Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	535	15	130	410	275	10	65	320	385	25	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3539	1518	3273	3438	1484	1770	1863	1533	1770	1592	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3539	1518	3273	3438	1484	1770	1863	1533	1770	1592	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	117	594	17	144	456	306	13	82	405	428	28	83
RTOR Reduction (vph)	0	0	8	0	0	124	0	0	189	0	45	0
Lane Group Flow (vph)	117	594	9	144	456	182	13	82	216	428	66	0
Confl. Peds. (#/hr)			13			12			10			20
Confl. Bikes (#/hr)			3			2			1		1	
Heavy Vehicles (%)	5%	2%	2%	7%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	10.4	24.1	24.1	17.7	31.4	31.4	1.6	22.5	22.5	29.7	50.6	
Effective Green, g (s)	10.4	24.1	24.1	17.7	31.4	31.4	1.6	22.5	22.5	29.7	50.6	
Actuated g/C Ratio	0.09	0.22	0.22	0.16	0.29	0.29	0.01	0.20	0.20	0.27	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	775	333	527	981	424	26	381	314	478	732	
v/s Ratio Prot	0.07	c0.17		0.04	c0.13		0.01	0.04		c0.24	0.04	
v/s Ratio Perm			0.01			0.12			c0.14			
v/c Ratio	0.72	0.77	0.03	0.27	0.46	0.43	0.50	0.22	0.69	0.90	0.09	
Uniform Delay, d1	48.4	40.3	33.7	40.5	32.4	32.0	53.8	36.4	40.5	38.7	16.7	
Progression Factor	1.00	1.00	1.00	0.74	0.68	0.84	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.0	4.6	0.0	0.3	1.5	3.0	14.3	1.3	11.6	18.9	0.2	
Delay (s)	62.4	44.9	33.8	30.4	23.5	29.8	68.1	37.7	52.1	57.6	17.0	
Level of Service	E	D	C	C	C	C	E	D	D	E	B	
Approach Delay (s)		47.4			26.7			50.2			49.2	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	105	1115	775	270	155	40
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1497	1770	1547
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1497	1770	1547
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.86	0.86
Adj. Flow (vph)	113	1199	861	300	180	47
RTOR Reduction (vph)	0	0	0	45	0	40
Lane Group Flow (vph)	113	1199	861	255	180	7
Confl. Peds. (#/hr)				8		4
Confl. Bikes (#/hr)				13		2
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	12.3	85.5	69.2	69.2	16.5	16.5
Effective Green, g (s)	12.3	85.5	69.2	69.2	16.5	16.5
Actuated g/C Ratio	0.11	0.78	0.63	0.63	0.15	0.15
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)	198	2751	2226	942	266	232
v/s Ratio Prot	c0.06	c0.34	0.24		c0.10	
v/s Ratio Perm				0.17		0.00
v/c Ratio	0.57	0.44	0.39	0.27	0.68	0.03
Uniform Delay, d1	46.3	4.1	10.0	9.1	44.2	39.9
Progression Factor	1.08	0.37	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	0.3	0.5	0.7	6.7	0.1
Delay (s)	52.9	1.9	10.5	9.8	50.9	40.0
Level of Service	D	A	B	A	D	D
Approach Delay (s)		6.3	10.3		48.6	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.7%	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												
Volume (vph)	115	715	405	35	950	70	145	45	25	100	100	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.97	1.00	1.00	0.90
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1528	1770	3539	1479	1770	1863	1534	1719	1863	1422
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1528	1770	3539	1479	1770	1863	1534	1719	1863	1422
Peak-hour factor, PHF	0.85	0.85	0.85	0.90	0.90	0.90	0.67	0.67	0.67	0.80	0.80	0.80
Adj. Flow (vph)	135	841	476	39	1056	78	216	67	37	125	125	212
RTOR Reduction (vph)	0	0	65	0	0	9	0	0	22	0	0	117
Lane Group Flow (vph)	135	841	411	39	1056	69	216	67	15	125	125	95
Confl. Peds. (#/hr)			4			9			4			16
Confl. Bikes (#/hr)		1	5		1	2		2	12		11	44
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	2%	2%	5%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.4	43.9	43.9	3.2	35.7	35.7	15.9	20.1	20.1	9.6	13.8	13.8
Effective Green, g (s)	11.4	43.9	43.9	3.2	35.7	35.7	15.9	20.1	20.1	9.6	13.8	13.8
Actuated g/C Ratio	0.12	0.47	0.47	0.03	0.38	0.38	0.17	0.22	0.22	0.10	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	217	1674	723	61	1361	569	303	404	332	178	277	211
v/s Ratio Prot	c0.08	0.24		0.02	c0.30		c0.12	0.04		0.07	c0.07	
v/s Ratio Perm			0.27			0.05			0.01			0.07
v/c Ratio	0.62	0.50	0.57	0.64	0.78	0.12	0.71	0.17	0.05	0.70	0.45	0.45
Uniform Delay, d1	38.7	16.9	17.6	44.2	25.0	18.4	36.3	29.5	28.8	40.2	36.0	36.0
Progression 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
Incremental Delay, d2	5.5	0.2	1.0	19.9	2.8	0.1	7.7	0.2	0.1	11.8	1.2	1.5
Delay (s)	44.1	17.1	18.7	64.2	27.9	18.5	44.0	29.7	28.8	52.1	37.2	37.6
Level of Service	D	B	B	E	C	B	D	C	C	D	D	D
Approach Delay (s)		20.1			28.5			39.3			41.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	92.8	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	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	680	140	145	675	35	170	130	55	50	205	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3539	1519	1770	3539	1418	1703	1759	1465	1770	3343	1531
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3539	1519	1770	3539	1418	1703	1759	1465	1770	3343	1531
Peak-hour factor, PHF	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	34	773	159	159	742	38	191	146	62	56	228	111
RTOR Reduction (vph)	0	0	25	0	0	18	0	0	37	0	0	62
Lane Group Flow (vph)	34	773	134	159	742	20	191	146	25	56	228	49
Confl. Peds. (#/hr)			3			4			4			13
Confl. Bikes (#/hr)		2	8		3	5		2	73		71	1
Heavy Vehicles (%)	7%	2%	4%	2%	2%	10%	6%	8%	2%	2%	8%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	25.9	25.9	12.3	35.0	35.0	14.1	23.2	23.2	4.2	13.3	13.3
Effective Green, g (s)	3.2	25.9	25.9	12.3	35.0	35.0	14.1	23.2	23.2	4.2	13.3	13.3
Actuated g/C Ratio	0.04	0.32	0.32	0.15	0.43	0.43	0.17	0.28	0.28	0.05	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	66	1123	482	267	1518	608	294	500	417	91	545	250
v/s Ratio Prot	0.02	c0.22		c0.09	0.21		c0.11	0.08		0.03	c0.07	
v/s Ratio Perm			0.09			0.01			0.02			0.03
v/c Ratio	0.52	0.69	0.28	0.60	0.49	0.03	0.65	0.29	0.06	0.62	0.42	0.20
Uniform Delay, d1	38.4	24.3	20.9	32.3	16.8	13.5	31.4	22.8	21.3	37.9	30.7	29.5
Progression 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
Incremental Delay, d2	6.6	1.8	0.3	3.5	0.2	0.0	4.9	0.3	0.1	11.7	0.5	0.4
Delay (s)	45.1	26.1	21.2	35.9	17.1	13.5	36.3	23.1	21.3	49.6	31.2	29.9
Level of Service	D	C	C	D	B	B	D	C	C	D	C	C
Approach Delay (s)		26.0			20.1			29.2			33.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	81.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	520	225	280	650	150	195
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1489	1770	3539	1770	1563
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1489	1770	3539	1770	1563
Peak-hour factor, PHF	0.79	0.79	0.85	0.85	0.56	0.56
Adj. Flow (vph)	658	285	329	765	268	348
RTOR Reduction (vph)	0	57	0	0	0	278
Lane Group Flow (vph)	658	228	329	765	268	70
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)		14				1
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	19.0	19.0	18.2	41.2	15.4	15.4
Effective Green, g (s)	19.0	19.0	18.2	41.2	15.4	15.4
Actuated g/C Ratio	0.25	0.25	0.24	0.54	0.20	0.20
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)	878	369	421	1903	356	314
v/s Ratio Prot	c0.19		c0.19	0.22	c0.15	
v/s Ratio Perm		0.15				0.04
v/c Ratio	0.75	0.62	0.78	0.40	0.75	0.22
Uniform Delay, d1	26.6	25.6	27.3	10.4	28.8	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	3.1	9.1	0.1	8.7	0.4
Delay (s)	30.1	28.6	36.5	10.6	37.5	26.0
Level of Service	C	C	D	B	D	C
Approach Delay (s)	29.7			18.4	31.0	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	76.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	670	845	195	175	85
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1459	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1459	1770	1583
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.73	0.73
Adj. Flow (vph)	59	882	939	217	240	116
RTOR Reduction (vph)	0	0	0	19	0	88
Lane Group Flow (vph)	59	882	939	198	240	28
Confl. Peds. (#/hr)				11		
Confl. Bikes (#/hr)			15			
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.2	36.0	27.8	27.8	16.2	16.2
Effective Green, g (s)	4.2	36.0	27.8	27.8	16.2	16.2
Actuated g/C Ratio	0.06	0.55	0.42	0.42	0.25	0.25
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)	113	1930	1491	615	434	389
v/s Ratio Prot	0.03	c0.25	c0.27		c0.14	
v/s Ratio Perm				0.14		0.02
v/c Ratio	0.52	0.46	0.63	0.32	0.55	0.07
Uniform Delay, d1	29.9	9.1	15.0	12.8	21.7	19.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	0.2	0.8	0.3	1.5	0.1
Delay (s)	34.2	9.3	15.9	13.1	23.3	19.2
Level of Service	C	A	B	B	C	B
Approach Delay (s)		10.8	15.4		21.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	46.4%	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												
Volume (vph)	30	580	235	395	900	105	60	90	185	215	190	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1539	3400	3539	1522	1752	1863	1522	1770	1863	1442
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1539	3400	3539	1522	1752	1863	1522	1770	1863	1442
Peak-hour factor, PHF	0.78	0.78	0.78	0.90	0.90	0.90	0.80	0.80	0.80	0.90	0.90	0.90
Adj. Flow (vph)	38	744	301	439	1000	117	75	112	231	239	211	89
RTOR Reduction (vph)	0	0	61	0	0	9	0	0	146	0	0	25
Lane Group Flow (vph)	38	744	240	439	1000	108	75	112	85	239	211	64
Confl. Peds. (#/hr)			2			6			10			20
Confl. Bikes (#/hr)			2		3	2						9
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	3%	2%	3%	2%	2%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	28.9	28.9	17.1	42.8	42.8	7.0	12.8	12.8	17.7	23.5	23.5
Effective Green, g (s)	3.2	28.9	28.9	17.1	42.8	42.8	7.0	12.8	12.8	17.7	23.5	23.5
Actuated g/C Ratio	0.03	0.31	0.31	0.18	0.46	0.46	0.08	0.14	0.14	0.19	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	61	1106	481	629	1638	704	133	258	211	339	473	366
v/s Ratio Prot	0.02	c0.21		c0.13	0.28		0.04	0.06		c0.14	c0.11	
v/s Ratio Perm			0.16			0.07			0.06			0.04
v/c Ratio	0.62	0.67	0.50	0.70	0.61	0.15	0.56	0.43	0.40	0.71	0.45	0.17
Uniform Delay, d1	44.1	27.7	25.9	35.3	18.6	14.4	41.3	36.5	36.4	35.0	29.0	26.9
Progression 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
Incremental Delay, d2	18.1	1.6	0.8	3.4	0.7	0.1	5.4	1.2	1.2	6.5	0.7	0.2
Delay (s)	62.2	29.3	26.7	38.7	19.3	14.5	46.7	37.7	37.6	41.5	29.7	27.2
Level of Service	E	C	C	D	B	B	D	D	D	D	C	C
Approach Delay (s)		29.7			24.4			39.3			34.5	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	92.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	0	895	85	120	1330	0	70	0	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0			
Lane Util. Factor		0.95	1.00	1.00	0.95			1.00	1.00			
Frpb, ped/bikes		1.00	0.88	1.00	1.00			1.00	0.99			
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00	1.00			
Frt		1.00	0.85	1.00	1.00			1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3539	1357	1656	3539			1770	1562			
Flt Permitted		1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (perm)		3539	1357	1656	3539			1770	1562			
Peak-hour factor, PHF	0.92	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	0	994	94	133	1478	0	82	0	94	0	0	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	85	0	0	0
Lane Group Flow (vph)	0	994	80	133	1478	0	0	82	9	0	0	0
Confl. Peds. (#/hr)			47						1			
Confl. Bikes (#/hr)			5									
Heavy Vehicles (%)	2%	2%	5%	9%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)		28.5	28.5	8.2	40.7			6.6	6.6			
Effective Green, g (s)		28.5	28.5	8.2	40.7			6.6	6.6			
Actuated g/C Ratio		0.44	0.44	0.13	0.62			0.10	0.10			
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)		1542	591	208	2202			179	158			
v/s Ratio Prot		0.28		0.08	c0.42			c0.05				
v/s Ratio Perm			0.06						0.01			
v/c Ratio		0.64	0.14	0.64	0.67			0.46	0.06			
Uniform Delay, d1		14.5	11.1	27.2	8.0			27.7	26.6			
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00			
Incremental Delay, d2		0.9	0.1	6.3	0.8			1.9	0.2			
Delay (s)		15.4	11.2	33.5	8.8			29.6	26.8			
Level of Service		B	B	C	A			C	C			
Approach Delay (s)		15.0			10.9			28.1			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	18.1
Intersection Capacity Utilization	54.3%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	85	305	25	80	155	140	20	85	40	120	185	50
Peak Hour Factor	0.90	0.90	0.90	0.73	0.73	0.73	0.64	0.64	0.64	0.90	0.90	0.90
Hourly flow rate (vph)	94	339	28	110	212	192	31	133	62	133	206	56

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	94	367	110	404	164	63	339	56
Volume Left (vph)	94	0	110	0	31	0	133	0
Volume Right (vph)	0	28	0	192	0	63	0	56
Hadj (s)	0.53	-0.02	0.53	-0.28	0.18	-0.67	0.24	-0.67
Departure Headway (s)	8.3	7.7	8.2	7.4	8.6	7.8	8.2	7.3
Degree Utilization, x	0.22	0.79	0.25	0.83	0.39	0.13	0.77	0.11
Capacity (veh/h)	417	453	423	475	386	427	420	472
Control Delay (s)	12.4	32.7	12.8	36.4	15.9	10.8	32.6	10.0
Approach Delay (s)	28.6		31.3		14.5		29.4	
Approach LOS	D		D		B		D	

Intersection Summary				
Delay	27.6			
HCM Level of Service	D			
Intersection Capacity Utilization	55.2%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	180	220	105	385	255	55
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	225	275	131	481	319	69

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	225	275	131	481	388
Volume Left (vph)	0	0	131	0	319
Volume Right (vph)	0	275	0	0	69
Hadj (s)	0.03	-0.67	0.53	0.03	0.09
Departure Headway (s)	7.1	6.4	7.3	6.8	6.6
Degree Utilization, x	0.44	0.49	0.27	0.91	0.72
Capacity (veh/h)	491	547	480	522	523
Control Delay (s)	14.4	14.0	11.8	45.4	24.6
Approach Delay (s)	14.2		38.2		24.6
Approach LOS	B		E		C

Intersection Summary			
Delay	26.7		
HCM Level of Service	D		
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	185	105	125	150	380	460
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	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1484	1770	1792	1863	1477
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1484	1770	1792	1863	1477
Peak-hour factor, PHF	0.80	0.80	0.83	0.83	0.78	0.78
Adj. Flow (vph)	231	131	151	181	487	590
RTOR Reduction (vph)	0	104	0	0	0	336
Lane Group Flow (vph)	231	27	151	181	487	254
Confl. Peds. (#/hr)	66					15
Confl. Bikes (#/hr)		24		17	2	31
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	9.7	9.7	4.8	28.9	20.1	20.1
Effective Green, g (s)	9.7	9.7	4.8	28.9	20.1	20.1
Actuated g/C Ratio	0.21	0.21	0.10	0.62	0.43	0.43
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)	368	309	182	1111	804	637
v/s Ratio Prot	c0.13		c0.09	0.10	c0.26	
v/s Ratio Perm		0.02				0.17
v/c Ratio	0.63	0.09	0.83	0.16	0.61	0.40
Uniform Delay, d1	16.8	14.9	20.5	3.7	10.2	9.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.1	25.7	0.1	1.3	0.4
Delay (s)	20.1	15.0	46.2	3.8	11.5	9.5
Level of Service	C	B	D	A	B	A
Approach Delay (s)	18.3			23.1	10.4	
Approach LOS	B			C	B	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	46.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	30	30	105	15	25	145
Peak Hour Factor	0.65	0.65	0.89	0.89	0.74	0.74
Hourly flow rate (vph)	46	46	118	17	34	196

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	92	118	17	34	196
Volume Left (vph)	46	0	0	34	0
Volume Right (vph)	46	0	17	0	0
Hadj (s)	-0.17	0.03	-0.67	0.53	0.14
Departure Headway (s)	4.6	5.0	4.3	5.4	5.0
Degree Utilization, x	0.12	0.16	0.02	0.05	0.27
Capacity (veh/h)	726	704	814	647	705
Control Delay (s)	8.2	7.7	6.1	7.5	8.6
Approach Delay (s)	8.2	7.5		8.5	
Approach LOS	A	A		A	

Intersection Summary			
Delay	8.1		
HCM Level of Service	A		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	335	15	85	265	40	15	40	15	60	75	95
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		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.92		1.00	0.92		1.00	0.98		1.00	0.89
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		0.99	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1856	1287		1840	1422		1692	1547		1802	1366
Flt Permitted		0.95	1.00		0.59	1.00		0.91	1.00		0.85	1.00
Satd. Flow (perm)		1768	1287		1108	1422		1562	1547		1564	1366
Peak-hour factor, PHF	0.69	0.69	0.69	0.73	0.73	0.73	0.71	0.71	0.71	0.63	0.63	0.63
Adj. Flow (vph)	36	486	22	116	363	55	21	56	21	95	119	151
RTOR Reduction (vph)	0	0	13	0	0	33	0	0	13	0	0	91
Lane Group Flow (vph)	0	522	9	0	479	22	0	77	8	0	214	60
Confl. Peds. (#/hr)	12		3	3		12	9		1	1		9
Confl. Bikes (#/hr)		1	56		4	45		2	2		1	88
Heavy Vehicles (%)	2%	2%	16%	2%	2%	5%	20%	7%	2%	2%	4%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		707	515		443	569		625	619		626	546
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.01		c0.43	0.02		0.05	0.01		c0.14	0.04
v/c Ratio		0.74	0.02		1.08	0.04		0.12	0.01		0.34	0.11
Uniform Delay, d1		10.2	7.2		12.0	7.3		7.6	7.2		8.3	7.5
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		6.8	0.1		66.4	0.1		0.4	0.0		1.5	0.4
Delay (s)		17.0	7.3		78.4	7.4		8.0	7.3		9.8	7.9
Level of Service		B	A		E	A		A	A		A	A
Approach Delay (s)		16.6			71.1			7.8			9.0	
Approach LOS		B			E			A			A	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	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												
Volume (vph)	15	215	85	65	410	30	70	120	35	35	175	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			4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95	1.00	0.99			0.99			1.00	0.93
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt		1.00	0.85	1.00	0.99			0.98			1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)		1856	1505	1748	1827			1563			1845	1438
Flt Permitted		0.96	1.00	0.49	1.00			0.81			0.91	1.00
Satd. Flow (perm)		1781	1505	910	1827			1292			1691	1438
Peak-hour factor, PHF	0.68	0.68	0.68	0.80	0.80	0.80	0.76	0.76	0.76	0.65	0.65	0.65
Adj. Flow (vph)	22	316	125	81	512	38	92	158	46	54	269	31
RTOR Reduction (vph)	0	0	70	0	6	0	0	13	0	0	0	15
Lane Group Flow (vph)	0	338	55	81	544	0	0	283	0	0	323	16
Confl. Peds. (#/hr)	6		2	2		6	10		9	9		10
Confl. Bikes (#/hr)		2	29		2	110		3	10		8	33
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	2%	2%	14%	2%	2%	5%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		22.0	22.0	22.0	22.0			20.0			20.0	20.0
Effective Green, g (s)		22.0	22.0	22.0	22.0			20.0			20.0	20.0
Actuated g/C Ratio		0.44	0.44	0.44	0.44			0.40			0.40	0.40
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Grp Cap (vph)		784	662	400	804			517			676	575
v/s Ratio Prot					c0.30							
v/s Ratio Perm		0.19	0.04	0.09				c0.22			0.19	0.01
v/c Ratio		0.43	0.08	0.20	0.68			0.55			0.48	0.03
Uniform Delay, d1		9.7	8.1	8.6	11.2			11.5			11.1	9.1
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2		1.7	0.2	1.1	4.6			4.1			2.4	0.1
Delay (s)		11.4	8.4	9.7	15.7			15.6			13.5	9.2
Level of Service		B	A	A	B			B			B	A
Approach Delay (s)		10.6			15.0			15.6			13.2	
Approach LOS		B			B			B			B	

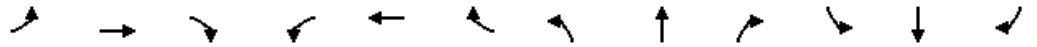
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	245	165	40	515	85	20	225	40	80	240	45
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	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.98			0.97		1.00	1.00	0.94	1.00	1.00	0.91
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95			0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1705			1764		1597	1776	1405	1770	1863	1437
Flt Permitted		0.96			0.93		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1642			1652		1597	1776	1405	1770	1863	1437
Peak-hour factor, PHF	0.68	0.68	0.68	0.76	0.76	0.76	0.84	0.84	0.84	0.78	0.78	0.78
Adj. Flow (vph)	22	360	243	53	678	112	24	268	48	103	308	58
RTOR Reduction (vph)	0	23	0	0	6	0	0	0	12	0	0	13
Lane Group Flow (vph)	0	602	0	0	837	0	24	268	36	103	308	45
Confl. Peds. (#/hr)	6		7	7		6			13			9
Confl. Bikes (#/hr)			37		14	237			2		2	39
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	13%	7%	8%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		51.9			51.9		1.3	21.4	21.4	8.3	28.4	28.4
Effective Green, g (s)		51.9			51.9		1.3	21.4	21.4	8.3	28.4	28.4
Actuated g/C Ratio		0.55			0.55		0.01	0.23	0.23	0.09	0.30	0.30
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)		910			916		22	406	321	157	565	436
v/s Ratio Prot							0.02	c0.15		c0.06	0.17	
v/s Ratio Perm		0.37			c0.51				0.03			0.03
v/c Ratio		0.66			0.91		1.09	0.66	0.11	0.66	0.55	0.10
Uniform Delay, d1		14.7			18.8		46.1	32.8	28.6	41.3	27.2	23.5
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8			13.3		221.9	4.0	0.2	9.5	1.1	0.1
Delay (s)		16.5			32.1		268.1	36.8	28.7	50.7	28.3	23.6
Level of Service		B			C		F	D	C	D	C	C
Approach Delay (s)		16.5			32.1			52.0			32.6	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	93.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	60	300	105	105	545	15	60	20	10	25	35	190
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	71	353	124	124	641	18	71	24	12	29	41	224

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	71	476	782	94	12	71	224
Volume Left (vph)	71	0	124	71	0	29	0
Volume Right (vph)	0	124	18	0	12	0	224
Hadj (s)	0.53	-0.15	0.08	0.18	-0.36	0.27	-0.63
Departure Headway (s)	7.4	6.8	7.1	8.8	3.2	8.2	7.3
Degree Utilization, x	0.15	0.89	1.54	0.23	0.01	0.16	0.45
Capacity (veh/h)	471	527	510	374	1121	423	476
Control Delay (s)	10.5	42.1	272.0	14.4	6.2	11.5	14.9
Approach Delay (s)	38.1		272.0	13.5		14.1	
Approach LOS	E		F	B		B	

Intersection Summary				
Delay	138.3			
HCM Level of Service	F			
Intersection Capacity Utilization	78.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	470	35	120	655	120	15	95	15	70	210	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.98		1.00	0.96	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3321			3404		1668	1559		1764	1564	
Flt Permitted		1.00			0.99		0.30	1.00		0.65	1.00	
Satd. Flow (perm)		3321			3404		528	1559		1204	1564	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	26	603	45	154	840	154	19	122	19	90	269	90
RTOR Reduction (vph)	0	7	0	0	16	0	0	7	0	0	16	0
Lane Group Flow (vph)	0	667	0	0	1132	0	19	134	0	90	343	0
Confl. Peds. (#/hr)	3		9	9		3	19		3	3		19
Confl. Bikes (#/hr)		1	1			8			2		1	24
Heavy Vehicles (%)	18%	7%	2%	2%	3%	2%	7%	5%	8%	2%	2%	2%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		16.0			26.0		21.0	21.0		21.0	21.0	
Effective Green, g (s)		16.0			26.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio		0.21			0.35		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		708			1180		148	437		337	438	
v/s Ratio Prot		c0.20			c0.33			0.09			c0.22	
v/s Ratio Perm							0.04			0.07		
v/c Ratio		0.94			0.96		0.13	0.31		0.27	0.78	
Uniform Delay, d1		29.0			24.0		20.2	21.3		21.0	24.9	
Progression Factor		1.00			1.06		1.00	1.00		1.00	1.00	
Incremental Delay, d2		22.3			10.4		1.8	1.8		1.9	13.1	
Delay (s)		51.3			35.8		21.9	23.1		22.9	38.0	
Level of Service		D			D		C	C		C	D	
Approach Delay (s)		51.3			35.8			22.9			35.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	39.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	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												
Volume (vph)	15	350	145	35	880	50	20	35	45	25	40	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.97	1.00	
Frt		0.96			0.99		1.00	0.92		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3217			3486		1589	1411		1690	1401	
Flt Permitted		1.00			1.00		0.71	1.00		0.70	1.00	
Satd. Flow (perm)		3217			3486		1182	1411		1246	1401	
Peak-hour factor, PHF	0.78	0.78	0.78	0.79	0.79	0.79	0.91	0.91	0.91	0.64	0.64	0.64
Adj. Flow (vph)	19	449	186	44	1114	63	22	38	49	39	62	16
RTOR Reduction (vph)	0	56	0	0	6	0	0	38	0	0	12	0
Lane Group Flow (vph)	0	598	0	0	1215	0	22	49	0	39	66	0
Confl. Peds. (#/hr)	4		7	7		4	4		21	21		4
Confl. Bikes (#/hr)			2		2	9			2		2	10
Heavy Vehicles (%)	18%	6%	5%	2%	2%	9%	13%	7%	6%	4%	14%	22%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		17.0			29.0		17.0	17.0		17.0	17.0	
Effective Green, g (s)		17.0			29.0		17.0	17.0		17.0	17.0	
Actuated g/C Ratio		0.23			0.39		0.23	0.23		0.23	0.23	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		729			1348		268	320		282	318	
v/s Ratio Prot		c0.19			c0.35			0.03			c0.05	
v/s Ratio Perm							0.02			0.03		
v/c Ratio		0.82			0.90		0.08	0.15		0.14	0.21	
Uniform Delay, d1		27.5			21.7		22.9	23.2		23.2	23.5	
Progression Factor		0.17			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.4			10.0		0.6	1.0		1.0	1.5	
Delay (s)		10.1			31.6		23.5	24.3		24.2	25.0	
Level of Service		B			C		C	C		C	C	
Approach Delay (s)		10.1			31.6			24.1			24.7	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	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												
Volume (veh/h)	70	795	110	65	1185	10	45	55	50	120	340	220
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.78	0.78	0.78	0.90	0.90	0.90
Hourly flow rate (vph)	78	883	122	72	1317	11	58	71	64	133	378	244
Pedestrians								78				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								7				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		932			1318							
pX, platoon unblocked	0.82			0.86			0.89	0.89	0.86	0.89	0.89	0.82
vC, conflicting volume	1328			961			2353	2589	520	2099	2584	664
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	966			632			1572	1837	119	1288	1831	159
tC, single (s)	4.1			4.1			7.6	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 %	87			91			0	0	91	0	0	65
cM capacity (veh/h)	583			762			0	49	733	0	49	706

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	
Volume Total	78	442	442	122	72	878	450	128	64	511	244	
Volume Left	78	0	0	0	72	0	0	58	0	133	0	
Volume Right	0	0	0	122	0	0	11	0	64	0	244	
cSH	583	1700	1700	1700	762	1700	1700	0	733	0	706	
Volume to Capacity	0.13	0.26	0.26	0.07	0.09	0.52	0.26	Err	0.09	Err	0.35	
Queue Length 95th (ft)	11	0	0	0	8	0	0	Err	7	Err	39	
Control Delay (s)	12.1	0.0	0.0	0.0	10.2	0.0	0.0	Err	10.4	Err	12.8	
Lane LOS	B				B			F	B	F	B	
Approach Delay (s)	0.9				0.5			Err		Err		
Approach LOS								F		F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	80.2%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	925	40	60	1200	60	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.81	0.81
Hourly flow rate (vph)	1028	44	67	1333	74	6
Pedestrians	73			73	73	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	6			6	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.78	
vC, conflicting volume			1145		1996	682
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1145		1716	682
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		0	98
cM capacity (veh/h)			569		49	346

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	685	387	67	667	667	80
Volume Left	0	0	67	0	0	74
Volume Right	0	44	0	0	0	6
cSH	1700	1700	569	1700	1700	52
Volume to Capacity	0.40	0.23	0.12	0.39	0.39	1.54
Queue Length 95th (ft)	0	0	10	0	0	188
Control Delay (s)	0.0	0.0	12.2	0.0	0.0	444.0
Lane LOS			B			F
Approach Delay (s)	0.0		0.6			444.0
Approach LOS						F

Intersection Summary			
Average Delay	14.3		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	295	475	160	90	765	165	155	180	55	290	425	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.66	1.00	1.00	0.98	1.00	1.00	0.93	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1023	1736	3539	1558	1752	1712	1476	1752	1827	1551
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1023	1736	3539	1558	1752	1712	1476	1752	1827	1551
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	528	178	100	850	183	172	200	61	322	472	378
RTOR Reduction (vph)	0	0	115	0	0	48	0	0	22	0	0	251
Lane Group Flow (vph)	328	528	63	100	850	135	172	200	39	322	472	127
Confl. Peds. (#/hr)			116			1			38			1
Confl. Bikes (#/hr)			2			3						9
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%	3%	11%	2%	3%	4%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.0	31.7	31.7	8.2	22.9	22.9	9.0	17.2	17.2	17.0	25.2	25.2
Effective Green, g (s)	17.0	31.7	31.7	8.2	22.9	22.9	9.0	17.2	17.2	17.0	25.2	25.2
Actuated g/C Ratio	0.19	0.35	0.35	0.09	0.25	0.25	0.10	0.19	0.19	0.19	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	334	1245	360	158	899	396	175	327	282	331	511	434
v/s Ratio Prot	c0.19	0.15		0.06	c0.24		0.10	0.12		c0.18	c0.26	
v/s Ratio Perm			0.06			0.09			0.03			0.08
v/c Ratio	0.98	0.42	0.17	0.63	0.95	0.34	0.98	0.61	0.14	0.97	0.92	0.29
Uniform Delay, d1	36.4	22.2	20.2	39.5	33.0	27.4	40.5	33.4	30.3	36.3	31.5	25.5
Progression 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
Incremental Delay, d2	44.1	0.2	0.2	8.0	18.1	0.5	62.6	3.4	0.2	41.9	22.5	0.4
Delay (s)	80.5	22.5	20.4	47.5	51.1	27.9	103.1	36.8	30.5	78.2	54.0	25.8
Level of Service	F	C	C	D	D	C	F	D	C	E	D	C
Approach Delay (s)		40.5			47.0			62.2			51.6	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	48.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	760	60	55	945	75	50
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.93	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1469	1770	3539	1770	1558
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1469	1770	3539	1770	1558
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.47	0.47
Adj. Flow (vph)	844	67	61	1050	160	106
RTOR Reduction (vph)	0	25	0	0	0	71
Lane Group Flow (vph)	844	42	61	1050	160	35
Confl. Peds. (#/hr)		19				
Confl. Bikes (#/hr)		4				3
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	30.9	30.9	6.9	41.8	13.1	13.1
Effective Green, g (s)	30.9	30.9	6.9	41.8	13.1	13.1
Actuated g/C Ratio	0.37	0.37	0.08	0.50	0.16	0.16
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)	1302	546	147	1778	279	245
v/s Ratio Prot	c0.24		0.03	c0.30	c0.09	
v/s Ratio Perm		0.03				0.02
v/c Ratio	0.65	0.08	0.41	0.59	0.57	0.14
Uniform Delay, d1	21.7	16.9	36.2	14.6	32.5	30.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	1.9	0.5	2.8	0.3
Delay (s)	22.8	17.0	38.1	15.2	35.3	30.5
Level of Service	C	B	D	B	D	C
Approach Delay (s)	22.3			16.4	33.4	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	83.2	Sum of lost time (s)	32.3
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	55	810	875	105	180	200
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3539	3505	1522	1770	1539
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3539	3505	1522	1770	1539
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	900	972	117	200	222
RTOR Reduction (vph)	0	0	0	21	0	111
Lane Group Flow (vph)	61	900	972	96	200	111
Confl. Peds. (#/hr)				4		13
Confl. Bikes (#/hr)				2		1
Heavy Vehicles (%)	5%	2%	3%	3%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.3	35.4	27.1	27.1	14.6	14.6
Effective Green, g (s)	4.3	35.4	27.1	27.1	14.6	14.6
Actuated g/C Ratio	0.07	0.55	0.42	0.42	0.23	0.23
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)	116	1964	1489	646	405	352
v/s Ratio Prot	0.04	c0.25	c0.28		c0.11	
v/s Ratio Perm				0.06		0.07
v/c Ratio	0.53	0.46	0.65	0.15	0.49	0.32
Uniform Delay, d1	28.8	8.5	14.6	11.3	21.4	20.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.3	0.2	1.0	0.1	0.9	0.5
Delay (s)	33.0	8.6	15.6	11.4	22.3	21.0
Level of Service	C	A	B	B	C	C
Approach Delay (s)		10.2	15.2		21.6	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	17.8
Intersection Capacity Utilization	48.7%	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												
Volume (veh/h)	5	945	35	30	915	5	60	5	50	5	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.25	0.25	0.25
Hourly flow rate (vph)	5	1005	37	33	1017	6	67	6	56	20	20	20
Pedestrians								12				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								1				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	1022			1055			1652	2135	533	1658	2151	511
vC1, stage 1 conf vol							1047	1047		1086	1086	
vC2, stage 2 conf vol							605	1089		572	1065	
vCu, unblocked vol	1022			778			1460	2013	183	1467	2031	511
tC, single (s)	4.1			4.3			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			72	97	92	90	90	96
cM capacity (veh/h)	675			680			241	212	712	204	205	508

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	5	670	372	542	514	128	60
Volume Left	5	0	0	33	0	67	20
Volume Right	0	0	37	0	6	56	20
cSH	675	1700	1700	680	1700	336	255
Volume to Capacity	0.01	0.39	0.22	0.05	0.30	0.38	0.23
Queue Length 95th (ft)	1	0	0	4	0	43	22
Control Delay (s)	10.4	0.0	0.0	1.3	0.0	22.1	23.4
Lane LOS	B			A		C	C
Approach Delay (s)	0.1			0.7		22.1	23.4
Approach LOS						C	C

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	64.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	745	230	20	790	160	50
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1529	1444	1845	1770	1562
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1529	1444	1845	1770	1562
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.68	0.68
Adj. Flow (vph)	828	256	22	878	235	74
RTOR Reduction (vph)	0	45	0	0	0	19
Lane Group Flow (vph)	828	211	22	878	235	55
Confl. Peds. (#/hr)		7				1
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	2%	25%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	36.6	36.6	1.9	42.5	14.7	14.7
Effective Green, g (s)	36.6	36.6	1.9	42.5	14.7	14.7
Actuated g/C Ratio	0.56	0.56	0.03	0.65	0.23	0.23
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)	1987	858	42	1203	399	352
v/s Ratio Prot	0.23		0.02	c0.48	c0.13	
v/s Ratio Perm		0.14				0.03
v/c Ratio	0.42	0.25	0.52	0.73	0.59	0.16
Uniform Delay, d1	8.2	7.3	31.2	7.5	22.6	20.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2	11.3	2.3	2.2	0.2
Delay (s)	8.3	7.4	42.5	9.8	24.8	20.5
Level of Service	A	A	D	A	C	C
Approach Delay (s)	8.1			10.6	23.7	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	730	60	45	660	155	240
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
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	1549	1770	1827	1719	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1549	1770	1827	1719	1583
Peak-hour factor, PHF	0.92	0.92	0.90	0.90	0.90	0.90
Adj. Flow (vph)	793	65	50	733	172	267
RTOR Reduction (vph)	0	36	0	0	0	207
Lane Group Flow (vph)	793	29	50	733	172	60
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	2%	2%	2%	4%	5%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	21.9	21.9	4.1	30.0	11.0	11.0
Effective Green, g (s)	21.9	21.9	4.1	30.0	11.0	11.0
Actuated g/C Ratio	0.45	0.45	0.08	0.61	0.22	0.22
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)	1582	692	148	1119	386	355
v/s Ratio Prot	0.22		0.03	c0.40	c0.10	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.50	0.04	0.34	0.66	0.45	0.17
Uniform Delay, d1	9.7	7.6	21.2	6.2	16.4	15.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	1.4	1.4	0.8	0.2
Delay (s)	9.9	7.7	22.5	7.5	17.2	15.5
Level of Service	A	A	C	A	B	B
Approach Delay (s)	9.7			8.5	16.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	49.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	25	390	375	740	1040	100
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	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1703	1845	3539	1479
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1703	1845	3539	1479
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	419	417	822	1156	111
RTOR Reduction (vph)	0	372	0	0	0	64
Lane Group Flow (vph)	27	47	417	822	1156	47
Confl. Peds. (#/hr)						8
Confl. Bikes (#/hr)					5	
Heavy Vehicles (%)	2%	2%	6%	3%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	8.3	8.3	22.9	58.1	31.2	31.2
Effective Green, g (s)	8.3	8.3	22.9	58.1	31.2	31.2
Actuated g/C Ratio	0.11	0.11	0.31	0.78	0.42	0.42
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)	197	177	524	1441	1484	620
v/s Ratio Prot	0.02		c0.24	0.45	c0.33	
v/s Ratio Perm		c0.03				0.03
v/c Ratio	0.14	0.26	0.80	0.57	0.78	0.08
Uniform Delay, d1	29.8	30.3	23.6	3.2	18.6	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.8	8.2	0.5	2.7	0.1
Delay (s)	30.1	31.1	31.8	3.8	21.3	13.0
Level of Service	C	C	C	A	C	B
Approach Delay (s)	31.0			13.2	20.6	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	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												
Volume (vph)	50	25	250	15	20	20	510	1180	20	60	1240	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1667	1511	1530	1651		1752	3458		1770	3539	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1667	1511	1530	1651		1752	3458		1770	3539	1468
Peak-hour factor, PHF	0.84	0.84	0.84	0.82	0.82	0.82	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	30	298	18	24	24	567	1311	22	67	1378	167
RTOR Reduction (vph)	0	0	262	0	22	0	0	1	0	0	0	102
Lane Group Flow (vph)	60	30	36	18	26	0	567	1332	0	67	1378	65
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)			3		7	6						8
Heavy Vehicles (%)	2%	14%	5%	18%	5%	5%	3%	4%	13%	2%	2%	7%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	3.6	10.0	10.0	1.5	7.9		23.2	50.6		4.7	32.1	32.1
Effective Green, g (s)	3.6	10.0	10.0	1.5	7.9		23.2	50.6		4.7	32.1	32.1
Actuated g/C Ratio	0.04	0.12	0.12	0.02	0.10		0.28	0.61		0.06	0.39	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	77	201	182	28	158		491	2113		100	1372	569
v/s Ratio Prot	c0.03	0.02		0.01	0.02		c0.32	0.39		0.04	c0.39	
v/s Ratio Perm			c0.02									0.04
v/c Ratio	0.78	0.15	0.20	0.64	0.17		1.15	0.63		0.67	1.00	0.11
Uniform Delay, d1	39.2	32.6	32.8	40.4	34.4		29.8	10.2		38.3	25.3	16.2
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	38.1	0.3	0.5	40.9	0.5		90.7	0.6		16.2	25.4	0.1
Delay (s)	77.3	32.9	33.3	81.3	34.9		120.5	10.8		54.5	50.7	16.3
Level of Service	E	C	C	F	C		F	B		D	D	B
Approach Delay (s)		40.1			47.6			43.5			47.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	44.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	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												
Volume (vph)	495	170	105	20	70	340	15	1065	75	165	360	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3438	1488	1770	1863	1557	1770	3471	1560	1736	3438	1533
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3438	1488	1770	1863	1557	1770	3471	1560	1736	3438	1533
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	521	179	111	22	76	370	16	1158	82	179	391	484
RTOR Reduction (vph)	0	0	82	0	0	119	0	0	11	0	0	294
Lane Group Flow (vph)	521	179	29	22	76	251	16	1158	71	179	391	190
Confl. Peds. (#/hr)			2						1			
Confl. Bikes (#/hr)					1	3			2		2	1
Heavy Vehicles (%)	2%	5%	7%	2%	2%	2%	2%	4%	2%	4%	5%	4%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.8	20.8	20.8	11.0	11.0	11.0	0.8	26.2	26.2	6.0	31.4	31.4
Effective Green, g (s)	20.8	20.8	20.8	11.0	11.0	11.0	0.8	26.2	26.2	6.0	31.4	31.4
Actuated g/C Ratio	0.26	0.26	0.26	0.14	0.14	0.14	0.01	0.33	0.33	0.08	0.39	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	460	894	387	243	256	214	18	1137	511	130	1349	602
v/s Ratio Prot	c0.29	0.05		0.01	0.04		0.01	c0.33		c0.10	0.11	
v/s Ratio Perm			0.02			c0.16			0.05			0.12
v/c Ratio	1.13	0.20	0.07	0.09	0.30	1.17	0.89	1.02	0.14	1.38	0.29	0.32
Uniform Delay, d1	29.6	23.1	22.3	30.1	31.0	34.5	39.6	26.9	18.9	37.0	16.7	16.8
Progression 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
Incremental Delay, d2	83.5	0.5	0.4	0.2	0.7	116.0	156.5	31.4	0.1	210.4	0.1	0.3
Delay (s)	113.1	23.6	22.7	30.3	31.7	150.5	196.1	58.3	19.1	247.4	16.8	17.2
Level of Service	F	C	C	C	C	F	F	E	B	F	B	B
Approach Delay (s)		81.0			125.6			57.5			56.1	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM Average Control Delay	71.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	35	555	35	10	820
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	87	38	572	36	10	845
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1438	572			608	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1438	572			608	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	40	93			99	
cM capacity (veh/h)	145	519			970	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	125	572	36	10	845
Volume Left	87	0	0	10	0
Volume Right	38	0	36	0	0
cSH	209	1700	1700	970	1700
Volume to Capacity	0.60	0.34	0.02	0.01	0.50
Queue Length 95th (ft)	85	0	0	1	0
Control Delay (s)	46.5	0.0	0.0	8.8	0.0
Lane LOS	E			A	
Approach Delay (s)	46.5	0.0		0.1	
Approach LOS	E				

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	54.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	20	120	90	5	30	20	520	100	45	845	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	22	130	98	5	33	22	565	109	49	918	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								623				
pX, platoon unblocked	0.92	0.92		0.92	0.92	0.92				0.92		
vC, conflicting volume	1633	1739	924	1821	1690	620	929			674		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1645	1761	924	1850	1707	540	929			599		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	28	69	60	0	93	93	97			95		
cM capacity (veh/h)	60	71	327	23	77	497	736			897		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	152	98	38	22	674	49	929
Volume Left	43	0	98	0	22	0	49	0
Volume Right	0	130	0	33	0	109	0	11
cSH	60	216	23	279	736	1700	897	1700
Volume to Capacity	0.72	0.71	4.34	0.14	0.03	0.40	0.05	0.55
Queue Length 95th (ft)	78	114	Err	12	2	0	4	0
Control Delay (s)	154.2	53.9	Err	20.0	10.0	0.0	9.2	0.0
Lane LOS	F	F	F	C	B		A	
Approach Delay (s)	76.2		7204.9		0.3		0.5	
Approach LOS	F		F					

Intersection Summary				
Average Delay	495.9			
Intersection Capacity Utilization	68.5%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	20	70	190	5	150	10	490	90	65	570	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	43	22	76	244	6	192	11	544	100	72	633	11
Pedestrians					12							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					1							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1546	1462	639	1493	1418	606	644			656		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1546	1462	639	1493	1418	606	644			656		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	14	81	84	0	95	61	99			92		
cM capacity (veh/h)	50	116	476	67	123	492	941			912		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	98	244	199	11	644	72	644
Volume Left	43	0	244	0	11	0	72	0
Volume Right	0	76	0	192	0	100	0	11
cSH	50	282	67	449	941	1700	912	1700
Volume to Capacity	0.86	0.35	3.64	0.44	0.01	0.38	0.08	0.38
Queue Length 95th (ft)	91	37	Err	56	1	0	6	0
Control Delay (s)	214.4	24.4	Err	19.3	8.9	0.0	9.3	0.0
Lane LOS	F	C	F	C	A		A	
Approach Delay (s)	82.9		5515.3		0.2		0.9	
Approach LOS	F		F					

Intersection Summary				
Average Delay	1253.7			
Intersection Capacity Utilization	64.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	70	55	365	580	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.74	0.74	0.70	0.70
Hourly flow rate (vph)	25	89	74	493	829	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.75	0.75	0.75			
vC, conflicting volume	1506	864	900			
vC1, stage 1 conf vol	864					
vC2, stage 2 conf vol	642					
vCu, unblocked vol	1508	656	703			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	75	89			
cM capacity (veh/h)	303	348	670			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	114	74	493	900
Volume Left	25	74	0	0
Volume Right	89	0	0	71
cSH	337	670	1700	1700
Volume to Capacity	0.34	0.11	0.29	0.53
Queue Length 95th (ft)	36	9	0	0
Control Delay (s)	21.0	11.0	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	21.0	1.4		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	130	140	290	25	125	480
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
Frpb, ped/bikes	1.00	0.91	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1433	1817		1719	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1433	1817		1719	1845
Peak-hour factor, PHF	0.70	0.70	0.83	0.83	0.90	0.90
Adj. Flow (vph)	186	200	349	30	139	533
RTOR Reduction (vph)	0	157	3	0	0	0
Lane Group Flow (vph)	186	43	376	0	139	533
Confl. Peds. (#/hr)				2		
Confl. Bikes (#/hr)		43		18		8
Heavy Vehicles (%)	2%	2%	3%	4%	5%	3%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	11.3	11.3	16.4		7.3	27.7
Effective Green, g (s)	11.3	11.3	16.4		7.3	27.7
Actuated g/C Ratio	0.21	0.21	0.31		0.14	0.52
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)	377	305	561		236	962
v/s Ratio Prot	c0.11		c0.21		0.08	c0.29
v/s Ratio Perm		0.03				
v/c Ratio	0.49	0.14	0.67		0.59	0.55
Uniform Delay, d1	18.4	17.0	16.0		21.5	8.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.2	3.0		3.7	0.7
Delay (s)	19.4	17.2	19.0		25.2	9.2
Level of Service	B	B	B		C	A
Approach Delay (s)	18.2		19.0			12.5
Approach LOS	B		B			B

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	18.1
Intersection Capacity Utilization	40.9%	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												
Volume (vph)	50	50	115	45	235	30	105	220	75	10	510	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.95		1.00	0.93	1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1764	1510		1846	1442	1770	1863	1441	1770	1863	1489
Flt Permitted		0.65	1.00		0.94	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1181	1510		1741	1442	1770	1863	1441	1770	1863	1489
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93
Adj. Flow (vph)	54	54	125	51	267	34	128	268	91	11	548	118
RTOR Reduction (vph)	0	0	92	0	0	19	0	0	46	0	0	65
Lane Group Flow (vph)	0	108	33	0	318	15	128	268	45	11	548	53
Confl. Peds. (#/hr)	2		5	5		2			5			9
Confl. Bikes (#/hr)			13			34		3	11		11	18
Heavy Vehicles (%)	8%	2%	2%	2%	2%	4%	2%	2%	8%	2%	2%	3%
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		13.8	13.8		13.8	13.8	5.0	26.4	26.4	0.7	22.1	22.1
Effective Green, g (s)		13.8	13.8		13.8	13.8	5.0	26.4	26.4	0.7	22.1	22.1
Actuated g/C Ratio		0.26	0.26		0.26	0.26	0.09	0.50	0.50	0.01	0.42	0.42
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		308	394		454	376	167	930	719	23	778	622
v/s Ratio Prot							c0.07	0.14		0.01	c0.29	
v/s Ratio Perm		0.09	0.02		c0.18	0.01			0.03			0.04
v/c Ratio		0.35	0.08		0.70	0.04	0.77	0.29	0.06	0.48	0.70	0.09
Uniform Delay, d1		15.9	14.8		17.7	14.6	23.4	7.8	6.9	25.9	12.7	9.3
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		0.7	0.1		4.8	0.0	18.7	0.2	0.0	14.8	2.9	0.1
Delay (s)		16.6	14.9		22.5	14.6	42.1	7.9	6.9	40.8	15.6	9.4
Level of Service		B	B		C	B	D	A	A	D	B	A
Approach Delay (s)		15.7			21.8			16.7			14.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	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												
Volume (vph)	45	225	175	125	280	80	295	245	140	165	345	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3505	1314	1719	3471	1469	1770	1863	1522	1770	1863	1451
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3505	1314	1719	3471	1469	1770	1863	1522	1770	1863	1451
Peak-hour factor, PHF	0.82	0.82	0.82	0.86	0.86	0.86	0.80	0.80	0.80	0.89	0.89	0.89
Adj. Flow (vph)	55	274	213	145	326	93	369	306	175	185	388	264
RTOR Reduction (vph)	0	0	111	0	0	32	0	0	37	0	0	44
Lane Group Flow (vph)	55	274	102	145	326	61	369	306	138	185	388	220
Confl. Peds. (#/hr)			41			11			16			21
Confl. Bikes (#/hr)			3		1	8			1		1	25
Heavy Vehicles (%)	7%	3%	6%	5%	4%	3%	2%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.2	14.4	14.4	11.2	19.4	19.4	23.0	32.9	32.9	14.4	24.3	24.3
Effective Green, g (s)	6.2	14.4	14.4	11.2	19.4	19.4	23.0	32.9	32.9	14.4	24.3	24.3
Actuated g/C Ratio	0.07	0.16	0.16	0.13	0.22	0.22	0.26	0.37	0.37	0.16	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	568	213	217	757	321	458	689	563	287	509	397
v/s Ratio Prot	0.03	0.08		c0.08	c0.09		c0.21	0.16		0.10	c0.21	
v/s Ratio Perm			0.08			0.04			0.09			0.15
v/c Ratio	0.47	0.48	0.48	0.67	0.43	0.19	0.81	0.44	0.24	0.64	0.76	0.56
Uniform Delay, d1	39.8	33.9	33.9	37.1	30.0	28.3	30.9	21.1	19.4	34.9	29.6	27.7
Progression 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
Incremental Delay, d2	2.9	0.6	1.7	7.6	0.4	0.3	9.9	0.5	0.2	4.9	6.7	1.7
Delay (s)	42.7	34.5	35.6	44.6	30.4	28.6	40.8	21.6	19.6	39.8	36.3	29.4
Level of Service	D	C	D	D	C	C	D	C	B	D	D	C
Approach Delay (s)		35.7			33.8			29.5			34.9	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.3%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	35	30	25	40	10	20	55	35	10	210	55
Peak Hour Factor	0.75	0.75	0.75	0.69	0.69	0.69	0.83	0.83	0.83	0.65	0.65	0.65
Hourly flow rate (vph)	27	47	40	36	58	14	24	66	42	15	323	85

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	109	133	423
Volume Left (vph)	27	36	24	15
Volume Right (vph)	40	14	42	85
Hadj (s)	-0.13	0.02	-0.12	-0.08
Departure Headway (s)	5.3	5.4	4.9	4.6
Degree Utilization, x	0.17	0.16	0.18	0.54
Capacity (veh/h)	606	589	676	749
Control Delay (s)	9.3	9.5	9.0	12.9
Approach Delay (s)	9.3	9.5	9.0	12.9
Approach LOS	A	A	A	B

Intersection Summary			
Delay	11.3		
HCM Level of Service	B		
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	215	85	40	385	15	70	60	45	35	190	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.96	1.00	0.97	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1753	1736		1762	1844		1765	1863	1513	1752	1670	
Flt Permitted	0.24	1.00		0.44	1.00		0.27	1.00	1.00	0.71	1.00	
Satd. Flow (perm)	450	1736		811	1844		494	1863	1513	1317	1670	
Peak-hour factor, PHF	0.83	0.83	0.83	0.75	0.75	0.75	0.91	0.91	0.91	0.67	0.67	0.67
Adj. Flow (vph)	12	259	102	53	513	20	77	66	49	52	284	306
RTOR Reduction (vph)	0	29	0	0	3	0	0	0	26	0	78	0
Lane Group Flow (vph)	12	332	0	53	530	0	77	66	23	52	512	0
Confl. Peds. (#/hr)	18		5	5		18	5		7	7		5
Confl. Bikes (#/hr)		7	70		2	82		12	17		10	33
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	19.0	19.0		19.0	19.0		23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	171	660		308	701		227	857	696	606	768	
v/s Ratio Prot		0.19			c0.29			0.04			c0.31	
v/s Ratio Perm	0.03			0.07			0.16		0.01	0.04		
v/c Ratio	0.07	0.50		0.17	0.76		0.34	0.08	0.03	0.09	0.67	
Uniform Delay, d1	9.9	11.9		10.3	13.5		8.6	7.6	7.4	7.6	10.5	
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	2.7		1.2	7.4		4.0	0.2	0.1	0.3	4.6	
Delay (s)	10.7	14.6		11.5	20.9		12.7	7.7	7.5	7.9	15.1	
Level of Service	B	B		B	C		B	A	A	A	B	
Approach Delay (s)		14.5			20.1			9.6			14.5	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	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												
Volume (vph)	55	290	55	105	655	45	55	70	40	105	140	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1718		1641	3539	1503	1770	1863	1365	1770	1863	1458
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1718		1641	3539	1503	1770	1863	1365	1770	1863	1458
Peak-hour factor, PHF	0.78	0.78	0.78	0.75	0.75	0.75	0.65	0.65	0.65	0.78	0.78	0.78
Adj. Flow (vph)	71	372	71	140	873	60	85	108	62	135	179	346
RTOR Reduction (vph)	0	7	0	0	0	26	0	0	51	0	0	223
Lane Group Flow (vph)	71	436	0	140	873	34	85	108	11	135	179	123
Confl. Peds. (#/hr)			16			9			3			13
Confl. Bikes (#/hr)					3	13			17		17	50
Heavy Vehicles (%)	2%	8%	2%	10%	2%	2%	2%	2%	14%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	5.9	23.7		8.2	26.0	26.0	5.6	12.2	12.2	7.7	14.3	14.3
Effective Green, g (s)	5.9	23.7		8.2	26.0	26.0	5.6	12.2	12.2	7.7	14.3	14.3
Actuated g/C Ratio	0.09	0.35		0.12	0.38	0.38	0.08	0.18	0.18	0.11	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	154	601		198	1357	576	146	335	246	201	393	308
v/s Ratio Prot	0.04	c0.25		c0.09	0.25		0.05	0.06		c0.08	c0.10	
v/s Ratio Perm						0.02			0.01			0.08
v/c Ratio	0.46	0.73		0.71	0.64	0.06	0.58	0.32	0.05	0.67	0.46	0.40
Uniform Delay, d1	29.4	19.2		28.6	17.1	13.2	30.0	24.2	23.0	28.8	23.4	23.0
Progression Factor	1.00	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	4.3		10.9	1.1	0.0	5.8	0.6	0.1	8.5	0.8	0.8
Delay (s)	31.6	23.5		39.6	18.2	13.2	35.8	24.8	23.1	37.4	24.2	23.9
Level of Service	C	C		D	B	B	D	C	C	D	C	C
Approach Delay (s)		24.7			20.7			28.0			26.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	67.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.8%	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												
Volume (vph)	100	555	10	295	600	345	15	30	265	290	65	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3505	1532	3433	3539	1524	1671	1863	1537	1770	1616	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3505	1532	3433	3539	1524	1671	1863	1537	1770	1616	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	111	617	11	328	667	383	17	34	298	322	72	128
RTOR Reduction (vph)	0	0	5	0	0	103	0	0	241	0	57	0
Lane Group Flow (vph)	111	617	6	328	667	280	17	34	57	322	143	0
Confl. Peds. (#/hr)			8			4			8			17
Confl. Bikes (#/hr)		2	5			4		2	2			
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	8%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	10.2	26.3	26.3	22.3	38.4	38.4	2.0	21.1	21.1	24.3	43.4	
Effective Green, g (s)	10.2	26.3	26.3	22.3	38.4	38.4	2.0	21.1	21.1	24.3	43.4	
Actuated g/C Ratio	0.09	0.24	0.24	0.20	0.35	0.35	0.02	0.19	0.19	0.22	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	838	366	696	1235	532	30	357	295	391	638	
v/s Ratio Prot	0.06	c0.18		0.10	c0.19		0.01	0.02		c0.18	c0.09	
v/s Ratio Perm			0.00			0.18			0.04			
v/c Ratio	0.68	0.74	0.02	0.47	0.54	0.53	0.57	0.10	0.19	0.82	0.22	
Uniform Delay, d1	48.3	38.6	32.0	38.7	28.7	28.5	53.6	36.6	37.3	40.8	22.1	
Progression Factor	1.00	1.00	1.00	0.76	0.68	0.64	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.5	3.4	0.0	0.4	1.5	3.2	22.3	0.5	1.5	13.1	0.8	
Delay (s)	58.8	42.0	32.0	29.8	20.9	21.4	75.8	37.1	38.8	53.9	22.9	
Level of Service	E	D	C	C	C	C	E	D	D	D	C	
Approach Delay (s)		44.4			23.2			40.4			42.1	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	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	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	1060	1170	185	245	60
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	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.75	0.75
Adj. Flow (vph)	44	1178	1232	195	327	80
RTOR Reduction (vph)	0	0	0	24	0	61
Lane Group Flow (vph)	44	1178	1232	171	327	19
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	5.6	76.4	66.8	66.8	25.6	25.6
Effective Green, g (s)	5.6	76.4	66.8	66.8	25.6	25.6
Actuated g/C Ratio	0.05	0.69	0.61	0.61	0.23	0.23
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)	90	2458	2149	961	412	368
v/s Ratio Prot	0.02	c0.33	c0.35		c0.18	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.49	0.48	0.57	0.18	0.79	0.05
Uniform Delay, d1	50.8	7.7	13.0	9.5	39.7	32.8
Progression Factor	1.05	0.51	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.5	1.1	0.4	10.1	0.1
Delay (s)	56.5	4.5	14.1	9.9	49.8	32.8
Level of Service	E	A	B	A	D	C
Approach Delay (s)		6.3	13.6		46.5	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.5%	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												
Volume (vph)	195	1020	145	30	1045	95	180	130	45	145	95	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.90	1.00	1.00	0.89
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1509	1770	3539	1439	1770	1863	1424	1770	1863	1399
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1509	1770	3539	1439	1770	1863	1424	1770	1863	1399
Peak-hour factor, PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	214	1121	159	33	1161	106	207	149	52	163	107	208
RTOR Reduction (vph)	0	0	16	0	0	11	0	0	14	0	0	129
Lane Group Flow (vph)	214	1121	143	33	1161	95	207	149	38	163	107	79
Confl. Peds. (#/hr)			8			21			12			39
Confl. Bikes (#/hr)		1	3			7		2	49		48	16
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.9	52.2	52.2	3.3	39.6	39.6	15.9	15.9	15.9	13.6	13.6	13.6
Effective Green, g (s)	15.9	52.2	52.2	3.3	39.6	39.6	15.9	15.9	15.9	13.6	13.6	13.6
Actuated g/C Ratio	0.16	0.52	0.52	0.03	0.39	0.39	0.16	0.16	0.16	0.13	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	279	1829	780	58	1388	564	279	293	224	238	251	188
v/s Ratio Prot	c0.12	0.32		0.02	c0.33		c0.12	0.08		c0.09	0.06	
v/s Ratio Perm			0.09			0.07			0.03			0.06
v/c Ratio	0.77	0.61	0.18	0.57	0.84	0.17	0.74	0.51	0.17	0.68	0.43	0.42
Uniform Delay, d1	40.8	17.3	13.0	48.1	27.8	20.0	40.6	39.0	36.8	41.7	40.1	40.1
Progression 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
Incremental Delay, d2	11.9	0.6	0.1	12.2	4.5	0.1	10.2	1.4	0.4	7.9	1.2	1.5
Delay (s)	52.7	17.9	13.1	60.3	32.3	20.1	50.8	40.4	37.2	49.6	41.3	41.6
Level of Service	D	B	B	E	C	C	D	D	D	D	D	D
Approach Delay (s)		22.4			32.0			45.2			44.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	101.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.1%	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												
Volume (vph)	90	925	140	110	755	90	255	210	135	95	155	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.90	1.00	1.00	0.87	1.00	1.00	0.91
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1736	3539	1514	1770	3539	1428	1752	1827	1382	1770	3406	1434
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1736	3539	1514	1770	3539	1428	1752	1827	1382	1770	3406	1434
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.91	0.91	0.91	0.74	0.74	0.74
Adj. Flow (vph)	95	974	147	122	839	100	280	231	148	128	209	81
RTOR Reduction (vph)	0	0	18	0	0	41	0	0	59	0	0	50
Lane Group Flow (vph)	95	974	129	122	839	59	280	231	89	128	209	31
Confl. Peds. (#/hr)			18			24			29			26
Confl. Bikes (#/hr)		1	5		1	16		1	73		71	27
Heavy Vehicles (%)	4%	2%	2%	2%	2%	2%	3%	4%	2%	2%	6%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	8.0	30.7	30.7	9.9	32.6	32.6	18.2	18.8	18.8	11.2	11.8	11.8
Effective Green, g (s)	8.0	30.7	30.7	9.9	32.6	32.6	18.2	18.8	18.8	11.2	11.8	11.8
Actuated g/C Ratio	0.09	0.35	0.35	0.11	0.38	0.38	0.21	0.22	0.22	0.13	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	160	1255	537	202	1332	538	368	397	300	229	464	195
v/s Ratio Prot	0.05	c0.28		c0.07	0.24		c0.16	c0.13		0.07	0.06	
v/s Ratio Perm			0.09			0.04			0.06			0.02
v/c Ratio	0.59	0.78	0.24	0.60	0.63	0.11	0.76	0.58	0.30	0.56	0.45	0.16
Uniform Delay, d1	37.7	24.9	19.7	36.5	22.1	17.6	32.2	30.4	28.4	35.4	34.4	33.0
Progression 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
Incremental Delay, d2	5.8	3.1	0.2	5.0	0.9	0.1	9.0	2.2	0.6	2.9	0.7	0.4
Delay (s)	43.5	28.0	20.0	41.5	23.0	17.7	41.1	32.5	28.9	38.3	35.1	33.4
Level of Service	D	C	B	D	C	B	D	C	C	D	D	C
Approach Delay (s)		28.2			24.6			35.4			35.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	86.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1185	155	280	735	185	225
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1503	1770	3539	1770	1548
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1503	1770	3539	1770	1548
Peak-hour factor, PHF	0.84	0.84	0.94	0.94	0.90	0.90
Adj. Flow (vph)	1411	185	298	782	206	250
RTOR Reduction (vph)	0	16	0	0	0	214
Lane Group Flow (vph)	1411	169	298	782	206	36
Confl. Peds. (#/hr)		8			14	5
Confl. Bikes (#/hr)	1	14				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	33.4	33.4	14.1	51.5	11.1	11.1
Effective Green, g (s)	33.4	33.4	14.1	51.5	11.1	11.1
Actuated g/C Ratio	0.43	0.43	0.18	0.67	0.14	0.14
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)	1531	650	323	2361	254	223
v/s Ratio Prot	c0.40		c0.17	0.22	c0.12	
v/s Ratio Perm		0.11				0.02
v/c Ratio	0.92	0.26	0.92	0.33	0.81	0.16
Uniform Delay, d1	20.7	14.0	31.0	5.5	32.0	29.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.5	0.2	30.8	0.1	17.5	0.3
Delay (s)	30.2	14.2	61.8	5.6	49.6	29.3
Level of Service	C	B	E	A	D	C
Approach Delay (s)	28.3			21.1	38.5	
Approach LOS	C			C	D	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	18.6
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	1330	920	230	145	95
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1501	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1501	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.97	0.97	0.85	0.85
Adj. Flow (vph)	89	1478	948	237	171	112
RTOR Reduction (vph)	0	0	0	20	0	90
Lane Group Flow (vph)	89	1478	948	217	171	22
Confl. Peds. (#/hr)				15		
Confl. Bikes (#/hr)			11			
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.5	41.9	30.4	30.4	13.4	13.4
Effective Green, g (s)	7.5	41.9	30.4	30.4	13.4	13.4
Actuated g/C Ratio	0.11	0.61	0.44	0.44	0.19	0.19
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)	192	2146	1557	660	343	307
v/s Ratio Prot	0.05	c0.42	0.27		c0.10	
v/s Ratio Perm				0.14		0.01
v/c Ratio	0.46	0.69	0.61	0.33	0.50	0.07
Uniform Delay, d1	28.9	9.2	14.8	12.7	24.9	22.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.9	0.7	0.3	1.1	0.1
Delay (s)	30.7	10.1	15.5	13.0	26.0	22.9
Level of Service	C	B	B	B	C	C
Approach Delay (s)		11.3	15.0		24.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	69.1	Sum of lost time (s)	13.8
Intersection Capacity Utilization	51.5%	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												
Volume (vph)	70	1225	180	260	800	225	300	180	290	110	150	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1493	3433	3539	1493	1770	1863	1516	1770	1863	1514
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1493	3433	3539	1493	1770	1863	1516	1770	1863	1514
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	78	1361	200	274	842	237	333	200	322	129	176	59
RTOR Reduction (vph)	0	0	24	0	0	23	0	0	117	0	0	20
Lane Group Flow (vph)	78	1361	176	274	842	214	333	200	205	129	176	39
Confl. Peds. (#/hr)			10			9			14			10
Confl. Bikes (#/hr)		1	5		1	9		1	3		2	7
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.5	45.7	45.7	10.0	48.2	48.2	22.7	25.7	25.7	10.5	13.5	13.5
Effective Green, g (s)	7.5	45.7	45.7	10.0	48.2	48.2	22.7	25.7	25.7	10.5	13.5	13.5
Actuated g/C Ratio	0.07	0.42	0.42	0.09	0.45	0.45	0.21	0.24	0.24	0.10	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	123	1499	632	318	1581	667	372	444	361	172	233	189
v/s Ratio Prot	0.04	c0.38		c0.08	0.24		c0.19	0.11		0.07	c0.09	
v/s Ratio Perm			0.12			0.14			0.13			0.03
v/c Ratio	0.63	0.91	0.28	0.86	0.53	0.32	0.90	0.45	0.57	0.75	0.76	0.21
Uniform Delay, d1	48.9	29.1	20.3	48.3	21.7	19.3	41.4	35.1	36.2	47.4	45.6	42.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	8.3	0.2	20.6	0.3	0.3	22.9	0.7	2.0	16.7	13.0	0.5
Delay (s)	59.1	37.4	20.6	68.8	22.0	19.6	64.4	35.8	38.2	64.1	58.6	42.9
Level of Service	E	D	C	E	C	B	E	D	D	E	E	D
Approach Delay (s)		36.4			31.1			47.8			58.0	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	38.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	107.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.7%	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												
Volume (vph)	0	1465	160	60	1140	0	145	0	175	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0	4.0			
Lane Util. Factor		0.95	1.00	1.00	0.95			1.00	1.00			
Frpb, ped/bikes		1.00	0.93	1.00	1.00			1.00	1.00			
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00	1.00			
Frt		1.00	0.85	1.00	1.00			1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3539	1465	1770	3539			1770	1583			
Flt Permitted		1.00	1.00	0.95	1.00			0.95	1.00			
Satd. Flow (perm)		3539	1465	1770	3539			1770	1583			
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1628	178	66	1253	0	161	0	194	0	0	0
RTOR Reduction (vph)	0	0	13	0	0	0	0	0	83	0	0	0
Lane Group Flow (vph)	0	1628	165	66	1253	0	0	161	111	0	0	0
Confl. Peds. (#/hr)			26									
Confl. Bikes (#/hr)								1			1	
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)		41.6	41.6	4.0	49.6			10.8	10.8			
Effective Green, g (s)		41.6	41.6	4.0	49.6			10.8	10.8			
Actuated g/C Ratio		0.61	0.61	0.06	0.73			0.16	0.16			
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)		2152	891	104	2566			279	250			
v/s Ratio Prot		c0.46		0.04	c0.35			c0.09				
v/s Ratio Perm			0.11						0.07			
v/c Ratio		0.76	0.18	0.63	0.49			0.58	0.44			
Uniform Delay, d1		9.7	5.9	31.5	4.0			26.7	26.1			
Progression Factor		1.00	1.00	1.00	1.00			1.00	1.00			
Incremental Delay, d2		1.6	0.1	12.0	0.1			2.9	1.3			
Delay (s)		11.3	6.0	43.5	4.1			29.6	27.3			
Level of Service		B	A	D	A			C	C			
Approach Delay (s)		10.8			6.1			28.3			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	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	
Volume (vph)	100	175	20	20	170	145	70	110	50	180	185	65
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	111	194	22	22	189	161	78	122	56	200	206	72

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	111	217	22	350	200	56	406	72
Volume Left (vph)	111	0	22	0	78	0	200	0
Volume Right (vph)	0	22	0	161	0	56	0	72
Hadj (s)	0.58	-0.04	0.53	-0.29	0.29	-0.67	0.30	-0.67
Departure Headway (s)	8.3	7.7	8.1	7.3	8.1	7.2	7.6	6.7
Degree Utilization, x	0.26	0.46	0.05	0.71	0.45	0.11	0.86	0.13
Capacity (veh/h)	408	433	420	472	413	465	406	515
Control Delay (s)	13.0	16.0	10.4	25.2	16.4	9.9	40.9	9.5
Approach Delay (s)	15.0		24.3		15.0		36.1	
Approach LOS	B		C		C		E	

Intersection Summary				
Delay	24.5			
HCM Level of Service	C			
Intersection Capacity Utilization	66.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	275	225	45	185	190	90
Peak Hour Factor	0.92	0.92	0.86	0.86	0.82	0.82
Hourly flow rate (vph)	299	245	52	215	232	110

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	299	245	52	215	341
Volume Left (vph)	0	0	52	0	232
Volume Right (vph)	0	245	0	0	110
Hadj (s)	0.03	-0.67	0.53	0.03	-0.02
Departure Headway (s)	6.1	5.3	6.9	6.4	5.8
Degree Utilization, x	0.50	0.36	0.10	0.38	0.55
Capacity (veh/h)	574	650	495	537	591
Control Delay (s)	13.8	10.2	9.4	12.0	15.4
Approach Delay (s)	12.2		11.5		15.4
Approach LOS	B		B		C

Intersection Summary			
Delay	13.0		
HCM Level of Service	B		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	255	155	90	535	330	215
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	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1543	1770	1863	1863	1514
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1543	1770	1863	1863	1514
Peak-hour factor, PHF	0.90	0.90	0.80	0.80	0.90	0.90
Adj. Flow (vph)	283	172	112	669	367	239
RTOR Reduction (vph)	0	125	0	0	0	152
Lane Group Flow (vph)	283	47	112	669	367	87
Confl. Peds. (#/hr)	25	4				18
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	11.8	11.8	3.5	23.1	15.6	15.6
Effective Green, g (s)	11.8	11.8	3.5	23.1	15.6	15.6
Actuated g/C Ratio	0.28	0.28	0.08	0.54	0.36	0.36
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)	487	424	144	1003	677	551
v/s Ratio Prot	c0.16		0.06	c0.36	0.20	
v/s Ratio Perm		0.03				0.06
v/c Ratio	0.58	0.11	0.78	0.67	0.54	0.16
Uniform Delay, d1	13.4	11.6	19.3	7.1	10.8	9.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1	22.7	1.7	0.9	0.1
Delay (s)	15.2	11.7	42.1	8.8	11.7	9.3
Level of Service	B	B	D	A	B	A
Approach Delay (s)	13.9			13.6	10.8	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	42.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	20	30	225	70	15	130
Peak Hour Factor	0.77	0.77	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	26	39	317	99	19	160

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	65	415	19	160
Volume Left (vph)	26	0	19	0
Volume Right (vph)	39	99	0	0
Hadj (s)	-0.25	-0.11	0.53	0.03
Departure Headway (s)	5.0	4.3	5.5	5.0
Degree Utilization, x	0.09	0.49	0.03	0.22
Capacity (veh/h)	646	828	633	698
Control Delay (s)	8.4	11.4	7.5	8.2
Approach Delay (s)	8.4	11.4	8.2	
Approach LOS	A	B	A	

Intersection Summary			
Delay	10.2		
HCM Level of Service	B		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	355	10	15	380	35	10	65	70	30	45	25
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		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.93		1.00	0.93		1.00	0.90		1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1859	1479		1859	1462		1754	1431		1803	1508
Flt Permitted		0.97	1.00		0.98	1.00		0.97	1.00		0.89	1.00
Satd. Flow (perm)		1816	1479		1822	1462		1712	1431		1634	1508
Peak-hour factor, PHF	0.88	0.88	0.88	0.80	0.80	0.80	0.76	0.76	0.76	0.82	0.82	0.82
Adj. Flow (vph)	17	403	11	19	475	44	13	86	92	37	55	30
RTOR Reduction (vph)	0	0	7	0	0	26	0	0	55	0	0	18
Lane Group Flow (vph)	0	420	4	0	494	18	0	99	37	0	92	12
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)		33	47		3	49		1	80		47	23
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	11%	7%	2%	2%	4%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		726	592		729	585		685	572		654	603
v/s Ratio Prot												
v/s Ratio Perm		0.23	0.00		c0.27	0.01		c0.06	0.03		0.06	0.01
v/c Ratio		0.58	0.01		0.68	0.03		0.14	0.06		0.14	0.02
Uniform Delay, d1		9.4	7.2		9.9	7.3		7.6	7.4		7.6	7.3
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		3.3	0.0		5.0	0.1		0.4	0.2		0.5	0.1
Delay (s)		12.7	7.2		14.9	7.4		8.1	7.6		8.1	7.3
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		12.6			14.3			7.9			7.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.5%	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												
Volume (vph)	15	415	65	60	250	40	70	125	115	15	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes		1.00	0.84	1.00	0.99			0.98			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.98			0.95			0.96	
Flt Protected		1.00	1.00	0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1859	1328	1731	1805			1517			1766	
Flt Permitted		0.98	1.00	0.33	1.00			0.89			0.95	
Satd. Flow (perm)		1832	1328	597	1805			1363			1689	
Peak-hour factor, PHF	0.88	0.88	0.88	0.81	0.81	0.81	0.86	0.86	0.86	0.67	0.67	0.67
Adj. Flow (vph)	17	472	74	74	309	49	81	145	134	22	134	60
RTOR Reduction (vph)	0	0	37	0	12	0	0	43	0	0	28	0
Lane Group Flow (vph)	0	489	37	74	346	0	0	317	0	0	188	0
Confl. Peds. (#/hr)	5		3	3		5	3		7	7		3
Confl. Bikes (#/hr)		17	153		2	54		4	37		20	11
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	4%	2%	2%	2%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Effective Green, g (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.42			0.42			0.42	
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		769	558	251	758			572			709	
v/s Ratio Prot					0.19							
v/s Ratio Perm		c0.27	0.03	0.12				c0.23			0.11	
v/c Ratio		0.64	0.07	0.29	0.46			0.55			0.27	
Uniform Delay, d1		11.5	8.7	9.6	10.4			11.0			9.5	
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2		4.0	0.2	3.0	2.0			3.8			0.9	
Delay (s)		15.5	8.9	12.6	12.4			14.8			10.4	
Level of Service		B	A	B	B			B			B	
Approach Delay (s)		14.6			12.4			14.8			10.4	
Approach LOS		B			B			B			B	

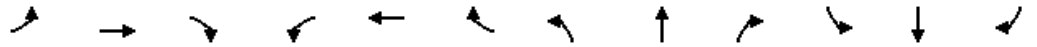
Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	360	140	45	300	95	40	365	115	115	310	25
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	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.96			0.98		1.00	1.00	0.88	1.00	1.00	0.91
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1715			1758		1770	1863	1398	1770	1863	1433
Flt Permitted		0.96			0.87		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1657			1545		1770	1863	1398	1770	1863	1433
Peak-hour factor, PHF	0.81	0.81	0.81	0.89	0.89	0.89	0.78	0.78	0.78	0.97	0.97	0.97
Adj. Flow (vph)	31	444	173	51	337	107	51	468	147	119	320	26
RTOR Reduction (vph)	0	12	0	0	10	0	0	0	23	0	0	6
Lane Group Flow (vph)	0	636	0	0	485	0	51	468	124	119	320	20
Confl. Peds. (#/hr)	13		10	10		13			19			19
Confl. Bikes (#/hr)		7	133		5	49		3	40		33	22
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		40.5			40.5		5.7	30.2	30.2	10.2	34.7	34.7
Effective Green, g (s)		40.5			40.5		5.7	30.2	30.2	10.2	34.7	34.7
Actuated g/C Ratio		0.44			0.44		0.06	0.33	0.33	0.11	0.37	0.37
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)		722			674		109	606	454	194	696	535
v/s Ratio Prot							0.03	c0.25		c0.07	0.17	
v/s Ratio Perm		c0.38			0.31				0.09			0.01
v/c Ratio		0.88			0.72		0.47	0.77	0.27	0.61	0.46	0.04
Uniform Delay, d1		24.0			21.5		42.1	28.3	23.2	39.5	22.0	18.5
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		12.1			3.8		3.2	6.1	0.3	5.6	0.5	0.0
Delay (s)		36.1			25.3		45.3	34.3	23.5	45.1	22.5	18.5
Level of Service		D			C		D	C	C	D	C	B
Approach Delay (s)		36.1			25.3			32.8			28.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	92.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.3%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	155	535	45	45	455	30	75	145	20	35	55	70
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	172	594	50	50	506	33	83	161	22	39	61	78

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	172	644	589	244	22	100	78
Volume Left (vph)	172	0	50	83	0	39	0
Volume Right (vph)	0	50	33	0	22	0	78
Hadj (s)	0.53	-0.02	0.02	0.10	-0.57	0.23	-0.63
Departure Headway (s)	7.9	7.3	7.5	8.6	3.2	9.0	8.2
Degree Utilization, x	0.38	1.31	1.23	0.58	0.02	0.25	0.18
Capacity (veh/h)	447	500	485	406	1121	386	425
Control Delay (s)	14.4	176.6	146.0	22.9	6.3	13.8	11.7
Approach Delay (s)	142.4		146.0	21.5		12.9	
Approach LOS	F		F	C		B	

Intersection Summary			
Delay	113.7		
HCM Level of Service	F		
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	720	55	55	590	70	40	210	65	100	275	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.98	1.00	
Frt		0.99			0.99		1.00	0.96		1.00	0.96	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3470			3464		1792	1561		1739	1562	
Flt Permitted		1.00			1.00		0.26	1.00		0.34	1.00	
Satd. Flow (perm)		3470			3464		482	1561		615	1562	
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	107	960	73	64	686	81	48	253	78	108	296	91
RTOR Reduction (vph)	0	5	0	0	9	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	1135	0	0	822	0	48	319	0	108	375	0
Confl. Peds. (#/hr)	3		19	19		3	13		24	24		13
Confl. Bikes (#/hr)			13		3	2			38		38	19
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	2%	2%	2%	2%	5%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		30.0			22.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		30.0			22.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.33			0.24		0.29	0.29		0.29	0.29	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1157			847		139	451		178	451	
v/s Ratio Prot		c0.33			c0.24			0.20			c0.24	
v/s Ratio Perm							0.10			0.18		
v/c Ratio		0.98			0.97		0.35	0.71		0.61	0.83	
Uniform Delay, d1		29.7			33.7		25.3	28.6		27.6	29.9	
Progression Factor		1.00			1.33		1.00	1.00		1.00	1.00	
Incremental Delay, d2		22.2			22.0		6.7	9.0		14.4	16.2	
Delay (s)		51.9			66.9		32.0	37.6		42.0	46.2	
Level of Service		D			E		C	D		D	D	
Approach Delay (s)		51.9			66.9			36.9			45.3	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	53.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	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												
Volume (vph)	35	615	240	80	480	90	80	185	55	40	70	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.97	1.00	
Frt		0.96			0.98		1.00	0.97		1.00	0.96	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3322			3421		1763	1560		1722	1561	
Flt Permitted		1.00			0.99		0.62	1.00		0.36	1.00	
Satd. Flow (perm)		3322			3421		1153	1560		647	1561	
Peak-hour factor, PHF	0.84	0.84	0.84	0.96	0.96	0.96	0.78	0.78	0.78	0.69	0.69	0.69
Adj. Flow (vph)	42	732	286	83	500	94	103	237	71	58	101	43
RTOR Reduction (vph)	0	42	0	0	15	0	0	12	0	0	17	0
Lane Group Flow (vph)	0	1018	0	0	662	0	103	296	0	58	127	0
Confl. Peds. (#/hr)	5		16	16		5	3		35	35		3
Confl. Bikes (#/hr)		3	9		3	9		1	24		21	14
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		32.0			21.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		32.0			21.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.36			0.23		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1181			798		320	433		180	434	
v/s Ratio Prot		c0.31			c0.19			c0.19			0.08	
v/s Ratio Perm							0.09			0.09		
v/c Ratio		0.86			0.83		0.32	0.68		0.32	0.29	
Uniform Delay, d1		26.9			32.8		25.8	29.0		25.8	25.5	
Progression Factor		0.18			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.3			9.8		2.6	8.5		4.7	1.7	
Delay (s)		8.2			42.6		28.4	37.4		30.5	27.2	
Level of Service		A			D		C	D		C	C	
Approach Delay (s)		8.2			42.6			35.2			28.2	
Approach LOS		A			D			D			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	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												
Volume (veh/h)	295	1240	105	115	1035	50	65	340	115	45	120	100
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.93	0.93	0.92	0.93	0.92	0.93	0.92	0.92	0.92
Hourly flow rate (vph)	328	1378	117	124	1113	54	70	370	124	49	130	109
Pedestrians		32			32			32				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		3			3			3				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		932			1318							
pX, platoon unblocked	0.90			0.74			0.79	0.79	0.74	0.79	0.79	0.90
vC, conflicting volume	1167			1410			3075	3480	753	2949	3453	616
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	962			861			2523	3033	0	2364	2999	348
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 %	49			78			0	0	84	0	0	81
cM capacity (veh/h)	640			562			0	4	764	0	4	567

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	
Volume Total	328	689	689	117	124	742	425	439	124	179	109	
Volume Left	328	0	0	0	124	0	0	70	0	49	0	
Volume Right	0	0	0	117	0	0	54	0	124	0	109	
cSH	640	1700	1700	1700	562	1700	1700	0	764	0	567	
Volume to Capacity	0.51	0.41	0.41	0.07	0.22	0.44	0.25	Err	0.16	Err	0.19	
Queue Length 95th (ft)	73	0	0	0	21	0	0	Err	14	Err	18	
Control Delay (s)	16.4	0.0	0.0	0.0	13.2	0.0	0.0	Err	10.6	Err	12.9	
Lane LOS	C				B			F	B	F	B	
Approach Delay (s)	2.9				1.3			Err		Err		
Approach LOS								F		F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	90.2%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1320	80	75	1060	140	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.84	0.84
Hourly flow rate (vph)	1451	88	79	1116	167	30
Pedestrians	7			7	7	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.84	
vC, conflicting volume			1545		2224	783
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1545		2081	783
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			81		0	91
cM capacity (veh/h)			423		31	332

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	967	571	79	558	558	196
Volume Left	0	0	79	0	0	167
Volume Right	0	88	0	0	0	30
cSH	1700	1700	423	1700	1700	36
Volume to Capacity	0.57	0.34	0.19	0.33	0.33	5.44
Queue Length 95th (ft)	0	0	17	0	0	Err
Control Delay (s)	0.0	0.0	15.5	0.0	0.0	Err
Lane LOS			C			F
Approach Delay (s)	0.0		1.0			Err
Approach LOS						F

Intersection Summary				
Average Delay	670.8			
Intersection Capacity Utilization	63.4%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	800	155	110	590	215	150	330	140	260	245	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.78	1.00	1.00	0.97	1.00	1.00	0.92	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1236	1770	3539	1543	1770	1863	1454	1770	1863	1561
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1236	1770	3539	1543	1770	1863	1454	1770	1863	1561
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	433	889	172	121	648	236	167	367	156	289	272	439
RTOR Reduction (vph)	0	0	59	0	0	68	0	0	26	0	0	317
Lane Group Flow (vph)	433	889	113	121	648	168	167	367	130	289	272	122
Confl. Peds. (#/hr)			59						35			
Confl. Bikes (#/hr)			6			12			9		9	3
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	27.6	38.9	38.9	9.7	21.0	21.0	13.1	24.0	24.0	18.9	29.8	29.8
Effective Green, g (s)	27.6	38.9	38.9	9.7	21.0	21.0	13.1	24.0	24.0	18.9	29.8	29.8
Actuated g/C Ratio	0.26	0.36	0.36	0.09	0.20	0.20	0.12	0.22	0.22	0.18	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	454	1281	447	160	691	301	216	416	325	311	516	433
v/s Ratio Prot	c0.24	0.25		0.07	c0.18		0.09	c0.20		c0.16	0.15	
v/s Ratio Perm			0.09			0.11			0.09			0.08
v/c Ratio	0.95	0.69	0.25	0.76	0.94	0.56	0.77	0.88	0.40	0.93	0.53	0.28
Uniform Delay, d1	39.3	29.2	24.1	47.7	42.6	39.1	45.8	40.4	35.6	43.6	32.9	30.5
Progression 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
Incremental Delay, d2	30.5	1.7	0.3	18.3	20.2	2.3	15.7	19.2	0.8	32.7	1.0	0.4
Delay (s)	69.8	30.9	24.4	66.0	62.8	41.3	61.5	59.6	36.4	76.3	33.9	30.8
Level of Service	E	C	C	E	E	D	E	E	D	E	C	C
Approach Delay (s)		41.4			58.2			54.8			44.8	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	107.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1135	65	50	880	35	10
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1449	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1449	1770	3539	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.67	0.67
Adj. Flow (vph)	1261	72	54	957	52	15
RTOR Reduction (vph)	0	0	0	0	0	14
Lane Group Flow (vph)	1261	72	54	957	52	1
Confl. Peds. (#/hr)		16	16			
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	5%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	45.7	45.7	4.2	53.9	4.5	4.5
Effective Green, g (s)	45.7	45.7	4.2	53.9	4.5	4.5
Actuated g/C Ratio	0.63	0.63	0.06	0.75	0.06	0.06
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)	2237	916	103	2638	110	99
v/s Ratio Prot	c0.36		c0.03	0.27	c0.03	
v/s Ratio Perm		0.05				0.00
v/c Ratio	0.56	0.08	0.52	0.36	0.47	0.01
Uniform Delay, d1	7.6	5.1	33.1	3.2	32.8	31.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	4.7	0.1	3.2	0.0
Delay (s)	7.9	5.2	37.8	3.3	35.9	31.8
Level of Service	A	A	D	A	D	C
Approach Delay (s)	7.8			5.1	35.0	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	17.9
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	170	905	785	170	70	130
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1502	1736	1540
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1502	1736	1540
Peak-hour factor, PHF	0.90	0.90	0.96	0.96	0.90	0.90
Adj. Flow (vph)	189	1006	818	177	78	144
RTOR Reduction (vph)	0	0	0	39	0	123
Lane Group Flow (vph)	189	1006	818	138	78	21
Confl. Peds. (#/hr)				15	2	13
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	13.1	41.2	24.1	24.1	9.5	9.5
Effective Green, g (s)	13.1	41.2	24.1	24.1	9.5	9.5
Actuated g/C Ratio	0.20	0.64	0.37	0.37	0.15	0.15
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)	359	2261	1322	561	256	227
v/s Ratio Prot	c0.11	0.28	c0.23		c0.04	
v/s Ratio Perm				0.09		0.01
v/c Ratio	0.53	0.44	0.62	0.25	0.30	0.09
Uniform Delay, d1	22.9	5.9	16.5	13.9	24.6	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.1	0.9	0.2	0.7	0.2
Delay (s)	24.3	6.0	17.3	14.2	25.2	24.0
Level of Service	C	A	B	B	C	C
Approach Delay (s)		8.9	16.8		24.4	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	17.8
Intersection Capacity Utilization	48.3%	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												
Volume (veh/h)	5	945	30	60	850	5	100	5	30	5	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90	0.38	0.38	0.38
Hourly flow rate (vph)	6	1050	33	64	904	5	111	6	33	13	13	13
Pedestrians		5			50			5				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			4			0				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	910			1088			1687	2120	597	1657	2134	460
vC1, stage 1 conf vol							1083	1083		1035	1035	
vC2, stage 2 conf vol							605	1037		622	1099	
vCu, unblocked vol	910			798			1488	1986	232	1453	2003	460
tC, single (s)	4.1			4.3			7.6	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.6	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			91			52	97	95	94	93	98
cM capacity (veh/h)	744			676			234	211	633	205	194	546

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	531	558	64	603	307	150	39
Volume Left	6	0	64	0	0	111	13
Volume Right	0	33	0	0	5	33	13
cSH	744	1700	676	1700	1700	270	253
Volume to Capacity	0.01	0.33	0.09	0.35	0.18	0.55	0.16
Queue Length 95th (ft)	1	0	8	0	0	77	14
Control Delay (s)	0.2	0.0	10.9	0.0	0.0	33.7	21.9
Lane LOS	A		B			D	C
Approach Delay (s)	0.1		0.7			33.7	21.9
Approach LOS						D	C

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	71.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	750	215	40	820	95	55
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1519	1770	1863	1736	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1519	1770	1863	1736	1583
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.78	0.78
Adj. Flow (vph)	833	239	43	872	122	71
RTOR Reduction (vph)	0	44	0	0	0	36
Lane Group Flow (vph)	833	195	43	872	122	35
Confl. Peds. (#/hr)		11				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	32.5	32.5	2.6	39.1	7.6	7.6
Effective Green, g (s)	32.5	32.5	2.6	39.1	7.6	7.6
Actuated g/C Ratio	0.59	0.59	0.05	0.71	0.14	0.14
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)	2103	903	84	1332	241	220
v/s Ratio Prot	0.24		0.02	c0.47	c0.07	
v/s Ratio Perm		0.13				0.02
v/c Ratio	0.40	0.22	0.51	0.65	0.51	0.16
Uniform Delay, d1	5.9	5.2	25.4	4.2	21.8	20.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	5.2	1.2	1.7	0.3
Delay (s)	6.0	5.3	30.6	5.4	23.5	21.1
Level of Service	A	A	C	A	C	C
Approach Delay (s)	5.9			6.5	22.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	660	150	230	785	75	80
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
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	1546	1770	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1546	1770	1863	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.90	0.90
Adj. Flow (vph)	733	167	245	835	83	89
RTOR Reduction (vph)	0	100	0	0	0	78
Lane Group Flow (vph)	733	67	245	835	83	11
Confl. Bikes (#/hr)		4				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	22.1	22.1	14.1	40.2	6.8	6.8
Effective Green, g (s)	22.1	22.1	14.1	40.2	6.8	6.8
Actuated g/C Ratio	0.40	0.40	0.26	0.73	0.12	0.12
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)	1422	621	454	1362	219	196
v/s Ratio Prot	0.21		0.14	c0.45	c0.05	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.52	0.11	0.54	0.61	0.38	0.06
Uniform Delay, d1	12.4	10.3	17.6	3.6	22.2	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.2	0.8	1.1	0.1
Delay (s)	12.7	10.4	18.9	4.4	23.3	21.4
Level of Service	B	B	B	A	C	C
Approach Delay (s)	12.3			7.7	22.3	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	45	280	400	935	785	25
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	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1559	1770	1863	3539	1547
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1559	1770	1863	3539	1547
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	311	444	1039	872	28
RTOR Reduction (vph)	0	271	0	0	0	18
Lane Group Flow (vph)	50	40	444	1039	872	10
Confl. Bikes (#/hr)		2		5	1	3
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	8.5	8.5	22.2	49.8	23.6	23.6
Effective Green, g (s)	8.5	8.5	22.2	49.8	23.6	23.6
Actuated g/C Ratio	0.13	0.13	0.33	0.75	0.36	0.36
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)	227	200	593	1399	1260	551
v/s Ratio Prot	c0.03		0.25	c0.56	0.25	
v/s Ratio Perm		0.03				0.01
v/c Ratio	0.22	0.20	0.75	0.74	0.69	0.02
Uniform Delay, d1	25.9	25.9	19.6	4.6	18.2	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5	5.2	2.2	1.7	0.0
Delay (s)	26.4	26.3	24.7	6.8	19.9	13.9
Level of Service	C	C	C	A	B	B
Approach Delay (s)	26.4			12.2	19.7	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	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												
Volume (vph)	260	130	620	20	20	40	600	1180	55	90	910	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1567	1719	1650		1770	3511		1752	3539	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1567	1719	1650		1770	3511		1752	3539	1537
Peak-hour factor, PHF	0.90	0.90	0.90	0.69	0.69	0.69	0.90	0.90	0.90	0.94	0.94	0.94
Adj. Flow (vph)	289	144	689	29	29	58	667	1311	61	96	968	90
RTOR Reduction (vph)	0	0	48	0	52	0	0	3	0	0	0	64
Lane Group Flow (vph)	289	144	641	29	35	0	667	1369	0	96	968	26
Confl. Peds. (#/hr)			6			5			2			2
Confl. Bikes (#/hr)			6		2	2			2		3	3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	3%	2%	2%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	11.1	17.8	42.0	1.9	8.6		24.2	42.8		5.4	24.0	24.0
Effective Green, g (s)	11.1	17.8	42.0	1.9	8.6		24.2	42.8		5.4	24.0	24.0
Actuated g/C Ratio	0.13	0.21	0.50	0.02	0.10		0.29	0.51		0.06	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	234	395	859	39	169		511	1791		113	1012	440
v/s Ratio Prot	c0.16	0.08	c0.22	0.02	0.02		c0.38	0.39		0.05	c0.27	
v/s Ratio Perm			0.19									0.02
v/c Ratio	1.24	0.36	0.75	0.74	0.21		1.31	0.76		0.85	0.96	0.06
Uniform Delay, d1	36.4	28.2	16.7	40.8	34.5		29.9	16.5		38.8	29.4	21.7
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	137.0	0.6	3.6	54.3	0.6		151.1	2.0		41.5	18.5	0.1
Delay (s)	173.4	28.8	20.3	95.0	35.1		180.9	18.5		80.3	47.9	21.8
Level of Service	F	C	C	F	D		F	B		F	D	C
Approach Delay (s)		60.8			50.1			71.6			48.6	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM Average Control Delay	62.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	83.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.5%	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												
Volume (vph)	480	335	175	35	85	195	30	875	110	275	460	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1562	1770	1863	1561	1752	3505	1559	1770	3539	1562
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1562	1770	1863	1561	1752	3505	1559	1770	3539	1562
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	495	345	180	38	91	210	31	902	113	306	511	356
RTOR Reduction (vph)	0	0	124	0	0	188	0	0	18	0	0	221
Lane Group Flow (vph)	495	345	56	38	91	22	31	902	95	306	511	135
Confl. Bikes (#/hr)		1	2			1			4		3	2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	2%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	29.3	29.3	29.3	10.1	10.1	10.1	3.6	24.6	24.6	15.0	36.0	36.0
Effective Green, g (s)	29.3	29.3	29.3	10.1	10.1	10.1	3.6	24.6	24.6	15.0	36.0	36.0
Actuated g/C Ratio	0.31	0.31	0.31	0.11	0.11	0.11	0.04	0.26	0.26	0.16	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	546	1092	482	188	198	166	66	908	404	279	1341	592
v/s Ratio Prot	c0.28	0.10		0.02	c0.05		0.02	c0.26		c0.17	0.14	
v/s Ratio Perm			0.04			0.01			0.06			0.09
v/c Ratio	0.91	0.32	0.12	0.20	0.46	0.13	0.47	0.99	0.24	1.10	0.38	0.23
Uniform Delay, d1	31.5	25.2	23.6	38.8	39.9	38.5	44.8	35.1	27.8	40.0	21.4	20.1
Progression Factor	0.87	0.81	1.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.2	0.7	0.5	0.5	1.7	0.4	5.2	28.1	0.3	82.3	0.2	0.2
Delay (s)	47.6	21.2	29.1	39.3	41.6	38.9	50.0	63.2	28.1	122.3	21.6	20.3
Level of Service	D	C	C	D	D	D	D	E	C	F	C	C
Approach Delay (s)		35.4			39.6			59.0			47.4	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	55	20	835	65	35	765
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	22	908	71	38	832
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1815	908			978	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1815	908			978	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	26	93			95	
cM capacity (veh/h)	81	334			705	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	82	908	71	38	832
Volume Left	60	0	0	38	0
Volume Right	22	0	71	0	0
cSH	111	1700	1700	705	1700
Volume to Capacity	0.74	0.53	0.04	0.05	0.49
Queue Length 95th (ft)	100	0	0	4	0
Control Delay (s)	96.0	0.0	0.0	10.4	0.0
Lane LOS	F			B	
Approach Delay (s)	96.0	0.0		0.5	
Approach LOS	F				

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	53.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	5	40	125	5	140	80	740	115	45	735	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	5	43	136	5	152	87	804	125	49	799	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								633				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1899	2022	821	1984	1981	867	842			929		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1988	2137	821	2091	2087	727	842			803		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	84	88	0	85	56	89			93		
cM capacity (veh/h)	16	33	375	21	36	347	793			672		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	22	49	136	158	87	929	49	842
Volume Left	22	0	136	0	87	0	49	0
Volume Right	0	43	0	152	0	125	0	43
cSH	16	175	21	267	793	1700	672	1700
Volume to Capacity	1.35	0.28	6.43	0.59	0.11	0.55	0.07	0.50
Queue Length 95th (ft)	81	27	Err	86	9	0	6	0
Control Delay (s)	686.3	33.4	Err	36.2	10.1	0.0	10.8	0.0
Lane LOS	F	D	F	E	B		B	
Approach Delay (s)	234.3		4648.6		0.9		0.6	
Approach LOS	F		F					

Intersection Summary				
Average Delay	608.4			
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	20	135	5	70	50	605	200	190	645	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.86	0.86	0.86	0.90	0.90	0.90
Hourly flow rate (vph)	33	5	22	169	6	88	58	703	233	211	717	44
Pedestrians					6						1	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					4.0						4.0	
Percent Blockage					1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2073	2219	739	2105	2125	827	761			942		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2073	2219	739	2105	2125	827	761			942		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	81	95	0	81	76	93			71		
cM capacity (veh/h)	19	29	417	22	33	369	851			724		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	33	27	169	94	58	936	211	761
Volume Left	33	0	169	0	58	0	211	0
Volume Right	0	22	0	88	0	233	0	44
cSH	19	112	22	219	851	1700	724	1700
Volume to Capacity	1.71	0.24	7.54	0.43	0.07	0.55	0.29	0.45
Queue Length 95th (ft)	111	22	Err	50	5	0	30	0
Control Delay (s)	764.9	47.1	Err	33.1	9.5	0.0	12.0	0.0
Lane LOS	F	E	F	D	A		B	
Approach Delay (s)	438.6		6439.8		0.6		2.6	
Approach LOS	F		F					

Intersection Summary				
Average Delay	751.4			
Intersection Capacity Utilization	78.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	55	105	90	570	410	95
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	71	136	110	695	500	116
Pedestrians	9			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.88	0.88	0.88			
vC, conflicting volume	1482	570	625			
vC1, stage 1 conf vol	567					
vC2, stage 2 conf vol	915					
vCu, unblocked vol	1479	445	508			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	75	88			
cM capacity (veh/h)	301	535	925			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	208	110	695	616
Volume Left	71	110	0	0
Volume Right	136	0	0	116
cSH	422	925	1700	1700
Volume to Capacity	0.49	0.12	0.41	0.36
Queue Length 95th (ft)	66	10	0	0
Control Delay (s)	21.5	9.4	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	21.5	1.3		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	70	525	115	125	405
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
Frpb, ped/bikes	1.00	0.87	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1308	1806		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1308	1806		1770	1863
Peak-hour factor, PHF	0.85	0.85	0.86	0.86	0.87	0.87
Adj. Flow (vph)	188	82	610	134	144	466
RTOR Reduction (vph)	0	71	8	0	0	0
Lane Group Flow (vph)	188	11	736	0	144	466
Confl. Bikes (#/hr)		42		18		14
Heavy Vehicles (%)	2%	7%	2%	2%	2%	2%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	9.1	9.1	31.5		7.1	42.6
Effective Green, g (s)	9.1	9.1	31.5		7.1	42.6
Actuated g/C Ratio	0.14	0.14	0.47		0.11	0.64
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)	243	179	857		189	1195
v/s Ratio Prot	c0.11		c0.41		c0.08	0.25
v/s Ratio Perm		0.01				
v/c Ratio	0.77	0.06	0.86		0.76	0.39
Uniform Delay, d1	27.7	24.9	15.5		28.8	5.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.2	0.1	8.5		16.5	0.2
Delay (s)	41.8	25.1	24.0		45.3	5.9
Level of Service	D	C	C		D	A
Approach Delay (s)	36.7		24.0			15.2
Approach LOS	D		C			B

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	18.7
Intersection Capacity Utilization	60.4%	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												
Volume (vph)	120	220	170	45	90	25	140	495	145	25	365	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.93		1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1826	1466		1827	1519	1770	1863	1513	1770	1863	1505
Flt Permitted		0.83	1.00		0.74	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1536	1466		1379	1519	1770	1863	1513	1770	1863	1505
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	135	247	191	51	102	28	159	562	165	27	401	220
RTOR Reduction (vph)	0	0	90	0	0	19	0	0	86	0	0	143
Lane Group Flow (vph)	0	382	101	0	153	9	159	562	79	27	401	77
Confl. Peds. (#/hr)	5		10	10		5			6			9
Confl. Bikes (#/hr)		2	33		3	11		2	17		15	14
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		17.2	17.2		17.2	17.2	5.8	23.1	23.1	1.4	18.7	18.7
Effective Green, g (s)		17.2	17.2		17.2	17.2	5.8	23.1	23.1	1.4	18.7	18.7
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.11	0.43	0.43	0.03	0.35	0.35
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		492	470		442	487	191	801	651	46	649	524
v/s Ratio Prot							c0.09	c0.30		0.02	0.22	
v/s Ratio Perm		c0.25	0.07		0.11	0.01			0.05			0.05
v/c Ratio		0.78	0.22		0.35	0.02	0.83	0.70	0.12	0.59	0.62	0.15
Uniform Delay, d1		16.5	13.3		14.0	12.5	23.5	12.5	9.2	25.9	14.5	12.0
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		7.5	0.2		0.5	0.0	25.5	2.8	0.1	17.7	1.8	0.1
Delay (s)		24.1	13.6		14.4	12.5	49.0	15.3	9.3	43.5	16.3	12.1
Level of Service		C	B		B	B	D	B	A	D	B	B
Approach Delay (s)		20.6			14.1			20.2			16.0	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	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												
Volume (vph)	160	205	380	140	305	185	290	400	195	160	390	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.83	1.00	1.00	0.96	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1453	1770	3505	1317	1770	1863	1522	1770	1863	1474
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1453	1770	3505	1317	1770	1863	1522	1770	1863	1474
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	167	214	396	167	363	220	319	440	214	174	424	125
RTOR Reduction (vph)	0	0	267	0	0	72	0	0	30	0	0	19
Lane Group Flow (vph)	167	214	129	167	363	148	319	440	184	174	424	106
Confl. Peds. (#/hr)			7			49			14			28
Confl. Bikes (#/hr)		1	12		2	7		2	6		5	15
Heavy Vehicles (%)	2%	2%	4%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.5	15.7	15.7	12.5	15.7	15.7	20.5	32.1	32.1	14.0	25.6	25.6
Effective Green, g (s)	12.5	15.7	15.7	12.5	15.7	15.7	20.5	32.1	32.1	14.0	25.6	25.6
Actuated g/C Ratio	0.14	0.17	0.17	0.14	0.17	0.17	0.23	0.36	0.36	0.16	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	245	615	253	245	609	229	402	662	541	274	528	418
v/s Ratio Prot	c0.09	0.06		0.09	0.10		c0.18	0.24		0.10	c0.23	
v/s Ratio Perm			0.09			c0.11			0.12			0.07
v/c Ratio	0.68	0.35	0.51	0.68	0.60	0.65	0.79	0.66	0.34	0.64	0.80	0.25
Uniform Delay, d1	37.0	32.8	33.8	37.0	34.4	34.7	32.9	24.6	21.3	35.8	30.0	25.0
Progression 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
Incremental Delay, d2	7.6	0.3	1.7	7.6	1.6	6.2	10.3	2.5	0.4	4.8	8.6	0.3
Delay (s)	44.6	33.1	35.6	44.6	36.0	40.9	43.2	27.1	21.7	40.5	38.6	25.3
Level of Service	D	C	D	D	D	D	D	C	C	D	D	C
Approach Delay (s)		36.8			39.3			31.2			36.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.2%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	120	10	20	40	30	25	255	15	10	205	25
Peak Hour Factor	0.65	0.65	0.65	0.78	0.78	0.78	0.83	0.83	0.83	0.76	0.76	0.76
Hourly flow rate (vph)	15	185	15	26	51	38	30	307	18	13	270	33

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	215	115	355	316
Volume Left (vph)	15	26	30	13
Volume Right (vph)	15	38	18	33
Hadj (s)	0.01	-0.12	0.02	-0.02
Departure Headway (s)	6.0	6.1	5.5	5.5
Degree Utilization, x	0.36	0.20	0.54	0.48
Capacity (veh/h)	538	491	617	614
Control Delay (s)	12.3	10.6	14.8	13.5
Approach Delay (s)	12.3	10.6	14.8	13.5
Approach LOS	B	B	B	B

Intersection Summary			
Delay	13.4		
HCM Level of Service	B		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	510	80	25	290	20	70	200	135	20	80	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.95	1.00	0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1750	1799		1765	1838		1764	1863	1506	1764	1677	
Flt Permitted	0.49	1.00		0.27	1.00		0.53	1.00	1.00	0.58	1.00	
Satd. Flow (perm)	899	1799		504	1838		988	1863	1506	1080	1677	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.88	0.88	0.88	0.69	0.69	0.69
Adj. Flow (vph)	38	554	87	30	354	24	80	227	153	29	116	145
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	104	0	90	0
Lane Group Flow (vph)	38	629	0	30	373	0	80	227	49	29	171	0
Confl. Peds. (#/hr)	13		6	6		13	3		3	3		3
Confl. Bikes (#/hr)		4	106		4	34		10	21		17	7
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0		16.0	16.0	16.0	16.0	16.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0		16.0	16.0	16.0	16.0	16.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.32	0.32	0.32	0.32	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	467	935		262	956		316	596	482	346	537	
v/s Ratio Prot		c0.35			0.20			c0.12			0.10	
v/s Ratio Perm	0.04			0.06			0.08		0.03	0.03		
v/c Ratio	0.08	0.67		0.11	0.39		0.25	0.38	0.10	0.08	0.32	
Uniform Delay, d1	6.0	8.9		6.1	7.2		12.6	13.2	11.9	11.9	12.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	3.9		0.9	1.2		1.9	1.8	0.4	0.5	1.6	
Delay (s)	6.4	12.7		7.0	8.4		14.5	15.0	12.4	12.4	14.4	
Level of Service	A	B		A	A		B	B	B	B	B	
Approach Delay (s)		12.4			8.3			14.0			14.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	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												
Volume (vph)	255	495	100	65	575	100	90	185	145	50	100	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.93	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1799		1703	3539	1498	1770	1863	1479	1770	1863	1478
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1799		1703	3539	1498	1770	1863	1479	1770	1863	1478
Peak-hour factor, PHF	0.83	0.83	0.83	0.89	0.89	0.89	0.87	0.87	0.87	0.70	0.70	0.70
Adj. Flow (vph)	307	596	120	73	646	112	103	213	167	71	143	121
RTOR Reduction (vph)	0	8	0	0	0	63	0	0	130	0	0	100
Lane Group Flow (vph)	307	708	0	73	646	49	103	213	37	71	143	21
Confl. Peds. (#/hr)			14			11			3			18
Confl. Bikes (#/hr)			3			7			43		43	24
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	18.1	36.3		4.3	22.5	22.5	5.8	14.4	14.4	4.3	12.9	12.9
Effective Green, g (s)	18.1	36.3		4.3	22.5	22.5	5.8	14.4	14.4	4.3	12.9	12.9
Actuated g/C Ratio	0.24	0.48		0.06	0.30	0.30	0.08	0.19	0.19	0.06	0.17	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	425	867		97	1057	448	136	356	283	101	319	253
v/s Ratio Prot	c0.17	c0.39		0.04	0.18		c0.06	c0.11		0.04	0.08	
v/s Ratio Perm						0.03			0.02			0.01
v/c Ratio	0.72	0.82		0.75	0.61	0.11	0.76	0.60	0.13	0.70	0.45	0.08
Uniform Delay, d1	26.3	16.7		35.0	22.6	19.1	34.1	27.8	25.3	34.9	28.0	26.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	6.0		27.6	1.1	0.1	21.1	2.7	0.2	19.8	1.0	0.1
Delay (s)	32.3	22.7		62.6	23.7	19.2	55.2	30.5	25.5	54.7	29.0	26.4
Level of Service	C	C		E	C	B	E	C	C	D	C	C
Approach Delay (s)		25.5			26.5			34.0			33.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Cumulative No Project - RES
Peak Hour: AM

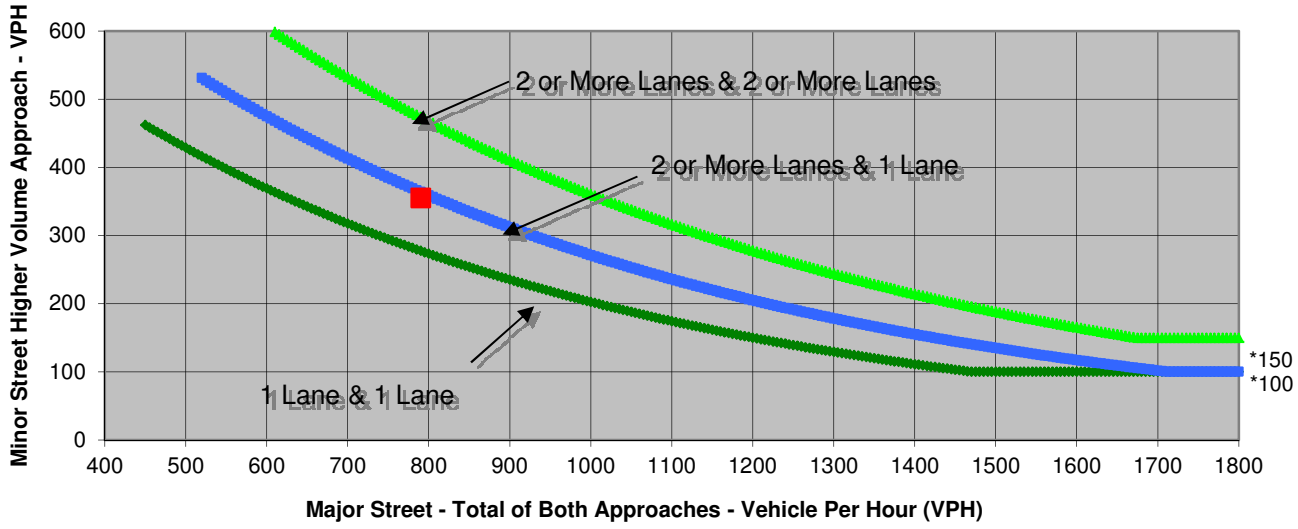
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	120	85	80
Through	85	185	305	155
Right	40	50	25	140
Total	145	355	415	375

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	790	355	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Cumulative No Project - RES
Peak Hour: PM

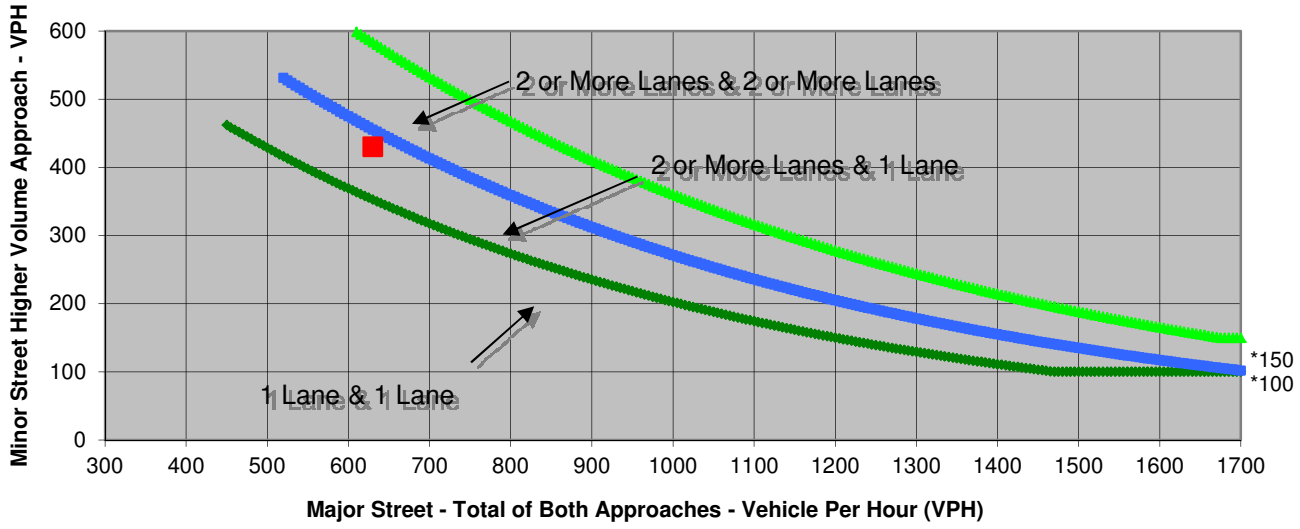
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	180	100	20
Through	10	185	175	170
Right	50	65	20	145
Total	130	430	295	335

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	630	430	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Cumulative No Project - RES
Peak Hour: AM

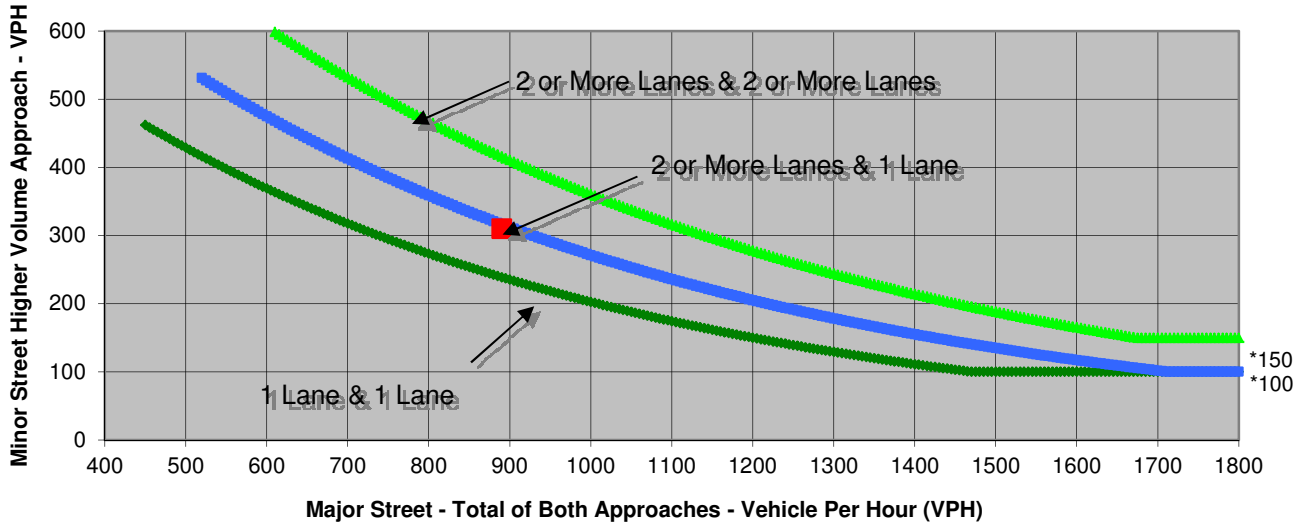
Turn Movement Volumes

	NB	SB	EB	WB
Left	255	0	0	105
Through	0	0	180	385
Right	55	0	220	0
Total	310	0	400	490

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	890	310	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Cumulative No Project - RES
Peak Hour: PM

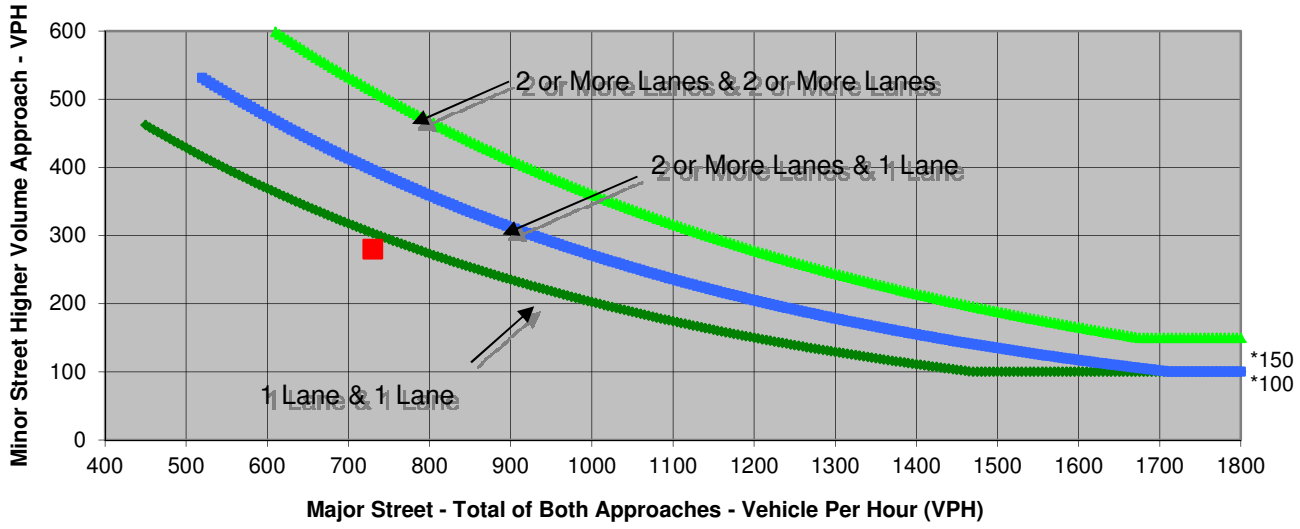
Turn Movement Volumes

	NB	SB	EB	WB
Left	190	0	0	45
Through	0	0	275	185
Right	90	0	225	0
Total	280	0	500	230

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	730	280	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Cumulative No Project - RES
Peak Hour: AM

Turn Movement Volumes

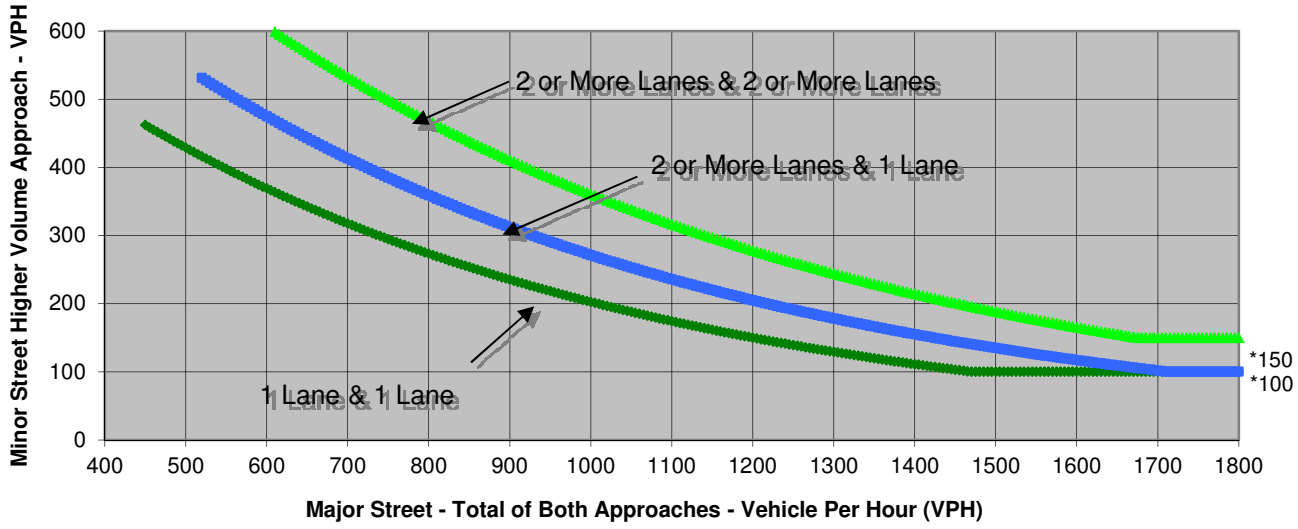
	NB	SB	EB	WB
Left	0	25	0	30
Through	105	145	0	0
Right	15	0	0	30
Total	120	170	0	60

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	290	60	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Cumulative No Project - RES
Peak Hour: PM

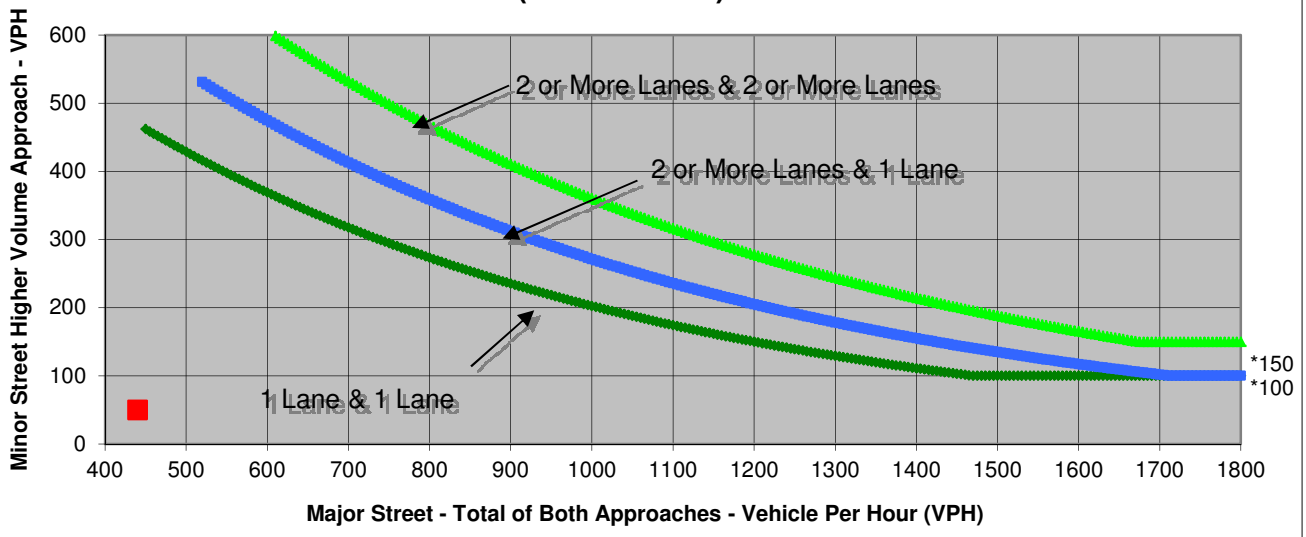
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	15	0	20
Through	225	130	0	0
Right	70	0	0	30
Total	295	145	0	50

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	440	50	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Cumulative No Project - RES
Peak Hour: AM

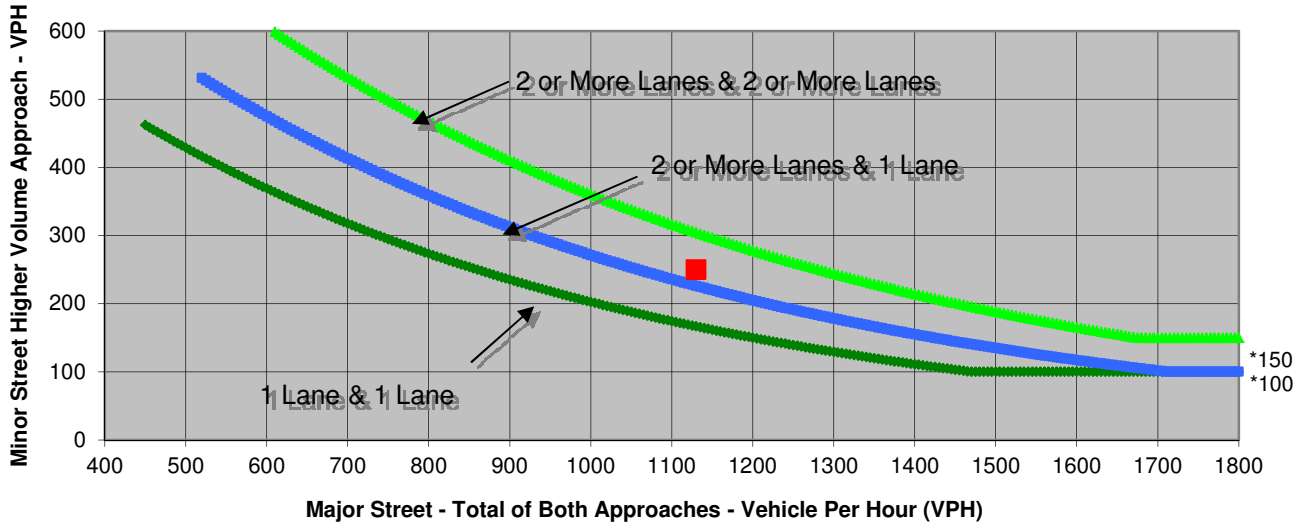
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	25	60	105
Through	20	35	300	545
Right	10	190	105	15
Total	90	250	465	665

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,130	250	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Cumulative No Project - RES
Peak Hour: PM

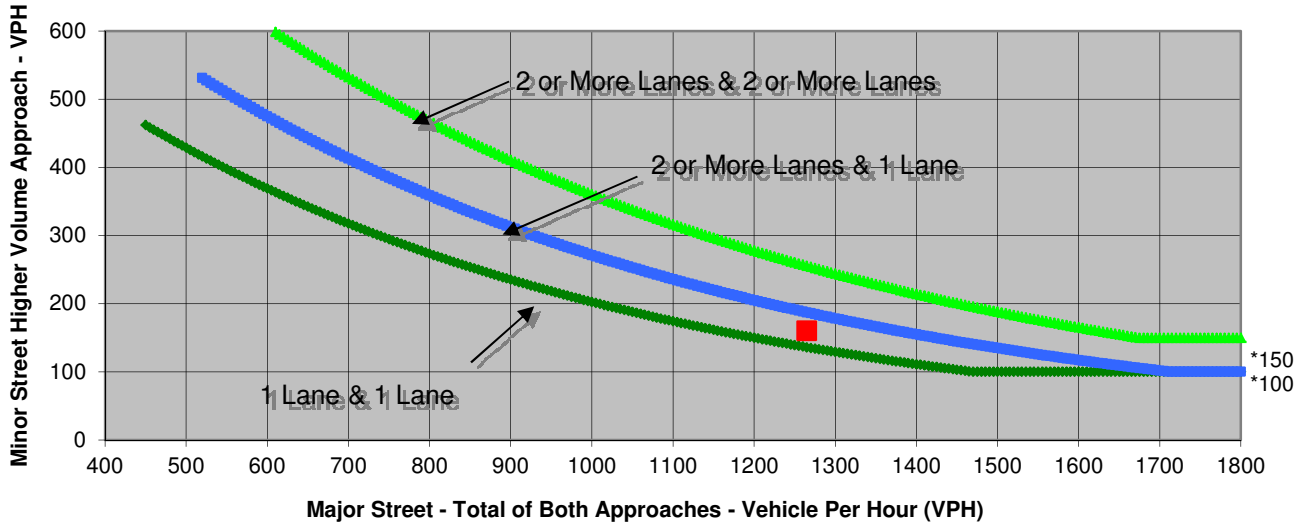
Turn Movement Volumes

	NB	SB	EB	WB
Left	75	35	155	45
Through	45	55	535	455
Right	20	70	45	30
Total	140	160	735	530

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,265	160	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Cumulative No Project - RES
Peak Hour: AM

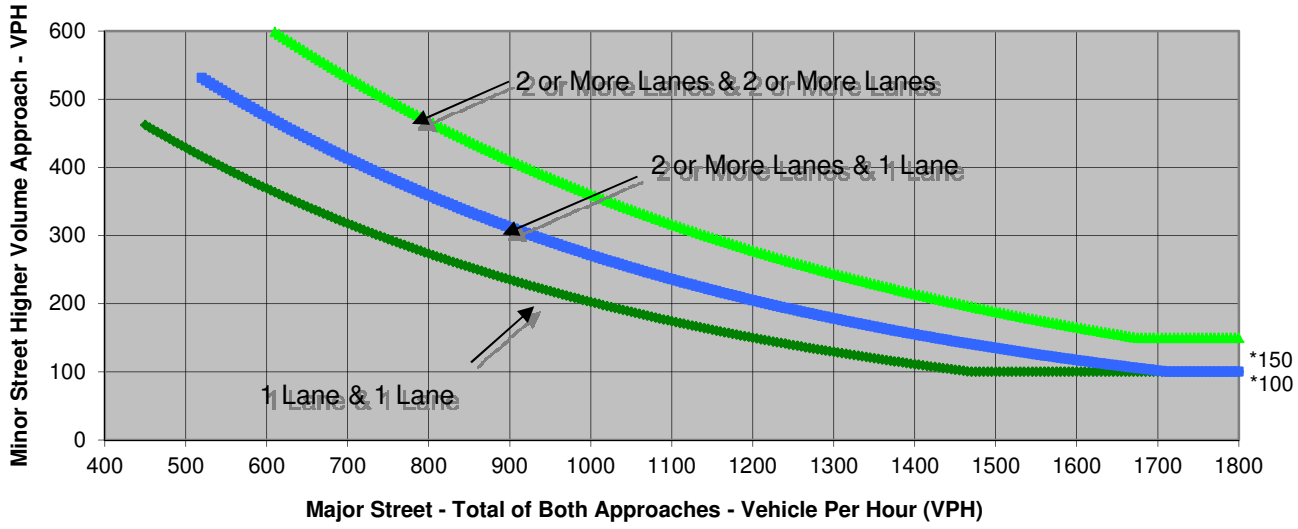
Turn Movement Volumes

	NB	SB	EB	WB
Left	45	120	70	65
Through	55	340	795	1,185
Right	0	220	0	10
Total	100	680	865	1,260

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,125	680	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Cumulative No Project - RES
Peak Hour: PM

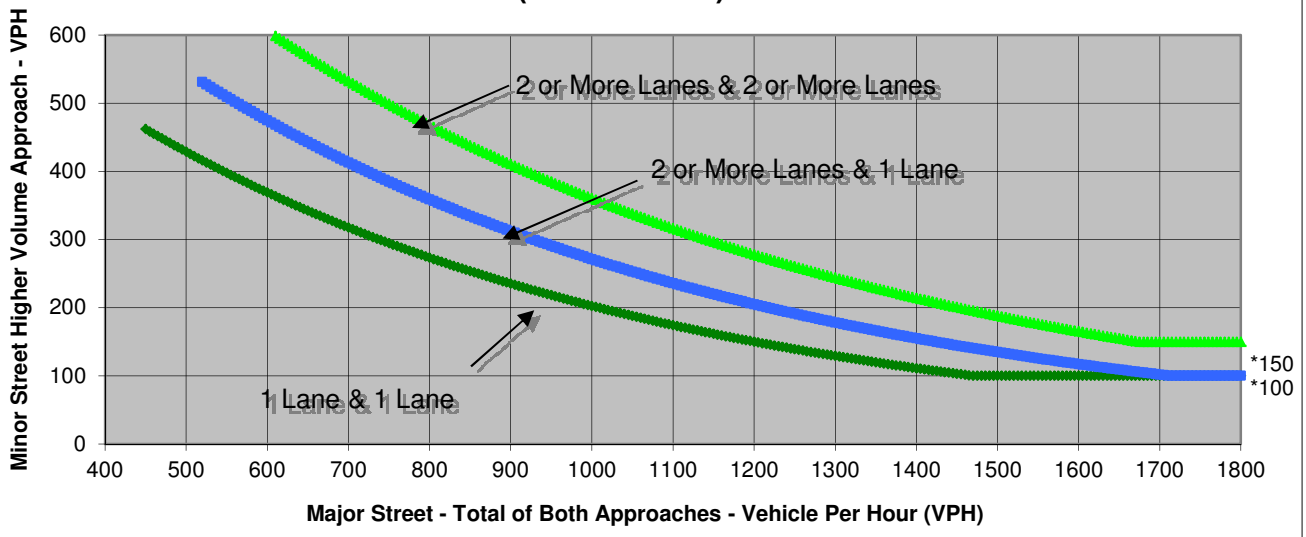
Turn Movement Volumes

	NB	SB	EB	WB
Left	65	45	295	115
Through	340	120	1,240	1,035
Right	0	100	0	50
Total	405	265	1,535	1,200

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,735	405	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative No Project - RES
Peak Hour: AM

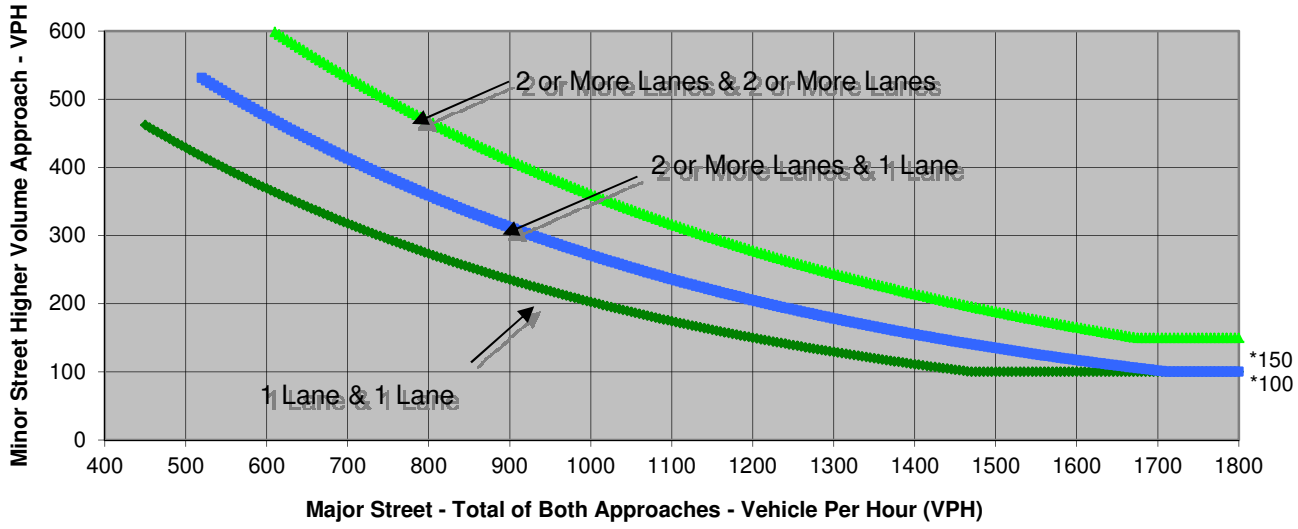
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	0	0	60
Through	0	0	925	1,200
Right	5	0	40	0
Total	65	0	965	1,260

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,225	65	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative No Project - RES
Peak Hour: PM

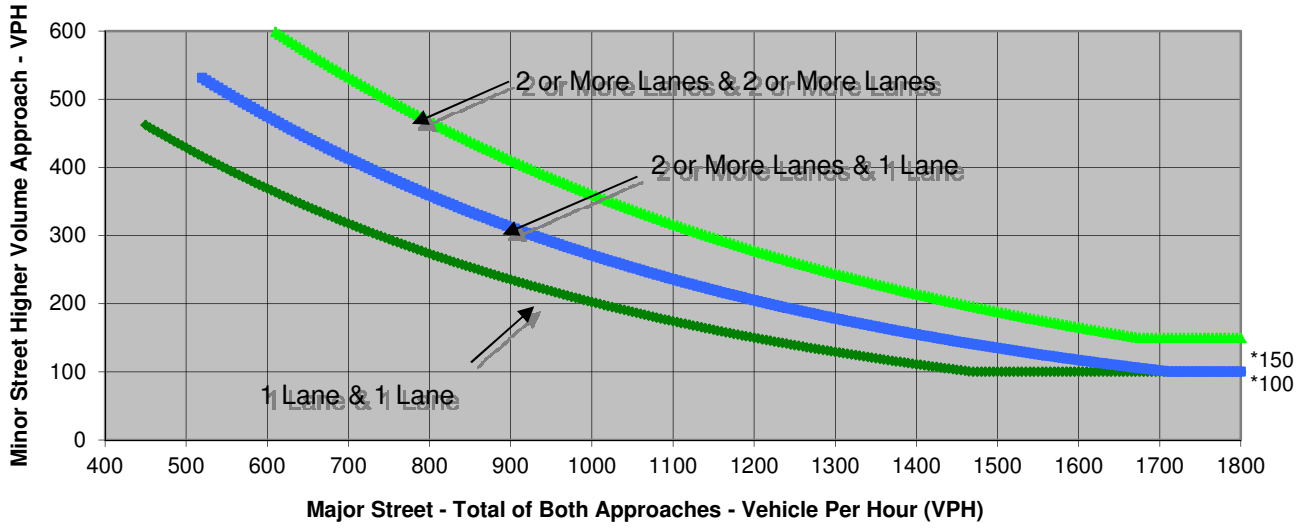
Turn Movement Volumes

	NB	SB	EB	WB
Left	140	0	0	75
Through	0	0	1,320	1,060
Right	25	0	80	0
Total	165	0	1,400	1,135

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,535	165	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Cumulative No Project - RES
Peak Hour: AM

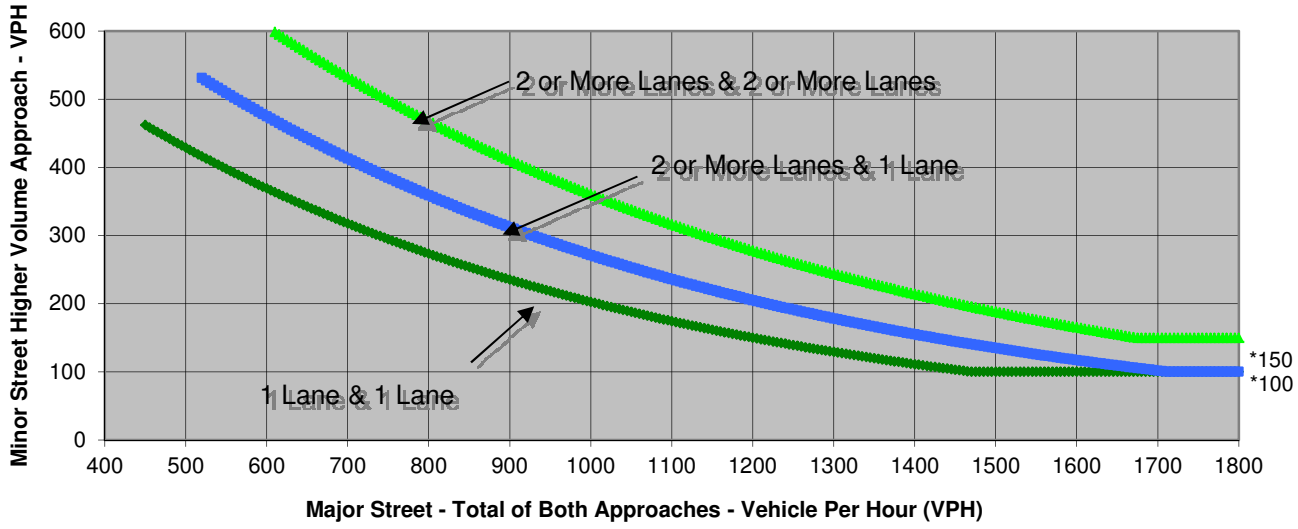
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	5	5	30
Through	5	5	945	915
Right	50	5	35	5
Total	115	15	985	950

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Covell Blvd	Minor Street Monarch Ln	Warrant Met
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,935	115	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Cumulative No Project - RES
Peak Hour: PM

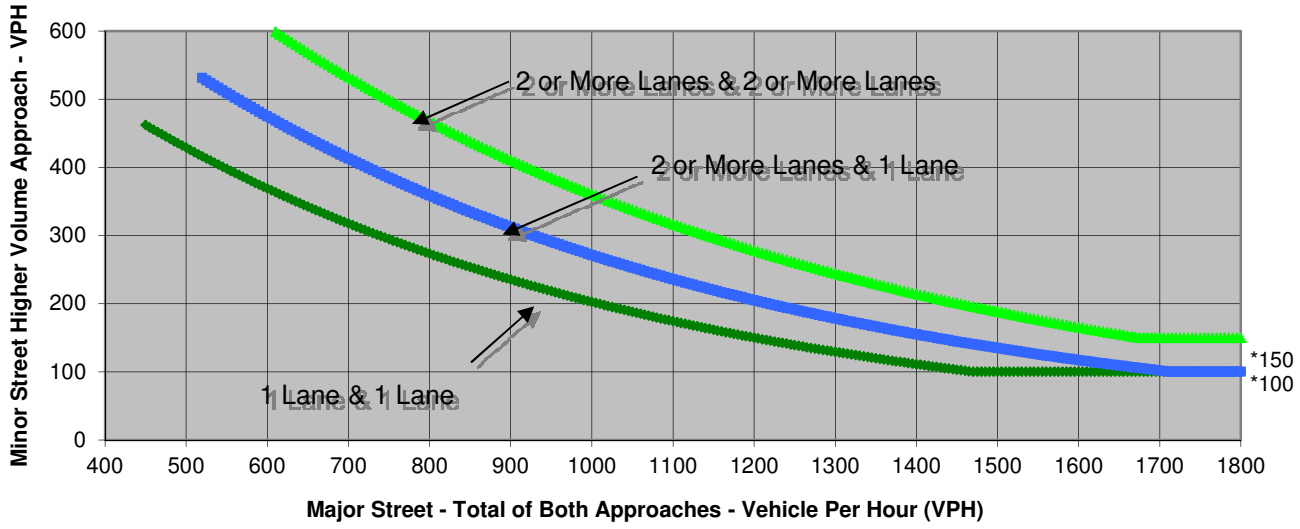
Turn Movement Volumes

	NB	SB	EB	WB
Left	100	5	5	60
Through	5	5	945	850
Right	30	5	30	5
Total	135	15	980	915

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Covell Blvd	Minor Street Monarch Ln	Warrant Met
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,895	135	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Cumulative No Project - RES
Peak Hour: AM

Turn Movement Volumes

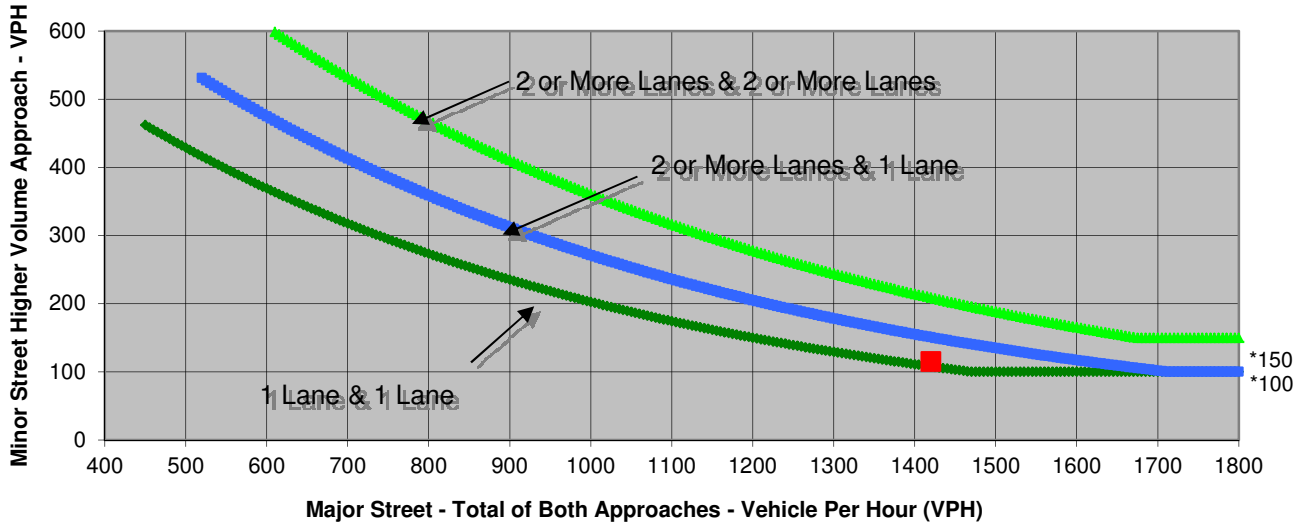
	NB	SB	EB	WB
Left	0	10	0	80
Through	555	820	0	0
Right	35	0	0	35
Total	590	830	0	115

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Donner Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,420	115	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Cumulative No Project - RES
Peak Hour: PM

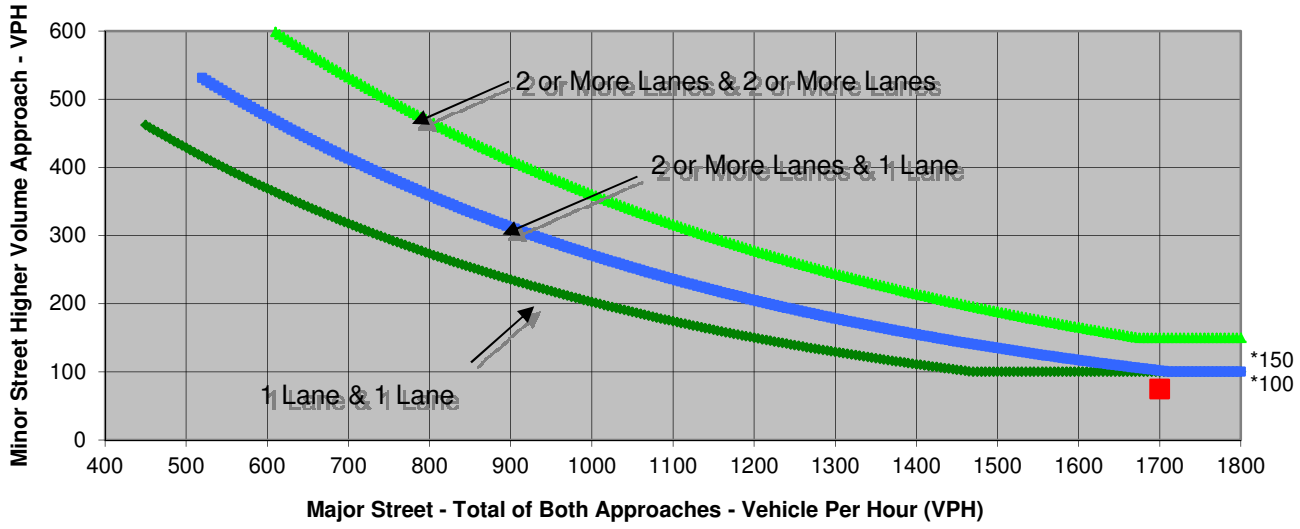
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	35	0	55
Through	835	765	0	0
Right	65	0	0	20
Total	900	800	0	75

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Donner Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,700	75	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Cumulative No Project - RES
Peak Hour: AM

Turn Movement Volumes

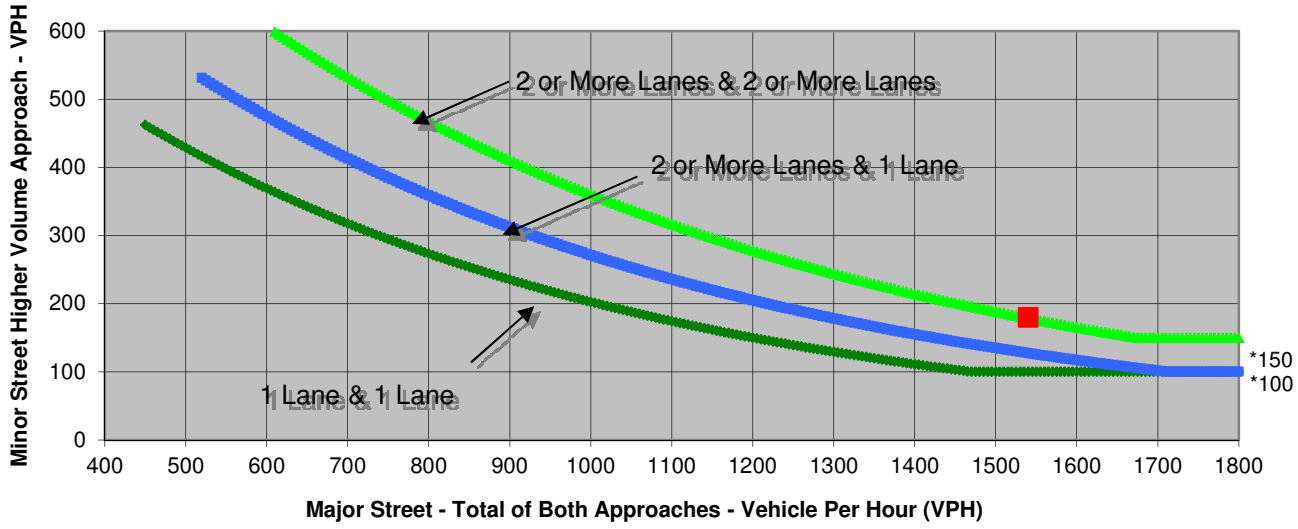
	NB	SB	EB	WB
Left	20	45	40	90
Through	520	845	20	5
Right	100	10	120	30
Total	640	900	180	125

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Picasso Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,540	180	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Cumulative No Project - RES
Peak Hour: PM

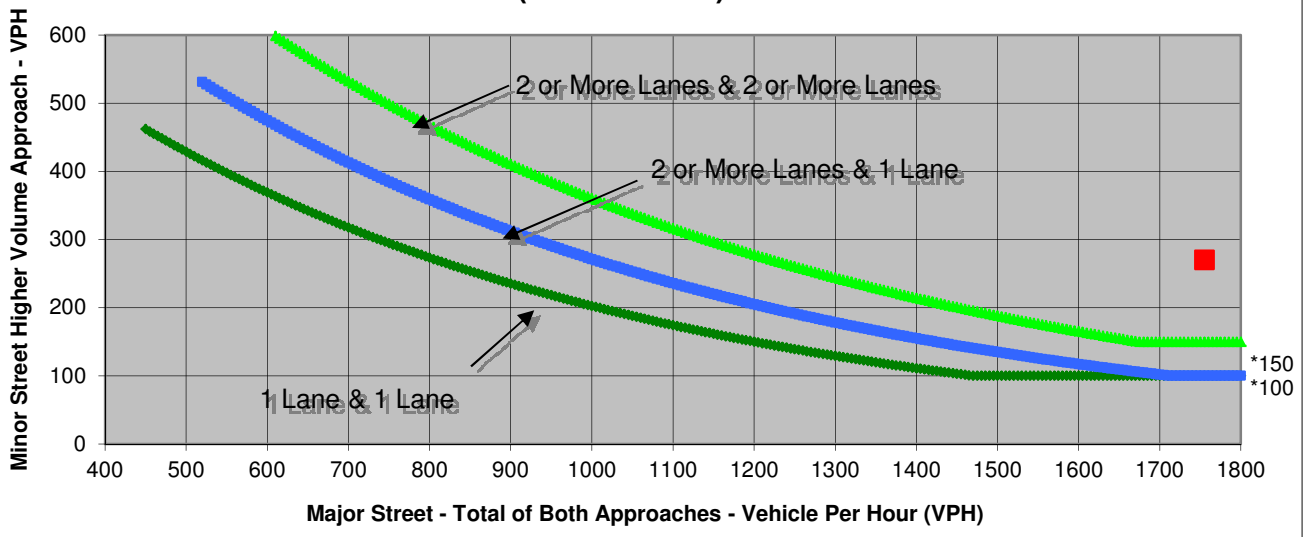
Turn Movement Volumes

	NB	SB	EB	WB
Left	80	45	20	125
Through	740	735	5	5
Right	115	40	40	140
Total	935	820	65	270

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Pole Line Rd	Minor Street Picasso Ave	Warrant Met
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,755	270	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Cumulative No Project - RES
Peak Hour: AM

Turn Movement Volumes

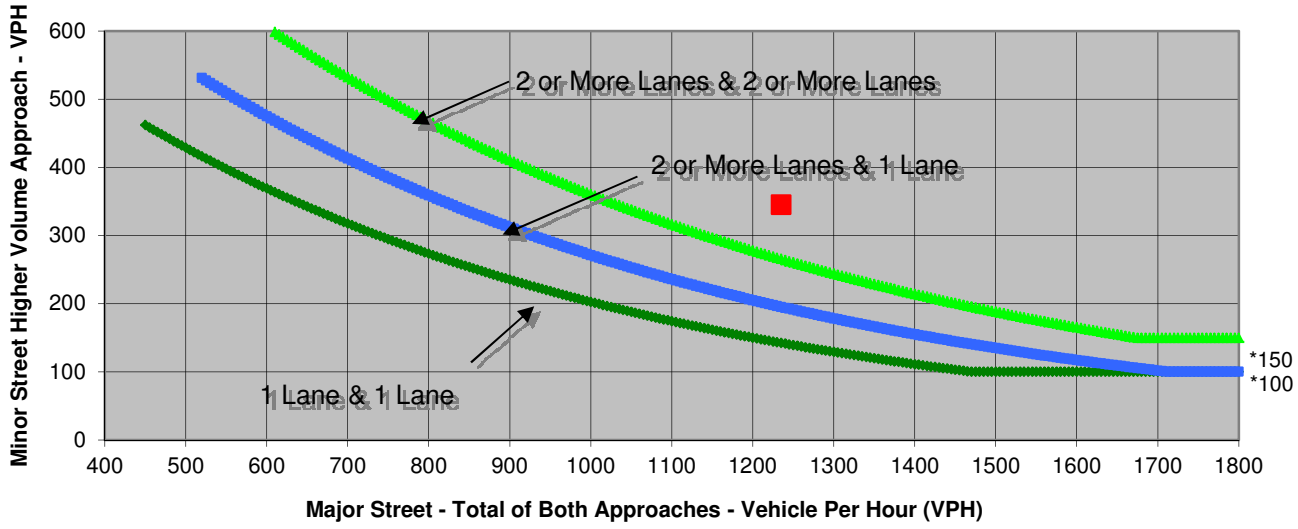
	NB	SB	EB	WB
Left	10	65	40	190
Through	490	570	20	5
Right	90	10	70	150
Total	590	645	130	345

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,235	345	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Cumulative No Project - RES
Peak Hour: PM

Turn Movement Volumes

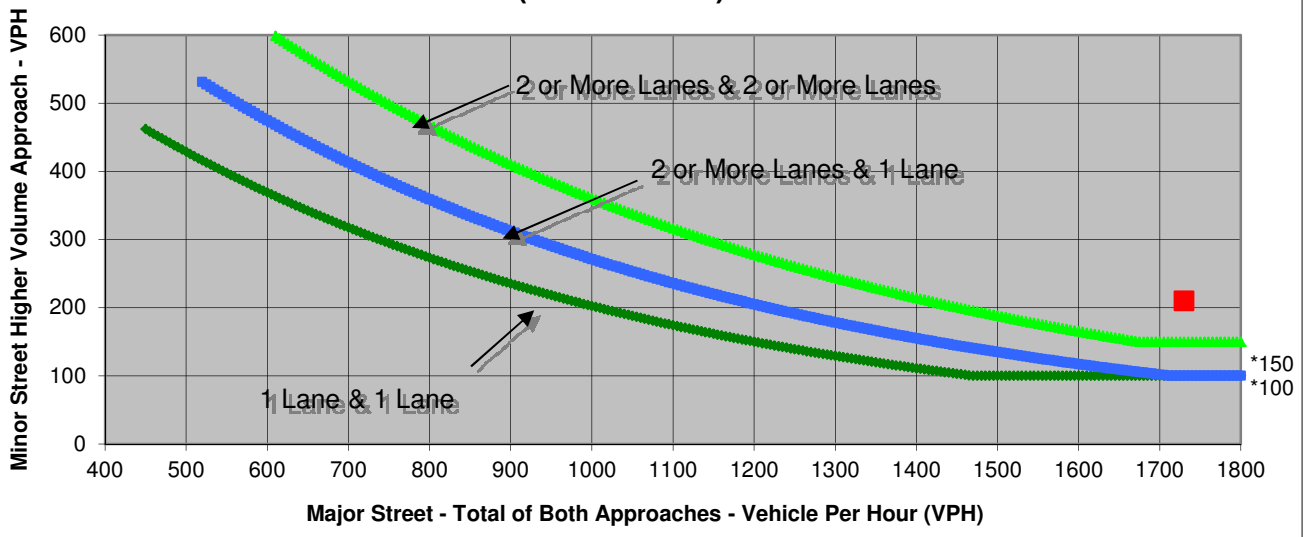
	NB	SB	EB	WB
Left	50	190	30	135
Through	605	645	5	5
Right	200	40	20	70
Total	855	875	55	210

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,730	210	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative No Project - RES
Peak Hour: AM

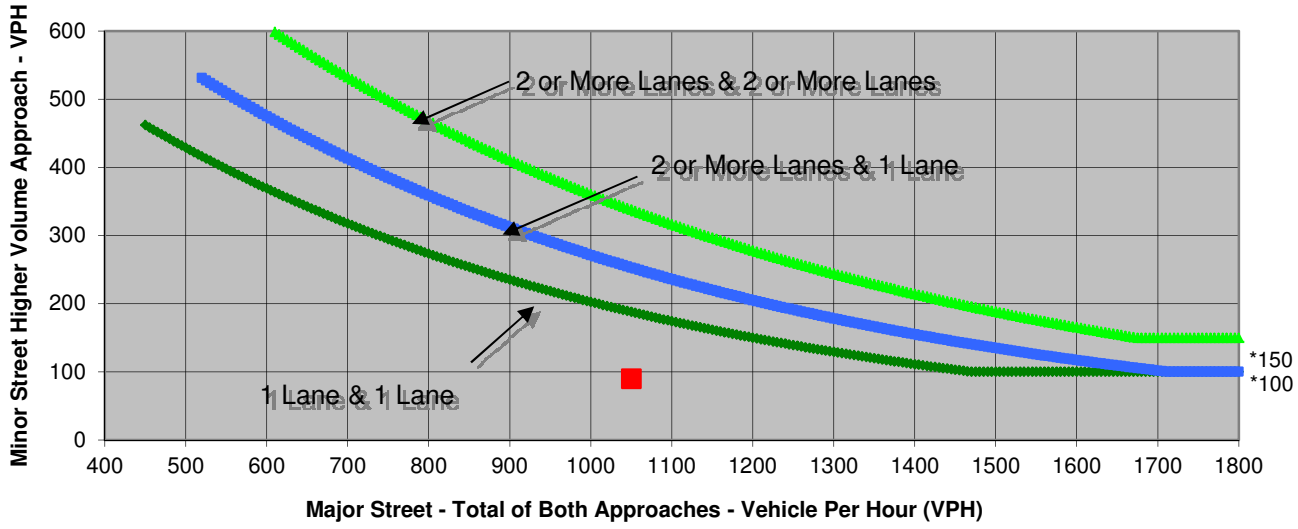
Turn Movement Volumes

	NB	SB	EB	WB
Left	55	0	20	0
Through	365	580	0	0
Right	0	50	70	0
Total	420	630	90	0

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,050	90	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative No Project - RES
Peak Hour: PM

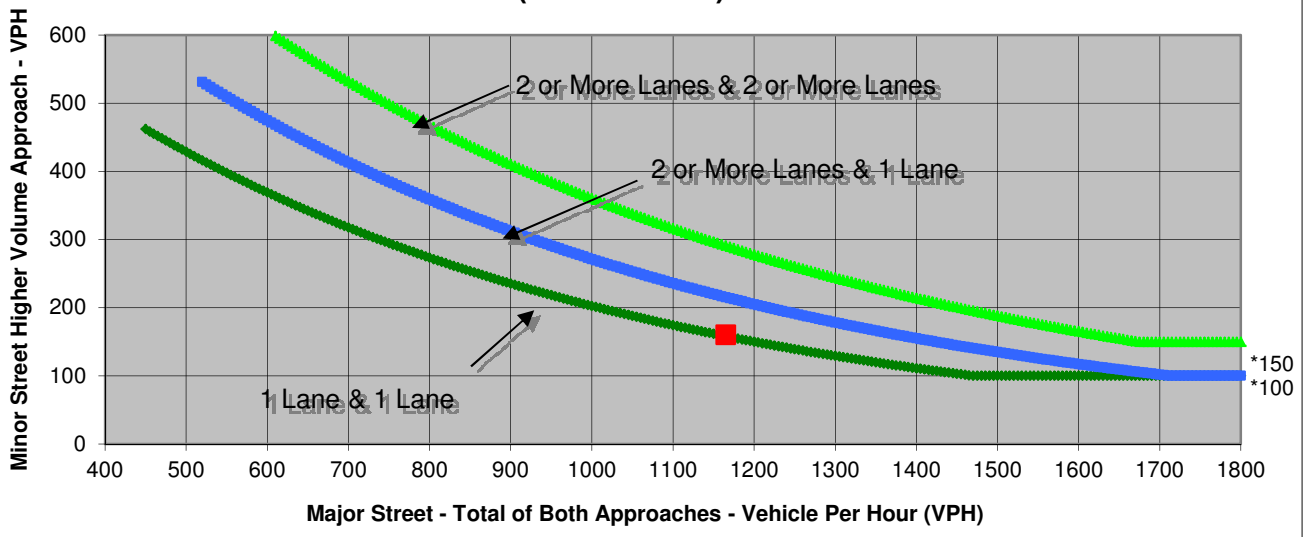
Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	55	0
Through	570	410	0	0
Right	0	95	105	0
Total	660	505	160	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,165	160	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Cumulative No Project - RES
Peak Hour: AM

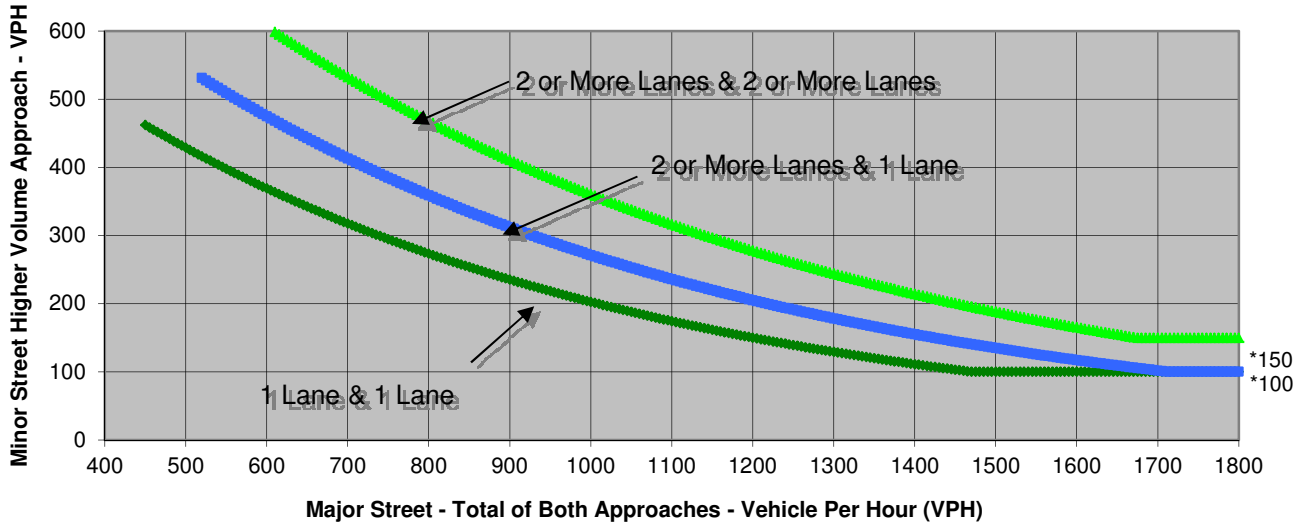
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	10	20	25
Through	55	210	35	40
Right	35	55	30	10
Total	110	275	85	75

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	385	85	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Cumulative No Project - RES
Peak Hour: PM

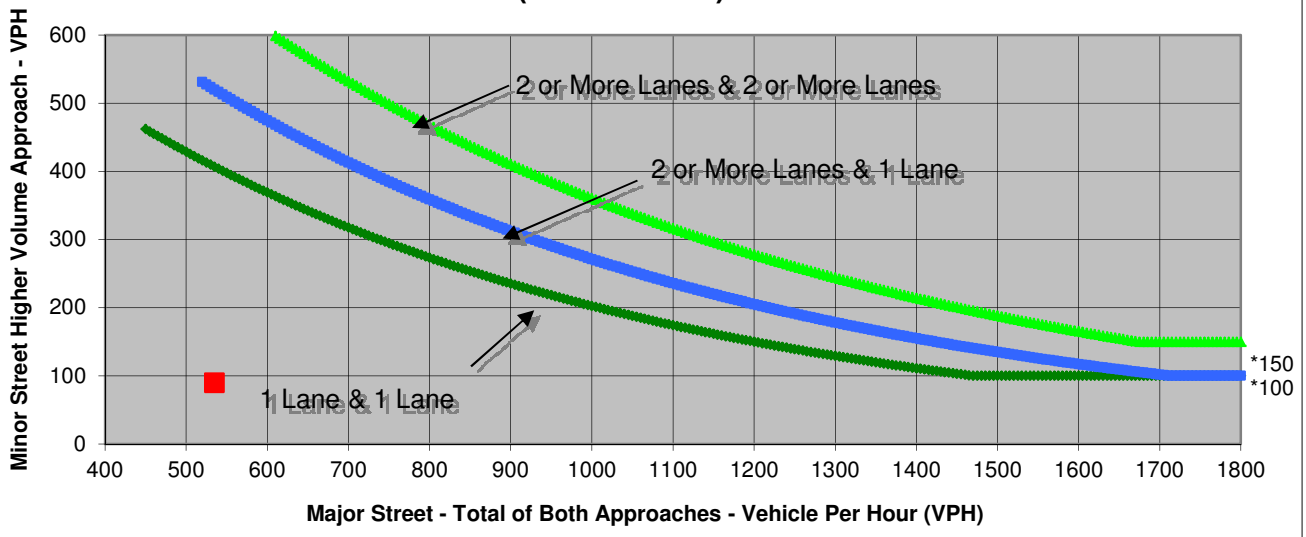
Turn Movement Volumes

	NB	SB	EB	WB
Left	25	10	10	20
Through	255	205	2	40
Right	15	25	10	30
Total	295	240	22	90

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	535	90	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	550	15	143	427	275	10	65	331	385	25	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.94	1.00	1.00	0.97	1.00	0.96	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3539	1518	3273	3438	1484	1770	1863	1533	1770	1592	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	3539	1518	3273	3438	1484	1770	1863	1533	1770	1592	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.79	0.79	0.79	0.90	0.90	0.90
Adj. Flow (vph)	117	611	17	159	474	306	13	82	419	428	28	83
RTOR Reduction (vph)	0	0	8	0	0	121	0	0	194	0	45	0
Lane Group Flow (vph)	117	611	9	159	474	185	13	82	225	428	66	0
Confl. Peds. (#/hr)			13			12			10			20
Confl. Bikes (#/hr)			3			2			1		1	
Heavy Vehicles (%)	5%	2%	2%	7%	5%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	9.7	24.2	24.2	17.2	31.7	31.7	1.6	23.4	23.4	29.2	51.0	
Effective Green, g (s)	9.7	24.2	24.2	17.2	31.7	31.7	1.6	23.4	23.4	29.2	51.0	
Actuated g/C Ratio	0.09	0.22	0.22	0.16	0.29	0.29	0.01	0.21	0.21	0.27	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	152	779	334	512	991	428	26	396	326	470	738	
v/s Ratio Prot	0.07	c0.17		0.05	c0.14		0.01	0.04		c0.24	0.04	
v/s Ratio Perm			0.01			0.12			c0.15			
v/c Ratio	0.77	0.78	0.03	0.31	0.48	0.43	0.50	0.21	0.69	0.91	0.09	
Uniform Delay, d1	49.1	40.4	33.7	41.1	32.3	31.8	53.8	35.7	39.9	39.1	16.5	
Progression Factor	1.00	1.00	1.00	0.74	0.67	0.81	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	20.6	5.2	0.0	0.3	1.6	3.0	14.3	1.2	11.3	21.7	0.2	
Delay (s)	69.7	45.6	33.7	30.8	23.1	28.6	68.1	36.8	51.2	60.8	16.8	
Level of Service	E	D	C	C	C	C	E	D	D	E	B	
Approach Delay (s)		49.1			26.2			49.4			51.8	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	41.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	105	1141	805	279	163	40
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1497	1770	1548
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1497	1770	1548
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.86	0.86
Adj. Flow (vph)	113	1227	894	310	190	47
RTOR Reduction (vph)	0	0	0	46	0	40
Lane Group Flow (vph)	113	1227	894	264	190	7
Confl. Peds. (#/hr)				8		4
Confl. Bikes (#/hr)				13		2
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	12.3	84.9	68.6	68.6	17.1	17.1
Effective Green, g (s)	12.3	84.9	68.6	68.6	17.1	17.1
Actuated g/C Ratio	0.11	0.77	0.62	0.62	0.16	0.16
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)	198	2731	2207	934	275	241
v/s Ratio Prot	c0.06	c0.35	0.25		c0.11	
v/s Ratio Perm				0.18		0.00
v/c Ratio	0.57	0.45	0.41	0.28	0.69	0.03
Uniform Delay, d1	46.3	4.4	10.4	9.5	43.9	39.4
Progression Factor	1.08	0.39	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.3	0.6	0.8	7.3	0.1
Delay (s)	52.6	2.1	11.0	10.2	51.2	39.5
Level of Service	D	A	B	B	D	D
Approach Delay (s)		6.3	10.8		48.9	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.8%	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												
Volume (vph)	115	783	405	39	1028	79	145	45	29	108	100	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.90
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1527	1770	3539	1478	1770	1863	1523	1719	1863	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1527	1770	3539	1478	1770	1863	1523	1719	1863	1417
Peak-hour factor, PHF	0.85	0.85	0.85	0.90	0.90	0.90	0.67	0.67	0.67	0.80	0.80	0.80
Adj. Flow (vph)	135	921	476	43	1142	88	216	67	43	135	125	212
RTOR Reduction (vph)	0	0	59	0	0	10	0	0	28	0	0	116
Lane Group Flow (vph)	135	921	417	43	1142	78	216	67	15	135	125	96
Confl. Peds. (#/hr)			4			9			4			16
Confl. Bikes (#/hr)		1	5		1	2		2	12		11	44
Heavy Vehicles (%)	2%	2%	2%	2%	2%	4%	2%	2%	2%	5%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.5	47.1	47.1	3.2	38.8	38.8	15.9	13.4	13.4	16.3	13.8	13.8
Effective Green, g (s)	11.5	47.1	47.1	3.2	38.8	38.8	15.9	13.4	13.4	16.3	13.8	13.8
Actuated g/C Ratio	0.12	0.49	0.49	0.03	0.40	0.40	0.17	0.14	0.14	0.17	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	212	1736	749	59	1430	597	293	260	213	292	268	204
v/s Ratio Prot	c0.08	0.26		0.02	c0.32		c0.12	0.04		0.08	0.07	
v/s Ratio Perm			0.27			0.05			0.01			c0.07
v/c Ratio	0.64	0.53	0.56	0.73	0.80	0.13	0.74	0.26	0.07	0.46	0.47	0.47
Uniform Delay, d1	40.3	16.8	17.1	46.0	25.2	18.0	38.1	36.9	35.9	35.9	37.7	37.7
Progression 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
Incremental Delay, d2	6.1	0.3	0.9	36.0	3.2	0.1	9.3	0.5	0.1	1.2	1.3	1.7
Delay (s)	46.4	17.2	18.0	81.9	28.4	18.1	47.4	37.4	36.0	37.1	39.0	39.4
Level of Service	D	B	B	F	C	B	D	D	D	D	D	D
Approach Delay (s)		20.0			29.5			43.8			38.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	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												
Volume (vph)	30	759	140	162	766	44	170	130	70	58	205	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.91	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3539	1519	1770	3539	1418	1703	1759	1449	1770	3343	1530
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3539	1519	1770	3539	1418	1703	1759	1449	1770	3343	1530
Peak-hour factor, PHF	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	34	862	159	178	842	48	191	146	79	64	228	111
RTOR Reduction (vph)	0	0	22	0	0	20	0	0	48	0	0	61
Lane Group Flow (vph)	34	862	137	178	842	28	191	146	31	64	228	50
Confl. Peds. (#/hr)			3			4			4			13
Confl. Bikes (#/hr)		2	8		3	5		2	73		71	1
Heavy Vehicles (%)	7%	2%	4%	2%	2%	10%	6%	8%	2%	2%	8%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	28.9	28.9	13.3	39.0	39.0	14.1	20.4	20.4	6.3	12.6	12.6
Effective Green, g (s)	3.2	28.9	28.9	13.3	39.0	39.0	14.1	20.4	20.4	6.3	12.6	12.6
Actuated g/C Ratio	0.04	0.34	0.34	0.16	0.46	0.46	0.17	0.24	0.24	0.07	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	64	1205	517	277	1626	651	283	423	348	131	496	227
v/s Ratio Prot	0.02	c0.24		c0.10	0.24		c0.11	0.08		0.04	c0.07	
v/s Ratio Perm			0.09			0.02			0.02			0.03
v/c Ratio	0.53	0.72	0.27	0.64	0.52	0.04	0.67	0.35	0.09	0.49	0.46	0.22
Uniform Delay, d1	40.1	24.4	20.3	33.6	16.3	12.7	33.2	26.7	25.0	37.8	33.0	31.8
Progression 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
Incremental Delay, d2	8.2	2.0	0.3	5.0	0.3	0.0	6.2	0.5	0.1	2.9	0.7	0.5
Delay (s)	48.3	26.5	20.6	38.6	16.6	12.7	39.5	27.2	25.2	40.6	33.7	32.3
Level of Service	D	C	C	D	B	B	D	C	C	D	C	C
Approach Delay (s)		26.3			20.1			32.5			34.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	84.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	634	225	293	780	150	206
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1491	1770	3539	1770	1562
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1491	1770	3539	1770	1562
Peak-hour factor, PHF	0.79	0.79	0.85	0.85	0.56	0.56
Adj. Flow (vph)	803	285	345	918	268	368
RTOR Reduction (vph)	0	46	0	0	0	299
Lane Group Flow (vph)	803	239	345	918	268	69
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)		14				1
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	22.0	22.0	18.5	44.5	15.1	15.1
Effective Green, g (s)	22.0	22.0	18.5	44.5	15.1	15.1
Actuated g/C Ratio	0.28	0.28	0.23	0.56	0.19	0.19
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)	973	410	409	1969	334	295
v/s Ratio Prot	c0.23		c0.19	0.26	c0.15	
v/s Ratio Perm		0.16				0.04
v/c Ratio	0.83	0.58	0.84	0.47	0.80	0.24
Uniform Delay, d1	27.2	25.0	29.4	10.6	31.0	27.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	2.1	14.6	0.2	13.0	0.4
Delay (s)	33.0	27.1	44.0	10.8	44.0	28.0
Level of Service	C	C	D	B	D	C
Approach Delay (s)	31.5			19.9	34.7	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	24.4
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	45	795	988	204	183	85
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.96	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1457	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1457	1770	1583
Peak-hour factor, PHF	0.76	0.76	0.90	0.90	0.73	0.73
Adj. Flow (vph)	59	1046	1098	227	251	116
RTOR Reduction (vph)	0	0	0	16	0	88
Lane Group Flow (vph)	59	1046	1098	211	251	28
Confl. Peds. (#/hr)				11		
Confl. Bikes (#/hr)			15			
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.2	40.3	32.1	32.1	17.0	17.0
Effective Green, g (s)	4.2	40.3	32.1	32.1	17.0	17.0
Actuated g/C Ratio	0.06	0.57	0.45	0.45	0.24	0.24
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)	104	2000	1593	656	422	377
v/s Ratio Prot	0.03	c0.30	c0.31		c0.14	
v/s Ratio Perm				0.14		0.02
v/c Ratio	0.57	0.52	0.69	0.32	0.59	0.07
Uniform Delay, d1	32.7	9.6	15.6	12.6	24.1	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.9	0.2	1.3	0.3	2.3	0.1
Delay (s)	39.6	9.8	16.9	12.9	26.3	21.1
Level of Service	D	A	B	B	C	C
Approach Delay (s)		11.4	16.2		24.7	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	71.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	50.8%	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												
Volume (vph)	30	713	235	430	1052	118	60	90	215	226	190	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00	0.94
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1539	3400	3539	1520	1752	1863	1520	1770	1863	1438
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1539	3400	3539	1520	1752	1863	1520	1770	1863	1438
Peak-hour factor, PHF	0.78	0.78	0.78	0.90	0.90	0.90	0.80	0.80	0.80	0.90	0.90	0.90
Adj. Flow (vph)	38	914	301	478	1169	131	75	112	269	251	211	89
RTOR Reduction (vph)	0	0	49	0	0	9	0	0	173	0	0	25
Lane Group Flow (vph)	38	914	252	478	1169	122	75	112	96	251	211	64
Confl. Peds. (#/hr)			2			6			10			20
Confl. Bikes (#/hr)			2		3	2						9
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	3%	2%	3%	2%	2%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	34.0	34.0	18.3	49.1	49.1	7.1	13.6	13.6	18.4	24.9	24.9
Effective Green, g (s)	3.2	34.0	34.0	18.3	49.1	49.1	7.1	13.6	13.6	18.4	24.9	24.9
Actuated g/C Ratio	0.03	0.34	0.34	0.18	0.49	0.49	0.07	0.14	0.14	0.18	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	56	1200	522	620	1732	744	124	253	206	325	462	357
v/s Ratio Prot	0.02	c0.26		c0.14	0.33		0.04	0.06		c0.14	c0.11	
v/s Ratio Perm			0.16			0.08			0.06			0.04
v/c Ratio	0.68	0.76	0.48	0.77	0.67	0.16	0.60	0.44	0.47	0.77	0.46	0.18
Uniform Delay, d1	48.0	29.5	26.2	39.0	19.5	14.2	45.2	39.9	40.0	39.0	32.0	29.7
Progression 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
Incremental Delay, d2	28.0	2.9	0.7	5.9	1.1	0.1	8.1	1.2	1.7	10.8	0.7	0.2
Delay (s)	76.0	32.5	26.9	44.9	20.6	14.3	53.3	41.1	41.7	49.8	32.7	29.9
Level of Service	E	C	C	D	C	B	D	D	D	D	C	C
Approach Delay (s)		32.4			26.7			43.4			40.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	61	120	888	85	120	1379	94	91	39	80	172	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.99		1.00	0.99		1.00	0.90		1.00	0.90
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3455		1770	3478		1770	1592		1770	1604
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3455		1770	3478		1770	1592		1770	1604
Peak-hour factor, PHF	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92
Adj. Flow (vph)	68	130	987	94	133	1532	104	107	46	94	187	76
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	198	1081	0	133	1636	0	107	140	0	187	212
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)				5								
Turn Type	Prot	Prot			Prot			Prot			Prot	
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)		13.0	54.0		13.1	54.1		11.9	14.5		14.8	17.4
Effective Green, g (s)		13.0	54.0		13.1	54.1		11.9	14.5		14.8	17.4
Actuated g/C Ratio		0.12	0.48		0.12	0.48		0.11	0.13		0.13	0.15
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)		205	1660		206	1674		187	205		233	248
v/s Ratio Prot		c0.11	0.31		0.08	c0.47		0.06	0.09		c0.11	c0.13
v/s Ratio Perm												
v/c Ratio		0.97	0.65		0.65	0.98		0.57	0.68		0.80	0.85
Uniform Delay, d1		49.5	22.1		47.4	28.5		47.8	46.8		47.4	46.3
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		52.6	0.9		6.8	16.7		4.2	9.0		17.8	23.8
Delay (s)		102.1	23.0		54.2	45.3		52.0	55.8		65.2	70.1
Level of Service		F	C		D	D		D	E		E	E
Approach Delay (s)			35.2			45.9			54.2			67.8
Approach LOS			D			D			D			E

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	125
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	136
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	89	305	25	80	155	140	20	89	40	120	189	54
Peak Hour Factor	0.90	0.90	0.90	0.73	0.73	0.73	0.64	0.64	0.64	0.87	0.87	0.87
Hourly flow rate (vph)	99	339	28	110	212	192	31	139	62	138	217	62

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	99	367	110	404	170	63	355	62
Volume Left (vph)	99	0	110	0	31	0	138	0
Volume Right (vph)	0	28	0	192	0	63	0	62
Hadj (s)	0.53	-0.02	0.53	-0.28	0.17	-0.67	0.24	-0.67
Departure Headway (s)	8.4	7.9	8.4	7.6	8.7	7.9	8.3	7.3
Degree Utilization, x	0.23	0.80	0.25	0.85	0.41	0.14	0.81	0.13
Capacity (veh/h)	411	444	416	466	382	422	419	469
Control Delay (s)	12.7	34.6	13.0	38.8	16.5	10.9	37.3	10.2
Approach Delay (s)	29.9		33.3		15.0		33.3	
Approach LOS	D		D		B		D	

Intersection Summary				
Delay	29.7			
HCM Level of Service	D			
Intersection Capacity Utilization	55.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	180	220	105	385	255	55
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	225	275	131	481	319	69

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	225	275	131	481	388
Volume Left (vph)	0	0	131	0	319
Volume Right (vph)	0	275	0	0	69
Hadj (s)	0.03	-0.67	0.53	0.03	0.09
Departure Headway (s)	7.1	6.4	7.3	6.8	6.6
Degree Utilization, x	0.44	0.49	0.27	0.91	0.72
Capacity (veh/h)	491	547	480	522	523
Control Delay (s)	14.4	14.0	11.8	45.4	24.6
Approach Delay (s)	14.2		38.2		24.6
Approach LOS	B		E		C

Intersection Summary			
Delay	26.7		
HCM Level of Service	D		
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	193	105	125	173	406	469
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	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1484	1770	1792	1863	1477
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1484	1770	1792	1863	1477
Peak-hour factor, PHF	0.80	0.80	0.83	0.83	0.78	0.78
Adj. Flow (vph)	241	131	151	208	521	601
RTOR Reduction (vph)	0	104	0	0	0	339
Lane Group Flow (vph)	241	27	151	208	521	262
Confl. Peds. (#/hr)	66					15
Confl. Bikes (#/hr)		24		17	2	31
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	9.8	9.8	4.8	29.4	20.6	20.6
Effective Green, g (s)	9.8	9.8	4.8	29.4	20.6	20.6
Actuated g/C Ratio	0.21	0.21	0.10	0.62	0.44	0.44
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)	368	308	180	1116	813	645
v/s Ratio Prot	c0.14		c0.09	0.12	c0.28	
v/s Ratio Perm		0.02				0.18
v/c Ratio	0.65	0.09	0.84	0.19	0.64	0.41
Uniform Delay, d1	17.1	15.1	20.8	3.8	10.4	9.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	0.1	27.5	0.1	1.7	0.4
Delay (s)	21.3	15.2	48.3	3.9	12.1	9.5
Level of Service	C	B	D	A	B	A
Approach Delay (s)	19.2			22.6	10.7	
Approach LOS	B			C	B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	47.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	30	34	150	15	29	197
Peak Hour Factor	0.65	0.65	0.89	0.89	0.74	0.74
Hourly flow rate (vph)	46	52	169	17	39	266

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	98	169	17	39	266
Volume Left (vph)	46	0	0	39	0
Volume Right (vph)	52	0	17	0	0
Hadj (s)	-0.19	0.03	-0.67	0.53	0.14
Departure Headway (s)	4.9	5.1	4.4	5.5	5.1
Degree Utilization, x	0.13	0.24	0.02	0.06	0.37
Capacity (veh/h)	678	689	792	638	696
Control Delay (s)	8.6	8.4	6.3	7.6	9.8
Approach Delay (s)	8.6	8.2		9.6	
Approach LOS	A	A		A	

Intersection Summary			
Delay	9.0		
HCM Level of Service	A		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	339	15	85	269	40	15	40	15	60	75	99
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		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.92		1.00	0.92		1.00	0.98		1.00	0.89
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		0.99	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1854	1287		1840	1422		1692	1547		1802	1366
Flt Permitted		0.94	1.00		0.58	1.00		0.91	1.00		0.85	1.00
Satd. Flow (perm)		1750	1287		1080	1422		1562	1547		1564	1366
Peak-hour factor, PHF	0.69	0.69	0.69	0.73	0.73	0.73	0.71	0.71	0.71	0.63	0.63	0.63
Adj. Flow (vph)	42	491	22	116	368	55	21	56	21	95	119	157
RTOR Reduction (vph)	0	0	13	0	0	33	0	0	13	0	0	94
Lane Group Flow (vph)	0	533	9	0	484	22	0	77	8	0	214	63
Confl. Peds. (#/hr)	12		3	3		12	9		1	1		9
Confl. Bikes (#/hr)		1	56		4	45		2	2		1	88
Heavy Vehicles (%)	2%	2%	16%	2%	2%	5%	20%	7%	2%	2%	4%	5%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		700	515		432	569		625	619		626	546
v/s Ratio Prot												
v/s Ratio Perm		0.30	0.01		c0.45	0.02		0.05	0.01		c0.14	0.05
v/c Ratio		0.76	0.02		1.12	0.04		0.12	0.01		0.34	0.12
Uniform Delay, d1		10.4	7.2		12.0	7.3		7.6	7.2		8.3	7.5
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		7.7	0.1		80.3	0.1		0.4	0.0		1.5	0.4
Delay (s)		18.0	7.3		92.3	7.4		8.0	7.3		9.8	8.0
Level of Service		B	A		F	A		A	A		A	A
Approach Delay (s)		17.6			83.7			7.8			9.0	
Approach LOS		B			F			A			A	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.2%	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												
Volume (vph)	15	223	85	65	419	30	70	120	35	35	175	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			4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00	0.95	1.00	0.99			0.99			1.00	0.93
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Frt		1.00	0.85	1.00	0.99			0.98			1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98			0.99	1.00
Satd. Flow (prot)		1856	1507	1748	1829			1563			1845	1435
Flt Permitted		0.96	1.00	0.49	1.00			0.81			0.91	1.00
Satd. Flow (perm)		1783	1507	903	1829			1288			1689	1435
Peak-hour factor, PHF	0.68	0.68	0.68	0.80	0.80	0.80	0.76	0.76	0.76	0.65	0.65	0.65
Adj. Flow (vph)	22	328	125	81	524	38	92	158	46	54	269	31
RTOR Reduction (vph)	0	0	68	0	5	0	0	13	0	0	0	16
Lane Group Flow (vph)	0	350	58	81	557	0	0	283	0	0	323	16
Confl. Peds. (#/hr)	6		2	2		6	10		9	9		10
Confl. Bikes (#/hr)		2	29		2	110		3	10		8	33
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%	2%	2%	14%	2%	2%	5%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)		23.0	23.0	23.0	23.0			19.0			19.0	19.0
Effective Green, g (s)		23.0	23.0	23.0	23.0			19.0			19.0	19.0
Actuated g/C Ratio		0.46	0.46	0.46	0.46			0.38			0.38	0.38
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	4.0
Lane Grp Cap (vph)		820	693	415	841			489			642	545
v/s Ratio Prot					c0.30							
v/s Ratio Perm		0.20	0.04	0.09				c0.22			0.19	0.01
v/c Ratio		0.43	0.08	0.20	0.66			0.58			0.50	0.03
Uniform Delay, d1		9.1	7.6	8.0	10.5			12.3			11.9	9.7
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2		1.6	0.2	1.0	4.1			4.9			2.8	0.1
Delay (s)		10.7	7.8	9.1	14.6			17.2			14.7	9.8
Level of Service		B	A	A	B			B			B	A
Approach Delay (s)		9.9			13.9			17.2			14.3	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	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												
Volume (vph)	19	249	165	53	519	85	20	240	51	80	257	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	4.0	4.0	4.0
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.98			0.98		1.00	1.00	0.94	1.00	1.00	0.90
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.95			0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1707			1762		1597	1776	1402	1770	1863	1430
Flt Permitted		0.95			0.91		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1619			1613		1597	1776	1402	1770	1863	1430
Peak-hour factor, PHF	0.68	0.68	0.68	0.76	0.76	0.76	0.84	0.84	0.84	0.78	0.78	0.78
Adj. Flow (vph)	28	366	243	70	683	112	24	286	61	103	329	63
RTOR Reduction (vph)	0	22	0	0	5	0	0	0	15	0	0	13
Lane Group Flow (vph)	0	615	0	0	860	0	24	286	46	103	329	50
Confl. Peds. (#/hr)	6		7	7		6			13			9
Confl. Bikes (#/hr)			37		14	237			2		2	39
Heavy Vehicles (%)	2%	2%	4%	13%	2%	2%	13%	7%	8%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		56.4			56.4		2.1	21.7	21.7	8.2	27.8	27.8
Effective Green, g (s)		56.4			56.4		2.1	21.7	21.7	8.2	27.8	27.8
Actuated g/C Ratio		0.57			0.57		0.02	0.22	0.22	0.08	0.28	0.28
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)		929			925		34	392	309	148	527	404
v/s Ratio Prot							0.02	c0.16		c0.06	0.18	
v/s Ratio Perm		0.38			c0.53				0.03			0.04
v/c Ratio		0.66			0.93		0.71	0.73	0.15	0.70	0.62	0.12
Uniform Delay, d1		14.4			19.1		47.8	35.6	30.9	43.8	30.7	26.2
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8			15.2		49.8	6.7	0.2	13.3	2.3	0.1
Delay (s)		16.2			34.3		97.6	42.2	31.1	57.1	33.0	26.3
Level of Service		B			C		F	D	C	E	C	C
Approach Delay (s)		16.2			34.3			44.0			37.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	83	300	105	105	545	19	60	35	10	29	52	216
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	98	353	124	124	641	22	71	41	12	34	61	254

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	98	476	787	112	12	95	254
Volume Left (vph)	98	0	124	71	0	34	0
Volume Right (vph)	0	124	22	0	12	0	254
Hadj (s)	0.53	-0.15	0.08	0.16	-0.36	0.25	-0.63
Departure Headway (s)	7.8	7.1	7.5	9.1	3.2	8.3	7.5
Degree Utilization, x	0.21	0.94	1.64	0.28	0.01	0.22	0.53
Capacity (veh/h)	452	497	484	367	1121	419	460
Control Delay (s)	11.7	52.3	316.7	15.6	6.2	12.5	17.3
Approach Delay (s)	45.4		316.7	14.7		16.0	
Approach LOS	E		F	B		C	

Intersection Summary				
Delay	154.1			
HCM Level of Service	F			
Intersection Capacity Utilization	79.9%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	470	35	120	655	120	15	106	15	70	223	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.98		1.00	0.96	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3309			3404		1670	1563		1764	1554	
Flt Permitted		1.00			0.99		0.26	1.00		0.63	1.00	
Satd. Flow (perm)		3309			3404		462	1563		1168	1554	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	45	603	45	154	840	154	19	136	19	90	286	112
RTOR Reduction (vph)	0	7	0	0	17	0	0	6	0	0	19	0
Lane Group Flow (vph)	0	686	0	0	1131	0	19	149	0	90	379	0
Confl. Peds. (#/hr)	3		9	9		3	19		3	3		19
Confl. Bikes (#/hr)		1	1			8			2		1	24
Heavy Vehicles (%)	18%	7%	2%	2%	3%	2%	7%	5%	8%	2%	2%	2%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		16.0			25.0		22.0	22.0		22.0	22.0	
Effective Green, g (s)		16.0			25.0		22.0	22.0		22.0	22.0	
Actuated g/C Ratio		0.21			0.33		0.29	0.29		0.29	0.29	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		706			1135		136	458		343	456	
v/s Ratio Prot		c0.21			c0.33			0.10			c0.24	
v/s Ratio Perm							0.04			0.08		
v/c Ratio		0.97			1.00		0.14	0.32		0.26	0.83	
Uniform Delay, d1		29.3			25.0		19.5	20.7		20.3	24.8	
Progression Factor		1.00			1.12		1.00	1.00		1.00	1.00	
Incremental Delay, d2		27.6			17.2		2.1	1.9		1.9	16.0	
Delay (s)		56.9			45.2		21.7	22.6		22.1	40.8	
Level of Service		E			D		C	C		C	D	
Approach Delay (s)		56.9			45.2			22.5			37.4	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	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												
Volume (vph)	15	350	145	35	880	50	20	35	45	25	40	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.97	1.00	
Frt		0.96			0.99		1.00	0.92		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3217			3486		1589	1411		1690	1401	
Flt Permitted		1.00			1.00		0.71	1.00		0.70	1.00	
Satd. Flow (perm)		3217			3486		1182	1411		1246	1401	
Peak-hour factor, PHF	0.78	0.78	0.78	0.79	0.79	0.79	0.91	0.91	0.91	0.64	0.64	0.64
Adj. Flow (vph)	19	449	186	44	1114	63	22	38	49	39	62	16
RTOR Reduction (vph)	0	56	0	0	6	0	0	38	0	0	12	0
Lane Group Flow (vph)	0	598	0	0	1215	0	22	49	0	39	66	0
Confl. Peds. (#/hr)	4		7	7		4	4		21	21		4
Confl. Bikes (#/hr)			2		2	9			2		2	10
Heavy Vehicles (%)	18%	6%	5%	2%	2%	9%	13%	7%	6%	4%	14%	22%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		17.0			29.0		17.0	17.0		17.0	17.0	
Effective Green, g (s)		17.0			29.0		17.0	17.0		17.0	17.0	
Actuated g/C Ratio		0.23			0.39		0.23	0.23		0.23	0.23	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		729			1348		268	320		282	318	
v/s Ratio Prot		c0.19			c0.35			0.03			c0.05	
v/s Ratio Perm							0.02			0.03		
v/c Ratio		0.82			0.90		0.08	0.15		0.14	0.21	
Uniform Delay, d1		27.5			21.7		22.9	23.2		23.2	23.5	
Progression Factor		0.18			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.0			10.0		0.6	1.0		1.0	1.5	
Delay (s)		10.1			31.6		23.5	24.3		24.2	25.0	
Level of Service		B			C		C	C		C	C	
Approach Delay (s)		10.1			31.6			24.1			24.7	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	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												
Volume (veh/h)	92	921	127	65	1294	10	60	55	50	120	340	239
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.78	0.78	0.78	0.90	0.90	0.90
Hourly flow rate (vph)	102	1023	141	72	1438	11	77	71	64	133	378	266
Pedestrians								78				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								7				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		932			1318							
pX, platoon unblocked	0.81			0.83			0.89	0.89	0.83	0.89	0.89	0.81
vC, conflicting volume	1449			1101			2624	2899	590	2339	2894	724
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1078			721			1733	2043	106	1414	2036	180
tC, single (s)	4.1			4.1			7.6	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 %	80			89			0	0	91	0	0	60
cM capacity (veh/h)	519			683			0	33	722	0	34	671

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	
Volume Total	102	512	512	141	72	959	490	147	64	511	266	
Volume Left	102	0	0	0	72	0	0	77	0	133	0	
Volume Right	0	0	0	141	0	0	11	0	64	0	266	
cSH	519	1700	1700	1700	683	1700	1700	0	722	0	671	
Volume to Capacity	0.20	0.30	0.30	0.08	0.11	0.56	0.29	Err	0.09	Err	0.40	
Queue Length 95th (ft)	18	0	0	0	9	0	0	Err	7	Err	47	
Control Delay (s)	13.6	0.0	0.0	0.0	10.9	0.0	0.0	Err	10.5	Err	13.8	
Lane LOS	B				B			F	B	F	B	
Approach Delay (s)	1.1				0.5			Err		Err		
Approach LOS								F		F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	85.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1042	49	60	1301	68	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.81	0.81
Hourly flow rate (vph)	1158	54	67	1446	84	6
Pedestrians	73			73	73	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	6			6	6	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.77	
vC, conflicting volume			1285		2187	752
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1285		1945	752
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		0	98
cM capacity (veh/h)			503		33	311

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	772	440	67	723	723	90
Volume Left	0	0	67	0	0	84
Volume Right	0	54	0	0	0	6
cSH	1700	1700	503	1700	1700	35
Volume to Capacity	0.45	0.26	0.13	0.43	0.43	2.56
Queue Length 95th (ft)	0	0	11	0	0	254
Control Delay (s)	0.0	0.0	13.2	0.0	0.0	947.4
Lane LOS			B			F
Approach Delay (s)	0.0		0.6			947.4
Approach LOS						F

Intersection Summary			
Average Delay	30.7		
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	325	519	203	90	803	165	193	180	55	290	425	365
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.66	1.00	1.00	0.98	1.00	1.00	0.93	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1019	1736	3539	1557	1752	1712	1475	1752	1827	1550
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1019	1736	3539	1557	1752	1712	1475	1752	1827	1550
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	361	577	226	100	892	183	214	200	61	322	472	406
RTOR Reduction (vph)	0	0	141	0	0	46	0	0	22	0	0	264
Lane Group Flow (vph)	361	577	85	100	892	137	214	200	39	322	472	142
Confl. Peds. (#/hr)			116			1			38			1
Confl. Bikes (#/hr)			2			3						9
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%	3%	11%	2%	3%	4%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	18.0	32.5	32.5	8.3	22.8	22.8	11.0	18.0	18.0	16.0	23.0	23.0
Effective Green, g (s)	18.0	32.5	32.5	8.3	22.8	22.8	11.0	18.0	18.0	16.0	23.0	23.0
Actuated g/C Ratio	0.20	0.36	0.36	0.09	0.25	0.25	0.12	0.20	0.20	0.18	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	1267	365	159	889	391	212	339	292	309	463	393
v/s Ratio Prot	c0.20	0.16		0.06	c0.25		0.12	0.12		c0.18	c0.26	
v/s Ratio Perm			0.08			0.09			0.03			0.09
v/c Ratio	1.03	0.46	0.23	0.63	1.00	0.35	1.01	0.59	0.13	1.04	1.02	0.36
Uniform Delay, d1	36.4	22.4	20.4	39.8	34.0	27.9	39.9	33.0	30.0	37.4	33.9	27.9
Progression 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
Incremental Delay, d2	55.5	0.3	0.3	7.6	31.0	0.5	64.3	2.6	0.2	62.6	46.8	0.6
Delay (s)	91.9	22.6	20.8	47.3	65.0	28.5	104.2	35.7	30.2	100.0	80.7	28.4
Level of Service	F	C	C	D	E	C	F	D	C	F	F	C
Approach Delay (s)		43.8			57.8			65.8			68.2	
Approach LOS		D			E			E			E	

Intersection Summary			
HCM Average Control Delay	57.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	804	60	55	983	75	50
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.93	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1467	1770	3539	1770	1558
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1467	1770	3539	1770	1558
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.47	0.47
Adj. Flow (vph)	893	67	61	1092	160	106
RTOR Reduction (vph)	0	24	0	0	0	69
Lane Group Flow (vph)	893	43	61	1092	160	37
Confl. Peds. (#/hr)		19				
Confl. Bikes (#/hr)		4				3
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	33.0	33.0	6.9	43.9	13.3	13.3
Effective Green, g (s)	33.0	33.0	6.9	43.9	13.3	13.3
Actuated g/C Ratio	0.39	0.39	0.08	0.51	0.16	0.16
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)	1353	566	143	1817	275	242
v/s Ratio Prot	c0.25		0.03	c0.31	c0.09	
v/s Ratio Perm		0.03				0.02
v/c Ratio	0.66	0.08	0.43	0.60	0.58	0.15
Uniform Delay, d1	21.6	16.6	37.4	14.6	33.5	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	2.0	0.6	3.1	0.3
Delay (s)	22.8	16.7	39.5	15.2	36.6	31.5
Level of Service	C	B	D	B	D	C
Approach Delay (s)	22.4			16.5	34.6	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	32.3
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	64	840	901	105	180	208
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3539	3505	1521	1770	1537
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3539	3505	1521	1770	1537
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	71	933	1001	117	200	231
RTOR Reduction (vph)	0	0	0	21	0	112
Lane Group Flow (vph)	71	933	1001	96	200	119
Confl. Peds. (#/hr)				4		13
Confl. Bikes (#/hr)				2		1
Heavy Vehicles (%)	5%	2%	3%	3%	2%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	6.5	38.7	28.2	28.2	14.5	14.5
Effective Green, g (s)	6.5	38.7	28.2	28.2	14.5	14.5
Actuated g/C Ratio	0.10	0.58	0.42	0.42	0.22	0.22
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)	167	2041	1473	639	382	332
v/s Ratio Prot	0.04	c0.26	c0.29		c0.11	
v/s Ratio Perm				0.06		0.08
v/c Ratio	0.43	0.46	0.68	0.15	0.52	0.36
Uniform Delay, d1	28.5	8.2	15.8	12.0	23.2	22.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	0.2	1.3	0.1	1.3	0.7
Delay (s)	30.3	8.3	17.0	12.1	24.5	23.0
Level of Service	C	A	B	B	C	C
Approach Delay (s)		9.9	16.5		23.7	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	17.9
Intersection Capacity Utilization	49.6%	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												
Volume (veh/h)	5	975	35	30	941	5	60	5	50	5	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.25	0.25	0.25
Hourly flow rate (vph)	5	1037	37	33	1046	6	67	6	56	20	20	20
Pedestrians								12				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								1				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	1051			1086			1698	2196	549	1703	2212	526
vC1, stage 1 conf vol							1078	1078		1115	1115	
vC2, stage 2 conf vol							619	1118		588	1097	
vCu, unblocked vol	1051			805			1507	2078	189	1512	2096	526
tC, single (s)	4.1			4.3			7.5	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			71	97	92	90	90	96
cM capacity (veh/h)	658			660			232	204	703	196	197	497

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	SB 1
Volume Total	5	691	383	556	528	128	60
Volume Left	5	0	0	33	0	67	20
Volume Right	0	0	37	0	6	56	20
cSH	658	1700	1700	660	1700	325	246
Volume to Capacity	0.01	0.41	0.23	0.05	0.31	0.39	0.24
Queue Length 95th (ft)	1	0	0	4	0	45	23
Control Delay (s)	10.5	0.0	0.0	1.4	0.0	23.1	24.3
Lane LOS	B			A		C	C
Approach Delay (s)	0.1			0.7		23.1	24.3
Approach LOS						C	C

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	771	234	20	813	164	50
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1528	1444	1845	1770	1562
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1528	1444	1845	1770	1562
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.68	0.68
Adj. Flow (vph)	857	260	22	903	241	74
RTOR Reduction (vph)	0	43	0	0	0	19
Lane Group Flow (vph)	857	217	22	903	241	55
Confl. Peds. (#/hr)		7				1
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	2%	25%	3%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	38.8	38.8	1.9	44.7	15.3	15.3
Effective Green, g (s)	38.8	38.8	1.9	44.7	15.3	15.3
Actuated g/C Ratio	0.57	0.57	0.03	0.66	0.23	0.23
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)	2019	872	40	1213	398	351
v/s Ratio Prot	0.24		0.02	c0.49	c0.14	
v/s Ratio Perm		0.14				0.04
v/c Ratio	0.42	0.25	0.55	0.74	0.61	0.16
Uniform Delay, d1	8.3	7.3	32.6	7.8	23.6	21.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2	15.3	2.5	2.6	0.2
Delay (s)	8.4	7.5	48.0	10.3	26.2	21.4
Level of Service	A	A	D	B	C	C
Approach Delay (s)	8.2			11.2	25.1	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	68.0	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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	756	60	45	683	155	240
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
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	1549	1770	1827	1719	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1549	1770	1827	1719	1583
Peak-hour factor, PHF	0.92	0.92	0.90	0.90	0.90	0.90
Adj. Flow (vph)	822	65	50	759	172	267
RTOR Reduction (vph)	0	35	0	0	0	208
Lane Group Flow (vph)	822	30	50	759	172	59
Confl. Bikes (#/hr)		2				
Heavy Vehicles (%)	2%	2%	2%	4%	5%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	23.0	23.0	4.1	31.1	11.1	11.1
Effective Green, g (s)	23.0	23.0	4.1	31.1	11.1	11.1
Actuated g/C Ratio	0.46	0.46	0.08	0.62	0.22	0.22
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)	1621	710	145	1132	380	350
v/s Ratio Prot	0.23		0.03	c0.42	c0.10	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.51	0.04	0.34	0.67	0.45	0.17
Uniform Delay, d1	9.6	7.5	21.8	6.2	16.9	15.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	1.4	1.6	0.9	0.2
Delay (s)	9.9	7.5	23.2	7.8	17.8	16.0
Level of Service	A	A	C	A	B	B
Approach Delay (s)	9.7			8.7	16.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	25	390	375	763	1066	100
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	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1703	1845	3539	1479
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1703	1845	3539	1479
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	419	417	848	1184	111
RTOR Reduction (vph)	0	374	0	0	0	62
Lane Group Flow (vph)	27	45	417	848	1184	49
Confl. Peds. (#/hr)						8
Confl. Bikes (#/hr)					5	
Heavy Vehicles (%)	2%	2%	6%	3%	2%	5%
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	8.1	8.1	23.0	59.2	32.2	32.2
Effective Green, g (s)	8.1	8.1	23.0	59.2	32.2	32.2
Actuated g/C Ratio	0.11	0.11	0.31	0.79	0.43	0.43
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)	190	170	520	1451	1513	632
v/s Ratio Prot	0.02		c0.24	0.46	c0.33	
v/s Ratio Perm		c0.03				0.03
v/c Ratio	0.14	0.27	0.80	0.58	0.78	0.08
Uniform Delay, d1	30.5	30.9	24.1	3.2	18.5	12.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.8	8.7	0.6	2.7	0.1
Delay (s)	30.8	31.7	32.7	3.8	21.3	12.8
Level of Service	C	C	C	A	C	B
Approach Delay (s)	31.6			13.3	20.5	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	75.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.6%	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												
Volume (vph)	54	25	250	15	20	20	510	1199	20	60	1262	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1667	1511	1530	1651		1752	3458		1770	3539	1468
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1667	1511	1530	1651		1752	3458		1770	3539	1468
Peak-hour factor, PHF	0.84	0.84	0.84	0.82	0.82	0.82	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	30	298	18	24	24	567	1332	22	67	1402	171
RTOR Reduction (vph)	0	0	262	0	22	0	0	1	0	0	0	105
Lane Group Flow (vph)	64	30	36	18	26	0	567	1353	0	67	1402	66
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)			3		7	6						8
Heavy Vehicles (%)	2%	14%	5%	18%	5%	5%	3%	4%	13%	2%	2%	7%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	3.6	10.0	10.0	1.5	7.9		23.2	50.6		4.7	32.1	32.1
Effective Green, g (s)	3.6	10.0	10.0	1.5	7.9		23.2	50.6		4.7	32.1	32.1
Actuated g/C Ratio	0.04	0.12	0.12	0.02	0.10		0.28	0.61		0.06	0.39	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	77	201	182	28	158		491	2113		100	1372	569
v/s Ratio Prot	c0.04	0.02		0.01	0.02		c0.32	0.39		0.04	c0.40	
v/s Ratio Perm			c0.02									0.05
v/c Ratio	0.83	0.15	0.20	0.64	0.17		1.15	0.64		0.67	1.02	0.12
Uniform Delay, d1	39.3	32.6	32.8	40.4	34.4		29.8	10.3		38.3	25.3	16.3
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	50.4	0.3	0.5	40.9	0.5		90.7	0.7		16.2	30.0	0.1
Delay (s)	89.7	32.9	33.3	81.3	34.9		120.5	11.0		54.5	55.3	16.3
Level of Service	F	C	C	F	C		F	B		D	E	B
Approach Delay (s)		42.5			47.6			43.3			51.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.8%	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												
Volume (vph)	495	170	105	20	70	344	15	1073	75	169	369	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3438	1488	1770	1863	1556	1770	3471	1560	1736	3438	1533
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3438	1488	1770	1863	1556	1770	3471	1560	1736	3438	1533
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	521	179	111	22	76	374	16	1166	82	184	401	484
RTOR Reduction (vph)	0	0	84	0	0	116	0	0	11	0	0	282
Lane Group Flow (vph)	521	179	27	22	76	259	16	1166	71	184	401	202
Confl. Peds. (#/hr)			2						1			
Confl. Bikes (#/hr)					1	3			2		2	1
Heavy Vehicles (%)	2%	5%	7%	2%	2%	2%	2%	4%	2%	4%	5%	4%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	19.8	19.8	19.8	10.0	10.0	10.0	0.8	27.2	27.2	7.0	33.4	33.4
Effective Green, g (s)	19.8	19.8	19.8	10.0	10.0	10.0	0.8	27.2	27.2	7.0	33.4	33.4
Actuated g/C Ratio	0.25	0.25	0.25	0.12	0.12	0.12	0.01	0.34	0.34	0.09	0.42	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	438	851	368	221	233	195	18	1180	530	152	1435	640
v/s Ratio Prot	c0.29	0.05		0.01	0.04		0.01	c0.34		c0.11	0.12	
v/s Ratio Perm			0.02			c0.17			0.05			0.13
v/c Ratio	1.19	0.21	0.07	0.10	0.33	1.33	0.89	0.99	0.13	1.21	0.28	0.32
Uniform Delay, d1	30.1	23.9	23.1	31.0	31.9	35.0	39.6	26.2	18.3	36.5	15.4	15.6
Progression 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
Incremental Delay, d2	106.0	0.6	0.4	0.2	0.8	177.6	156.5	23.1	0.1	140.6	0.1	0.3
Delay (s)	136.1	24.5	23.5	31.2	32.7	212.6	196.1	49.3	18.4	177.1	15.5	15.9
Level of Service	F	C	C	C	C	F	F	D	B	F	B	B
Approach Delay (s)		96.1			175.1			49.2			43.5	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	84	35	577	39	10	837
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	91	38	595	40	10	863
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1478	595			635	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1478	595			635	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	33	92			99	
cM capacity (veh/h)	137	504			948	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	129	595	40	10	863
Volume Left	91	0	0	10	0
Volume Right	38	0	40	0	0
cSH	194	1700	1700	948	1700
Volume to Capacity	0.67	0.35	0.02	0.01	0.51
Queue Length 95th (ft)	100	0	0	1	0
Control Delay (s)	54.9	0.0	0.0	8.8	0.0
Lane LOS	F			A	
Approach Delay (s)	54.9	0.0		0.1	
Approach LOS	F				

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	20	120	94	5	30	20	546	104	45	866	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	22	130	102	5	33	22	593	113	49	941	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								623				
pX, platoon unblocked	0.92	0.92		0.92	0.92	0.92				0.92		
vC, conflicting volume	1684	1795	947	1874	1743	650	952			707		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1701	1821	947	1907	1765	574	952			635		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	21	67	59	0	92	93	97			94		
cM capacity (veh/h)	55	65	317	19	70	476	722			870		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	152	102	38	22	707	49	952
Volume Left	43	0	102	0	22	0	49	0
Volume Right	0	130	0	33	0	113	0	11
cSH	55	204	19	261	722	1700	870	1700
Volume to Capacity	0.79	0.75	5.24	0.15	0.03	0.42	0.06	0.56
Queue Length 95th (ft)	85	124	Err	13	2	0	4	0
Control Delay (s)	184.9	61.3	Err	21.1	10.1	0.0	9.4	0.0
Lane LOS	F	F	F	C	B		A	
Approach Delay (s)	88.8		7291.8		0.3		0.5	
Approach LOS	F		F					

Intersection Summary				
Average Delay	503.8			
Intersection Capacity Utilization	69.8%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	20	70	198	5	150	10	503	99	65	579	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.78	0.78	0.78	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	43	22	76	254	6	192	11	559	110	72	643	11
Pedestrians					12							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					1							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1570	1496	649	1523	1447	626	654			681		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1570	1496	649	1523	1447	626	654			681		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	9	80	84	0	95	60	99			92		
cM capacity (veh/h)	48	110	470	63	118	479	933			893		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	98	254	199	11	669	72	654
Volume Left	43	0	254	0	11	0	72	0
Volume Right	0	76	0	192	0	110	0	11
cSH	48	272	63	436	933	1700	893	1700
Volume to Capacity	0.91	0.36	4.03	0.46	0.01	0.39	0.08	0.38
Queue Length 95th (ft)	95	39	Err	58	1	0	7	0
Control Delay (s)	238.9	25.4	Err	20.0	8.9	0.0	9.4	0.0
Lane LOS	F	D	F	C	A		A	
Approach Delay (s)	91.1		5617.3		0.1		0.9	
Approach LOS	F		F					

Intersection Summary				
Average Delay	1277.6			
Intersection Capacity Utilization	66.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	70	55	403	624	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.74	0.74	0.70	0.70
Hourly flow rate (vph)	25	89	74	545	891	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.76	0.76	0.76			
vC, conflicting volume	1620	927	963			
vC1, stage 1 conf vol	927					
vC2, stage 2 conf vol	693					
vCu, unblocked vol	1659	746	793			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	72	88			
cM capacity (veh/h)	277	312	626			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	114	74	545	963
Volume Left	25	74	0	0
Volume Right	89	0	0	71
cSH	303	626	1700	1700
Volume to Capacity	0.38	0.12	0.32	0.57
Queue Length 95th (ft)	42	10	0	0
Control Delay (s)	23.8	11.5	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	23.8	1.4		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	130	151	316	25	138	510
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
Frpb, ped/bikes	1.00	0.90	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1421	1819		1719	1845
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1421	1819		1719	1845
Peak-hour factor, PHF	0.70	0.70	0.83	0.83	0.90	0.90
Adj. Flow (vph)	186	216	381	30	153	567
RTOR Reduction (vph)	0	174	3	0	0	0
Lane Group Flow (vph)	186	42	408	0	153	567
Confl. Peds. (#/hr)				2		
Confl. Bikes (#/hr)		43		18		8
Heavy Vehicles (%)	2%	2%	3%	4%	5%	3%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	10.8	10.8	17.2		9.6	30.8
Effective Green, g (s)	10.8	10.8	17.2		9.6	30.8
Actuated g/C Ratio	0.19	0.19	0.31		0.17	0.55
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)	343	275	561		296	1018
v/s Ratio Prot	c0.11		c0.22		0.09	c0.31
v/s Ratio Perm		0.03				
v/c Ratio	0.54	0.15	0.73		0.52	0.56
Uniform Delay, d1	20.3	18.7	17.2		21.0	8.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.8	0.3	4.7		1.5	0.7
Delay (s)	22.0	19.0	21.9		22.5	8.8
Level of Service	C	B	C		C	A
Approach Delay (s)	20.4		21.9			11.7
Approach LOS	C		C			B

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	18.2
Intersection Capacity Utilization	43.0%	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												
Volume (vph)	50	50	115	45	235	34	105	243	75	14	536	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.95		1.00	0.93	1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1764	1509		1846	1441	1770	1863	1441	1770	1863	1489
Flt Permitted		0.64	1.00		0.94	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1159	1509		1741	1441	1770	1863	1441	1770	1863	1489
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.82	0.82	0.82	0.93	0.93	0.93
Adj. Flow (vph)	54	54	125	51	267	39	128	296	91	15	576	118
RTOR Reduction (vph)	0	0	93	0	0	22	0	0	45	0	0	60
Lane Group Flow (vph)	0	108	32	0	318	17	128	296	46	15	576	58
Confl. Peds. (#/hr)	2		5	5		2			5			9
Confl. Bikes (#/hr)			13			34		3	11		11	18
Heavy Vehicles (%)	8%	2%	2%	2%	2%	4%	2%	2%	8%	2%	2%	3%
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		13.8	13.8		13.8	13.8	5.0	27.2	27.2	0.7	22.9	22.9
Effective Green, g (s)		13.8	13.8		13.8	13.8	5.0	27.2	27.2	0.7	22.9	22.9
Actuated g/C Ratio		0.26	0.26		0.26	0.26	0.09	0.51	0.51	0.01	0.43	0.43
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		298	388		447	370	165	944	730	23	794	635
v/s Ratio Prot							c0.07	0.16		0.01	c0.31	
v/s Ratio Perm		0.09	0.02		c0.18	0.01			0.03			0.04
v/c Ratio		0.36	0.08		0.71	0.05	0.78	0.31	0.06	0.65	0.73	0.09
Uniform Delay, d1		16.3	15.1		18.1	15.0	23.8	7.8	6.8	26.4	12.8	9.2
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		0.8	0.1		5.3	0.1	20.1	0.2	0.0	50.9	3.3	0.1
Delay (s)		17.1	15.2		23.4	15.0	43.9	8.0	6.8	77.3	16.1	9.3
Level of Service		B	B		C	B	D	A	A	E	B	A
Approach Delay (s)		16.1			22.5			16.7			16.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	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												
Volume (vph)	45	225	175	125	280	88	295	260	140	174	362	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.86	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1687	3505	1312	1719	3471	1468	1770	1863	1522	1770	1863	1452
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1687	3505	1312	1719	3471	1468	1770	1863	1522	1770	1863	1452
Peak-hour factor, PHF	0.82	0.82	0.82	0.86	0.86	0.86	0.80	0.80	0.80	0.89	0.89	0.89
Adj. Flow (vph)	55	274	213	145	326	102	369	325	175	196	407	264
RTOR Reduction (vph)	0	0	111	0	0	35	0	0	35	0	0	42
Lane Group Flow (vph)	55	274	102	145	326	67	369	325	140	196	407	222
Confl. Peds. (#/hr)			41			11			16			21
Confl. Bikes (#/hr)			3		1	8			1		1	25
Heavy Vehicles (%)	7%	3%	6%	5%	4%	3%	2%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.2	14.4	14.4	11.2	19.4	19.4	23.0	33.3	33.3	15.1	25.4	25.4
Effective Green, g (s)	6.2	14.4	14.4	11.2	19.4	19.4	23.0	33.3	33.3	15.1	25.4	25.4
Actuated g/C Ratio	0.07	0.16	0.16	0.12	0.22	0.22	0.26	0.37	0.37	0.17	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	116	561	210	214	748	316	452	689	563	297	526	410
v/s Ratio Prot	0.03	0.08		c0.08	c0.09		c0.21	0.17		0.11	c0.22	
v/s Ratio Perm			0.08			0.05			0.09			0.15
v/c Ratio	0.47	0.49	0.49	0.68	0.44	0.21	0.82	0.47	0.25	0.66	0.77	0.54
Uniform Delay, d1	40.3	34.4	34.4	37.7	30.6	29.0	31.5	21.6	19.7	35.0	29.7	27.4
Progression 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
Incremental Delay, d2	3.0	0.7	1.8	8.2	0.4	0.3	10.9	0.5	0.2	5.2	7.0	1.5
Delay (s)	43.4	35.1	36.2	45.9	31.0	29.3	42.4	22.1	19.9	40.3	36.6	28.8
Level of Service	D	D	D	D	C	C	D	C	B	D	D	C
Approach Delay (s)		36.4			34.5			30.3			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.2%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	35	30	25	40	18	20	63	35	19	219	55
Peak Hour Factor	0.75	0.75	0.75	0.69	0.69	0.69	0.83	0.83	0.83	0.65	0.65	0.65
Hourly flow rate (vph)	27	47	40	36	58	26	24	76	42	29	337	85

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	120	142	451
Volume Left (vph)	27	36	24	29
Volume Right (vph)	40	26	42	85
Hadj (s)	-0.13	-0.04	-0.11	-0.06
Departure Headway (s)	5.5	5.5	5.1	4.7
Degree Utilization, x	0.17	0.18	0.20	0.59
Capacity (veh/h)	585	580	660	739
Control Delay (s)	9.6	9.8	9.3	14.2
Approach Delay (s)	9.6	9.8	9.3	14.2
Approach LOS	A	A	A	B

Intersection Summary			
Delay	12.1		
HCM Level of Service	B		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	215	85	40	385	15	70	68	45	35	199	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.97		1.00	1.00		1.00	1.00	0.96	1.00	0.97	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	0.99	1.00	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1753	1736		1762	1844		1765	1863	1513	1752	1674	
Flt Permitted	0.24	1.00		0.44	1.00		0.25	1.00	1.00	0.71	1.00	
Satd. Flow (perm)	450	1736		811	1844		473	1863	1513	1306	1674	
Peak-hour factor, PHF	0.83	0.83	0.83	0.75	0.75	0.75	0.91	0.91	0.91	0.67	0.67	0.67
Adj. Flow (vph)	12	259	102	53	513	20	77	75	49	52	297	306
RTOR Reduction (vph)	0	29	0	0	3	0	0	0	26	0	74	0
Lane Group Flow (vph)	12	332	0	53	530	0	77	75	23	52	529	0
Confl. Peds. (#/hr)	18		5	5		18	5		7	7		5
Confl. Bikes (#/hr)		7	70		2	82		12	17		10	33
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	19.0	19.0		19.0	19.0		23.0	23.0	23.0	23.0	23.0	
Effective Green, g (s)	19.0	19.0		19.0	19.0		23.0	23.0	23.0	23.0	23.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.46	0.46	0.46	0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	171	660		308	701		218	857	696	601	770	
v/s Ratio Prot		0.19			c0.29			0.04			c0.32	
v/s Ratio Perm	0.03			0.07			0.16		0.01	0.04		
v/c Ratio	0.07	0.50		0.17	0.76		0.35	0.09	0.03	0.09	0.69	
Uniform Delay, d1	9.9	11.9		10.3	13.5		8.7	7.6	7.4	7.6	10.7	
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	2.7		1.2	7.4		4.4	0.2	0.1	0.3	5.0	
Delay (s)	10.7	14.6		11.5	20.9		13.1	7.8	7.5	7.9	15.6	
Level of Service	B	B		B	C		B	A	A	A	B	
Approach Delay (s)		14.5			20.1			9.8			15.0	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	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												
Volume (vph)	55	290	55	105	655	45	55	74	40	105	144	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.96	1.00	1.00	0.92
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1718		1641	3539	1502	1770	1863	1365	1770	1863	1458
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1718		1641	3539	1502	1770	1863	1365	1770	1863	1458
Peak-hour factor, PHF	0.78	0.78	0.78	0.75	0.75	0.75	0.65	0.65	0.65	0.78	0.78	0.78
Adj. Flow (vph)	71	372	71	140	873	60	85	114	62	135	185	346
RTOR Reduction (vph)	0	7	0	0	0	26	0	0	51	0	0	223
Lane Group Flow (vph)	71	436	0	140	873	34	85	114	11	135	185	123
Confl. Peds. (#/hr)			16			9			3			13
Confl. Bikes (#/hr)					3	13			17		17	50
Heavy Vehicles (%)	2%	8%	2%	10%	2%	2%	2%	2%	14%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	5.9	23.8		8.2	26.1	26.1	5.6	12.4	12.4	7.7	14.5	14.5
Effective Green, g (s)	5.9	23.8		8.2	26.1	26.1	5.6	12.4	12.4	7.7	14.5	14.5
Actuated g/C Ratio	0.09	0.35		0.12	0.38	0.38	0.08	0.18	0.18	0.11	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	600		198	1356	576	146	339	249	200	397	310
v/s Ratio Prot	0.04	c0.25		c0.09	0.25		0.05	0.06		c0.08	c0.10	
v/s Ratio Perm						0.02			0.01			0.08
v/c Ratio	0.46	0.73		0.71	0.64	0.06	0.58	0.34	0.05	0.68	0.47	0.40
Uniform Delay, d1	29.6	19.3		28.8	17.2	13.3	30.1	24.3	23.0	29.0	23.4	23.0
Progression Factor	1.00	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	4.4		10.9	1.1	0.0	5.8	0.6	0.1	8.7	0.9	0.8
Delay (s)	31.8	23.7		39.7	18.3	13.3	35.9	24.9	23.0	37.7	24.3	23.9
Level of Service	C	C		D	B	B	D	C	C	D	C	C
Approach Delay (s)		24.8			20.8			28.0			26.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	68.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↱			↱
Volume (veh/h)	0	1154	1510	146	0	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1254	1641	159	0	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		921	857			
pX, platoon unblocked	0.56				0.66	0.56
vC, conflicting volume	1800				2348	900
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	845				624	0
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	84
cM capacity (veh/h)	438				275	604

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	627	627	1094	706	98
Volume Left	0	0	0	0	0
Volume Right	0	0	0	159	98
cSH	1700	1700	1700	1700	604
Volume to Capacity	0.37	0.37	0.64	0.42	0.16
Queue Length 95th (ft)	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	12.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.1
Approach LOS					B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	572	10	307	616	345	15	30	278	290	65	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.97	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3505	1532	3433	3539	1524	1671	1863	1537	1770	1616	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3505	1532	3433	3539	1524	1671	1863	1537	1770	1616	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.89	0.89	0.89	0.90	0.90	0.90
Adj. Flow (vph)	111	636	11	341	684	383	17	34	312	322	72	128
RTOR Reduction (vph)	0	0	5	0	0	101	0	0	253	0	57	0
Lane Group Flow (vph)	111	636	6	341	684	282	17	34	59	322	143	0
Confl. Peds. (#/hr)			8			4			8			17
Confl. Bikes (#/hr)		2	5			4		2	2			
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%	8%	2%	2%	2%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	10.2	26.7	26.7	22.5	39.0	39.0	2.0	20.8	20.8	24.0	42.8	
Effective Green, g (s)	10.2	26.7	26.7	22.5	39.0	39.0	2.0	20.8	20.8	24.0	42.8	
Actuated g/C Ratio	0.09	0.24	0.24	0.20	0.35	0.35	0.02	0.19	0.19	0.22	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	851	372	702	1255	540	30	352	291	386	629	
v/s Ratio Prot	0.06	c0.18		0.10	c0.19		0.01	0.02		c0.18	c0.09	
v/s Ratio Perm			0.00			0.18			0.04			
v/c Ratio	0.68	0.75	0.02	0.49	0.55	0.52	0.57	0.10	0.20	0.83	0.23	
Uniform Delay, d1	48.3	38.5	31.7	38.6	28.4	28.1	53.6	36.8	37.6	41.1	22.5	
Progression Factor	1.00	1.00	1.00	0.75	0.65	0.60	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.5	3.6	0.0	0.5	1.5	3.1	22.3	0.5	1.6	14.3	0.8	
Delay (s)	58.8	42.1	31.7	29.3	20.0	19.8	75.8	37.4	39.2	55.4	23.4	
Level of Service	E	D	C	C	C	B	E	D	D	E	C	
Approach Delay (s)		44.4			22.2			40.7			43.1	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	40	1090	1198	193	254	60
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	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.95	0.95	0.75	0.75
Adj. Flow (vph)	44	1211	1261	203	339	80
RTOR Reduction (vph)	0	0	0	25	0	61
Lane Group Flow (vph)	44	1211	1261	178	339	19
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	5.6	75.8	66.2	66.2	26.2	26.2
Effective Green, g (s)	5.6	75.8	66.2	66.2	26.2	26.2
Actuated g/C Ratio	0.05	0.69	0.60	0.60	0.24	0.24
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)	90	2439	2130	953	422	377
v/s Ratio Prot	0.02	c0.34	c0.36		c0.19	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.49	0.50	0.59	0.19	0.80	0.05
Uniform Delay, d1	50.8	8.1	13.5	9.8	39.5	32.3
Progression Factor	1.05	0.51	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.6	1.2	0.4	10.6	0.1
Delay (s)	56.7	4.7	14.8	10.3	50.1	32.4
Level of Service	E	A	B	B	D	C
Approach Delay (s)		6.5	14.1		46.7	
Approach LOS		A	B		D	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	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												
Volume (vph)	195	1097	145	34	1117	103	180	130	49	154	95	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.90	1.00	1.00	0.89
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1508	1770	3539	1437	1770	1863	1419	1770	1863	1397
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1508	1770	3539	1437	1770	1863	1419	1770	1863	1397
Peak-hour factor, PHF	0.91	0.91	0.91	0.90	0.90	0.90	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	214	1205	159	38	1241	114	207	149	56	173	107	208
RTOR Reduction (vph)	0	0	15	0	0	11	0	0	15	0	0	129
Lane Group Flow (vph)	214	1205	144	38	1241	103	207	149	41	173	107	79
Confl. Peds. (#/hr)			8			21			12			39
Confl. Bikes (#/hr)		1	3			7		2	49		48	16
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.6	54.6	54.6	3.3	42.3	42.3	15.8	15.8	15.8	14.0	14.0	14.0
Effective Green, g (s)	15.6	54.6	54.6	3.3	42.3	42.3	15.8	15.8	15.8	14.0	14.0	14.0
Actuated g/C Ratio	0.15	0.53	0.53	0.03	0.41	0.41	0.15	0.15	0.15	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	266	1863	794	56	1444	586	270	284	216	239	252	189
v/s Ratio Prot	c0.12	0.34		0.02	c0.35		c0.12	0.08		c0.10	0.06	
v/s Ratio Perm			0.10			0.07			0.03			0.06
v/c Ratio	0.80	0.65	0.18	0.68	0.86	0.18	0.77	0.52	0.19	0.72	0.42	0.42
Uniform Delay, d1	42.6	17.6	12.8	49.7	28.0	19.6	42.2	40.5	38.4	43.0	41.2	41.1
Progression 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
Incremental Delay, d2	16.0	0.8	0.1	28.0	5.3	0.1	12.2	1.7	0.4	10.4	1.2	1.5
Delay (s)	58.6	18.4	13.0	77.7	33.3	19.7	54.4	42.2	38.8	53.3	42.3	42.6
Level of Service	E	B	B	E	C	B	D	D	D	D	D	D
Approach Delay (s)		23.3			33.4			47.9			46.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	103.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.0%	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												
Volume (vph)	90	1014	140	126	839	98	255	210	152	104	155	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.90	1.00	1.00	0.87	1.00	1.00	0.90
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1736	3539	1513	1770	3539	1425	1752	1827	1373	1770	3406	1431
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1736	3539	1513	1770	3539	1425	1752	1827	1373	1770	3406	1431
Peak-hour factor, PHF	0.95	0.95	0.95	0.90	0.90	0.90	0.91	0.91	0.91	0.74	0.74	0.74
Adj. Flow (vph)	95	1067	147	140	932	109	280	231	167	141	209	81
RTOR Reduction (vph)	0	0	16	0	0	40	0	0	65	0	0	49
Lane Group Flow (vph)	95	1067	131	140	932	69	280	231	102	141	209	32
Confl. Peds. (#/hr)			18			24			29			26
Confl. Bikes (#/hr)		1	5		1	16		1	73		71	27
Heavy Vehicles (%)	4%	2%	2%	2%	2%	2%	3%	4%	2%	2%	6%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.7	33.2	33.2	10.4	35.9	35.9	18.2	18.3	18.3	12.0	12.1	12.1
Effective Green, g (s)	7.7	33.2	33.2	10.4	35.9	35.9	18.2	18.3	18.3	12.0	12.1	12.1
Actuated g/C Ratio	0.09	0.37	0.37	0.12	0.40	0.40	0.20	0.20	0.20	0.13	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	149	1307	559	205	1413	569	355	372	279	236	458	193
v/s Ratio Prot	0.05	c0.30		c0.08	c0.26		c0.16	c0.13		0.08	0.06	
v/s Ratio Perm			0.09			0.05			0.07			0.02
v/c Ratio	0.64	0.82	0.23	0.68	0.66	0.12	0.79	0.62	0.37	0.60	0.46	0.16
Uniform Delay, d1	39.8	25.6	19.6	38.2	22.0	17.0	34.0	32.6	30.8	36.7	35.9	34.4
Progression 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
Incremental Delay, d2	8.6	4.1	0.2	9.0	1.1	0.1	11.1	3.2	0.8	4.0	0.7	0.4
Delay (s)	48.4	29.7	19.8	47.2	23.1	17.1	45.1	35.8	31.6	40.7	36.6	34.8
Level of Service	D	C	B	D	C	B	D	D	C	D	D	C
Approach Delay (s)		29.9			25.4			38.6			37.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1312	155	292	856	185	238
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.95	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1504	1770	3539	1770	1548
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1504	1770	3539	1770	1548
Peak-hour factor, PHF	0.84	0.84	0.94	0.94	0.90	0.90
Adj. Flow (vph)	1562	185	311	911	206	264
RTOR Reduction (vph)	0	14	0	0	0	226
Lane Group Flow (vph)	1562	171	311	911	206	38
Confl. Peds. (#/hr)		8			14	5
Confl. Bikes (#/hr)	1	14				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	34.4	34.4	13.1	51.5	11.1	11.1
Effective Green, g (s)	34.4	34.4	13.1	51.5	11.1	11.1
Actuated g/C Ratio	0.45	0.45	0.17	0.67	0.14	0.14
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)	1577	670	300	2361	254	223
v/s Ratio Prot	c0.44		c0.18	0.26	c0.12	
v/s Ratio Perm		0.11				0.02
v/c Ratio	0.99	0.25	1.04	0.39	0.81	0.17
Uniform Delay, d1	21.2	13.4	32.1	5.8	32.0	29.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.3	0.2	61.8	0.1	17.5	0.4
Delay (s)	41.6	13.6	93.8	5.9	49.6	29.4
Level of Service	D	B	F	A	D	C
Approach Delay (s)	38.6			28.3	38.2	
Approach LOS	D			C	D	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	18.6
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	80	1470	1053	238	154	95
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1497	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1497	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.97	0.97	0.85	0.85
Adj. Flow (vph)	89	1633	1086	245	181	112
RTOR Reduction (vph)	0	0	0	18	0	91
Lane Group Flow (vph)	89	1633	1086	227	181	21
Confl. Peds. (#/hr)				15		
Confl. Bikes (#/hr)			11			
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.6	46.4	34.8	34.8	14.1	14.1
Effective Green, g (s)	7.6	46.4	34.8	34.8	14.1	14.1
Actuated g/C Ratio	0.10	0.62	0.47	0.47	0.19	0.19
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)	181	2204	1653	699	335	300
v/s Ratio Prot	0.05	c0.46	0.31		c0.10	
v/s Ratio Perm				0.15		0.01
v/c Ratio	0.49	0.74	0.66	0.33	0.54	0.07
Uniform Delay, d1	31.6	9.8	15.3	12.5	27.3	24.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	1.4	1.0	0.3	1.8	0.1
Delay (s)	33.7	11.2	16.2	12.7	29.1	24.9
Level of Service	C	B	B	B	C	C
Approach Delay (s)		12.4	15.6		27.5	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	55.8%	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												
Volume (vph)	70	1374	180	292	941	237	300	180	324	123	150	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.96	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1492	3433	3539	1492	1770	1863	1515	1770	1863	1512
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1492	3433	3539	1492	1770	1863	1515	1770	1863	1512
Peak-hour factor, PHF	0.90	0.90	0.90	0.95	0.95	0.95	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	78	1527	200	307	991	249	333	200	360	145	176	59
RTOR Reduction (vph)	0	0	21	0	0	21	0	0	130	0	0	19
Lane Group Flow (vph)	78	1527	179	307	991	228	333	200	230	145	176	40
Confl. Peds. (#/hr)			10			9			14			10
Confl. Bikes (#/hr)		1	5		1	9		1	3		2	7
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.6	49.8	49.8	10.0	52.2	52.2	21.8	24.2	24.2	10.8	13.2	13.2
Effective Green, g (s)	7.6	49.8	49.8	10.0	52.2	52.2	21.8	24.2	24.2	10.8	13.2	13.2
Actuated g/C Ratio	0.07	0.45	0.45	0.09	0.47	0.47	0.20	0.22	0.22	0.10	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	121	1591	671	310	1667	703	348	407	331	173	222	180
v/s Ratio Prot	0.04	c0.43		c0.09	0.28		c0.19	0.11		0.08	0.09	
v/s Ratio Perm			0.12			0.15			c0.15			0.03
v/c Ratio	0.64	0.96	0.27	0.99	0.59	0.32	0.96	0.49	0.70	0.84	0.79	0.22
Uniform Delay, d1	50.3	29.5	19.1	50.4	21.5	18.3	44.0	37.9	39.9	49.1	47.5	44.1
Progression 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
Incremental Delay, d2	11.2	14.0	0.2	48.3	0.6	0.3	36.6	0.9	6.2	28.3	17.4	0.6
Delay (s)	61.5	43.5	19.3	98.7	22.1	18.6	80.6	38.8	46.1	77.4	64.9	44.8
Level of Service	E	D	B	F	C	B	F	D	D	E	E	D
Approach Delay (s)		41.6			36.7			57.4			66.5	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	69	153	1439	160	60	1186	116	169	44	175	179	64
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		1.00	0.95		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	0.94		1.00	0.96
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.98		1.00	0.99		1.00	0.88		1.00	0.90
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (prot)		1770	3445		1770	3455		1770	1547		1770	1617
Flt Permitted		0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00
Satd. Flow (perm)		1770	3445		1770	3455		1770	1547		1770	1617
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	170	1599	178	66	1303	127	188	49	194	199	71
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	247	1777	0	66	1430	0	188	243	0	199	195
Confl. Peds. (#/hr)				30			30			30		
Confl. Bikes (#/hr)									1			1
Turn Type	Prot	Prot			Prot			Prot			Prot	
Protected Phases	7	7	4		3	8		5	2		1	6
Permitted Phases												
Actuated Green, G (s)		15.0	54.0		4.0	43.0		14.6	18.0		14.9	18.3
Effective Green, g (s)		15.0	54.0		4.0	43.0		14.6	18.0		14.9	18.3
Actuated g/C Ratio		0.14	0.51		0.04	0.40		0.14	0.17		0.14	0.17
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)		248	1740		66	1390		242	260		247	277
v/s Ratio Prot		c0.14	c0.52		0.04	0.41		0.11	c0.16		c0.11	0.12
v/s Ratio Perm												
v/c Ratio		1.00	1.02		1.00	1.03		0.78	0.93		0.81	0.70
Uniform Delay, d1		45.9	26.5		51.5	32.0		44.6	43.9		44.6	41.7
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		55.7	27.1		110.8	31.8		14.4	38.2		17.2	7.9
Delay (s)		101.6	53.6		162.2	63.8		59.0	82.1		61.8	49.6
Level of Service		F	D		F	E		E	F		E	D
Approach Delay (s)			59.4			68.1			72.0			55.8
Approach LOS			E			E			E			E

Intersection Summary			
HCM Average Control Delay	63.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	106.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	112
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	124
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	30
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	104	175	20	20	170	145	70	114	50	180	189	69
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	116	194	22	22	189	161	78	127	56	200	210	77

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	116	217	22	350	204	56	410	77
Volume Left (vph)	116	0	22	0	78	0	200	0
Volume Right (vph)	0	22	0	161	0	56	0	77
Hadj (s)	0.58	-0.04	0.53	-0.29	0.28	-0.67	0.30	-0.67
Departure Headway (s)	8.4	7.8	8.2	7.4	8.2	7.2	7.7	6.7
Degree Utilization, x	0.27	0.47	0.05	0.72	0.46	0.11	0.87	0.14
Capacity (veh/h)	405	431	417	467	412	462	410	513
Control Delay (s)	13.3	16.2	10.4	25.8	16.8	9.9	43.0	9.6
Approach Delay (s)	15.2		24.9		15.3		37.7	
Approach LOS	C		C		C		E	

Intersection Summary				
Delay	25.3			
HCM Level of Service	D			
Intersection Capacity Utilization	67.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	275	225	45	185	190	90
Peak Hour Factor	0.92	0.92	0.86	0.86	0.82	0.82
Hourly flow rate (vph)	299	245	52	215	232	110

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	299	245	52	215	341
Volume Left (vph)	0	0	52	0	232
Volume Right (vph)	0	245	0	0	110
Hadj (s)	0.03	-0.67	0.53	0.03	-0.02
Departure Headway (s)	6.1	5.3	6.9	6.4	5.8
Degree Utilization, x	0.50	0.36	0.10	0.38	0.55
Capacity (veh/h)	574	650	495	537	591
Control Delay (s)	13.8	10.2	9.4	12.0	15.4
Approach Delay (s)	12.2		11.5		15.4
Approach LOS	B		B		C

Intersection Summary			
Delay	13.0		
HCM Level of Service	B		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	264	155	90	561	354	223
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	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1543	1770	1863	1863	1513
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1543	1770	1863	1863	1513
Peak-hour factor, PHF	0.90	0.90	0.80	0.80	0.90	0.90
Adj. Flow (vph)	293	172	112	701	393	248
RTOR Reduction (vph)	0	126	0	0	0	159
Lane Group Flow (vph)	293	46	112	701	393	89
Confl. Peds. (#/hr)	25	4				18
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	11.8	11.8	4.4	24.1	15.7	15.7
Effective Green, g (s)	11.8	11.8	4.4	24.1	15.7	15.7
Actuated g/C Ratio	0.27	0.27	0.10	0.55	0.36	0.36
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)	476	415	177	1023	666	541
v/s Ratio Prot	c0.17		0.06	c0.38	0.21	
v/s Ratio Perm		0.03				0.06
v/c Ratio	0.62	0.11	0.63	0.69	0.59	0.16
Uniform Delay, d1	14.1	12.1	19.0	7.2	11.5	9.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.1	7.2	1.9	1.4	0.1
Delay (s)	16.4	12.2	26.2	9.1	12.9	9.8
Level of Service	B	B	C	A	B	A
Approach Delay (s)	14.9			11.4	11.7	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	43.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	20	34	276	70	19	178
Peak Hour Factor	0.77	0.77	0.71	0.71	0.81	0.81
Hourly flow rate (vph)	26	44	389	99	23	220

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	70	487	23	220
Volume Left (vph)	26	0	23	0
Volume Right (vph)	44	99	0	0
Hadj (s)	-0.27	-0.09	0.53	0.03
Departure Headway (s)	5.3	4.4	5.6	5.1
Degree Utilization, x	0.10	0.60	0.04	0.31
Capacity (veh/h)	602	807	622	686
Control Delay (s)	8.8	13.6	7.6	9.2
Approach Delay (s)	8.8	13.6	9.0	
Approach LOS	A	B	A	

Intersection Summary			
Delay	11.8		
HCM Level of Service	B		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	359	10	15	384	35	10	65	70	30	45	29
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		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	0.93		1.00	0.93		1.00	0.90		1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00		0.99	1.00		0.98	1.00
Satd. Flow (prot)		1858	1479		1859	1462		1754	1431		1803	1508
Flt Permitted		0.97	1.00		0.98	1.00		0.97	1.00		0.89	1.00
Satd. Flow (perm)		1799	1479		1822	1462		1712	1431		1634	1508
Peak-hour factor, PHF	0.88	0.88	0.88	0.80	0.80	0.80	0.76	0.76	0.76	0.82	0.82	0.82
Adj. Flow (vph)	22	408	11	19	480	44	13	86	92	37	55	35
RTOR Reduction (vph)	0	0	7	0	0	26	0	0	55	0	0	21
Lane Group Flow (vph)	0	430	4	0	499	18	0	99	37	0	92	14
Confl. Peds. (#/hr)	2		2	2		2	5		2	2		5
Confl. Bikes (#/hr)		33	47		3	49		1	80		47	23
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	11%	7%	2%	2%	4%	2%
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Effective Green, g (s)		16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0
Actuated g/C Ratio		0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40
Clearance Time (s)		4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		720	592		729	585		685	572		654	603
v/s Ratio Prot												
v/s Ratio Perm		0.24	0.00		c0.27	0.01		c0.06	0.03		0.06	0.01
v/c Ratio		0.60	0.01		0.68	0.03		0.14	0.06		0.14	0.02
Uniform Delay, d1		9.5	7.2		9.9	7.3		7.6	7.4		7.6	7.3
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2		3.6	0.0		5.2	0.1		0.4	0.2		0.5	0.1
Delay (s)		13.1	7.2		15.1	7.4		8.1	7.6		8.1	7.3
Level of Service		B	A		B	A		A	A		A	A
Approach Delay (s)		12.9			14.5			7.9			7.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.7%	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												
Volume (vph)	15	424	65	60	258	40	70	125	115	15	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lane Util. Factor		1.00	1.00	1.00	1.00			1.00			1.00	
Frpb, ped/bikes		1.00	0.84	1.00	0.99			0.98			0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00			1.00			1.00	
Frt		1.00	0.85	1.00	0.98			0.95			0.96	
Flt Protected		1.00	1.00	0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1859	1328	1731	1806			1517			1766	
Flt Permitted		0.98	1.00	0.32	1.00			0.89			0.95	
Satd. Flow (perm)		1832	1328	579	1806			1363			1689	
Peak-hour factor, PHF	0.88	0.88	0.88	0.81	0.81	0.81	0.86	0.86	0.86	0.67	0.67	0.67
Adj. Flow (vph)	17	482	74	74	319	49	81	145	134	22	134	60
RTOR Reduction (vph)	0	0	37	0	11	0	0	43	0	0	28	0
Lane Group Flow (vph)	0	499	37	74	357	0	0	317	0	0	188	0
Confl. Peds. (#/hr)	5		3	3		5	3		7	7		3
Confl. Bikes (#/hr)		17	153		2	54		4	37		20	11
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	4%	2%	2%	2%
Parking (#/hr)								1				
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Effective Green, g (s)		21.0	21.0	21.0	21.0			21.0			21.0	
Actuated g/C Ratio		0.42	0.42	0.42	0.42			0.42			0.42	
Clearance Time (s)		4.0	4.0	4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		769	558	243	759			572			709	
v/s Ratio Prot					0.20							
v/s Ratio Perm		c0.27	0.03	0.13				c0.23			0.11	
v/c Ratio		0.65	0.07	0.30	0.47			0.55			0.27	
Uniform Delay, d1		11.6	8.7	9.6	10.5			11.0			9.5	
Progression Factor		1.00	1.00	1.00	1.00			1.00			1.00	
Incremental Delay, d2		4.2	0.2	3.2	2.1			3.8			0.9	
Delay (s)		15.8	8.9	12.9	12.6			14.8			10.4	
Level of Service		B	A	B	B			B			B	
Approach Delay (s)		14.9			12.6			14.8			10.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	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												
Volume (vph)	29	364	140	57	304	95	40	382	128	115	326	29
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	1.00	1.00	1.00	1.00
Frpb, ped/bikes		0.96			0.98		1.00	1.00	0.88	1.00	1.00	0.90
Flpb, ped/bikes		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1716			1758		1770	1863	1397	1770	1863	1432
Flt Permitted		0.96			0.82		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1649			1456		1770	1863	1397	1770	1863	1432
Peak-hour factor, PHF	0.81	0.81	0.81	0.89	0.89	0.89	0.78	0.78	0.78	0.97	0.97	0.97
Adj. Flow (vph)	36	449	173	64	342	107	51	490	164	119	336	30
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	25	0	0	6
Lane Group Flow (vph)	0	646	0	0	504	0	51	490	139	119	336	24
Confl. Peds. (#/hr)	13		10	10		13			19			19
Confl. Bikes (#/hr)		7	133		5	49		3	40		33	22
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm			Perm			Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)		41.6			41.6		5.7	31.4	31.4	9.8	35.5	35.5
Effective Green, g (s)		41.6			41.6		5.7	31.4	31.4	9.8	35.5	35.5
Actuated g/C Ratio		0.44			0.44		0.06	0.33	0.33	0.10	0.37	0.37
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)		724			639		106	617	463	183	698	536
v/s Ratio Prot							0.03	c0.26		c0.07	0.18	
v/s Ratio Perm		c0.39			0.35				0.10			0.02
v/c Ratio		0.89			0.79		0.48	0.79	0.30	0.65	0.48	0.04
Uniform Delay, d1		24.5			22.8		43.1	28.8	23.5	40.9	22.6	18.9
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		13.3			6.4		3.4	7.0	0.4	8.0	0.5	0.0
Delay (s)		37.9			29.3		46.5	35.7	23.9	48.9	23.2	18.9
Level of Service		D			C		D	D	C	D	C	B
Approach Delay (s)		37.9			29.3			33.8			29.2	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	94.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.7%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	181	535	45	45	455	34	75	162	20	39	71	94
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	201	594	50	50	506	38	83	180	22	43	79	104

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	201	644	593	263	22	122	104
Volume Left (vph)	201	0	50	83	0	43	0
Volume Right (vph)	0	50	38	0	22	0	104
Hadj (s)	0.53	-0.02	0.01	0.10	-0.57	0.21	-0.63
Departure Headway (s)	8.3	7.7	7.9	8.8	3.2	9.1	8.3
Degree Utilization, x	0.46	1.38	1.30	0.64	0.02	0.31	0.24
Capacity (veh/h)	429	479	464	398	1121	383	420
Control Delay (s)	16.9	204.4	175.2	26.4	6.3	15.0	12.7
Approach Delay (s)	159.8		175.2	24.9		13.9	
Approach LOS	F		F	C		B	

Intersection Summary			
Delay	127.8		
HCM Level of Service	F		
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	720	55	55	590	70	40	223	65	100	287	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.99			1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		0.99	1.00		0.98	1.00	
Frt		0.99			0.99		1.00	0.97		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3468			3464		1793	1565		1741	1552	
Flt Permitted		0.99			1.00		0.21	1.00		0.31	1.00	
Satd. Flow (perm)		3468			3464		400	1565		573	1552	
Peak-hour factor, PHF	0.75	0.75	0.75	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93
Adj. Flow (vph)	129	960	73	64	686	81	48	269	78	108	309	109
RTOR Reduction (vph)	0	5	0	0	9	0	0	11	0	0	14	0
Lane Group Flow (vph)	0	1157	0	0	822	0	48	336	0	108	404	0
Confl. Peds. (#/hr)	3		19	19		3	13		24	24		13
Confl. Bikes (#/hr)			13		3	2			38		38	19
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	2%	2%	2%	2%	5%
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		30.0			22.0		26.0	26.0		26.0	26.0	
Effective Green, g (s)		30.0			22.0		26.0	26.0		26.0	26.0	
Actuated g/C Ratio		0.33			0.24		0.29	0.29		0.29	0.29	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1156			847		116	452		166	448	
v/s Ratio Prot		c0.33			c0.24			0.21			c0.26	
v/s Ratio Perm							0.12			0.19		
v/c Ratio		1.00			0.97		0.41	0.74		0.65	0.90	
Uniform Delay, d1		30.0			33.7		25.8	29.0		28.0	30.8	
Progression Factor		1.00			0.67		1.00	1.00		1.00	1.00	
Incremental Delay, d2		26.6			22.0		10.5	10.5		18.1	23.9	
Delay (s)		56.6			44.6		36.4	39.5		46.1	54.6	
Level of Service		E			D		D	D		D	D	
Approach Delay (s)		56.6			44.6			39.1			52.9	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.0%	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												
Volume (vph)	35	615	240	80	480	90	80	185	55	40	70	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.99		1.00	0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		0.97	1.00	
Frt		0.96			0.98		1.00	0.97		1.00	0.96	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3322			3421		1763	1560		1722	1561	
Flt Permitted		1.00			0.99		0.62	1.00		0.36	1.00	
Satd. Flow (perm)		3322			3421		1153	1560		647	1561	
Peak-hour factor, PHF	0.84	0.84	0.84	0.96	0.96	0.96	0.78	0.78	0.78	0.69	0.69	0.69
Adj. Flow (vph)	42	732	286	83	500	94	103	237	71	58	101	43
RTOR Reduction (vph)	0	42	0	0	15	0	0	12	0	0	17	0
Lane Group Flow (vph)	0	1018	0	0	662	0	103	296	0	58	127	0
Confl. Peds. (#/hr)	5		16	16		5	3		35	35		3
Confl. Bikes (#/hr)		3	9		3	9		1	24		21	14
Parking (#/hr)								3			3	
Turn Type	Split			Split			Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)		32.0			21.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		32.0			21.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.36			0.23		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1181			798		320	433		180	434	
v/s Ratio Prot		c0.31			c0.19			c0.19			0.08	
v/s Ratio Perm							0.09			0.09		
v/c Ratio		0.86			0.83		0.32	0.68		0.32	0.29	
Uniform Delay, d1		26.9			32.8		25.8	29.0		25.8	25.5	
Progression Factor		0.58			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.9			9.8		2.6	8.5		4.7	1.7	
Delay (s)		18.5			42.6		28.4	37.4		30.5	27.2	
Level of Service		B			D		C	D		C	C	
Approach Delay (s)		18.5			42.6			35.2			28.2	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	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												
Volume (veh/h)	315	1357	121	115	1159	50	82	340	115	45	120	121
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.93	0.93	0.92	0.93	0.92	0.93	0.92	0.92	0.92
Hourly flow rate (vph)	350	1508	134	124	1246	54	88	370	124	49	130	132
Pedestrians		32			32			32				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		3			3			3				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		932			1318							
pX, platoon unblocked	0.88			0.59			0.66	0.66	0.59	0.66	0.66	0.88
vC, conflicting volume	1301			1540			3339	3788	818	3191	3761	682
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1065			542			2680	3365	0	2454	3323	360
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 %	39			79			0	0	80	0	0	76
cM capacity (veh/h)	571			591			0	1	610	0	2	544

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2	
Volume Total	350	754	754	134	124	831	470	458	124	179	132	
Volume Left	350	0	0	0	124	0	0	88	0	49	0	
Volume Right	0	0	0	134	0	0	54	0	124	0	132	
cSH	571	1700	1700	1700	591	1700	1700	0	610	0	544	
Volume to Capacity	0.61	0.44	0.44	0.08	0.21	0.49	0.28	Err	0.20	Err	0.24	
Queue Length 95th (ft)	103	0	0	0	20	0	0	Err	19	Err	23	
Control Delay (s)	20.8	0.0	0.0	0.0	12.7	0.0	0.0	Err	12.4	Err	13.7	
Lane LOS	C				B			F	B	F	B	
Approach Delay (s)	3.7				1.1			Err		Err		
Approach LOS								F		F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	95.6%	ICU Level of Service	F	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1429	88	75	1175	149	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.95	0.95	0.84	0.84
Hourly flow rate (vph)	1570	97	79	1237	177	30
Pedestrians	7			7	7	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				724		
pX, platoon unblocked					0.83	
vC, conflicting volume			1674		2409	848
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1674		2287	848
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		0	90
cM capacity (veh/h)			377		22	301

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1047	620	79	618	618	207
Volume Left	0	0	79	0	0	177
Volume Right	0	97	0	0	0	30
cSH	1700	1700	377	1700	1700	25
Volume to Capacity	0.62	0.36	0.21	0.36	0.36	8.35
Queue Length 95th (ft)	0	0	19	0	0	Err
Control Delay (s)	0.0	0.0	17.1	0.0	0.0	Err
Lane LOS			C			F
Approach Delay (s)	0.0		1.0			Err
Approach LOS						F

Intersection Summary			
Average Delay	649.7		
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	418	840	196	110	633	215	193	330	140	260	245	424
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.78	1.00	1.00	0.97	1.00	1.00	0.92	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1231	1770	3539	1543	1770	1863	1452	1770	1863	1560
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1231	1770	3539	1543	1770	1863	1452	1770	1863	1560
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	464	933	218	121	696	236	214	367	156	289	272	471
RTOR Reduction (vph)	0	0	71	0	0	63	0	0	25	0	0	358
Lane Group Flow (vph)	464	933	147	121	696	173	214	367	131	289	272	113
Confl. Peds. (#/hr)			59						35			
Confl. Bikes (#/hr)			6			12			9		9	3
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	29.0	39.6	39.6	11.5	22.1	22.1	16.0	23.3	23.3	19.0	26.3	26.3
Effective Green, g (s)	29.0	39.6	39.6	11.5	22.1	22.1	16.0	23.3	23.3	19.0	26.3	26.3
Actuated g/C Ratio	0.27	0.36	0.36	0.11	0.20	0.20	0.15	0.21	0.21	0.17	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	469	1281	446	186	715	312	259	397	309	307	448	375
v/s Ratio Prot	c0.26	0.26		0.07	c0.20		0.12	c0.20		c0.16	c0.15	
v/s Ratio Perm			0.12			0.11			0.09			0.07
v/c Ratio	0.99	0.73	0.33	0.65	0.97	0.55	0.83	0.92	0.42	0.94	0.61	0.30
Uniform Delay, d1	40.0	30.2	25.3	47.0	43.4	39.2	45.4	42.2	37.2	44.6	37.0	34.0
Progression 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
Incremental Delay, d2	38.3	2.1	0.4	7.9	27.0	2.1	18.9	27.0	0.9	36.0	2.3	0.5
Delay (s)	78.4	32.3	25.7	54.9	70.3	41.4	64.3	69.2	38.2	80.6	39.3	34.5
Level of Service	E	C	C	D	E	D	E	E	D	F	D	C
Approach Delay (s)		44.7			62.1			61.2			48.7	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	109.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1175	65	50	923	35	10
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	0.95	1.00	1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00	0.94	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1446	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1446	1770	3539	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.67	0.67
Adj. Flow (vph)	1306	72	54	1003	52	15
RTOR Reduction (vph)	0	0	0	0	0	14
Lane Group Flow (vph)	1306	72	54	1003	52	1
Confl. Peds. (#/hr)		16	16			
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	5%	2%	2%	2%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	48.0	48.0	4.1	56.1	4.4	4.4
Effective Green, g (s)	48.0	48.0	4.1	56.1	4.4	4.4
Actuated g/C Ratio	0.63	0.63	0.05	0.73	0.06	0.06
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)	2212	904	94	2585	101	91
v/s Ratio Prot	c0.37		c0.03	0.28	c0.03	
v/s Ratio Perm		0.05				0.00
v/c Ratio	0.59	0.08	0.57	0.39	0.51	0.01
Uniform Delay, d1	8.6	5.7	35.5	3.9	35.2	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	8.2	0.1	4.4	0.0
Delay (s)	9.0	5.7	43.7	4.0	39.5	34.2
Level of Service	A	A	D	A	D	C
Approach Delay (s)	8.8			6.0	38.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	76.8	Sum of lost time (s)	20.3
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	178	933	815	170	70	139
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	1.00	0.95	0.95	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.95	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1501	1736	1539
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1501	1736	1539
Peak-hour factor, PHF	0.90	0.90	0.96	0.96	0.90	0.90
Adj. Flow (vph)	198	1037	849	177	78	154
RTOR Reduction (vph)	0	0	0	38	0	132
Lane Group Flow (vph)	198	1037	849	139	78	22
Confl. Peds. (#/hr)				15	2	13
Confl. Bikes (#/hr)				2		
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	13.6	42.6	25.0	25.0	9.5	9.5
Effective Green, g (s)	13.6	42.6	25.0	25.0	9.5	9.5
Actuated g/C Ratio	0.21	0.65	0.38	0.38	0.14	0.14
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)	365	2284	1341	569	250	222
v/s Ratio Prot	c0.11	0.29	c0.24		c0.04	
v/s Ratio Perm				0.09		0.01
v/c Ratio	0.54	0.45	0.63	0.24	0.31	0.10
Uniform Delay, d1	23.4	5.9	16.8	14.0	25.3	24.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	0.1	1.0	0.2	0.7	0.2
Delay (s)	25.1	6.0	17.7	14.3	26.0	24.7
Level of Service	C	A	B	B	C	C
Approach Delay (s)		9.1	17.1		25.2	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	49.6%	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												
Volume (veh/h)	5	973	30	60	880	5	100	5	30	5	5	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.90	0.90	0.90	0.38	0.38	0.38
Hourly flow rate (vph)	6	1081	33	64	936	5	111	6	33	13	13	13
Pedestrians		5			50			5				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			4			0				
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		903										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	941			1119			1734	2183	612	1704	2197	476
vC1, stage 1 conf vol							1114	1114		1066	1066	
vC2, stage 2 conf vol							620	1069		638	1131	
vCu, unblocked vol	941			817			1531	2052	228	1496	2068	476
tC, single (s)	4.1			4.3			7.6	6.5	7.0	7.5	6.5	6.9
tC, 2 stage (s)							6.6	5.5		6.5	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			90			51	97	95	93	93	98
cM capacity (veh/h)	724			660			225	203	632	196	186	533

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	546	574	64	624	317	150	39
Volume Left	6	0	64	0	0	111	13
Volume Right	0	33	0	0	5	33	13
cSH	724	1700	660	1700	1700	262	243
Volume to Capacity	0.01	0.34	0.10	0.37	0.19	0.57	0.16
Queue Length 95th (ft)	1	0	8	0	0	82	14
Control Delay (s)	0.2	0.0	11.0	0.0	0.0	35.8	22.7
Lane LOS	A		B			E	C
Approach Delay (s)	0.1		0.7			35.8	22.7
Approach LOS						E	C

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	71.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	774	219	40	846	99	55
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1517	1770	1863	1736	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1517	1770	1863	1736	1583
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.78	0.78
Adj. Flow (vph)	860	243	43	900	127	71
RTOR Reduction (vph)	0	46	0	0	0	33
Lane Group Flow (vph)	860	197	43	900	127	38
Confl. Peds. (#/hr)		11				
Confl. Bikes (#/hr)		4				
Heavy Vehicles (%)	2%	2%	2%	2%	4%	2%
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	33.5	33.5	2.7	40.2	9.8	9.8
Effective Green, g (s)	33.5	33.5	2.7	40.2	9.8	9.8
Actuated g/C Ratio	0.58	0.58	0.05	0.69	0.17	0.17
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)	2044	876	82	1291	293	267
v/s Ratio Prot	0.24		0.02	c0.48	c0.07	
v/s Ratio Perm		0.13				0.02
v/c Ratio	0.42	0.22	0.52	0.70	0.43	0.14
Uniform Delay, d1	6.8	5.9	27.0	5.3	21.6	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1	5.9	1.7	1.0	0.2
Delay (s)	7.0	6.1	33.0	6.9	22.6	20.8
Level of Service	A	A	C	A	C	C
Approach Delay (s)	6.8			8.1	22.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	684	150	230	811	75	80
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	0.95	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
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	1546	1770	1863	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1546	1770	1863	1770	1583
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.90	0.90
Adj. Flow (vph)	760	167	245	863	83	89
RTOR Reduction (vph)	0	99	0	0	0	78
Lane Group Flow (vph)	760	68	245	863	83	11
Confl. Bikes (#/hr)		4				
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	22.8	22.8	14.1	40.9	6.8	6.8
Effective Green, g (s)	22.8	22.8	14.1	40.9	6.8	6.8
Actuated g/C Ratio	0.41	0.41	0.25	0.73	0.12	0.12
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)	1449	633	448	1368	216	193
v/s Ratio Prot	0.21		0.14	c0.46	c0.05	
v/s Ratio Perm		0.04				0.01
v/c Ratio	0.52	0.11	0.55	0.63	0.38	0.06
Uniform Delay, d1	12.4	10.2	18.0	3.7	22.5	21.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	1.4	1.0	1.1	0.1
Delay (s)	12.7	10.2	19.4	4.6	23.7	21.7
Level of Service	B	B	B	A	C	C
Approach Delay (s)	12.3			7.9	22.7	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	45	280	400	961	809	25
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	1.00	1.00	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1559	1770	1863	3539	1547
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1770	1559	1770	1863	3539	1547
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	311	444	1068	899	28
RTOR Reduction (vph)	0	272	0	0	0	18
Lane Group Flow (vph)	50	39	444	1068	899	10
Confl. Bikes (#/hr)		2		5	1	3
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	8.5	8.5	22.3	50.6	24.3	24.3
Effective Green, g (s)	8.5	8.5	22.3	50.6	24.3	24.3
Actuated g/C Ratio	0.13	0.13	0.33	0.75	0.36	0.36
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)	224	197	588	1405	1282	560
v/s Ratio Prot	c0.03		0.25	c0.57	0.25	
v/s Ratio Perm		0.03				0.01
v/c Ratio	0.22	0.20	0.76	0.76	0.70	0.02
Uniform Delay, d1	26.3	26.3	20.0	4.8	18.3	13.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.5	5.5	2.5	1.8	0.0
Delay (s)	26.8	26.8	25.5	7.2	20.1	13.8
Level of Service	C	C	C	A	C	B
Approach Delay (s)	26.8			12.6	19.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	67.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	264	130	620	20	20	40	600	1201	55	90	930	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	0.98		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.90		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1567	1719	1650		1770	3512		1752	3539	1537
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1567	1719	1650		1770	3512		1752	3539	1537
Peak-hour factor, PHF	0.90	0.90	0.90	0.69	0.69	0.69	0.90	0.90	0.90	0.94	0.94	0.94
Adj. Flow (vph)	293	144	689	29	29	58	667	1334	61	96	989	95
RTOR Reduction (vph)	0	0	47	0	52	0	0	4	0	0	0	68
Lane Group Flow (vph)	293	144	642	29	35	0	667	1391	0	96	989	27
Confl. Peds. (#/hr)			6			5			2			2
Confl. Bikes (#/hr)			6		2	2			2		3	3
Heavy Vehicles (%)	2%	2%	2%	5%	2%	2%	2%	2%	2%	3%	2%	2%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	11.1	17.8	42.0	1.9	8.6		24.2	41.4		6.0	23.2	23.2
Effective Green, g (s)	11.1	17.8	42.0	1.9	8.6		24.2	41.4		6.0	23.2	23.2
Actuated g/C Ratio	0.13	0.21	0.51	0.02	0.10		0.29	0.50		0.07	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	236	399	867	39	171		515	1750		126	988	429
v/s Ratio Prot	c0.17	0.08	c0.22	0.02	0.02		c0.38	0.40		0.05	c0.28	
v/s Ratio Perm			0.19									0.02
v/c Ratio	1.24	0.36	0.74	0.74	0.20		1.30	0.80		0.76	1.00	0.06
Uniform Delay, d1	36.0	27.8	16.2	40.4	34.1		29.4	17.3		37.8	29.9	22.0
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	139.3	0.6	3.4	54.3	0.6		146.7	2.6		23.4	28.9	0.1
Delay (s)	175.3	28.4	19.7	94.6	34.7		176.2	19.9		61.3	58.8	22.0
Level of Service	F	C	B	F	C		F	B		E	E	C
Approach Delay (s)		61.3			49.7			70.5			56.1	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM Average Control Delay	63.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.2%	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												
Volume (vph)	480	335	175	35	85	199	30	884	110	279	468	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1562	1770	1863	1561	1752	3505	1559	1770	3539	1563
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1562	1770	1863	1561	1752	3505	1559	1770	3539	1563
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	495	345	180	38	91	214	31	911	113	310	520	356
RTOR Reduction (vph)	0	0	126	0	0	191	0	0	18	0	0	217
Lane Group Flow (vph)	495	345	54	38	91	23	31	911	95	310	520	139
Confl. Bikes (#/hr)		1	2			1			4		3	2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	2%
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.3	28.3	28.3	10.1	10.1	10.1	3.6	24.6	24.6	16.0	37.0	37.0
Effective Green, g (s)	28.3	28.3	28.3	10.1	10.1	10.1	3.6	24.6	24.6	16.0	37.0	37.0
Actuated g/C Ratio	0.30	0.30	0.30	0.11	0.11	0.11	0.04	0.26	0.26	0.17	0.39	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	527	1054	465	188	198	166	66	908	404	298	1378	609
v/s Ratio Prot	c0.28	0.10		0.02	c0.05		0.02	c0.26		c0.18	0.15	
v/s Ratio Perm			0.03			0.01			0.06			0.09
v/c Ratio	0.94	0.33	0.12	0.20	0.46	0.14	0.47	1.00	0.24	1.04	0.38	0.23
Uniform Delay, d1	32.5	25.9	24.2	38.8	39.9	38.5	44.8	35.2	27.8	39.5	20.8	19.4
Progression Factor	0.87	0.82	1.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.6	0.8	0.5	0.5	1.7	0.4	5.2	30.7	0.3	63.0	0.2	0.2
Delay (s)	53.9	22.0	30.0	39.3	41.6	38.9	50.0	65.9	28.1	102.5	20.9	19.6
Level of Service	D	C	C	D	D	D	D	E	C	F	C	B
Approach Delay (s)		38.9			39.6			61.4			41.9	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	59	20	855	69	35	786
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	64	22	929	75	38	854
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		7				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1860	929			1004	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1860	929			1004	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	16	93			94	
cM capacity (veh/h)	76	324			690	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	86	929	75	38	854
Volume Left	64	0	0	38	0
Volume Right	22	0	75	0	0
cSH	102	1700	1700	690	1700
Volume to Capacity	0.84	0.55	0.04	0.06	0.50
Queue Length 95th (ft)	119	0	0	4	0
Control Delay (s)	120.4	0.0	0.0	10.5	0.0
Lane LOS	F			B	
Approach Delay (s)	120.4	0.0		0.4	
Approach LOS	F				

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	5	40	129	5	140	80	764	119	45	760	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	5	43	140	5	152	87	830	129	49	826	43
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								633				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1953	2079	848	2039	2036	895	870			960		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2054	2208	848	2159	2156	760	870			840		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	82	88	0	83	54	89			92		
cM capacity (veh/h)	14	30	361	18	32	332	775			651		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	22	49	140	158	87	960	49	870
Volume Left	22	0	140	0	87	0	49	0
Volume Right	0	43	0	152	0	129	0	43
cSH	14	161	18	251	775	1700	651	1700
Volume to Capacity	1.59	0.30	7.62	0.63	0.11	0.56	0.08	0.51
Queue Length 95th (ft)	85	30	Err	95	9	0	6	0
Control Delay (s)	858.2	36.8	Err	40.8	10.2	0.0	11.0	0.0
Lane LOS	F	E	F	E	B		B	
Approach Delay (s)	289.5		4729.2		0.8		0.6	
Approach LOS	F		F					

Intersection Summary				
Average Delay	612.9			
Intersection Capacity Utilization	76.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	5	20	144	5	70	50	617	208	190	657	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.80	0.80	0.80	0.86	0.86	0.86	0.90	0.90	0.90
Hourly flow rate (vph)	33	5	22	180	6	88	58	717	242	211	730	44
Pedestrians					6						1	
Lane Width (ft)					12.0						12.0	
Walking Speed (ft/s)					4.0						4.0	
Percent Blockage					1						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2100	2256	752	2137	2157	845	774			965		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2100	2256	752	2137	2157	845	774			965		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	80	95	0	80	76	93			70		
cM capacity (veh/h)	18	27	410	21	31	360	841			710		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	33	27	180	94	58	959	211	774
Volume Left	33	0	180	0	58	0	211	0
Volume Right	0	22	0	88	0	242	0	44
cSH	18	106	21	211	841	1700	710	1700
Volume to Capacity	1.83	0.26	8.63	0.44	0.07	0.56	0.30	0.46
Queue Length 95th (ft)	113	24	Err	52	6	0	31	0
Control Delay (s)	841.1	50.1	Err	35.0	9.6	0.0	12.2	0.0
Lane LOS	F	F	F	E	A		B	
Approach Delay (s)	481.5		6586.7		0.5		2.6	
Approach LOS	F		F					

Intersection Summary				
Average Delay	785.4			
Intersection Capacity Utilization	80.5%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	55	105	90	613	450	95
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.77	0.77	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	71	136	110	748	549	116
Pedestrians	9			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	TWLTL	
Median storage veh)					2	
Upstream signal (ft)					656	
pX, platoon unblocked	0.87	0.87	0.87			
vC, conflicting volume	1583	619	674			
vC1, stage 1 conf vol	616					
vC2, stage 2 conf vol	967					
vCu, unblocked vol	1595	492	555			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	75	73	88			
cM capacity (veh/h)	280	499	881			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	208	110	748	665
Volume Left	71	110	0	0
Volume Right	136	0	0	116
cSH	394	881	1700	1700
Volume to Capacity	0.53	0.12	0.44	0.39
Queue Length 95th (ft)	74	11	0	0
Control Delay (s)	23.9	9.7	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	23.9	1.2		0.0
Approach LOS	C			

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	160	83	555	115	137	433
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
Frpb, ped/bikes	1.00	0.85	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1287	1809		1770	1863
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1287	1809		1770	1863
Peak-hour factor, PHF	0.85	0.85	0.86	0.86	0.87	0.87
Adj. Flow (vph)	188	98	645	134	157	498
RTOR Reduction (vph)	0	86	8	0	0	0
Lane Group Flow (vph)	188	12	771	0	157	498
Confl. Bikes (#/hr)		42		18		14
Heavy Vehicles (%)	2%	7%	2%	2%	2%	2%
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.1	8.1	32.5		7.1	43.6
Effective Green, g (s)	8.1	8.1	32.5		7.1	43.6
Actuated g/C Ratio	0.12	0.12	0.49		0.11	0.66
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)	216	157	885		189	1223
v/s Ratio Prot	c0.11		c0.43		c0.09	0.27
v/s Ratio Perm		0.01				
v/c Ratio	0.87	0.08	0.87		0.83	0.41
Uniform Delay, d1	28.6	25.8	15.1		29.1	5.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	29.4	0.2	9.4		25.5	0.2
Delay (s)	58.1	26.0	24.4		54.6	5.6
Level of Service	E	C	C		D	A
Approach Delay (s)	47.1		24.4			17.3
Approach LOS	D		C			B

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	18.7
Intersection Capacity Utilization	62.6%	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												
Volume (vph)	120	220	170	45	90	29	140	521	145	29	389	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	0.93		1.00	0.96	1.00	1.00	0.96	1.00	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.98	1.00		0.98	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1826	1465		1827	1518	1770	1863	1513	1770	1863	1505
Flt Permitted		0.83	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1535	1465		1359	1518	1770	1863	1513	1770	1863	1505
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.88	0.88	0.91	0.91	0.91
Adj. Flow (vph)	135	247	191	51	102	33	159	592	165	32	427	220
RTOR Reduction (vph)	0	0	90	0	0	23	0	0	80	0	0	142
Lane Group Flow (vph)	0	382	101	0	153	10	159	592	85	32	427	78
Confl. Peds. (#/hr)	5		10	10		5			6			9
Confl. Bikes (#/hr)		2	33		3	11		2	17		15	14
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)		17.2	17.2		17.2	17.2	5.8	23.8	23.8	1.4	19.4	19.4
Effective Green, g (s)		17.2	17.2		17.2	17.2	5.8	23.8	23.8	1.4	19.4	19.4
Actuated g/C Ratio		0.32	0.32		0.32	0.32	0.11	0.44	0.44	0.03	0.36	0.36
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		485	463		430	480	189	815	662	46	664	537
v/s Ratio Prot							c0.09	c0.32		0.02	0.23	
v/s Ratio Perm		c0.25	0.07		0.11	0.01			0.06			0.05
v/c Ratio		0.79	0.22		0.36	0.02	0.84	0.73	0.13	0.70	0.64	0.15
Uniform Delay, d1		16.9	13.7		14.3	12.8	23.8	12.6	9.1	26.3	14.6	11.9
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		8.3	0.2		0.5	0.0	27.2	3.2	0.1	36.9	2.1	0.1
Delay (s)		25.2	13.9		14.8	12.8	51.0	15.9	9.2	63.2	16.7	12.0
Level of Service		C	B		B	B	D	B	A	E	B	B
Approach Delay (s)		21.4			14.5			20.8			17.4	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.5%	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												
Volume (vph)	160	205	380	140	305	194	290	417	195	168	406	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	1.00	0.83	1.00	1.00	0.96	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1453	1770	3505	1316	1770	1863	1522	1770	1863	1474
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1453	1770	3505	1316	1770	1863	1522	1770	1863	1474
Peak-hour factor, PHF	0.96	0.96	0.96	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	167	214	396	167	363	231	319	458	214	183	441	125
RTOR Reduction (vph)	0	0	267	0	0	75	0	0	31	0	0	18
Lane Group Flow (vph)	167	214	129	167	363	156	319	458	183	183	441	107
Confl. Peds. (#/hr)			7			49			14			28
Confl. Bikes (#/hr)		1	12		2	7		2	6		5	15
Heavy Vehicles (%)	2%	2%	4%	2%	3%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.1	15.8	15.8	12.1	15.8	15.8	20.2	33.9	33.9	13.0	26.7	26.7
Effective Green, g (s)	12.1	15.8	15.8	12.1	15.8	15.8	20.2	33.9	33.9	13.0	26.7	26.7
Actuated g/C Ratio	0.13	0.17	0.17	0.13	0.17	0.17	0.22	0.37	0.37	0.14	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	616	253	236	610	229	394	696	568	253	548	433
v/s Ratio Prot	c0.09	0.06		0.09	0.10		c0.18	0.25		0.10	c0.24	
v/s Ratio Perm			0.09			c0.12			0.12			0.07
v/c Ratio	0.71	0.35	0.51	0.71	0.60	0.68	0.81	0.66	0.32	0.72	0.80	0.25
Uniform Delay, d1	37.7	33.0	34.0	37.7	34.6	35.1	33.5	23.6	20.3	37.2	29.6	24.4
Progression 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
Incremental Delay, d2	9.3	0.3	1.7	9.3	1.6	8.1	11.6	2.3	0.3	9.8	8.4	0.3
Delay (s)	47.0	33.3	35.7	47.0	36.1	43.2	45.1	25.9	20.6	47.0	38.0	24.7
Level of Service	D	C	D	D	D	D	D	C	C	D	D	C
Approach Delay (s)		37.5			40.6			30.9			38.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	120	10	20	40	39	25	264	15	18	213	25
Peak Hour Factor	0.65	0.65	0.65	0.78	0.78	0.78	0.83	0.83	0.83	0.76	0.76	0.76
Hourly flow rate (vph)	15	185	15	26	51	50	30	318	18	24	280	33

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	215	127	366	337
Volume Left (vph)	15	26	30	24
Volume Right (vph)	15	50	18	33
Hadj (s)	0.01	-0.16	0.02	-0.01
Departure Headway (s)	6.2	6.2	5.6	5.6
Degree Utilization, x	0.37	0.22	0.57	0.53
Capacity (veh/h)	513	482	606	603
Control Delay (s)	12.7	11.0	15.7	14.7
Approach Delay (s)	12.7	11.0	15.7	14.7
Approach LOS	B	B	C	B

Intersection Summary			
Delay	14.2		
HCM Level of Service	B		
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	510	80	25	290	20	70	209	135	20	88	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.95	1.00	0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1750	1799		1765	1838		1764	1863	1506	1764	1685	
Flt Permitted	0.49	1.00		0.27	1.00		0.51	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	899	1799		504	1838		956	1863	1506	1050	1685	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.88	0.88	0.88	0.69	0.69	0.69
Adj. Flow (vph)	38	554	87	30	354	24	80	238	153	29	128	145
RTOR Reduction (vph)	0	12	0	0	5	0	0	0	104	0	82	0
Lane Group Flow (vph)	38	629	0	30	373	0	80	238	49	29	191	0
Confl. Peds. (#/hr)	13		6	6		13	3		3	3		3
Confl. Bikes (#/hr)		4	106		4	34		10	21		17	7
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	26.0	26.0		26.0	26.0		16.0	16.0	16.0	16.0	16.0	
Effective Green, g (s)	26.0	26.0		26.0	26.0		16.0	16.0	16.0	16.0	16.0	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.32	0.32	0.32	0.32	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Grp Cap (vph)	467	935		262	956		306	596	482	336	539	
v/s Ratio Prot		c0.35			0.20			c0.13			0.11	
v/s Ratio Perm	0.04			0.06			0.08		0.03	0.03		
v/c Ratio	0.08	0.67		0.11	0.39		0.26	0.40	0.10	0.09	0.36	
Uniform Delay, d1	6.0	8.9		6.1	7.2		12.6	13.3	11.9	11.9	13.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	3.9		0.9	1.2		2.1	2.0	0.4	0.5	1.8	
Delay (s)	6.4	12.7		7.0	8.4		14.7	15.2	12.4	12.4	14.9	
Level of Service	A	B		A	A		B	B	B	B	B	
Approach Delay (s)		12.4			8.3			14.2			14.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	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												
Volume (vph)	255	495	100	65	575	100	90	189	145	50	104	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.93	1.00	1.00	0.93
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1799		1703	3539	1498	1770	1863	1480	1770	1863	1478
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1799		1703	3539	1498	1770	1863	1480	1770	1863	1478
Peak-hour factor, PHF	0.83	0.83	0.83	0.89	0.89	0.89	0.87	0.87	0.87	0.70	0.70	0.70
Adj. Flow (vph)	307	596	120	73	646	112	103	217	167	71	149	121
RTOR Reduction (vph)	0	8	0	0	0	63	0	0	127	0	0	100
Lane Group Flow (vph)	307	708	0	73	646	49	103	217	40	71	149	21
Confl. Peds. (#/hr)			14			11			3			18
Confl. Bikes (#/hr)			3			7			43		43	24
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	18.2	36.4		4.3	22.5	22.5	5.8	14.6	14.6	4.3	13.1	13.1
Effective Green, g (s)	18.2	36.4		4.3	22.5	22.5	5.8	14.6	14.6	4.3	13.1	13.1
Actuated g/C Ratio	0.24	0.48		0.06	0.30	0.30	0.08	0.19	0.19	0.06	0.17	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	426	866		97	1053	446	136	360	286	101	323	256
v/s Ratio Prot	c0.17	c0.39		0.04	0.18		c0.06	c0.12		0.04	0.08	
v/s Ratio Perm						0.03			0.03			0.01
v/c Ratio	0.72	0.82		0.75	0.61	0.11	0.76	0.60	0.14	0.70	0.46	0.08
Uniform Delay, d1	26.4	16.8		35.1	22.8	19.3	34.2	27.9	25.3	35.0	28.1	26.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9	6.0		27.6	1.1	0.1	21.1	2.8	0.2	19.8	1.0	0.1
Delay (s)	32.3	22.8		62.7	23.9	19.4	55.3	30.7	25.5	54.9	29.1	26.3
Level of Service	C	C		E	C	B	E	C	C	D	C	C
Approach Delay (s)		25.7			26.7			34.1			33.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	75.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↱			↱
Volume (veh/h)	0	1821	1362	174	0	108
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1979	1480	189	0	117
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		931	847			
pX, platoon unblocked	0.63				0.77	0.63
vC, conflicting volume	1670				2565	835
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	877				260	0
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	83
cM capacity (veh/h)	480				545	679

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	990	990	987	683	117
Volume Left	0	0	0	0	0
Volume Right	0	0	0	189	117
cSH	1700	1700	1700	1700	679
Volume to Capacity	0.58	0.58	0.58	0.40	0.17
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	11.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.4
Approach LOS					B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Cumulative + Project - RES
Peak Hour: AM

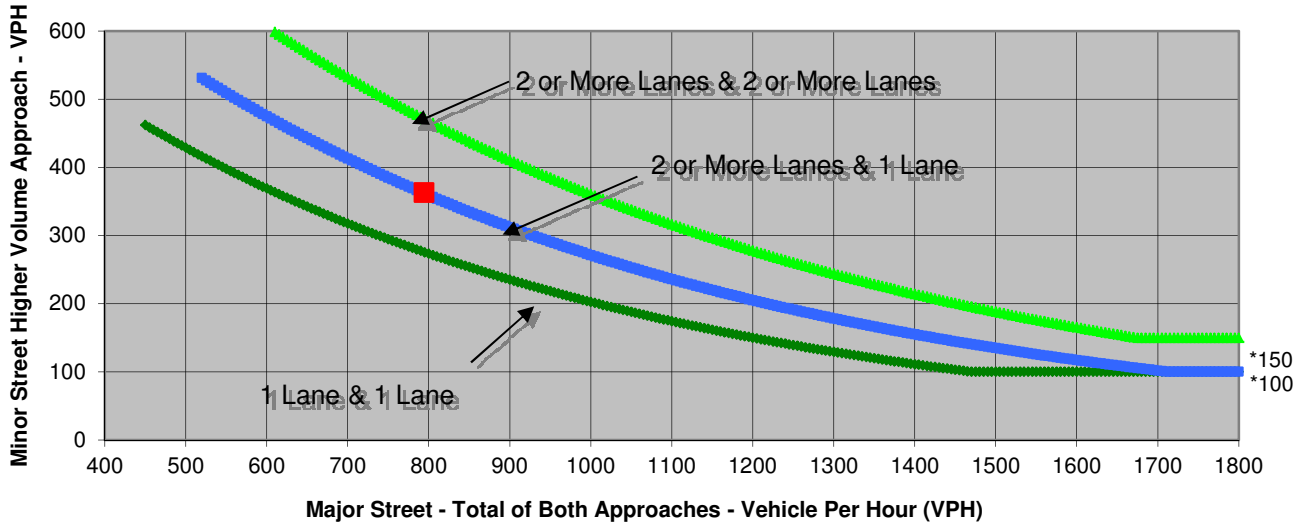
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	120	89	80
Through	89	189	305	155
Right	40	54	25	140
Total	149	363	419	375

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	794	363	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: Oak Ave

Scenario: Cumulative + Project - RES
Peak Hour: PM

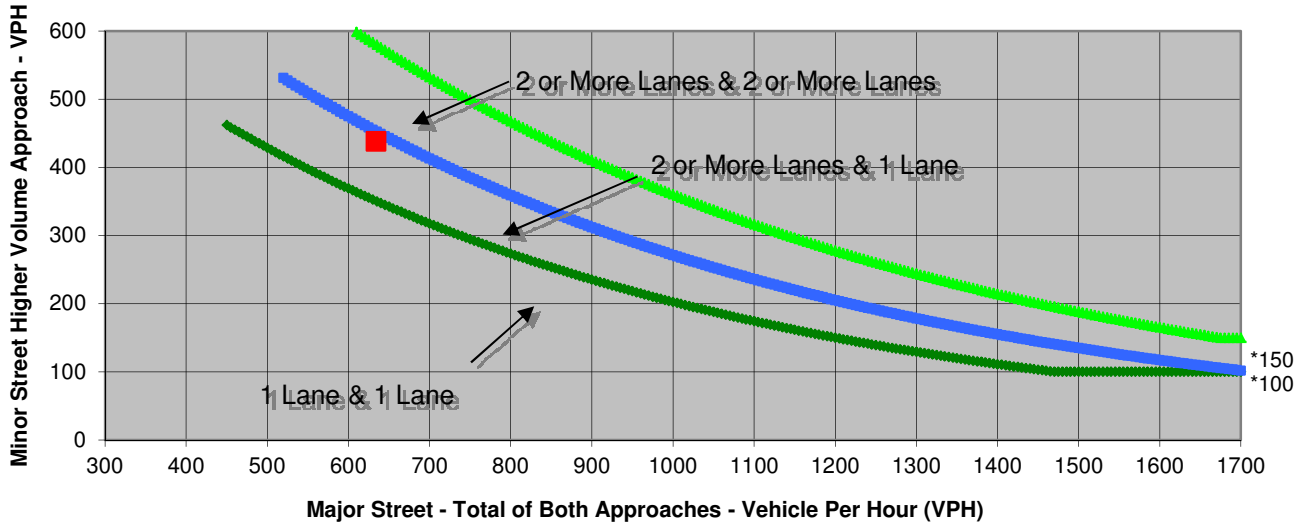
Turn Movement Volumes

	NB	SB	EB	WB
Left	70	180	104	20
Through	114	189	175	170
Right	50	69	20	145
Total	234	438	299	335

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	Oak Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	634	438	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Cumulative + Project - RES
Peak Hour: AM

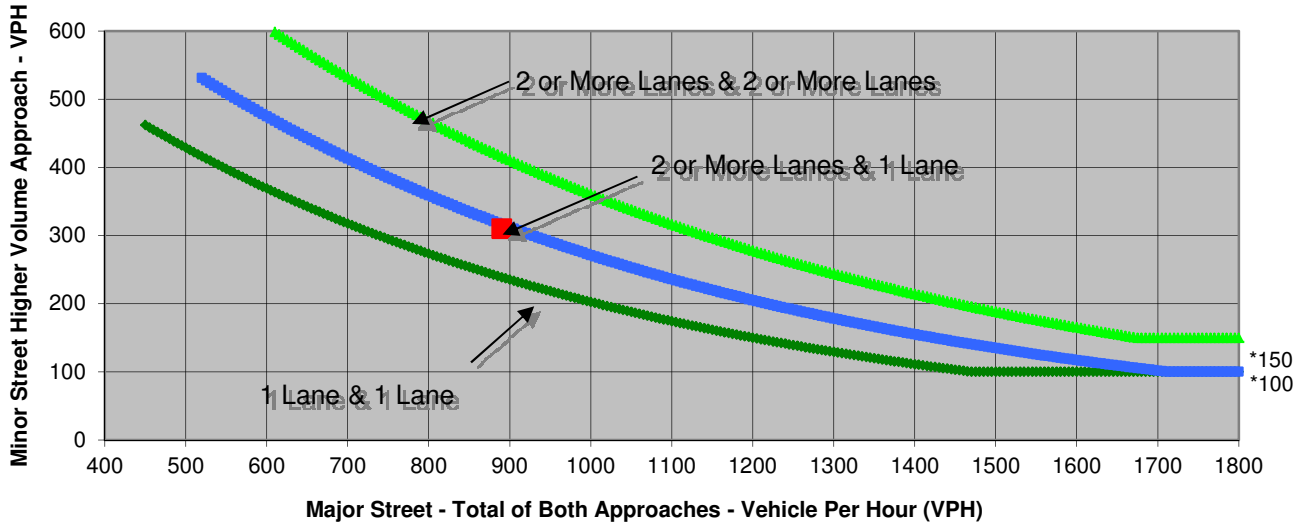
Turn Movement Volumes

	NB	SB	EB	WB
Left	255	0	0	105
Through	0	0	180	385
Right	55	0	220	0
Total	310	0	400	490

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	890	310	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: W 14th St
Minor Street: B St

Scenario: Cumulative + Project - RES
Peak Hour: PM

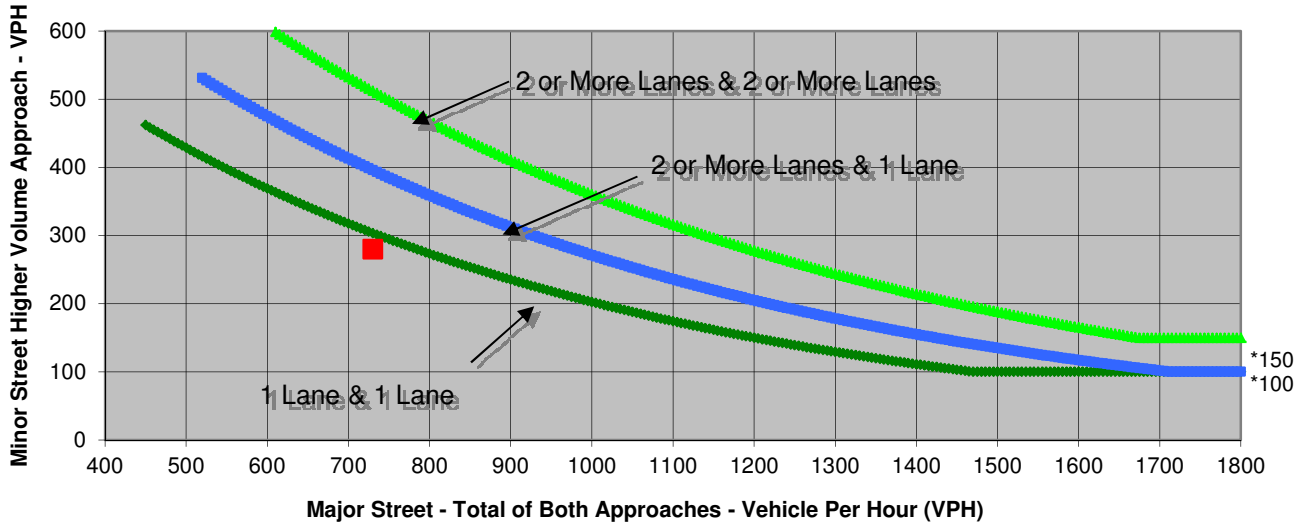
Turn Movement Volumes

	NB	SB	EB	WB
Left	190	0	0	45
Through	0	0	275	185
Right	90	0	225	0
Total	280	0	500	230

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	W 14th St	B St	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	730	280	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Cumulative + Project - RES
Peak Hour: AM

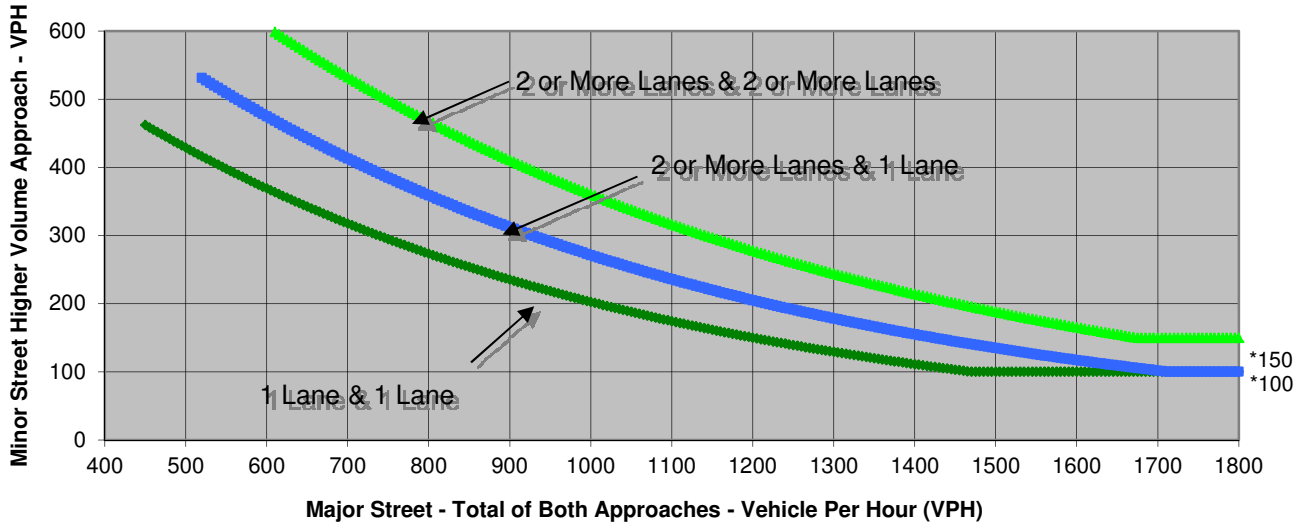
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	29	0	30
Through	150	197	0	0
Right	15	0	0	34
Total	165	226	0	64

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	391	64	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: J St
Minor Street: Drexel Dr

Scenario: Cumulative + Project - RES
Peak Hour: PM

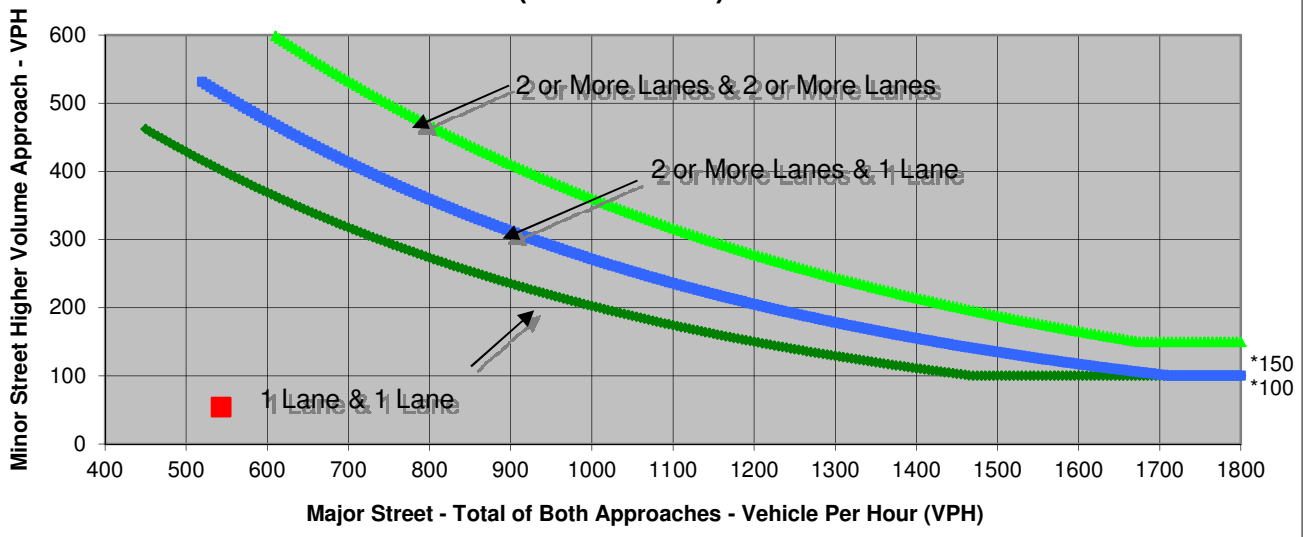
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	19	0	20
Through	276	178	0	0
Right	70	0	0	34
Total	346	197	0	54

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	J St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	543	54	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Cumulative + Project - RES
Peak Hour: AM

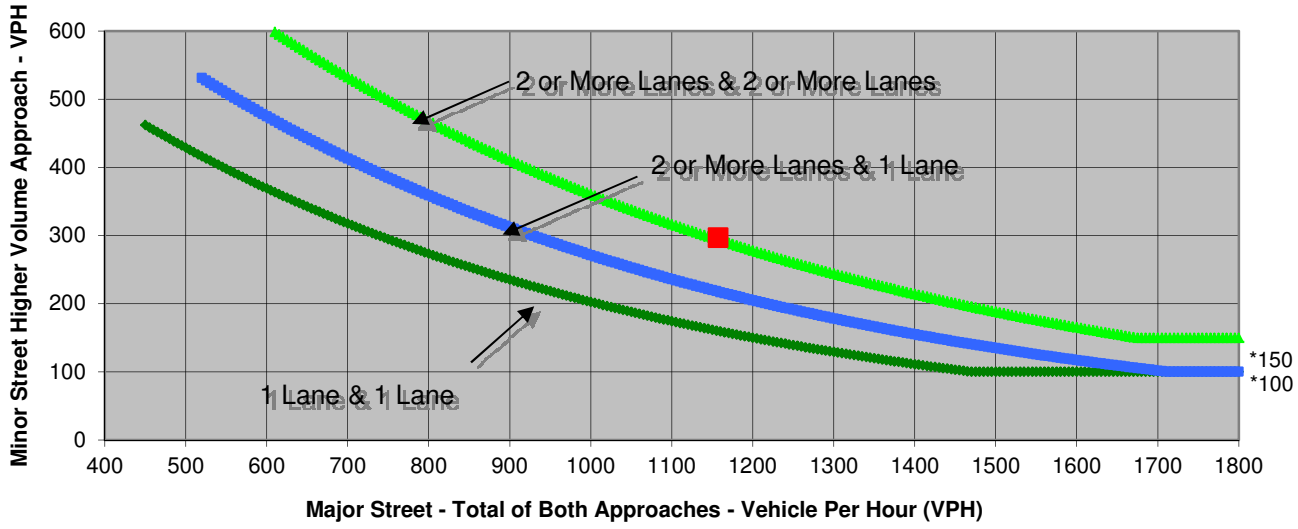
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	29	83	105
Through	35	52	300	545
Right	10	216	105	19
Total	105	297	488	669

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,157	297	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: E 8th St
Minor Street: J St

Scenario: Cumulative + Project - RES
Peak Hour: PM

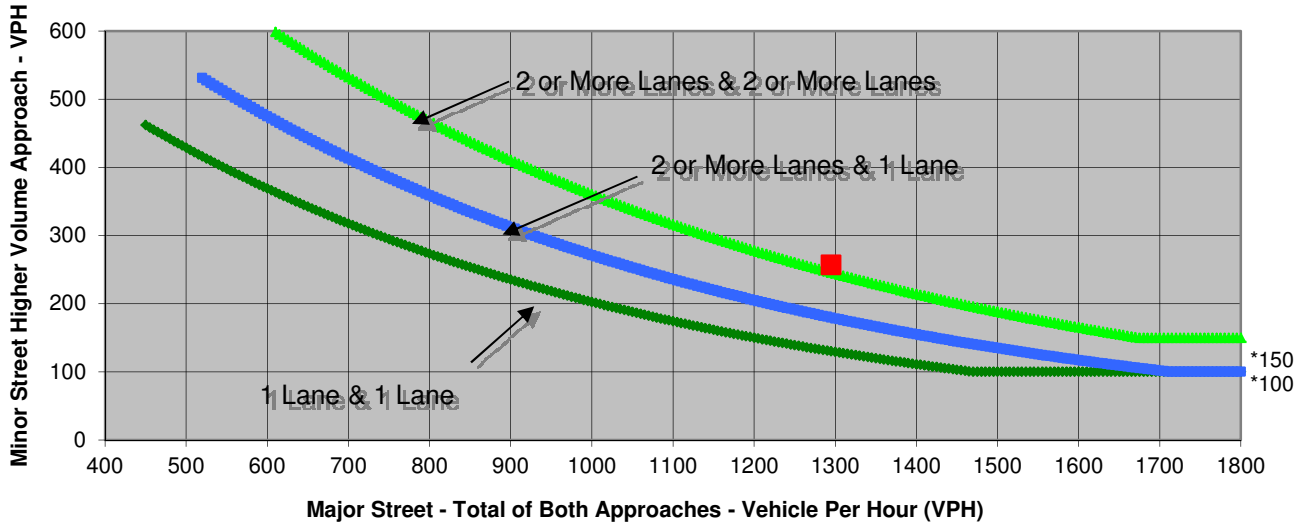
Turn Movement Volumes

	NB	SB	EB	WB
Left	75	39	181	45
Through	162	71	535	455
Right	20	94	45	34
Total	257	204	761	534

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	E 8th St	J St	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,295	257	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Cumulative + Project - RES
Peak Hour: AM

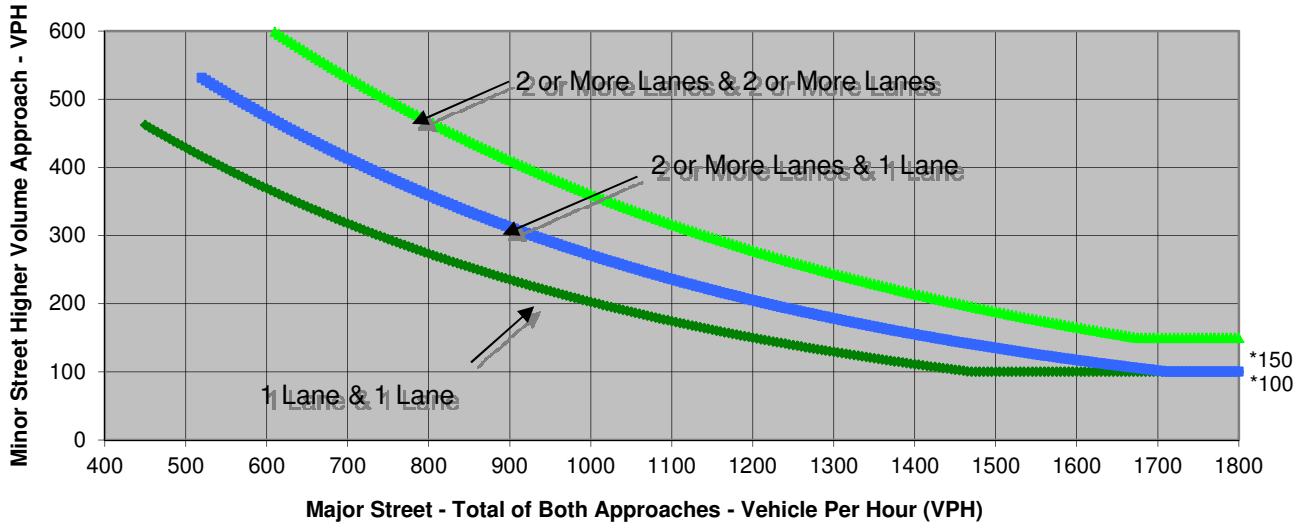
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	120	92	65
Through	55	340	921	1,294
Right	0	239	0	10
Total	115	699	1,013	1,369

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,382	699	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: L St

Scenario: Cumulative + Project - RES
Peak Hour: PM

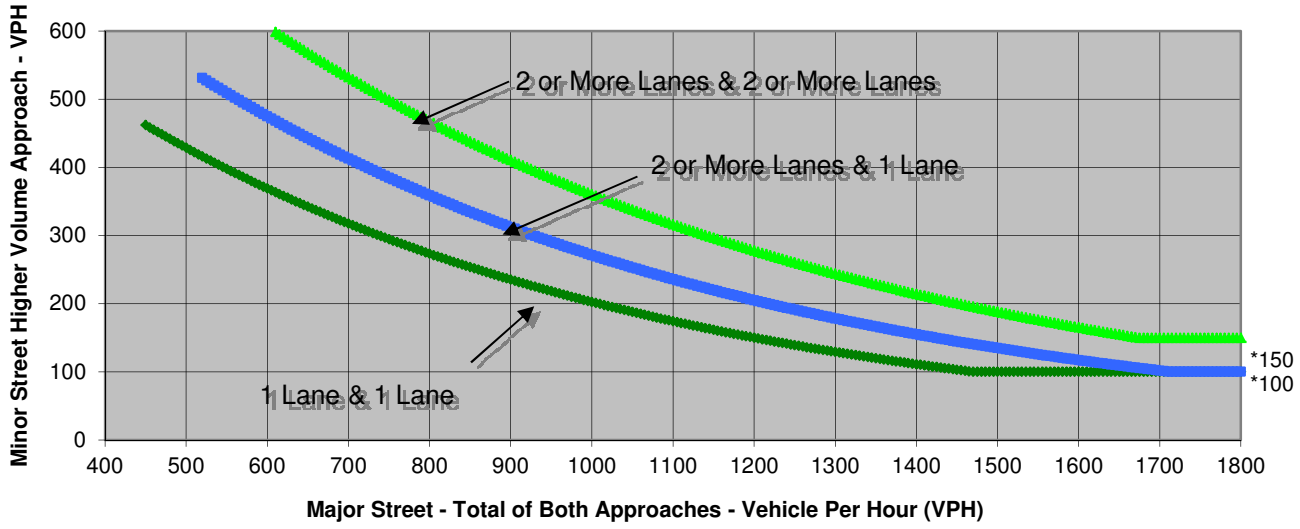
Turn Movement Volumes

	NB	SB	EB	WB
Left	82	45	315	115
Through	340	120	1,357	1,159
Right	0	121	0	50
Total	422	286	1,672	1,324

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	L St	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,996	422	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: AM

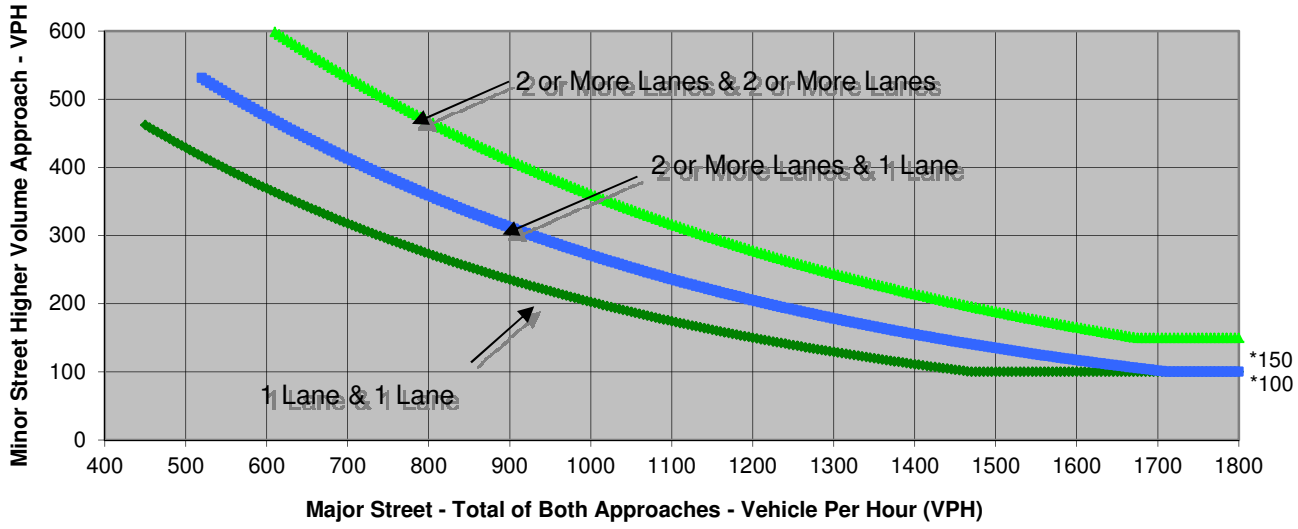
Turn Movement Volumes

	NB	SB	EB	WB
Left	68	0	0	60
Through	0	0	1,042	1,301
Right	5	0	49	0
Total	73	0	1,091	1,361

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	2,452	73	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: PM

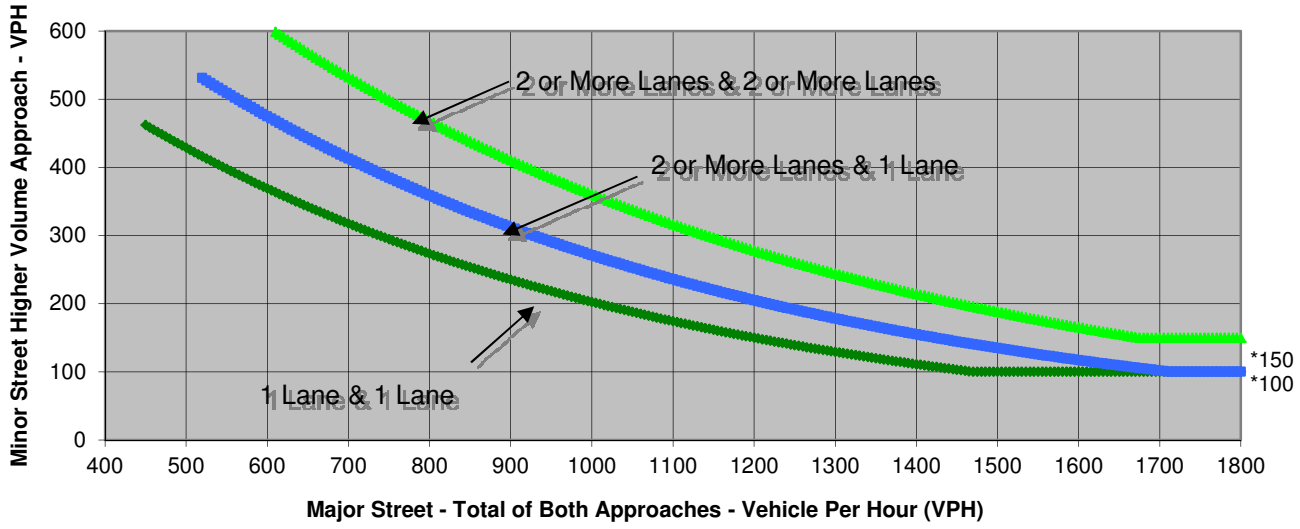
Turn Movement Volumes

	NB	SB	EB	WB
Left	149	0	0	75
Through	0	0	1,429	1,175
Right	25	0	88	0
Total	174	0	1,517	1,250

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	2,767	174	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Cumulative + Project - RES
Peak Hour: AM

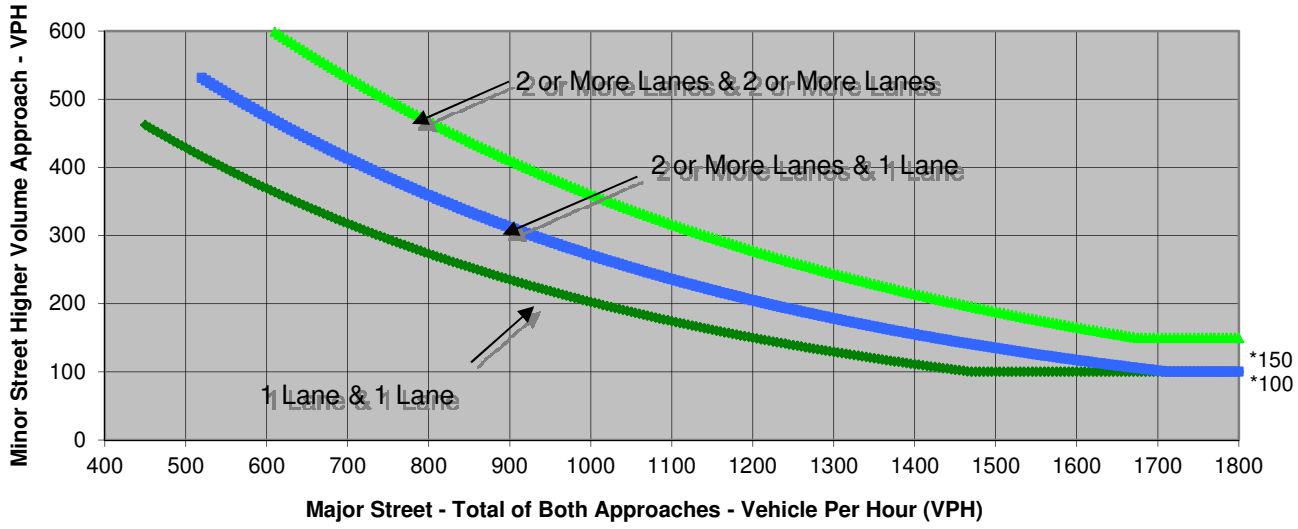
Turn Movement Volumes

	NB	SB	EB	WB
Left	60	5	5	30
Through	5	5	975	941
Right	50	5	35	5
Total	115	15	1,015	976

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Covell Blvd	Minor Street Monarch Ln	Warrant Met
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,991	115	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Monarch Ln

Scenario: Cumulative + Project - RES
Peak Hour: PM

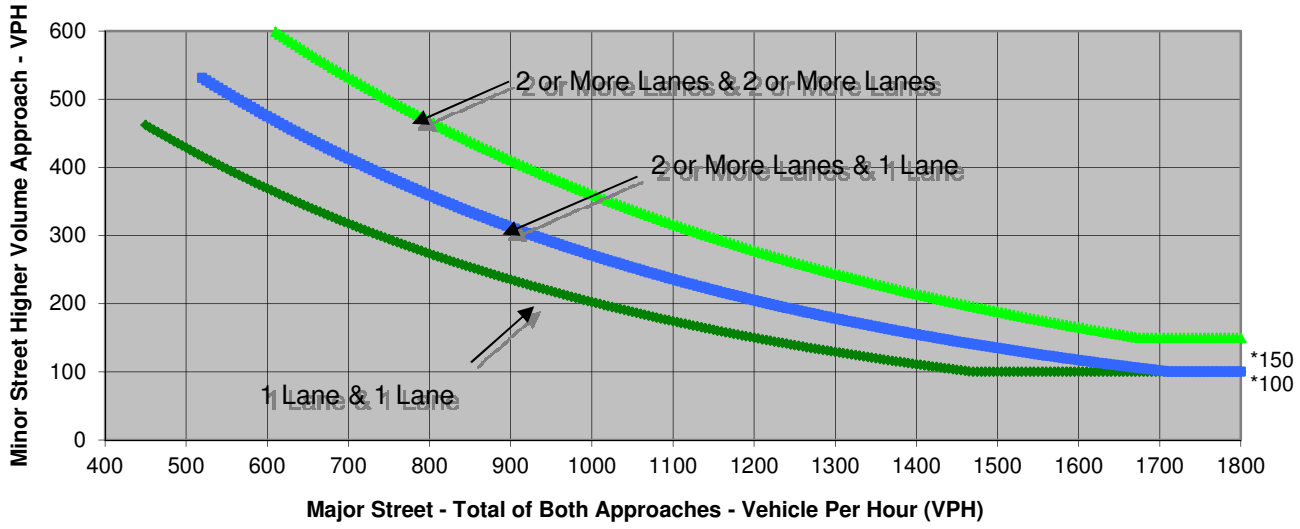
Turn Movement Volumes

	NB	SB	EB	WB
Left	100	5	5	60
Through	5	5	973	880
Right	30	5	30	5
Total	135	15	1,008	945

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Monarch Ln	
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,953	135	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Cumulative + Project - RES
Peak Hour: AM

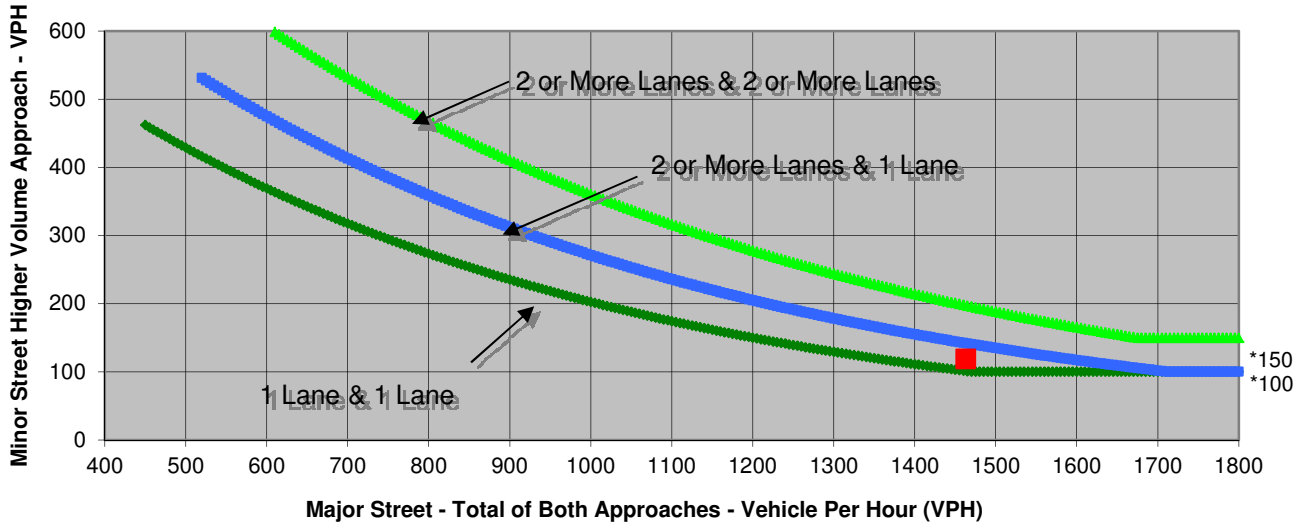
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	0	84
Through	577	837	0	0
Right	39	0	0	35
Total	616	847	0	119

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Donner Ave	
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,463	119	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Donner Ave

Scenario: Cumulative + Project - RES
Peak Hour: PM

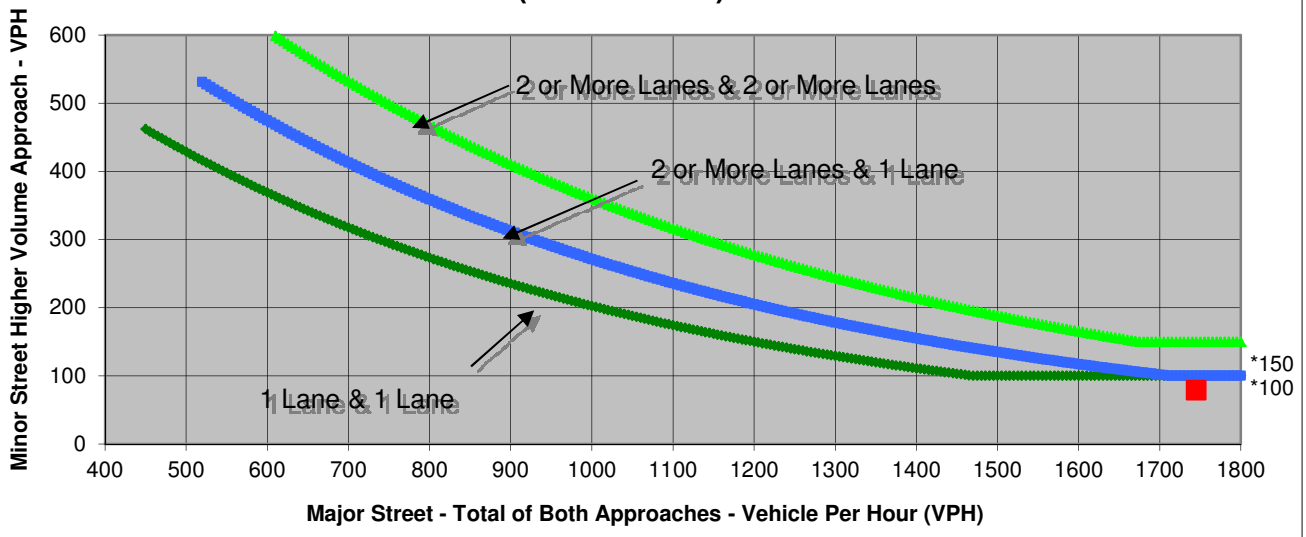
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	35	0	59
Through	855	786	0	0
Right	69	0	0	20
Total	924	821	0	79

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Pole Line Rd	Minor Street Donner Ave	Warrant Met
Number of Approach Lanes	2	2	NO
Traffic Volume (VPH) *	1,745	79	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Cumulative + Project - RES
Peak Hour: AM

Turn Movement Volumes

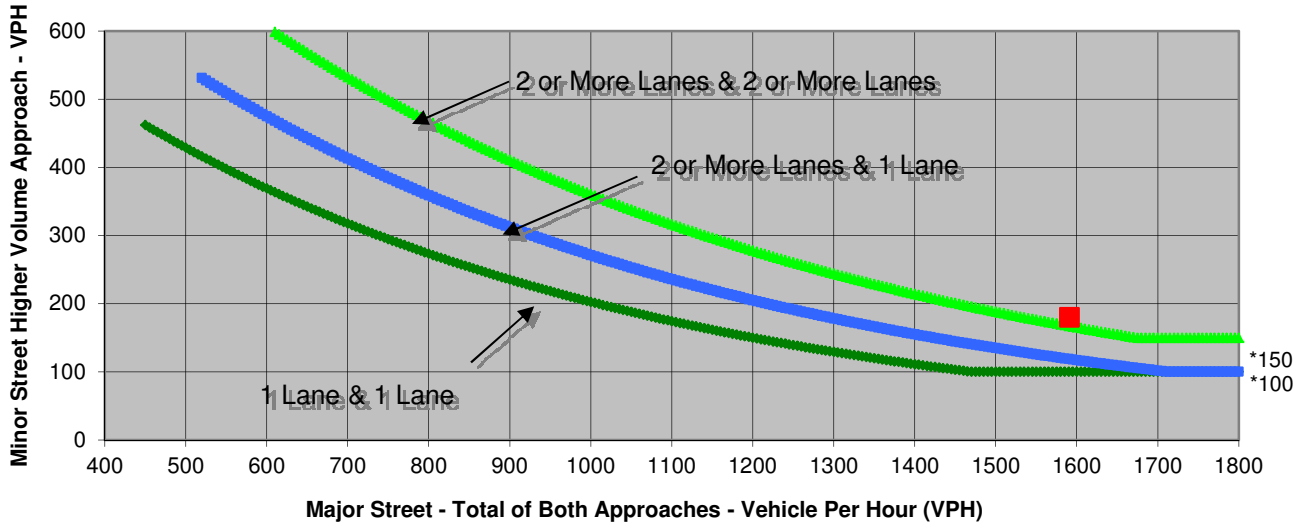
	NB	SB	EB	WB
Left	20	45	40	94
Through	546	866	20	5
Right	104	10	120	30
Total	670	921	180	129

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Picasso Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,591	180	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Picasso Ave

Scenario: Cumulative + Project - RES
Peak Hour: PM

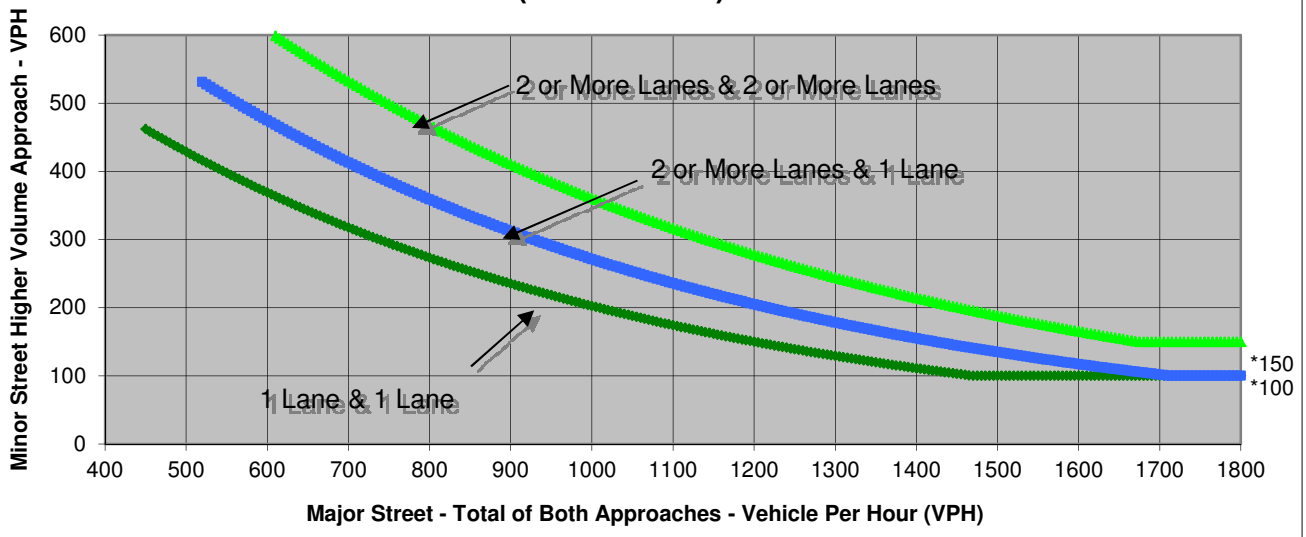
Turn Movement Volumes

	NB	SB	EB	WB
Left	80	45	20	129
Through	764	760	5	5
Right	119	40	40	140
Total	963	845	65	274

Major Street Direction

x North/South
East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Pole Line Rd	Minor Street Picasso Ave	Warrant Met
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,808	274	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Cumulative + Project - RES
Peak Hour: AM

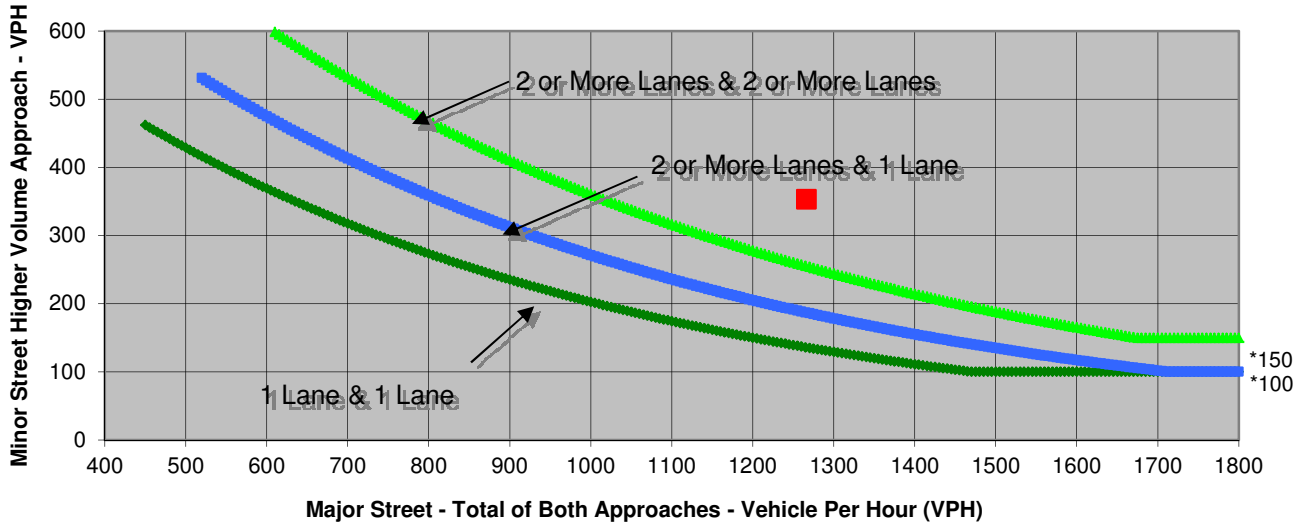
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	65	40	198
Through	503	579	20	5
Right	99	10	70	150
Total	612	654	130	353

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,266	353	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Moore Ave

Scenario: Cumulative + Project - RES
Peak Hour: PM

Turn Movement Volumes

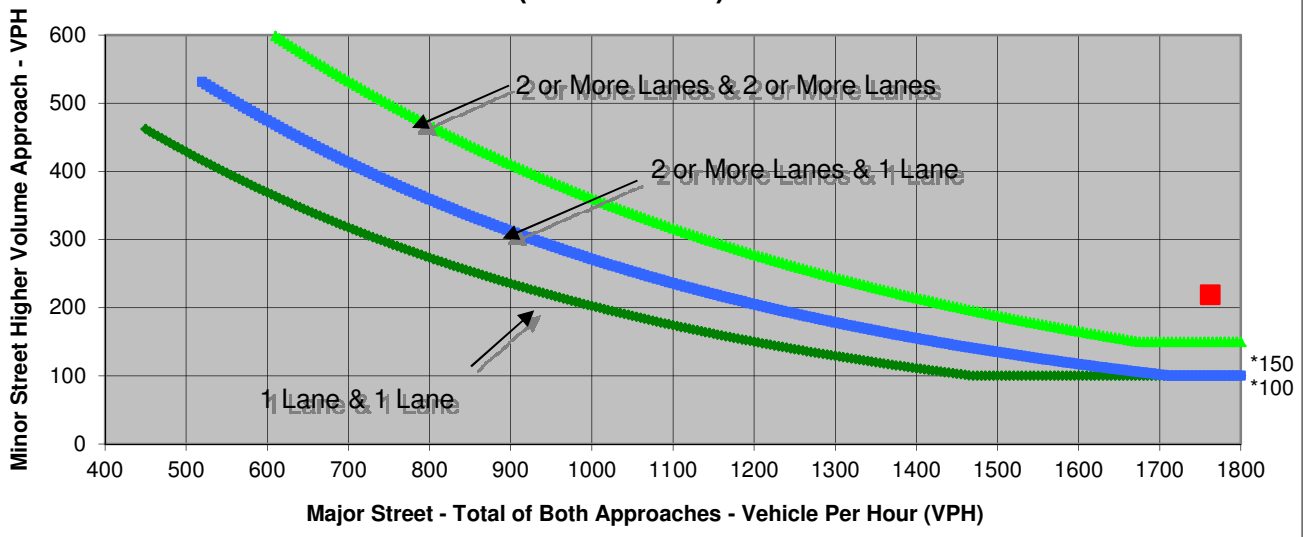
	NB	SB	EB	WB
Left	50	190	30	144
Through	617	657	5	5
Right	208	40	20	70
Total	875	887	55	219

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Moore Ave	
Number of Approach Lanes	2	2	YES
Traffic Volume (VPH) *	1,762	219	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: AM

Turn Movement Volumes

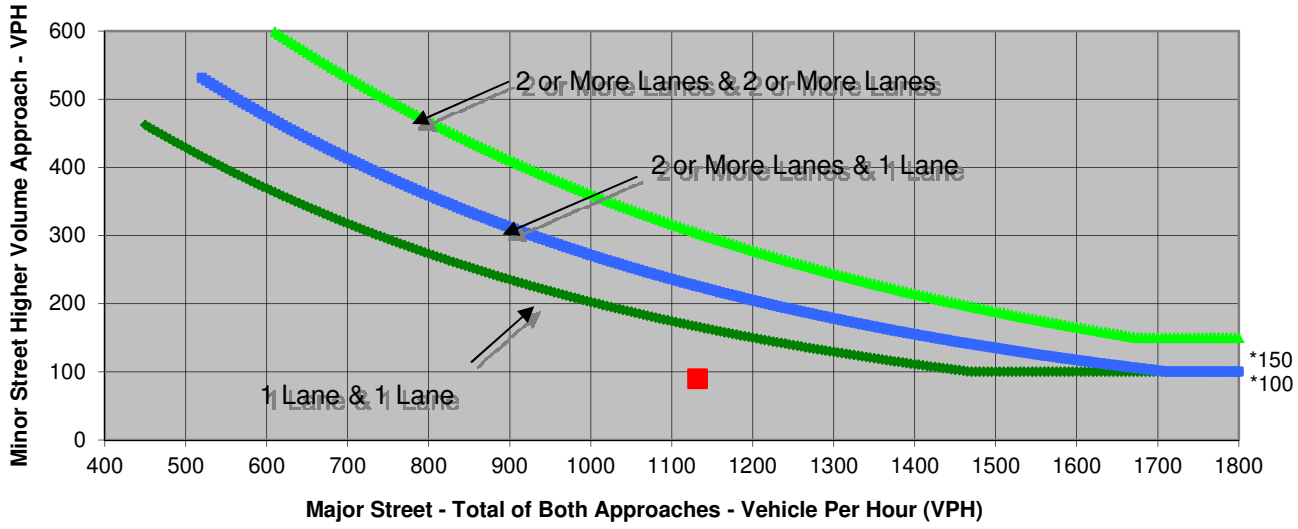
	NB	SB	EB	WB
Left	55	0	20	0
Through	403	624	0	0
Right	0	50	70	0
Total	458	674	90	0

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,132	90	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Pole Line Rd
Minor Street: Oak Tree Plaza Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: PM

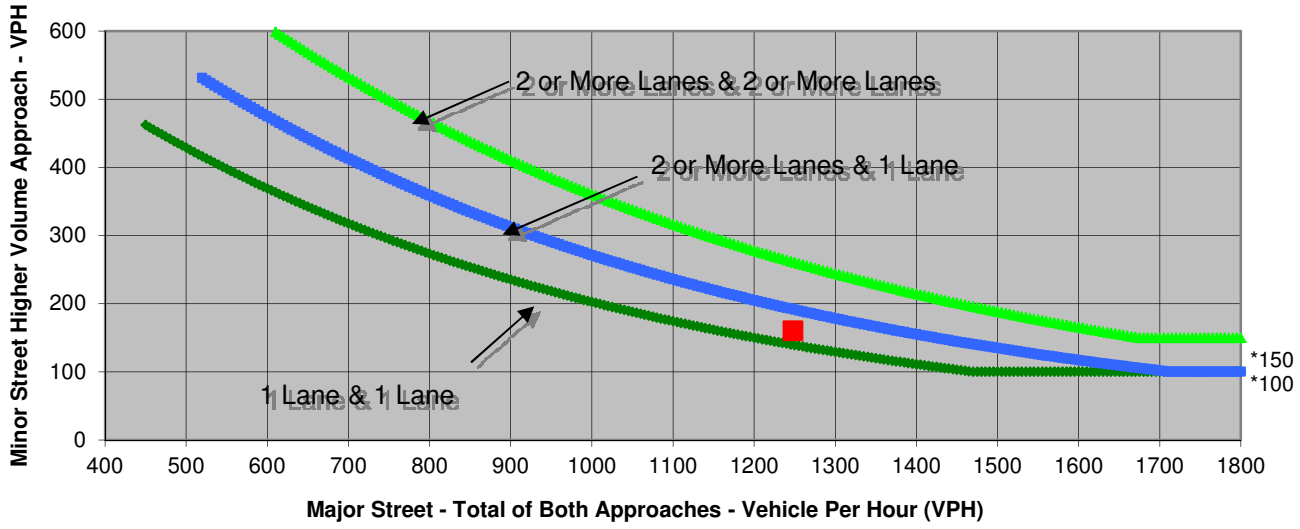
Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	55	0
Through	613	450	0	0
Right	0	95	105	0
Total	703	545	160	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Pole Line Rd	Oak Tree Plaza Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,248	160	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Cumulative + Project - RES
Peak Hour: AM

Turn Movement Volumes

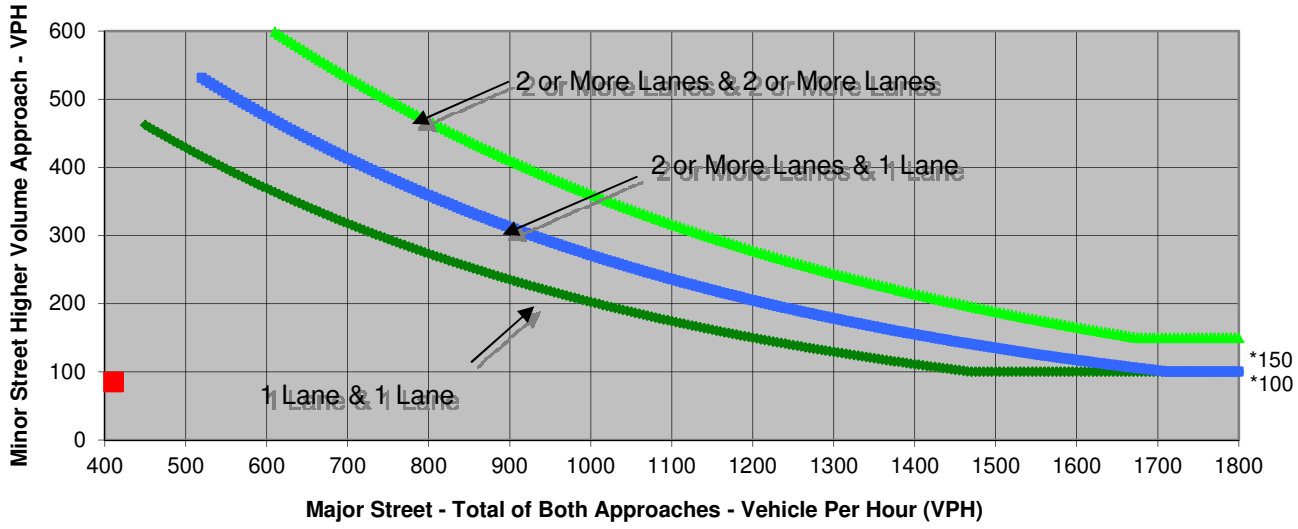
	NB	SB	EB	WB
Left	20	19	20	25
Through	63	219	35	40
Right	35	55	30	18
Total	118	293	85	83

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	411	85	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: L St
Minor Street: Drexel Dr

Scenario: Cumulative + Project - RES
Peak Hour: PM

Turn Movement Volumes

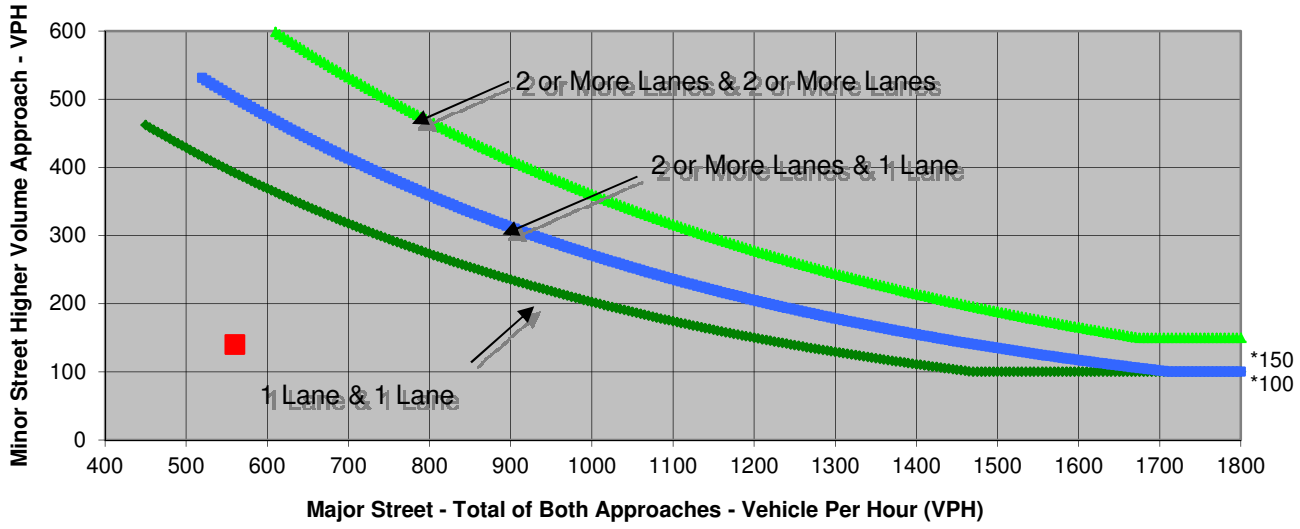
	NB	SB	EB	WB
Left	25	18	10	20
Through	264	213	120	40
Right	15	25	10	39
Total	304	256	140	99

Major Street Direction

x North/South

East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	L St	Drexel Dr	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	560	140	

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

FEHR PEERS

Sheet No 1 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Cannery Park Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: AM

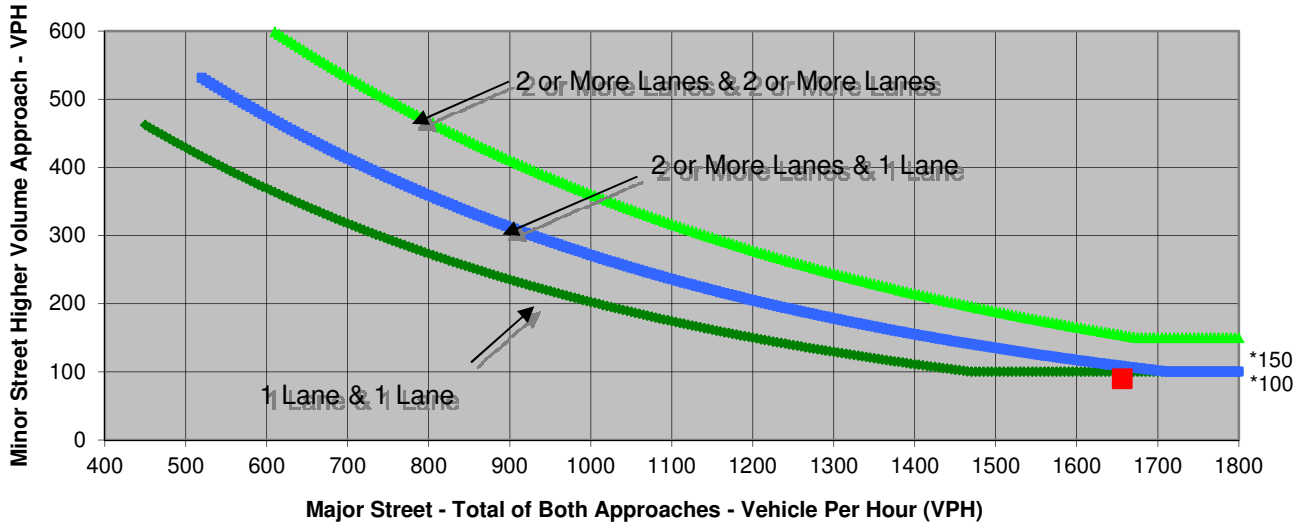
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	0	1,510
Right	0	90	0	146
Total	0	90	0	1,656

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street	Minor Street	Warrant Met
	Covell Blvd	Cannery Park Dvwy	
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,656	90	

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

FEHR PEERS

Sheet No 2 of 2

Project: Cannery Park EIR

Major Street: Covell Blvd
Minor Street: Cannery Park Dvwy

Scenario: Cumulative + Project - RES
Peak Hour: PM

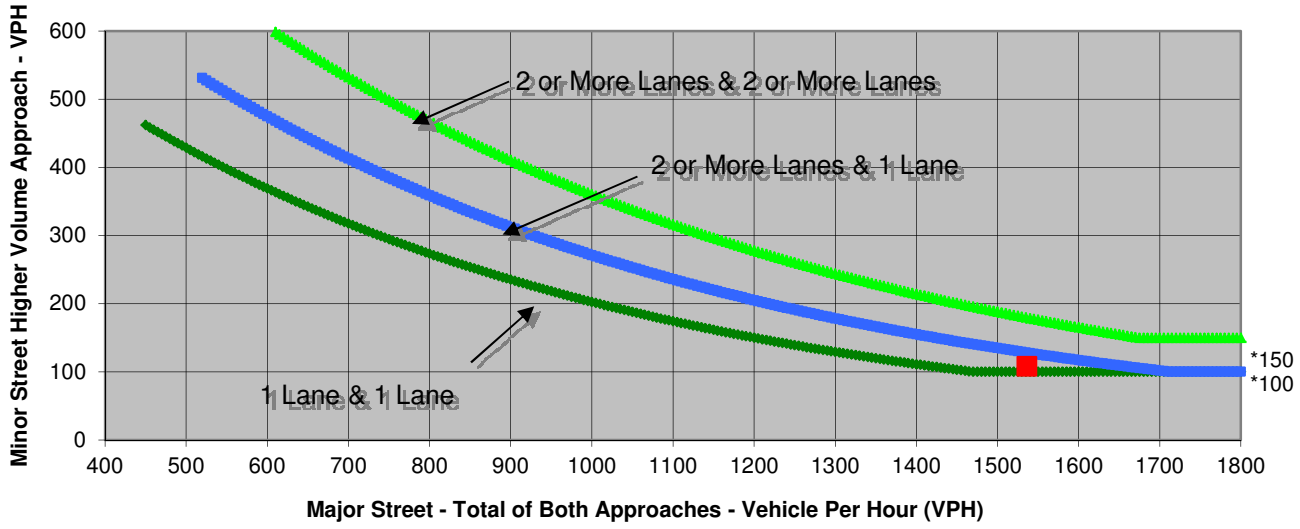
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	0	0	0	1,362
Right	0	108	0	174
Total	0	108	0	1,536

Major Street Direction

	North/South
x	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2010

	Major Street Covell Blvd	Minor Street Cannery Park Dvwy	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	1,536	108	

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

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	61	120	888	85	120	1379	94	91	39	80	172	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95			1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.96	1.00	1.00			1.00	0.99	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.99			1.00	0.85	1.00	0.90
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.97	1.00	0.95	1.00
Satd. Flow (prot)		1770	3539	1469	1656	3505			1800	1564	1770	1683
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.97	1.00	0.95	1.00
Satd. Flow (perm)		1770	3539	1469	1656	3505			1800	1564	1770	1683
Peak-hour factor, PHF	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92
Adj. Flow (vph)	68	130	987	94	133	1532	104	107	46	94	187	76
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	0	0	0	66
Lane Group Flow (vph)	0	198	987	94	133	1631	0	0	153	94	187	146
Confl. Peds. (#/hr)				47						1		
Confl. Bikes (#/hr)				5								
Heavy Vehicles (%)	2%	2%	2%	5%	9%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot		Free	Prot			Split		Free	Split	
Protected Phases	7	7	4		3	8		2	2		6	6
Permitted Phases				Free						Free		
Actuated Green, G (s)		12.0	45.2	100.8	12.0	45.2			13.5	100.8	14.1	14.1
Effective Green, g (s)		12.0	45.2	100.8	12.0	45.2			13.5	100.8	14.1	14.1
Actuated g/C Ratio		0.12	0.45	1.00	0.12	0.45			0.13	1.00	0.14	0.14
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)		211	1587	1469	197	1572			241	1564	248	235
v/s Ratio Prot		c0.11	0.28		0.08	c0.47			c0.09		c0.11	0.09
v/s Ratio Perm				0.06						0.06		
v/c Ratio		0.94	0.62	0.06	0.68	1.04			0.63	0.06	0.75	0.62
Uniform Delay, d1		44.0	21.3	0.0	42.5	27.8			41.3	0.0	41.7	40.8
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		44.4	0.8	0.1	8.8	33.1			5.4	0.1	12.2	5.0
Delay (s)		88.4	22.0	0.1	51.3	60.9			46.7	0.1	53.9	45.8
Level of Service		F	C	A	D	E			D	A	D	D
Approach Delay (s)			30.7			60.2			29.0			49.6
Approach LOS			C			E			C			D

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Volume (vph)	125
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	136
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	2%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	69	153	1439	160	60	1186	116	169	44	175	179	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0			4.0	4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00	1.00	0.95			1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.97	1.00	1.00			1.00	1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.99			1.00	0.85	1.00	0.90
Flt Protected		0.95	1.00	1.00	0.95	1.00			0.96	1.00	0.95	1.00
Satd. Flow (prot)		1770	3539	1531	1770	3492			1792	1583	1770	1685
Flt Permitted		0.95	1.00	1.00	0.95	1.00			0.96	1.00	0.95	1.00
Satd. Flow (perm)		1770	3539	1531	1770	3492			1792	1583	1770	1685
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	77	170	1599	178	66	1303	127	188	49	194	199	71
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	247	1599	178	66	1430	0	0	237	194	199	195
Confl. Peds. (#/hr)				26								
Confl. Bikes (#/hr)									1			1
Turn Type	Prot	Prot		Free	Prot			Split		Free	Split	
Protected Phases	7	7	4		3	8		2	2		6	6
Permitted Phases				Free						Free		
Actuated Green, G (s)		15.0	51.0	98.6	4.0	40.0			13.0	98.6	14.6	14.6
Effective Green, g (s)		15.0	51.0	98.6	4.0	40.0			13.0	98.6	14.6	14.6
Actuated g/C Ratio		0.15	0.52	1.00	0.04	0.41			0.13	1.00	0.15	0.15
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)		269	1831	1531	72	1417			236	1583	262	250
v/s Ratio Prot		c0.14	0.45		0.04	c0.41			c0.13		0.11	c0.12
v/s Ratio Perm				0.12						0.12		
v/c Ratio		0.92	0.87	0.12	0.92	1.01			1.00	0.12	0.76	0.78
Uniform Delay, d1		41.2	21.0	0.0	47.1	29.3			42.8	0.0	40.3	40.5
Progression Factor		1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		33.6	4.9	0.2	77.1	26.2			59.7	0.2	11.9	14.5
Delay (s)		74.8	25.9	0.2	124.2	55.5			102.5	0.2	52.2	55.0
Level of Service		E	C	A	F	E			F	A	D	D
Approach Delay (s)			29.6			58.5			56.4			53.6
Approach LOS			C			E			E			D

Intersection Summary			
HCM Average Control Delay	44.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	98.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Volume (vph)	112
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.90
Adj. Flow (vph)	124
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary