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MEMORANDUM

To:	Raney Planning & Management	**Date:**	April 14, 2010
Attn:	Nick Pappani	**Project:**	North Placer County Bohemia Retail Traffic Impact Analysis Report (TIAR)
From:	Omni Means		
Re:	Existing + Project Analysis without Canal Street	**Job No.:**	25-5676-04
		File No.:	C1313MEM009.DOC
CC:			

INTRODUCTION

This memorandum has been prepared to present the results of the Existing Plus Project analysis for the proposed Bohemia Retail Project without Canal Street access.

Tables 1A and 1B provides a summary of the *Existing Plus Project* peak hour intersection levels of service for the Club and Superstore alternatives without Canal Street access.

TABLE 1A
EXISTING PLUS PROJECT (DISCOUNT CLUB) CONDITIONS NO CANAL STREET ACCESS: INTERSECTION LOS

#	Intersection	Control Type	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?	Delay	LOS	Warrant Met?
7	SR 49/Kemper Road/New Airport Road	Signal	E	10.7	B	-	25.7	C	-
8	SR 49/Hulbert Way (north)/Retail Way	Signal	E	5.7	A	-	24.0	C	-
9	SR 49/Luther Road	Signal	E	11.8	B	-	30.6	C	-
13	**Bell Road/New Airport Road**	**Signal (Circular 212)**	**C**	0.548	A	-	**0.901**	**E**	-
18	Luther Road/Canal Street	TWSC	C	16.4	C	No	22.7	C	No

Notes:
TWSC = Two Way Stop Control; AWSC = All Way Stop Control; Warrant = Caltrans peak hour signal warrant
OVR = overflow conditions
Bolded entries indicate intersections operating at deficient LOS

TABLE 1B
EXISTING PLUS PROJECT (SUPERSTORE) CONDITIONS NO CANAL STREET ACCESS: INTERSECTION LOS

#	Intersection	Control Type	Target LOS	AM Peak Hour			PM Peak Hour		
				Delay	LOS	Warrant Met?	Delay	LOS	Warrant Met?
7	SR 49/Kemper Road/New Airport Road	Signal	E	10.9	B	-	26.3	C	-
8	SR 49/Hulbert Way (north)/Retail Way	Signal	E	7.3	A	-	25.7	C	-
9	SR 49/Luther Road	Signal	E	11.9	B	-	31.4	C	-
13	**Bell Road/New Airport Road**	**Signal (Circular 212)**	**C**	0.549	A	-	**0.904**	**E**	-
18	Luther Road/Canal Street	TWSC	C	16.8	C	No	22.8	C	No

Notes:
TWSC = Two Way Stop Control; AWSC = All Way Stop Control; Warrant = Caltrans peak hour signal warrant
OVR = overflow conditions
Bolded entries indicate intersections operating at deficient LOS

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The intersection of Bell Road/New Airport Road that was found to be operating at unacceptable LOS D under *Existing* conditions will operate at unacceptable LOS E with the addition of "Plus Project" volumes for both the Club and Superstore alternatives without the Canal Street access.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1577		3335	1625		1719	3438	1538	1719	3434	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	1577		3335	1625		1719	3438	1538	1719	3434	
Volume (vph)	25	29	177	196	26	54	68	609	46	60	1423	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	32	192	213	28	59	74	662	50	65	1547	13
RTOR Reduction (vph)	0	135	0	0	51	0	0	0	26	0	1	0
Lane Group Flow (vph)	27	89	0	213	36	0	74	662	24	65	1559	0
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.6	9.6		10.2	10.2		5.8	39.0	39.0	5.0	38.2	
Effective Green, g (s)	9.6	9.6		10.2	10.2		5.8	39.0	39.0	5.0	38.2	
Actuated g/C Ratio	0.12	0.12		0.13	0.13		0.07	0.49	0.49	0.06	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	207	190		426	208		125	1680	752	108	1644	
v/s Ratio Prot	0.02	c0.06		c0.06	0.02		c0.04	0.19		0.04	c0.45	
v/s Ratio Perm									0.02			
v/c Ratio	0.13	0.47		0.50	0.17		0.59	0.39	0.03	0.60	0.95	
Uniform Delay, d1	31.4	32.7		32.4	31.0		35.9	12.9	10.6	36.4	19.9	
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	1.8		0.9	0.4		7.3	0.2	0.0	9.1	12.0	
Delay (s)	31.7	34.6		33.3	31.4		43.2	13.1	10.6	45.5	31.9	
Level of Service	C	C		C	C		D	B	B	D	C	
Approach Delay (s)		34.3			32.8			15.7			32.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1719	1538	1719	3438	3433	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1719	1538	1719	3438	3433	
Volume (vph)	34	128	91	747	1624	16
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	139	99	812	1765	17
RTOR Reduction (vph)	0	128	0	0	1	0
Lane Group Flow (vph)	37	11	99	812	1781	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.9	7.9	9.8	84.1	70.3	
Effective Green, g (s)	7.9	7.9	9.8	84.1	70.3	
Actuated g/C Ratio	0.08	0.08	0.10	0.84	0.70	
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)	136	122	168	2891	2413	
v/s Ratio Prot	c0.02		c0.06	0.24	c0.52	
v/s Ratio Perm		0.01				
v/c Ratio	0.27	0.09	0.59	0.28	0.74	
Uniform Delay, d1	43.3	42.7	43.2	1.7	9.2	
Progression Factor	1.00	1.00	1.21	0.72	1.00	
Incremental Delay, d2	1.1	0.3	5.0	0.2	2.1	
Delay (s)	44.4	43.0	57.2	1.4	11.2	
Level of Service	D	D	E	A	B	
Approach Delay (s)	43.3			7.5	11.2	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1538	1719	3438	3438	1538
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1538	1719	3438	3438	1538
Volume (vph)	37	40	112	887	1582	170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	43	122	964	1720	185
RTOR Reduction (vph)	0	40	0	0	0	54
Lane Group Flow (vph)	40	3	122	964	1720	131
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	6.6	6.6	10.7	85.4	70.7	70.7
Effective Green, g (s)	6.6	6.6	10.7	85.4	70.7	70.7
Actuated g/C Ratio	0.07	0.07	0.11	0.85	0.71	0.71
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	102	184	2936	2431	1087
v/s Ratio Prot	c0.02		c0.07	0.28	c0.50	
v/s Ratio Perm		0.00				0.09
v/c Ratio	0.35	0.03	0.66	0.33	0.71	0.12
Uniform Delay, d1	44.7	43.7	42.9	1.5	8.6	4.7
Progression Factor	1.00	1.00	0.78	1.41	0.35	0.12
Incremental Delay, d2	1.9	0.1	8.1	0.3	1.2	0.2
Delay (s)	46.6	43.8	41.7	2.4	4.2	0.7
Level of Service	D	D	D	A	A	A
Approach Delay (s)	45.1			6.8	3.9	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3374	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3374	
Volume (vph)	89	157	106	152	383	318	259	592	115	436	1038	148
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	171	115	165	416	346	282	643	125	474	1128	161
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	74	0	10	0
Lane Group Flow (vph)	97	171	77	165	416	346	282	643	51	474	1279	0
Turn Type	Prot		pm+ov	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	7.8	10.1	21.7	14.7	17.0	100.0	11.6	40.6	40.6	18.6	47.6	
Effective Green, g (s)	7.8	10.1	21.7	14.7	17.0	100.0	11.6	40.6	40.6	18.6	47.6	
Actuated g/C Ratio	0.08	0.10	0.22	0.15	0.17	1.00	0.12	0.41	0.41	0.19	0.48	
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)	134	347	395	490	584	1538	387	1396	624	620	1606	
v/s Ratio Prot	c0.06	0.05	0.02	0.05	c0.12		c0.08	0.19		0.14	c0.38	
v/s Ratio Perm			0.03			0.22			0.03			
v/c Ratio	0.72	0.49	0.20	0.34	0.71	0.22	0.73	0.46	0.08	0.76	0.80	
Uniform Delay, d1	45.0	42.5	32.0	38.3	39.2	0.0	42.7	21.7	18.2	38.6	22.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.42	0.15	0.77	0.48	
Incremental Delay, d2	17.5	1.1	0.2	0.4	4.1	0.3	6.5	1.1	0.2	4.0	3.0	
Delay (s)	62.6	43.6	32.3	38.7	43.3	0.3	34.7	10.1	3.0	33.9	13.6	
Level of Service	E	D	C	D	D	A	C	B	A	C	B	
Approach Delay (s)		45.0			26.4			15.9			19.1	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.6%	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												
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	0.97		1.00		1.00	1.00	1.00	0.91	1.00	1.00	0.91	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	0.95		1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335		1538		1744	1538	1719	4940	1538	1719	4940	1538
Flt Permitted	0.95		1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335		1538		1744	1538	1719	4940	1538	1719	4940	1538
Volume (vph)	47	0	36	28	9	35	89	1021	43	35	1261	59
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	0	39	30	10	38	97	1110	47	38	1371	64
RTOR Reduction (vph)	0	0	33	0	0	35	0	0	17	0	0	24
Lane Group Flow (vph)	51	0	6	0	40	3	97	1110	30	38	1371	40
Turn Type	Split		pm+ov	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.5		14.2		6.6	6.6	9.7	62.8	62.8	10.1	63.2	63.2
Effective Green, g (s)	4.5		14.2		6.6	6.6	9.7	62.8	62.8	10.1	63.2	63.2
Actuated g/C Ratio	0.04		0.14		0.07	0.07	0.10	0.63	0.63	0.10	0.63	0.63
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)	150		218		115	102	167	3102	966	174	3122	972
v/s Ratio Prot	c0.02		0.00		c0.02		c0.06	0.22		0.02	c0.28	
v/s Ratio Perm			0.00			0.00			0.02			0.03
v/c Ratio	0.34		0.03		0.35	0.02	0.58	0.36	0.03	0.22	0.44	0.04
Uniform Delay, d1	46.3		36.9		44.6	43.7	43.2	8.9	7.1	41.3	9.4	7.0
Progression Factor	1.00		1.00		1.00	1.00	0.84	0.54	0.62	0.68	0.30	0.21
Incremental Delay, d2	1.4		0.0		1.8	0.1	4.8	0.3	0.1	0.5	0.3	0.1
Delay (s)	47.7		37.0		46.5	43.8	41.1	5.2	4.4	28.6	3.2	1.5
Level of Service	D		D		D	D	D	A	A	C	A	A
Approach Delay (s)		43.0			45.2			7.9			3.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.0%	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												
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	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1810	1538	1719	4896		1719	4908	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1810	1538	1719	4896		1719	4908	
Volume (vph)	103	38	204	55	61	55	340	953	60	65	1119	51
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	41	222	60	66	60	370	1036	65	71	1216	55
RTOR Reduction (vph)	0	0	81	0	0	50	0	6	0	0	4	0
Lane Group Flow (vph)	112	41	141	60	66	10	370	1095	0	71	1267	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	9.8	8.6	33.9	9.7	8.5	16.8	25.3	57.4		8.3	40.4	
Effective Green, g (s)	9.8	8.6	33.9	9.7	8.5	16.8	25.3	57.4		8.3	40.4	
Actuated g/C Ratio	0.10	0.09	0.34	0.10	0.08	0.17	0.25	0.57		0.08	0.40	
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)	168	156	521	167	154	320	435	2810		143	1983	
v/s Ratio Prot	c0.07	0.02	0.07	0.03	c0.04	0.00	c0.22	0.22		0.04	c0.26	
v/s Ratio Perm			0.02			0.00						
v/c Ratio	0.67	0.26	0.27	0.36	0.43	0.03	0.85	0.39		0.50	0.64	
Uniform Delay, d1	43.5	42.7	24.1	42.2	43.4	34.8	35.6	11.7		43.9	23.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.08		0.91	0.36	
Incremental Delay, d2	9.6	0.9	0.3	1.3	1.9	0.0	13.0	0.4		2.5	1.5	
Delay (s)	53.1	43.6	24.3	43.6	45.4	34.8	45.0	13.0		42.3	10.1	
Level of Service	D	D	C	D	D	C	D	B		D	B	
Approach Delay (s)		35.0			41.4			21.1			11.8	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00		1.00	0.91		1.00	0.91	
Frt		0.90		1.00	0.95		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1639		3335	1721		1719	4861		1719	4928	
Flt Permitted		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1639		3335	1721		1719	4861		1719	4928	
Volume (vph)	15	12	81	156	50	24	114	1314	156	28	1288	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	13	88	170	54	26	124	1428	170	30	1400	23
RTOR Reduction (vph)	0	81	0	0	19	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	36	0	170	61	0	124	1588	0	30	1422	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		7.9		10.2	10.2		13.8	61.7		4.2	52.1	
Effective Green, g (s)		7.9		10.2	10.2		13.8	61.7		4.2	52.1	
Actuated g/C Ratio		0.08		0.10	0.10		0.14	0.62		0.04	0.52	
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)		129		340	176		237	2999		72	2567	
v/s Ratio Prot		c0.02		c0.05	0.04		c0.07	c0.33		0.02	c0.29	
v/s Ratio Perm												
v/c Ratio		0.28		0.50	0.35		0.52	0.53		0.42	0.55	
Uniform Delay, d1		43.4		42.5	41.8		40.0	10.9		46.7	16.1	
Progression Factor		1.00		1.00	1.00		0.61	0.57		0.95	0.23	
Incremental Delay, d2		1.2		1.2	1.2		1.9	0.6		3.3	0.7	
Delay (s)		44.5		43.6	43.0		26.4	6.8		47.7	4.4	
Level of Service		D		D	D		C	A		D	A	
Approach Delay (s)		44.5			43.4			8.2			5.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.3%	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												
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		0.97	1.00		1.00	0.91	1.00	1.00	0.91	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	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Volume (vph)	14	0	5	72	0	60	24	1504	86	106	1375	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	0	5	78	0	65	26	1635	93	115	1495	47
RTOR Reduction (vph)	0	5	0	0	62	0	0	0	27	0	0	12
Lane Group Flow (vph)	15	0	0	78	3	0	26	1635	66	115	1495	35
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	4.1	1.1		8.1	5.1		4.6	62.4	62.4	12.4	70.2	70.2
Effective Green, g (s)	4.1	1.1		8.1	5.1		4.6	62.4	62.4	12.4	70.2	70.2
Actuated g/C Ratio	0.04	0.01		0.08	0.05		0.05	0.62	0.62	0.12	0.70	0.70
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)	70	17		270	78		79	3083	960	213	3468	1080
v/s Ratio Prot	0.01	0.00		c0.02	c0.00		0.02	c0.33		c0.07	0.30	
v/s Ratio Perm									0.04			0.02
v/c Ratio	0.21	0.00		0.29	0.04		0.33	0.53	0.07	0.54	0.43	0.03
Uniform Delay, d1	46.4	48.9		43.2	45.1		46.2	10.6	7.4	41.1	6.4	4.5
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.29	0.03	0.88	0.12	0.01
Incremental Delay, d2	1.5	0.1		0.6	0.2		2.1	0.6	0.1	2.2	0.3	0.0
Delay (s)	47.9	49.0		43.8	45.4		35.2	3.6	0.3	38.6	1.1	0.1
Level of Service	D	D		D	D		D	A	A	D	A	A
Approach Delay (s)		48.2			44.5			3.9			3.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.7%	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												
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	0.91		0.97	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765	1538	1719	1810	1538	1719	4895		3335	4928	
Flt Permitted		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1765	1538	1719	1810	1538	1719	4895		3335	4928	
Volume (vph)	7	7	13	142	11	273	29	1349	87	149	1290	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	8	14	154	12	297	32	1466	95	162	1402	23
RTOR Reduction (vph)	0	0	13	0	0	219	0	6	0	0	1	0
Lane Group Flow (vph)	0	16	1	154	12	78	32	1555	0	162	1424	0
Turn Type	Split		Perm	Split		pm+ov	Prot			Prot		
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		4.2	4.2	14.2	14.2	26.4	5.1	53.4		12.2	60.5	
Effective Green, g (s)		4.2	4.2	14.2	14.2	26.4	5.1	53.4		12.2	60.5	
Actuated g/C Ratio		0.04	0.04	0.14	0.14	0.26	0.05	0.53		0.12	0.60	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		74	65	244	257	406	88	2614		407	2981	
v/s Ratio Prot		c0.01		c0.09	0.01	0.02	0.02	c0.32		0.05	c0.29	
v/s Ratio Perm			0.00			0.03						
v/c Ratio		0.22	0.01	0.63	0.05	0.19	0.36	0.60		0.40	0.48	
Uniform Delay, d1		46.3	45.9	40.4	37.1	28.5	45.9	15.9		40.5	11.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.14	0.36		0.65	0.55	
Incremental Delay, d2		1.5	0.1	5.2	0.1	0.2	2.2	0.9		0.6	0.5	
Delay (s)		47.8	46.0	45.7	37.1	28.8	54.6	6.6		27.1	6.6	
Level of Service		D	D	D	D	C	D	A		C	A	
Approach Delay (s)		46.9			34.6			7.6			8.7	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.2%	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												
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	0.95		1.00	0.95	
Frt	1.00	0.85			0.95		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1541			1666		1719	3437		1719	3422	
Flt Permitted	0.75	1.00			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1362	1541			1443		1719	3437		1719	3422	
Volume (vph)	62	1	75	5	0	3	49	1440	2	1	1403	44
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1	82	5	0	3	53	1565	2	1	1525	48
RTOR Reduction (vph)	0	75	0	0	3	0	0	0	0	0	2	0
Lane Group Flow (vph)	67	8	0	0	5	0	53	1567	0	1	1571	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	8.9	8.9			8.9		9.5	77.7		1.4	69.6	
Effective Green, g (s)	8.9	8.9			8.9		9.5	77.7		1.4	69.6	
Actuated g/C Ratio	0.09	0.09			0.09		0.10	0.78		0.01	0.70	
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)	121	137			128		163	2671		24	2382	
v/s Ratio Prot		0.01					c0.03	c0.46		0.00	c0.46	
v/s Ratio Perm	c0.05				0.00							
v/c Ratio	0.55	0.06			0.04		0.33	0.59		0.04	0.66	
Uniform Delay, d1	43.6	41.7			41.6		42.3	4.6		48.6	8.5	
Progression Factor	1.00	1.00			1.00		1.10	0.34		0.91	0.37	
Incremental Delay, d2	5.4	0.2			0.1		0.9	0.7		0.6	1.3	
Delay (s)	49.0	41.9			41.8		47.4	2.3		45.1	4.5	
Level of Service	D	D			D		D	A		D	A	
Approach Delay (s)		45.1			41.8			3.8			4.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.4%	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												
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	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1728	1538		1798	1538	1719	3437		1719	3426	
Flt Permitted		0.71	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1292	1538		1752	1538	1719	3437		1719	3426	
Volume (vph)	176	10	20	4	26	70	30	1246	3	48	1342	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	191	11	22	4	28	76	33	1354	3	52	1459	34
RTOR Reduction (vph)	0	0	18	0	0	61	0	0	0	0	1	0
Lane Group Flow (vph)	0	202	4	0	32	15	33	1357	0	52	1492	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		19.7	19.7		19.7	19.7	4.5	60.0		8.3	63.8	
Effective Green, g (s)		19.7	19.7		19.7	19.7	4.5	60.0		8.3	63.8	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.04	0.60		0.08	0.64	
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)		255	303		345	303	77	2062		143	2186	
v/s Ratio Prot							0.02	c0.39		0.03	c0.44	
v/s Ratio Perm		c0.16	0.00		0.02	0.01						
v/c Ratio		0.79	0.01		0.09	0.05	0.43	0.66		0.36	0.68	
Uniform Delay, d1		38.2	32.3		32.8	32.6	46.5	13.2		43.4	11.6	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		0.59	0.19	
Incremental Delay, d2		15.4	0.0		0.1	0.1	3.8	1.7		1.3	1.4	
Delay (s)		53.6	32.4		33.0	32.6	50.3	14.9		26.7	3.6	
Level of Service		D	C		C	C	D	B		C	A	
Approach Delay (s)		51.5			32.7			15.7			4.4	
Approach LOS		D			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.5%	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												
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	0.97	0.95	1.00	0.97	0.95	1.00	0.91	0.91		0.91	0.86	0.91
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	0.89	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	1564	2984		1564	2778	1400
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	1564	2984		1564	2778	1400
Volume (vph)	73	557	6	99	879	16	59	10	37	13	14	71
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	605	7	108	955	17	64	11	40	14	15	77
RTOR Reduction (vph)	0	0	5	0	0	11	0	28	0	0	36	37
Lane Group Flow (vph)	79	605	2	108	955	6	39	48	0	14	17	2
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	20.0	20.0	4.5	22.5	22.5	18.3	18.3		3.5	3.5	3.5
Effective Green, g (s)	2.0	20.0	20.0	4.5	22.5	22.5	18.3	18.3		3.5	3.5	3.5
Actuated g/C Ratio	0.03	0.32	0.32	0.07	0.36	0.36	0.29	0.29		0.06	0.06	0.06
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)	107	1104	494	241	1242	555	459	877		88	156	79
v/s Ratio Prot	0.02	c0.18		0.03	c0.28		c0.02	0.02		c0.01	0.01	
v/s Ratio Perm			0.00			0.00						0.00
v/c Ratio	0.74	0.55	0.00	0.45	0.77	0.01	0.08	0.05		0.16	0.11	0.03
Uniform Delay, d1	29.9	17.4	14.4	27.7	17.6	12.8	15.9	15.8		28.0	27.9	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.1	0.6	0.0	1.3	2.9	0.0	0.4	0.1		0.8	0.3	0.1
Delay (s)	53.0	18.0	14.4	29.0	20.5	12.8	16.3	15.9		28.8	28.2	27.9
Level of Service	D	B	B	C	C	B	B	B		C	C	C
Approach Delay (s)		22.0			21.3			16.0			28.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.9%	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												
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	0.95	1.00	1.00	0.95	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	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1782	1538		1735	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1719	3438	1538	1719	3438	1538		1782	1538		1735	1538
Volume (vph)	19	500	9	106	962	245	19	43	57	113	18	24
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	543	10	115	1046	266	21	47	62	123	20	26
RTOR Reduction (vph)	0	0	8	0	0	154	0	0	54	0	0	22
Lane Group Flow (vph)	21	543	2	115	1046	112	0	68	8	0	143	4
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)	1.2	14.6	14.6	12.1	25.5	25.5		7.9	7.9		10.1	10.1
Effective Green, g (s)	1.2	14.6	14.6	12.1	25.5	25.5		7.9	7.9		10.1	10.1
Actuated g/C Ratio	0.02	0.24	0.24	0.20	0.42	0.42		0.13	0.13		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
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)	34	827	370	343	1444	646		232	200		289	256
v/s Ratio Prot	0.01	c0.16		0.07	c0.30			c0.04			c0.08	
v/s Ratio Perm			0.00			0.07			0.01			0.00
v/c Ratio	0.62	0.66	0.01	0.34	0.72	0.17		0.29	0.04		0.49	0.02
Uniform Delay, d1	29.5	20.8	17.5	20.8	14.7	11.0		23.9	23.1		23.0	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	29.0	1.9	0.0	0.6	1.8	0.1		0.7	0.1		1.3	0.0
Delay (s)	58.5	22.7	17.5	21.4	16.5	11.1		24.6	23.2		24.3	21.2
Level of Service	E	C	B	C	B	B		C	C		C	C
Approach Delay (s)		23.9			15.9			23.9			23.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.8%	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)	123	215	171	58	197	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	234	186	63	214	174

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	134	234	186	63	214	174
Volume Left (vph)	134	0	0	0	214	0
Volume Right (vph)	0	234	0	63	0	0
Hadj (s)	0.59	-0.62	0.08	-0.62	0.59	0.08
Departure Headway (s)	6.8	5.6	6.2	5.5	6.5	6.0
Degree Utilization, x	0.25	0.36	0.32	0.10	0.39	0.29
Capacity (veh/h)	505	613	554	615	531	575
Control Delay (s)	10.8	10.5	11.0	7.9	12.4	10.3
Approach Delay (s)	10.6		10.2		11.4	
Approach LOS	B		B		B	

Intersection Summary			
Delay	10.8		
HCM Level of Service	B		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	140	115	18	214	0	0	0	0	60	0	124
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)	0	152	125	20	233	0	0	0	0	65	0	135
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	233			277			621	486	215	486	549	233
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	233			277			621	486	215	486	549	233
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	86	100	83
cM capacity (veh/h)	1317			1269			325	469	818	481	432	799

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	277	252	65	135
Volume Left	0	20	65	0
Volume Right	125	0	0	135
cSH	1700	1269	481	799
Volume to Capacity	0.16	0.02	0.14	0.17
Queue Length 95th (ft)	0	1	12	15
Control Delay (s)	0.0	0.7	13.7	10.4
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.7	11.5	
Approach LOS			B	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	60	140	0	0	139	65	93	1	41	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)	65	152	0	0	151	71	101	1	45	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	222			152			469	504	152	514	469	186
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	222			152			469	504	152	514	469	186
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	95			100			79	100	95	100	100	100
cM capacity (veh/h)	1330			1410			481	443	886	425	464	848

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	217	222	102	45
Volume Left	65	0	101	0
Volume Right	0	71	0	45
cSH	1330	1700	480	886
Volume to Capacity	0.05	0.13	0.21	0.05
Queue Length 95th (ft)	4	0	20	4
Control Delay (s)	2.6	0.0	14.5	9.3
Lane LOS	A		B	A
Approach Delay (s)	2.6	0.0	12.9	
Approach LOS			B	

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	42	0	139	0	0	0	180	17	0	0	7	24
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)	46	0	151	0	0	0	196	18	0	0	8	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	430	430	21	582	443	18	34			18		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430	430	21	582	443	18	34			18		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	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 %	90	100	86	100	100	100	87			100		
cM capacity (veh/h)	479	449	1048	325	441	1051	1559			1579		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	197	214	34
Volume Left	46	196	0
Volume Right	151	0	26
cSH	822	1559	1700
Volume to Capacity	0.24	0.13	0.02
Queue Length 95th (ft)	23	11	0
Control Delay (s)	10.8	7.1	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	7.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	8.2		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	36	230	10	6	363	10	7	0	6	18	2	101
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)	39	250	11	7	395	11	8	0	7	20	2	110
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		687										
pX, platoon unblocked												
vC, conflicting volume	405			261			852	752	255	748	752	400
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	405			261			852	752	255	748	752	400
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	97			99			97	100	99	94	99	83
cM capacity (veh/h)	1137			1286			221	322	776	313	322	643

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	39	261	7	405	14	20	112
Volume Left	39	0	7	0	8	20	0
Volume Right	0	11	0	11	7	0	110
cSH	1137	1700	1286	1700	330	313	631
Volume to Capacity	0.03	0.15	0.01	0.24	0.04	0.06	0.18
Queue Length 95th (ft)	3	0	0	0	3	5	16
Control Delay (s)	8.3	0.0	7.8	0.0	16.4	17.3	11.9
Lane LOS	A		A		C	C	B
Approach Delay (s)	1.1		0.1		16.4	12.7	
Approach LOS					C	B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	260	100	27	227	95	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	283	109	29	247	103	25

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	283	109	29	247	128
Volume Left (vph)	0	0	29	0	103
Volume Right (vph)	0	109	0	0	25
Hadj (s)	0.09	-0.62	0.59	0.09	0.13
Departure Headway (s)	5.2	4.5	5.9	5.3	5.5
Degree Utilization, x	0.41	0.14	0.05	0.37	0.20
Capacity (veh/h)	661	763	589	652	587
Control Delay (s)	10.7	7.1	7.9	10.2	9.9
Approach Delay (s)	9.7		10.0		9.9
Approach LOS	A		A		A

Intersection Summary			
Delay	9.8		
HCM Level of Service	A		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	129	190	155	69	110	182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	140	207	168	75	120	198
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	630	218	317			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	630	218	317			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	63	75	86			
cM capacity (veh/h)	380	814	1226			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	140	207	168	75	317
Volume Left	140	0	168	0	0
Volume Right	0	207	0	0	198
cSH	380	814	1226	1700	1700
Volume to Capacity	0.37	0.25	0.14	0.04	0.19
Queue Length 95th (ft)	42	25	12	0	0
Control Delay (s)	19.9	10.9	8.4	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.6		5.8		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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
Frt	1.00	1.00	0.85	1.00	0.91					1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)	1719	1810	1538	1719	1649					1719	1810	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)	1719	1810	1538	1719	1649					1719	1810	1538
Volume (vph)	33	54	50	254	137	199	0	0	0	109	232	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	59	54	276	149	216	0	0	0	118	252	2
RTOR Reduction (vph)	0	0	37	0	38	0	0	0	0	0	0	2
Lane Group Flow (vph)	36	59	17	276	327	0	0	0	0	118	252	0
Turn Type	Prot		Perm	Prot						Prot		Perm
Protected Phases	7	4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)	3.4	25.7	25.7	26.4	48.7					15.9	15.9	15.9
Effective Green, g (s)	3.4	25.7	25.7	26.4	48.7					15.9	15.9	15.9
Actuated g/C Ratio	0.04	0.32	0.32	0.33	0.61					0.20	0.20	0.20
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)	73	581	494	567	1004					342	360	306
v/s Ratio Prot	c0.02	0.03		c0.16	c0.20					0.07	c0.14	
v/s Ratio Perm			0.01									0.00
v/c Ratio	0.49	0.10	0.04	0.49	0.33					0.35	0.70	0.00
Uniform Delay, d1	37.5	19.0	18.6	21.4	7.6					27.6	29.8	25.7
Progression Factor	1.00	1.00	1.00	0.65	0.22					1.00	1.00	1.00
Incremental Delay, d2	5.2	0.3	0.1	0.7	0.9					0.6	6.0	0.0
Delay (s)	42.6	19.4	18.8	14.6	2.5					28.2	35.9	25.7
Level of Service	D	B	B	B	A					C	D	C
Approach Delay (s)		24.8			7.7			0.0			33.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1810	3438		1719	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1810	3438		1719	1538
Volume (vph)	0	163	516	0	100	74
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	177	561	0	109	80
RTOR Reduction (vph)	0	0	0	0	0	70
Lane Group Flow (vph)	0	177	561	0	109	10
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		62.4	62.4		9.6	9.6
Effective Green, g (s)		62.4	62.4		9.6	9.6
Actuated g/C Ratio		0.78	0.78		0.12	0.12
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1412	2682		206	185
v/s Ratio Prot		0.10	c0.16		c0.06	
v/s Ratio Perm						0.01
v/c Ratio		0.13	0.21		0.53	0.05
Uniform Delay, d1		2.1	2.3		33.1	31.2
Progression Factor		1.00	1.68		1.00	1.00
Incremental Delay, d2		0.2	0.2		2.4	0.1
Delay (s)		2.3	4.1		35.5	31.3
Level of Service		A	A		D	C
Approach Delay (s)		2.3	4.1		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	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	1810			1810	1538		1726	1538			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1719	1810			1810	1538		1726	1538			
Volume (vph)	24	239	0	0	415	253	101	3	158	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	260	0	0	451	275	110	3	172	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	87	0	0	150	0	0	0
Lane Group Flow (vph)	26	260	0	0	451	188	0	113	22	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	3.2	61.8			54.6	54.6		10.2	10.2			
Effective Green, g (s)	3.2	61.8			54.6	54.6		10.2	10.2			
Actuated g/C Ratio	0.04	0.77			0.68	0.68		0.13	0.13			
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)	69	1398			1235	1050		220	196			
v/s Ratio Prot	c0.02	0.14			c0.25			c0.07				
v/s Ratio Perm						0.12			0.01			
v/c Ratio	0.38	0.19			0.37	0.18		0.51	0.11			
Uniform Delay, d1	37.4	2.4			5.4	4.6		32.6	30.9			
Progression Factor	1.27	0.15			0.37	0.05		1.00	1.00			
Incremental Delay, d2	3.3	0.3			0.8	0.3		2.0	0.3			
Delay (s)	51.0	0.7			2.8	0.6		34.6	31.1			
Level of Service	D	A			A	A		C	C			
Approach Delay (s)		5.2			1.9			32.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
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												
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	0.97	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		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)	3335	1810	1538	1719	3376		1719	3347		1719	3438	1538
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)	3335	1810	1538	1719	3376		1719	3347		1719	3438	1538
Volume (vph)	120	74	203	86	332	45	233	151	32	21	79	103
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	80	221	93	361	49	253	164	35	23	86	112
RTOR Reduction (vph)	0	0	140	0	11	0	0	24	0	0	0	102
Lane Group Flow (vph)	130	80	81	93	399	0	253	175	0	23	86	11
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)	7.7	29.4	29.4	8.0	29.7		19.1	24.6		2.0	7.5	7.5
Effective Green, g (s)	7.7	29.4	29.4	8.0	29.7		19.1	24.6		2.0	7.5	7.5
Actuated g/C Ratio	0.10	0.37	0.37	0.10	0.37		0.24	0.31		0.02	0.09	0.09
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)	321	665	565	172	1253		410	1029		43	322	144
v/s Ratio Prot	0.04	0.04		c0.05	c0.12		c0.15	0.05		c0.01	c0.03	
v/s Ratio Perm			0.05									0.01
v/c Ratio	0.40	0.12	0.14	0.54	0.32		0.62	0.17		0.53	0.27	0.07
Uniform Delay, d1	34.0	16.7	16.9	34.3	17.9		27.2	20.2		38.5	33.7	33.1
Progression Factor	0.86	0.64	0.53	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.4	0.5	3.4	0.7		2.8	0.1		12.2	0.4	0.2
Delay (s)	30.1	11.0	9.4	37.7	18.6		29.9	20.3		50.7	34.1	33.3
Level of Service	C	B	A	D	B		C	C		D	C	C
Approach Delay (s)		16.0			22.1			25.7			35.4	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.6%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.88		1.00	0.89		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1584		3335	1614		1719	3438	1538	1719	3432	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	1584		3335	1614		1719	3438	1538	1719	3432	
Volume (vph)	45	33	163	166	43	112	243	1709	172	46	995	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	36	177	180	47	122	264	1858	187	50	1082	12
RTOR Reduction (vph)	0	161	0	0	89	0	0	0	69	0	1	0
Lane Group Flow (vph)	49	52	0	180	80	0	264	1858	118	50	1093	0
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.7	9.7		11.6	11.6		22.4	69.5	69.5	3.2	50.3	
Effective Green, g (s)	9.7	9.7		11.6	11.6		22.4	69.5	69.5	3.2	50.3	
Actuated g/C Ratio	0.09	0.09		0.11	0.11		0.20	0.63	0.63	0.03	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	152	140		352	170		350	2172	972	50	1569	
v/s Ratio Prot	0.03	c0.03		c0.05	0.05		c0.15	c0.54		0.03	0.32	
v/s Ratio Perm									0.08			
v/c Ratio	0.32	0.37		0.51	0.47		0.75	0.86	0.12	1.00	0.70	
Uniform Delay, d1	47.1	47.3		46.5	46.3		41.2	16.2	8.1	53.4	23.8	
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.55	0.59	1.00	1.00	
Incremental Delay, d2	1.2	1.6		1.3	2.1		6.4	3.3	0.2	127.3	2.6	
Delay (s)	48.3	48.9		47.8	48.4		41.7	12.2	4.9	180.7	26.4	
Level of Service	D	D		D	D		D	B	A	F	C	
Approach Delay (s)		48.8			48.1			15.0			33.1	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1719	1538	1719	3438	3421	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1719	1538	1719	3438	3421	
Volume (vph)	24	113	212	2007	1253	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	123	230	2182	1362	47
RTOR Reduction (vph)	0	115	0	0	2	0
Lane Group Flow (vph)	26	8	230	2182	1407	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.6	7.6	30.4	94.4	60.0	
Effective Green, g (s)	7.6	7.6	30.4	94.4	60.0	
Actuated g/C Ratio	0.07	0.07	0.28	0.86	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)	119	106	475	2950	1866	
v/s Ratio Prot	c0.02		0.13	c0.63	0.41	
v/s Ratio Perm		0.01				
v/c Ratio	0.22	0.08	0.48	0.74	0.75	
Uniform Delay, d1	48.4	47.9	33.3	3.0	19.3	
Progression Factor	1.00	1.00	0.74	0.29	0.24	
Incremental Delay, d2	0.9	0.3	0.5	1.0	2.1	
Delay (s)	49.3	48.3	25.0	1.9	6.8	
Level of Service	D	D	C	A	A	
Approach Delay (s)	48.4			4.1	6.8	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1538	1719	3438	3438	1538
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1538	1719	3438	3438	1538
Volume (vph)	120	104	37	2065	1338	28
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	113	40	2245	1454	30
RTOR Reduction (vph)	0	99	0	0	0	8
Lane Group Flow (vph)	130	14	40	2245	1454	22
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	13.2	13.2	5.0	88.8	79.8	79.8
Effective Green, g (s)	13.2	13.2	5.0	88.8	79.8	79.8
Actuated g/C Ratio	0.12	0.12	0.05	0.81	0.73	0.73
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)	206	185	78	2775	2494	1116
v/s Ratio Prot	c0.08		0.02	c0.65	0.42	
v/s Ratio Perm		0.01				0.01
v/c Ratio	0.63	0.07	0.51	0.81	0.58	0.02
Uniform Delay, d1	46.1	43.0	51.3	5.9	7.2	4.2
Progression Factor	1.00	1.00	1.17	0.87	0.07	0.01
Incremental Delay, d2	6.2	0.2	3.6	1.7	0.7	0.0
Delay (s)	52.2	43.1	63.7	6.8	1.2	0.1
Level of Service	D	D	E	A	A	A
Approach Delay (s)	48.0			7.8	1.2	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.4%	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												
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	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3401	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3401	
Volume (vph)	162	344	193	239	230	752	132	1188	281	468	905	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	374	210	260	250	817	143	1291	305	509	984	76
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	177	0	5	0
Lane Group Flow (vph)	176	374	160	260	250	817	143	1291	128	509	1055	0
Turn Type	Prot		pm+ov	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	15.5	16.8	25.9	11.6	12.9	110.0	9.1	46.3	46.3	19.3	56.5	
Effective Green, g (s)	15.5	16.8	25.9	11.6	12.9	110.0	9.1	46.3	46.3	19.3	56.5	
Actuated g/C Ratio	0.14	0.15	0.24	0.11	0.12	1.00	0.08	0.42	0.42	0.18	0.51	
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)	242	525	418	352	403	1538	276	1447	647	585	1747	
v/s Ratio Prot	0.10	c0.11	0.03	c0.08	0.07		0.04	c0.38		c0.15	0.31	
v/s Ratio Perm			0.07			c0.53			0.08			
v/c Ratio	0.73	0.71	0.38	0.74	0.62	0.53	0.52	0.89	0.20	0.87	0.60	
Uniform Delay, d1	45.2	44.3	35.3	47.7	46.2	0.0	48.3	29.5	20.1	44.1	18.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.23	0.46	0.25	0.63	0.39	
Incremental Delay, d2	10.4	4.5	0.6	7.9	3.0	1.3	1.4	7.7	0.6	11.4	1.3	
Delay (s)	55.6	48.8	35.9	55.6	49.2	1.3	61.0	21.2	5.6	39.1	8.6	
Level of Service	E	D	D	E	D	A	E	C	A	D	A	
Approach Delay (s)		46.8			21.0			21.7			18.5	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	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												
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	0.97	1.00	1.00		1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85		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	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	1810	1538		1726	1538	1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	1810	1538		1726	1538	1719	4940	1538	1719	4940	1538
Volume (vph)	112	8	111	52	2	68	96	1536	43	75	1287	99
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	9	121	57	2	74	104	1670	47	82	1399	108
RTOR Reduction (vph)	0	0	92	0	0	69	0	0	18	0	0	50
Lane Group Flow (vph)	122	9	29	0	59	5	104	1670	29	82	1399	58
Turn Type	Split		pm+ov	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.2	9.2	26.7		7.9	7.9	17.5	67.6	67.6	9.3	59.4	59.4
Effective Green, g (s)	9.2	9.2	26.7		7.9	7.9	17.5	67.6	67.6	9.3	59.4	59.4
Actuated g/C Ratio	0.08	0.08	0.24		0.07	0.07	0.16	0.61	0.61	0.08	0.54	0.54
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)	279	151	429		124	110	273	3036	945	145	2668	831
v/s Ratio Prot	c0.04	0.00	0.01		c0.03		0.06	c0.34		0.05	c0.28	
v/s Ratio Perm			0.01			0.00			0.02			0.04
v/c Ratio	0.44	0.06	0.07		0.48	0.05	0.38	0.55	0.03	0.57	0.52	0.07
Uniform Delay, d1	47.9	46.4	32.1		49.1	47.5	41.4	12.3	8.3	48.4	16.2	12.1
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.69	0.19	0.03	0.86	1.00	1.81
Incremental Delay, d2	1.1	0.2	0.1		2.9	0.2	0.7	0.5	0.0	4.2	0.6	0.1
Delay (s)	49.0	46.6	32.1		51.9	47.7	29.0	2.9	0.3	45.9	16.9	22.1
Level of Service	D	D	C		D	D	C	A	A	D	B	C
Approach Delay (s)		40.8			49.6			4.3			18.7	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.7%	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												
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	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1810	1538	1719	4882		1719	4909	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1810	1538	1719	4882		1719	4909	
Volume (vph)	140	81	386	118	80	156	186	1383	118	124	1233	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	88	420	128	87	170	202	1503	128	135	1340	59
RTOR Reduction (vph)	0	0	75	0	0	59	0	8	0	0	4	0
Lane Group Flow (vph)	152	88	345	128	87	111	202	1623	0	135	1395	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.3	9.2	28.8	14.3	9.2	27.5	19.6	52.2		18.3	50.9	
Effective Green, g (s)	14.3	9.2	28.8	14.3	9.2	27.5	19.6	52.2		18.3	50.9	
Actuated g/C Ratio	0.13	0.08	0.26	0.13	0.08	0.25	0.18	0.47		0.17	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	
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)	223	151	403	223	151	440	306	2317		286	2272	
v/s Ratio Prot	c0.09	0.05	c0.15	0.07	0.05	0.04	0.12	c0.33		0.08	c0.28	
v/s Ratio Perm			0.07			0.03						
v/c Ratio	0.68	0.58	0.86	0.57	0.58	0.25	0.66	0.70		0.47	0.61	
Uniform Delay, d1	45.7	48.6	38.6	45.0	48.5	33.0	42.1	22.7		41.5	22.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.62		0.58	0.31	
Incremental Delay, d2	8.3	5.6	16.1	3.5	5.2	0.3	3.2	1.1		1.1	1.1	
Delay (s)	54.0	54.2	54.7	48.5	53.8	33.3	31.4	15.3		25.0	7.9	
Level of Service	D	D	D	D	D	C	C	B		C	A	
Approach Delay (s)		54.5			43.0			17.0			9.4	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00		1.00	0.91		1.00	0.91	
Frt		0.92		1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667		3335	1696		1719	4828		1719	4931	
Flt Permitted		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1667		3335	1696		1719	4828		1719	4931	
Volume (vph)	49	41	144	297	26	18	69	1620	289	40	1690	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	45	157	323	28	20	75	1761	314	43	1837	23
RTOR Reduction (vph)	0	56	0	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	0	199	0	323	31	0	75	2055	0	43	1859	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		17.1		14.8	14.8		7.9	58.1		4.0	54.2	
Effective Green, g (s)		17.1		14.8	14.8		7.9	58.1		4.0	54.2	
Actuated g/C Ratio		0.16		0.13	0.13		0.07	0.53		0.04	0.49	
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)		259		449	228		123	2550		63	2430	
v/s Ratio Prot		c0.12		c0.10	0.02		0.04	c0.43		0.03	c0.38	
v/s Ratio Perm												
v/c Ratio		0.77		0.72	0.13		0.61	0.81		0.68	0.77	
Uniform Delay, d1		44.6		45.6	42.0		49.6	21.3		52.4	22.7	
Progression Factor		1.00		1.00	1.00		0.84	0.80		0.93	0.91	
Incremental Delay, d2		12.9		5.5	0.3		5.1	1.7		20.4	1.8	
Delay (s)		57.4		51.1	42.2		46.6	18.7		69.0	22.5	
Level of Service		E		D	D		D	B		E	C	
Approach Delay (s)		57.4			49.9			19.7			23.6	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.6%	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												
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		0.97	1.00		1.00	0.91	1.00	1.00	0.91	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	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Volume (vph)	56	0	20	267	0	216	25	1705	228	254	1823	55
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	0	22	290	0	235	27	1853	248	276	1982	60
RTOR Reduction (vph)	0	22	0	0	142	0	0	0	103	0	0	17
Lane Group Flow (vph)	61	0	0	290	93	0	27	1853	145	276	1982	43
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.7	2.2		23.9	18.4		7.2	47.2	47.2	20.7	60.7	60.7
Effective Green, g (s)	7.7	2.2		23.9	18.4		7.2	47.2	47.2	20.7	60.7	60.7
Actuated g/C Ratio	0.07	0.02		0.22	0.17		0.07	0.43	0.43	0.19	0.55	0.55
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)	120	31		725	257		113	2120	660	323	2726	849
v/s Ratio Prot	c0.04	0.00		c0.09	0.06		0.02	c0.38		c0.16	0.40	
v/s Ratio Perm									0.09			0.03
v/c Ratio	0.51	0.01		0.40	0.36		0.24	0.87	0.22	0.85	0.73	0.05
Uniform Delay, d1	49.3	52.8		36.9	40.6		48.8	28.7	19.8	43.2	18.5	11.4
Progression Factor	1.00	1.00		1.00	1.00		1.08	0.62	0.40	1.20	0.92	0.28
Incremental Delay, d2	3.4	0.2		0.4	0.9		0.6	3.0	0.4	13.4	1.1	0.1
Delay (s)	52.7	53.0		37.3	41.5		53.5	20.7	8.3	65.3	18.2	3.3
Level of Service	D	D		D	D		D	C	A	E	B	A
Approach Delay (s)		52.8			39.2			19.7			23.4	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.1%	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												
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	0.91		0.97	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1753	1538	1719	1810	1538	1719	4835		3335	4926	
Flt Permitted		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1753	1538	1719	1810	1538	1719	4835		3335	4926	
Volume (vph)	29	17	34	149	19	263	53	1674	276	544	1537	29
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	18	37	162	21	286	58	1820	300	591	1671	32
RTOR Reduction (vph)	0	0	35	0	0	163	0	18	0	0	1	0
Lane Group Flow (vph)	0	50	2	162	21	123	58	2102	0	591	1702	0
Turn Type	Split		Perm	Split		pm+ov	Prot			Prot		
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		7.4	7.4	15.4	15.4	34.2	7.2	52.4		18.8	64.0	
Effective Green, g (s)		7.4	7.4	15.4	15.4	34.2	7.2	52.4		18.8	64.0	
Actuated g/C Ratio		0.07	0.07	0.14	0.14	0.31	0.07	0.48		0.17	0.58	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		118	103	241	253	478	113	2303		570	2866	
v/s Ratio Prot		c0.03		c0.09	0.01	0.04	0.03	c0.43		c0.18	0.35	
v/s Ratio Perm			0.00			0.04						
v/c Ratio		0.42	0.02	0.67	0.08	0.26	0.51	0.91		1.04	0.59	
Uniform Delay, d1		49.3	47.9	44.9	41.2	28.4	49.7	26.7		45.6	14.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.13	0.60		0.96	1.21	
Incremental Delay, d2		2.4	0.1	7.2	0.1	0.3	3.1	5.6		42.8	0.7	
Delay (s)		51.7	48.0	52.1	41.3	28.7	59.2	21.7		86.5	18.5	
Level of Service		D	D	D	D	C	E	C		F	B	
Approach Delay (s)		50.1			37.3			22.7			36.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.9%	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												
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	0.95		1.00	0.95	
Frt	1.00	0.85			0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1538			1714		1719	3437		1719	3424	
Flt Permitted	0.75	1.00			0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1353	1538			1438		1719	3437		1719	3424	
Volume (vph)	72	0	80	10	2	2	68	1737	3	10	1493	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	0	87	11	2	2	74	1888	3	11	1623	47
RTOR Reduction (vph)	0	78	0	0	2	0	0	0	0	0	1	0
Lane Group Flow (vph)	78	9	0	0	13	0	74	1891	0	11	1669	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	11.4	11.4			11.4		8.8	85.1		1.5	77.8	
Effective Green, g (s)	11.4	11.4			11.4		8.8	85.1		1.5	77.8	
Actuated g/C Ratio	0.10	0.10			0.10		0.08	0.77		0.01	0.71	
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)	140	159			149		138	2659		23	2422	
v/s Ratio Prot		0.01					c0.04	c0.55		0.01	0.49	
v/s Ratio Perm	c0.06				0.01							
v/c Ratio	0.56	0.06			0.09		0.54	0.71		0.48	0.69	
Uniform Delay, d1	46.9	44.5			44.6		48.6	6.3		53.9	9.2	
Progression Factor	1.00	1.00			1.00		1.05	0.48		1.06	0.35	
Incremental Delay, d2	4.7	0.1			0.3		2.4	1.0		12.3	1.3	
Delay (s)	51.6	44.6			44.9		53.7	4.0		69.4	4.5	
Level of Service	D	D			D		D	A		E	A	
Approach Delay (s)		47.9			44.9			5.9			5.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1728	1538		1761	1538	1719	3435		1719	3422	
Flt Permitted		0.72	1.00		0.83	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1304	1538		1499	1538	1719	3435		1719	3422	
Volume (vph)	312	17	28	11	9	149	36	1347	8	76	1443	47
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	339	18	30	12	10	162	39	1464	9	83	1568	51
RTOR Reduction (vph)	0	0	21	0	0	113	0	0	0	0	2	0
Lane Group Flow (vph)	0	357	9	0	22	49	39	1473	0	83	1617	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		33.1	33.1		33.1	33.1	3.6	57.8		7.1	61.3	
Effective Green, g (s)		33.1	33.1		33.1	33.1	3.6	57.8		7.1	61.3	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.03	0.53		0.06	0.56	
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)		392	463		451	463	56	1805		111	1907	
v/s Ratio Prot							0.02	c0.43		0.05	c0.47	
v/s Ratio Perm		c0.27	0.01		0.01	0.03						
v/c Ratio		0.91	0.02		0.05	0.11	0.70	0.82		0.75	0.85	
Uniform Delay, d1		37.0	27.0		27.3	27.8	52.7	21.7		50.6	20.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		0.65	0.32	
Incremental Delay, d2		24.8	0.0		0.0	0.1	31.4	4.2		18.4	3.7	
Delay (s)		61.8	27.1		27.3	27.9	84.1	25.9		51.2	10.4	
Level of Service		E	C		C	C	F	C		D	B	
Approach Delay (s)		59.1			27.8			27.4			12.4	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.6%	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												
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	0.97	0.95	1.00	0.97	0.95	1.00	0.91	0.91		0.91	0.86	0.91
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.91	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99		0.95	0.99	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	1564	2980		1564	2806	1400
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99		0.95	0.99	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	1564	2980		1564	2806	1400
Volume (vph)	239	876	33	172	800	29	173	66	162	97	36	192
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	260	952	36	187	870	32	188	72	176	105	39	209
RTOR Reduction (vph)	0	0	24	0	0	22	0	134	0	0	91	92
Lane Group Flow (vph)	260	952	12	187	870	10	132	170	0	76	81	13
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	8.1	23.6	23.6	6.0	21.5	21.5	17.1	17.1		9.0	9.0	9.0
Effective Green, g (s)	8.1	23.6	23.6	6.0	21.5	21.5	17.1	17.1		9.0	9.0	9.0
Actuated g/C Ratio	0.11	0.33	0.33	0.08	0.30	0.30	0.24	0.24		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
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)	377	1132	506	279	1031	461	373	711		196	352	176
v/s Ratio Prot	c0.08	c0.28		0.06	0.25		c0.08	0.06		c0.05	0.03	
v/s Ratio Perm			0.01			0.01						0.01
v/c Ratio	0.69	0.84	0.02	0.67	0.84	0.02	0.35	0.24		0.39	0.23	0.07
Uniform Delay, d1	30.6	22.3	16.3	31.9	23.5	17.7	22.7	22.0		28.8	28.2	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
Incremental Delay, d2	5.2	5.8	0.0	6.2	6.4	0.0	2.6	0.8		1.3	0.3	0.2
Delay (s)	35.8	28.1	16.3	38.1	30.0	17.7	25.3	22.8		30.1	28.6	27.9
Level of Service	D	C	B	D	C	B	C	C		C	C	C
Approach Delay (s)		29.4			31.0			23.6			28.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.4%	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												
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	0.95	1.00	1.00	0.95	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	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1756	1538		1737	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (perm)	1719	3438	1538	1719	3438	1538		1756	1538		1737	1538
Volume (vph)	15	972	28	111	897	93	24	16	212	275	56	56
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1057	30	121	975	101	26	17	230	299	61	61
RTOR Reduction (vph)	0	0	20	0	0	56	0	0	192	0	0	46
Lane Group Flow (vph)	16	1057	10	121	975	45	0	43	38	0	360	15
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)	0.7	27.7	27.7	9.3	36.3	36.3		8.4	8.4		19.3	19.3
Effective Green, g (s)	0.7	27.7	27.7	9.3	36.3	36.3		8.4	8.4		19.3	19.3
Actuated g/C Ratio	0.01	0.34	0.34	0.12	0.45	0.45		0.10	0.10		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
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)	15	1180	528	198	1546	692		183	160		415	368
v/s Ratio Prot	0.01	c0.31		0.07	c0.28			0.02			c0.21	
v/s Ratio Perm			0.01			0.03			c0.02			0.01
v/c Ratio	1.07	0.90	0.02	0.61	0.63	0.07		0.23	0.24		0.87	0.04
Uniform Delay, d1	40.0	25.1	17.5	34.0	17.1	12.6		33.2	33.2		29.5	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	255.5	9.1	0.0	5.5	0.8	0.0		0.7	0.8		17.1	0.0
Delay (s)	295.5	34.2	17.5	39.5	17.9	12.6		33.9	34.0		46.6	23.6
Level of Service	F	C	B	D	B	B		C	C		D	C
Approach Delay (s)		37.5			19.6			34.0			43.3	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	149	134	106	119	159	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	162	146	115	129	173	145

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	162	146	115	129	173	145
Volume Left (vph)	162	0	0	0	173	0
Volume Right (vph)	0	146	0	129	0	0
Hadj (s)	0.59	-0.62	0.09	-0.62	0.59	0.09
Departure Headway (s)	6.5	5.3	5.9	5.2	6.3	5.8
Degree Utilization, x	0.29	0.22	0.19	0.19	0.30	0.23
Capacity (veh/h)	524	637	580	655	548	595
Control Delay (s)	11.0	8.6	9.1	8.2	10.8	9.4
Approach Delay (s)	9.8		8.6		10.2	
Approach LOS	A		A		B	

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	231	47	30	183	0	0	0	0	95	1	100
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)	0	251	51	33	199	0	0	0	0	103	1	109
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	199			302			650	541	277	541	566	199
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	199			302			650	541	277	541	566	199
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	76	100	87
cM capacity (veh/h)	1356			1242			322	432	755	438	418	835

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	302	232	104	109
Volume Left	0	33	103	0
Volume Right	51	0	0	109
cSH	1700	1242	438	835
Volume to Capacity	0.18	0.03	0.24	0.13
Queue Length 95th (ft)	0	2	23	11
Control Delay (s)	0.0	1.3	15.8	10.0
Lane LOS		A	C	A
Approach Delay (s)	0.0	1.3	12.8	
Approach LOS			B	

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	97	229	0	0	148	198	65	4	42	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)	105	249	0	0	161	215	71	4	46	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	376			249			728	836	249	776	728	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	376			249			728	836	249	776	728	268
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	91			100			77	98	94	100	100	100
cM capacity (veh/h)	1166			1299			312	273	783	269	315	763

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	354	376	75	46
Volume Left	105	0	71	0
Volume Right	0	215	0	46
cSH	1166	1700	309	783
Volume to Capacity	0.09	0.22	0.24	0.06
Queue Length 95th (ft)	7	0	23	5
Control Delay (s)	3.1	0.0	20.3	9.9
Lane LOS	A		C	A
Approach Delay (s)	3.1	0.0	16.4	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	32	0	239	0	0	0	285	16	0	0	18	61
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)	35	0	260	0	0	0	310	17	0	0	20	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	690	690	53	949	723	17	86			17		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	690	690	53	949	723	17	86			17		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	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 %	88	100	74	100	100	100	79			100		
cM capacity (veh/h)	299	289	1006	148	276	1053	1492			1580		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	295	327	86
Volume Left	35	310	0
Volume Right	260	0	66
cSH	786	1492	1700
Volume to Capacity	0.37	0.21	0.05
Queue Length 95th (ft)	44	20	0
Control Delay (s)	12.3	7.7	0.0
Lane LOS	B	A	
Approach Delay (s)	12.3	7.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	106	485	4	2	325	17	11	0	13	11	0	61
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)	115	527	4	2	353	18	12	0	14	12	0	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		687										
pX, platoon unblocked												
vC, conflicting volume	372			532			1184	1136	529	1139	1129	362
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	372			532			1184	1136	529	1139	1129	362
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	90			100			91	100	97	92	100	90
cM capacity (veh/h)	1170			1021			136	179	544	158	181	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	115	532	2	372	26	12	66
Volume Left	115	0	2	0	12	12	0
Volume Right	0	4	0	18	14	0	66
cSH	1170	1700	1021	1700	230	158	676
Volume to Capacity	0.10	0.31	0.00	0.22	0.11	0.08	0.10
Queue Length 95th (ft)	8	0	0	0	9	6	8
Control Delay (s)	8.4	0.0	8.5	0.0	22.7	29.6	10.9
Lane LOS	A		A		C	D	B
Approach Delay (s)	1.5		0.0		22.7	13.8	
Approach LOS					C	B	

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	288	117	27	245	108	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	313	127	29	266	117	25

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	313	127	29	266	142
Volume Left (vph)	0	0	29	0	117
Volume Right (vph)	0	127	0	0	25
Hadj (s)	0.08	-0.62	0.59	0.09	0.14
Departure Headway (s)	5.3	4.6	6.0	5.5	5.7
Degree Utilization, x	0.46	0.16	0.05	0.40	0.23
Capacity (veh/h)	651	749	576	637	569
Control Delay (s)	11.7	7.3	8.1	10.9	10.3
Approach Delay (s)	10.4		10.7		10.3
Approach LOS	B		B		B

Intersection Summary			
Delay	10.5		
HCM Level of Service	B		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	101	237	191	111	135	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	110	258	208	121	147	148
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	757	221	295			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	757	221	295			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	65	68	83			
cM capacity (veh/h)	310	812	1250			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	110	258	208	121	295
Volume Left	110	0	208	0	0
Volume Right	0	258	0	0	148
cSH	310	812	1250	1700	1700
Volume to Capacity	0.35	0.32	0.17	0.07	0.17
Queue Length 95th (ft)	39	34	15	0	0
Control Delay (s)	22.9	11.5	8.5	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.9		5.3		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Frt	1.00	1.00	0.85	1.00	0.91					1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1648					1719	1810	
Flt Permitted	0.95	1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1648					1719	1810	
Volume (vph)	46	116	66	178	194	286	0	0	0	168	185	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	126	72	193	211	311	0	0	0	183	201	0
RTOR Reduction (vph)	0	0	35	0	53	0	0	0	0	0	0	0
Lane Group Flow (vph)	50	126	37	193	469	0	0	0	0	183	201	0
Turn Type	Prot		Perm	Prot						Prot		Perm
Protected Phases	7	4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.6	41.5	41.5	13.3	45.2					13.2	13.2	
Effective Green, g (s)	9.6	41.5	41.5	13.3	45.2					13.2	13.2	
Actuated g/C Ratio	0.12	0.52	0.52	0.17	0.57					0.16	0.16	
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)	206	939	798	286	931					284	299	
v/s Ratio Prot	c0.03	0.07		c0.11	c0.28					0.11	c0.11	
v/s Ratio Perm			0.02									
v/c Ratio	0.24	0.13	0.05	0.67	0.50					0.64	0.67	
Uniform Delay, d1	31.9	10.0	9.5	31.3	10.6					31.2	31.4	
Progression Factor	1.00	1.00	1.00	0.90	0.61					1.00	1.00	
Incremental Delay, d2	0.6	0.3	0.1	6.1	1.9					4.9	5.8	
Delay (s)	32.5	10.3	9.6	34.2	8.3					36.2	37.2	
Level of Service	C	B	A	C	A					D	D	
Approach Delay (s)		14.6			15.3			0.0			36.7	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	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	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1810	3438		1719	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1810	3438		1719	1538
Volume (vph)	0	284	572	0	116	86
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	309	622	0	126	93
RTOR Reduction (vph)	0	0	0	0	0	81
Lane Group Flow (vph)	0	309	622	0	126	12
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		61.7	61.7		10.3	10.3
Effective Green, g (s)		61.7	61.7		10.3	10.3
Actuated g/C Ratio		0.77	0.77		0.13	0.13
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1396	2652		221	198
v/s Ratio Prot		0.17	c0.18		c0.07	
v/s Ratio Perm						0.01
v/c Ratio		0.22	0.23		0.57	0.06
Uniform Delay, d1		2.5	2.6		32.8	30.6
Progression Factor		0.42	0.55		1.00	1.00
Incremental Delay, d2		0.3	0.2		3.5	0.1
Delay (s)		1.4	1.6		36.3	30.7
Level of Service		A	A		D	C
Approach Delay (s)		1.4	1.6		33.9	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	80.0	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.87		1.00	0.90		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1577		3335	1625		1719	3438	1538	1719	3434	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	1577		3335	1625		1719	3438	1538	1719	3434	
Volume (vph)	25	29	178	196	26	54	70	619	46	60	1430	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	32	193	213	28	59	76	673	50	65	1554	13
RTOR Reduction (vph)	0	135	0	0	51	0	0	0	26	0	1	0
Lane Group Flow (vph)	27	90	0	213	36	0	76	673	24	65	1566	0
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.6	9.6		10.2	10.2		5.8	39.0	39.0	5.0	38.2	
Effective Green, g (s)	9.6	9.6		10.2	10.2		5.8	39.0	39.0	5.0	38.2	
Actuated g/C Ratio	0.12	0.12		0.13	0.13		0.07	0.49	0.49	0.06	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	207	190		426	208		125	1680	752	108	1644	
v/s Ratio Prot	0.02	c0.06		c0.06	0.02		c0.04	0.20		0.04	c0.46	
v/s Ratio Perm									0.02			
v/c Ratio	0.13	0.48		0.50	0.17		0.61	0.40	0.03	0.60	0.95	
Uniform Delay, d1	31.4	32.8		32.4	31.0		35.9	13.0	10.6	36.4	19.9	
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	1.9		0.9	0.4		8.1	0.2	0.0	9.1	12.7	
Delay (s)	31.7	34.6		33.3	31.4		44.0	13.1	10.6	45.5	32.7	
Level of Service	C	C		C	C		D	B	B	D	C	
Approach Delay (s)		34.3			32.8			15.9			33.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1719	1538	1719	3438	3433	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1719	1538	1719	3438	3433	
Volume (vph)	34	128	91	759	1632	16
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	139	99	825	1774	17
RTOR Reduction (vph)	0	128	0	0	1	0
Lane Group Flow (vph)	37	11	99	825	1790	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.9	7.9	9.8	84.1	70.3	
Effective Green, g (s)	7.9	7.9	9.8	84.1	70.3	
Actuated g/C Ratio	0.08	0.08	0.10	0.84	0.70	
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)	136	122	168	2891	2413	
v/s Ratio Prot	c0.02		c0.06	0.24	c0.52	
v/s Ratio Perm		0.01				
v/c Ratio	0.27	0.09	0.59	0.29	0.74	
Uniform Delay, d1	43.3	42.7	43.2	1.7	9.2	
Progression Factor	1.00	1.00	1.21	0.72	1.00	
Incremental Delay, d2	1.1	0.3	5.0	0.2	2.1	
Delay (s)	44.4	43.0	57.4	1.4	11.3	
Level of Service	D	D	E	A	B	
Approach Delay (s)	43.3			7.4	11.3	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1538	1719	3438	3438	1538
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1538	1719	3438	3438	1538
Volume (vph)	37	40	112	901	1591	170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	43	122	979	1729	185
RTOR Reduction (vph)	0	40	0	0	0	54
Lane Group Flow (vph)	40	3	122	979	1729	131
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	6.6	6.6	10.7	85.4	70.7	70.7
Effective Green, g (s)	6.6	6.6	10.7	85.4	70.7	70.7
Actuated g/C Ratio	0.07	0.07	0.11	0.85	0.71	0.71
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	102	184	2936	2431	1087
v/s Ratio Prot	c0.02		c0.07	0.28	c0.50	
v/s Ratio Perm		0.00				0.09
v/c Ratio	0.35	0.03	0.66	0.33	0.71	0.12
Uniform Delay, d1	44.7	43.7	42.9	1.5	8.6	4.7
Progression Factor	1.00	1.00	0.78	1.41	0.34	0.10
Incremental Delay, d2	1.9	0.1	8.1	0.3	1.2	0.2
Delay (s)	46.6	43.8	41.6	2.4	4.2	0.6
Level of Service	D	D	D	A	A	A
Approach Delay (s)	45.1			6.7	3.8	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.5%	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												
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	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3374	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3374	
Volume (vph)	89	157	107	153	383	318	261	606	117	436	1047	148
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	171	116	166	416	346	284	659	127	474	1138	161
RTOR Reduction (vph)	0	0	36	0	0	0	0	0	75	0	11	0
Lane Group Flow (vph)	97	171	80	166	416	346	284	659	52	474	1289	0
Turn Type	Prot		pm+ov	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	7.8	10.1	21.8	14.7	17.0	100.0	11.7	40.6	40.6	18.6	47.5	
Effective Green, g (s)	7.8	10.1	21.8	14.7	17.0	100.0	11.7	40.6	40.6	18.6	47.5	
Actuated g/C Ratio	0.08	0.10	0.22	0.15	0.17	1.00	0.12	0.41	0.41	0.19	0.48	
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)	134	347	397	490	584	1538	390	1396	624	620	1603	
v/s Ratio Prot	c0.06	0.05	0.02	0.05	c0.12		c0.09	0.19		0.14	c0.38	
v/s Ratio Perm			0.03			0.22			0.03			
v/c Ratio	0.72	0.49	0.20	0.34	0.71	0.22	0.73	0.47	0.08	0.76	0.80	
Uniform Delay, d1	45.0	42.5	32.0	38.3	39.2	0.0	42.6	21.8	18.3	38.6	22.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.42	0.15	0.78	0.47	
Incremental Delay, d2	17.5	1.1	0.3	0.4	4.1	0.3	6.4	1.1	0.2	4.0	3.2	
Delay (s)	62.6	43.6	32.2	38.7	43.3	0.3	34.2	10.4	2.9	34.1	13.7	
Level of Service	E	D	C	D	D	A	C	B	A	C	B	
Approach Delay (s)		45.0			26.5			15.8			19.1	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.0%	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												
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	0.97		1.00		1.00	1.00	1.00	0.91	1.00	1.00	0.91	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	0.95		1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335		1538		1744	1538	1719	4940	1538	1719	4940	1538
Flt Permitted	0.95		1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335		1538		1744	1538	1719	4940	1538	1719	4940	1538
Volume (vph)	47	0	36	28	9	35	89	1038	43	35	1273	59
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	0	39	30	10	38	97	1128	47	38	1384	64
RTOR Reduction (vph)	0	0	33	0	0	35	0	0	17	0	0	24
Lane Group Flow (vph)	51	0	6	0	40	3	97	1128	30	38	1384	40
Turn Type	Split		pm+ov	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.5		14.2		6.6	6.6	9.7	63.4	63.4	9.5	63.2	63.2
Effective Green, g (s)	4.5		14.2		6.6	6.6	9.7	63.4	63.4	9.5	63.2	63.2
Actuated g/C Ratio	0.04		0.14		0.07	0.07	0.10	0.63	0.63	0.10	0.63	0.63
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)	150		218		115	102	167	3132	975	163	3122	972
v/s Ratio Prot	c0.02		0.00		c0.02		c0.06	0.23		0.02	c0.28	
v/s Ratio Perm			0.00			0.00			0.02			0.03
v/c Ratio	0.34		0.03		0.35	0.02	0.58	0.36	0.03	0.23	0.44	0.04
Uniform Delay, d1	46.3		36.9		44.6	43.7	43.2	8.7	6.8	41.9	9.4	7.0
Progression Factor	1.00		1.00		1.00	1.00	0.86	0.53	0.66	0.69	0.30	0.21
Incremental Delay, d2	1.4		0.0		1.8	0.1	4.8	0.3	0.1	0.5	0.3	0.1
Delay (s)	47.7		37.0		46.5	43.8	41.8	4.9	4.5	29.3	3.2	1.5
Level of Service	D		D		D	D	D	A	A	C	A	A
Approach Delay (s)		43.0			45.2			7.7			3.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1810	1538	1719	4897		1719	4908	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1810	1538	1719	4897		1719	4908	
Volume (vph)	103	38	207	55	61	55	344	970	60	65	1131	51
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	41	225	60	66	60	374	1054	65	71	1229	55
RTOR Reduction (vph)	0	0	80	0	0	50	0	6	0	0	4	0
Lane Group Flow (vph)	112	41	145	60	66	10	374	1113	0	71	1280	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	9.7	8.6	34.1	9.7	8.6	16.9	25.5	57.4		8.3	40.2	
Effective Green, g (s)	9.7	8.6	34.1	9.7	8.6	16.9	25.5	57.4		8.3	40.2	
Actuated g/C Ratio	0.10	0.09	0.34	0.10	0.09	0.17	0.26	0.57		0.08	0.40	
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)	167	156	524	167	156	321	438	2811		143	1973	
v/s Ratio Prot	c0.07	0.02	0.07	0.03	c0.04	0.00	c0.22	0.23		0.04	c0.26	
v/s Ratio Perm			0.02			0.00						
v/c Ratio	0.67	0.26	0.28	0.36	0.42	0.03	0.85	0.40		0.50	0.65	
Uniform Delay, d1	43.6	42.7	24.0	42.2	43.3	34.7	35.5	11.7		43.9	24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.09		0.91	0.36	
Incremental Delay, d2	10.1	0.9	0.3	1.3	1.8	0.0	13.1	0.4		2.5	1.6	
Delay (s)	53.7	43.6	24.3	43.6	45.2	34.8	44.9	13.1		42.5	10.4	
Level of Service	D	D	C	D	D	C	D	B		D	B	
Approach Delay (s)		35.1			41.3			21.1			12.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.4%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00		1.00	0.91		1.00	0.91	
Frt		0.90		1.00	0.95		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1639		3335	1721		1719	4857		1719	4928	
Flt Permitted		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1639		3335	1721		1719	4857		1719	4928	
Volume (vph)	15	12	81	164	50	24	114	1335	168	28	1301	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	13	88	178	54	26	124	1451	183	30	1414	23
RTOR Reduction (vph)	0	81	0	0	19	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	36	0	178	61	0	124	1623	0	30	1436	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		7.9		10.5	10.5		13.8	61.4		4.2	51.8	
Effective Green, g (s)		7.9		10.5	10.5		13.8	61.4		4.2	51.8	
Actuated g/C Ratio		0.08		0.10	0.10		0.14	0.61		0.04	0.52	
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)		129		350	181		237	2982		72	2553	
v/s Ratio Prot		c0.02		c0.05	0.04		c0.07	c0.33		0.02	c0.29	
v/s Ratio Perm												
v/c Ratio		0.28		0.51	0.34		0.52	0.54		0.42	0.56	
Uniform Delay, d1		43.4		42.3	41.5		40.0	11.2		46.7	16.4	
Progression Factor		1.00		1.00	1.00		0.62	0.59		0.95	0.23	
Incremental Delay, d2		1.2		1.2	1.1		1.8	0.6		3.2	0.8	
Delay (s)		44.5		43.5	42.6		26.5	7.2		47.5	4.5	
Level of Service		D		D	D		C	A		D	A	
Approach Delay (s)		44.5			43.2			8.6			5.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.0%	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												
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		0.97	1.00		1.00	0.91	1.00	1.00	0.91	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	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Volume (vph)	14	0	5	120	0	104	24	1498	117	135	1368	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	0	5	130	0	113	26	1628	127	147	1487	47
RTOR Reduction (vph)	0	5	0	0	105	0	0	0	41	0	0	13
Lane Group Flow (vph)	15	0	0	130	8	0	26	1628	86	147	1487	34
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	4.6	1.1		10.5	7.0		4.5	58.4	58.4	14.0	67.9	67.9
Effective Green, g (s)	4.6	1.1		10.5	7.0		4.5	58.4	58.4	14.0	67.9	67.9
Actuated g/C Ratio	0.05	0.01		0.10	0.07		0.04	0.58	0.58	0.14	0.68	0.68
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)	79	17		350	108		77	2885	898	241	3354	1044
v/s Ratio Prot	0.01	0.00		c0.04	c0.01		0.02	c0.33		c0.09	0.30	
v/s Ratio Perm									0.06			0.02
v/c Ratio	0.19	0.00		0.37	0.07		0.34	0.56	0.10	0.61	0.44	0.03
Uniform Delay, d1	45.9	48.9		41.7	43.5		46.3	12.9	9.2	40.4	7.4	5.3
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.29	0.02	0.91	0.12	0.01
Incremental Delay, d2	1.2	0.1		0.7	0.3		2.2	0.7	0.2	3.7	0.4	0.1
Delay (s)	47.1	49.0		42.3	43.8		35.4	4.4	0.4	40.6	1.3	0.1
Level of Service	D	D		D	D		D	A	A	D	A	A
Approach Delay (s)		47.6			43.0			4.5			4.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.5%	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												
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	0.91		0.97	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765	1538	1719	1810	1538	1719	4895		3335	4928	
Flt Permitted		0.98	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1765	1538	1719	1810	1538	1719	4895		3335	4928	
Volume (vph)	7	7	13	142	11	279	29	1367	87	158	1316	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	8	14	154	12	303	32	1486	95	172	1430	23
RTOR Reduction (vph)	0	0	13	0	0	224	0	6	0	0	1	0
Lane Group Flow (vph)	0	16	1	154	12	79	32	1575	0	172	1452	0
Turn Type	Split		Perm	Split		pm+ov	Prot			Prot		
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		4.2	4.2	14.2	14.2	26.1	5.1	53.7		11.9	60.5	
Effective Green, g (s)		4.2	4.2	14.2	14.2	26.1	5.1	53.7		11.9	60.5	
Actuated g/C Ratio		0.04	0.04	0.14	0.14	0.26	0.05	0.54		0.12	0.60	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		74	65	244	257	401	88	2629		397	2981	
v/s Ratio Prot		c0.01		c0.09	0.01	0.02	0.02	c0.32		0.05	c0.29	
v/s Ratio Perm			0.00			0.03						
v/c Ratio		0.22	0.01	0.63	0.05	0.20	0.36	0.60		0.43	0.49	
Uniform Delay, d1		46.3	45.9	40.4	37.1	28.8	45.9	15.8		40.9	11.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.16	0.35		0.68	0.57	
Incremental Delay, d2		1.5	0.1	5.2	0.1	0.2	2.1	0.9		0.7	0.5	
Delay (s)		47.8	46.0	45.7	37.1	29.0	55.6	6.4		28.3	6.8	
Level of Service		D	D	D	D	C	E	A		C	A	
Approach Delay (s)		46.9			34.7			7.4			9.1	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
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												
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	0.95		1.00	0.95	
Frt	1.00	0.85			0.95		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1541			1666		1719	3437		1719	3423	
Flt Permitted	0.75	1.00			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1362	1541			1443		1719	3437		1719	3423	
Volume (vph)	62	1	75	5	0	3	49	1457	2	1	1428	44
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1	82	5	0	3	53	1584	2	1	1552	48
RTOR Reduction (vph)	0	75	0	0	3	0	0	0	0	0	2	0
Lane Group Flow (vph)	67	8	0	0	5	0	53	1586	0	1	1598	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	8.9	8.9			8.9		9.5	77.7		1.4	69.6	
Effective Green, g (s)	8.9	8.9			8.9		9.5	77.7		1.4	69.6	
Actuated g/C Ratio	0.09	0.09			0.09		0.10	0.78		0.01	0.70	
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)	121	137			128		163	2671		24	2382	
v/s Ratio Prot		0.01					c0.03	c0.46		0.00	c0.47	
v/s Ratio Perm	c0.05				0.00							
v/c Ratio	0.55	0.06			0.04		0.33	0.59		0.04	0.67	
Uniform Delay, d1	43.6	41.7			41.6		42.3	4.6		48.6	8.7	
Progression Factor	1.00	1.00			1.00		1.08	0.33		0.92	0.37	
Incremental Delay, d2	5.4	0.2			0.1		0.9	0.7		0.6	1.4	
Delay (s)	49.0	41.9			41.8		46.7	2.2		45.5	4.6	
Level of Service	D	D			D		D	A		D	A	
Approach Delay (s)		45.1			41.8			3.7			4.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.5%	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												
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	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1728	1538		1798	1538	1719	3437		1719	3425	
Flt Permitted		0.71	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1292	1538		1751	1538	1719	3437		1719	3425	
Volume (vph)	179	10	20	4	26	70	30	1260	3	48	1363	35
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	11	22	4	28	76	33	1370	3	52	1482	38
RTOR Reduction (vph)	0	0	18	0	0	61	0	0	0	0	1	0
Lane Group Flow (vph)	0	206	4	0	32	15	33	1373	0	52	1519	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		19.9	19.9		19.9	19.9	4.5	59.5		8.6	63.6	
Effective Green, g (s)		19.9	19.9		19.9	19.9	4.5	59.5		8.6	63.6	
Actuated g/C Ratio		0.20	0.20		0.20	0.20	0.04	0.60		0.09	0.64	
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)		257	306		348	306	77	2045		148	2178	
v/s Ratio Prot							0.02	c0.40		0.03	c0.44	
v/s Ratio Perm		c0.16	0.00		0.02	0.01						
v/c Ratio		0.80	0.01		0.09	0.05	0.43	0.67		0.35	0.70	
Uniform Delay, d1		38.2	32.2		32.7	32.4	46.5	13.7		43.1	11.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		0.59	0.19	
Incremental Delay, d2		16.3	0.0		0.1	0.1	3.8	1.8		1.1	1.5	
Delay (s)		54.4	32.2		32.8	32.5	50.3	15.4		26.7	3.8	
Level of Service		D	C		C	C	D	B		C	A	
Approach Delay (s)		52.3			32.6			16.3			4.6	
Approach LOS		D			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.97	0.95	1.00	0.97	0.95	1.00	0.91	0.91		0.91	0.86	0.91
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	0.89	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	1564	2984		1564	2778	1400
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	1564	2984		1564	2778	1400
Volume (vph)	73	557	6	99	879	16	59	10	37	13	14	71
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	605	7	108	955	17	64	11	40	14	15	77
RTOR Reduction (vph)	0	0	5	0	0	11	0	28	0	0	36	37
Lane Group Flow (vph)	79	605	2	108	955	6	39	48	0	14	17	2
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	20.0	20.0	4.5	22.5	22.5	18.3	18.3		3.5	3.5	3.5
Effective Green, g (s)	2.0	20.0	20.0	4.5	22.5	22.5	18.3	18.3		3.5	3.5	3.5
Actuated g/C Ratio	0.03	0.32	0.32	0.07	0.36	0.36	0.29	0.29		0.06	0.06	0.06
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)	107	1104	494	241	1242	555	459	877		88	156	79
v/s Ratio Prot	0.02	c0.18		0.03	c0.28		c0.02	0.02		c0.01	0.01	
v/s Ratio Perm			0.00			0.00						0.00
v/c Ratio	0.74	0.55	0.00	0.45	0.77	0.01	0.08	0.05		0.16	0.11	0.03
Uniform Delay, d1	29.9	17.4	14.4	27.7	17.6	12.8	15.9	15.8		28.0	27.9	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.1	0.6	0.0	1.3	2.9	0.0	0.4	0.1		0.8	0.3	0.1
Delay (s)	53.0	18.0	14.4	29.0	20.5	12.8	16.3	15.9		28.8	28.2	27.9
Level of Service	D	B	B	C	C	B	B	B		C	C	C
Approach Delay (s)		22.0			21.3			16.0			28.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.9%	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												
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	0.95	1.00	1.00	0.95	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	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1782	1538		1735	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.96	1.00
Satd. Flow (perm)	1719	3438	1538	1719	3438	1538		1782	1538		1735	1538
Volume (vph)	19	500	9	110	962	245	19	43	64	113	18	24
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	543	10	120	1046	266	21	47	70	123	20	26
RTOR Reduction (vph)	0	0	8	0	0	154	0	0	61	0	0	22
Lane Group Flow (vph)	21	543	2	120	1046	112	0	68	9	0	143	4
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)	1.2	14.6	14.6	12.1	25.5	25.5		7.9	7.9		10.1	10.1
Effective Green, g (s)	1.2	14.6	14.6	12.1	25.5	25.5		7.9	7.9		10.1	10.1
Actuated g/C Ratio	0.02	0.24	0.24	0.20	0.42	0.42		0.13	0.13		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
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)	34	827	370	343	1444	646		232	200		289	256
v/s Ratio Prot	0.01	c0.16		0.07	c0.30			c0.04			c0.08	
v/s Ratio Perm			0.00			0.07			0.01			0.00
v/c Ratio	0.62	0.66	0.01	0.35	0.72	0.17		0.29	0.05		0.49	0.02
Uniform Delay, d1	29.5	20.8	17.5	20.9	14.7	11.0		23.9	23.1		23.0	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	29.0	1.9	0.0	0.6	1.8	0.1		0.7	0.1		1.3	0.0
Delay (s)	58.5	22.7	17.5	21.5	16.5	11.1		24.6	23.2		24.3	21.2
Level of Service	E	C	B	C	B	B		C	C		C	C
Approach Delay (s)		23.9			15.9			23.9			23.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.8%	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)	123	215	171	58	197	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	234	186	63	214	174

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	134	234	186	63	214	174
Volume Left (vph)	134	0	0	0	214	0
Volume Right (vph)	0	234	0	63	0	0
Hadj (s)	0.59	-0.62	0.08	-0.62	0.59	0.08
Departure Headway (s)	6.8	5.6	6.2	5.5	6.5	6.0
Degree Utilization, x	0.25	0.36	0.32	0.10	0.39	0.29
Capacity (veh/h)	505	613	554	615	531	575
Control Delay (s)	10.8	10.5	11.0	7.9	12.4	10.3
Approach Delay (s)	10.6		10.2		11.4	
Approach LOS	B		B		B	

Intersection Summary			
Delay	10.8		
HCM Level of Service	B		
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	140	115	18	214	0	0	0	0	60	0	124
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)	0	152	125	20	233	0	0	0	0	65	0	135
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	233			277			621	486	215	486	549	233
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	233			277			621	486	215	486	549	233
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			100	100	100	86	100	83
cM capacity (veh/h)	1317			1269			325	469	818	481	432	799

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	277	252	65	135
Volume Left	0	20	65	0
Volume Right	125	0	0	135
cSH	1700	1269	481	799
Volume to Capacity	0.16	0.02	0.14	0.17
Queue Length 95th (ft)	0	1	12	15
Control Delay (s)	0.0	0.7	13.7	10.4
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.7	11.5	
Approach LOS			B	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	60	140	0	0	139	65	93	1	41	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)	65	152	0	0	151	71	101	1	45	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	222			152			469	504	152	514	469	186
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	222			152			469	504	152	514	469	186
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	95			100			79	100	95	100	100	100
cM capacity (veh/h)	1330			1410			481	443	886	425	464	848

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	217	222	102	45
Volume Left	65	0	101	0
Volume Right	0	71	0	45
cSH	1330	1700	480	886
Volume to Capacity	0.05	0.13	0.21	0.05
Queue Length 95th (ft)	4	0	20	4
Control Delay (s)	2.6	0.0	14.5	9.3
Lane LOS	A		B	A
Approach Delay (s)	2.6	0.0	12.9	
Approach LOS			B	

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	42	0	139	0	0	0	180	17	0	0	7	24
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)	46	0	151	0	0	0	196	18	0	0	8	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	430	430	21	582	443	18	34			18		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430	430	21	582	443	18	34			18		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	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 %	90	100	86	100	100	100	87			100		
cM capacity (veh/h)	479	449	1048	325	441	1051	1559			1579		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	197	214	34
Volume Left	46	196	0
Volume Right	151	0	26
cSH	822	1559	1700
Volume to Capacity	0.24	0.13	0.02
Queue Length 95th (ft)	23	11	0
Control Delay (s)	10.8	7.1	0.0
Lane LOS	B	A	
Approach Delay (s)	10.8	7.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	8.2		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	38	237	10	6	368	10	7	0	6	18	2	102
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)	41	258	11	7	400	11	8	0	7	20	2	111
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		687										
pX, platoon unblocked												
vC, conflicting volume	411			268			871	770	263	765	770	405
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	411			268			871	770	263	765	770	405
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	96			99			96	100	99	94	99	83
cM capacity (veh/h)	1132			1278			214	314	768	304	314	639

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	41	268	7	411	14	20	113
Volume Left	41	0	7	0	8	20	0
Volume Right	0	11	0	11	7	0	111
cSH	1132	1700	1278	1700	320	304	626
Volume to Capacity	0.04	0.16	0.01	0.24	0.04	0.06	0.18
Queue Length 95th (ft)	3	0	0	0	3	5	16
Control Delay (s)	8.3	0.0	7.8	0.0	16.8	17.7	12.0
Lane LOS	A		A		C	C	B
Approach Delay (s)	1.1		0.1		16.8	12.8	
Approach LOS					C	B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	264	104	27	230	98	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	287	113	29	250	107	25

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	287	113	29	250	132
Volume Left (vph)	0	0	29	0	107
Volume Right (vph)	0	113	0	0	25
Hadj (s)	0.09	-0.62	0.59	0.09	0.13
Departure Headway (s)	5.3	4.6	5.9	5.4	5.6
Degree Utilization, x	0.42	0.14	0.05	0.37	0.20
Capacity (veh/h)	659	760	586	649	584
Control Delay (s)	10.8	7.1	8.0	10.3	10.0
Approach Delay (s)	9.8		10.1		10.0
Approach LOS	A		B		A

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	129	193	156	69	110	182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	140	210	170	75	120	198
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	633	218	317			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	633	218	317			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	63	74	86			
cM capacity (veh/h)	378	814	1226			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	140	210	170	75	317
Volume Left	140	0	170	0	0
Volume Right	0	210	0	0	198
cSH	378	814	1226	1700	1700
Volume to Capacity	0.37	0.26	0.14	0.04	0.19
Queue Length 95th (ft)	42	26	12	0	0
Control Delay (s)	20.0	11.0	8.4	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.6		5.8		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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
Frt	1.00	1.00	0.85	1.00	0.91					1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)	1719	1810	1538	1719	1649					1719	1810	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00					0.95	1.00	1.00
Satd. Flow (perm)	1719	1810	1538	1719	1649					1719	1810	1538
Volume (vph)	33	54	50	254	137	200	0	0	0	112	232	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	59	54	276	149	217	0	0	0	122	252	2
RTOR Reduction (vph)	0	0	37	0	39	0	0	0	0	0	0	2
Lane Group Flow (vph)	36	59	17	276	327	0	0	0	0	122	252	0
Turn Type	Prot		Perm	Prot						Prot		Perm
Protected Phases	7	4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)	3.4	25.7	25.7	26.4	48.7					15.9	15.9	15.9
Effective Green, g (s)	3.4	25.7	25.7	26.4	48.7					15.9	15.9	15.9
Actuated g/C Ratio	0.04	0.32	0.32	0.33	0.61					0.20	0.20	0.20
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)	73	581	494	567	1004					342	360	306
v/s Ratio Prot	c0.02	0.03		c0.16	c0.20					0.07	c0.14	
v/s Ratio Perm			0.01									0.00
v/c Ratio	0.49	0.10	0.04	0.49	0.33					0.36	0.70	0.00
Uniform Delay, d1	37.5	19.0	18.6	21.4	7.6					27.6	29.8	25.7
Progression Factor	1.00	1.00	1.00	0.65	0.22					1.00	1.00	1.00
Incremental Delay, d2	5.2	0.3	0.1	0.7	0.9					0.6	6.0	0.0
Delay (s)	42.6	19.4	18.8	14.6	2.5					28.3	35.9	25.7
Level of Service	D	B	B	B	A					C	D	C
Approach Delay (s)		24.8			7.7			0.0			33.3	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1810	3438		1719	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1810	3438		1719	1538
Volume (vph)	0	166	517	0	100	74
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	180	562	0	109	80
RTOR Reduction (vph)	0	0	0	0	0	70
Lane Group Flow (vph)	0	180	562	0	109	10
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		62.4	62.4		9.6	9.6
Effective Green, g (s)		62.4	62.4		9.6	9.6
Actuated g/C Ratio		0.78	0.78		0.12	0.12
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1412	2682		206	185
v/s Ratio Prot		0.10	c0.16		c0.06	
v/s Ratio Perm						0.01
v/c Ratio		0.13	0.21		0.53	0.05
Uniform Delay, d1		2.1	2.3		33.1	31.2
Progression Factor		1.00	1.68		1.00	1.00
Incremental Delay, d2		0.2	0.2		2.4	0.1
Delay (s)		2.3	4.1		35.5	31.3
Level of Service		A	A		D	C
Approach Delay (s)		2.3	4.1		33.7	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.0%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	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	1810			1810	1538		1726	1538			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1719	1810			1810	1538		1726	1538			
Volume (vph)	24	242	0	0	416	253	101	3	158	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	263	0	0	452	275	110	3	172	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	87	0	0	150	0	0	0
Lane Group Flow (vph)	26	263	0	0	452	188	0	113	22	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	3.2	61.8			54.6	54.6		10.2	10.2			
Effective Green, g (s)	3.2	61.8			54.6	54.6		10.2	10.2			
Actuated g/C Ratio	0.04	0.77			0.68	0.68		0.13	0.13			
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)	69	1398			1235	1050		220	196			
v/s Ratio Prot	c0.02	0.15			c0.25			c0.07				
v/s Ratio Perm						0.12			0.01			
v/c Ratio	0.38	0.19			0.37	0.18		0.51	0.11			
Uniform Delay, d1	37.4	2.4			5.4	4.6		32.6	30.9			
Progression Factor	1.28	0.15			0.38	0.05		1.00	1.00			
Incremental Delay, d2	3.3	0.3			0.8	0.3		2.0	0.3			
Delay (s)	51.1	0.7			2.8	0.6		34.6	31.1			
Level of Service	D	A			A	A		C	C			
Approach Delay (s)		5.2			1.9			32.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.0%	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												
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	0.97	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		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)	3335	1810	1538	1719	3377		1719	3347		1719	3438	1538
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)	3335	1810	1538	1719	3377		1719	3347		1719	3438	1538
Volume (vph)	120	77	203	86	333	45	233	151	32	21	79	103
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	84	221	93	362	49	253	164	35	23	86	112
RTOR Reduction (vph)	0	0	140	0	11	0	0	24	0	0	0	102
Lane Group Flow (vph)	130	84	81	93	400	0	253	175	0	23	86	11
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)	7.7	29.4	29.4	8.0	29.7		19.1	24.6		2.0	7.5	7.5
Effective Green, g (s)	7.7	29.4	29.4	8.0	29.7		19.1	24.6		2.0	7.5	7.5
Actuated g/C Ratio	0.10	0.37	0.37	0.10	0.37		0.24	0.31		0.02	0.09	0.09
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)	321	665	565	172	1254		410	1029		43	322	144
v/s Ratio Prot	0.04	0.05		c0.05	c0.12		c0.15	0.05		c0.01	c0.03	
v/s Ratio Perm			0.05									0.01
v/c Ratio	0.40	0.13	0.14	0.54	0.32		0.62	0.17		0.53	0.27	0.07
Uniform Delay, d1	34.0	16.8	16.9	34.3	17.9		27.2	20.2		38.5	33.7	33.1
Progression Factor	0.86	0.63	0.52	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.4	0.5	3.4	0.7		2.8	0.1		12.2	0.4	0.2
Delay (s)	30.1	11.0	9.4	37.7	18.6		29.9	20.3		50.7	34.1	33.3
Level of Service	C	B	A	D	B		C	C		D	C	C
Approach Delay (s)		15.9			22.1			25.7			35.4	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.6%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.88		1.00	0.89		1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1584		3335	1614		1719	3438	1538	1719	3432	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1719	1584		3335	1614		1719	3438	1538	1719	3432	
Volume (vph)	45	33	163	166	43	112	243	1713	172	46	997	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	36	177	180	47	122	264	1862	187	50	1084	12
RTOR Reduction (vph)	0	161	0	0	89	0	0	0	69	0	1	0
Lane Group Flow (vph)	49	52	0	180	80	0	264	1862	118	50	1095	0
Turn Type	Split			Split			Prot		Perm	Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	9.7	9.7		11.6	11.6		22.3	69.5	69.5	3.2	50.4	
Effective Green, g (s)	9.7	9.7		11.6	11.6		22.3	69.5	69.5	3.2	50.4	
Actuated g/C Ratio	0.09	0.09		0.11	0.11		0.20	0.63	0.63	0.03	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	152	140		352	170		348	2172	972	50	1572	
v/s Ratio Prot	0.03	c0.03		c0.05	0.05		c0.15	c0.54		0.03	0.32	
v/s Ratio Perm									0.08			
v/c Ratio	0.32	0.37		0.51	0.47		0.76	0.86	0.12	1.00	0.70	
Uniform Delay, d1	47.1	47.3		46.5	46.3		41.3	16.3	8.1	53.4	23.7	
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.55	0.59	1.00	1.00	
Incremental Delay, d2	1.2	1.6		1.3	2.1		6.5	3.3	0.2	127.3	2.6	
Delay (s)	48.3	48.9		47.8	48.4		41.9	12.2	4.9	180.7	26.3	
Level of Service	D	D		D	D		D	B	A	F	C	
Approach Delay (s)		48.8			48.1			15.0			33.0	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1719	1538	1719	3438	3421	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1719	1538	1719	3438	3421	
Volume (vph)	24	113	212	2011	1255	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	123	230	2186	1364	47
RTOR Reduction (vph)	0	115	0	0	2	0
Lane Group Flow (vph)	26	8	230	2186	1409	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	7.6	7.6	30.4	94.4	60.0	
Effective Green, g (s)	7.6	7.6	30.4	94.4	60.0	
Actuated g/C Ratio	0.07	0.07	0.28	0.86	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)	119	106	475	2950	1866	
v/s Ratio Prot	c0.02		0.13	c0.64	0.41	
v/s Ratio Perm		0.01				
v/c Ratio	0.22	0.08	0.48	0.74	0.76	
Uniform Delay, d1	48.4	47.9	33.3	3.0	19.3	
Progression Factor	1.00	1.00	0.74	0.29	0.24	
Incremental Delay, d2	0.9	0.3	0.5	1.0	2.2	
Delay (s)	49.3	48.3	24.9	1.9	6.8	
Level of Service	D	D	C	A	A	
Approach Delay (s)	48.4			4.1	6.8	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1538	1719	3438	3438	1538
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	1719	1538	1719	3438	3438	1538
Volume (vph)	120	104	37	2070	1341	28
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	113	40	2250	1458	30
RTOR Reduction (vph)	0	99	0	0	0	8
Lane Group Flow (vph)	130	14	40	2250	1458	22
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	13.2	13.2	5.0	88.8	79.8	79.8
Effective Green, g (s)	13.2	13.2	5.0	88.8	79.8	79.8
Actuated g/C Ratio	0.12	0.12	0.05	0.81	0.73	0.73
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)	206	185	78	2775	2494	1116
v/s Ratio Prot	c0.08		0.02	c0.65	0.42	
v/s Ratio Perm		0.01				0.01
v/c Ratio	0.63	0.07	0.51	0.81	0.58	0.02
Uniform Delay, d1	46.1	43.0	51.3	5.9	7.2	4.2
Progression Factor	1.00	1.00	1.17	0.88	0.07	0.01
Incremental Delay, d2	6.2	0.2	3.6	1.7	0.7	0.0
Delay (s)	52.2	43.1	63.8	6.9	1.2	0.1
Level of Service	D	D	E	A	A	A
Approach Delay (s)	48.0			7.9	1.2	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	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												
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	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3401	
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	3438	1538	3335	3438	1538	3335	3438	1538	3335	3401	
Volume (vph)	162	344	193	239	230	752	133	1193	281	468	908	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	374	210	260	250	817	145	1297	305	509	987	76
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	177	0	5	0
Lane Group Flow (vph)	176	374	160	260	250	817	145	1297	128	509	1058	0
Turn Type	Prot		pm+ov	Prot		Free	Prot		Perm	Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4			Free			2			
Actuated Green, G (s)	15.5	16.8	26.0	11.6	12.9	110.0	9.2	46.3	46.3	19.3	56.4	
Effective Green, g (s)	15.5	16.8	26.0	11.6	12.9	110.0	9.2	46.3	46.3	19.3	56.4	
Actuated g/C Ratio	0.14	0.15	0.24	0.11	0.12	1.00	0.08	0.42	0.42	0.18	0.51	
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)	242	525	419	352	403	1538	279	1447	647	585	1744	
v/s Ratio Prot	0.10	c0.11	0.03	c0.08	0.07		0.04	c0.38		c0.15	0.31	
v/s Ratio Perm			0.07			c0.53			0.08			
v/c Ratio	0.73	0.71	0.38	0.74	0.62	0.53	0.52	0.90	0.20	0.87	0.61	
Uniform Delay, d1	45.2	44.3	35.2	47.7	46.2	0.0	48.3	29.6	20.1	44.1	19.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.22	0.46	0.26	0.63	0.39	
Incremental Delay, d2	10.4	4.5	0.6	7.9	3.0	1.3	1.4	7.9	0.6	11.4	1.3	
Delay (s)	55.6	48.8	35.8	55.6	49.2	1.3	60.5	21.6	5.9	39.1	8.7	
Level of Service	E	D	D	E	D	A	E	C	A	D	A	
Approach Delay (s)		46.8			21.0			22.0			18.5	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
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												
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	0.97	1.00	1.00		1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85		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	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	1810	1538		1726	1538	1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	1810	1538		1726	1538	1719	4940	1538	1719	4940	1538
Volume (vph)	112	8	111	52	2	68	96	1542	43	75	1290	99
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	9	121	57	2	74	104	1676	47	82	1402	108
RTOR Reduction (vph)	0	0	92	0	0	69	0	0	18	0	0	50
Lane Group Flow (vph)	122	9	29	0	59	5	104	1676	29	82	1402	58
Turn Type	Split		pm+ov	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4	5	8	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.2	9.2	26.7		7.9	7.9	17.5	67.6	67.6	9.3	59.4	59.4
Effective Green, g (s)	9.2	9.2	26.7		7.9	7.9	17.5	67.6	67.6	9.3	59.4	59.4
Actuated g/C Ratio	0.08	0.08	0.24		0.07	0.07	0.16	0.61	0.61	0.08	0.54	0.54
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)	279	151	429		124	110	273	3036	945	145	2668	831
v/s Ratio Prot	c0.04	0.00	0.01		c0.03		0.06	c0.34		0.05	c0.28	
v/s Ratio Perm			0.01			0.00			0.02			0.04
v/c Ratio	0.44	0.06	0.07		0.48	0.05	0.38	0.55	0.03	0.57	0.53	0.07
Uniform Delay, d1	47.9	46.4	32.1		49.1	47.5	41.4	12.4	8.3	48.4	16.2	12.1
Progression Factor	1.00	1.00	1.00		1.00	1.00	0.69	0.19	0.03	0.86	1.00	1.83
Incremental Delay, d2	1.1	0.2	0.1		2.9	0.2	0.7	0.5	0.0	4.2	0.6	0.1
Delay (s)	49.0	46.6	32.1		51.9	47.7	29.1	2.9	0.3	45.8	16.9	22.3
Level of Service	D	D	C		D	D	C	A	A	D	B	C
Approach Delay (s)		40.8			49.6			4.3			18.8	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.8%	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												
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	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1810	1538	1719	4882		1719	4909	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1810	1538	1719	4882		1719	4909	
Volume (vph)	140	81	386	118	80	156	187	1389	118	124	1236	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	152	88	420	128	87	170	203	1510	128	135	1343	59
RTOR Reduction (vph)	0	0	75	0	0	59	0	8	0	0	3	0
Lane Group Flow (vph)	152	88	345	128	87	111	203	1630	0	135	1399	0
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.3	9.2	28.6	14.3	9.2	27.4	19.4	52.3		18.2	51.1	
Effective Green, g (s)	14.3	9.2	28.6	14.3	9.2	27.4	19.4	52.3		18.2	51.1	
Actuated g/C Ratio	0.13	0.08	0.26	0.13	0.08	0.25	0.18	0.48		0.17	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	
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)	223	151	400	223	151	439	303	2321		284	2280	
v/s Ratio Prot	c0.09	0.05	c0.15	0.07	0.05	0.04	0.12	c0.33		0.08	c0.28	
v/s Ratio Perm			0.07			0.03						
v/c Ratio	0.68	0.58	0.86	0.57	0.58	0.25	0.67	0.70		0.48	0.61	
Uniform Delay, d1	45.7	48.6	38.8	45.0	48.5	33.1	42.3	22.7		41.6	22.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.65		0.57	0.31	
Incremental Delay, d2	8.3	5.6	17.0	3.5	5.2	0.3	3.3	1.1		1.1	1.1	
Delay (s)	54.0	54.2	55.8	48.5	53.8	33.4	31.7	15.7		25.0	7.8	
Level of Service	D	D	E	D	D	C	C	B		C	A	
Approach Delay (s)		55.2			43.0			17.5			9.3	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		-3%			0%			0%			0%	
Total Lost time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00		1.00	0.91		1.00	0.91	
Frt		0.92		1.00	0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667		3335	1696		1719	4827		1719	4931	
Flt Permitted		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1667		3335	1696		1719	4827		1719	4931	
Volume (vph)	49	41	144	299	26	18	69	1627	293	40	1694	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	45	157	325	28	20	75	1768	318	43	1841	23
RTOR Reduction (vph)	0	56	0	0	17	0	0	20	0	0	1	0
Lane Group Flow (vph)	0	199	0	325	31	0	75	2066	0	43	1863	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)		17.1		14.8	14.8		8.0	58.1		4.0	54.1	
Effective Green, g (s)		17.1		14.8	14.8		8.0	58.1		4.0	54.1	
Actuated g/C Ratio		0.16		0.13	0.13		0.07	0.53		0.04	0.49	
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)		259		449	228		125	2550		63	2425	
v/s Ratio Prot		c0.12		c0.10	0.02		0.04	c0.43		0.03	c0.38	
v/s Ratio Perm												
v/c Ratio		0.77		0.72	0.13		0.60	0.81		0.68	0.77	
Uniform Delay, d1		44.6		45.6	42.0		49.4	21.4		52.4	22.8	
Progression Factor		1.00		1.00	1.00		0.86	0.85		0.93	0.91	
Incremental Delay, d2		12.9		5.7	0.3		4.6	1.7		20.4	1.8	
Delay (s)		57.4		51.3	42.2		47.3	19.9		69.3	22.6	
Level of Service		E		D	D		D	B		E	C	
Approach Delay (s)		57.4			50.2			20.8			23.7	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.9%	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												
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		0.97	1.00		1.00	0.91	1.00	1.00	0.91	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	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1719	1538		3335	1538		1719	4940	1538	1719	4940	1538
Volume (vph)	56	0	20	284	0	231	25	1703	237	263	1821	55
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	0	22	309	0	251	27	1851	258	286	1979	60
RTOR Reduction (vph)	0	22	0	0	139	0	0	0	110	0	0	18
Lane Group Flow (vph)	61	0	0	309	112	0	27	1851	148	286	1979	42
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	7.7	2.2		25.3	19.8		7.2	45.7	45.7	20.8	59.3	59.3
Effective Green, g (s)	7.7	2.2		25.3	19.8		7.2	45.7	45.7	20.8	59.3	59.3
Actuated g/C Ratio	0.07	0.02		0.23	0.18		0.07	0.42	0.42	0.19	0.54	0.54
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)	120	31		767	277		113	2052	639	325	2663	829
v/s Ratio Prot	c0.04	0.00		c0.09	0.07		0.02	c0.37		c0.17	0.40	
v/s Ratio Perm									0.10			0.03
v/c Ratio	0.51	0.01		0.40	0.40		0.24	0.90	0.23	0.88	0.74	0.05
Uniform Delay, d1	49.3	52.8		35.9	39.9		48.8	30.1	20.8	43.4	19.5	12.0
Progression Factor	1.00	1.00		1.00	1.00		1.08	0.63	0.44	1.21	0.94	0.29
Incremental Delay, d2	3.4	0.2		0.3	1.0		0.6	4.0	0.5	16.3	1.2	0.1
Delay (s)	52.7	53.0		36.3	40.8		53.4	23.1	9.7	68.6	19.7	3.6
Level of Service	D	D		D	D		D	C	A	E	B	A
Approach Delay (s)		52.8			38.3			21.8			25.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.4%	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												
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	0.91		0.97	0.91	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1753	1538	1719	1810	1538	1719	4835		3335	4926	
Flt Permitted		0.97	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1753	1538	1719	1810	1538	1719	4835		3335	4926	
Volume (vph)	29	17	34	149	19	265	53	1679	276	547	1546	29
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	18	37	162	21	288	58	1825	300	595	1680	32
RTOR Reduction (vph)	0	0	35	0	0	163	0	18	0	0	1	0
Lane Group Flow (vph)	0	50	2	162	21	125	58	2107	0	595	1711	0
Turn Type	Split		Perm	Split		pm+ov	Prot			Prot		
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)		7.4	7.4	15.4	15.4	34.2	7.2	52.4		18.8	64.0	
Effective Green, g (s)		7.4	7.4	15.4	15.4	34.2	7.2	52.4		18.8	64.0	
Actuated g/C Ratio		0.07	0.07	0.14	0.14	0.31	0.07	0.48		0.17	0.58	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		118	103	241	253	478	113	2303		570	2866	
v/s Ratio Prot		c0.03		c0.09	0.01	0.04	0.03	c0.44		c0.18	0.35	
v/s Ratio Perm			0.00			0.04						
v/c Ratio		0.42	0.02	0.67	0.08	0.26	0.51	0.91		1.04	0.60	
Uniform Delay, d1		49.3	47.9	44.9	41.2	28.4	49.7	26.7		45.6	14.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00	1.13	0.60		1.00	1.25	
Incremental Delay, d2		2.4	0.1	7.2	0.1	0.3	3.1	5.8		44.7	0.7	
Delay (s)		51.7	48.0	52.1	41.3	28.7	59.2	21.9		90.1	19.2	
Level of Service		D	D	D	D	C	E	C		F	B	
Approach Delay (s)		50.1			37.3			22.9			37.5	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.1%	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												
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	0.95		1.00	0.95	
Frt	1.00	0.85			0.98		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1538			1714		1719	3437		1719	3424	
Flt Permitted	0.75	1.00			0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1353	1538			1438		1719	3437		1719	3424	
Volume (vph)	72	0	80	10	2	2	68	1742	3	10	1502	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	0	87	11	2	2	74	1893	3	11	1633	47
RTOR Reduction (vph)	0	78	0	0	2	0	0	0	0	0	1	0
Lane Group Flow (vph)	78	9	0	0	13	0	74	1896	0	11	1679	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	11.4	11.4			11.4		8.8	85.1		1.5	77.8	
Effective Green, g (s)	11.4	11.4			11.4		8.8	85.1		1.5	77.8	
Actuated g/C Ratio	0.10	0.10			0.10		0.08	0.77		0.01	0.71	
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)	140	159			149		138	2659		23	2422	
v/s Ratio Prot		0.01					c0.04	c0.55		0.01	0.49	
v/s Ratio Perm	c0.06				0.01							
v/c Ratio	0.56	0.06			0.09		0.54	0.71		0.48	0.69	
Uniform Delay, d1	46.9	44.5			44.6		48.6	6.3		53.9	9.2	
Progression Factor	1.00	1.00			1.00		1.05	0.49		1.06	0.37	
Incremental Delay, d2	4.7	0.1			0.3		2.4	1.0		12.3	1.4	
Delay (s)	51.6	44.6			44.9		53.7	4.1		69.5	4.8	
Level of Service	D	D			D		D	A		E	A	
Approach Delay (s)		47.9			44.9			5.9			5.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	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												
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	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1728	1538		1761	1538	1719	3435		1719	3422	
Flt Permitted		0.72	1.00		0.83	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1304	1538		1499	1538	1719	3435		1719	3422	
Volume (vph)	312	17	28	11	9	149	36	1351	8	76	1450	48
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	339	18	30	12	10	162	39	1468	9	83	1576	52
RTOR Reduction (vph)	0	0	21	0	0	113	0	0	0	0	2	0
Lane Group Flow (vph)	0	357	9	0	22	49	39	1477	0	83	1626	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		33.1	33.1		33.1	33.1	3.6	57.8		7.1	61.3	
Effective Green, g (s)		33.1	33.1		33.1	33.1	3.6	57.8		7.1	61.3	
Actuated g/C Ratio		0.30	0.30		0.30	0.30	0.03	0.53		0.06	0.56	
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)		392	463		451	463	56	1805		111	1907	
v/s Ratio Prot							0.02	c0.43		0.05	c0.48	
v/s Ratio Perm		c0.27	0.01		0.01	0.03						
v/c Ratio		0.91	0.02		0.05	0.11	0.70	0.82		0.75	0.85	
Uniform Delay, d1		37.0	27.0		27.3	27.8	52.7	21.7		50.6	20.5	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		0.65	0.34	
Incremental Delay, d2		24.8	0.0		0.0	0.1	31.4	4.3		18.3	3.8	
Delay (s)		61.8	27.1		27.3	27.9	84.1	26.0		51.4	10.7	
Level of Service		E	C		C	C	F	C		D	B	
Approach Delay (s)		59.1			27.8			27.5			12.7	
Approach LOS		E			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.8%	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												
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	0.97	0.95	1.00	0.97	0.95	1.00	0.91	0.91		0.91	0.86	0.91
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.91	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99		0.95	0.99	1.00
Satd. Flow (prot)	3335	3438	1538	3335	3438	1538	1564	2980		1564	2806	1400
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99		0.95	0.99	1.00
Satd. Flow (perm)	3335	3438	1538	3335	3438	1538	1564	2980		1564	2806	1400
Volume (vph)	239	876	33	172	800	29	173	66	162	97	36	192
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	260	952	36	187	870	32	188	72	176	105	39	209
RTOR Reduction (vph)	0	0	24	0	0	22	0	134	0	0	91	92
Lane Group Flow (vph)	260	952	12	187	870	10	132	170	0	76	81	13
Turn Type	Prot		Perm	Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	8.1	23.6	23.6	6.0	21.5	21.5	17.1	17.1		9.0	9.0	9.0
Effective Green, g (s)	8.1	23.6	23.6	6.0	21.5	21.5	17.1	17.1		9.0	9.0	9.0
Actuated g/C Ratio	0.11	0.33	0.33	0.08	0.30	0.30	0.24	0.24		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
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)	377	1132	506	279	1031	461	373	711		196	352	176
v/s Ratio Prot	c0.08	c0.28		0.06	0.25		c0.08	0.06		c0.05	0.03	
v/s Ratio Perm			0.01			0.01						0.01
v/c Ratio	0.69	0.84	0.02	0.67	0.84	0.02	0.35	0.24		0.39	0.23	0.07
Uniform Delay, d1	30.6	22.3	16.3	31.9	23.5	17.7	22.7	22.0		28.8	28.2	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
Incremental Delay, d2	5.2	5.8	0.0	6.2	6.4	0.0	2.6	0.8		1.3	0.3	0.2
Delay (s)	35.8	28.1	16.3	38.1	30.0	17.7	25.3	22.8		30.1	28.6	27.9
Level of Service	D	C	B	D	C	B	C	C		C	C	C
Approach Delay (s)		29.4			31.0			23.6			28.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	71.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.4%	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												
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	0.95	1.00	1.00	0.95	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	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1756	1538		1737	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.96	1.00
Satd. Flow (perm)	1719	3438	1538	1719	3438	1538		1756	1538		1737	1538
Volume (vph)	15	972	28	113	897	93	24	16	214	275	56	56
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1057	30	123	975	101	26	17	233	299	61	61
RTOR Reduction (vph)	0	0	20	0	0	56	0	0	192	0	0	46
Lane Group Flow (vph)	16	1057	10	123	975	45	0	43	41	0	360	15
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)	0.7	27.7	27.7	9.4	36.4	36.4		8.5	8.5		19.3	19.3
Effective Green, g (s)	0.7	27.7	27.7	9.4	36.4	36.4		8.5	8.5		19.3	19.3
Actuated g/C Ratio	0.01	0.34	0.34	0.12	0.45	0.45		0.11	0.11		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
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)	15	1177	527	200	1547	692		184	162		414	367
v/s Ratio Prot	0.01	c0.31		0.07	c0.28			0.02			c0.21	
v/s Ratio Perm			0.01			0.03			c0.03			0.01
v/c Ratio	1.07	0.90	0.02	0.62	0.63	0.07		0.23	0.26		0.87	0.04
Uniform Delay, d1	40.1	25.3	17.6	34.0	17.1	12.6		33.2	33.3		29.6	23.7
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	255.5	9.2	0.0	5.5	0.8	0.0		0.7	0.8		17.4	0.0
Delay (s)	295.6	34.5	17.6	39.5	17.9	12.7		33.9	34.1		46.9	23.7
Level of Service	F	C	B	D	B	B		C	C		D	C
Approach Delay (s)		37.8			19.7			34.1			43.6	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Stop			Stop
Volume (vph)	149	134	106	119	159	133
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	162	146	115	129	173	145

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	162	146	115	129	173	145
Volume Left (vph)	162	0	0	0	173	0
Volume Right (vph)	0	146	0	129	0	0
Hadj (s)	0.59	-0.62	0.09	-0.62	0.59	0.09
Departure Headway (s)	6.5	5.3	5.9	5.2	6.3	5.8
Degree Utilization, x	0.29	0.22	0.19	0.19	0.30	0.23
Capacity (veh/h)	524	637	580	655	548	595
Control Delay (s)	11.0	8.6	9.1	8.2	10.8	9.4
Approach Delay (s)	9.8		8.6		10.2	
Approach LOS	A		A		B	

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	231	47	30	183	0	0	0	0	95	1	100
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)	0	251	51	33	199	0	0	0	0	103	1	109
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	199			302			650	541	277	541	566	199
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	199			302			650	541	277	541	566	199
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	76	100	87
cM capacity (veh/h)	1356			1242			322	432	755	438	418	835

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	302	232	104	109
Volume Left	0	33	103	0
Volume Right	51	0	0	109
cSH	1700	1242	438	835
Volume to Capacity	0.18	0.03	0.24	0.13
Queue Length 95th (ft)	0	2	23	11
Control Delay (s)	0.0	1.3	15.8	10.0
Lane LOS		A	C	A
Approach Delay (s)	0.0	1.3	12.8	
Approach LOS			B	

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	97	229	0	0	148	198	65	4	42	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)	105	249	0	0	161	215	71	4	46	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	376			249			728	836	249	776	728	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	376			249			728	836	249	776	728	268
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	91			100			77	98	94	100	100	100
cM capacity (veh/h)	1166			1299			312	273	783	269	315	763

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	354	376	75	46
Volume Left	105	0	71	0
Volume Right	0	215	0	46
cSH	1166	1700	309	783
Volume to Capacity	0.09	0.22	0.24	0.06
Queue Length 95th (ft)	7	0	23	5
Control Delay (s)	3.1	0.0	20.3	9.9
Lane LOS	A		C	A
Approach Delay (s)	3.1	0.0	16.4	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	32	0	239	0	0	0	285	16	0	0	18	61
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)	35	0	260	0	0	0	310	17	0	0	20	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	690	690	53	949	723	17	86			17		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	690	690	53	949	723	17	86			17		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	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 %	88	100	74	100	100	100	79			100		
cM capacity (veh/h)	299	289	1006	148	276	1053	1492			1580		

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	295	327	86
Volume Left	35	310	0
Volume Right	260	0	66
cSH	786	1492	1700
Volume to Capacity	0.37	0.21	0.05
Queue Length 95th (ft)	44	20	0
Control Delay (s)	12.3	7.7	0.0
Lane LOS	B	A	
Approach Delay (s)	12.3	7.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	106	488	4	2	327	17	11	0	13	11	0	61
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)	115	530	4	2	355	18	12	0	14	12	0	66
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		687										
pX, platoon unblocked												
vC, conflicting volume	374			535			1189	1141	533	1144	1134	365
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			535			1189	1141	533	1144	1134	365
tC, single (s)	4.1			4.1			7.2	6.6	6.2	7.2	6.6	6.2
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 %	90			100			91	100	97	92	100	90
cM capacity (veh/h)	1168			1018			135	178	541	157	180	674

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	115	535	2	374	26	12	66
Volume Left	115	0	2	0	12	12	0
Volume Right	0	4	0	18	14	0	66
cSH	1168	1700	1018	1700	228	157	674
Volume to Capacity	0.10	0.31	0.00	0.22	0.11	0.08	0.10
Queue Length 95th (ft)	8	0	0	0	10	6	8
Control Delay (s)	8.4	0.0	8.5	0.0	22.8	29.8	10.9
Lane LOS	A		A		C	D	B
Approach Delay (s)	1.5		0.0		22.8	13.8	
Approach LOS					C	B	

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	289	118	27	245	108	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	314	128	29	266	117	25

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total (vph)	314	128	29	266	142
Volume Left (vph)	0	0	29	0	117
Volume Right (vph)	0	128	0	0	25
Hadj (s)	0.09	-0.62	0.59	0.09	0.14
Departure Headway (s)	5.3	4.6	6.0	5.5	5.7
Degree Utilization, x	0.47	0.17	0.05	0.40	0.23
Capacity (veh/h)	651	749	575	636	568
Control Delay (s)	11.7	7.3	8.1	10.9	10.3
Approach Delay (s)	10.4		10.7		10.3
Approach LOS	B		B		B

Intersection Summary			
Delay	10.5		
HCM Level of Service	B		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	101	238	191	111	135	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	110	259	208	121	147	148
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	757	221	295			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	757	221	295			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	65	68	83			
cM capacity (veh/h)	310	812	1250			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	110	259	208	121	295
Volume Left	110	0	208	0	0
Volume Right	0	259	0	0	148
cSH	310	812	1250	1700	1700
Volume to Capacity	0.35	0.32	0.17	0.07	0.17
Queue Length 95th (ft)	39	34	15	0	0
Control Delay (s)	22.9	11.5	8.5	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	14.9		5.3		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	
Frt	1.00	1.00	0.85	1.00	0.91					1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)	1719	1810	1538	1719	1648					1719	1810	
Flt Permitted	0.95	1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)	1719	1810	1538	1719	1648					1719	1810	
Volume (vph)	46	116	66	178	194	286	0	0	0	169	185	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	126	72	193	211	311	0	0	0	184	201	0
RTOR Reduction (vph)	0	0	35	0	53	0	0	0	0	0	0	0
Lane Group Flow (vph)	50	126	37	193	469	0	0	0	0	184	201	0
Turn Type	Prot		Perm	Prot						Prot		Perm
Protected Phases	7	4		3	8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.6	41.5	41.5	13.3	45.2					13.2	13.2	
Effective Green, g (s)	9.6	41.5	41.5	13.3	45.2					13.2	13.2	
Actuated g/C Ratio	0.12	0.52	0.52	0.17	0.57					0.16	0.16	
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)	206	939	798	286	931					284	299	
v/s Ratio Prot	c0.03	0.07		c0.11	c0.28					0.11	c0.11	
v/s Ratio Perm			0.02									
v/c Ratio	0.24	0.13	0.05	0.67	0.50					0.65	0.67	
Uniform Delay, d1	31.9	10.0	9.5	31.3	10.6					31.2	31.4	
Progression Factor	1.00	1.00	1.00	0.90	0.61					1.00	1.00	
Incremental Delay, d2	0.6	0.3	0.1	6.1	1.9					5.0	5.8	
Delay (s)	32.5	10.3	9.6	34.2	8.3					36.2	37.2	
Level of Service	C	B	A	C	A					D	D	
Approach Delay (s)		14.6			15.3			0.0			36.8	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	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	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	0.95		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		1810	3438		1719	1538
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		1810	3438		1719	1538
Volume (vph)	0	285	572	0	116	86
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	310	622	0	126	93
RTOR Reduction (vph)	0	0	0	0	0	81
Lane Group Flow (vph)	0	310	622	0	126	12
Turn Type						Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		61.7	61.7		10.3	10.3
Effective Green, g (s)		61.7	61.7		10.3	10.3
Actuated g/C Ratio		0.77	0.77		0.13	0.13
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1396	2652		221	198
v/s Ratio Prot		0.17	c0.18		c0.07	
v/s Ratio Perm						0.01
v/c Ratio		0.22	0.23		0.57	0.06
Uniform Delay, d1		2.5	2.6		32.8	30.6
Progression Factor		0.41	0.55		1.00	1.00
Incremental Delay, d2		0.3	0.2		3.5	0.1
Delay (s)		1.4	1.6		36.3	30.7
Level of Service		A	A		D	C
Approach Delay (s)		1.4	1.6		33.9	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.9%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	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	1810			1810	1538		1719	1538			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1719	1810			1810	1538		1719	1538			
Volume (vph)	43	358	0	0	378	274	194	0	361	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	389	0	0	411	298	211	0	392	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	119	0	0	319	0	0	0
Lane Group Flow (vph)	47	389	0	0	411	179	0	211	73	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	5.2	57.2			48.0	48.0		14.8	14.8			
Effective Green, g (s)	5.2	57.2			48.0	48.0		14.8	14.8			
Actuated g/C Ratio	0.06	0.72			0.60	0.60		0.18	0.18			
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)	112	1294			1086	923		318	285			
v/s Ratio Prot	c0.03	0.21			c0.23			c0.12				
v/s Ratio Perm						0.12			0.05			
v/c Ratio	0.42	0.30			0.38	0.19		0.66	0.25			
Uniform Delay, d1	35.9	4.1			8.3	7.2		30.3	27.9			
Progression Factor	1.06	0.18			0.38	0.13		1.00	1.00			
Incremental Delay, d2	2.4	0.6			0.8	0.4		5.1	0.5			
Delay (s)	40.7	1.3			4.0	1.3		35.4	28.4			
Level of Service	D	A			A	A		D	C			
Approach Delay (s)		5.6			2.9			30.8			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.9%	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												
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	0.97	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.95		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)	3335	1810	1538	1719	3344		1719	3266		1719	3438	1538
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)	3335	1810	1538	1719	3344		1719	3266		1719	3438	1538
Volume (vph)	257	242	220	23	152	34	294	242	121	126	194	206
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	263	239	25	165	37	320	263	132	137	211	224
RTOR Reduction (vph)	0	0	146	0	23	0	0	83	0	0	0	195
Lane Group Flow (vph)	279	263	93	25	179	0	320	312	0	137	211	29
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)	12.4	31.2	31.2	2.5	21.3		20.1	20.9		9.4	10.2	10.2
Effective Green, g (s)	12.4	31.2	31.2	2.5	21.3		20.1	20.9		9.4	10.2	10.2
Actuated g/C Ratio	0.16	0.39	0.39	0.03	0.27		0.25	0.26		0.12	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
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)	517	706	600	54	890		432	853		202	438	196
v/s Ratio Prot	c0.08	c0.15		c0.01	0.05		c0.19	0.10		c0.08	0.06	
v/s Ratio Perm			0.06									0.02
v/c Ratio	0.54	0.37	0.16	0.46	0.20		0.74	0.37		0.68	0.48	0.15
Uniform Delay, d1	31.2	17.4	15.8	38.1	22.8		27.6	24.1		33.8	32.4	31.0
Progression Factor	0.92	0.83	0.74	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.3	0.5	6.2	0.5		6.7	0.3		8.7	0.8	0.3
Delay (s)	29.6	15.9	12.2	44.3	23.3		34.3	24.4		42.6	33.3	31.4
Level of Service	C	B	B	D	C		C	C		D	C	C
Approach Delay (s)		19.6			25.6			28.8			34.8	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Frt	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	1810			1810	1538		1719	1538			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1719	1810			1810	1538		1719	1538			
Volume (vph)	43	357	0	0	378	274	194	0	361	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	388	0	0	411	298	211	0	392	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	119	0	0	319	0	0	0
Lane Group Flow (vph)	47	388	0	0	411	179	0	211	73	0	0	0
Turn Type	Prot					Perm	Split		Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	5.2	57.2			48.0	48.0		14.8	14.8			
Effective Green, g (s)	5.2	57.2			48.0	48.0		14.8	14.8			
Actuated g/C Ratio	0.06	0.72			0.60	0.60		0.18	0.18			
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)	112	1294			1086	923		318	285			
v/s Ratio Prot	c0.03	0.21			c0.23			c0.12				
v/s Ratio Perm						0.12			0.05			
v/c Ratio	0.42	0.30			0.38	0.19		0.66	0.25			
Uniform Delay, d1	35.9	4.1			8.3	7.2		30.3	27.9			
Progression Factor	1.07	0.18			0.38	0.13		1.00	1.00			
Incremental Delay, d2	2.4	0.6			0.8	0.4		5.1	0.5			
Delay (s)	40.7	1.3			4.0	1.3		35.4	28.4			
Level of Service	D	A			A	A		D	C			
Approach Delay (s)		5.6			2.9			30.8			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
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												
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	0.97	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.95		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)	3335	1810	1538	1719	3344		1719	3266		1719	3438	1538
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)	3335	1810	1538	1719	3344		1719	3266		1719	3438	1538
Volume (vph)	257	241	220	23	152	34	294	242	121	126	194	206
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	279	262	239	25	165	37	320	263	132	137	211	224
RTOR Reduction (vph)	0	0	146	0	23	0	0	83	0	0	0	195
Lane Group Flow (vph)	279	262	93	25	179	0	320	312	0	137	211	29
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)	12.4	31.2	31.2	2.5	21.3		20.1	20.9		9.4	10.2	10.2
Effective Green, g (s)	12.4	31.2	31.2	2.5	21.3		20.1	20.9		9.4	10.2	10.2
Actuated g/C Ratio	0.16	0.39	0.39	0.03	0.27		0.25	0.26		0.12	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
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)	517	706	600	54	890		432	853		202	438	196
v/s Ratio Prot	c0.08	c0.14		c0.01	0.05		c0.19	0.10		c0.08	0.06	
v/s Ratio Perm			0.06									0.02
v/c Ratio	0.54	0.37	0.16	0.46	0.20		0.74	0.37		0.68	0.48	0.15
Uniform Delay, d1	31.2	17.4	15.8	38.1	22.8		27.6	24.1		33.8	32.4	31.0
Progression Factor	0.92	0.83	0.74	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.3	0.5	6.2	0.5		6.7	0.3		8.7	0.8	0.3
Delay (s)	29.6	15.9	12.2	44.3	23.3		34.3	24.4		42.6	33.3	31.4
Level of Service	C	B	B	D	C		C	C		D	C	C
Approach Delay (s)		19.6			25.6			28.8			34.8	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Travel Time Data

Summary of Travel Time Runs

PM - Inbound	Oak Ridge-Hyde Park-Erin Street	Luther Road-Canal Street	SR 49-Hulbert Way	Dairy Road-Luther Road
Trial 1	02:37.9	01:23.8	03:44.2	03:48.9
Trial 2	02:50.0	01:29.4	03:06.4	04:08.6
Trial 3	02:47.6	01:25.7	02:44.4	03:58.2
Trial 4	02:41.1	01:27.4		
Trial 5	02:44.7	01:31.9		
Average	*02:44.3*	*01:27.6*	*03:11.6*	*05:26.2*

PM - Outbound	Oak Ridge-Hyde Park-Erin Street	Luther Road-Canal Street	SR 49-Hulbert Way	Dairy Road-Luther Road
Trial 1	02:53.0	01:50.1	04:41.6	04:20.6
Trial 2	03:36.2	01:35.5	05:53.1	05:04.7
Trial 3	02:58.9	02:01.4	04:39.0	04:25.5
Trial 4	03:06.5	01:41.3		
Trial 5	03:08.8	02:07.3		
Average	*03:08.7*	*01:51.1*	*05:04.6*	*06:28.1*
Totals (in + out)	**05:53.0**	**03:18.8**	**08:16.2**	**11:54.3**

HCM Unsignalized Intersection Capacity Analysis
3: Luther Road &

6/3/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	453	4	2	293	17	11	0	13	11	0	55
Sign Control		Free			Free			Stop			Stop	
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)	109	492	4	2	318	18	12	0	14	12	0	60
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	337			497			1095	1053	495	1056	1046	328
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	337			497			1095	1053	495	1056	1046	328
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
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 %	91			100			93	100	98	94	100	92
cM capacity (veh/h)	1222			1067			163	206	575	184	208	714

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	109	497	2	337	26	12	60
Volume Left	109	0	2	0	12	12	0
Volume Right	0	4	0	18	14	0	60
cSH	1222	1700	1067	1700	266	184	714
Volume to Capacity	0.09	0.29	0.00	0.20	0.10	0.06	0.08
Queue Length 95th (ft)	7	0	0	0	8	5	7
Control Delay (s)	8.2	0.0	8.4	0.0	20.0	25.9	10.5
Lane LOS	A		A		C	D	B
Approach Delay (s)	1.5		0.1		20.0	13.1	
Approach LOS					C	B	

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		45.5%	ICU Level of Service
Analysis Period (min)			

Approach Delay 0.1 Sec/Veh

Baseline
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Lanes, Volumes, Timings
18: LUTHER & CANAL

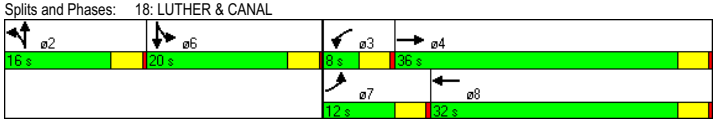
6/3/2010

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	599	11	2	408	76	11	21	13	93	6	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	100		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Satd. Flow (prot)	1770	1857	0	1770	1818	0	0	1769	0	1770	1608	0
Flt Permitted	0.950			0.950				0.988		0.950		
Satd. Flow (perm)	1770	1857	0	1770	1818	0	0	1769	0	1770	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			13			14			71	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			388			281			256	
Travel Time (s)		6.5			8.8			6.4			5.8	
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
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	663	0	2	526	0	0	49	0	101	78	0
Turn Type	Prot			Prot			Split			Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases												
Total Split (s)	12.0	36.0	0.0	8.0	32.0	0.0	16.0	16.0	0.0	20.0	20.0	0.0
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
Act Effct Green (s)	8.2	31.4		4.4	24.1			13.1		10.0	10.0	
Actuated g/C Ratio	0.13	0.48		0.07	0.37			0.20		0.15	0.15	
v/c Ratio	0.53	0.74		0.02	0.77			0.13		0.37	0.25	
Control Delay	42.8	22.1		35.5	29.8			22.8		32.4	11.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	42.8	22.1		35.5	29.8			22.8		32.4	11.1	
LOS	D	C		D	C			C		C	B	
Approach Delay		25.3			29.8			22.8			23.1	
Approach LOS		C			C			C			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 65.3	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 26.5	Inte
Intersection Capacity Utilization 57.3%	ICU
Analysis Period (min) 15	

Approach delay for Year 2030 plus project conditions with signal is 29.8 Sec/Veh

Splits and Phases: 18: LUTHER & CANAL



Baseline
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The 30 sec increase in delay indicated in the response to comments is the difference in the WB approach delay between the Existing conditions and Year 2030 Plus Project conditions during the PM peak period.