	0	0	0	0	0	0	0	0	0
10367	0	9	1	0	1	0	0	336	336	10,000	75,000	0
10368	0	10	1	0	1	0	0	0	0	0	0	0
10369	0	9	1	0	1	0	0	0	0	0	0	0
10370	0	8	1	0	5	1	0	305	305	77,000	35,000	0
10371	0	6	1	0	5	1	0	0	0	0	0	0
10372	0	17	1	0	11	1	0	0	0	0	0	0
10373	0	0	1	0	0	1	0	0	0	0	0	0
10374	0	0	5	0	0	3	0	0	0	0	0	0
	3	986	64	3	1,480	95	364	3246	3610	624,000	305,000	375,000