Appendix I

FUTURE (2035) INTERCHANGE ANALYSIS AND QUEUING WORKSHEETS

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FUTURE (2035) ALTERNATIVE 1

INTERSECTION LEVEL OF SERVICE (LOS) ANALYSIS

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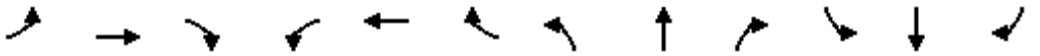
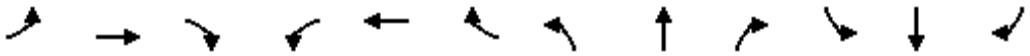


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (prot)	1143	2378		1878	1301	925		1921	901		2104	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (perm)	1143	2378		1878	1301	925		1921	901		2104	
Volume (vph)	10	70	20	440	100	280	250	40	530	210	10	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	74	21	463	105	295	263	42	558	221	11	105
RTOR Reduction (vph)	0	17	0	0	0	151	0	0	0	0	52	0
Lane Group Flow (vph)	11	78	0	463	105	144	0	305	558	0	285	0
Heavy Vehicles (%)	33%	30%	1%	57%	23%	47%	60%	0%	51%	39%	0%	25%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	7	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.7	17.1		25.1	46.2	46.2		16.6	94.6		15.1	
Effective Green, g (s)	0.7	17.1		25.1	46.2	46.2		16.6	94.6		15.1	
Actuated g/C Ratio	0.01	0.18		0.27	0.49	0.49		0.18	1.00		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)	8	430		498	635	452		337	901		336	
v/s Ratio Prot	0.01	0.03		c0.25	0.08			c0.16			c0.14	
v/s Ratio Perm						0.16			c0.62			
v/c Ratio	1.38	0.18		0.93	0.17	0.32		1.52dl	0.62		0.95dl	
Uniform Delay, d1	46.9	32.8		33.9	13.5	14.7		38.2	0.0		38.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	466.9	0.9		23.8	0.1	0.4		26.4	3.2		17.7	
Delay (s)	513.9	33.7		57.7	13.6	15.1		64.7	3.2		56.3	
Level of Service	F	C		E	B	B		E	A		E	
Approach Delay (s)		83.6			37.8			24.9			56.3	
Approach LOS		F			D			C			E	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

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

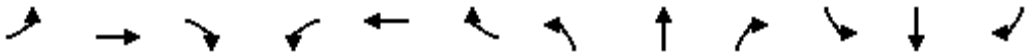
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.93		1.00	1.00	0.85		1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (prot)	1333	2155		1878	1231	971		2961	855		2153	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (perm)	1333	2155		1878	1231	971		2961	855		2153	
Volume (vph)	5	60	50	410	60	250	110	140	230	80	10	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	63	53	432	63	263	116	147	242	84	11	21
RTOR Reduction (vph)	0	41	0	0	0	119	0	0	0	0	19	0
Lane Group Flow (vph)	5	75	0	432	63	144	0	263	242	0	97	0
Heavy Vehicles (%)	14%	57%	1%	57%	30%	40%	1%	0%	59%	39%	0%	24%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	7	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.6	17.3		21.3	42.6	42.6		11.6	77.9		7.1	
Effective Green, g (s)	0.6	17.3		21.3	42.6	42.6		11.6	77.9		7.1	
Actuated g/C Ratio	0.01	0.22		0.27	0.55	0.55		0.15	1.00		0.09	
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)	10	479		513	673	531		441	855		196	
v/s Ratio Prot	0.00	0.03		c0.23	0.05			c0.09			c0.05	
v/s Ratio Perm						0.15			c0.28			
v/c Ratio	0.50	0.16		0.84	0.09	0.27		0.60	0.28		0.49	
Uniform Delay, d1	38.5	24.4		26.7	8.4	9.4		31.0	0.0		33.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	34.4	0.7		11.9	0.1	0.3		2.2	0.8		2.0	
Delay (s)	72.9	25.1		38.6	8.5	9.7		33.1	0.8		35.7	
Level of Service	E	C		D	A	A		C	A		D	
Approach Delay (s)		27.1			26.1			17.7			35.7	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.86		1.00	1.00	0.85		1.00	0.85		0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.96	
Satd. Flow (prot)	1382	1687		1992	1391	1046		2505	1000		2586	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.96	
Satd. Flow (perm)	1382	1687		1992	1391	1046		2505	1000		2586	
Volume (vph)	10	30	450	510	60	370	90	100	300	100	5	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	32	474	537	63	389	95	105	316	105	5	5
RTOR Reduction (vph)	0	328	0	0	0	155	0	0	0	0	4	0
Lane Group Flow (vph)	11	178	0	537	63	234	0	200	316	0	111	0
Heavy Vehicles (%)	10%	38%	56%	48%	15%	30%	39%	0%	36%	12%	0%	17%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.6	25.3		24.9	49.6	49.6		9.1	82.3		7.0	
Effective Green, g (s)	0.6	25.3		24.9	49.6	49.6		9.1	82.3		7.0	
Actuated g/C Ratio	0.01	0.31		0.30	0.60	0.60		0.11	1.00		0.09	
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)	10	519		603	838	630		277	1000		220	
v/s Ratio Prot	0.01	0.11		c0.27	0.05			c0.08			c0.04	
v/s Ratio Perm						c0.22			0.32			
v/c Ratio	1.10	0.34		0.89	0.08	0.37		0.72	0.32		0.51	
Uniform Delay, d1	40.9	22.1		27.4	6.8	8.4		35.4	0.0		36.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	321.8	1.8		15.3	0.0	0.4		8.9	0.8		1.8	
Delay (s)	362.7	23.9		42.7	6.8	8.7		44.3	0.8		37.8	
Level of Service	F	C		D	A	A		D	A		D	
Approach Delay (s)		31.1			27.0			17.7			37.8	
Approach LOS		C			C			B			D	

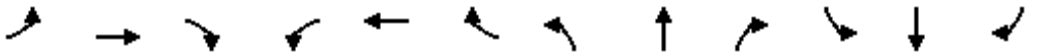
Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	82.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1476	1133	2951	1214	1462	3010
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1476	1133	2951	1214	1462	3010
Volume (vph)	1160	140	410	110	120	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1221	147	432	116	126	211
RTOR Reduction (vph)	0	40	0	20	0	0
Lane Group Flow (vph)	1221	107	432	96	126	211
Heavy Vehicles (%)	3%	20%	3%	12%	4%	1%
Turn Type		Perm		pm+ov	Prot	
Protected Phases	8		2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	82.0	82.0	17.0	99.0	9.0	30.0
Effective Green, g (s)	82.0	82.0	17.0	99.0	9.0	30.0
Actuated g/C Ratio	0.68	0.68	0.14	0.82	0.08	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1009	774	418	1042	110	753
v/s Ratio Prot	c0.83		c0.15	0.06	c0.09	0.07
v/s Ratio Perm		0.09		0.02		
v/c Ratio	1.21	0.14	1.03	0.09	1.15	0.28
Uniform Delay, d1	19.0	6.6	51.5	2.0	55.5	36.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	103.9	0.1	52.9	0.0	130.2	0.9
Delay (s)	122.9	6.7	104.4	2.0	185.7	37.2
Level of Service	F	A	F	A	F	D
Approach Delay (s)	110.4		82.7			92.7
Approach LOS	F		F			F

Intersection Summary			
HCM Average Control Delay	101.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.7%	ICU Level of Service	G
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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00		0.95	0.95	0.88
Frt	1.00	0.99		1.00	1.00	0.85		0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	1434	4098		1520	3010	1347		1518		1388	1426	2324
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (perm)	1434	4098		1520	3010	1347		1518		1388	1426	2324
Volume (vph)	210	810	30	20	1430	290	30	30	20	350	60	940
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	221	853	32	21	1505	305	32	32	21	368	63	989
RTOR Reduction (vph)	0	3	0	0	0	87	0	13	0	0	0	287
Lane Group Flow (vph)	221	882	0	21	1505	218	0	72	0	206	225	702
Heavy Vehicles (%)	6%	6%	6%	0%	1%	1%	0%	0%	0%	4%	0%	3%
Turn Type	Prot			Prot		pm+ov	Split			Split		pm+ov
Protected Phases	7	4		3	8	6	2	2		6	6	7
Permitted Phases						8						6
Actuated Green, G (s)	13.2	50.8		2.4	40.0	60.5		10.3		20.5	20.5	33.7
Effective Green, g (s)	13.2	50.8		2.4	40.0	60.5		10.3		20.5	20.5	33.7
Actuated g/C Ratio	0.13	0.51		0.02	0.40	0.60		0.10		0.20	0.20	0.34
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)	189	2082		36	1204	815		156		285	292	876
v/s Ratio Prot	c0.15	0.22		0.01	c0.50	0.05		c0.05		0.15	0.16	c0.11
v/s Ratio Perm						0.11						0.20
v/c Ratio	1.17	0.42		0.58	1.25	0.27		0.46		0.72	0.77	0.80
Uniform Delay, d1	43.4	15.4		48.3	30.0	9.3		42.3		37.1	37.5	30.1
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	118.5	0.6		21.8	119.5	0.2		2.2		8.7	11.8	5.3
Delay (s)	161.9	16.1		70.1	149.5	9.5		44.4		45.8	49.4	35.4
Level of Service	F	B		E	F	A		D		D	D	D
Approach Delay (s)		45.2			125.3			44.4			39.1	
Approach LOS		D			F			D			D	

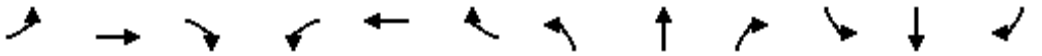
Intersection Summary			
HCM Average Control Delay	76.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1394	1172	2980	1183	1490	3010
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1394	1172	2980	1183	1490	3010
Volume (vph)	840	110	490	140	100	340
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	884	116	516	147	105	358
RTOR Reduction (vph)	0	42	0	27	0	0
Lane Group Flow (vph)	884	74	516	120	105	358
Heavy Vehicles (%)	9%	16%	2%	15%	2%	1%
Turn Type		Perm		pm+ov	Prot	
Protected Phases	8		2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	70.0	70.0	20.0	90.0	8.0	32.0
Effective Green, g (s)	70.0	70.0	20.0	90.0	8.0	32.0
Actuated g/C Ratio	0.64	0.64	0.18	0.82	0.07	0.29
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)	887	746	542	1011	108	876
v/s Ratio Prot	c0.63		c0.17	0.08	c0.07	0.12
v/s Ratio Perm		0.06		0.03		
v/c Ratio	1.00	0.10	0.95	0.12	0.97	0.41
Uniform Delay, d1	19.9	7.8	44.5	2.0	50.9	31.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.2	0.1	28.4	0.1	77.3	1.4
Delay (s)	49.1	7.8	73.0	2.1	128.2	32.8
Level of Service	D	A	E	A	F	C
Approach Delay (s)	44.3		57.2			54.4
Approach LOS	D		E			D

Intersection Summary			
HCM Average Control Delay	50.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00		0.95	0.95	0.88
Frt	1.00	0.99		1.00	1.00	0.85		0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	1407	4004		1520	2923	1308		1517		1388	1418	2196
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (perm)	1407	4004		1520	2923	1308		1517		1388	1418	2196
Volume (vph)	310	1120	80	50	650	230	60	90	60	560	70	550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	1179	84	53	684	242	63	95	63	589	74	579
RTOR Reduction (vph)	0	8	0	0	0	138	0	16	0	0	0	302
Lane Group Flow (vph)	326	1255	0	53	684	104	0	205	0	316	347	277
Heavy Vehicles (%)	8%	8%	8%	0%	4%	4%	0%	0%	0%	4%	0%	9%
Turn Type	Prot			Prot		pm+ov	Split			Split		pm+ov
Protected Phases	7	4		3	8	6	2	2		6	6	7
Permitted Phases						8						6
Actuated Green, G (s)	22.0	41.0		4.0	23.0	39.9		15.1		16.9	16.9	38.9
Effective Green, g (s)	22.0	41.0		4.0	23.0	39.9		15.1		16.9	16.9	38.9
Actuated g/C Ratio	0.24	0.44		0.04	0.25	0.43		0.16		0.18	0.18	0.42
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)	333	1765		65	723	561		246		252	258	1013
v/s Ratio Prot	c0.23	0.31		0.03	c0.23	0.03		c0.14		0.23	c0.24	0.06
v/s Ratio Perm						0.05						0.06
v/c Ratio	0.98	0.71		0.82	0.95	0.19		0.83		1.25	1.34	0.27
Uniform Delay, d1	35.3	21.2		44.1	34.4	16.5		37.7		38.1	38.1	17.8
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	43.1	2.5		52.3	22.6	0.2		20.9		142.6	178.8	0.1
Delay (s)	78.4	23.6		96.4	57.0	16.6		58.6		180.6	216.9	17.9
Level of Service	E	C		F	E	B		E		F	F	B
Approach Delay (s)		34.9			49.2			58.6			114.9	
Approach LOS		C			D			E			F	

Intersection Summary			
HCM Average Control Delay	64.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	93.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1462	1183	2815	1259	1476	3010
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1462	1183	2815	1259	1476	3010
Volume (vph)	690	50	160	180	190	330
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	726	53	168	189	200	347
RTOR Reduction (vph)	0	24	0	51	0	0
Lane Group Flow (vph)	726	29	168	138	200	347
Heavy Vehicles (%)	4%	15%	8%	8%	3%	1%
Turn Type		Perm		pm+ov	Prot	
Protected Phases	8		2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	39.7	39.7	10.2	49.9	11.0	25.2
Effective Green, g (s)	39.7	39.7	10.2	49.9	11.0	25.2
Actuated g/C Ratio	0.54	0.54	0.14	0.68	0.15	0.35
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)	796	644	394	931	223	1040
v/s Ratio Prot	c0.50		c0.06	0.08	c0.14	0.12
v/s Ratio Perm		0.02		0.03		
v/c Ratio	0.91	0.04	0.43	0.15	0.90	0.33
Uniform Delay, d1	15.0	7.7	28.7	4.0	30.4	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.7	0.0	0.7	0.1	33.6	0.2
Delay (s)	29.7	7.8	29.4	4.1	64.0	17.8
Level of Service	C	A	C	A	E	B
Approach Delay (s)	28.2		16.0			34.7
Approach LOS	C		B			C

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00		1.00		0.95	0.95	0.88
Frt	1.00	1.00		1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (prot)	1476	4229		1520	2980	1333		1468		1416	1426	2280
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (perm)	1476	4229		1520	2980	1333		1468		1416	1426	2280
Volume (vph)	200	2190	40	10	630	120	40	20	60	520	20	480
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	2305	42	11	663	126	42	21	63	547	21	505
RTOR Reduction (vph)	0	2	0	0	0	55	0	38	0	0	0	304
Lane Group Flow (vph)	211	2345	0	11	663	71	0	88	0	274	294	201
Heavy Vehicles (%)	3%	3%	3%	0%	2%	2%	0%	0%	0%	2%	0%	5%
Turn Type	Prot			Prot		pm+ov	Split			Split		pm+ov
Protected Phases	7	4		3	8	6	2	2		6	6	7
Permitted Phases						8						6
Actuated Green, G (s)	16.8	49.2		0.8	33.2	56.3		10.9		23.1	23.1	39.9
Effective Green, g (s)	16.8	49.2		0.8	33.2	56.3		10.9		23.1	23.1	39.9
Actuated g/C Ratio	0.17	0.49		0.01	0.33	0.56		0.11		0.23	0.23	0.40
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)	248	2081		12	989	750		160		327	329	1001
v/s Ratio Prot	c0.14	c0.55		0.01	0.22	0.02		c0.06		0.19	c0.21	0.03
v/s Ratio Perm						0.03						0.05
v/c Ratio	0.85	1.13		0.92	0.67	0.09		0.55		0.84	0.89	0.20
Uniform Delay, d1	40.4	25.4		49.6	28.7	10.1		42.2		36.7	37.3	19.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	23.3	64.0		212.2	3.6	0.1		3.8		16.8	24.9	0.1
Delay (s)	63.7	89.4		261.7	32.3	10.1		46.0		53.5	62.2	19.7
Level of Service	E	F		F	C	B		D		D	E	B
Approach Delay (s)		87.3			32.0			46.0			40.0	
Approach LOS		F			C			D			D	

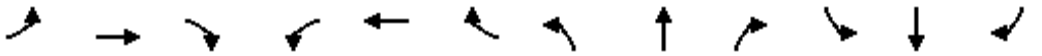
Intersection Summary			
HCM Average Control Delay	65.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95				
Frt	1.00	1.00			0.96		1.00	0.94				
Flt Protected	0.95	1.00			1.00		0.95	0.97				
Satd. Flow (prot)	1434	2980			2887		1350	1299				
Flt Permitted	0.06	1.00			1.00		0.95	0.97				
Satd. Flow (perm)	91	2980			2887		1350	1299				
Volume (vph)	80	1130	0	0	1460	500	370	0	100	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	1189	0	0	1537	526	389	0	105	0	0	0
RTOR Reduction (vph)	0	0	0	0	38	0	0	29	0	0	0	0
Lane Group Flow (vph)	84	1189	0	0	2025	0	244	221	0	0	0	0
Heavy Vehicles (%)	6%	2%	0%	0%	1%	2%	7%	0%	6%	0%	0%	0%
Turn Type	Perm						Prot					
Protected Phases		4			8		5	2				
Permitted Phases	4											
Actuated Green, G (s)	66.0	66.0			66.0		16.0	16.0				
Effective Green, g (s)	66.0	66.0			66.0		16.0	16.0				
Actuated g/C Ratio	0.73	0.73			0.73		0.18	0.18				
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)	67	2185			2117		240	231				
v/s Ratio Prot		0.40			0.70		c0.18	0.17				
v/s Ratio Perm	c0.92											
v/c Ratio	1.25	0.54			0.96		1.02	0.96				
Uniform Delay, d1	12.0	5.3			10.7		37.0	36.7				
Progression Factor	1.24	0.20			1.00		1.00	1.00				
Incremental Delay, d2	176.0	0.7			11.7		62.4	46.9				
Delay (s)	190.9	1.8			22.5		99.4	83.5				
Level of Service	F	A			C		F	F				
Approach Delay (s)		14.3			22.5			91.4			0.0	
Approach LOS		B			C			F			A	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)			4.0			4.0	4.0	4.0			4.0	4.0
Lane Util. Factor			1.00			0.88	1.00	0.95			0.95	1.00
Frt			0.86			0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1384			2347	1505	2951			2951	1295
Flt Permitted			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1384			2347	1505	2951			2951	1295
Volume (vph)	0	0	330	0	0	520	290	1540	0	0	880	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	347	0	0	547	305	1621	0	0	926	263
RTOR Reduction (vph)	0	0	0	0	0	37	0	0	0	0	0	179
Lane Group Flow (vph)	0	0	347	0	0	510	305	1621	0	0	926	84
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	1%	3%	0%	0%	3%	5%
Turn Type			Free			custom	Prot					Perm
Protected Phases							5	2			6	
Permitted Phases			Free			4						6
Actuated Green, G (s)			59.2			15.2	13.0	36.0			19.0	19.0
Effective Green, g (s)			59.2			15.2	13.0	36.0			19.0	19.0
Actuated g/C Ratio			1.00			0.26	0.22	0.61			0.32	0.32
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)			1384			603	330	1795			947	416
v/s Ratio Prot							0.20	c0.55			0.31	
v/s Ratio Perm			0.25			c0.22						0.07
v/c Ratio			0.25			0.85	0.92	0.90			0.98	0.20
Uniform Delay, d1			0.0			20.9	22.6	10.1			19.9	14.6
Progression Factor			1.00			1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.4			10.6	30.6	7.9			24.4	1.1
Delay (s)			0.4			31.4	53.2	18.0			44.2	15.7
Level of Service			A			C	D	B			D	B
Approach Delay (s)		0.4			31.4			23.6			37.9	
Approach LOS		A			C			C			D	

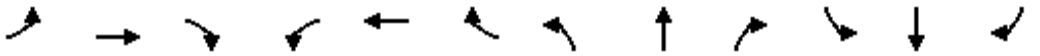
Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95				
Frt	1.00	1.00			0.95		1.00	0.89				
Flt Protected	0.95	1.00			1.00		0.95	0.99				
Satd. Flow (prot)	1434	2951			2793		1267	1212				
Flt Permitted	0.23	1.00			1.00		0.95	0.99				
Satd. Flow (perm)	347	2951			2793		1267	1212				
Volume (vph)	220	1040	0	0	710	360	170	0	120	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1095	0	0	747	379	179	0	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	60	0	0	91	0	0	0	0
Lane Group Flow (vph)	232	1095	0	0	1066	0	128	86	0	0	0	0
Heavy Vehicles (%)	6%	3%	0%	0%	3%	4%	14%	0%	9%	0%	0%	0%
Turn Type	Perm						Prot					
Protected Phases		4			8		5	2				
Permitted Phases	4											
Actuated Green, G (s)	77.5	77.5			77.5		14.5	14.5				
Effective Green, g (s)	77.5	77.5			77.5		14.5	14.5				
Actuated g/C Ratio	0.78	0.78			0.78		0.14	0.14				
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)	269	2287			2165		184	176				
v/s Ratio Prot		0.37			0.38		c0.10	0.07				
v/s Ratio Perm	c0.67											
v/c Ratio	0.86	0.48			0.49		0.70	0.49				
Uniform Delay, d1	7.6	4.0			4.1		40.7	39.4				
Progression Factor	0.52	0.24			1.00		1.00	1.00				
Incremental Delay, d2	26.7	0.7			0.8		10.9	2.1				
Delay (s)	30.7	1.6			4.9		51.5	41.5				
Level of Service	C	A			A		D	D				
Approach Delay (s)		6.7			4.9			45.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.4%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)			4.0			4.0	4.0	4.0			4.0	4.0
Lane Util. Factor			1.00			0.88	1.00	0.95			0.95	1.00
Frt			0.86			0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1384			2280	1462	2868			2951	1214
Flt Permitted			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1384			2280	1462	2868			2951	1214
Volume (vph)	0	0	390	0	0	400	130	750	0	0	870	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	411	0	0	421	137	789	0	0	916	263
RTOR Reduction (vph)	0	0	0	0	0	289	0	0	0	0	0	131
Lane Group Flow (vph)	0	0	411	0	0	132	137	789	0	0	916	132
Heavy Vehicles (%)	0%	0%	0%	0%	0%	5%	4%	6%	0%	0%	3%	12%
Turn Type			Free			custom	Prot					Perm
Protected Phases							5	2			6	
Permitted Phases			Free			4						6
Actuated Green, G (s)			53.8			8.4	6.4	37.4			27.0	27.0
Effective Green, g (s)			53.8			8.4	6.4	37.4			27.0	27.0
Actuated g/C Ratio			1.00			0.16	0.12	0.70			0.50	0.50
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)			1384			356	174	1994			1481	609
v/s Ratio Prot							c0.09	0.28			c0.31	
v/s Ratio Perm			c0.30			0.06						0.11
v/c Ratio			0.30			0.37	0.79	0.40			0.62	0.22
Uniform Delay, d1			0.0			20.3	23.0	3.4			9.7	7.5
Progression Factor			1.00			1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			0.5			0.7	20.6	0.6			1.9	0.8
Delay (s)			0.5			21.0	43.6	4.0			11.6	8.3
Level of Service			A			C	D	A			B	A
Approach Delay (s)		0.5			21.0			9.9			10.9	
Approach LOS		A			C			A			B	

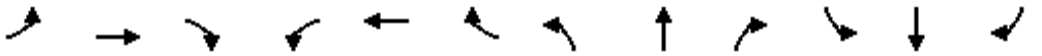
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	53.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0				
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95				
Frt	1.00	1.00			0.96		1.00	0.85				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1476	3010			2848		1375	1230				
Flt Permitted	0.20	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	314	3010			2848		1375	1230				
Volume (vph)	290	1590	0	0	830	350	150	0	180	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	305	1674	0	0	874	368	158	0	189	0	0	0
RTOR Reduction (vph)	0	0	0	0	39	0	0	58	0	0	0	0
Lane Group Flow (vph)	305	1674	0	0	1203	0	158	131	0	0	0	0
Heavy Vehicles (%)	3%	1%	0%	0%	2%	2%	5%	0%	5%	0%	0%	0%
Turn Type	Perm						Prot					
Protected Phases		4			8		5	2				
Permitted Phases	4											
Actuated Green, G (s)	96.0	96.0			96.0		16.0	16.0				
Effective Green, g (s)	96.0	96.0			96.0		16.0	16.0				
Actuated g/C Ratio	0.80	0.80			0.80		0.13	0.13				
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)	251	2408			2278		183	164				
v/s Ratio Prot		0.56			0.42		c0.11	0.11				
v/s Ratio Perm	c0.97											
v/c Ratio	1.22	0.70			0.53		0.86	0.80				
Uniform Delay, d1	12.0	5.4			4.2		50.9	50.4				
Progression Factor	0.47	0.17			1.00		1.00	1.00				
Incremental Delay, d2	123.8	1.4			0.9		31.8	23.1				
Delay (s)	129.4	2.4			5.0		82.7	73.5				
Level of Service	F	A			A		F	E				
Approach Delay (s)		21.9			5.0			77.7			0.0	
Approach LOS		C			A			E			A	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)			4.0			4.0	4.0	4.0			4.0	4.0
Lane Util. Factor			1.00			0.88	1.00	0.95			0.95	1.00
Frt			0.86			0.85	1.00	1.00			1.00	0.85
Flt Protected			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)			1384			2280	1490	2951			2980	1320
Flt Permitted			1.00			1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)			1384			2280	1490	2951			2980	1320
Volume (vph)	0	0	570	0	0	250	110	870	0	0	1310	300
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	600	0	0	263	116	916	0	0	1379	316
RTOR Reduction (vph)	0	0	0	0	0	224	0	0	0	0	0	144
Lane Group Flow (vph)	0	0	600	0	0	39	116	916	0	0	1379	172
Heavy Vehicles (%)	0%	0%	0%	0%	0%	5%	2%	3%	0%	0%	2%	3%
Turn Type			Free			custom	Prot					Perm
Protected Phases							5	2			6	
Permitted Phases			Free			4						6
Actuated Green, G (s)			52.2			6.8	5.0	37.4			28.4	28.4
Effective Green, g (s)			52.2			6.8	5.0	37.4			28.4	28.4
Actuated g/C Ratio			1.00			0.13	0.10	0.72			0.54	0.54
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)			1384			297	143	2114			1621	718
v/s Ratio Prot							c0.08	0.31			c0.46	
v/s Ratio Perm			c0.43			0.02						0.13
v/c Ratio			0.43			0.13	0.81	0.43			0.85	0.24
Uniform Delay, d1			0.0			20.1	23.1	3.0			10.1	6.2
Progression Factor			1.00			1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2			1.0			0.2	28.2	0.6			5.8	0.8
Delay (s)			1.0			20.3	51.4	3.7			15.9	7.0
Level of Service			A			C	D	A			B	A
Approach Delay (s)		1.0			20.3			9.1			14.3	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2980			2951	1394	1183
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2980			2951	1394	1183
Volume (vph)	1100	0	0	1950	140	330
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1158	0	0	2053	147	347
RTOR Reduction (vph)	0	0	0	0	0	97
Lane Group Flow (vph)	1158	0	0	2053	147	250
Heavy Vehicles (%)	2%	2%	2%	3%	9%	15%
Turn Type						Prot
Protected Phases	4			8	2	2
Permitted Phases						
Actuated Green, G (s)	63.0			63.0	19.0	19.0
Effective Green, g (s)	63.0			63.0	19.0	19.0
Actuated g/C Ratio	0.70			0.70	0.21	0.21
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)	2086			2066	294	250
v/s Ratio Prot	0.39			c0.70	0.11	c0.21
v/s Ratio Perm						
v/c Ratio	0.56			0.99	0.50	1.00
Uniform Delay, d1	6.6			13.3	31.3	35.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			18.2	6.0	56.9
Delay (s)	6.9			31.5	37.3	92.4
Level of Service	A			C	D	F
Approach Delay (s)	6.9			31.5	76.0	
Approach LOS	A			C	E	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1100	140	450	1640	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1158	147	474	1726	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				638		
pX, platoon unblocked					0.41	
vC, conflicting volume			1305		3042	653
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1305		4523	653
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			9		100	100
cM capacity (veh/h)			521		0	403

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	772	533	474	863	863
Volume Left	0	0	474	0	0
Volume Right	0	147	0	0	0
cSH	1700	1700	521	1700	1700
Volume to Capacity	0.45	0.31	0.91	0.51	0.51
Queue Length 95th (ft)	0	0	267	0	0
Control Delay (s)	0.0	0.0	48.5	0.0	0.0
Lane LOS			E		
Approach Delay (s)	0.0		10.4		
Approach LOS					

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2951			2951	1322	1162
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2951			2951	1322	1162
Volume (vph)	600	0	0	790	70	260
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	632	0	0	832	74	274
RTOR Reduction (vph)	0	0	0	0	0	103
Lane Group Flow (vph)	632	0	0	832	74	171
Heavy Vehicles (%)	3%	0%	0%	3%	15%	17%
Turn Type						Prot
Protected Phases	4			8	2	2
Permitted Phases						
Actuated Green, G (s)	25.1			25.1	36.3	36.3
Effective Green, g (s)	25.1			25.1	36.3	36.3
Actuated g/C Ratio	0.36			0.36	0.52	0.52
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)	1067			1067	691	608
v/s Ratio Prot	0.21			c0.28	0.06	c0.15
v/s Ratio Perm						
v/c Ratio	0.59			0.78	0.11	0.28
Uniform Delay, d1	18.0			19.7	8.4	9.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.9			3.7	0.3	1.1
Delay (s)	18.9			23.4	8.7	10.4
Level of Service	B			C	A	B
Approach Delay (s)	18.9			23.4	10.0	
Approach LOS	B			C	B	

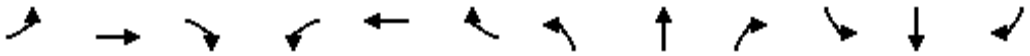
Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2951			2951	1434	1271
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2951			2951	1434	1271
Volume (vph)	1490	0	0	1050	140	790
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1568	0	0	1105	147	832
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	1568	0	0	1105	147	829
Heavy Vehicles (%)	3%	0%	0%	3%	6%	7%
Turn Type						Prot
Protected Phases	4			8	2	2
Permitted Phases						
Actuated Green, G (s)	37.0			37.0	45.0	45.0
Effective Green, g (s)	37.0			37.0	45.0	45.0
Actuated g/C Ratio	0.41			0.41	0.50	0.50
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1213			1213	717	636
v/s Ratio Prot	c0.53			0.37	0.10	c0.65
v/s Ratio Perm						
v/c Ratio	1.29			0.91	0.21	1.30
Uniform Delay, d1	26.5			24.9	12.5	22.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	138.0			10.3	0.6	147.8
Delay (s)	164.5			35.3	13.2	170.3
Level of Service	F			D	B	F
Approach Delay (s)	164.5			35.3	146.7	
Approach LOS	F			D	F	

Intersection Summary			
HCM Average Control Delay	120.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		

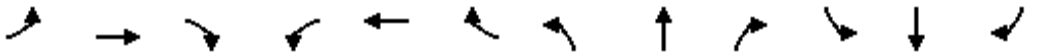
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1462	4282			2951	1360	1434	1271				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1462	4282			2951	1360	1434	1271				
Volume (vph)	320	850	0	0	700	430	240	0	300	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	895	0	0	737	453	253	0	316	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	136	0	0	0	0
Lane Group Flow (vph)	337	895	0	0	737	453	253	180	0	0	0	0
Heavy Vehicles (%)	4%	2%	0%	2%	3%	0%	6%	0%	7%	0%	0%	0%
Turn Type	Prot					Free	Perm					
Protected Phases	7	4			8			2				
Permitted Phases						Free	2					
Actuated Green, G (s)	25.7	66.0			36.3	100.0	26.0	26.0				
Effective Green, g (s)	25.7	66.0			36.3	100.0	26.0	26.0				
Actuated g/C Ratio	0.26	0.66			0.36	1.00	0.26	0.26				
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)	376	2826			1071	1360	373	330				
v/s Ratio Prot	c0.23	0.21			c0.25			0.14				
v/s Ratio Perm						0.33	c0.18					
v/c Ratio	0.90	0.32			0.69	0.33	0.68	0.54				
Uniform Delay, d1	35.9	7.3			27.0	0.0	33.2	31.9				
Progression Factor	0.85	0.78			0.60	1.00	1.00	1.00				
Incremental Delay, d2	15.9	0.2			0.3	0.1	9.5	6.3				
Delay (s)	46.4	5.9			16.5	0.1	42.8	38.2				
Level of Service	D	A			B	A	D	D				
Approach Delay (s)		17.0			10.3			40.3			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

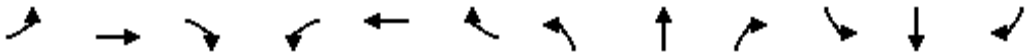
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	870	400	260	680	0	0	0	300	0	0	510
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	916	421	274	716	0	0	0	316	0	0	537
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		780			720							
pX, platoon unblocked	0.93						0.93	0.93		0.93	0.93	0.93
vC, conflicting volume	716			1337			2358	2179	458	2037	2600	358
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	615			1337			2386	2193	458	2040	2647	229
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			44			100	100	43	100	100	26
cM capacity (veh/h)	904			486			2	19	555	7	10	723

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	458	458	421	274	477	239	316	537
Volume Left	0	0	0	274	0	0	0	0
Volume Right	0	0	421	0	0	0	316	537
cSH	1700	1700	1700	486	1700	1700	555	723
Volume to Capacity	0.27	0.27	0.25	0.56	0.28	0.14	0.57	0.74
Queue Length 95th (ft)	0	0	0	86	0	0	88	168
Control Delay (s)	0.0	0.0	0.0	21.5	0.0	0.0	19.7	22.9
Lane LOS				C			C	C
Approach Delay (s)	0.0			6.0			19.7	22.9
Approach LOS							C	C

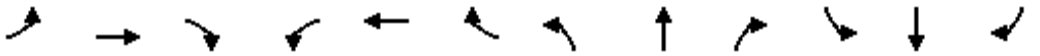
Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1407	4200			2895	1295	1322	1225				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1407	4200			2895	1295	1322	1225				
Volume (vph)	310	640	0	0	570	360	340	0	310	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	674	0	0	600	379	358	0	326	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	151	0	0	0	0
Lane Group Flow (vph)	326	674	0	0	600	379	358	175	0	0	0	0
Heavy Vehicles (%)	8%	4%	0%	0%	5%	5%	15%	0%	11%	0%	0%	0%
Turn Type	Prot					Free	Perm					
Protected Phases	7	4			8			2				
Permitted Phases						Free	2					
Actuated Green, G (s)	25.8	57.0			27.2	100.0	35.0	35.0				
Effective Green, g (s)	25.8	57.0			27.2	100.0	35.0	35.0				
Actuated g/C Ratio	0.26	0.57			0.27	1.00	0.35	0.35				
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)	363	2394			787	1295	463	429				
v/s Ratio Prot	c0.23	0.16			c0.21			0.14				
v/s Ratio Perm						0.29	c0.27					
v/c Ratio	0.90	0.28			0.76	0.29	0.77	0.41				
Uniform Delay, d1	35.8	11.0			33.4	0.0	29.0	24.6				
Progression Factor	0.76	0.91			0.64	1.00	1.00	1.00				
Incremental Delay, d2	21.5	0.3			2.2	0.2	11.9	2.8				
Delay (s)	48.6	10.3			23.6	0.2	40.8	27.5				
Level of Service	D	B			C	A	D	C				
Approach Delay (s)		22.8			14.5			34.5			0.0	
Approach LOS		C			B			C			A	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

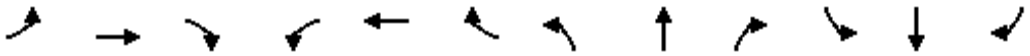
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	620	380	290	620	0	0	0	330	0	0	380
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	653	400	305	653	0	0	0	347	0	0	400
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		780			720							
pX, platoon unblocked												
vC, conflicting volume	653			1053			1989	1916	326	1937	2316	326
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	653			1053			1989	1916	326	1937	2316	326
tC, single (s)	4.1			4.3			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			50			100	100	49	100	100	41
cM capacity (veh/h)	944			612			9	34	675	12	19	675

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	326	326	400	305	435	218	347	400
Volume Left	0	0	0	305	0	0	0	0
Volume Right	0	0	400	0	0	0	347	400
cSH	1700	1700	1700	612	1700	1700	675	675
Volume to Capacity	0.19	0.19	0.24	0.50	0.26	0.13	0.51	0.59
Queue Length 95th (ft)	0	0	0	70	0	0	74	98
Control Delay (s)	0.0	0.0	0.0	16.6	0.0	0.0	15.8	17.8
Lane LOS				C			C	C
Approach Delay (s)	0.0			5.3			15.8	17.8
Approach LOS							C	C

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	55.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1462	4160			2951	1236	1448	1236				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1462	4160			2951	1236	1448	1236				
Volume (vph)	350	1160	0	0	860	310	370	0	450	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	1221	0	0	905	326	389	0	474	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	46	0	0	0	0
Lane Group Flow (vph)	368	1221	0	0	905	326	389	428	0	0	0	0
Heavy Vehicles (%)	4%	5%	3%	0%	3%	10%	5%	3%	10%	0%	0%	0%
Turn Type	Prot					Free	Perm					
Protected Phases	7	4			8			2				
Permitted Phases						Free	2					
Actuated Green, G (s)	25.0	59.0			30.0	100.0	33.0	33.0				
Effective Green, g (s)	25.0	59.0			30.0	100.0	33.0	33.0				
Actuated g/C Ratio	0.25	0.59			0.30	1.00	0.33	0.33				
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)	366	2454			885	1236	478	408				
v/s Ratio Prot	c0.25	0.29			c0.31			c0.35				
v/s Ratio Perm						0.26	0.27					
v/c Ratio	1.01	0.50			1.02	0.26	0.81	1.05				
Uniform Delay, d1	37.5	11.9			35.0	0.0	30.7	33.5				
Progression Factor	0.80	1.00			0.69	1.00	1.00	1.00				
Incremental Delay, d2	40.2	0.5			21.1	0.1	14.1	57.8				
Delay (s)	70.0	12.4			45.3	0.1	44.8	91.3				
Level of Service	E	B			D	A	D	F				
Approach Delay (s)		25.8			33.4			70.3			0.0	
Approach LOS		C			C			E			A	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	1120	280	260	970	0	0	0	390	0	0	430
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	1179	295	274	1021	0	0	0	411	0	0	453
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		780			720							
pX, platoon unblocked	0.79			0.77			0.88	0.88	0.77	0.88	0.88	0.79
vC, conflicting volume	1021			1474			2689	2747	589	2568	3042	511
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	754			1320			2054	2119	176	1916	2454	105
tC, single (s)	4.1			4.2			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			30			100	100	37	100	100	38
cM capacity (veh/h)	680			390			5	13	652	6	8	736

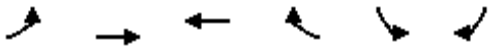
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	589	589	295	274	681	340	411	453
Volume Left	0	0	0	274	0	0	0	0
Volume Right	0	0	295	0	0	0	411	453
cSH	1700	1700	1700	390	1700	1700	652	736
Volume to Capacity	0.35	0.35	0.17	0.70	0.40	0.20	0.63	0.62
Queue Length 95th (ft)	0	0	0	130	0	0	111	107
Control Delay (s)	0.0	0.0	0.0	33.3	0.0	0.0	19.5	17.4
Lane LOS				D			C	C
Approach Delay (s)	0.0			7.0			19.5	17.4
Approach LOS							C	C

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	1.00		0.91	0.97	0.91
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	4282	1360		4241	2949	1105
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	4282	1360		4241	2949	1105
Volume (vph)	900	260	0	1130	610	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	947	274	0	1189	642	200
RTOR Reduction (vph)	0	0	0	0	0	17
Lane Group Flow (vph)	947	274	0	1189	642	184
Heavy Vehicles (%)	2%	0%	0%	3%	0%	12%
Turn Type		Free				Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	22.0	60.0		22.0	30.0	30.0
Effective Green, g (s)	22.0	60.0		22.0	30.0	30.0
Actuated g/C Ratio	0.37	1.00		0.37	0.50	0.50
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1570	1360		1555	1475	553
v/s Ratio Prot	0.22			c0.28	c0.22	
v/s Ratio Perm		0.20				0.17
v/c Ratio	0.60	0.20		0.76	0.44	0.33
Uniform Delay, d1	15.5	0.0		16.7	9.6	9.0
Progression Factor	0.65	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.6	0.3		3.6	0.9	1.6
Delay (s)	11.6	0.3		20.4	10.5	10.6
Level of Service	B	A		C	B	B
Approach Delay (s)	9.1			20.4	10.5	
Approach LOS	A			C	B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↑↑	↱
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.91	0.95	1.00	0.97	0.91
Frt		1.00	1.00	0.85	0.93	0.85
Flt Protected		1.00	1.00	1.00	0.97	1.00
Satd. Flow (prot)		4282	2951	1360	2751	1202
Flt Permitted		1.00	1.00	1.00	0.97	1.00
Satd. Flow (perm)		4282	2951	1360	2751	1202
Volume (vph)	0	980	1350	390	180	290
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1032	1421	411	189	305
RTOR Reduction (vph)	0	0	0	0	17	17
Lane Group Flow (vph)	0	1032	1421	411	324	136
Heavy Vehicles (%)	0%	2%	3%	0%	2%	3%
Turn Type				Free		Perm
Protected Phases		4	8		6	
Permitted Phases				Free		6
Actuated Green, G (s)		31.0	31.0	60.0	21.0	21.0
Effective Green, g (s)		31.0	31.0	60.0	21.0	21.0
Actuated g/C Ratio		0.52	0.52	1.00	0.35	0.35
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)		2212	1525	1360	963	421
v/s Ratio Prot		0.24	c0.48		0.12	
v/s Ratio Perm				c0.30		0.11
v/c Ratio		0.47	0.93	0.30	0.34	0.32
Uniform Delay, d1		9.2	13.5	0.0	14.4	14.3
Progression Factor		1.00	0.64	1.00	1.00	1.00
Incremental Delay, d2		0.7	9.3	0.4	0.9	2.0
Delay (s)		9.9	18.0	0.4	15.3	16.3
Level of Service		A	B	A	B	B
Approach Delay (s)		9.9	14.0		15.6	
Approach LOS		A	B		B	

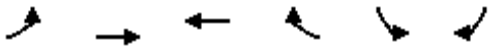
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	1.00		0.91	0.97	0.91
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	4200	1360		4121	2938	1031
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	4200	1360		4121	2938	1031
Volume (vph)	670	200	0	660	510	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	211	0	695	537	221
RTOR Reduction (vph)	0	0	0	0	3	49
Lane Group Flow (vph)	705	211	0	695	545	161
Heavy Vehicles (%)	4%	0%	0%	6%	0%	20%
Turn Type		Free				Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	23.0	60.0		23.0	29.0	29.0
Effective Green, g (s)	23.0	60.0		23.0	29.0	29.0
Actuated g/C Ratio	0.38	1.00		0.38	0.48	0.48
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)	1610	1360		1580	1420	498
v/s Ratio Prot	0.17			c0.17	c0.19	
v/s Ratio Perm		0.16				0.16
v/c Ratio	0.44	0.16		0.44	0.38	0.32
Uniform Delay, d1	13.7	0.0		13.7	9.8	9.5
Progression Factor	0.68	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.2		0.9	0.8	1.7
Delay (s)	10.2	0.2		14.6	10.6	11.2
Level of Service	B	A		B	B	B
Approach Delay (s)	7.9			14.6	10.8	
Approach LOS	A			B	B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.9%	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)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.91	0.95	1.00	0.97	0.91
Frt		1.00	1.00	0.85	0.95	0.85
Flt Protected		1.00	1.00	1.00	0.97	1.00
Satd. Flow (prot)		4200	2868	1360	2705	1179
Flt Permitted		1.00	1.00	1.00	0.97	1.00
Satd. Flow (perm)		4200	2868	1360	2705	1179
Volume (vph)	0	740	1060	110	130	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	779	1116	116	137	158
RTOR Reduction (vph)	0	0	0	0	45	55
Lane Group Flow (vph)	0	779	1116	116	156	39
Heavy Vehicles (%)	0%	4%	6%	0%	6%	5%
Turn Type				Free		Perm
Protected Phases		4	8		6	
Permitted Phases				Free		6
Actuated Green, G (s)		34.0	34.0	60.0	18.0	18.0
Effective Green, g (s)		34.0	34.0	60.0	18.0	18.0
Actuated g/C Ratio		0.57	0.57	1.00	0.30	0.30
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)		2380	1625	1360	812	354
v/s Ratio Prot		0.19	c0.39		c0.06	
v/s Ratio Perm				0.09		0.03
v/c Ratio		0.33	0.69	0.09	0.19	0.11
Uniform Delay, d1		6.9	9.2	0.0	15.6	15.2
Progression Factor		1.00	0.68	1.00	1.00	1.00
Incremental Delay, d2		0.4	2.2	0.1	0.5	0.6
Delay (s)		7.3	8.5	0.1	16.1	15.8
Level of Service		A	A	A	B	B
Approach Delay (s)		7.3	7.7		16.0	
Approach LOS		A	A		B	

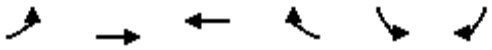
Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	1.00		0.91	0.97	0.91
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	4282	1360		4241	2949	1146
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	4282	1360		4241	2949	1146
Volume (vph)	1050	280	0	1050	780	300
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1105	295	0	1105	821	316
RTOR Reduction (vph)	0	0	0	0	0	9
Lane Group Flow (vph)	1105	295	0	1105	821	307
Heavy Vehicles (%)	2%	0%	0%	3%	0%	8%
Turn Type		Free				Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	22.0	60.0		22.0	30.0	30.0
Effective Green, g (s)	22.0	60.0		22.0	30.0	30.0
Actuated g/C Ratio	0.37	1.00		0.37	0.50	0.50
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1570	1360		1555	1475	573
v/s Ratio Prot	0.26			c0.26	c0.28	
v/s Ratio Perm		0.22				0.27
v/c Ratio	0.70	0.22		0.71	0.56	0.54
Uniform Delay, d1	16.2	0.0		16.3	10.4	10.2
Progression Factor	0.82	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	0.3		2.8	1.5	3.6
Delay (s)	15.7	0.3		19.1	11.9	13.8
Level of Service	B	A		B	B	B
Approach Delay (s)	12.4			19.1	12.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↰↑	↱
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.91	0.95	1.00	0.97	0.91
Frt		1.00	1.00	0.85	0.94	0.85
Flt Protected		1.00	1.00	1.00	0.97	1.00
Satd. Flow (prot)		4282	2951	1360	2770	1213
Flt Permitted		1.00	1.00	1.00	0.97	1.00
Satd. Flow (perm)		4282	2951	1360	2770	1213
Volume (vph)	0	1080	1650	180	250	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1137	1737	189	263	389
RTOR Reduction (vph)	0	0	0	0	15	15
Lane Group Flow (vph)	0	1137	1737	189	441	181
Heavy Vehicles (%)	0%	2%	3%	0%	2%	2%
Turn Type				Free		Perm
Protected Phases		4	8		6	
Permitted Phases				Free		6
Actuated Green, G (s)		36.0	36.0	60.0	16.0	16.0
Effective Green, g (s)		36.0	36.0	60.0	16.0	16.0
Actuated g/C Ratio		0.60	0.60	1.00	0.27	0.27
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)		2569	1771	1360	739	323
v/s Ratio Prot		0.27	c0.59		c0.16	
v/s Ratio Perm				0.14		0.15
v/c Ratio		0.44	0.98	0.14	0.60	0.56
Uniform Delay, d1		6.5	11.7	0.0	19.2	19.0
Progression Factor		1.00	0.72	1.00	1.00	1.00
Incremental Delay, d2		0.6	14.6	0.2	3.5	6.8
Delay (s)		7.1	23.0	0.2	22.7	25.8
Level of Service		A	C	A	C	C
Approach Delay (s)		7.1	20.8		23.6	
Approach LOS		A	C		C	

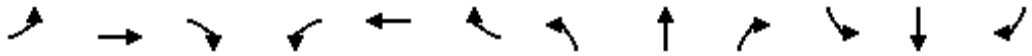
Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	0.99			1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1462	2967			2951	1308		1493	1279	1375	1454	1236
Flt Permitted	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1462	2967			2951	1308		1493	1279	1375	1454	1236
Volume (vph)	85	1365	50	0	1190	290	100	520	380	580	275	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1437	53	0	1253	305	105	547	400	611	289	26
RTOR Reduction (vph)	0	2	0	0	0	43	0	0	11	0	0	19
Lane Group Flow (vph)	89	1488	0	0	1253	262	0	652	390	429	471	7
Heavy Vehicles (%)	4%	2%	0%	0%	3%	4%	1%	1%	1%	5%	1%	10%
Turn Type	Prot					pm+ov	Split		Perm	Split		pm+ov
Protected Phases	7	4			8	6	2	2		6	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	54.0			44.0	76.0		42.0	42.0	32.0	32.0	38.0
Effective Green, g (s)	6.0	54.0			44.0	76.0		42.0	42.0	32.0	32.0	38.0
Actuated g/C Ratio	0.04	0.39			0.31	0.54		0.30	0.30	0.23	0.23	0.27
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)	63	1144			927	710		448	384	314	332	371
v/s Ratio Prot	0.06	c0.50			0.42	0.08		c0.44		0.31	c0.32	0.00
v/s Ratio Perm						0.12			0.30			0.00
v/c Ratio	1.41	1.30			1.35	0.37		1.46	1.01	1.37	1.42	0.02
Uniform Delay, d1	67.0	43.0			48.0	18.3		49.0	49.0	54.0	54.0	37.3
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	256.5	141.9			165.4	0.3		217.0	49.6	184.0	205.3	0.0
Delay (s)	323.5	184.9			213.4	18.6		266.0	98.6	238.0	259.3	37.4
Level of Service	F	F			F	B		F	F	F	F	D
Approach Delay (s)		192.7			175.3			202.4			243.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	198.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.9%	ICU Level of Service	H
Analysis Period (min)	15		

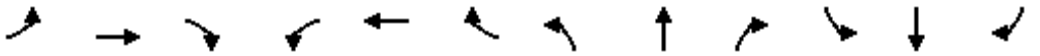
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85		0.96	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1394	2916			2923	1320		1422	1279	1350	1444	1193
Flt Permitted	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.98	1.00
Satd. Flow (perm)	1394	2916			2923	1320		1422	1279	1350	1444	1193
Volume (vph)	80	1140	25	0	945	335	50	150	345	425	205	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	1200	26	0	995	353	53	158	363	447	216	26
RTOR Reduction (vph)	0	2	0	0	0	133	0	14	43	0	0	18
Lane Group Flow (vph)	84	1224	0	0	995	220	0	277	240	314	349	8
Heavy Vehicles (%)	9%	4%	0%	0%	4%	3%	1%	2%	1%	7%	1%	14%
Turn Type	Prot					pm+ov	Split		Perm	Split		pm+ov
Protected Phases	7	4			8	6	2	2		6	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	45.0			35.0	59.0		19.0	19.0	24.0	24.0	30.0
Effective Green, g (s)	6.0	45.0			35.0	59.0		19.0	19.0	24.0	24.0	30.0
Actuated g/C Ratio	0.06	0.45			0.35	0.59		0.19	0.19	0.24	0.24	0.30
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)	84	1312			1023	779		270	243	324	347	406
v/s Ratio Prot	0.06	c0.42			0.34	0.07		c0.19		0.23	c0.24	0.00
v/s Ratio Perm						0.10			0.19			0.01
v/c Ratio	1.00	0.93			0.97	0.28		1.03	0.99	0.97	1.01	0.02
Uniform Delay, d1	47.0	26.1			32.0	10.1		40.5	40.4	37.6	38.0	24.6
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	98.2	13.3			22.3	0.2		61.9	53.8	41.2	49.8	0.0
Delay (s)	145.2	39.4			54.3	10.3		102.4	94.2	78.8	87.8	24.7
Level of Service	F	D			D	B		F	F	E	F	C
Approach Delay (s)		46.2			42.8			98.3			81.3	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	58.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		

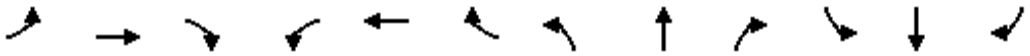
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00		0.95	0.95	0.95	0.95	1.00
Frt	1.00	0.99			1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1476	2927			2951	1333		1497	1279	1402	1451	1248
Flt Permitted	0.95	1.00			1.00	1.00		0.99	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1476	2927			2951	1333		1497	1279	1402	1451	1248
Volume (vph)	200	1335	100	0	1415	545	50	450	100	625	200	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1405	105	0	1489	574	53	474	105	658	211	26
RTOR Reduction (vph)	0	4	0	0	0	31	0	0	13	0	0	18
Lane Group Flow (vph)	211	1506	0	0	1489	543	0	527	92	419	450	8
Heavy Vehicles (%)	3%	3%	0%	0%	3%	2%	1%	1%	1%	3%	1%	9%
Turn Type	Prot					pm+ov	Split		Perm	Split		pm+ov
Protected Phases	7	4			8	6	2	2		6	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	14.0	70.0			52.0	84.0		36.0	36.0	32.0	32.0	46.0
Effective Green, g (s)	14.0	70.0			52.0	84.0		36.0	36.0	32.0	32.0	46.0
Actuated g/C Ratio	0.09	0.47			0.35	0.56		0.24	0.24	0.21	0.21	0.31
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)	138	1366			1023	746		359	307	299	310	416
v/s Ratio Prot	c0.14	0.51			c0.50	0.16		c0.35		0.30	c0.31	0.00
v/s Ratio Perm						0.25			0.07			0.00
v/c Ratio	1.53	1.10			1.46	0.73		1.47	0.30	1.40	1.45	0.02
Uniform Delay, d1	68.0	40.0			49.0	24.5		57.0	46.7	59.0	59.0	36.3
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	271.1	57.6			210.5	3.6		225.3	0.6	199.6	220.4	0.0
Delay (s)	339.1	97.6			259.5	28.1		282.3	47.2	258.6	279.4	36.3
Level of Service	F	F			F	C		F	D	F	F	D
Approach Delay (s)		127.2			195.1			243.2			262.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	190.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		

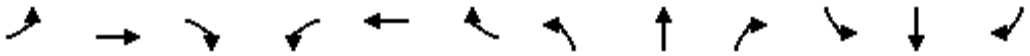
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)			4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor			1.00		0.95		1.00	0.95			0.95	
Frt			0.85		0.99		1.00	1.00			1.00	
Flt Protected			1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)			1360		2749		1520	2951			2943	
Flt Permitted			1.00		0.99		0.95	1.00			1.00	
Satd. Flow (perm)			1360		2749		1520	2951			2943	
Volume (vph)	0	0	420	40	330	20	330	560	0	0	420	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	442	42	347	21	347	589	0	0	442	11
RTOR Reduction (vph)	0	0	326	0	7	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	116	0	403	0	347	589	0	0	450	0
Heavy Vehicles (%)	0%	0%	0%	4%	10%	6%	0%	3%	0%	0%	3%	0%
Turn Type	custom		Over	Perm			Prot					
Protected Phases			5		8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)			15.8		13.2		15.8	38.8			19.0	
Effective Green, g (s)			15.8		13.2		15.8	38.8			19.0	
Actuated g/C Ratio			0.26		0.22		0.26	0.65			0.32	
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)			358		605		400	1908			932	
v/s Ratio Prot			0.09				c0.23	0.20			c0.15	
v/s Ratio Perm					0.15							
v/c Ratio			0.33		0.67		0.87	0.31			0.48	
Uniform Delay, d1			17.8		21.4		21.1	4.7			16.5	
Progression Factor			1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2			0.5		2.8		17.6	0.4			1.8	
Delay (s)			18.3		24.2		38.7	5.1			18.3	
Level of Service			B		C		D	A			B	
Approach Delay (s)		18.3			24.2			17.6			18.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

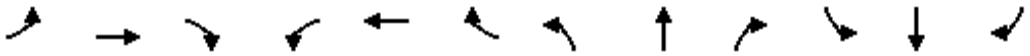
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00		0.95		1.00	0.95			0.95	
Frt	1.00		0.85		0.98		1.00	1.00			1.00	
Flt Protected	0.95		1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1520		1360		2541		1520	2868			2868	
Flt Permitted	0.40		1.00		0.99		0.95	1.00			1.00	
Satd. Flow (perm)	641		1360		2541		1520	2868			2868	
Volume (vph)	10	0	210	90	260	60	220	350	0	0	360	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	0	221	95	274	63	232	368	0	0	379	0
RTOR Reduction (vph)	0	0	173	0	24	0	0	0	0	0	0	0
Lane Group Flow (vph)	11	0	48	0	408	0	232	368	0	0	379	0
Heavy Vehicles (%)	0%	0%	0%	8%	20%	9%	0%	6%	0%	0%	6%	0%
Turn Type	custom		Over	Perm			Prot					
Protected Phases			5		8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)	13.6		13.1		13.6		13.1	38.4			21.3	
Effective Green, g (s)	13.6		13.1		13.6		13.1	38.4			21.3	
Actuated g/C Ratio	0.23		0.22		0.23		0.22	0.64			0.36	
Clearance Time (s)	4.0		4.0		4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0		3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	145		297		576		332	1836			1018	
v/s Ratio Prot			0.04				c0.15	0.13			c0.13	
v/s Ratio Perm	0.02				0.16							
v/c Ratio	0.08		0.16		0.71		0.70	0.20			0.37	
Uniform Delay, d1	18.3		19.0		21.4		21.6	4.5			14.4	
Progression Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2		0.3		4.0		6.3	0.2			1.0	
Delay (s)	18.5		19.3		25.4		27.9	4.7			15.4	
Level of Service	B		B		C		C	A			B	
Approach Delay (s)		19.2			25.4			13.7			15.4	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

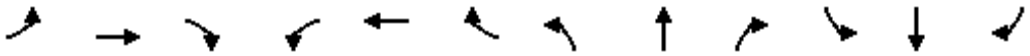
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0		4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00		0.95		1.00	0.95			0.95	
Frt	1.00		0.85		0.99		1.00	1.00			1.00	
Flt Protected	0.95		1.00		0.99		0.95	1.00			1.00	
Satd. Flow (prot)	1520		1360		2750		1520	2923			2943	
Flt Permitted	0.33		1.00		0.99		0.95	1.00			1.00	
Satd. Flow (perm)	532		1360		2750		1520	2923			2943	
Volume (vph)	10	0	310	100	350	40	460	730	0	0	440	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	0	326	105	368	42	484	768	0	0	463	11
RTOR Reduction (vph)	0	0	231	0	11	0	0	0	0	0	3	0
Lane Group Flow (vph)	11	0	95	0	504	0	484	768	0	0	471	0
Heavy Vehicles (%)	0%	0%	0%	3%	10%	4%	0%	4%	0%	0%	3%	0%
Turn Type	custom		Over	Perm			Prot					
Protected Phases			5		8		5	2			6	
Permitted Phases	4			8								
Actuated Green, G (s)	14.5		17.5		14.5		17.5	37.5			16.0	
Effective Green, g (s)	14.5		17.5		14.5		17.5	37.5			16.0	
Actuated g/C Ratio	0.24		0.29		0.24		0.29	0.62			0.27	
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)	129		397		665		443	1827			785	
v/s Ratio Prot			0.07				c0.32	0.26			c0.16	
v/s Ratio Perm	0.02				0.18							
v/c Ratio	0.09		0.24		0.76		1.09	0.42			0.60	
Uniform Delay, d1	17.6		16.2		21.1		21.2	5.7			19.2	
Progression Factor	1.00		1.00		1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.3		0.3		4.9		70.1	0.7			3.4	
Delay (s)	17.9		16.5		26.0		91.4	6.4			22.6	
Level of Service	B		B		C		F	A			C	
Approach Delay (s)		16.5			26.0			39.3			22.6	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

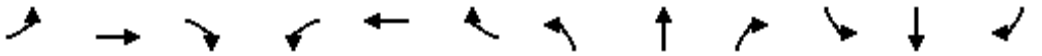
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.86	0.86		0.91		0.97		0.88			
Frt		1.00	0.85		0.96		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		4008	1136		4017		2808		2028			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		4008	1136		4017		2808		2028			
Volume (vph)	0	1740	590	0	1610	660	420	0	360	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1832	621	0	1695	695	442	0	379	0	0	0
RTOR Reduction (vph)	0	0	0	0	74	0	0	0	38	0	0	0
Lane Group Flow (vph)	0	1832	621	0	2316	0	442	0	341	0	0	0
Heavy Vehicles (%)	0%	3%	3%	0%	4%	4%	5%	0%	18%	0%	0%	0%
Turn Type			Free				custom		custom			
Protected Phases		4			8							
Permitted Phases			Free				2		2			
Actuated Green, G (s)		68.0	100.0		68.0		24.0		24.0			
Effective Green, g (s)		68.0	100.0		68.0		24.0		24.0			
Actuated g/C Ratio		0.68	1.00		0.68		0.24		0.24			
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)		2725	1136		2732		674		487			
v/s Ratio Prot		0.46			c0.58							
v/s Ratio Perm			0.55				0.16		c0.17			
v/c Ratio		0.67	0.55		0.85		0.66		0.70			
Uniform Delay, d1		9.4	0.0		12.1		34.3		34.7			
Progression Factor		1.32	1.00		0.60		1.00		1.00			
Incremental Delay, d2		0.8	1.1		0.3		4.9		8.1			
Delay (s)		13.2	1.1		7.6		39.2		42.9			
Level of Service		B	A		A		D		D			
Approach Delay (s)		10.1			7.6			40.9			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.4%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.91	1.00		0.91					0.97		0.88
Frt		1.00	0.85		0.96					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4282	1204		4096					2782		2280
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4282	1204		4096					2782		2280
Volume (vph)	0	2080	1060	0	1460	570	0	0	0	250	0	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2189	1116	0	1537	600	0	0	0	263	0	589
RTOR Reduction (vph)	0	0	0	0	70	0	0	0	0	0	0	41
Lane Group Flow (vph)	0	2189	1116	0	2067	0	0	0	0	263	0	548
Heavy Vehicles (%)	0%	2%	13%	0%	3%	0%	0%	0%	0%	6%	0%	5%
Turn Type			Free							custom		custom
Protected Phases		4			8							
Permitted Phases			Free							6		6
Actuated Green, G (s)		60.0	100.0		60.0					32.0		32.0
Effective Green, g (s)		60.0	100.0		60.0					32.0		32.0
Actuated g/C Ratio		0.60	1.00		0.60					0.32		0.32
Clearance Time (s)		4.0			4.0					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		2569	1204		2458					890		730
v/s Ratio Prot		0.51			0.50							
v/s Ratio Perm			c0.93							0.09		0.24
v/c Ratio		0.85	0.93		0.84					0.30		0.75
Uniform Delay, d1		16.4	0.0		16.1					25.5		30.4
Progression Factor		0.44	1.00		0.62					1.00		1.00
Incremental Delay, d2		1.7	6.7		2.1					0.8		7.0
Delay (s)		8.9	6.7		12.1					26.4		37.4
Level of Service		A	A		B					C		D
Approach Delay (s)		8.1			12.1			0.0			34.0	
Approach LOS		A			B			A			C	

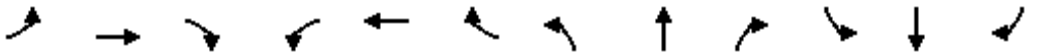
Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.86	0.86		0.91		0.97		0.88			
Frt		1.00	0.85		0.95		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3894	1103		3860		2920		1870			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3894	1103		3860		2920		1870			
Volume (vph)	0	1860	460	0	1690	740	480	0	800	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1958	484	0	1779	779	505	0	842	0	0	0
RTOR Reduction (vph)	0	0	0	0	79	0	0	0	8	0	0	0
Lane Group Flow (vph)	0	1958	484	0	2479	0	505	0	834	0	0	0
Heavy Vehicles (%)	0%	6%	6%	0%	8%	8%	1%	0%	28%	0%	0%	0%
Turn Type			Free				custom		custom			
Protected Phases		4			8							
Permitted Phases			Free				2		2			
Actuated Green, G (s)		54.0	100.0		54.0		38.0		38.0			
Effective Green, g (s)		54.0	100.0		54.0		38.0		38.0			
Actuated g/C Ratio		0.54	1.00		0.54		0.38		0.38			
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)		2103	1103		2084		1110		711			
v/s Ratio Prot		0.50			c0.64							
v/s Ratio Perm			0.44				0.17		c0.45			
v/c Ratio		0.93	0.44		1.19		0.45		1.17			
Uniform Delay, d1		21.3	0.0		23.0		23.2		31.0			
Progression Factor		1.33	1.00		0.55		1.00		1.00			
Incremental Delay, d2		6.1	0.8		89.0		1.3		92.3			
Delay (s)		34.4	0.8		101.6		24.6		123.3			
Level of Service		C	A		F		C		F			
Approach Delay (s)		27.8			101.6			86.3			0.0	
Approach LOS		C			F			F			A	

Intersection Summary			
HCM Average Control Delay	70.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

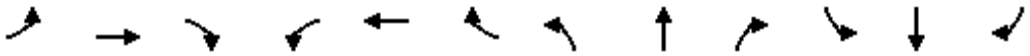
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.91	1.00		0.91					0.97		0.88
Frt		1.00	0.85		0.97					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4160	1153		4100					2681		2196
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4160	1153		4100					2681		2196
Volume (vph)	0	1900	740	0	1710	460	0	0	0	420	0	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2000	779	0	1800	484	0	0	0	442	0	663
RTOR Reduction (vph)	0	0	0	0	48	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	2000	779	0	2236	0	0	0	0	442	0	643
Heavy Vehicles (%)	0%	5%	18%	0%	4%	0%	0%	0%	0%	10%	0%	9%
Turn Type			Free							custom		custom
Protected Phases		4			8							
Permitted Phases			Free							6		6
Actuated Green, G (s)		59.0	100.0		59.0					33.0		33.0
Effective Green, g (s)		59.0	100.0		59.0					33.0		33.0
Actuated g/C Ratio		0.59	1.00		0.59					0.33		0.33
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)		2454	1153		2419					885		725
v/s Ratio Prot		0.48			c0.55							
v/s Ratio Perm			0.68							0.16		c0.29
v/c Ratio		0.81	0.68		0.92					0.50		0.89
Uniform Delay, d1		16.2	0.0		18.5					26.9		31.7
Progression Factor		0.47	1.00		0.54					1.00		1.00
Incremental Delay, d2		1.6	1.7		0.8					2.0		15.0
Delay (s)		9.2	1.7		10.8					28.9		46.7
Level of Service		A	A		B					C		D
Approach Delay (s)		7.1			10.8			0.0			39.6	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

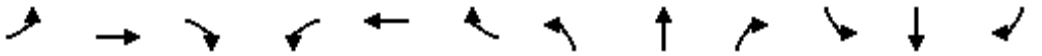
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.86	0.86		0.91		0.97		0.88			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		4047	1147		4095		2891		2100			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		4047	1147		4095		2891		2100			
Volume (vph)	0	2330	480	0	2050	610	820	0	910	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2453	505	0	2158	642	863	0	958	0	0	0
RTOR Reduction (vph)	0	0	0	0	54	0	0	0	3	0	0	0
Lane Group Flow (vph)	0	2453	505	0	2746	0	863	0	955	0	0	0
Heavy Vehicles (%)	0%	2%	2%	0%	3%	3%	2%	0%	14%	0%	0%	0%
Turn Type			Free				custom		custom			
Protected Phases		4			8							
Permitted Phases			Free				2		2			
Actuated Green, G (s)		55.0	100.0		55.0		37.0		37.0			
Effective Green, g (s)		55.0	100.0		55.0		37.0		37.0			
Actuated g/C Ratio		0.55	1.00		0.55		0.37		0.37			
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)		2226	1147		2252		1070		777			
v/s Ratio Prot		0.61			c0.67							
v/s Ratio Perm			0.44				0.30		c0.46			
v/c Ratio		1.10	0.44		1.22		0.81		1.23			
Uniform Delay, d1		22.5	0.0		22.5		28.3		31.5			
Progression Factor		1.02	1.00		0.80		1.00		1.00			
Incremental Delay, d2		50.1	0.6		102.2		6.5		114.6			
Delay (s)		72.9	0.6		120.1		34.8		146.1			
Level of Service		E	A		F		C		F			
Approach Delay (s)		60.6			120.1			93.3			0.0	
Approach LOS		E			F			F			A	

Intersection Summary			
HCM Average Control Delay	90.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

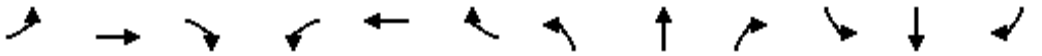
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.91	1.00		0.91					0.97		0.88
Frt		1.00	0.85		0.97					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		4282	1259		4175					2863		2302
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		4282	1259		4175					2863		2302
Volume (vph)	0	2070	800	0	2320	550	0	0	0	730	0	700
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2179	842	0	2442	579	0	0	0	768	0	737
RTOR Reduction (vph)	0	0	0	0	40	0	0	0	0	0	0	7
Lane Group Flow (vph)	0	2179	842	0	2981	0	0	0	0	768	0	730
Heavy Vehicles (%)	0%	2%	8%	0%	2%	0%	0%	0%	0%	3%	0%	4%
Turn Type			Free							custom		custom
Protected Phases		4			8							
Permitted Phases			Free							6		6
Actuated Green, G (s)		64.0	100.0		64.0					28.0		28.0
Effective Green, g (s)		64.0	100.0		64.0					28.0		28.0
Actuated g/C Ratio		0.64	1.00		0.64					0.28		0.28
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)		2740	1259		2672					802		645
v/s Ratio Prot		0.51			c0.71							
v/s Ratio Perm			0.67							0.27		c0.32
v/c Ratio		0.80	0.67		1.12					0.96		1.13
Uniform Delay, d1		13.2	0.0		18.0					35.4		36.0
Progression Factor		0.15	1.00		0.64					1.00		1.00
Incremental Delay, d2		0.2	0.3		52.7					23.0		77.5
Delay (s)		2.2	0.3		64.2					58.4		113.5
Level of Service		A	A		E					E		F
Approach Delay (s)		1.7			64.2			0.0			85.4	
Approach LOS		A			E			A			F	

Intersection Summary			
HCM Average Control Delay	43.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.5%	ICU Level of Service	G
Analysis Period (min)	15		

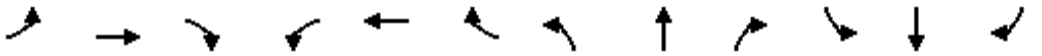
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2756	4241	1308	1505	4206		2891	2954		2891	4160	1153
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)	2756	4241	1308	1505	4206		2891	2954		2891	4160	1153
Volume (vph)	440	990	260	40	1300	80	380	590	40	60	310	410
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	1042	274	42	1368	84	400	621	42	63	326	432
RTOR Reduction (vph)	0	0	83	0	7	0	0	5	0	0	0	10
Lane Group Flow (vph)	463	1042	191	42	1445	0	400	658	0	63	326	422
Heavy Vehicles (%)	7%	3%	4%	1%	3%	2%	2%	2%	1%	2%	5%	18%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	16.0	48.6	64.2	4.8	37.4		15.6	25.8		4.8	15.0	31.0
Effective Green, g (s)	16.0	48.6	64.2	4.8	37.4		15.6	25.8		4.8	15.0	31.0
Actuated g/C Ratio	0.16	0.49	0.64	0.05	0.37		0.16	0.26		0.05	0.15	0.31
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)	441	2061	892	72	1573		451	762		139	624	404
v/s Ratio Prot	c0.17	0.25	0.03	0.03	c0.34		c0.14	0.22		0.02	0.08	c0.17
v/s Ratio Perm			0.11									0.20
v/c Ratio	1.05	0.51	0.21	0.58	0.92		0.89	0.86		0.45	0.52	1.05
Uniform Delay, d1	42.0	17.5	7.4	46.6	29.9		41.3	35.4		46.3	39.2	34.5
Progression Factor	1.22	0.48	0.06	1.12	0.87		0.92	0.65		0.78	0.73	0.99
Incremental Delay, d2	53.1	0.2	0.1	6.9	5.7		6.7	4.2		1.8	2.5	52.1
Delay (s)	104.2	8.6	0.6	59.2	31.8		44.6	27.0		37.9	31.2	86.4
Level of Service	F	A	A	E	C		D	C		D	C	F
Approach Delay (s)		32.3			32.5			33.6			60.8	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	37.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

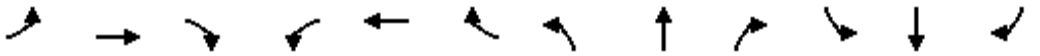
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		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)	2587	4121	1236	1505	4047		2835	2808		2863	4160	1172
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)	2587	4121	1236	1505	4047		2835	2808		2863	4160	1172
Volume (vph)	360	1030	650	100	1070	200	280	570	80	210	440	410
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	379	1084	684	105	1126	211	295	600	84	221	463	432
RTOR Reduction (vph)	0	0	91	0	27	0	0	11	0	0	0	25
Lane Group Flow (vph)	379	1084	593	105	1310	0	295	673	0	221	463	407
Heavy Vehicles (%)	14%	6%	10%	1%	6%	2%	4%	7%	1%	3%	5%	16%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	16.0	40.1	54.9	9.7	33.8		14.8	26.2		8.0	19.4	35.4
Effective Green, g (s)	16.0	40.1	54.9	9.7	33.8		14.8	26.2		8.0	19.4	35.4
Actuated g/C Ratio	0.16	0.40	0.55	0.10	0.34		0.15	0.26		0.08	0.19	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	414	1653	728	146	1368		420	736		229	807	462
v/s Ratio Prot	c0.15	0.26	c0.12	0.07	c0.32		0.10	c0.24		0.08	0.11	c0.14
v/s Ratio Perm			0.36									0.21
v/c Ratio	0.92	0.66	0.82	0.72	0.96		0.70	0.91		0.97	0.57	0.88
Uniform Delay, d1	41.3	24.3	18.4	43.8	32.4		40.5	35.8		45.9	36.5	30.3
Progression Factor	1.27	0.64	0.45	1.11	0.72		1.04	0.64		0.87	0.82	1.00
Incremental Delay, d2	15.9	0.5	4.0	11.7	12.2		3.3	12.2		45.6	2.6	15.9
Delay (s)	68.5	16.1	12.3	60.4	35.6		45.4	35.3		85.4	32.7	46.3
Level of Service	E	B	B	E	D		D	D		F	C	D
Approach Delay (s)		24.1			37.4			38.4			48.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

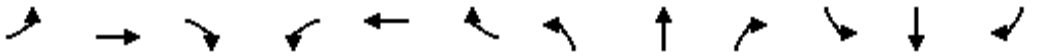
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		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)	2657	4200	1320	1505	4187		2863	2893		2891	4282	1295
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)	2657	4200	1320	1505	4187		2863	2893		2891	4282	1295
Volume (vph)	420	1300	500	100	1200	120	310	510	90	240	650	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	1368	526	105	1263	126	326	537	95	253	684	589
RTOR Reduction (vph)	0	0	45	0	12	0	0	14	0	0	0	6
Lane Group Flow (vph)	442	1368	481	105	1377	0	326	618	0	253	684	583
Heavy Vehicles (%)	11%	4%	3%	1%	3%	2%	3%	3%	1%	2%	2%	5%
Turn Type	Prot		pm+ov	Prot			Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Actuated Green, G (s)	22.0	44.5	56.5	9.5	32.0		12.0	21.0		9.0	18.0	40.0
Effective Green, g (s)	22.0	44.5	56.5	9.5	32.0		12.0	21.0		9.0	18.0	40.0
Actuated g/C Ratio	0.22	0.44	0.56	0.10	0.32		0.12	0.21		0.09	0.18	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)	585	1869	799	143	1340		344	608		260	771	570
v/s Ratio Prot	0.17	0.33	0.07	0.07	c0.33		c0.11	c0.21		0.09	0.16	c0.23
v/s Ratio Perm			0.29									0.23
v/c Ratio	0.76	0.73	0.60	0.73	1.03		0.95	1.02		0.97	0.89	1.02
Uniform Delay, d1	36.5	22.8	14.3	44.0	34.0		43.7	39.5		45.4	40.0	30.0
Progression Factor	1.16	0.52	0.50	1.04	0.90		1.01	0.66		1.05	0.78	0.85
Incremental Delay, d2	4.2	1.1	1.0	9.9	25.5		15.3	23.9		35.0	8.9	34.4
Delay (s)	46.4	13.0	8.1	55.7	56.1		59.2	49.9		82.6	40.1	59.8
Level of Service	D	B	A	E	E		E	D		F	D	E
Approach Delay (s)		18.2			56.1			53.1			54.8	
Approach LOS		B			E			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.98		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)	1490	4076		1226	4112		1490	2951	1259	1288	2815	1308
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)	1490	4076		1226	4112		1490	2951	1259	1288	2815	1308
Volume (vph)	170	780	250	90	750	100	300	850	130	100	420	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	821	263	95	789	105	316	895	137	105	442	105
RTOR Reduction (vph)	0	58	0	0	17	0	0	0	61	0	0	65
Lane Group Flow (vph)	179	1026	0	95	877	0	316	895	76	105	442	40
Heavy Vehicles (%)	2%	4%	1%	24%	4%	7%	2%	3%	8%	18%	8%	4%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	14.1	27.4		9.6	22.9		23.3	36.6	46.2	10.4	23.7	37.8
Effective Green, g (s)	14.1	27.4		9.6	22.9		23.3	36.6	46.2	10.4	23.7	37.8
Actuated g/C Ratio	0.14	0.27		0.10	0.23		0.23	0.37	0.46	0.10	0.24	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	210	1117		118	942		347	1080	632	134	667	547
v/s Ratio Prot	c0.12	c0.25		0.08	0.21		c0.21	c0.30	0.01	0.08	0.16	0.01
v/s Ratio Perm									0.05			0.02
v/c Ratio	0.85	0.92		0.81	0.93		0.91	0.83	0.12	0.78	0.66	0.07
Uniform Delay, d1	41.9	35.2		44.3	37.8		37.3	28.8	15.3	43.7	34.5	19.9
Progression Factor	1.21	0.60		0.68	1.00		0.94	0.39	0.25	1.28	0.75	0.71
Incremental Delay, d2	23.5	10.3		3.7	1.9		18.4	4.5	0.1	20.7	4.1	0.0
Delay (s)	74.2	31.4		33.6	39.9		53.4	15.8	3.9	76.7	29.9	14.1
Level of Service	E	C		C	D		D	B	A	E	C	B
Approach Delay (s)		37.5			39.3			23.4			34.9	
Approach LOS		D			D			C			C	

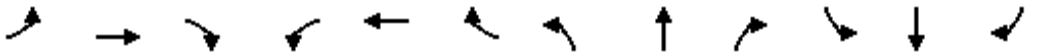
Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.98		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)	1476	3950		1333	3979		1490	2815	1162	1288	2815	1320
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)	1476	3950		1333	3979		1490	2815	1162	1288	2815	1320
Volume (vph)	140	530	170	130	480	80	230	560	140	80	560	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	558	179	137	505	84	242	589	147	84	589	147
RTOR Reduction (vph)	0	59	0	0	23	0	0	0	66	0	0	81
Lane Group Flow (vph)	147	678	0	137	566	0	242	589	81	84	589	66
Heavy Vehicles (%)	3%	8%	2%	14%	6%	16%	2%	8%	17%	18%	8%	3%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	12.5	19.7		13.5	20.7		18.5	41.3	54.8	9.5	32.3	44.8
Effective Green, g (s)	12.5	19.7		13.5	20.7		18.5	41.3	54.8	9.5	32.3	44.8
Actuated g/C Ratio	0.12	0.20		0.14	0.21		0.18	0.41	0.55	0.10	0.32	0.45
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)	185	778		180	824		276	1163	683	122	909	644
v/s Ratio Prot	0.10	c0.17		c0.10	0.14		c0.16	0.21	0.02	0.07	c0.21	0.01
v/s Ratio Perm									0.05			0.04
v/c Ratio	0.79	0.87		0.76	0.69		0.88	0.51	0.12	0.69	0.65	0.10
Uniform Delay, d1	42.5	38.9		41.7	36.7		39.6	21.8	10.9	43.8	29.0	16.0
Progression Factor	1.32	0.63		0.93	1.14		1.00	0.59	1.03	1.32	0.60	0.10
Incremental Delay, d2	17.3	8.9		12.9	1.8		11.8	0.6	0.0	13.3	3.1	0.1
Delay (s)	73.5	33.2		51.7	43.5		51.3	13.4	11.3	71.1	20.6	1.7
Level of Service	E	C		D	D		D	B	B	E	C	A
Approach Delay (s)		39.9			45.1			22.5			22.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	31.8	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	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1476	4090		1448	4147		1505	2895	1183	1407	2951	1333
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)	1476	4090		1448	4147		1505	2895	1183	1407	2951	1333
Volume (vph)	140	1050	390	130	740	70	430	880	130	210	720	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1105	411	137	779	74	453	926	137	221	758	95
RTOR Reduction (vph)	0	67	0	0	11	0	0	0	37	0	0	27
Lane Group Flow (vph)	147	1449	0	137	842	0	453	926	100	221	758	68
Heavy Vehicles (%)	3%	3%	1%	5%	3%	14%	1%	5%	15%	8%	3%	2%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	12.4	29.0		8.0	24.6		23.0	32.0	40.0	15.0	24.0	36.4
Effective Green, g (s)	12.4	29.0		8.0	24.6		23.0	32.0	40.0	15.0	24.0	36.4
Actuated g/C Ratio	0.12	0.29		0.08	0.25		0.23	0.32	0.40	0.15	0.24	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	183	1186		116	1020		346	926	521	211	708	539
v/s Ratio Prot	c0.10	c0.35		c0.09	0.20		c0.30	c0.32	0.02	0.16	0.26	0.02
v/s Ratio Perm									0.07			0.04
v/c Ratio	0.80	1.22		1.18	0.83		1.31	1.00	0.19	1.05	1.07	0.13
Uniform Delay, d1	42.6	35.5		46.0	35.7		38.5	34.0	19.5	42.5	38.0	21.2
Progression Factor	1.35	0.62		0.83	0.97		0.93	0.77	0.63	1.56	0.57	0.23
Incremental Delay, d2	19.3	106.6		131.6	4.5		153.9	25.4	0.1	66.6	50.1	0.1
Delay (s)	76.7	128.8		169.8	39.0		189.7	51.7	12.4	132.8	71.9	4.9
Level of Service	E	F		F	D		F	D	B	F	E	A
Approach Delay (s)		124.2			57.1			89.4			78.5	
Approach LOS		F			E			F			E	

Intersection Summary			
HCM Average Control Delay	92.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.91			0.91	0.97	
Frt	1.00			1.00	0.91	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3551			3766	2600	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3551			3766	2600	
Volume (vph)	740	0	0	1220	330	440
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	779	0	0	1284	347	463
RTOR Reduction (vph)	0	0	0	0	72	0
Lane Group Flow (vph)	779	0	0	1284	738	0
Heavy Vehicles (%)	23%	0%	0%	16%	8%	6%
Turn Type						
Protected Phases	4			8	2	
Permitted Phases						
Actuated Green, G (s)	28.0			28.0	24.0	
Effective Green, g (s)	28.0			28.0	24.0	
Actuated g/C Ratio	0.47			0.47	0.40	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1657			1757	1040	
v/s Ratio Prot	0.22			c0.34	c0.28	
v/s Ratio Perm						
v/c Ratio	0.47			0.73	0.71	
Uniform Delay, d1	10.9			12.9	15.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.0			2.7	4.1	
Delay (s)	11.9			15.7	19.2	
Level of Service	B			B	B	
Approach Delay (s)	11.9			15.7	19.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.91			0.91	0.97	
Frt	1.00			1.00	0.92	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3360			3309	2399	
Flt Permitted	1.00			1.00	0.98	
Satd. Flow (perm)	3360			3309	2399	
Volume (vph)	970	0	0	690	210	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1021	0	0	726	221	253
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	1021	0	0	726	455	0
Heavy Vehicles (%)	30%	0%	0%	32%	19%	14%
Turn Type						
Protected Phases	4			8	2	
Permitted Phases						
Actuated Green, G (s)	24.0			24.0	28.0	
Effective Green, g (s)	24.0			24.0	28.0	
Actuated g/C Ratio	0.40			0.40	0.47	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1344			1324	1120	
v/s Ratio Prot	c0.30			0.22	c0.19	
v/s Ratio Perm						
v/c Ratio	0.76			0.55	0.41	
Uniform Delay, d1	15.5			13.8	10.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	4.1			1.6	1.1	
Delay (s)	19.6			15.5	11.6	
Level of Service	B			B	B	
Approach Delay (s)	19.6			15.5	11.6	
Approach LOS	B			B	B	

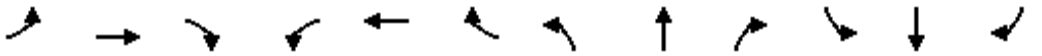
Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.91			0.91	0.97	
Frt	1.00			1.00	0.90	
Flt Protected	1.00			1.00	0.99	
Satd. Flow (prot)	3935			3733	2416	
Flt Permitted	1.00			1.00	0.99	
Satd. Flow (perm)	3935			3733	2416	
Volume (vph)	1440	0	0	620	60	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1516	0	0	653	63	147
RTOR Reduction (vph)	0	0	0	0	9	0
Lane Group Flow (vph)	1516	0	0	653	201	0
Heavy Vehicles (%)	11%	0%	0%	17%	21%	10%
Turn Type						
Protected Phases	4			8	2	
Permitted Phases						
Actuated Green, G (s)	29.0			29.0	23.0	
Effective Green, g (s)	29.0			29.0	23.0	
Actuated g/C Ratio	0.48			0.48	0.38	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1902			1804	926	
v/s Ratio Prot	c0.39			0.17	c0.08	
v/s Ratio Perm						
v/c Ratio	0.80			0.36	0.22	
Uniform Delay, d1	13.0			9.7	12.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	3.6			0.6	0.5	
Delay (s)	16.6			10.3	13.0	
Level of Service	B			B	B	
Approach Delay (s)	16.6			10.3	13.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

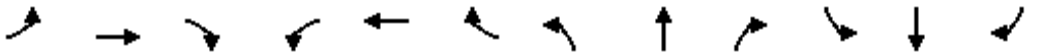


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	1.00	1.00	1.00	0.81		1.00	0.86	0.86
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.97		1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1178	3012		1407	1391	1097	1505	6084		1434	3942	1114
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1178	3012		1407	1391	1097	1505	6084		1434	3942	1114
Volume (vph)	280	650	250	140	260	160	60	1500	340	60	750	900
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	684	263	147	274	168	63	1579	358	63	789	947
RTOR Reduction (vph)	0	47	0	0	0	125	0	27	0	0	8	0
Lane Group Flow (vph)	295	900	0	147	274	43	63	1910	0	63	866	862
Heavy Vehicles (%)	11%	8%	92%	8%	15%	24%	1%	3%	6%	6%	3%	5%
Turn Type	Split			Split		pm+ov	Prot			Prot		Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases						8						Free
Actuated Green, G (s)	44.8	44.8		29.0	29.0	34.0	8.5	47.2		5.0	43.7	150.0
Effective Green, g (s)	46.8	46.8		31.0	31.0	38.0	10.5	49.2		7.0	45.7	150.0
Actuated g/C Ratio	0.31	0.31		0.21	0.21	0.25	0.07	0.33		0.05	0.30	1.00
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
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)	368	940		291	287	307	105	1996		67	1201	1114
v/s Ratio Prot	0.25	c0.30		0.10	c0.20	0.01	0.04	c0.31		0.04	0.22	
v/s Ratio Perm						0.03						c0.77
v/c Ratio	0.80	1.00dr		0.51	0.95	0.14	0.60	0.96		0.94	0.72	0.77
Uniform Delay, d1	47.3	50.6		52.7	58.8	43.3	67.7	49.4		71.3	46.5	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	16.7	20.7		1.4	40.6	0.2	9.3	12.3		88.8	3.8	5.3
Delay (s)	64.0	71.4		54.1	99.4	43.5	77.0	61.6		160.1	50.2	5.3
Level of Service	E	E		D	F	D	E	E		F	D	A
Approach Delay (s)		69.6			72.2			62.1			32.5	
Approach LOS		E			E			E			C	

Intersection Summary			
HCM Average Control Delay	55.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

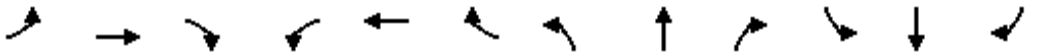


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.86	0.86		1.00	1.00	1.00	1.00	0.81		1.00	0.86	0.86
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1157	2723		1322	1221	1162	1505	5964		1357	3931	1073
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1157	2723		1322	1221	1162	1505	5964		1357	3931	1073
Volume (vph)	310	550	350	170	170	360	60	1230	240	80	720	460
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	579	368	179	179	379	63	1295	253	84	758	484
RTOR Reduction (vph)	0	78	0	0	0	146	0	23	0	0	0	0
Lane Group Flow (vph)	326	869	0	179	179	233	63	1525	0	84	758	484
Heavy Vehicles (%)	13%	14%	88%	15%	31%	17%	1%	5%	11%	12%	5%	9%
Turn Type	Split			Split		pm+ov	Prot			Prot		Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases						8						Free
Actuated Green, G (s)	50.8	50.8		22.3	22.3	34.2	8.5	41.0		11.9	44.4	150.0
Effective Green, g (s)	52.8	52.8		24.3	24.3	38.2	10.5	43.0		13.9	46.4	150.0
Actuated g/C Ratio	0.35	0.35		0.16	0.16	0.25	0.07	0.29		0.09	0.31	1.00
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
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)	407	958		214	198	327	105	1710		126	1216	1073
v/s Ratio Prot	0.28	c0.32		0.14	c0.15	c0.07	0.04	c0.26		0.06	0.19	
v/s Ratio Perm						0.13						c0.45
v/c Ratio	0.80	1.14dr		0.84	0.90	0.71	0.60	0.89		0.67	0.62	0.45
Uniform Delay, d1	43.9	46.3		60.9	61.7	50.9	67.7	51.3		65.8	44.3	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.2	13.8		23.7	38.2	7.2	9.3	7.5		12.5	2.4	1.4
Delay (s)	59.1	60.1		84.6	99.9	58.1	77.0	58.8		78.4	46.7	1.4
Level of Service	E	E		F	F	E	E	E		E	D	A
Approach Delay (s)		59.8			74.7			59.5			32.2	
Approach LOS		E			E			E			C	

Intersection Summary			
HCM Average Control Delay	54.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.86	0.86		1.00	1.00	1.00	1.00	0.81		1.00	0.86	0.86
Frt	1.00	0.93		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1233	3080		1462	1356	1271	1490	6071		1345	4008	1114
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1233	3080		1462	1356	1271	1490	6071		1345	4008	1114
Volume (vph)	360	680	540	250	190	450	30	1350	310	60	1180	400
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	379	716	568	263	200	474	32	1421	326	63	1242	421
RTOR Reduction (vph)	0	74	0	0	0	123	0	28	0	0	0	0
Lane Group Flow (vph)	379	1210	0	263	200	351	32	1719	0	63	1242	421
Heavy Vehicles (%)	6%	7%	48%	4%	18%	7%	2%	3%	7%	13%	3%	5%
Turn Type	Split			Split		pm+ov	Prot			Prot		Free
Protected Phases	4	4		8	8	1	5	2		1	6	
Permitted Phases						8						Free
Actuated Green, G (s)	51.8	51.8		23.0	23.0	35.0	3.2	39.2		12.0	48.0	150.0
Effective Green, g (s)	53.8	53.8		25.0	25.0	39.0	5.2	41.2		14.0	50.0	150.0
Actuated g/C Ratio	0.36	0.36		0.17	0.17	0.26	0.03	0.27		0.09	0.33	1.00
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
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)	442	1105		244	226	364	52	1668		126	1336	1114
v/s Ratio Prot	0.31	c0.39		c0.18	0.15	c0.09	0.02	c0.28		0.05	0.31	
v/s Ratio Perm						0.19						0.38
v/c Ratio	0.86	1.45dr		1.08	0.88	0.96	0.62	1.03		0.50	0.93	0.38
Uniform Delay, d1	44.5	48.1		62.5	61.1	54.8	71.4	54.4		64.7	48.3	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.9	57.0		79.9	31.0	37.6	19.7	30.4		3.1	12.7	1.0
Delay (s)	63.5	105.1		142.4	92.1	92.4	91.1	84.8		67.8	61.0	1.0
Level of Service	E	F		F	F	F	F	F		E	E	A
Approach Delay (s)		95.6			106.4			84.9			46.6	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	80.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

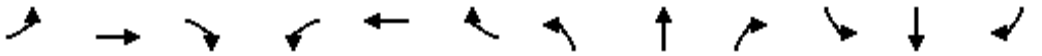
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00				0.95	0.91	0.95
Frt	1.00	1.00		1.00	1.00	0.85				1.00	0.99	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1407	4044		1520	4160	1259				1337	1270	1050
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.76	0.74	1.00
Satd. Flow (perm)	1407	4044		1520	4160	1259				1066	979	1050
Volume (vph)	120	840	0	1	1250	330	0	0	0	290	0	220
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	884	0	1	1316	347	0	0	0	305	0	232
RTOR Reduction (vph)	0	0	0	0	0	206	0	0	0	0	3	7
Lane Group Flow (vph)	126	884	0	1	1316	141	0	0	0	153	156	218
Heavy Vehicles (%)	8%	8%	12%	0%	5%	8%	12%	12%	12%	8%	12%	23%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	7.7	30.8		1.2	24.3	24.3				16.0	16.0	23.7
Effective Green, g (s)	7.7	30.8		1.2	24.3	24.3				16.0	16.0	23.7
Actuated g/C Ratio	0.13	0.51		0.02	0.40	0.40				0.27	0.27	0.39
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)	181	2076		30	1685	510				284	261	485
v/s Ratio Prot	c0.09	0.22		0.00	c0.32							c0.06
v/s Ratio Perm						0.11				0.14	c0.16	0.15
v/c Ratio	0.70	0.43		0.03	0.78	0.28				0.54	0.60	0.45
Uniform Delay, d1	25.0	9.1		28.8	15.5	12.0				18.8	19.2	13.3
Progression Factor	1.29	0.56		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	10.2	0.6		0.5	3.7	1.3				7.2	9.7	0.7
Delay (s)	42.5	5.7		29.3	19.2	13.3				26.0	28.9	14.0
Level of Service	D	A		C	B	B				C	C	B
Approach Delay (s)		10.3			18.0			0.0			21.8	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0					4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91					0.95	0.91	0.95
Frt	1.00	1.00			0.98					1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00					0.95	0.95	1.00
Satd. Flow (prot)	993	4007			3928					1362	1305	1219
Flt Permitted	0.95	1.00			1.00					0.76	0.76	1.00
Satd. Flow (perm)	993	4007			3928					1086	1040	1219
Volume (vph)	90	590	0	0	1250	220	0	0	0	370	0	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	621	0	0	1316	232	0	0	0	389	0	211
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	0	0	0	155
Lane Group Flow (vph)	95	621	0	0	1509	0	0	0	0	195	194	56
Heavy Vehicles (%)	53%	9%	12%	12%	9%	7%	12%	0%	12%	6%	12%	6%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	8.3	36.0			23.7					16.0	16.0	16.0
Effective Green, g (s)	8.3	36.0			23.7					16.0	16.0	16.0
Actuated g/C Ratio	0.14	0.60			0.39					0.27	0.27	0.27
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)	137	2404			1552					290	277	325
v/s Ratio Prot	c0.10	0.15			c0.38							
v/s Ratio Perm										0.18	c0.19	0.05
v/c Ratio	0.69	0.26			0.97					0.67	0.70	0.17
Uniform Delay, d1	24.6	5.7			17.8					19.7	19.8	16.9
Progression Factor	1.00	1.00			0.52					1.00	1.00	1.00
Incremental Delay, d2	14.1	0.3			13.1					11.8	13.8	1.2
Delay (s)	38.8	5.9			22.4					31.5	33.6	18.1
Level of Service	D	A			C					C	C	B
Approach Delay (s)		10.3			22.4			0.0			27.4	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00			1.00	0.85		0.86		1.00	0.98	0.85
Flt Protected	0.95	1.00			1.00	1.00		1.00		0.95	0.96	1.00
Satd. Flow (prot)	1369	3935			3900	1225		1134		1350	1221	923
Flt Permitted	0.95	1.00			1.00	1.00		1.00		0.75	0.75	1.00
Satd. Flow (perm)	1369	3935			3900	1225		1134		1066	955	923
Volume (vph)	130	1410	0	0	830	270	0	0	10	290	0	260
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	1484	0	0	874	284	0	0	11	305	0	274
RTOR Reduction (vph)	0	0	0	0	0	178	0	8	0	0	10	25
Lane Group Flow (vph)	137	1484	0	0	874	106	0	3	0	153	168	223
Heavy Vehicles (%)	11%	11%	22%	0%	12%	11%	22%	22%	22%	7%	22%	40%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	8.6	35.0			22.4	22.4		17.0		17.0	17.0	25.6
Effective Green, g (s)	8.6	35.0			22.4	22.4		17.0		17.0	17.0	25.6
Actuated g/C Ratio	0.14	0.58			0.37	0.37		0.28		0.28	0.28	0.43
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)	196	2295			1456	457		321		302	271	455
v/s Ratio Prot	0.10	c0.38			0.22			0.00				0.07
v/s Ratio Perm						0.09				0.14	c0.18	0.17
v/c Ratio	0.70	0.65			0.60	0.23		0.01		0.51	0.62	0.49
Uniform Delay, d1	24.5	8.4			15.2	12.9		15.5		18.0	18.7	12.5
Progression Factor	1.13	0.84			1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	0.7			1.8	1.2		0.1		6.0	10.2	0.8
Delay (s)	33.2	7.8			17.0	14.1		15.5		24.0	28.9	13.3
Level of Service	C	A			B	B		B		C	C	B
Approach Delay (s)		9.9			16.3			15.5			20.9	
Approach LOS		A			B			B			C	

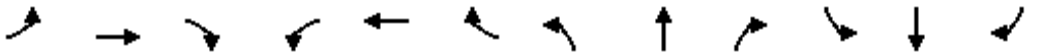
Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		0.95	0.91	0.95
Frt	1.00	1.00		1.00	0.96			0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.95	1.00
Satd. Flow (prot)	1000	3900		1246	3556			1193		1313	1257	1154
Flt Permitted	0.95	1.00		0.95	1.00			0.83		0.74	0.74	1.00
Satd. Flow (perm)	1000	3900		1246	3556			1014		1027	983	1154
Volume (vph)	230	710	0	10	770	310	10	0	10	820	0	420
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	747	0	11	811	326	11	0	11	863	0	442
RTOR Reduction (vph)	0	0	0	0	120	0	0	7	0	0	0	196
Lane Group Flow (vph)	242	747	0	11	1017	0	0	15	0	432	431	246
Heavy Vehicles (%)	52%	12%	22%	22%	21%	9%	22%	0%	22%	10%	22%	12%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.0	26.2		0.8	17.0			21.0		21.0	21.0	21.0
Effective Green, g (s)	10.0	26.2		0.8	17.0			21.0		21.0	21.0	21.0
Actuated g/C Ratio	0.17	0.44		0.01	0.28			0.35		0.35	0.35	0.35
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)	167	1703		17	1008			355		359	344	404
v/s Ratio Prot	c0.24	0.19		0.01	c0.29							
v/s Ratio Perm								0.01		0.42	c0.44	0.21
v/c Ratio	1.45	0.44		0.65	1.01			0.04		1.20	1.25	0.61
Uniform Delay, d1	25.0	11.8		29.5	21.5			12.9		19.5	19.5	16.1
Progression Factor	1.00	1.00		1.36	0.51			1.00		1.00	1.00	1.00
Incremental Delay, d2	232.3	0.8		52.8	27.7			0.2		115.1	135.6	6.7
Delay (s)	257.3	12.6		92.8	38.7			13.1		134.6	155.1	22.8
Level of Service	F	B		F	D			B		F	F	C
Approach Delay (s)		72.5			39.2			13.1			103.5	
Approach LOS		E			D			B			F	

Intersection Summary			
HCM Average Control Delay	72.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

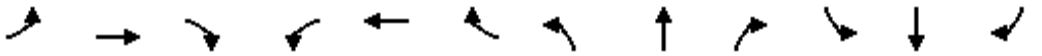
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91	1.00				0.95	0.91	0.95
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	1448	4160			4082	1283				1337	1281	1017
Flt Permitted	0.95	1.00			1.00	1.00				0.76	0.76	1.00
Satd. Flow (perm)	1448	4160			4082	1283				1066	1021	1017
Volume (vph)	170	1430	0	0	1140	400	0	0	0	300	0	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	1505	0	0	1200	421	0	0	0	316	0	200
RTOR Reduction (vph)	0	0	0	0	0	283	0	0	0	0	0	3
Lane Group Flow (vph)	179	1505	0	0	1200	138	0	0	0	158	158	197
Heavy Vehicles (%)	5%	5%	9%	0%	7%	6%	9%	9%	9%	8%	9%	27%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	10.3	34.0			19.7	19.7				18.0	18.0	28.3
Effective Green, g (s)	10.3	34.0			19.7	19.7				18.0	18.0	28.3
Actuated g/C Ratio	0.17	0.57			0.33	0.33				0.30	0.30	0.47
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)	249	2357			1340	421				320	306	547
v/s Ratio Prot	0.12	c0.36			c0.29							0.06
v/s Ratio Perm						0.11				0.15	c0.15	0.13
v/c Ratio	0.72	0.64			0.90	0.33				0.49	0.52	0.36
Uniform Delay, d1	23.5	8.8			19.2	15.2				17.3	17.4	10.1
Progression Factor	0.95	1.75			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	8.0	1.1			9.6	2.1				5.4	6.1	0.4
Delay (s)	30.4	16.6			28.7	17.2				22.6	23.5	10.5
Level of Service	C	B			C	B				C	C	B
Approach Delay (s)		18.0			25.8			0.0			18.2	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91			0.91			1.00		0.95	0.91	0.95
Frt	1.00	1.00			0.96			0.86		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00			1.00		0.95	0.95	1.00
Satd. Flow (prot)	1267	4160			3843			1270		1362	1305	1185
Flt Permitted	0.95	1.00			1.00			1.00		0.75	0.75	1.00
Satd. Flow (perm)	1267	4160			3843			1270		1076	1031	1185
Volume (vph)	300	1420	0	0	940	390	0	0	10	170	0	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	1495	0	0	989	411	0	0	11	179	0	105
RTOR Reduction (vph)	0	0	0	0	125	0	0	8	0	0	0	77
Lane Group Flow (vph)	316	1495	0	0	1275	0	0	3	0	90	89	28
Heavy Vehicles (%)	20%	5%	9%	9%	11%	3%	9%	0%	9%	6%	9%	9%
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	14.0	36.0			18.0			16.0		16.0	16.0	16.0
Effective Green, g (s)	14.0	36.0			18.0			16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.23	0.60			0.30			0.27		0.27	0.27	0.27
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)	296	2496			1153			339		287	275	316
v/s Ratio Prot	c0.25	0.36			c0.33			0.00				
v/s Ratio Perm										0.08	c0.09	0.02
v/c Ratio	1.07	0.60			1.11			0.01		0.31	0.32	0.09
Uniform Delay, d1	23.0	7.5			21.0			16.2		17.6	17.7	16.5
Progression Factor	1.00	1.00			0.36			1.00		1.00	1.00	1.00
Incremental Delay, d2	71.3	1.1			55.1			0.0		2.8	3.1	0.6
Delay (s)	94.3	8.6			62.7			16.2		20.4	20.8	17.1
Level of Service	F	A			E			B		C	C	B
Approach Delay (s)		23.5			62.7			16.2			19.3	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

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FUTURE (2035) ALTERNATIVE 5A

INTERSECTION LEVEL OF SERVICE (LOS) ANALYSIS

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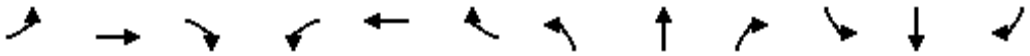
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (prot)	869	1721		2152	1168	993		1845	861		2052	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (perm)	869	1721		2152	1168	993		1845	861		2052	
Volume (vph)	5	70	5	485	70	430	145	25	540	440	10	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	74	5	511	74	453	153	26	568	463	11	258
RTOR Reduction (vph)	0	4	0	0	0	270	0	0	0	0	73	0
Lane Group Flow (vph)	5	75	0	511	74	183	0	179	568	0	659	0
Heavy Vehicles (%)	75%	75%	75%	37%	37%	37%	58%	58%	58%	36%	36%	36%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	17.0		24.3	40.5	40.5		13.7	100.0		29.0	
Effective Green, g (s)	0.8	17.0		24.3	40.5	40.5		13.7	100.0		29.0	
Actuated g/C Ratio	0.01	0.17		0.24	0.40	0.40		0.14	1.00		0.29	
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)	7	293		523	473	402		253	861		595	
v/s Ratio Prot	0.01	0.04		c0.24	0.06			0.10			c0.32	
v/s Ratio Perm						0.18			c0.66			
v/c Ratio	0.71	0.26		0.98	0.16	0.46		1.17dl	0.66		1.17dl	
Uniform Delay, d1	49.5	36.0		37.6	18.9	21.7		41.2	0.0		35.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	159.1	2.1		33.1	0.7	3.7		8.7	4.0		69.9	
Delay (s)	208.6	38.1		70.7	19.6	25.4		50.0	4.0		105.4	
Level of Service	F	D		E	B	C		D	A		F	
Approach Delay (s)		48.3			47.3			15.0			105.4	
Approach LOS		D			D			B			F	

Intersection Summary			
HCM Average Control Delay	54.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

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

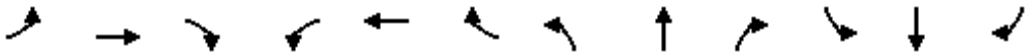
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.94		1.00	1.00	0.85		1.00	0.85		0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.97	
Satd. Flow (prot)	804	1518		2168	1176	1000		1827	829		1983	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.97	
Satd. Flow (perm)	804	1518		2168	1176	1000		1827	829		1983	
Volume (vph)	5	50	30	545	50	360	95	235	450	135	35	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	53	32	574	53	379	100	247	474	142	37	47
RTOR Reduction (vph)	0	26	0	0	0	198	0	0	0	0	24	0
Lane Group Flow (vph)	5	59	0	574	53	181	0	347	474	0	202	0
Heavy Vehicles (%)	89%	89%	89%	36%	36%	36%	64%	64%	64%	44%	44%	44%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	1.0	20.2		28.5	47.7	47.7		21.4	100.0		13.9	
Effective Green, g (s)	1.0	20.2		28.5	47.7	47.7		21.4	100.0		13.9	
Actuated g/C Ratio	0.01	0.20		0.28	0.48	0.48		0.21	1.00		0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	8	307		618	561	477		391	829		276	
v/s Ratio Prot	0.01	0.04		c0.26	0.05			c0.19			0.10	
v/s Ratio Perm						0.18			c0.57			
v/c Ratio	0.62	0.19		0.93	0.09	0.38		0.89	0.57		0.73	
Uniform Delay, d1	49.3	33.1		34.8	14.3	16.7		38.1	0.0		41.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	97.8	1.4		20.3	0.3	2.3		20.8	2.9		9.6	
Delay (s)	147.1	34.5		55.1	14.7	19.0		58.9	2.9		50.8	
Level of Service	F	C		E	B	B		E	A		D	
Approach Delay (s)		40.8			39.3			26.6			50.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	55.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.87		1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.96	
Satd. Flow (prot)	1000	1733		2437	1322	1124		2105	958		2148	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.96	
Satd. Flow (perm)	1000	1733		2437	1322	1124		2105	958		2148	
Volume (vph)	5	35	280	580	75	620	65	125	450	260	20	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	37	295	611	79	653	68	132	474	274	21	5
RTOR Reduction (vph)	0	222	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	5	110	0	611	79	653	0	200	474	0	299	0
Heavy Vehicles (%)	52%	52%	52%	21%	21%	21%	42%	42%	42%	35%	35%	35%
Turn Type	Prot			Prot		Free	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						Free			Free			
Actuated Green, G (s)	0.8	24.6		28.4	52.2	100.0		13.7	100.0		17.3	
Effective Green, g (s)	0.8	24.6		28.4	52.2	100.0		13.7	100.0		17.3	
Actuated g/C Ratio	0.01	0.25		0.28	0.52	1.00		0.14	1.00		0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	8	426		692	690	1124		288	958		372	
v/s Ratio Prot	0.01	0.06		c0.25	0.06			0.10			c0.14	
v/s Ratio Perm						c0.58			0.49			
v/c Ratio	0.62	0.26		0.88	0.11	0.58		0.69	0.49		1.40dl	
Uniform Delay, d1	49.5	30.3		34.2	12.2	0.0		41.2	0.0		39.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	97.8	1.5		12.8	0.3	2.2		7.1	1.8		11.9	
Delay (s)	147.3	31.8		47.0	12.5	2.2		48.2	1.8		51.6	
Level of Service	F	C		D	B	A		D	A		D	
Approach Delay (s)		33.5			23.2			15.6			51.6	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

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

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2048	4325	2920	4325	2681	2417
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2048	4325	2920	4325	2681	2417
Volume (vph)	435	940	220	1070	470	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	458	989	232	1126	495	126
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	458	989	232	1126	495	126
Heavy Vehicles (%)	44%	1%	1%	1%	10%	22%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	16.0	26.6	8.6	19.2	12.8	12.8
Effective Green, g (s)	16.0	26.6	8.6	19.2	12.8	12.8
Actuated g/C Ratio	0.27	0.44	0.14	0.32	0.21	0.21
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)	546	1917	419	1384	572	516
v/s Ratio Prot	c0.22	0.23	0.08	c0.26	c0.18	0.05
v/s Ratio Perm						
v/c Ratio	0.84	0.52	0.55	0.81	0.87	0.24
Uniform Delay, d1	20.8	12.1	23.9	18.8	22.8	19.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.9	1.0	1.6	5.3	12.9	0.2
Delay (s)	31.6	13.0	25.5	24.1	35.7	19.8
Level of Service	C	B	C	C	D	B
Approach Delay (s)		18.9		24.3		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2121	4325	2863	4325	2499	2437
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2121	4325	2863	4325	2499	2437
Volume (vph)	975	750	140	1420	405	475
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1026	789	147	1495	426	500
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1026	789	147	1495	426	500
Heavy Vehicles (%)	39%	1%	3%	1%	18%	21%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	49.0	76.8	10.2	38.0	21.0	21.0
Effective Green, g (s)	49.0	76.8	10.2	38.0	21.0	21.0
Actuated g/C Ratio	0.41	0.64	0.08	0.32	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)	866	2768	243	1370	437	426
v/s Ratio Prot	c0.48	0.18	0.05	c0.35	0.17	c0.21
v/s Ratio Perm						
v/c Ratio	1.18	0.29	0.60	1.09	0.97	1.17
Uniform Delay, d1	35.5	9.5	53.0	41.0	49.2	49.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	94.8	0.3	4.2	53.2	36.2	100.4
Delay (s)	130.3	9.8	57.2	94.2	85.4	149.9
Level of Service	F	A	E	F	F	F
Approach Delay (s)		77.9		90.9		
Approach LOS		E		F		

Intersection Summary			
HCM Average Control Delay	91.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2378	4325	2863	4325	2681	2681
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2378	4325	2863	4325	2681	2681
Volume (vph)	635	950	150	1155	435	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	668	1000	158	1216	458	174
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	668	1000	158	1216	458	174
Heavy Vehicles (%)	24%	1%	3%	1%	10%	10%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.8	34.6	6.4	20.2	12.0	12.0
Effective Green, g (s)	20.8	34.6	6.4	20.2	12.0	12.0
Actuated g/C Ratio	0.32	0.53	0.10	0.31	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)	761	2302	282	1344	495	495
v/s Ratio Prot	c0.28	0.23	0.06	c0.28	c0.17	0.06
v/s Ratio Perm						
v/c Ratio	0.88	0.43	0.56	0.90	0.93	0.35
Uniform Delay, d1	20.9	9.2	28.0	21.5	26.1	23.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.2	0.6	2.5	10.3	23.2	0.4
Delay (s)	32.1	9.8	30.5	31.7	49.3	23.5
Level of Service	C	A	C	C	D	C
Approach Delay (s)		18.8		31.6		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2152	3671	1966	4282	2542	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2152	3671	1966	4282	2542	2756
Volume (vph)	515	535	10	1655	335	220
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	542	563	11	1742	353	232
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	542	563	11	1742	353	232
Heavy Vehicles (%)	37%	19%	50%	2%	16%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	21.0	55.2	0.8	35.0	12.0	12.0
Effective Green, g (s)	21.0	55.2	0.8	35.0	12.0	12.0
Actuated g/C Ratio	0.26	0.69	0.01	0.44	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	565	2533	20	1873	381	413
v/s Ratio Prot	c0.25	0.15	0.01	c0.41	c0.14	0.08
v/s Ratio Perm						
v/c Ratio	0.96	0.22	0.55	0.93	0.93	0.56
Uniform Delay, d1	29.1	4.5	39.4	21.3	33.6	31.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.6	0.2	28.9	9.8	28.1	1.7
Delay (s)	56.7	4.7	68.3	31.1	61.7	33.3
Level of Service	E	A	E	C	E	C
Approach Delay (s)		30.2		31.3		
Approach LOS		C		C		

Intersection Summary				
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2062	4325	1992	4325	2457	2610
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2062	4325	1992	4325	2457	2610
Volume (vph)	995	910	25	645	480	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1047	958	26	679	505	200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1047	958	26	679	505	200
Heavy Vehicles (%)	43%	1%	48%	1%	20%	13%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	44.0	58.0	2.0	16.0	18.0	18.0
Effective Green, g (s)	44.0	58.0	2.0	16.0	18.0	18.0
Actuated g/C Ratio	0.49	0.64	0.02	0.18	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1008	2787	44	769	491	522
v/s Ratio Prot	c0.51	0.22	0.01	c0.16	c0.21	0.08
v/s Ratio Perm						
v/c Ratio	1.04	0.34	0.59	0.88	1.03	0.38
Uniform Delay, d1	23.0	7.3	43.6	36.1	36.0	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.9	0.3	19.5	14.0	48.1	0.5
Delay (s)	61.9	7.6	63.0	50.0	84.1	31.7
Level of Service	E	A	E	D	F	C
Approach Delay (s)		36.0		50.5		
Approach LOS		D		D		

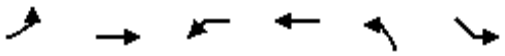
Intersection Summary			
HCM Average Control Delay	45.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2201	4044	2106	4241	2564	2091
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2201	4044	2106	4241	2564	2091
Volume (vph)	595	990	5	860	435	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	626	1042	5	905	458	79
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	626	1042	5	905	458	79
Heavy Vehicles (%)	34%	8%	40%	3%	15%	41%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.6	35.2	0.8	17.4	12.0	12.0
Effective Green, g (s)	18.6	35.2	0.8	17.4	12.0	12.0
Actuated g/C Ratio	0.31	0.59	0.01	0.29	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	682	2372	28	1230	513	418
v/s Ratio Prot	c0.28	0.26	0.00	c0.21	c0.18	0.04
v/s Ratio Perm						
v/c Ratio	0.92	0.44	0.18	0.74	0.89	0.19
Uniform Delay, d1	20.0	6.9	29.3	19.2	23.4	20.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.2	0.6	3.0	3.9	17.6	0.2
Delay (s)	37.2	7.5	32.3	23.2	41.0	20.2
Level of Service	D	A	C	C	D	C
Approach Delay (s)		18.6		23.2		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

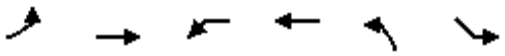
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	3010	2681	4325	2920	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	3010	2681	4325	2920	2920
Volume (vph)	665	720	540	640	110	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	700	758	568	674	116	379
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	700	758	568	674	116	379
Heavy Vehicles (%)	1%	1%	10%	1%	1%	1%
Turn Type	Prot		Prot		Prot	
Protected Phases	7	4	3	8	5	1
Permitted Phases						
Actuated Green, G (s)	38.0	51.4	27.7	41.1	18.9	18.9
Effective Green, g (s)	38.0	51.4	27.7	41.1	18.9	18.9
Actuated g/C Ratio	0.35	0.47	0.25	0.37	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1009	1406	675	1616	502	502
v/s Ratio Prot	c0.24	c0.25	c0.21	0.16	0.04	c0.13
v/s Ratio Perm						
v/c Ratio	0.69	0.54	0.84	0.42	0.23	0.75
Uniform Delay, d1	31.0	20.9	39.1	25.6	39.3	43.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	1.5	9.3	0.8	0.2	6.4
Delay (s)	33.1	22.4	48.4	26.4	39.5	49.7
Level of Service	C	C	D	C	D	D
Approach Delay (s)		27.5		36.4		49.7
Approach LOS		C		D		D

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

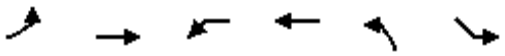
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	3010	2681	4325	2920	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	3010	2681	4325	2920	2920
Volume (vph)	490	385	245	190	120	740
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	516	405	258	200	126	779
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	516	405	258	200	126	779
Heavy Vehicles (%)	1%	1%	10%	1%	1%	1%
Turn Type	Prot		Prot		Prot	
Protected Phases	7	4	3	8	5	1
Permitted Phases						
Actuated Green, G (s)	33.0	48.9	15.5	31.4	33.6	33.6
Effective Green, g (s)	33.0	48.9	15.5	31.4	33.6	33.6
Actuated g/C Ratio	0.30	0.44	0.14	0.29	0.31	0.31
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)	876	1338	378	1235	892	892
v/s Ratio Prot	c0.18	c0.13	c0.10	0.05	0.04	c0.27
v/s Ratio Perm						
v/c Ratio	0.59	0.30	0.68	0.16	0.14	0.87
Uniform Delay, d1	32.7	19.6	44.9	29.4	27.7	36.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.6	5.0	0.3	0.1	9.5
Delay (s)	33.8	20.2	49.9	29.7	27.8	45.6
Level of Service	C	C	D	C	C	D
Approach Delay (s)		27.8		41.1		45.6
Approach LOS		C		D		D

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

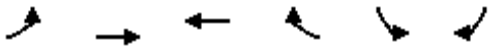
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	3010	2808	4325	2920	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	3010	2808	4325	2920	2920
Volume (vph)	760	635	235	1590	130	745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	668	247	1674	137	784
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	800	668	247	1674	137	784
Heavy Vehicles (%)	1%	1%	5%	1%	1%	1%
Turn Type	Prot		Prot		Prot	
Protected Phases	7	4	3	8	5	1
Permitted Phases						
Actuated Green, G (s)	28.0	56.0	14.0	42.0	28.0	28.0
Effective Green, g (s)	28.0	56.0	14.0	42.0	28.0	28.0
Actuated g/C Ratio	0.25	0.51	0.13	0.38	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	743	1532	357	1651	743	743
v/s Ratio Prot	c0.27	0.22	0.09	c0.39	0.05	c0.27
v/s Ratio Perm						
v/c Ratio	1.08	0.44	0.69	1.01	0.18	1.06
Uniform Delay, d1	41.0	17.0	45.9	34.0	32.1	41.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.6	0.9	5.7	25.7	0.1	48.5
Delay (s)	96.6	17.9	51.6	59.7	32.2	89.5
Level of Service	F	B	D	E	C	F
Approach Delay (s)		60.8		58.6		89.5
Approach LOS		E		E		F

Intersection Summary			
HCM Average Control Delay	64.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1421	3832	4160	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1421	3832	4160	1347	2920	1347
Volume (vph)	195	865	2475	405	445	225
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	911	2605	426	468	237
RTOR Reduction (vph)	0	0	0	136	0	172
Lane Group Flow (vph)	205	911	2605	290	468	65
Heavy Vehicles (%)	7%	14%	5%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	18.0	102.0	80.0	80.0	20.0	20.0
Effective Green, g (s)	18.0	102.0	80.0	80.0	20.0	20.0
Actuated g/C Ratio	0.14	0.78	0.62	0.62	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	3007	2560	829	449	207
v/s Ratio Prot	c0.14	0.24	c0.63		c0.16	
v/s Ratio Perm				0.22		0.05
v/c Ratio	1.04	0.30	1.02	0.35	1.04	0.32
Uniform Delay, d1	56.0	4.0	25.0	12.3	55.0	48.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	75.2	0.1	22.3	0.3	53.9	4.0
Delay (s)	131.2	4.0	47.3	12.5	108.9	52.9
Level of Service	F	A	D	B	F	D
Approach Delay (s)		27.4	42.4		90.1	
Approach LOS		C	D		F	

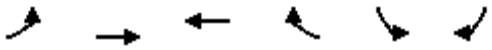
Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2564	4325	2808	4325	2782	2705
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2564	4325	2808	4325	2782	2705
Volume (vph)	200	460	480	1065	360	665
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	484	505	1121	379	700
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	211	484	505	1121	379	700
Heavy Vehicles (%)	15%	1%	5%	1%	6%	9%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	7.0	14.1	12.4	19.5	17.2	17.2
Effective Green, g (s)	7.0	14.1	12.4	19.5	17.2	17.2
Actuated g/C Ratio	0.13	0.25	0.22	0.35	0.31	0.31
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)	322	1095	625	1514	859	835
v/s Ratio Prot	c0.08	0.11	0.18	c0.26	0.14	c0.26
v/s Ratio Perm						
v/c Ratio	0.66	0.44	0.81	0.74	0.44	0.84
Uniform Delay, d1	23.2	17.5	20.5	15.9	15.4	18.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	0.3	7.6	2.0	0.4	7.4
Delay (s)	27.9	17.8	28.1	17.9	15.8	25.3
Level of Service	C	B	C	B	B	C
Approach Delay (s)		20.9		21.0		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	55.7	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	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1448	3900	3900	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1448	3900	3900	1347	2920	1347
Volume (vph)	315	1215	1200	335	425	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	332	1279	1263	353	447	211
RTOR Reduction (vph)	0	0	0	225	0	169
Lane Group Flow (vph)	332	1279	1263	128	447	42
Heavy Vehicles (%)	5%	12%	12%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	23.0	56.0	29.0	29.0	16.0	16.0
Effective Green, g (s)	23.0	56.0	29.0	29.0	16.0	16.0
Actuated g/C Ratio	0.29	0.70	0.36	0.36	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	2730	1414	488	584	269
v/s Ratio Prot	c0.23	0.33	c0.32		c0.15	
v/s Ratio Perm				0.10		0.03
v/c Ratio	0.80	0.47	0.89	0.26	0.77	0.16
Uniform Delay, d1	26.4	5.4	24.0	18.0	30.2	26.4
Progression Factor	1.00	1.00	0.60	0.53	1.00	1.00
Incremental Delay, d2	10.2	0.6	8.5	1.2	9.2	1.2
Delay (s)	36.6	5.9	22.9	10.7	39.5	27.7
Level of Service	D	A	C	B	D	C
Approach Delay (s)		12.3	20.2		35.7	
Approach LOS		B	C		D	

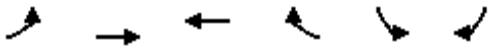
Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2633	4325	2782	4325	2808	2564
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2633	4325	2782	4325	2808	2564
Volume (vph)	585	465	280	440	420	515
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	616	489	295	463	442	542
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	616	489	295	463	442	542
Heavy Vehicles (%)	12%	1%	6%	1%	5%	15%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.6	34.4	12.6	21.4	21.0	21.0
Effective Green, g (s)	25.6	34.4	12.6	21.4	21.0	21.0
Actuated g/C Ratio	0.32	0.43	0.16	0.27	0.26	0.26
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)	843	1860	438	1157	737	673
v/s Ratio Prot	c0.23	0.11	0.11	c0.11	0.16	c0.21
v/s Ratio Perm						
v/c Ratio	0.73	0.26	0.67	0.40	0.60	0.81
Uniform Delay, d1	24.1	14.7	31.8	24.0	25.8	27.6
Progression Factor	0.89	0.73	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	0.3	4.1	1.0	1.3	7.0
Delay (s)	24.3	11.0	35.8	25.1	27.1	34.6
Level of Service	C	B	D	C	C	C
Approach Delay (s)		18.4		29.3		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

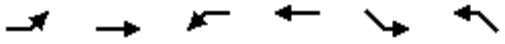
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1333	4200	4007	1308	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1333	4200	4007	1308	2920	1347
Volume (vph)	110	2355	1600	120	465	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	2479	1684	126	489	247
RTOR Reduction (vph)	0	0	0	63	0	185
Lane Group Flow (vph)	116	2479	1684	63	489	62
Heavy Vehicles (%)	14%	4%	9%	4%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.2	46.0	34.8	34.8	16.0	16.0
Effective Green, g (s)	7.2	46.0	34.8	34.8	16.0	16.0
Actuated g/C Ratio	0.10	0.66	0.50	0.50	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	137	2760	1992	650	667	308
v/s Ratio Prot	0.09	c0.59	0.42		c0.17	
v/s Ratio Perm				0.05		0.05
v/c Ratio	0.85	0.90	0.85	0.10	0.73	0.20
Uniform Delay, d1	30.9	10.0	15.3	9.3	25.0	21.8
Progression Factor	1.00	1.00	0.37	0.02	1.00	1.00
Incremental Delay, d2	35.6	5.2	4.1	0.3	7.0	1.5
Delay (s)	66.5	15.2	9.7	0.4	32.0	23.3
Level of Service	E	B	A	A	C	C
Approach Delay (s)		17.5	9.1		29.1	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

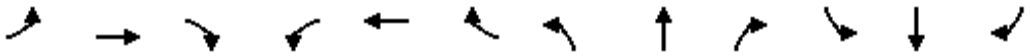
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4325	2808	4160	2808	2587
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4325	2808	4160	2808	2587
Volume (vph)	845	1355	220	665	420	445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	889	1426	232	700	442	468
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	889	1426	232	700	442	468
Heavy Vehicles (%)	5%	1%	5%	5%	5%	14%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	26.0	32.7	10.0	16.7	15.3	15.3
Effective Green, g (s)	26.0	32.7	10.0	16.7	15.3	15.3
Actuated g/C Ratio	0.37	0.47	0.14	0.24	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1043	2020	401	992	614	565
v/s Ratio Prot	c0.32	0.33	0.08	c0.17	0.16	c0.18
v/s Ratio Perm						
v/c Ratio	0.85	0.71	0.58	0.71	0.72	0.83
Uniform Delay, d1	20.2	14.8	28.0	24.4	25.4	26.1
Progression Factor	0.77	0.70	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	1.0	2.0	4.2	4.0	9.7
Delay (s)	19.0	11.3	30.1	28.6	29.4	35.8
Level of Service	B	B	C	C	C	D
Approach Delay (s)		14.3		29.0		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	70.0	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1434	4282			2980	1347	1434	1308				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1434	4282			2980	1347	1434	1308				
Volume (vph)	65	900	0	0	1060	535	250	0	100	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	947	0	0	1116	563	263	0	105	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	266	0	81	0	0	0	0
Lane Group Flow (vph)	68	947	0	0	1116	297	263	24	0	0	0	0
Heavy Vehicles (%)	6%	2%	0%	0%	2%	1%	6%	0%	4%	0%	0%	0%
Turn Type	Prot					Perm	Prot					
Protected Phases	7	4			8		5	2				
Permitted Phases						8						
Actuated Green, G (s)	4.8	45.7			36.9	36.9	16.3	16.3				
Effective Green, g (s)	4.8	45.7			36.9	36.9	16.3	16.3				
Actuated g/C Ratio	0.07	0.65			0.53	0.53	0.23	0.23				
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	98	2796			1571	710	334	305				
v/s Ratio Prot	c0.05	0.22			c0.37		c0.18	0.02				
v/s Ratio Perm						0.22						
v/c Ratio	0.69	0.34			0.71	0.42	0.79	0.08				
Uniform Delay, d1	31.9	5.4			12.5	10.0	25.2	21.0				
Progression Factor	0.57	0.25			1.00	1.00	1.00	1.00				
Incremental Delay, d2	16.1	0.3			2.8	1.8	11.6	0.1				
Delay (s)	34.3	1.6			15.3	11.8	36.8	21.1				
Level of Service	C	A			B	B	D	C				
Approach Delay (s)		3.8			14.1			32.3			0.0	
Approach LOS		A			B			C			A	

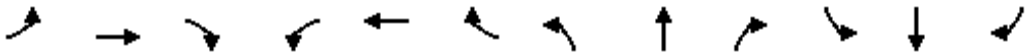
Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1271	1448	2980	2891	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1271	1448	2980	2891	1333
Volume (vph)	670	420	310	1000	605	295
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	442	326	1053	637	311
RTOR Reduction (vph)	0	296	0	0	0	0
Lane Group Flow (vph)	705	146	326	1053	637	311
Heavy Vehicles (%)	3%	7%	5%	2%	2%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	23.1	23.1	18.0	45.1	16.9	70.0
Effective Green, g (s)	23.1	23.1	18.0	45.1	16.9	70.0
Actuated g/C Ratio	0.33	0.33	0.26	0.64	0.24	1.00
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)	974	419	372	1920	698	1333
v/s Ratio Prot	c0.24		c0.23	0.35		
v/s Ratio Perm		0.11			c0.22	0.23
v/c Ratio	0.72	0.35	0.88	0.55	0.91	0.23
Uniform Delay, d1	20.6	17.8	24.9	6.8	25.8	0.0
Progression Factor	1.00	1.00	0.65	0.24	1.00	1.00
Incremental Delay, d2	4.7	2.3	14.7	0.8	16.3	0.4
Delay (s)	25.3	20.0	31.0	2.4	42.1	0.4
Level of Service	C	C	C	A	D	A
Approach Delay (s)	23.3			9.2	28.4	
Approach LOS	C			A	C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.9%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1421	4200			2951	1308	1357	1214				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1421	4200			2951	1308	1357	1214				
Volume (vph)	210	925	0	0	545	420	85	0	85	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	221	974	0	0	574	442	89	0	89	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	239	0	79	0	0	0	0
Lane Group Flow (vph)	221	974	0	0	574	203	89	10	0	0	0	0
Heavy Vehicles (%)	7%	4%	0%	0%	3%	4%	12%	0%	12%	0%	0%	0%
Turn Type	Prot					Perm	Prot					
Protected Phases	7	4			8		5	2				
Permitted Phases						8						
Actuated Green, G (s)	14.0	45.5			27.5	27.5	6.5	6.5				
Effective Green, g (s)	14.0	45.5			27.5	27.5	6.5	6.5				
Actuated g/C Ratio	0.23	0.76			0.46	0.46	0.11	0.11				
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)	332	3185			1353	600	147	132				
v/s Ratio Prot	c0.16	0.23			c0.19		c0.07	0.01				
v/s Ratio Perm						0.15						
v/c Ratio	0.67	0.31			0.42	0.34	0.61	0.07				
Uniform Delay, d1	20.9	2.3			10.9	10.4	25.5	24.0				
Progression Factor	0.68	0.37			1.00	1.00	1.00	1.00				
Incremental Delay, d2	4.6	0.2			1.0	1.5	6.9	0.2				
Delay (s)	18.7	1.1			11.9	11.9	32.4	24.3				
Level of Service	B	A			B	B	C	C				
Approach Delay (s)		4.3			11.9			28.3			0.0	
Approach LOS		A			B			C			A	

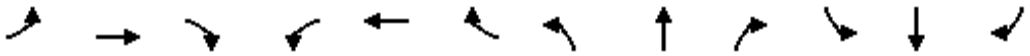
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	1183	1476	2923	2808	1295
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	1183	1476	2923	2808	1295
Volume (vph)	630	490	70	560	545	505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	663	516	74	589	574	532
RTOR Reduction (vph)	0	274	0	0	0	0
Lane Group Flow (vph)	663	242	74	589	574	532
Heavy Vehicles (%)	4%	15%	3%	4%	5%	5%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	28.1	28.1	4.8	36.9	15.1	60.0
Effective Green, g (s)	28.1	28.1	4.8	36.9	15.1	60.0
Actuated g/C Ratio	0.47	0.47	0.08	0.61	0.25	1.00
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)	1369	554	118	1798	707	1295
v/s Ratio Prot	c0.23		0.05	0.20		
v/s Ratio Perm		0.20			c0.20	c0.41
v/c Ratio	0.48	0.44	0.63	0.33	0.81	0.41
Uniform Delay, d1	11.0	10.7	26.7	5.6	21.1	0.0
Progression Factor	1.00	1.00	0.54	0.06	1.00	1.00
Incremental Delay, d2	1.2	2.5	9.3	0.5	7.1	1.0
Delay (s)	12.2	13.1	23.7	0.8	28.2	1.0
Level of Service	B	B	C	A	C	A
Approach Delay (s)	12.6			3.3	15.1	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00				
Frt	1.00	1.00			1.00	0.85	1.00	0.85				
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (prot)	1476	4282			2980	1333	1421	1271				
Flt Permitted	0.95	1.00			1.00	1.00	0.95	1.00				
Satd. Flow (perm)	1476	4282			2980	1333	1421	1271				
Volume (vph)	290	1230	0	0	605	390	115	0	155	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	305	1295	0	0	637	411	121	0	163	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	256	0	52	0	0	0	0
Lane Group Flow (vph)	305	1295	0	0	637	155	121	111	0	0	0	0
Heavy Vehicles (%)	3%	2%	0%	0%	2%	2%	7%	0%	7%	0%	0%	0%
Turn Type	Prot					Perm	Prot					
Protected Phases	7	4			8		5	2				
Permitted Phases						8						
Actuated Green, G (s)	16.0	42.7			22.7	22.7	9.3	9.3				
Effective Green, g (s)	16.0	42.7			22.7	22.7	9.3	9.3				
Actuated g/C Ratio	0.27	0.71			0.38	0.38	0.16	0.16				
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	394	3047			1127	504	220	197				
v/s Ratio Prot	c0.21	0.30			c0.21		0.09	c0.09				
v/s Ratio Perm						0.12						
v/c Ratio	0.77	0.43			0.57	0.31	0.55	0.57				
Uniform Delay, d1	20.3	3.6			14.7	13.1	23.4	23.5				
Progression Factor	0.59	0.26			1.00	1.00	1.00	1.00				
Incremental Delay, d2	7.4	0.3			2.1	1.6	3.0	3.7				
Delay (s)	19.4	1.3			16.8	14.7	26.4	27.2				
Level of Service	B	A			B	B	C	C				
Approach Delay (s)		4.7			16.0			26.8			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1320	1490	2951	2891	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1320	1490	2951	2891	1333
Volume (vph)	990	490	130	590	310	530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1042	516	137	621	326	558
RTOR Reduction (vph)	0	264	0	0	0	0
Lane Group Flow (vph)	1042	252	137	621	326	558
Heavy Vehicles (%)	2%	3%	2%	3%	2%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	29.3	29.3	7.0	40.3	11.7	60.0
Effective Green, g (s)	29.3	29.3	7.0	40.3	11.7	60.0
Actuated g/C Ratio	0.49	0.49	0.12	0.67	0.19	1.00
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)	1455	645	174	1982	564	1333
v/s Ratio Prot	c0.35		c0.09	0.21		
v/s Ratio Perm		0.19			c0.11	0.42
v/c Ratio	0.72	0.39	0.79	0.31	0.58	0.42
Uniform Delay, d1	12.1	9.7	25.8	4.1	21.9	0.0
Progression Factor	1.00	1.00	0.51	0.01	1.00	1.00
Incremental Delay, d2	3.0	1.8	17.9	0.4	1.4	1.0
Delay (s)	15.1	11.5	31.0	0.4	23.4	1.0
Level of Service	B	B	C	A	C	A
Approach Delay (s)	13.9			5.9	9.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			3010	1382	1214
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			3010	1382	1214
Volume (vph)	950	0	0	1845	60	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1000	0	0	1942	63	126
RTOR Reduction (vph)	0	0	0	0	0	113
Lane Group Flow (vph)	1000	0	0	1942	63	13
Heavy Vehicles (%)	1%	0%	0%	1%	10%	12%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	63.5			63.5	8.5	8.5
Effective Green, g (s)	63.5			63.5	8.5	8.5
Actuated g/C Ratio	0.79			0.79	0.11	0.11
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)	2389			2389	147	129
v/s Ratio Prot	0.33			c0.65	c0.05	0.01
v/s Ratio Perm						
v/c Ratio	0.42			0.81	0.43	0.10
Uniform Delay, d1	2.5			4.8	33.5	32.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			3.2	2.0	0.4
Delay (s)	3.1			8.0	35.5	32.7
Level of Service	A			A	D	C
Approach Delay (s)	3.1			8.0	33.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	950	155	555	1350	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1000	163	584	1421	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.77	
vC, conflicting volume			1000		2961	582
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1000		3243	582
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			14		100	100
cM capacity (veh/h)			682		1	462

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	667	496	584	711	711
Volume Left	0	0	584	0	0
Volume Right	0	163	0	0	0
cSH	1700	1700	682	1700	1700
Volume to Capacity	0.39	0.29	0.86	0.42	0.42
Queue Length 95th (ft)	0	0	248	0	0
Control Delay (s)	0.0	0.0	33.5	0.0	0.0
Lane LOS			D		
Approach Delay (s)	0.0		9.8		
Approach LOS					

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2895	1226	1172
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2895	1226	1172
Volume (vph)	540	0	0	850	50	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	568	0	0	895	53	116
RTOR Reduction (vph)	0	0	0	0	0	102
Lane Group Flow (vph)	568	0	0	895	53	14
Heavy Vehicles (%)	1%	0%	0%	5%	24%	16%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	44.8			44.8	7.2	7.2
Effective Green, g (s)	44.8			44.8	7.2	7.2
Actuated g/C Ratio	0.75			0.75	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)	2247			2162	147	141
v/s Ratio Prot	0.19			c0.31	c0.04	0.01
v/s Ratio Perm						
v/c Ratio	0.25			0.41	0.36	0.10
Uniform Delay, d1	2.4			2.8	24.3	23.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.6	1.5	0.3
Delay (s)	2.6			3.4	25.8	23.8
Level of Service	A			A	C	C
Approach Delay (s)	2.6			3.4	24.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	5.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	600	70	210	650	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	632	74	221	684	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				638		
pX, platoon unblocked						
vC, conflicting volume			705		1453	353
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			705		1453	353
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			74		100	100
cM capacity (veh/h)			862		92	649

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	421	284	221	342	342
Volume Left	0	0	221	0	0
Volume Right	0	74	0	0	0
cSH	1700	1700	862	1700	1700
Volume to Capacity	0.25	0.17	0.26	0.20	0.20
Queue Length 95th (ft)	0	0	26	0	0
Control Delay (s)	0.0	0.0	10.6	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.6		
Approach LOS					

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2980			2980	1394	1248
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2980			2980	1394	1248
Volume (vph)	1440	0	0	960	55	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1516	0	0	1011	58	279
RTOR Reduction (vph)	0	0	0	0	0	27
Lane Group Flow (vph)	1516	0	0	1011	58	252
Heavy Vehicles (%)	2%	0%	0%	2%	9%	9%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	37.4			37.4	14.6	14.6
Effective Green, g (s)	37.4			37.4	14.6	14.6
Actuated g/C Ratio	0.62			0.62	0.24	0.24
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)	1858			1858	339	304
v/s Ratio Prot	c0.51			0.34	0.04	c0.20
v/s Ratio Perm						
v/c Ratio	0.82			0.54	0.17	0.83
Uniform Delay, d1	8.7			6.4	17.9	21.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	4.1			1.1	0.2	16.7
Delay (s)	12.8			7.6	18.2	38.2
Level of Service	B			A	B	D
Approach Delay (s)	12.8			7.6	34.8	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1490	100	330	860	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1568	105	347	905	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				638		
pX, platoon unblocked					0.88	
vC, conflicting volume			1674		2768	837
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1674		2873	837
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			7		100	100
cM capacity (veh/h)			375		1	314

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	1046	628	347	453	453
Volume Left	0	0	347	0	0
Volume Right	0	105	0	0	0
cSH	1700	1700	375	1700	1700
Volume to Capacity	0.62	0.37	0.93	0.27	0.27
Queue Length 95th (ft)	0	0	246	0	0
Control Delay (s)	0.0	0.0	63.5	0.0	0.0
Lane LOS			F		
Approach Delay (s)	0.0		17.6		
Approach LOS					

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4241	2756	4241	2808	2705
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4241	2756	4241	2808	2705
Volume (vph)	190	950	340	755	400	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	1000	358	795	421	121
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	200	1000	358	795	421	121
Heavy Vehicles (%)	3%	3%	7%	3%	5%	9%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	5.4	15.4	7.9	17.9	8.8	8.8
Effective Green, g (s)	5.4	15.4	7.9	17.9	8.8	8.8
Actuated g/C Ratio	0.12	0.35	0.18	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	1481	494	1721	560	540
v/s Ratio Prot	0.07	c0.24	c0.13	0.19	c0.15	0.04
v/s Ratio Perm						
v/c Ratio	0.57	0.68	0.72	0.46	0.75	0.22
Uniform Delay, d1	18.3	12.2	17.1	9.6	16.6	14.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	1.2	5.2	0.2	5.7	0.2
Delay (s)	20.4	13.5	22.3	9.8	22.3	15.0
Level of Service	C	B	C	A	C	B
Approach Delay (s)		14.6		13.7		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4200	2730	4044	2782	2564
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4200	2730	4044	2782	2564
Volume (vph)	250	625	395	440	595	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	263	658	416	463	626	195
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	263	658	416	463	626	195
Heavy Vehicles (%)	4%	4%	8%	8%	6%	15%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.4	13.4	12.7	14.7	15.4	15.4
Effective Green, g (s)	11.4	13.4	12.7	14.7	15.4	15.4
Actuated g/C Ratio	0.21	0.25	0.24	0.27	0.29	0.29
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)	604	1052	648	1111	801	738
v/s Ratio Prot	0.09	c0.16	c0.15	0.11	c0.23	0.08
v/s Ratio Perm						
v/c Ratio	0.44	0.63	0.64	0.42	0.78	0.26
Uniform Delay, d1	18.3	17.8	18.4	15.9	17.5	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.2	2.2	0.3	5.0	0.2
Delay (s)	18.8	19.0	20.5	16.1	22.5	14.9
Level of Service	B	B	C	B	C	B
Approach Delay (s)		18.9		18.2		
Approach LOS		B		B		

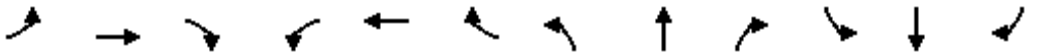
Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	53.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4241	2808	4241	2891	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4241	2808	4241	2891	2756
Volume (vph)	240	1560	315	1130	440	225
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	1642	332	1189	463	237
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	253	1642	332	1189	463	237
Heavy Vehicles (%)	3%	3%	5%	3%	2%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.8	24.6	8.0	20.8	10.0	10.0
Effective Green, g (s)	11.8	24.6	8.0	20.8	10.0	10.0
Actuated g/C Ratio	0.22	0.45	0.15	0.38	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)	619	1911	411	1616	529	505
v/s Ratio Prot	0.09	c0.39	0.12	c0.28	c0.16	0.09
v/s Ratio Perm						
v/c Ratio	0.41	0.86	0.81	0.74	0.88	0.47
Uniform Delay, d1	18.4	13.4	22.6	14.5	21.7	19.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	4.1	11.1	1.8	14.9	0.7
Delay (s)	18.8	17.6	33.6	16.3	36.6	20.6
Level of Service	B	B	C	B	D	C
Approach Delay (s)		17.7		20.1		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

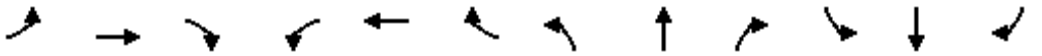
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2855	1386		2980	1320				2808		2370
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2855	1386		2980	1320				2808		2370
Volume (vph)	0	985	810	0	1300	380	0	0	0	190	0	485
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1037	853	0	1368	400	0	0	0	200	0	511
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	34
Lane Group Flow (vph)	0	1037	853	0	1368	400	0	0	0	200	0	477
Heavy Vehicles (%)	0%	2%	6%	0%	2%	3%	0%	0%	0%	5%	0%	1%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		42.9	70.0		42.9	70.0				19.1		19.1
Effective Green, g (s)		42.9	70.0		42.9	70.0				19.1		19.1
Actuated g/C Ratio		0.61	1.00		0.61	1.00				0.27		0.27
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)		1750	1386		1826	1320				766		647
v/s Ratio Prot		0.36			c0.46					0.07		0.20
v/s Ratio Perm			c0.62			0.30						
v/c Ratio		0.59	0.62		0.75	0.30				0.26		0.74
Uniform Delay, d1		8.2	0.0		9.7	0.0				19.9		23.2
Progression Factor		1.00	1.00		0.76	1.00				1.00		1.00
Incremental Delay, d2		1.5	0.8		2.2	0.1				0.2		4.4
Delay (s)		9.7	0.8		9.6	0.1				20.1		27.5
Level of Service		A	A		A	A				C		C
Approach Delay (s)		5.7			7.4			0.0			25.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

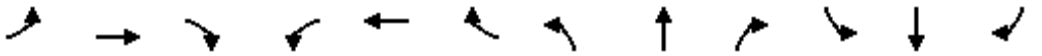
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2827	1278		2980	1248				2782		2302
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2827	1278		2980	1248				2782		2302
Volume (vph)	0	665	460	0	1015	110	0	0	0	220	0	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	700	484	0	1068	116	0	0	0	232	0	253
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	85
Lane Group Flow (vph)	0	700	484	0	1068	116	0	0	0	232	0	168
Heavy Vehicles (%)	0%	3%	15%	0%	2%	9%	0%	0%	0%	6%	0%	4%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		36.5	55.0		36.5	55.0				10.5		10.5
Effective Green, g (s)		36.5	55.0		36.5	55.0				10.5		10.5
Actuated g/C Ratio		0.66	1.00		0.66	1.00				0.19		0.19
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)		1876	1278		1978	1248				531		439
v/s Ratio Prot		0.25			c0.36					0.08		0.07
v/s Ratio Perm			c0.38			0.09						
v/c Ratio		0.37	0.38		0.54	0.09				0.44		0.38
Uniform Delay, d1		4.1	0.0		4.8	0.0				19.6		19.4
Progression Factor		1.00	1.00		0.47	1.00				1.00		1.00
Incremental Delay, d2		0.6	0.2		0.9	0.0				0.6		0.6
Delay (s)		4.7	0.2		3.2	0.0				20.2		20.0
Level of Service		A	A		A	A				C		B
Approach Delay (s)		2.9			2.9			0.0			20.1	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

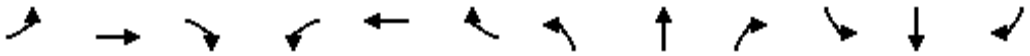
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2827	1400		2980	1236				2705		2370
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2827	1400		2980	1236				2705		2370
Volume (vph)	0	1150	430	0	1570	210	0	0	0	165	0	655
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1211	453	0	1653	221	0	0	0	174	0	689
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	1211	453	0	1653	221	0	0	0	174	0	677
Heavy Vehicles (%)	0%	3%	5%	0%	2%	10%	0%	0%	0%	9%	0%	1%
Turn Type			Free			Free				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			Free			Free						6
Actuated Green, G (s)		52.2	90.0		52.2	90.0				29.8		29.8
Effective Green, g (s)		52.2	90.0		52.2	90.0				29.8		29.8
Actuated g/C Ratio		0.58	1.00		0.58	1.00				0.33		0.33
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)		1640	1400		1728	1236				896		785
v/s Ratio Prot		0.43			c0.55					0.06		
v/s Ratio Perm			0.32			0.18						c0.29
v/c Ratio		0.74	0.32		0.96	0.18				0.19		0.86
Uniform Delay, d1		13.9	0.0		17.8	0.0				21.5		28.2
Progression Factor		1.00	1.00		0.88	1.00				1.00		1.00
Incremental Delay, d2		3.0	0.6		9.9	0.2				0.1		9.6
Delay (s)		16.9	0.6		25.7	0.2				21.6		37.8
Level of Service		B	A		C	A				C		D
Approach Delay (s)		12.5			22.7			0.0			34.6	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

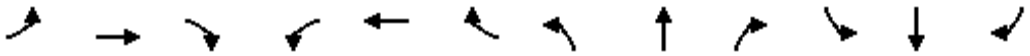
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3010	1283		4079		2891		1038			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3010	1283		4079		2891		1038			
Volume (vph)	0	905	270	0	1065	220	615	0	195	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	953	284	0	1121	232	647	0	205	0	0	0
RTOR Reduction (vph)	0	0	115	0	36	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	953	169	0	1317	0	647	0	205	0	0	0
Heavy Vehicles (%)	0%	1%	6%	0%	4%	6%	2%	0%	31%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		41.6	41.6		41.6		20.4		70.0			
Effective Green, g (s)		41.6	41.6		41.6		20.4		70.0			
Actuated g/C Ratio		0.59	0.59		0.59		0.29		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1789	762		2424		843		1038			
v/s Ratio Prot		0.32			c0.32		c0.22					
v/s Ratio Perm			0.13						0.20			
v/c Ratio		0.53	0.22		0.54		0.77		0.20			
Uniform Delay, d1		8.4	6.6		8.5		22.6		0.0			
Progression Factor		0.51	0.00		1.00		1.00		1.00			
Incremental Delay, d2		0.9	0.5		0.9		4.2		0.4			
Delay (s)		5.2	0.5		9.4		26.9		0.4			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.1			9.4			20.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

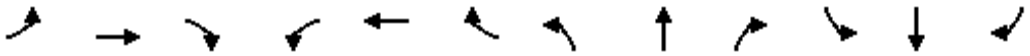
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.98		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2951	1283		3990		2863		1153			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2951	1283		3990		2863		1153			
Volume (vph)	0	1035	280	0	990	190	790	0	300	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1089	295	0	1042	200	832	0	316	0	0	0
RTOR Reduction (vph)	0	0	153	0	61	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1089	142	0	1181	0	832	0	316	0	0	0
Heavy Vehicles (%)	0%	3%	6%	0%	7%	6%	3%	0%	18%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		21.6	21.6		21.6		15.4		45.0			
Effective Green, g (s)		21.6	21.6		21.6		15.4		45.0			
Actuated g/C Ratio		0.48	0.48		0.48		0.34		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1416	616		1915		980		1153			
v/s Ratio Prot		c0.37			0.30		c0.29					
v/s Ratio Perm			0.11						0.27			
v/c Ratio		0.77	0.23		0.62		0.85		0.27			
Uniform Delay, d1		9.6	6.8		8.6		13.7		0.0			
Progression Factor		0.89	3.21		1.00		1.00		1.00			
Incremental Delay, d2		2.6	0.4		1.5		7.0		0.6			
Delay (s)		11.1	22.3		10.1		20.7		0.6			
Level of Service		B	C		B		C		A			
Approach Delay (s)		13.5			10.1			15.2			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

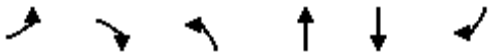
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.98		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		3010	1225		3928		2863		938			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		3010	1225		3928		2863		938			
Volume (vph)	0	655	230	0	615	120	510	0	220	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	689	242	0	647	126	537	0	232	0	0	0
RTOR Reduction (vph)	0	0	100	0	39	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	689	142	0	734	0	537	0	232	0	0	0
Heavy Vehicles (%)	0%	1%	11%	0%	8%	11%	3%	0%	45%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		32.2	32.2		32.2		14.8		55.0			
Effective Green, g (s)		32.2	32.2		32.2		14.8		55.0			
Actuated g/C Ratio		0.59	0.59		0.59		0.27		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1762	717		2300		770		938			
v/s Ratio Prot		c0.23			0.19		c0.19					
v/s Ratio Perm			0.12						0.25			
v/c Ratio		0.39	0.20		0.32		0.70		0.25			
Uniform Delay, d1		6.1	5.3		5.8		18.1		0.0			
Progression Factor		0.83	0.14		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.6		0.4		2.8		0.6			
Delay (s)		5.7	1.3		6.2		20.9		0.6			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.6			6.2			14.8			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

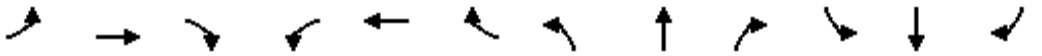
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1360	1520	2841	1538	1360
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1520	1360	982	2841	1538	1360
Volume (vph)	5	265	90	245	220	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	279	95	258	232	11
RTOR Reduction (vph)	0	236	0	0	0	4
Lane Group Flow (vph)	5	43	95	258	232	7
Heavy Vehicles (%)	0%	0%	0%	7%	4%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	25.8	25.8	25.8	25.8
Effective Green, g (s)	6.2	6.2	25.8	25.8	25.8	25.8
Actuated g/C Ratio	0.16	0.16	0.64	0.64	0.64	0.64
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	211	633	1832	992	877
v/s Ratio Prot	0.00			0.09	c0.15	
v/s Ratio Perm		c0.03	0.10			0.01
v/c Ratio	0.02	0.20	0.15	0.14	0.23	0.01
Uniform Delay, d1	14.3	14.7	2.8	2.8	3.0	2.5
Progression Factor	1.00	1.00	0.87	0.86	1.00	1.00
Incremental Delay, d2	0.0	0.5	0.4	0.1	0.6	0.0
Delay (s)	14.4	15.2	2.9	2.5	3.5	2.6
Level of Service	B	B	A	A	A	A
Approach Delay (s)	15.2			2.6	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4263			4241	1308			2370	2808		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4263			4241	1308			2370	2808		1295
Volume (vph)	85	1715	50	0	1265	250	0	0	380	470	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1805	53	0	1332	263	0	0	400	495	0	16
RTOR Reduction (vph)	0	4	0	0	0	171	0	0	23	0	0	13
Lane Group Flow (vph)	89	1854	0	0	1332	92	0	0	377	495	0	3
Heavy Vehicles (%)	0%	2%	3%	0%	3%	4%	0%	0%	1%	5%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	5.0	36.9			27.9	27.9			15.3	15.8		15.8
Effective Green, g (s)	5.0	36.9			27.9	27.9			15.3	15.8		15.8
Actuated g/C Ratio	0.06	0.46			0.35	0.35			0.19	0.20		0.20
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)	95	1966			1479	456			453	555		256
v/s Ratio Prot	0.06	c0.43			0.31					c0.18		
v/s Ratio Perm						0.07			c0.16			0.00
v/c Ratio	0.94	0.94			0.90	0.20			0.83	0.89		0.01
Uniform Delay, d1	37.3	20.5			24.7	18.2			31.1	31.3		25.8
Progression Factor	1.00	1.00			0.45	0.47			1.00	0.96		0.95
Incremental Delay, d2	71.2	10.7			7.8	0.8			12.4	15.5		0.0
Delay (s)	108.5	31.3			19.1	9.4			43.5	45.5		24.4
Level of Service	F	C			B	A			D	D		C
Approach Delay (s)		34.8			17.5			43.5			44.8	
Approach LOS		C			B			D			D	

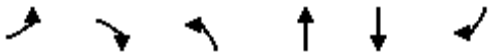
Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4241	2863	4160	2808	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4241	2863	4160	2808	2863
Volume (vph)	720	925	700	670	215	555
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	758	974	737	705	226	584
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	758	974	737	705	226	584
Heavy Vehicles (%)	3%	3%	3%	5%	5%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	25.4	23.6	24.0	19.0	19.0
Effective Green, g (s)	25.0	25.4	23.6	24.0	19.0	19.0
Actuated g/C Ratio	0.31	0.32	0.30	0.30	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	895	1347	845	1248	667	680
v/s Ratio Prot	c0.26	0.23	c0.26	0.17	0.08	c0.20
v/s Ratio Perm						
v/c Ratio	0.85	0.72	0.87	0.56	0.34	0.86
Uniform Delay, d1	25.7	24.2	26.8	23.6	25.3	29.2
Progression Factor	0.70	0.69	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	1.3	9.8	1.9	0.3	10.5
Delay (s)	20.9	17.9	36.6	25.5	25.6	39.7
Level of Service	C	B	D	C	C	D
Approach Delay (s)		19.2		31.2		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

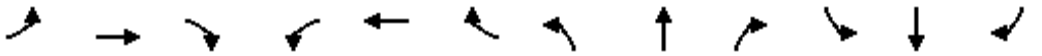
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1360	1520	2868	1524	1360
Flt Permitted	0.95	1.00	0.63	1.00	1.00	1.00
Satd. Flow (perm)	1520	1360	1001	2868	1524	1360
Volume (vph)	10	105	130	250	200	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	111	137	263	211	5
RTOR Reduction (vph)	0	100	0	0	0	1
Lane Group Flow (vph)	11	11	137	263	211	4
Heavy Vehicles (%)	0%	0%	0%	6%	5%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	4.3	4.3	32.7	32.7	32.7	32.7
Effective Green, g (s)	4.3	4.3	32.7	32.7	32.7	32.7
Actuated g/C Ratio	0.10	0.10	0.73	0.73	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)	145	130	727	2084	1107	988
v/s Ratio Prot	0.01			0.09	c0.14	
v/s Ratio Perm		c0.01	0.14			0.00
v/c Ratio	0.08	0.08	0.19	0.13	0.19	0.00
Uniform Delay, d1	18.5	18.6	1.9	1.9	2.0	1.7
Progression Factor	1.00	1.00	0.84	0.83	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.5	0.1	0.4	0.0
Delay (s)	18.8	18.8	2.1	1.6	2.3	1.7
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.8			1.8	2.3	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.4%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4223			4241	1308			2370	2835		1271
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4223			4241	1308			2370	2835		1271
Volume (vph)	80	1340	25	0	1325	300	0	0	345	290	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	1411	26	0	1395	316	0	0	363	305	0	16
RTOR Reduction (vph)	0	2	0	0	0	177	0	0	74	0	0	14
Lane Group Flow (vph)	84	1435	0	0	1395	139	0	0	289	305	0	2
Heavy Vehicles (%)	0%	3%	11%	0%	3%	4%	0%	0%	1%	4%	0%	7%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.4	50.0			39.6	39.6			14.3	13.7		13.7
Effective Green, g (s)	6.4	50.0			39.6	39.6			14.3	13.7		13.7
Actuated g/C Ratio	0.07	0.56			0.44	0.44			0.16	0.15		0.15
Clearance Time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)	108	2346			1866	576			377	432		193
v/s Ratio Prot	0.06	c0.34			c0.33					c0.11		
v/s Ratio Perm						0.11			c0.12			0.00
v/c Ratio	0.78	0.61			0.75	0.24			0.77	0.71		0.01
Uniform Delay, d1	41.1	13.5			21.0	15.8			36.3	36.2		32.4
Progression Factor	1.00	1.00			0.45	0.80			1.00	0.96		0.98
Incremental Delay, d2	28.9	1.2			2.1	0.7			9.0	5.1		0.0
Delay (s)	70.0	14.7			11.5	13.4			45.3	40.1		31.8
Level of Service	E	B			B	B			D	D		C
Approach Delay (s)		17.7			11.9			45.3			39.7	
Approach LOS		B			B			D			D	

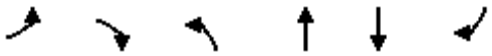
Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4160	2681	3971	2782	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4160	2681	3971	2782	2808
Volume (vph)	760	515	500	410	380	895
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	542	526	432	400	942
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	800	542	526	432	400	942
Heavy Vehicles (%)	5%	5%	10%	10%	6%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.3	19.8	26.0	18.5	32.2	32.2
Effective Green, g (s)	27.3	19.8	26.0	18.5	32.2	32.2
Actuated g/C Ratio	0.30	0.22	0.29	0.21	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	852	915	775	816	995	1005
v/s Ratio Prot	c0.28	0.13	c0.20	0.11	0.14	c0.34
v/s Ratio Perm						
v/c Ratio	0.94	0.59	0.68	0.53	0.40	0.94
Uniform Delay, d1	30.5	31.5	28.3	31.9	21.7	27.9
Progression Factor	0.82	0.77	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.2	2.1	2.4	2.5	0.3	15.4
Delay (s)	39.4	26.4	30.7	34.3	21.9	43.3
Level of Service	D	C	C	C	C	D
Approach Delay (s)		34.1		32.3		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

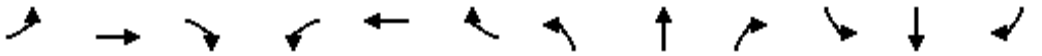
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1360	1520	2923	1538	1360
Flt Permitted	0.95	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1520	1360	914	2923	1538	1360
Volume (vph)	10	200	215	440	295	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	211	226	463	311	5
RTOR Reduction (vph)	0	185	0	0	0	1
Lane Group Flow (vph)	11	26	226	463	311	4
Heavy Vehicles (%)	0%	0%	0%	4%	4%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	35.8	35.8	35.8	35.8
Effective Green, g (s)	6.2	6.2	35.8	35.8	35.8	35.8
Actuated g/C Ratio	0.12	0.12	0.72	0.72	0.72	0.72
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)	188	169	654	2093	1101	974
v/s Ratio Prot	0.01			0.16	0.20	
v/s Ratio Perm		c0.02	c0.25			0.00
v/c Ratio	0.06	0.15	0.35	0.22	0.28	0.00
Uniform Delay, d1	19.3	19.6	2.7	2.4	2.5	2.0
Progression Factor	1.00	1.00	0.86	0.68	1.00	1.00
Incremental Delay, d2	0.1	0.4	1.0	0.2	0.6	0.0
Delay (s)	19.5	20.0	3.3	1.8	3.2	2.0
Level of Service	B	B	A	A	A	A
Approach Delay (s)	20.0			2.3	3.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4206			4241	1333			2370	2863		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4206			4241	1333			2370	2863		1295
Volume (vph)	200	1615	100	0	1375	455	0	0	100	480	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1700	105	0	1447	479	0	0	105	505	0	16
RTOR Reduction (vph)	0	6	0	0	0	293	0	0	28	0	0	12
Lane Group Flow (vph)	211	1799	0	0	1447	186	0	0	77	505	0	4
Heavy Vehicles (%)	0%	3%	2%	0%	3%	2%	0%	0%	1%	3%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	14.0	56.8			38.8	38.8			7.4	23.8		23.8
Effective Green, g (s)	14.0	56.8			38.8	38.8			7.4	23.8		23.8
Actuated g/C Ratio	0.14	0.57			0.39	0.39			0.07	0.24		0.24
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)	213	2389			1646	517			175	681		308
v/s Ratio Prot	c0.14	0.43			c0.34					c0.18		
v/s Ratio Perm						0.14			c0.03			0.00
v/c Ratio	0.99	0.75			0.88	0.36			0.44	0.74		0.01
Uniform Delay, d1	42.9	16.3			28.4	21.8			44.3	35.3		29.1
Progression Factor	1.00	1.00			0.48	0.87			1.00	0.96		0.94
Incremental Delay, d2	58.8	2.2			5.3	1.4			1.8	4.1		0.0
Delay (s)	101.7	18.6			19.0	20.4			46.1	37.9		27.3
Level of Service	F	B			B	C			D	D		C
Approach Delay (s)		27.3			19.3			46.1			37.5	
Approach LOS		C			B			D			D	

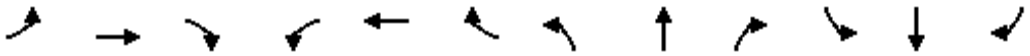
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4241	2863	4160	2782	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4241	2863	4160	2782	2863
Volume (vph)	560	1195	550	800	150	790
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	589	1258	579	842	158	832
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	589	1258	579	842	158	832
Heavy Vehicles (%)	3%	3%	3%	5%	6%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.0	34.4	22.3	32.7	31.3	31.3
Effective Green, g (s)	24.0	34.4	22.3	32.7	31.3	31.3
Actuated g/C Ratio	0.24	0.34	0.22	0.33	0.31	0.31
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)	687	1459	638	1360	871	896
v/s Ratio Prot	0.21	c0.30	c0.20	0.20	0.06	c0.29
v/s Ratio Perm						
v/c Ratio	0.86	0.86	0.91	0.62	0.18	0.93
Uniform Delay, d1	36.4	30.6	37.8	28.4	25.0	33.3
Progression Factor	0.79	0.76	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	4.8	16.6	2.1	0.1	15.4
Delay (s)	35.9	28.0	54.5	30.5	25.1	48.7
Level of Service	D	C	D	C	C	D
Approach Delay (s)		30.5		40.3		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

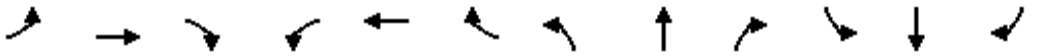
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1125		3811	1103	2756		2063			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1125		3811	1103	2756		2063			
Volume (vph)	0	1615	690	0	1240	1040	440	0	360	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1700	726	0	1305	1095	463	0	379	0	0	0
RTOR Reduction (vph)	0	0	0	0	33	0	0	0	10	0	0	0
Lane Group Flow (vph)	0	1700	726	0	1490	877	463	0	369	0	0	0
Heavy Vehicles (%)	0%	2%	4%	0%	6%	6%	7%	0%	16%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		31.0	60.0		31.0	60.0	21.0		21.0			
Effective Green, g (s)		31.0	60.0		31.0	60.0	21.0		21.0			
Actuated g/C Ratio		0.52	1.00		0.52	1.00	0.35		0.35			
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)		2091	1125		1969	1103	965		722			
v/s Ratio Prot		0.42			0.39		0.17		0.18			
v/s Ratio Perm			0.65			c0.79						
v/c Ratio		0.81	0.65		0.76	0.80	0.48		0.51			
Uniform Delay, d1		12.1	0.0		11.5	0.0	15.2		15.4			
Progression Factor		0.71	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		2.1	0.5		2.8	4.0	0.4		0.6			
Delay (s)		10.6	0.5		14.3	4.0	15.6		16.1			
Level of Service		B	A		B	A	B		B			
Approach Delay (s)		7.6			10.5			15.8			0.0	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

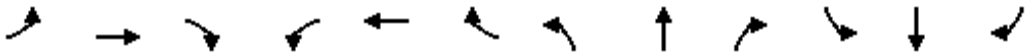
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		0.98	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		4047	1044		3871	1063				2835		2302
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		4047	1044		3871	1063				2835		2302
Volume (vph)	0	1950	750	0	950	730	0	0	0	355	0	685
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2053	789	0	1000	768	0	0	0	374	0	721
RTOR Reduction (vph)	0	0	346	0	39	0	0	0	0	0	0	111
Lane Group Flow (vph)	0	2053	443	0	1149	580	0	0	0	374	0	610
Heavy Vehicles (%)	0%	2%	12%	0%	3%	10%	0%	0%	0%	4%	0%	4%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		33.7	33.7		33.7	60.0				18.3		18.3
Effective Green, g (s)		33.7	33.7		33.7	60.0				18.3		18.3
Actuated g/C Ratio		0.56	0.56		0.56	1.00				0.31		0.31
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)		2273	586		2174	1063				865		702
v/s Ratio Prot		c0.51			0.30					0.13		
v/s Ratio Perm			0.42			0.55						c0.27
v/c Ratio		0.90	0.76		0.53	0.55				0.43		0.87
Uniform Delay, d1		11.7	10.0		8.2	0.0				16.7		19.7
Progression Factor		1.00	1.00		0.60	1.00				1.00		1.00
Incremental Delay, d2		6.4	8.8		0.7	0.4				0.3		11.2
Delay (s)		18.1	18.8		5.6	0.4				17.0		30.9
Level of Service		B	B		A	A				B		C
Approach Delay (s)		18.3			3.9			0.0			26.2	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

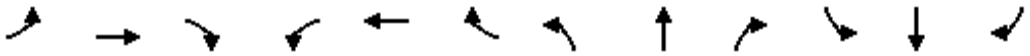
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		3931	1093		3590	1063	2681		1946			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		3931	1093		3590	1063	2681		1946			
Volume (vph)	0	1760	590	0	1495	1000	495	0	815	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1853	621	0	1574	1053	521	0	858	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	3	0	0	0
Lane Group Flow (vph)	0	1853	621	0	1574	1053	521	0	855	0	0	0
Heavy Vehicles (%)	0%	5%	7%	0%	15%	10%	10%	0%	23%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		22.0	50.0		22.0	50.0	20.0		20.0			
Effective Green, g (s)		22.0	50.0		22.0	50.0	20.0		20.0			
Actuated g/C Ratio		0.44	1.00		0.44	1.00	0.40		0.40			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		1730	1093		1580	1063	1072		778			
v/s Ratio Prot		0.47			0.44		0.19		0.44			
v/s Ratio Perm			0.57			c0.99						
v/c Ratio		1.07	0.57		1.00	0.99	0.49		1.10			
Uniform Delay, d1		14.0	0.0		14.0	0.0	11.2		15.0			
Progression Factor		0.65	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		37.1	0.1		21.8	25.2	0.3		62.8			
Delay (s)		46.2	0.1		35.7	25.2	11.5		77.8			
Level of Service		D	A		D	C	B		E			
Approach Delay (s)		34.6			31.5			52.7			0.0	
Approach LOS		C			C			D			A	

Intersection Summary			
HCM Average Control Delay	37.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

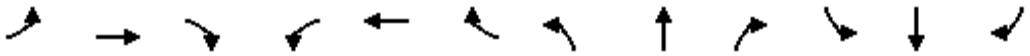
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3894	1035		3948	967				2782		2258
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3894	1035		3948	967				2782		2258
Volume (vph)	0	1820	310	0	1260	730	0	0	0	530	0	800
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1916	326	0	1326	768	0	0	0	558	0	842
RTOR Reduction (vph)	0	0	179	0	3	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	1916	147	0	1346	745	0	0	0	558	0	822
Heavy Vehicles (%)	0%	6%	13%	0%	4%	21%	0%	0%	0%	6%	0%	6%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		22.5	22.5		22.5	50.0				19.5		19.5
Effective Green, g (s)		22.5	22.5		22.5	50.0				19.5		19.5
Actuated g/C Ratio		0.45	0.45		0.45	1.00				0.39		0.39
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)		1752	466		1777	967				1085		881
v/s Ratio Prot		c0.49			0.34					0.20		
v/s Ratio Perm			0.14			0.77						c0.36
v/c Ratio		1.09	0.31		0.76	0.77				0.51		0.93
Uniform Delay, d1		13.8	8.8		11.5	0.0				11.6		14.6
Progression Factor		1.00	1.00		0.73	1.00				1.00		1.00
Incremental Delay, d2		51.9	1.8		1.8	0.9				0.4		16.4
Delay (s)		65.6	10.6		10.2	0.9				12.1		31.1
Level of Service		E	B		B	A				B		C
Approach Delay (s)		57.6			6.9			0.0			23.5	
Approach LOS		E			A			A			C	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

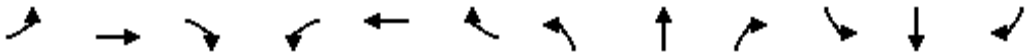
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.97	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1136		3915	1114	2863		2100			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1136		3915	1114	2863		2100			
Volume (vph)	0	2100	300	0	1325	1320	800	0	950	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2211	316	0	1395	1389	842	0	1000	0	0	0
RTOR Reduction (vph)	0	0	0	0	66	0	0	0	2	0	0	0
Lane Group Flow (vph)	0	2211	316	0	1731	987	842	0	998	0	0	0
Heavy Vehicles (%)	0%	2%	3%	0%	1%	5%	3%	0%	14%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		36.0	75.0		36.0	75.0	31.0		31.0			
Effective Green, g (s)		36.0	75.0		36.0	75.0	31.0		31.0			
Actuated g/C Ratio		0.48	1.00		0.48	1.00	0.41		0.41			
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)		1943	1136		1879	1114	1183		868			
v/s Ratio Prot		c0.55			0.44		0.29		c0.48			
v/s Ratio Perm			0.28			0.89						
v/c Ratio		1.14	0.28		0.92	0.89	0.71		1.15			
Uniform Delay, d1		19.5	0.0		18.2	0.0	18.3		22.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		68.9	0.1		9.0	8.7	2.0		80.8			
Delay (s)		88.4	0.1		27.1	8.7	20.3		102.8			
Level of Service		F	A		C	A	C		F			
Approach Delay (s)		77.4			20.6			65.1			0.0	
Approach LOS		E			C			E			A	

Intersection Summary			
HCM Average Control Delay	52.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

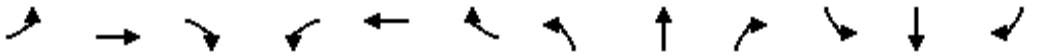
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		4047	1073		4087	1114				2863		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		4047	1073		4087	1114				2863		2324
Volume (vph)	0	1625	670	0	1745	380	0	0	0	775	0	745
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1711	705	0	1837	400	0	0	0	816	0	784
RTOR Reduction (vph)	0	0	355	0	0	0	0	0	0	0	0	7
Lane Group Flow (vph)	0	1711	350	0	1837	400	0	0	0	816	0	777
Heavy Vehicles (%)	0%	2%	9%	0%	1%	5%	0%	0%	0%	3%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		27.3	27.3		27.3	55.0				19.7		19.7
Effective Green, g (s)		27.3	27.3		27.3	55.0				19.7		19.7
Actuated g/C Ratio		0.50	0.50		0.50	1.00				0.36		0.36
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)		2009	533		2029	1114				1025		832
v/s Ratio Prot		0.42			c0.45					0.29		
v/s Ratio Perm			0.33			0.36						c0.33
v/c Ratio		0.85	0.66		0.91	0.36				0.80		0.93
Uniform Delay, d1		12.1	10.3		12.7	0.0				15.8		17.0
Progression Factor		1.00	1.00		1.00	1.00				1.00		1.00
Incremental Delay, d2		4.8	6.2		7.3	0.2				4.4		17.2
Delay (s)		16.9	16.6		19.9	0.2				20.2		34.2
Level of Service		B	B		B	A				C		C
Approach Delay (s)		16.8			16.4			0.0			27.1	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2891	4200	1308	1520	4156		2891	2984		2730	4241	1347
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)	2891	4200	1308	1520	4156		2891	2984		2730	4241	1347
Volume (vph)	430	990	255	40	1295	85	365	605	40	65	310	395
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	453	1042	268	42	1363	89	384	637	42	68	326	416
RTOR Reduction (vph)	0	0	137	0	8	0	0	4	0	0	0	252
Lane Group Flow (vph)	453	1042	131	42	1444	0	384	675	0	68	326	164
Heavy Vehicles (%)	2%	4%	4%	0%	4%	6%	2%	1%	0%	8%	3%	1%
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)	17.6	49.0	49.0	4.2	35.6		14.8	27.6		3.2	16.0	16.0
Effective Green, g (s)	17.6	49.0	49.0	4.2	35.6		14.8	27.6		3.2	16.0	16.0
Actuated g/C Ratio	0.18	0.49	0.49	0.04	0.36		0.15	0.28		0.03	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
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)	509	2058	641	64	1480		428	824		87	679	216
v/s Ratio Prot	c0.16	0.25		0.03	c0.35		c0.13	c0.23		0.02	0.08	
v/s Ratio Perm			0.10									0.12
v/c Ratio	0.89	0.51	0.20	0.66	0.98		0.90	0.82		0.78	0.48	0.76
Uniform Delay, d1	40.3	17.3	14.5	47.2	31.8		41.9	33.9		48.1	38.2	40.2
Progression Factor	0.86	0.67	0.30	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.2	0.8	0.6	21.7	18.3		20.8	8.9		35.5	2.4	21.9
Delay (s)	49.6	12.4	4.9	68.9	50.1		62.7	42.8		83.5	40.6	62.0
Level of Service	D	B	A	E	D		E	D		F	D	E
Approach Delay (s)		20.8			50.6			50.0			55.2	
Approach LOS		C			D			D			E	

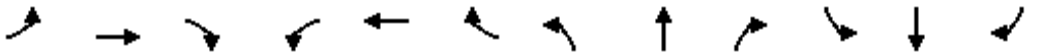
Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	2951	2949	2951	2863	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	2951	2949	2951	2863	2835
Volume (vph)	350	1160	120	1415	240	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	1221	126	1489	253	226
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	368	1221	126	1489	253	226
Heavy Vehicles (%)	3%	3%	0%	3%	3%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	16.5	67.3	8.5	59.3	12.2	12.2
Effective Green, g (s)	16.5	67.3	8.5	59.3	12.2	12.2
Actuated g/C Ratio	0.16	0.67	0.08	0.59	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	472	1986	251	1750	349	346
v/s Ratio Prot	c0.13	0.41	0.04	c0.50	c0.09	0.08
v/s Ratio Perm						
v/c Ratio	0.78	0.61	0.50	0.85	0.72	0.65
Uniform Delay, d1	40.0	9.1	43.7	16.7	42.3	41.9
Progression Factor	1.00	1.00	1.01	0.16	1.00	1.00
Incremental Delay, d2	8.0	1.4	0.6	2.2	7.3	4.4
Delay (s)	48.0	10.6	44.7	4.9	49.6	46.3
Level of Service	D	B	D	A	D	D
Approach Delay (s)		19.2		8.1		
Approach LOS		B		A		

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.4%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		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)	2891	4121	1320	1520	4057		2891	2940		2863	4282	1347
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)	2891	4121	1320	1520	4057		2891	2940		2863	4282	1347
Volume (vph)	300	1130	650	95	1105	160	325	505	100	195	375	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	1189	684	100	1163	168	342	532	105	205	395	379
RTOR Reduction (vph)	0	0	278	0	24	0	0	20	0	0	0	190
Lane Group Flow (vph)	316	1189	406	100	1307	0	342	617	0	205	395	189
Heavy Vehicles (%)	2%	6%	3%	0%	6%	3%	2%	1%	0%	3%	2%	1%
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)	9.0	32.0	32.0	6.0	29.0		10.0	20.0		6.0	16.0	16.0
Effective Green, g (s)	9.0	32.0	32.0	6.0	29.0		10.0	20.0		6.0	16.0	16.0
Actuated g/C Ratio	0.11	0.40	0.40	0.08	0.36		0.12	0.25		0.08	0.20	0.20
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)	325	1648	528	114	1471		361	735		215	856	269
v/s Ratio Prot	0.11	0.29		0.07	c0.32		0.12	c0.21		c0.07	0.09	
v/s Ratio Perm			c0.31									0.14
v/c Ratio	0.97	0.72	0.77	0.88	0.89		0.95	0.84		0.95	0.46	0.70
Uniform Delay, d1	35.4	20.2	20.8	36.6	24.0		34.7	28.5		36.9	28.2	29.8
Progression Factor	0.69	0.48	0.58	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	35.1	2.0	7.6	47.9	8.4		33.6	11.1		48.0	1.8	14.4
Delay (s)	59.4	11.7	19.7	84.5	32.4		68.3	39.6		84.8	30.0	44.2
Level of Service	E	B	B	F	C		E	D		F	C	D
Approach Delay (s)		21.1			36.0			49.6			47.0	
Approach LOS		C			D			D			D	

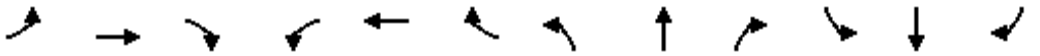
Intersection Summary					
HCM Average Control Delay	34.4	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	80.1%	ICU Level of Service	D		
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	3010	2705	3010	2705	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	3010	2705	3010	2705	2863
Volume (vph)	270	1160	640	540	350	530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1221	674	568	368	558
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1221	674	568	368	558
Heavy Vehicles (%)	4%	1%	9%	1%	9%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.3	32.0	20.0	40.7	16.0	16.0
Effective Green, g (s)	11.3	32.0	20.0	40.7	16.0	16.0
Actuated g/C Ratio	0.14	0.40	0.25	0.51	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	400	1204	676	1531	541	573
v/s Ratio Prot	0.10	c0.41	c0.25	0.19	0.14	c0.19
v/s Ratio Perm						
v/c Ratio	0.71	1.01	1.00	0.37	0.68	0.97
Uniform Delay, d1	32.8	24.0	30.0	11.9	29.6	31.8
Progression Factor	1.00	1.00	0.55	0.26	1.00	1.00
Incremental Delay, d2	5.7	29.5	22.0	0.3	3.5	30.8
Delay (s)	38.5	53.5	38.4	3.4	33.1	62.6
Level of Service	D	D	D	A	C	E
Approach Delay (s)		50.7		22.4		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		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)	2808	4121	1333	1520	4131		2891	2920		2782	4282	1347
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)	2808	4121	1333	1520	4131		2891	2920		2782	4282	1347
Volume (vph)	405	1310	520	115	1180	120	305	515	95	205	585	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	426	1379	547	121	1242	126	321	542	100	216	616	474
RTOR Reduction (vph)	0	0	260	0	14	0	0	17	0	0	0	243
Lane Group Flow (vph)	426	1379	287	121	1354	0	321	625	0	216	616	231
Heavy Vehicles (%)	5%	6%	2%	0%	4%	7%	2%	2%	0%	6%	2%	1%
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)	14.0	36.4	36.4	9.6	32.0		11.0	20.0		8.0	17.0	17.0
Effective Green, g (s)	14.0	36.4	36.4	9.6	32.0		11.0	20.0		8.0	17.0	17.0
Actuated g/C Ratio	0.16	0.40	0.40	0.11	0.36		0.12	0.22		0.09	0.19	0.19
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)	437	1667	539	162	1469		353	649		247	809	254
v/s Ratio Prot	c0.15	0.33		0.08	c0.33		0.11	c0.21		0.08	0.14	
v/s Ratio Perm			0.22									c0.17
v/c Ratio	0.97	0.83	0.53	0.75	0.92		0.91	0.96		0.87	0.76	0.91
Uniform Delay, d1	37.8	24.0	20.3	39.0	27.8		39.0	34.6		40.5	34.6	35.8
Progression Factor	0.83	0.74	0.49	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	24.7	2.6	2.0	17.0	11.0		26.2	27.3		27.2	6.7	37.5
Delay (s)	56.0	20.2	11.9	56.0	38.8		65.2	61.9		67.7	41.3	73.3
Level of Service	E	C	B	E	D		E	E		E	D	E
Approach Delay (s)		24.8			40.2			63.0			57.3	
Approach LOS		C			D			E			E	

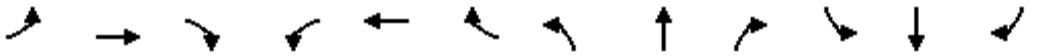
Intersection Summary					
HCM Average Control Delay	41.5	HCM Level of Service	D		
HCM Volume to Capacity ratio	0.92				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	84.7%	ICU Level of Service	E		
Analysis Period (min)	15				

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	2951	2705	3010	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	2951	2705	3010	2808	2891
Volume (vph)	280	1750	110	1285	300	345
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	1842	116	1353	316	363
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	295	1842	116	1353	316	363
Heavy Vehicles (%)	4%	3%	9%	1%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.7	60.0	5.0	53.3	13.0	13.0
Effective Green, g (s)	11.7	60.0	5.0	53.3	13.0	13.0
Actuated g/C Ratio	0.13	0.67	0.06	0.59	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	369	1967	150	1783	406	418
v/s Ratio Prot	0.10	c0.62	0.04	c0.45	0.11	c0.13
v/s Ratio Perm						
v/c Ratio	0.80	0.94	0.77	0.76	0.78	0.87
Uniform Delay, d1	38.0	13.3	41.9	13.6	37.1	37.7
Progression Factor	1.00	1.00	0.62	0.17	1.00	1.00
Incremental Delay, d2	11.5	10.0	8.8	1.1	9.1	17.1
Delay (s)	49.5	23.3	35.0	3.4	46.2	54.8
Level of Service	D	C	C	A	D	D
Approach Delay (s)		26.9		5.9		
Approach LOS		C		A		

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1490	4079		1505	4069		2920	2980	1347	2835	2951	1308
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)	1490	4079		1505	4069		2920	2980	1347	2835	2951	1308
Volume (vph)	500	1025	420	15	1000	35	650	460	30	35	180	295
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	526	1079	442	16	1053	37	684	484	32	37	189	311
RTOR Reduction (vph)	0	55	0	0	3	0	0	0	22	0	0	273
Lane Group Flow (vph)	526	1466	0	16	1087	0	684	484	10	37	189	38
Heavy Vehicles (%)	2%	3%	1%	1%	7%	1%	1%	2%	1%	4%	3%	4%
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)	42.4	68.8		2.4	28.8		26.8	39.6	39.6	3.2	16.0	16.0
Effective Green, g (s)	42.4	68.8		2.4	28.8		26.8	39.6	39.6	3.2	16.0	16.0
Actuated g/C Ratio	0.33	0.53		0.02	0.22		0.21	0.30	0.30	0.02	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	486	2159		28	901		602	908	410	70	363	161
v/s Ratio Prot	c0.35	0.36		0.01	c0.27		c0.23	0.16		0.01	c0.06	
v/s Ratio Perm									0.01			0.03
v/c Ratio	1.08	0.68		0.57	1.21		1.14	0.53	0.02	0.53	0.52	0.24
Uniform Delay, d1	43.8	22.5		63.3	50.6		51.6	37.5	31.7	62.7	53.4	51.5
Progression Factor	0.76	0.40		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	62.9	1.6		25.2	103.3		80.3	2.2	0.1	7.0	5.3	3.5
Delay (s)	96.1	10.6		88.5	153.9		131.9	39.8	31.8	69.7	58.7	54.9
Level of Service	F	B		F	F		F	D	C	E	E	D
Approach Delay (s)		32.6			153.0			92.1			57.3	
Approach LOS		C			F			F			E	

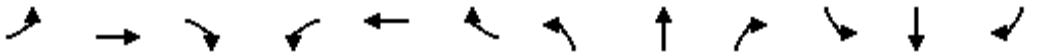
Intersection Summary			
HCM Average Control Delay	77.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	4282	2417	4325	2808	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	4282	2417	4325	2808	2863
Volume (vph)	690	640	345	1060	705	290
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	726	674	363	1116	742	305
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	726	674	363	1116	742	305
Heavy Vehicles (%)	1%	2%	22%	1%	5%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	35.5	51.5	29.1	45.1	37.4	37.4
Effective Green, g (s)	35.5	51.5	29.1	45.1	37.4	37.4
Actuated g/C Ratio	0.27	0.40	0.22	0.35	0.29	0.29
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)	797	1696	541	1500	808	824
v/s Ratio Prot	c0.25	0.16	0.15	c0.26	c0.26	0.11
v/s Ratio Perm						
v/c Ratio	0.91	0.40	0.67	0.74	0.92	0.37
Uniform Delay, d1	45.7	28.1	46.1	37.4	44.8	36.9
Progression Factor	1.00	1.00	0.38	0.29	1.00	1.00
Incremental Delay, d2	14.5	0.7	0.3	0.3	15.2	0.3
Delay (s)	60.2	28.8	17.6	11.0	60.0	37.2
Level of Service	E	C	B	B	E	D
Approach Delay (s)		45.1		12.6		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1462	3955		1505	4026		2920	2951	1347	2835	2951	1320
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)	1462	3955		1505	4026		2920	2951	1347	2835	2951	1320
Volume (vph)	390	860	415	50	810	40	525	350	50	30	295	325
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	411	905	437	53	853	42	553	368	53	32	311	342
RTOR Reduction (vph)	0	72	0	0	5	0	0	0	36	0	0	296
Lane Group Flow (vph)	411	1270	0	53	890	0	553	368	17	32	311	46
Heavy Vehicles (%)	4%	7%	1%	1%	8%	2%	1%	3%	1%	4%	3%	3%
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)	36.8	54.9		7.5	25.6		25.6	39.2	39.2	2.4	16.0	16.0
Effective Green, g (s)	36.8	54.9		7.5	25.6		25.6	39.2	39.2	2.4	16.0	16.0
Actuated g/C Ratio	0.31	0.46		0.06	0.21		0.21	0.33	0.33	0.02	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)	448	1809		94	859		623	964	440	57	393	176
v/s Ratio Prot	c0.28	0.32		0.04	c0.22		c0.19	0.12		0.01	c0.11	
v/s Ratio Perm									0.01			0.03
v/c Ratio	0.92	0.70		0.56	1.04		0.89	0.38	0.04	0.56	0.79	0.26
Uniform Delay, d1	40.1	26.0		54.7	47.2		45.8	31.1	27.6	58.3	50.4	46.7
Progression Factor	0.61	0.38		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.3	1.9		7.5	40.5		14.4	1.1	0.2	12.0	15.0	3.5
Delay (s)	44.8	11.8		62.2	87.7		60.2	32.2	27.7	70.3	65.4	50.2
Level of Service	D	B		E	F		E	C	C	E	E	D
Approach Delay (s)		19.6			86.3			47.8			58.0	
Approach LOS		B			F			D			E	

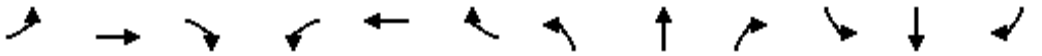
Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4241	2520	4325	2681	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4241	2520	4325	2681	2808
Volume (vph)	510	445	475	625	840	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	537	468	500	658	884	379
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	537	468	500	658	884	379
Heavy Vehicles (%)	4%	3%	17%	1%	10%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	26.6	30.5	34.0	37.9	43.5	43.5
Effective Green, g (s)	26.6	30.5	34.0	37.9	43.5	43.5
Actuated g/C Ratio	0.22	0.25	0.28	0.32	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	628	1078	714	1366	972	1018
v/s Ratio Prot	c0.19	0.11	c0.20	c0.15	c0.33	0.13
v/s Ratio Perm						
v/c Ratio	0.86	0.43	0.70	0.48	0.91	0.37
Uniform Delay, d1	44.8	37.5	38.4	33.1	36.4	28.2
Progression Factor	1.00	1.00	0.35	0.35	1.00	1.00
Incremental Delay, d2	11.0	1.3	1.3	0.5	12.1	0.2
Delay (s)	55.8	38.8	14.7	12.0	48.4	28.4
Level of Service	E	D	B	B	D	C
Approach Delay (s)		47.9		13.1		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1490	4024		1505	4217		2920	2923	1347	2891	3010	1347
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)	1490	4024		1505	4217		2920	2923	1347	2891	3010	1347
Volume (vph)	260	1445	590	65	895	40	610	650	75	165	590	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1521	621	68	942	42	642	684	79	174	621	184
RTOR Reduction (vph)	0	61	0	0	4	0	0	0	51	0	0	143
Lane Group Flow (vph)	274	2081	0	68	980	0	642	684	28	174	621	41
Heavy Vehicles (%)	2%	5%	1%	1%	3%	1%	1%	4%	1%	2%	1%	1%
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)	20.0	46.0		4.0	30.0		27.0	42.1	42.1	11.9	27.0	27.0
Effective Green, g (s)	20.0	46.0		4.0	30.0		27.0	42.1	42.1	11.9	27.0	27.0
Actuated g/C Ratio	0.17	0.38		0.03	0.25		0.22	0.35	0.35	0.10	0.22	0.22
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)	248	1543		50	1054		657	1025	473	287	677	303
v/s Ratio Prot	0.18	c0.52		0.05	c0.23		c0.22	0.23		0.06	c0.21	
v/s Ratio Perm									0.02			0.03
v/c Ratio	1.10	1.35		1.36	0.93		0.98	0.67	0.06	0.61	0.92	0.14
Uniform Delay, d1	50.0	37.0		58.0	44.0		46.2	33.0	25.8	51.8	45.4	37.2
Progression Factor	0.91	0.53		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	79.4	160.0		250.1	15.3		29.1	3.4	0.2	3.6	19.4	0.9
Delay (s)	124.8	179.7		308.1	59.3		75.3	36.5	26.1	55.4	64.8	38.1
Level of Service	F	F		F	E		E	D	C	E	E	D
Approach Delay (s)		173.5			75.3			53.6			58.1	
Approach LOS		F			E			D			E	

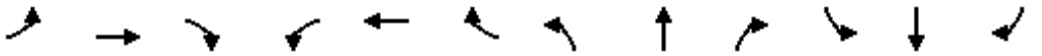
Intersection Summary			
HCM Average Control Delay	107.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4325	2808	4241	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4325	2808	4241	2808	2891
Volume (vph)	760	1220	620	470	670	335
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	1284	653	495	705	353
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	800	1284	653	495	705	353
Heavy Vehicles (%)	3%	1%	5%	3%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	43.5	44.5	30.5	31.5	33.0	33.0
Effective Green, g (s)	43.5	44.5	30.5	31.5	33.0	33.0
Actuated g/C Ratio	0.36	0.37	0.25	0.26	0.28	0.28
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)	1038	1604	714	1113	772	795
v/s Ratio Prot	0.28	c0.30	c0.23	0.12	c0.25	0.12
v/s Ratio Perm						
v/c Ratio	0.77	0.80	0.91	0.44	0.91	0.44
Uniform Delay, d1	33.8	33.8	43.5	36.9	42.1	35.9
Progression Factor	1.00	1.00	0.87	0.69	1.00	1.00
Incremental Delay, d2	3.6	4.3	8.2	0.6	15.1	0.4
Delay (s)	37.4	38.1	46.1	26.1	57.2	36.3
Level of Service	D	D	D	C	E	D
Approach Delay (s)		37.8		37.5		
Approach LOS		D		D		

Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

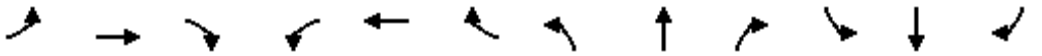
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	4399		2321	3868	1326	1442	4378	2399	2928	4337	2399
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	4399		2321	3868	1326	1442	4378	2399	2928	4337	2399
Volume (vph)	80	610	30	640	675	500	40	920	975	55	670	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	642	32	674	711	526	42	968	1026	58	705	226
RTOR Reduction (vph)	0	6	0	0	0	139	0	0	193	0	0	112
Lane Group Flow (vph)	84	668	0	674	711	387	42	968	833	58	705	114
Heavy Vehicles (%)	6%	4%	20%	35%	20%	9%	12%	6%	6%	7%	7%	6%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	18.4		27.0	29.4	43.0	4.2	25.0	52.0	13.6	34.4	50.4
Effective Green, g (s)	16.0	18.4		27.0	29.4	43.0	4.2	25.0	52.0	13.6	34.4	50.4
Actuated g/C Ratio	0.16	0.18		0.27	0.29	0.43	0.04	0.25	0.52	0.14	0.34	0.50
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)	244	809		627	1137	623	61	1095	1343	398	1492	1209
v/s Ratio Prot	0.06	c0.15		c0.29	0.18	c0.08	0.03	c0.22	c0.17	0.02	0.16	0.02
v/s Ratio Perm						0.21			0.18			0.03
v/c Ratio	0.34	0.83		1.07	0.63	0.62	0.69	0.88	0.62	0.15	0.47	0.09
Uniform Delay, d1	37.3	39.3		36.5	30.5	22.2	47.3	36.1	17.0	38.1	25.7	12.9
Progression Factor	1.19	0.82		0.73	0.82	0.60	0.85	0.24	0.66	1.00	1.00	1.00
Incremental Delay, d2	0.8	9.2		46.2	1.1	0.8	8.8	3.3	0.3	0.2	1.1	0.0
Delay (s)	45.4	41.5		72.8	26.2	14.1	48.9	12.1	11.4	38.2	26.8	12.9
Level of Service	D	D		E	C	B	D	B	B	D	C	B
Approach Delay (s)		41.9			39.3			12.5			24.3	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		

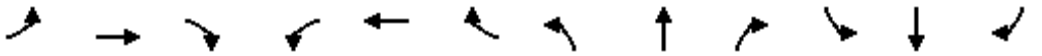
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4337	1018		4001					3013	1635	2445
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4337	1018		4001					3013	1635	2445
Volume (vph)	0	335	395	0	930	0	0	0	0	385	455	800
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	353	416	0	979	0	0	0	0	405	479	842
RTOR Reduction (vph)	0	0	132	0	0	0	0	0	0	0	0	66
Lane Group Flow (vph)	0	353	284	0	979	0	0	0	0	405	479	776
Heavy Vehicles (%)	0%	7%	42%	42%	16%	0%	4%	0%	4%	4%	4%	4%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		54.5	54.5		54.5					37.5	37.5	37.5
Effective Green, g (s)		54.5	54.5		54.5					37.5	37.5	37.5
Actuated g/C Ratio		0.54	0.54		0.54					0.38	0.38	0.38
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)		2364	555		2181					1130	613	917
v/s Ratio Prot		0.08			0.24					0.13	0.29	
v/s Ratio Perm			c0.28									c0.32
v/c Ratio		0.15	0.51		0.45					0.36	0.78	0.85
Uniform Delay, d1		11.3	14.4		13.7					22.6	27.6	28.6
Progression Factor		1.00	1.00		0.28					1.00	1.00	1.00
Incremental Delay, d2		0.1	3.3		0.6					0.2	6.4	7.3
Delay (s)		11.4	17.7		4.5					22.8	34.1	35.9
Level of Service		B	B		A					C	C	D
Approach Delay (s)		14.8			4.5			0.0			32.3	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

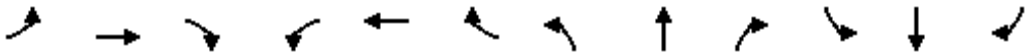
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1900	1900	1900	1700	1900	1700	1900	1700	1700	1700
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1615	3438	2733	3367	3374	1376	2894	1305		1538	1635	1376
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1615	3438	2733	3367	3374	1376	2894	1305		1538	1635	1376
Volume (vph)	25	705	910	140	700	25	1090	385	345	30	190	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	742	958	147	737	26	1147	405	363	32	200	26
RTOR Reduction (vph)	0	0	138	0	0	19	0	31	0	0	0	22
Lane Group Flow (vph)	26	742	820	147	737	7	1147	737	0	32	200	4
Heavy Vehicles (%)	0%	5%	4%	4%	7%	5%	21%	21%	21%	5%	4%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.4	18.6	61.6	6.6	22.8	26.0	43.0	55.6		3.2	15.8	15.8
Effective Green, g (s)	2.4	18.6	61.6	6.6	22.8	26.0	43.0	55.6		3.2	15.8	15.8
Actuated g/C Ratio	0.02	0.19	0.62	0.07	0.23	0.26	0.43	0.56		0.03	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	39	639	1793	222	769	358	1244	726		49	258	217
v/s Ratio Prot	0.02	c0.22	0.20	c0.04	c0.22	0.00	0.40	c0.56		0.02	c0.12	
v/s Ratio Perm			0.10			0.00						0.00
v/c Ratio	0.67	1.16	0.46	0.66	0.96	0.02	0.92	1.02		0.65	0.78	0.02
Uniform Delay, d1	48.4	40.7	10.3	45.6	38.1	27.5	26.9	22.2		47.9	40.4	35.6
Progression Factor	0.83	0.76	0.41	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	26.6	84.9	0.1	7.2	23.8	0.0	11.3	37.2		27.1	13.5	0.0
Delay (s)	66.7	115.9	4.3	52.8	61.9	27.5	38.2	59.4		75.0	53.9	35.6
Level of Service	E	F	A	D	E	C	D	E		E	D	D
Approach Delay (s)		53.2			59.4			46.7			54.7	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	51.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		

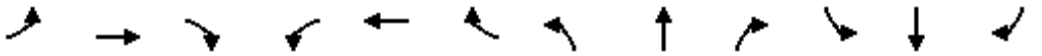
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2275	1389					5517	1018	2206	4337	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2275	1389					5517	1018	2206	4337	
Volume (vph)	0	315	535	0	0	0	0	1935	230	305	1035	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	332	563	0	0	0	0	2037	242	321	1089	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	150	0	0	0
Lane Group Flow (vph)	0	332	517	0	0	0	0	2037	92	321	1089	0
Heavy Vehicles (%)	0%	42%	4%	0%	0%	0%	0%	6%	42%	42%	7%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		38.0	38.0					38.0	38.0	12.0	54.0	
Effective Green, g (s)		38.0	38.0					38.0	38.0	12.0	54.0	
Actuated g/C Ratio		0.38	0.38					0.38	0.38	0.12	0.54	
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)		865	528					2096	387	265	2342	
v/s Ratio Prot		0.15						c0.37		c0.15	0.25	
v/s Ratio Perm			c0.37						0.09			
v/c Ratio		0.38	0.98					0.97	0.24	1.21	0.46	
Uniform Delay, d1		22.5	30.6					30.5	21.1	44.0	14.1	
Progression Factor		0.62	0.63					1.00	1.00	1.08	1.08	
Incremental Delay, d2		0.2	27.4					14.1	1.4	115.0	0.4	
Delay (s)		14.1	46.6					44.5	22.6	162.5	15.6	
Level of Service		B	D					D	C	F	B	
Approach Delay (s)		34.5			0.0			42.2			49.1	
Approach LOS		C			A			D			D	

Intersection Summary			
HCM Average Control Delay	42.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

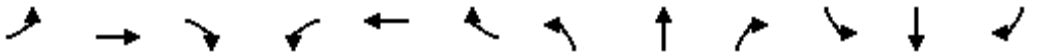
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1509	3907		2161	3094	1268	1455	4258	2312	2748	4297	2312
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1509	3907		2161	3094	1268	1455	4258	2312	2748	4297	2312
Volume (vph)	70	465	45	660	330	400	55	710	1255	85	760	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	489	47	695	347	421	58	747	1321	89	800	189
RTOR Reduction (vph)	0	12	0	0	0	156	0	0	39	0	0	113
Lane Group Flow (vph)	74	524	0	695	347	265	58	747	1282	89	800	76
Heavy Vehicles (%)	7%	16%	30%	45%	50%	14%	11%	9%	10%	14%	8%	10%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	16.2		38.0	38.2	45.0	5.6	23.0	61.0	6.8	24.2	40.2
Effective Green, g (s)	16.0	16.2		38.0	38.2	45.0	5.6	23.0	61.0	6.8	24.2	40.2
Actuated g/C Ratio	0.16	0.16		0.38	0.38	0.45	0.06	0.23	0.61	0.07	0.24	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	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)	241	633		821	1182	621	81	979	1503	187	1040	929
v/s Ratio Prot	0.05	c0.13		0.32	0.11	0.03	0.04	0.18	c0.32	0.03	c0.19	0.01
v/s Ratio Perm						0.18			0.23			0.02
v/c Ratio	0.31	0.83		0.85	0.29	0.43	0.72	0.76	0.85	0.48	0.77	0.08
Uniform Delay, d1	37.1	40.6		28.3	21.5	18.7	46.4	36.0	15.9	44.9	35.3	18.5
Progression Factor	1.19	0.84		0.76	0.59	0.30	0.44	0.56	0.91	1.00	1.00	1.00
Incremental Delay, d2	0.7	11.8		4.4	0.3	0.2	8.5	1.7	1.5	1.9	5.5	0.0
Delay (s)	44.8	45.9		26.0	12.9	5.8	28.7	21.9	15.9	46.8	40.8	18.5
Level of Service	D	D		C	B	A	C	C	B	D	D	B
Approach Delay (s)		45.7			17.1			18.3			37.4	
Approach LOS		D			B			B			D	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.6%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4420	1010		3074					2928	1589	2377
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4420	1010		3074					2928	1589	2377
Volume (vph)	0	390	765	0	565	0	0	0	0	190	325	515
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	411	805	0	595	0	0	0	0	200	342	542
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	0	0	0	423
Lane Group Flow (vph)	0	411	763	0	595	0	0	0	0	200	342	119
Heavy Vehicles (%)	0%	5%	43%	0%	51%	0%	0%	0%	0%	7%	7%	7%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		70.0	70.0		70.0					22.0	22.0	22.0
Effective Green, g (s)		70.0	70.0		70.0					22.0	22.0	22.0
Actuated g/C Ratio		0.70	0.70		0.70					0.22	0.22	0.22
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		3094	707		2152					644	350	523
v/s Ratio Prot		0.09			0.19					0.07	c0.22	
v/s Ratio Perm			c0.75									0.05
v/c Ratio		0.13	1.08		0.28					0.31	0.98	0.23
Uniform Delay, d1		5.0	15.0		5.6					32.7	38.8	32.0
Progression Factor		1.00	1.00		0.48					1.00	1.00	1.00
Incremental Delay, d2		0.1	57.1		0.3					0.3	41.5	0.2
Delay (s)		5.1	72.1		3.0					32.9	80.3	32.2
Level of Service		A	E		A					C	F	C
Approach Delay (s)		49.4			3.0			0.0			47.5	
Approach LOS		D			A			A			D	

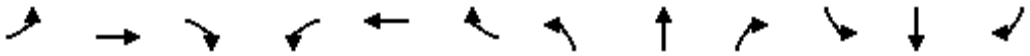
Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1900	1900	1900	1700	1900	1700	1900	1700	1700	1700
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1538	3008	2656	3273	2674	1445	2398	1073		1538	1589	1376
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1538	3008	2656	3273	2674	1445	2398	1073		1538	1589	1376
Volume (vph)	20	550	1235	225	605	25	750	245	270	25	230	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	579	1300	237	637	26	789	258	284	26	242	37
RTOR Reduction (vph)	0	0	145	0	0	18	0	37	0	0	0	30
Lane Group Flow (vph)	21	579	1155	237	637	8	789	505	0	26	242	7
Heavy Vehicles (%)	5%	20%	7%	7%	35%	0%	46%	46%	46%	5%	7%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	1.6	18.5	55.4	10.4	27.3	29.7	36.9	52.7		2.4	18.2	18.2
Effective Green, g (s)	1.6	18.5	55.4	10.4	27.3	29.7	36.9	52.7		2.4	18.2	18.2
Actuated g/C Ratio	0.02	0.18	0.55	0.10	0.27	0.30	0.37	0.53		0.02	0.18	0.18
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)	25	556	1578	340	730	429	885	565		37	289	250
v/s Ratio Prot	0.01	c0.19	0.27	c0.07	c0.24	0.00	0.33	c0.47		0.02	c0.15	
v/s Ratio Perm			0.16			0.00						0.00
v/c Ratio	0.84	1.04	0.73	0.70	0.87	0.02	0.89	0.89		0.70	0.84	0.03
Uniform Delay, d1	49.1	40.8	16.7	43.3	34.7	24.8	29.7	21.1		48.4	39.5	33.6
Progression Factor	1.01	0.87	0.71	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	73.0	39.3	1.0	6.1	13.6	0.0	11.2	16.4		46.2	18.6	0.0
Delay (s)	122.5	74.7	12.9	49.4	48.3	24.9	40.9	37.5		94.6	58.1	33.7
Level of Service	F	E	B	D	D	C	D	D		F	E	C
Approach Delay (s)		32.9			47.9			39.5			58.2	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

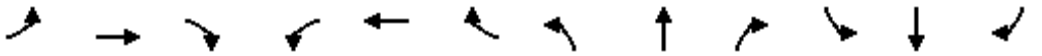
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2259	1350					5365	1010	2191	4297	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2259	1350					5365	1010	2191	4297	
Volume (vph)	0	665	425	0	0	0	0	2020	190	345	1120	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	700	447	0	0	0	0	2126	200	363	1179	0
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	31	0	0	0
Lane Group Flow (vph)	0	700	390	0	0	0	0	2126	169	363	1179	0
Heavy Vehicles (%)	0%	43%	7%	0%	0%	0%	0%	9%	43%	43%	8%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		31.0	31.0					41.0	41.0	16.0	61.0	
Effective Green, g (s)		31.0	31.0					41.0	41.0	16.0	61.0	
Actuated g/C Ratio		0.31	0.31					0.41	0.41	0.16	0.61	
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)		700	419					2200	414	351	2621	
v/s Ratio Prot		c0.31						c0.40		c0.17	0.27	
v/s Ratio Perm			0.29						0.17			
v/c Ratio		1.00	0.93					0.97	0.41	1.03	0.45	
Uniform Delay, d1		34.5	33.5					28.8	20.9	42.0	10.5	
Progression Factor		0.86	0.83					1.00	1.00	0.80	0.99	
Incremental Delay, d2		10.2	4.0					12.8	3.0	45.2	0.3	
Delay (s)		40.0	31.8					41.6	23.9	78.8	10.7	
Level of Service		D	C					D	C	E	B	
Approach Delay (s)		36.8			0.0			40.1			26.7	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

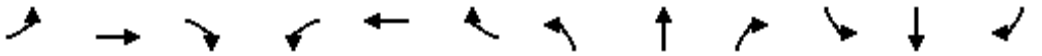
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	4181		2338	3713	1204	1429	4420	2377	2748	4219	2231
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	4181		2338	3713	1204	1429	4420	2377	2748	4219	2231
Volume (vph)	80	905	70	590	435	335	40	600	1055	70	1020	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	953	74	621	458	353	42	632	1111	74	1074	147
RTOR Reduction (vph)	0	9	0	0	0	148	0	0	112	0	0	83
Lane Group Flow (vph)	84	1018	0	621	458	205	42	632	999	74	1074	64
Heavy Vehicles (%)	6%	9%	20%	34%	25%	20%	13%	5%	7%	14%	10%	14%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	26.2		27.0	37.2	48.0	3.2	20.0	47.0	10.8	27.6	43.6
Effective Green, g (s)	16.0	26.2		27.0	37.2	48.0	3.2	20.0	47.0	10.8	27.6	43.6
Actuated g/C Ratio	0.16	0.26		0.27	0.37	0.48	0.03	0.20	0.47	0.11	0.28	0.44
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)	244	1095		631	1381	626	46	884	1212	297	1164	973
v/s Ratio Prot	0.06	c0.24		c0.27	0.12	0.04	0.03	0.14	c0.22	0.03	c0.25	0.01
v/s Ratio Perm						0.13			0.20			0.02
v/c Ratio	0.34	0.93		0.98	0.33	0.33	0.91	0.71	0.82	0.25	0.92	0.07
Uniform Delay, d1	37.3	36.0		36.3	22.5	16.0	48.3	37.3	22.9	40.9	35.2	16.4
Progression Factor	1.11	0.88		0.81	0.49	0.22	0.44	0.46	0.57	1.00	1.00	1.00
Incremental Delay, d2	0.8	14.3		24.2	0.4	0.2	51.5	1.7	1.7	0.4	13.3	0.0
Delay (s)	42.1	45.8		53.8	11.3	3.8	72.7	18.8	14.8	41.3	48.5	16.4
Level of Service	D	D		D	B	A	E	B	B	D	D	B
Approach Delay (s)		45.6			27.9			17.6			44.4	
Approach LOS		D			C			B			D	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

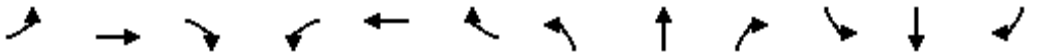
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4107	1078		3713					2984	1619	2422
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4107	1078		3713					2984	1619	2422
Volume (vph)	0	755	815	0	615	0	0	0	0	300	310	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	795	858	0	647	0	0	0	0	316	326	474
RTOR Reduction (vph)	0	0	41	0	0	0	0	0	0	0	0	374
Lane Group Flow (vph)	0	795	817	0	647	0	0	0	0	316	326	100
Heavy Vehicles (%)	0%	13%	34%	0%	25%	0%	0%	0%	0%	5%	5%	5%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		71.0	71.0		71.0					21.0	21.0	21.0
Effective Green, g (s)		71.0	71.0		71.0					21.0	21.0	21.0
Actuated g/C Ratio		0.71	0.71		0.71					0.21	0.21	0.21
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)		2916	765		2636					627	340	509
v/s Ratio Prot		0.19			0.17					0.11	c0.20	
v/s Ratio Perm			c0.76									0.04
v/c Ratio		0.27	1.07		0.25					0.50	0.96	0.20
Uniform Delay, d1		5.2	14.5		5.1					34.9	39.1	32.5
Progression Factor		1.00	1.00		0.38					1.00	1.00	1.00
Incremental Delay, d2		0.2	52.3		0.2					0.6	37.5	0.2
Delay (s)		5.4	66.8		2.2					35.5	76.6	32.7
Level of Service		A	E		A					D	E	C
Approach Delay (s)		37.3			2.2			0.0			46.3	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

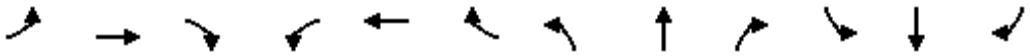
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1900	1900	1900	1700	1900	1700	1900	1700	1700	1700
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1538	3282	2707	3303	3282	1445	2575	1223		1538	1619	1376
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1538	3282	2707	3303	3282	1445	2575	1223		1538	1619	1376
Volume (vph)	25	800	1205	190	485	25	850	125	275	20	135	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	842	1268	200	511	26	895	132	289	21	142	26
RTOR Reduction (vph)	0	0	151	0	0	18	0	74	0	0	0	23
Lane Group Flow (vph)	26	842	1117	200	511	8	895	347	0	21	142	3
Heavy Vehicles (%)	5%	10%	5%	6%	10%	0%	36%	0%	36%	5%	5%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	24.8	63.3	7.6	28.8	31.2	38.5	49.2		2.4	13.1	13.1
Effective Green, g (s)	3.6	24.8	63.3	7.6	28.8	31.2	38.5	49.2		2.4	13.1	13.1
Actuated g/C Ratio	0.04	0.25	0.63	0.08	0.29	0.31	0.38	0.49		0.02	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)	55	814	1822	251	945	451	991	602		37	212	180
v/s Ratio Prot	0.02	c0.26	0.24	c0.06	0.16	0.00	c0.35	0.28		0.01	c0.09	
v/s Ratio Perm			0.18			0.01						0.00
v/c Ratio	0.47	1.03	0.61	0.80	0.54	0.02	0.90	0.58		0.57	0.67	0.02
Uniform Delay, d1	47.3	37.6	11.0	45.4	30.0	23.8	29.0	18.0		48.3	41.4	37.9
Progression Factor	0.95	0.81	0.65	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.2	31.7	0.3	15.9	2.2	0.0	11.3	1.3		18.4	7.8	0.0
Delay (s)	47.9	62.0	7.5	61.4	32.2	23.8	40.3	19.3		66.7	49.2	37.9
Level of Service	D	E	A	E	C	C	D	B		E	D	D
Approach Delay (s)		29.4			39.9			33.6			49.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

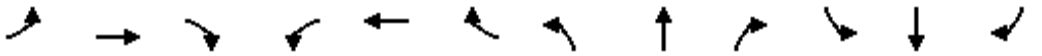
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2410	1376					5570	1078	2338	4219	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2410	1376					5570	1078	2338	4219	
Volume (vph)	0	815	310	0	0	0	0	1695	120	455	1225	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	858	326	0	0	0	0	1784	126	479	1289	0
RTOR Reduction (vph)	0	0	37	0	0	0	0	0	26	0	0	0
Lane Group Flow (vph)	0	858	289	0	0	0	0	1784	100	479	1289	0
Heavy Vehicles (%)	0%	34%	5%	0%	0%	0%	0%	5%	34%	34%	10%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		34.0	34.0					34.0	34.0	20.0	58.0	
Effective Green, g (s)		34.0	34.0					34.0	34.0	20.0	58.0	
Actuated g/C Ratio		0.34	0.34					0.34	0.34	0.20	0.58	
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)		819	468					1894	367	468	2447	
v/s Ratio Prot		c0.36						c0.32		c0.20	0.31	
v/s Ratio Perm			0.21						0.09			
v/c Ratio		1.05	0.62					0.94	0.27	1.02	0.53	
Uniform Delay, d1		33.0	27.6					32.0	24.0	40.0	12.7	
Progression Factor		0.88	0.86					1.00	1.00	0.74	1.42	
Incremental Delay, d2		25.1	0.2					10.9	1.8	30.2	0.3	
Delay (s)		54.3	23.9					42.9	25.8	59.7	18.4	
Level of Service		D	C					D	C	E	B	
Approach Delay (s)		45.9			0.0			41.8			29.6	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

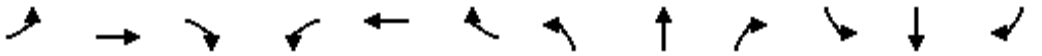
c Critical Lane Group



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	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	0.89	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	0.99	1.00
Satd. Flow (prot)	1433	4715	1583	1770	4893	1468		1750		1453	1289	1289
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.92		0.75	0.92	1.00
Satd. Flow (perm)	1433	4715	1583	1770	4893	1468		1641		1144	1197	1289
Volume (vph)	200	1010	5	5	1345	25	5	5	5	170	5	430
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)	217	1098	5	5	1462	27	5	5	5	185	5	467
RTOR Reduction (vph)	0	0	2	0	0	16	0	4	0	0	86	3
Lane Group Flow (vph)	217	1098	3	5	1462	11	0	11	0	125	134	310
Heavy Vehicles (%)	26%	10%	2%	2%	6%	10%	2%	2%	2%	18%	2%	19%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	20.6	62.2	62.2	0.8	42.4	42.4		25.0		25.0	25.0	45.6
Effective Green, g (s)	20.6	62.2	62.2	0.8	42.4	42.4		25.0		25.0	25.0	45.6
Actuated g/C Ratio	0.21	0.62	0.62	0.01	0.42	0.42		0.25		0.25	0.25	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)	295	2933	985	14	2075	622		410		286	299	639
v/s Ratio Prot	c0.15	0.23		0.00	c0.30							c0.10
v/s Ratio Perm			0.00			0.01		0.01		0.11	0.11	0.14
v/c Ratio	0.74	0.37	0.00	0.36	0.70	0.02		0.03		0.44	0.45	0.49
Uniform Delay, d1	37.2	9.3	7.2	49.3	23.7	16.7		28.3		31.6	31.7	19.0
Progression Factor	0.99	0.79	0.68	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	8.6	0.3	0.0	14.9	2.0	0.1		0.1		4.8	4.8	0.6
Delay (s)	45.2	7.7	4.9	64.3	25.7	16.8		28.4		36.4	36.4	19.6
Level of Service	D	A	A	E	C	B		C		D	D	B
Approach Delay (s)		13.9			25.7			28.4			28.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

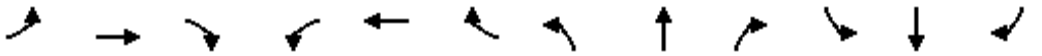
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.97	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (prot)	1337	4589		1770	4803	1214		1750		1545	1459	1382
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.92		0.75	0.76	1.00
Satd. Flow (perm)	1337	4589		1770	4803	1214		1629		1216	1157	1382
Volume (vph)	310	945	5	5	1685	90	5	5	5	265	5	295
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)	337	1027	5	5	1832	98	5	5	5	288	5	321
RTOR Reduction (vph)	0	0	0	0	0	56	0	4	0	0	9	234
Lane Group Flow (vph)	337	1032	0	5	1832	42	0	11	0	144	176	51
Heavy Vehicles (%)	35%	13%	2%	2%	8%	33%	2%	2%	2%	11%	2%	11%
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	26.9	69.2		0.8	43.1	43.1		18.0		18.0	18.0	18.0
Effective Green, g (s)	26.9	69.2		0.8	43.1	43.1		18.0		18.0	18.0	18.0
Actuated g/C Ratio	0.27	0.69		0.01	0.43	0.43		0.18		0.18	0.18	0.18
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)	360	3176		14	2070	523		293		219	208	249
v/s Ratio Prot	c0.25	0.22		0.00	c0.38							
v/s Ratio Perm						0.03		0.01		0.12	c0.15	0.04
v/c Ratio	0.94	0.32		0.36	0.89	0.08		0.04		0.66	0.85	0.21
Uniform Delay, d1	35.7	6.1		49.3	26.2	16.8		33.8		38.1	39.7	34.9
Progression Factor	1.00	1.00		0.82	0.53	0.42		1.00		1.00	1.00	1.00
Incremental Delay, d2	31.2	0.3		11.3	4.6	0.2		0.2		14.4	32.4	1.9
Delay (s)	66.9	6.4		51.6	18.4	7.3		34.1		52.6	72.1	36.8
Level of Service	E	A		D	B	A		C		D	E	D
Approach Delay (s)		21.3			17.9			34.1			51.1	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

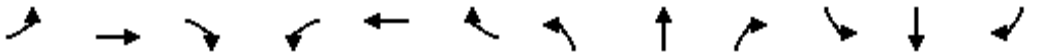
c Critical Lane Group



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	0.91	1.00	1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	0.97	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (prot)	1367	4715	1583	1770	4673	1214		1750		1329	1254	1180
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.93		0.75	0.77	1.00
Satd. Flow (perm)	1367	4715	1583	1770	4673	1214		1653		1046	999	1180
Volume (vph)	250	805	5	5	1055	30	5	5	5	295	5	315
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)	272	875	5	5	1147	33	5	5	5	321	5	342
RTOR Reduction (vph)	0	0	2	0	0	22	0	4	0	0	10	2
Lane Group Flow (vph)	272	875	3	5	1147	11	0	12	0	161	200	295
Heavy Vehicles (%)	32%	10%	2%	2%	11%	33%	2%	2%	2%	29%	2%	30%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	24.9	57.2	57.2	0.8	33.1	33.1		30.0		30.0	30.0	54.9
Effective Green, g (s)	24.9	57.2	57.2	0.8	33.1	33.1		30.0		30.0	30.0	54.9
Actuated g/C Ratio	0.25	0.57	0.57	0.01	0.33	0.33		0.30		0.30	0.30	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)	340	2697	905	14	1547	402		496		314	300	695
v/s Ratio Prot	c0.20	0.19		0.00	c0.25							c0.11
v/s Ratio Perm			0.00			0.01		0.01		0.15	c0.20	0.14
v/c Ratio	0.80	0.32	0.00	0.36	0.74	0.03		0.02		0.51	0.67	0.42
Uniform Delay, d1	35.2	11.2	9.2	49.3	29.7	22.6		24.7		29.0	30.6	13.3
Progression Factor	0.92	0.80	0.72	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	12.1	0.3	0.0	14.9	3.2	0.1		0.1		5.9	11.2	0.4
Delay (s)	44.4	9.3	6.6	64.3	32.9	22.7		24.8		34.8	41.8	13.7
Level of Service	D	A	A	E	C	C		C		C	D	B
Approach Delay (s)		17.6			32.8			24.8			27.6	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

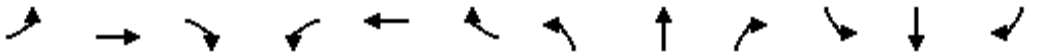
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.94	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	1327	4549		1770	4550	1162		1750		1417	1310	1268
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.91		0.75	0.82	1.00
Satd. Flow (perm)	1327	4549		1770	4550	1162		1627		1115	1103	1268
Volume (vph)	480	885	5	5	1280	90	5	5	5	170	5	260
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)	522	962	5	5	1391	98	5	5	5	185	5	283
RTOR Reduction (vph)	0	1	0	0	0	67	0	4	0	0	25	180
Lane Group Flow (vph)	522	966	0	5	1391	31	0	11	0	93	141	34
Heavy Vehicles (%)	36%	14%	2%	2%	14%	39%	2%	2%	2%	21%	2%	21%
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	40.0	71.2		0.8	32.0	32.0		16.0		16.0	16.0	16.0
Effective Green, g (s)	40.0	71.2		0.8	32.0	32.0		16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.40	0.71		0.01	0.32	0.32		0.16		0.16	0.16	0.16
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
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)	531	3239		14	1456	372		260		178	176	203
v/s Ratio Prot	c0.39	0.21		0.00	c0.31							
v/s Ratio Perm						0.03		0.01		0.08	c0.13	0.03
v/c Ratio	0.98	0.30		0.36	0.96	0.08		0.04		0.52	0.80	0.17
Uniform Delay, d1	29.7	5.3		49.3	33.3	23.8		35.5		38.5	40.5	36.3
Progression Factor	1.00	1.00		0.79	0.48	0.05		1.00		1.00	1.00	1.00
Incremental Delay, d2	34.5	0.2		11.0	12.1	0.3		0.3		10.5	30.5	1.8
Delay (s)	64.1	5.5		50.2	28.0	1.4		35.8		49.0	71.0	38.0
Level of Service	E	A		D	C	A		D		D	E	D
Approach Delay (s)		26.1			26.3			35.8			51.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

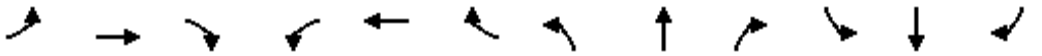
c Critical Lane Group



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	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	0.93	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98		0.95	0.97	1.00
Satd. Flow (prot)	1388	4893	1583	1770	4848	1154		1750		1280	1200	1180
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.92		0.75	0.83	1.00
Satd. Flow (perm)	1388	4893	1583	1770	4848	1154		1633		1007	1017	1180
Volume (vph)	370	1430	5	5	1610	30	5	5	5	145	5	340
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)	402	1554	5	5	1750	33	5	5	5	158	5	370
RTOR Reduction (vph)	0	0	1	0	0	19	0	4	0	0	28	1
Lane Group Flow (vph)	402	1554	4	5	1750	14	0	11	0	79	121	304
Heavy Vehicles (%)	30%	6%	2%	2%	7%	40%	2%	2%	2%	34%	2%	30%
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		pm+ov
Protected Phases	7	4		3	8			2			6	7
Permitted Phases			4			8	2			6		6
Actuated Green, G (s)	30.9	71.2	71.2	0.8	41.1	41.1		16.0		16.0	16.0	46.9
Effective Green, g (s)	30.9	71.2	71.2	0.8	41.1	41.1		16.0		16.0	16.0	46.9
Actuated g/C Ratio	0.31	0.71	0.71	0.01	0.41	0.41		0.16		0.16	0.16	0.47
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)	429	3484	1127	14	1993	474		261		161	163	601
v/s Ratio Prot	c0.29	0.32		0.00	c0.36							c0.16
v/s Ratio Perm			0.00			0.01		0.01		0.08	c0.12	0.10
v/c Ratio	0.94	0.45	0.00	0.36	0.88	0.03		0.04		0.49	0.74	0.51
Uniform Delay, d1	33.6	6.1	4.2	49.3	27.1	17.6		35.5		38.3	40.0	18.5
Progression Factor	1.41	0.87	0.92	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	25.3	0.4	0.0	14.9	5.9	0.1		0.3		10.3	26.2	0.7
Delay (s)	72.8	5.7	3.8	64.3	33.0	17.7		35.8		48.6	66.2	19.2
Level of Service	E	A	A	E	C	B		D		D	E	B
Approach Delay (s)		19.4			32.8			35.8			36.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00		1.00		0.95	0.91	0.95
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.93	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.98	1.00
Satd. Flow (prot)	1556	4758		1770	4673	1380		1750		1199	1097	1044
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.92		0.75	0.84	1.00
Satd. Flow (perm)	1556	4758		1770	4673	1380		1642		944	947	1044
Volume (vph)	630	1685	5	5	1800	150	5	5	5	115	5	150
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)	685	1832	5	5	1957	163	5	5	5	125	5	163
RTOR Reduction (vph)	0	0	0	0	0	98	0	4	0	0	30	89
Lane Group Flow (vph)	685	1837	0	5	1957	65	0	11	0	63	94	17
Heavy Vehicles (%)	16%	9%	2%	2%	11%	17%	2%	2%	2%	43%	2%	47%
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	32.0	71.2		0.8	40.0	40.0		16.0		16.0	16.0	16.0
Effective Green, g (s)	32.0	71.2		0.8	40.0	40.0		16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.32	0.71		0.01	0.40	0.40		0.16		0.16	0.16	0.16
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
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)	498	3388		14	1869	552		263		151	152	167
v/s Ratio Prot	c0.44	0.39		0.00	c0.42							
v/s Ratio Perm						0.05		0.01		0.07	c0.10	0.02
v/c Ratio	1.38	0.54		0.36	1.05	0.12		0.04		0.42	0.62	0.10
Uniform Delay, d1	34.0	6.8		49.3	30.0	18.9		35.5		37.8	39.1	35.9
Progression Factor	1.00	1.00		0.92	0.46	0.01		1.00		1.00	1.00	1.00
Incremental Delay, d2	181.3	0.6		8.3	29.5	0.2		0.3		8.3	17.3	1.2
Delay (s)	215.3	7.4		53.7	43.2	0.4		35.8		46.1	56.5	37.1
Level of Service	F	A		D	D	A		D		D	E	D
Approach Delay (s)		63.9			39.9			35.8			47.2	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

FUTURE (2035) ALTERNATIVE 5A

INTERSECTION QUEUING ANALYSIS

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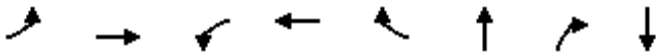


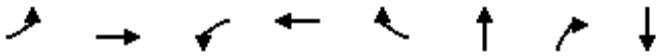
Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	5	79	511	74	453	179	568	732
v/c Ratio	0.12	0.27	0.98	0.15	0.66	1.17dl	0.66	1.17dl
Control Delay	52.4	36.5	73.7	20.0	7.6	50.0	4.0	94.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.4	36.5	73.7	20.0	7.6	50.0	4.0	94.3
Queue Length 50th (ft)	3	21	~173	27	0	57	0	~253
Queue Length 95th (ft)	15	44	#291	67	101	94	0	#373
Internal Link Dist (ft)		738		419		857		397
Turn Bay Length (ft)	120				150			
Base Capacity (vph)	42	297	523	510	689	295	861	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.27	0.98	0.15	0.66	0.61	0.66	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	5	85	574	53	379	347	474	226
v/c Ratio	0.12	0.25	0.93	0.09	0.54	0.89	0.57	0.76
Control Delay	51.8	26.2	54.3	15.7	5.3	58.7	2.9	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	26.2	54.3	15.7	5.3	58.7	2.9	45.8
Queue Length 50th (ft)	3	15	181	17	0	111	0	63
Queue Length 95th (ft)	15	38	#285	46	70	#194	0	105
Internal Link Dist (ft)		738		419		857		397
Turn Bay Length (ft)	120				150			
Base Capacity (vph)	42	334	635	599	696	407	829	341
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.25	0.90	0.09	0.54	0.85	0.57	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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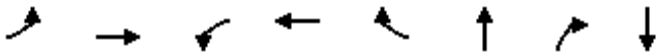

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	5	332	611	79	653	200	474	300
v/c Ratio	0.10	0.51	0.88	0.11	0.58	0.69	0.49	1.40dl
Control Delay	50.8	9.7	43.4	13.4	2.2	48.4	1.8	50.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	9.7	43.4	13.4	2.2	48.4	1.8	50.9
Queue Length 50th (ft)	3	10	184	23	0	64	0	95
Queue Length 95th (ft)	15	54	#260	58	0	102	0	#154
Internal Link Dist (ft)		738		419		857		397
Turn Bay Length (ft)	120				150			
Base Capacity (vph)	49	650	755	733	1124	337	958	409
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.51	0.81	0.11	0.58	0.59	0.49	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	458	989	232	1126	495	126
v/c Ratio	0.84	0.52	0.56	0.82	0.86	0.27
Control Delay	37.4	13.4	29.4	25.1	40.5	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	13.4	29.4	25.1	40.5	21.4
Queue Length 50th (ft)	80	91	40	135	89	19
Queue Length 95th (ft)	#154	125	71	#190	#164	39
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	546	1917	438	1381	581	524
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.52	0.53	0.82	0.85	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1026	789	147	1495	426	500
v/c Ratio	1.18	0.28	0.60	1.09	0.97	1.17
Control Delay	128.0	9.9	63.8	92.3	86.8	143.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	128.0	9.9	63.8	92.3	86.8	143.9
Queue Length 50th (ft)	~492	93	57	~478	171	~238
Queue Length 95th (ft)	#623	115	92	#575	#276	#346
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	866	2769	262	1370	437	426
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.28	0.56	1.09	0.97	1.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	668	1000	158	1216	458	174
v/c Ratio	0.91	0.42	0.48	0.87	0.93	0.35
Control Delay	41.7	10.1	31.9	29.4	54.6	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	10.1	31.9	29.4	54.6	25.5
Queue Length 50th (ft)	129	86	30	163	93	31
Queue Length 95th (ft)	#227	116	57	#242	#175	57
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	732	2358	352	1397	495	495
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.42	0.45	0.87	0.93	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	542	563	11	1742	353	232
v/c Ratio	0.96	0.21	0.11	0.93	0.93	0.56
Control Delay	60.3	4.0	38.9	32.0	66.7	37.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	4.0	38.9	32.0	66.7	37.4
Queue Length 50th (ft)	137	23	2	291	90	56
Queue Length 95th (ft)	#237	52	10	#404	#170	91
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	565	2680	98	1873	381	413
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.21	0.11	0.93	0.93	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1047	958	26	679	505	200
v/c Ratio	1.04	0.33	0.23	0.88	1.03	0.38
Control Delay	63.5	7.1	46.0	50.9	85.3	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	7.1	46.0	50.9	85.3	33.7
Queue Length 50th (ft)	~334	62	7	139	~159	51
Queue Length 95th (ft)	#457	116	20	#205	#258	83
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	1008	2903	111	769	491	522
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.33	0.23	0.88	1.03	0.38

Intersection Summary

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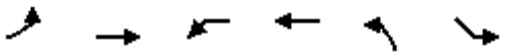
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	626	1042	5	905	458	79
v/c Ratio	0.92	0.40	0.04	0.73	0.89	0.24
Control Delay	42.0	6.3	26.8	23.6	46.8	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	6.3	26.8	23.6	46.8	22.6
Queue Length 50th (ft)	109	50	1	108	84	12
Queue Length 95th (ft)	#201	108	5	150	#161	28
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	697	2588	140	1233	513	418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.40	0.04	0.73	0.89	0.19

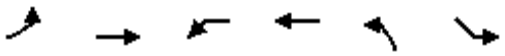
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



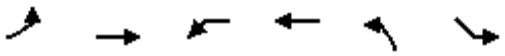
Lane Group	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Group Flow (vph)	700	758	568	674	116	379
v/c Ratio	0.69	0.54	0.84	0.42	0.23	0.75
Control Delay	35.4	24.6	50.6	27.2	39.3	53.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	24.6	50.6	27.2	39.3	53.0
Queue Length 50th (ft)	217	194	197	128	36	132
Queue Length 95th (ft)	285	312	239	176	59	175
Internal Link Dist (ft)		175		222		200
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	1009	1406	853	1615	637	637
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.54	0.67	0.42	0.18	0.59

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Group Flow (vph)	516	405	258	200	126	779
v/c Ratio	0.59	0.30	0.68	0.16	0.14	0.87
Control Delay	36.0	22.5	54.1	31.7	26.4	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	22.5	54.1	31.7	26.4	47.0
Queue Length 50th (ft)	159	94	90	38	32	267
Queue Length 95th (ft)	215	161	127	66	50	307
Internal Link Dist (ft)		175		222		200
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	876	1337	536	1233	1195	1195
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.30	0.48	0.16	0.11	0.65

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL2	SEL
Lane Group Flow (vph)	800	668	247	1674	137	784
v/c Ratio	1.08	0.44	0.69	1.01	0.18	1.06
Control Delay	95.3	18.5	56.2	59.9	32.9	88.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.3	18.5	56.2	59.9	32.9	88.7
Queue Length 50th (ft)	~325	153	86	~441	39	~312
Queue Length 95th (ft)	#445	206	128	#554	65	#432
Internal Link Dist (ft)		175		222		200
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	743	1532	408	1651	743	743
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.44	0.61	1.01	0.18	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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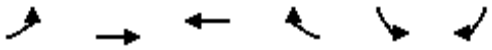

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	205	911	2605	426	468	237
v/c Ratio	1.04	0.30	1.02	0.44	1.04	0.63
Control Delay	129.0	4.2	47.6	3.8	106.7	18.4
Queue Delay	0.0	0.0	12.2	0.0	0.0	0.0
Total Delay	129.0	4.2	59.8	3.8	106.7	18.4
Queue Length 50th (ft)	~187	67	~849	23	~219	25
Queue Length 95th (ft)	#346	81	#937	74	#329	114
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	197	3007	2560	965	449	379
Starvation Cap Reductn	0	0	81	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.30	1.05	0.44	1.04	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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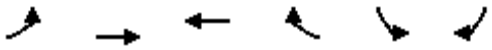
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	211	484	505	1121	379	700
v/c Ratio	0.66	0.44	0.81	0.74	0.44	0.84
Control Delay	37.2	19.4	34.5	19.6	17.8	29.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.7
Total Delay	37.2	19.4	34.5	19.7	17.8	30.5
Queue Length 50th (ft)	38	52	90	123	55	118
Queue Length 95th (ft)	#82	79	#163	167	88	#202
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	325	1206	651	1639	922	897
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	33	0	43
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.40	0.78	0.70	0.41	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

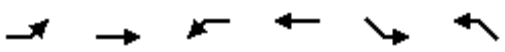


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	332	1279	1263	353	447	211
v/c Ratio	0.80	0.47	0.89	0.50	0.77	0.48
Control Delay	42.9	6.0	24.0	3.6	40.3	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	6.0	24.0	3.6	40.3	8.5
Queue Length 50th (ft)	153	87	165	19	109	0
Queue Length 95th (ft)	#287	112	#218	m21	#174	55
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	416	2730	1414	713	584	438
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.47	0.89	0.50	0.77	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

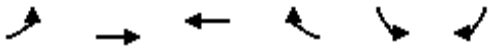
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	616	489	295	463	442	542
v/c Ratio	0.73	0.26	0.68	0.40	0.60	0.80
Control Delay	26.4	11.9	39.8	26.8	28.8	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	11.9	39.8	26.8	28.8	37.0
Queue Length 50th (ft)	148	37	71	71	98	129
Queue Length 95th (ft)	205	m65	111	108	136	175
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	889	1860	487	1157	878	801
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.26	0.61	0.40	0.50	0.68

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	116	2479	1684	126	489	247
v/c Ratio	0.72	0.90	0.83	0.17	0.73	0.50
Control Delay	55.9	16.1	10.4	0.5	32.7	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	16.1	10.4	0.5	32.7	7.9
Queue Length 50th (ft)	49	277	108	0	101	2
Queue Length 95th (ft)	#122	369	#180	m1	#153	56
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	171	2760	2038	727	667	493
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.90	0.83	0.17	0.73	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	889	1426	232	700	442	468
v/c Ratio	0.85	0.71	0.58	0.71	0.72	0.83
Control Delay	21.3	11.9	34.0	29.2	32.6	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	11.9	34.0	29.2	32.6	40.1
Queue Length 50th (ft)	179	163	47	102	90	98
Queue Length 95th (ft)	m195	m177	80	142	137	#168
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	1043	2019	441	991	642	591
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.71	0.53	0.71	0.69	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	68	947	1116	563	263	105
v/c Ratio	0.56	0.34	0.69	0.57	0.79	0.25
Control Delay	34.7	1.8	16.6	3.8	42.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	1.8	16.6	3.8	42.6	3.6
Queue Length 50th (ft)	30	15	194	0	104	0
Queue Length 95th (ft)	m44	21	283	49	#197	20
Internal Link Dist (ft)		668	436			569
Turn Bay Length (ft)	470			200		
Base Capacity (vph)	123	2797	1606	986	389	459
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.34	0.69	0.57	0.68	0.23

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	705	442	326	1053	637	311
v/c Ratio	0.72	0.62	0.88	0.55	0.91	0.23
Control Delay	25.8	6.4	37.8	2.5	46.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	6.4	37.8	2.5	46.3	0.4
Queue Length 50th (ft)	138	0	141	34	137	0
Queue Length 95th (ft)	198	64	m#246	26	#231	0
Internal Link Dist (ft)	198			668	319	
Turn Bay Length (ft)			490		300	
Base Capacity (vph)	975	715	372	1921	702	1333
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.62	0.88	0.55	0.91	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	221	974	574	442	89	89
v/c Ratio	0.67	0.29	0.40	0.51	0.45	0.31
Control Delay	25.4	1.2	12.9	4.2	29.6	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	1.2	12.9	4.2	29.6	5.2
Queue Length 50th (ft)	73	13	75	0	30	0
Queue Length 95th (ft)	#160	23	128	53	63	18
Internal Link Dist (ft)		668	436			569
Turn Bay Length (ft)	470			200		
Base Capacity (vph)	332	3412	1433	862	362	418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.29	0.40	0.51	0.25	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	663	516	74	589	574	532
v/c Ratio	0.46	0.61	0.41	0.33	0.81	0.41
Control Delay	13.0	5.1	19.6	0.8	31.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	5.1	19.6	0.8	31.7	1.0
Queue Length 50th (ft)	94	0	26	0	98	0
Queue Length 95th (ft)	141	57	m58	0	#167	0
Internal Link Dist (ft)	198			668	319	
Turn Bay Length (ft)			490		300	
Base Capacity (vph)	1446	846	197	1797	749	1295
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.61	0.38	0.33	0.77	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	305	1295	637	411	121	163
v/c Ratio	0.77	0.41	0.55	0.53	0.49	0.60
Control Delay	26.1	1.5	19.2	5.2	28.0	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.1	1.5	19.2	5.2	28.0	23.5
Queue Length 50th (ft)	102	15	95	0	40	34
Queue Length 95th (ft) m	#185	28	#191	61	74	76
Internal Link Dist (ft)		668	436			569
Turn Bay Length (ft)	470			200		
Base Capacity (vph)	394	3160	1166	772	379	384
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.41	0.55	0.53	0.32	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1042	516	137	621	326	558
v/c Ratio	0.72	0.57	0.79	0.31	0.58	0.42
Control Delay	16.7	4.1	45.0	0.4	25.8	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.7	4.1	45.0	0.4	25.8	1.0
Queue Length 50th (ft)	144	0	52	0	55	0
Queue Length 95th (ft)	#252	49	m#123	0	84	0
Internal Link Dist (ft)	198			668	319	
Turn Bay Length (ft)			490		300	
Base Capacity (vph)	1457	909	174	1984	771	1333
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.57	0.79	0.31	0.42	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1000	1942	63	126
v/c Ratio	0.42	0.81	0.42	0.52
Control Delay	3.5	9.4	40.8	14.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.5	9.4	40.8	14.6
Queue Length 50th (ft)	59	216	30	0
Queue Length 95th (ft)	107	421	65	46
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2389	2389	276	344
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.81	0.23	0.37

Intersection Summary

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	568	895	53	116
v/c Ratio	0.25	0.41	0.34	0.48
Control Delay	3.0	3.8	29.4	12.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.0	3.8	29.4	12.4
Queue Length 50th (ft)	19	35	18	0
Queue Length 95th (ft)	50	88	44	37
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2246	2160	429	486
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.41	0.12	0.24

Intersection Summary

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1516	1011	58	279
v/c Ratio	0.82	0.54	0.21	0.85
Control Delay	14.2	8.2	19.8	43.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.2	8.2	19.8	43.4
Queue Length 50th (ft)	203	101	16	81
Queue Length 95th (ft)	#314	146	41	#196
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	1860	1860	372	359
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.54	0.16	0.78

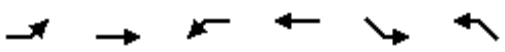
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	200	1000	358	795	421	121
v/c Ratio	0.47	0.70	0.71	0.45	0.74	0.27
Control Delay	21.3	15.6	27.7	11.2	26.9	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	15.6	27.7	11.2	26.9	17.7
Queue Length 50th (ft)	24	76	45	54	53	13
Queue Length 95th (ft)	47	112	#95	82	#108	30
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	441	1519	510	1773	584	506
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.66	0.70	0.45	0.72	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	263	658	416	463	626	195
v/c Ratio	0.38	0.62	0.70	0.41	0.77	0.29
Control Delay	19.1	20.7	27.7	19.9	25.5	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	20.7	27.7	19.9	25.5	16.8
Queue Length 50th (ft)	37	73	68	53	97	25
Queue Length 95th (ft)	69	105	#119	78	#162	50
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	722	1285	666	1439	917	799
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.51	0.62	0.32	0.68	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	253	1642	332	1189	463	237
v/c Ratio	0.41	0.86	0.81	0.73	0.87	0.47
Control Delay	22.0	19.6	40.9	17.3	42.8	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	19.6	40.9	17.3	42.8	23.6
Queue Length 50th (ft)	37	163	55	115	76	36
Queue Length 95th (ft)	70	#231	#114	145	#150	64
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	618	1928	411	1766	530	505
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.85	0.81	0.67	0.87	0.47

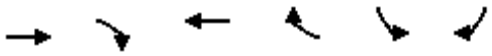
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	953	284	1353	647	205
v/c Ratio	0.53	0.32	0.55	0.77	0.20
Control Delay	5.9	0.7	9.8	28.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	0.7	9.8	28.7	0.4
Queue Length 50th (ft)	47	0	106	129	0
Queue Length 95th (ft)	66	m0	183	159	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1790	878	2460	1156	1038
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.32	0.55	0.56	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



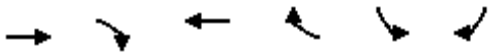
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1037	853	1368	400	200	511
v/c Ratio	0.72	0.62	0.91	0.30	0.19	0.97
Control Delay	17.1	2.1	21.6	0.7	14.9	55.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	2.1	21.6	0.7	14.9	55.2
Queue Length 50th (ft)	180	0	240	0	28	199
Queue Length 95th (ft)	254	0	#421	m2	49	#393
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1446	1379	1509	1313	1083	536
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.62	0.91	0.30	0.18	0.95

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	689	242	773	537	232
v/c Ratio	0.39	0.30	0.33	0.70	0.25
Control Delay	6.5	1.1	6.1	22.7	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.5	1.1	6.1	22.7	0.6
Queue Length 50th (ft)	57	0	34	81	0
Queue Length 95th (ft)	77	3	67	110	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1762	818	2339	1197	938
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.30	0.33	0.45	0.25

Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	700	484	1068	116	232	253
v/c Ratio	0.40	0.38	0.58	0.09	0.35	0.71
Control Delay	7.4	0.9	5.7	0.1	17.4	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	0.9	5.7	0.1	17.4	24.7
Queue Length 50th (ft)	53	0	35	0	32	57
Queue Length 95th (ft)	119	0	178	m0	47	103
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1739	1278	1834	1248	1012	513
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.58	0.09	0.23	0.49

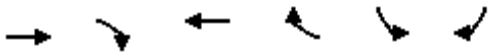
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1089	295	1242	832	316
v/c Ratio	0.77	0.38	0.63	0.85	0.27
Control Delay	11.5	3.8	9.7	24.6	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	3.8	9.7	24.6	0.6
Queue Length 50th (ft)	132	22	72	96	0
Queue Length 95th (ft)	m185	m46	108	#182	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1419	770	1980	1018	1153
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.38	0.63	0.82	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



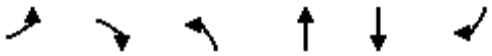
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1211	453	1653	221	174	689
v/c Ratio	0.88	0.32	1.13	0.18	0.15	1.20
Control Delay	29.5	0.6	89.6	0.2	16.5	131.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	0.6	89.6	0.2	16.5	131.8
Queue Length 50th (ft)	323	0	~582	0	30	~480
Queue Length 95th (ft)	#475	0	#720	m0	51	#696
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1382	1400	1457	1236	1142	575
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.32	1.13	0.18	0.15	1.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	279	95	258	232	11
v/c Ratio	0.02	0.58	0.14	0.13	0.22	0.01
Control Delay	11.4	7.7	4.0	3.2	4.9	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.4	7.7	4.0	3.2	4.9	2.9
Queue Length 50th (ft)	1	0	11	16	15	0
Queue Length 95th (ft)	6	37	m30	m33	57	5
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	608	711	672	1943	1052	934
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.39	0.14	0.13	0.22	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	89	1858	1332	263	400	495	16
v/c Ratio	0.94	0.94	0.90	0.42	0.84	0.89	0.06
Control Delay	118.7	32.5	20.8	3.1	46.4	49.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.7	32.5	20.8	3.1	46.4	49.6	12.5
Queue Length 50th (ft)	45	317	149	16	101	124	1
Queue Length 95th (ft)	#134	#442	m#309	m22	#180	#213	m10
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	95	1972	1480	628	496	562	272
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.94	0.90	0.42	0.81	0.88	0.06

Intersection Summary

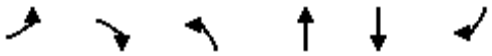
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	758	974	737	705	226	584
v/c Ratio	0.85	0.72	0.87	0.57	0.34	0.86
Control Delay	23.1	18.8	39.5	26.1	26.5	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	18.8	39.5	26.1	26.5	43.0
Queue Length 50th (ft)	152	139	174	110	47	141
Queue Length 95th (ft)	m175	m158	#264	148	77	#222
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	895	1346	895	1246	702	716
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.72	0.82	0.57	0.32	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	111	137	263	211	5
v/c Ratio	0.05	0.38	0.17	0.12	0.17	0.00
Control Delay	16.0	8.6	2.7	2.0	3.1	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	8.6	2.7	2.0	3.1	2.2
Queue Length 50th (ft)	3	0	13	12	13	0
Queue Length 95th (ft)	12	29	m34	25	40	2
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	642	638	798	2285	1214	1085
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.17	0.17	0.12	0.17	0.00

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	84	1437	1395	316	363	305	16
v/c Ratio	0.65	0.61	0.73	0.42	0.80	0.70	0.08
Control Delay	64.2	15.6	12.6	3.3	41.7	43.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	15.6	12.6	3.3	41.7	43.9	15.0
Queue Length 50th (ft)	47	196	149	16	84	80	1
Queue Length 95th (ft)	#112	260	m226	m29	#150	120	m14
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	135	2345	1901	761	494	504	239
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.61	0.73	0.42	0.73	0.61	0.07

Intersection Summary

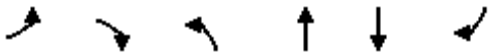
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	800	542	526	432	400	942
v/c Ratio	0.94	0.59	0.68	0.53	0.40	0.94
Control Delay	41.8	26.9	33.6	35.3	22.9	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	26.9	33.6	35.3	22.9	45.4
Queue Length 50th (ft)	236	97	136	82	85	258
Queue Length 95th (ft)	#343	m119	192	116	124	#381
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	874	913	775	814	1020	1030
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.59	0.68	0.53	0.39	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	211	226	463	311	5
v/c Ratio	0.05	0.56	0.34	0.21	0.27	0.00
Control Delay	17.0	9.5	4.1	2.1	4.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	9.5	4.1	2.1	4.1	2.4
Queue Length 50th (ft)	3	0	18	15	21	0
Queue Length 95th (ft)	12	41	m71	m52	71	3
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	486	579	657	2187	1151	1019
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.34	0.21	0.27	0.00

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	211	1805	1447	479	105	505	16
v/c Ratio	0.99	0.74	0.86	0.59	0.46	0.74	0.05
Control Delay	104.2	19.0	19.8	4.4	37.2	41.1	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.2	19.0	19.8	4.4	37.2	41.1	13.5
Queue Length 50th (ft)	136	319	214	40	26	150	1
Queue Length 95th (ft)	#284	385	m#398	m55	53	#231	m13
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	213	2429	1680	817	404	681	320
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.74	0.86	0.59	0.26	0.74	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	589	1258	579	842	158	832
v/c Ratio	0.86	0.86	0.91	0.62	0.18	0.93
Control Delay	38.9	28.9	57.4	31.0	25.4	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	28.9	57.4	31.0	25.4	51.1
Queue Length 50th (ft)	193	291	184	166	37	260
Queue Length 95th (ft)	#273	#358	#278	211	61	#376
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	687	1461	658	1362	890	916
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.86	0.88	0.62	0.18	0.91

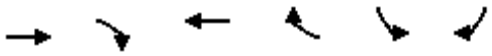
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1700	726	1523	877	463	379
v/c Ratio	0.81	0.65	0.76	0.80	0.48	0.52
Control Delay	12.2	6.7	15.0	6.9	16.6	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	6.7	15.0	6.9	16.6	17.1
Queue Length 50th (ft)	181	90	161	0	61	53
Queue Length 95th (ft)	m276	m98	223	#23	96	92
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	2092	1125	2004	1103	1056	800
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.65	0.76	0.80	0.44	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2053	789	1188	580	374	721
v/c Ratio	0.90	0.85	0.54	0.55	0.43	0.89
Control Delay	20.4	12.4	5.6	5.9	18.0	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	12.4	5.6	5.9	18.0	30.0
Queue Length 50th (ft)	247	0	68	73	52	104
Queue Length 95th (ft)	#388	#340	80	m113	84	#206
Internal Link Dist (ft)	447		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2271	932	2212	1056	945	873
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.85	0.54	0.55	0.40	0.83

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

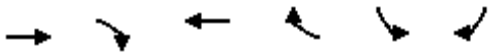
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1853	621	1574	1053	521	858
v/c Ratio	1.07	0.57	1.00	0.99	0.49	1.10
Control Delay	50.6	5.0	38.7	30.9	13.1	82.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	5.0	38.7	30.9	13.1	82.2
Queue Length 50th (ft)	~234	56	166	0	55	~170
Queue Length 95th (ft)	m#171	m31	#279	#217	90	#277
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1730	1093	1580	1063	1072	781
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.57	1.00	0.99	0.49	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1916	326	1349	745	558	842
v/c Ratio	1.10	0.51	0.76	0.77	0.51	0.93
Control Delay	70.6	4.6	10.7	12.0	13.5	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.6	4.6	10.7	12.0	13.5	34.5
Queue Length 50th (ft)	~262	0	113	130	59	121
Queue Length 95th (ft)	#351	43	m136	m130	96	#239
Internal Link Dist (ft)	433		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	1749	645	1776	960	1113	922
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.51	0.76	0.78	0.50	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

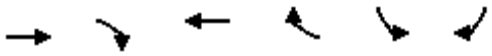
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2211	316	1797	987	842	1000
v/c Ratio	1.14	0.28	0.92	0.89	0.71	1.15
Control Delay	90.7	0.6	26.9	12.3	22.4	104.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.7	0.6	26.9	12.3	22.4	104.6
Queue Length 50th (ft)	~474	0	270	0	162	~318
Queue Length 95th (ft)	#574	0	#401	#111	227	#447
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1943	1136	1944	1114	1183	870
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.28	0.92	0.89	0.71	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

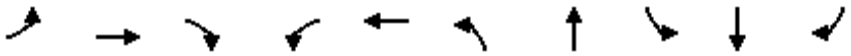
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1711	705	1837	400	816	784
v/c Ratio	0.85	0.79	0.90	0.36	0.80	0.93
Control Delay	18.0	9.9	21.4	0.9	23.2	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	9.9	21.4	0.9	23.2	38.2
Queue Length 50th (ft)	176	0	198	0	118	132
Queue Length 95th (ft)	#255	#262	#319	0	#188	#249
Internal Link Dist (ft)	465		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2010	888	2030	1104	1041	852
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.79	0.90	0.36	0.78	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	453	1042	268	42	1452	384	679	68	326	416
v/c Ratio	0.98	0.48	0.33	0.42	0.91	0.95	0.82	0.62	0.48	0.89
Control Delay	71.5	11.9	1.6	57.8	39.5	77.3	43.8	72.3	40.9	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	11.9	1.6	57.8	39.5	77.3	43.8	72.3	40.9	34.8
Queue Length 50th (ft)	152	106	4	26	315	126	216	22	69	73
Queue Length 95th (ft)	#254	134	m12	61	#414	#217	#316	#54	100	#256
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	463	2159	803	106	1587	405	829	109	679	468
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.48	0.33	0.40	0.91	0.95	0.82	0.62	0.48	0.89

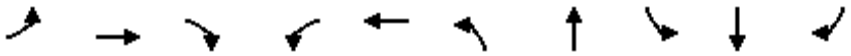
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	368	1221	126	1489	253	226
v/c Ratio	0.78	0.61	0.51	0.85	0.72	0.65
Control Delay	52.6	11.1	47.1	5.6	54.6	51.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	11.1	47.1	5.6	54.6	51.1
Queue Length 50th (ft)	116	213	44	62	80	71
Queue Length 95th (ft)	#177	276	m48	m73	122	110
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	487	1987	265	1751	372	369
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.61	0.48	0.85	0.68	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	316	1189	684	100	1331	342	637	205	395	379
v/c Ratio	0.97	0.72	0.85	0.88	0.89	0.95	0.84	0.95	0.46	0.83
Control Delay	64.6	11.8	13.6	97.0	32.5	73.0	39.5	90.5	30.2	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.6	11.8	13.6	97.0	32.5	73.0	39.5	90.5	30.2	28.8
Queue Length 50th (ft)	78	108	29	51	219	88	153	53	64	66
Queue Length 95th (ft)	m#116	m125	m38	#139	#310	#169	#243	#119	93	#219
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	325	1648	806	114	1494	361	755	215	856	459
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.72	0.85	0.88	0.89	0.95	0.84	0.95	0.46	0.83

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

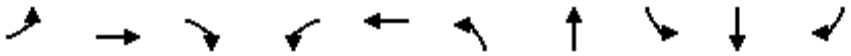
Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1221	674	568	368	558
v/c Ratio	0.71	1.01	1.00	0.37	0.68	0.97
Control Delay	43.0	55.2	42.3	3.6	36.9	65.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	55.2	42.3	3.6	36.9	65.6
Queue Length 50th (ft)	70	~323	167	23	88	143
Queue Length 95th (ft)	110	#469	m#224	m28	134	#245
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	425	1204	676	1530	541	573
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	1.01	1.00	0.37	0.68	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	426	1379	547	121	1368	321	642	216	616	474
v/c Ratio	0.97	0.83	0.68	0.75	0.92	0.91	0.96	0.87	0.76	0.95
Control Delay	59.2	20.7	4.9	67.4	39.2	70.3	62.0	74.6	41.6	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	20.7	4.9	67.4	39.2	70.3	62.0	74.6	41.6	45.7
Queue Length 50th (ft)	122	219	25	68	265	94	185	63	122	107
Queue Length 95th (ft)	m#158	m261	m36	#152	#364	#172	#299	#128	164	#309
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	437	1668	799	169	1482	353	666	247	809	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.83	0.68	0.72	0.92	0.91	0.96	0.87	0.76	0.95

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

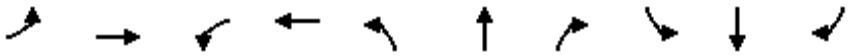
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	295	1842	116	1353	316	363
v/c Ratio	0.80	0.94	0.77	0.76	0.78	0.87
Control Delay	55.3	24.3	42.7	3.5	52.0	60.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	24.3	42.7	3.5	52.0	60.4
Queue Length 50th (ft)	85	431	33	66	90	105
Queue Length 95th (ft)	#146	#676	m34	m71	#153	#182
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	378	1968	150	1784	406	418
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.94	0.77	0.76	0.78	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	526	1521	16	1090	684	484	32	37	189	311
v/c Ratio	1.15	0.66	0.24	1.08	1.17	0.53	0.07	0.43	0.52	0.72
Control Delay	120.7	9.1	68.5	99.9	139.6	40.6	11.2	76.8	59.1	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.7	9.1	68.5	99.9	139.6	40.6	11.2	76.8	59.1	15.7
Queue Length 50th (ft)	~526	109	13	~376	~353	181	0	15	80	0
Queue Length 95th (ft)	m#703	m187	39	#472	#475	239	25	36	120	99
Internal Link Dist (ft)		1765		384		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	458	2310	69	1005	584	908	432	87	363	434
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.15	0.66	0.23	1.08	1.17	0.53	0.07	0.43	0.52	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

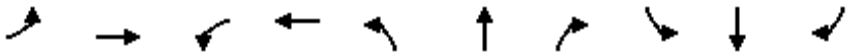
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	726	674	363	1116	742	305
v/c Ratio	0.91	0.40	0.67	0.74	0.92	0.37
Control Delay	62.0	29.4	18.2	11.5	62.0	37.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	29.4	18.2	11.5	62.0	37.9
Queue Length 50th (ft)	297	152	103	189	303	102
Queue Length 95th (ft)	#383	190	m98	m167	#404	143
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	854	1701	539	1503	864	881
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.40	0.67	0.74	0.86	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	411	1342	53	895	553	368	53	32	311	342
v/c Ratio	0.94	0.69	0.49	0.95	0.95	0.38	0.11	0.34	0.79	0.72
Control Delay	53.0	10.3	68.6	64.4	74.0	33.3	8.7	66.4	65.8	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	10.3	68.6	64.4	74.0	33.3	8.7	66.4	65.8	14.8
Queue Length 50th (ft)	249	155	40	250	219	120	0	12	124	0
Queue Length 95th (ft)	m#428	m234	83	#340	#329	166	30	30	#192	99
Internal Link Dist (ft)		1765		384		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	439	1957	125	944	584	964	475	95	393	472
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.69	0.42	0.95	0.95	0.38	0.11	0.34	0.79	0.72

Intersection Summary

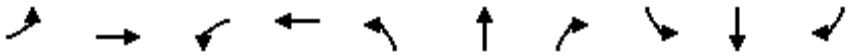
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	537	468	500	658	884	379
v/c Ratio	0.85	0.43	0.70	0.48	0.91	0.37
Control Delay	58.3	40.4	15.9	12.8	49.9	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	40.4	15.9	12.8	49.9	28.5
Queue Length 50th (ft)	205	113	101	89	327	108
Queue Length 95th (ft)	261	160	m117	m140	381	137
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	732	1079	714	1366	1139	1193
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.43	0.70	0.48	0.78	0.32

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	274	2142	68	984	642	684	79	174	621	184
v/c Ratio	1.10	1.34	1.36	0.93	0.98	0.67	0.15	0.60	0.92	0.41
Control Delay	122.4	175.7	293.3	59.2	76.5	37.5	6.9	60.5	65.2	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.4	175.7	293.3	59.2	76.5	37.5	6.9	60.5	65.2	8.4
Queue Length 50th (ft)	~234	~783	~69	272	256	234	0	67	248	0
Queue Length 95th (ft)	m#339	#857	#166	#360	#377	318	35	102	#358	60
Internal Link Dist (ft)		1765		384		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	248	1604	50	1059	657	1025	524	771	677	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	1.34	1.36	0.93	0.98	0.67	0.15	0.23	0.92	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	800	1284	653	495	705	353
v/c Ratio	0.77	0.80	0.91	0.44	0.91	0.44
Control Delay	39.4	39.4	47.4	27.0	59.3	37.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	39.4	47.4	27.0	59.3	37.5
Queue Length 50th (ft)	274	339	211	109	265	113
Queue Length 95th (ft)	351	403	m242	m115	#365	158
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	1074	1603	749	1113	819	843
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.80	0.87	0.44	0.86	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

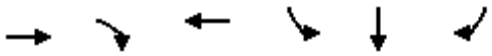
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	674	674	711	526	42	968	1026	58	705	226
v/c Ratio	0.34	0.76	1.07	0.59	0.70	0.44	0.88	0.68	0.17	0.47	0.17
Control Delay	49.2	36.9	74.4	25.2	8.9	42.5	13.3	6.6	40.9	28.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	36.9	74.4	25.2	8.9	42.5	13.3	6.6	40.9	28.0	1.6
Queue Length 50th (ft)	54	137	~257	123	69	21	164	54	17	136	0
Queue Length 95th (ft)	103	157	m#306	m138	m78	m21	m164	m57	36	177	15
Internal Link Dist (ft)		638		714			596			987	
Turn Bay Length (ft)	150		500		350	100		500	600		500
Base Capacity (vph)	244	885	627	1199	753	101	1095	1520	351	1492	1356
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.76	1.07	0.59	0.70	0.42	0.88	0.68	0.17	0.47	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	353	416	979	405	479	842
v/c Ratio	0.15	0.61	0.45	0.36	0.78	0.86
Control Delay	12.8	10.0	4.9	22.4	36.4	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	10.0	4.9	22.4	36.4	33.9
Queue Length 50th (ft)	38	40	35	94	265	246
Queue Length 95th (ft)	68	172	57	111	331	284
Internal Link Dist (ft)	1518		638		1839	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2365	687	2181	1416	768	1205
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.61	0.45	0.29	0.62	0.70

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	742	958	147	737	26	1147	768	32	200	26
v/c Ratio	0.40	1.03	0.49	0.88	0.87	0.06	0.94	1.01	0.52	0.78	0.11
Control Delay	51.9	67.2	2.6	91.3	49.2	8.1	44.0	59.1	76.1	60.4	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.9	67.2	2.6	91.3	49.2	8.1	44.0	59.1	76.1	60.4	14.2
Queue Length 50th (ft)	17	~212	17	48	247	0	363	~512	20	121	0
Queue Length 95th (ft)	m23	#374	99	#107	#374	17	#518	#743	#64	#212	23
Internal Link Dist (ft)		714			1091			678		795	
Turn Bay Length (ft)	200			500			700				
Base Capacity (vph)	65	722	1954	168	850	442	1221	757	62	294	269
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	1.03	0.49	0.88	0.87	0.06	0.94	1.01	0.52	0.68	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	332	563	2037	242	321	1089
v/c Ratio	0.38	0.98	0.97	0.45	1.21	0.46
Control Delay	15.0	46.7	45.1	5.8	156.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	46.7	45.1	5.8	156.4	15.8
Queue Length 50th (ft)	45	333	365	0	~134	140
Queue Length 95th (ft)	m81	#550	#459	53	m#174	m148
Internal Link Dist (ft)	767		613			596
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	865	574	2096	537	265	2342
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.98	0.97	0.45	1.21	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

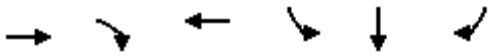
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	74	536	695	347	421	58	747	1321	89	800	189
v/c Ratio	0.31	0.79	0.85	0.29	0.55	0.59	0.76	0.86	0.54	0.77	0.18
Control Delay	48.2	42.3	28.5	12.7	3.1	29.4	22.1	14.4	58.2	42.0	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.2	42.3	28.5	12.7	3.1	29.4	22.1	14.4	58.2	42.0	2.4
Queue Length 50th (ft)	45	88	235	33	0	30	190	168	28	179	0
Queue Length 95th (ft)	90	#159	m285	m44	m31	m32	m196	m165	55	#243	17
Internal Link Dist (ft)		638		714			596			987	
Turn Bay Length (ft)	150		500		350	100		500	600		500
Base Capacity (vph)	241	676	821	1207	766	102	979	1538	165	1040	1060
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.79	0.85	0.29	0.55	0.57	0.76	0.86	0.54	0.77	0.18

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	411	805	595	200	342	542
v/c Ratio	0.13	1.07	0.28	0.31	0.98	0.57
Control Delay	5.1	70.5	3.0	34.3	83.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	70.5	3.0	34.3	83.1	5.6
Queue Length 50th (ft)	27	~546	26	55	218	0
Queue Length 95th (ft)	38	#780	38	88	#398	46
Internal Link Dist (ft)	1518		638		1839	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	3094	749	2152	644	350	946
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	1.07	0.28	0.31	0.98	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	21	579	1300	237	637	26	789	542	26	242	37
v/c Ratio	0.34	0.86	0.74	0.90	0.76	0.05	0.93	0.90	0.42	0.84	0.13
Control Delay	55.5	41.0	8.8	82.5	39.5	7.0	51.0	39.7	67.2	63.9	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	41.0	8.8	82.5	39.5	7.0	51.0	39.7	67.2	63.9	12.1
Queue Length 50th (ft)	14	163	184	78	183	0	252	280	17	147	0
Queue Length 95th (ft)	m17	m#247	347	#150	#315	16	#379	#519	#50	#263	27
Internal Link Dist (ft)		714			1091			678		795	
Turn Bay Length (ft)	200			500			700				
Base Capacity (vph)	62	677	1765	262	837	561	846	603	62	318	305
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.86	0.74	0.90	0.76	0.05	0.93	0.90	0.42	0.76	0.12

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	700	447	2126	200	363	1179
v/c Ratio	1.00	0.94	0.97	0.45	1.03	0.45
Control Delay	41.7	29.2	42.2	19.2	80.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	29.2	42.2	19.2	80.7	10.8
Queue Length 50th (ft)	212	195	377	65	~134	182
Queue Length 95th (ft)	m196	m179	#474	131	m#197	231
Internal Link Dist (ft)	767		613			596
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	700	476	2200	445	351	2621
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.94	0.97	0.45	1.03	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

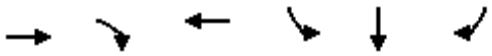
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	1027	621	458	353	42	632	1111	74	1074	147
v/c Ratio	0.34	0.90	0.98	0.32	0.46	0.74	0.71	0.84	0.27	0.92	0.14
Control Delay	45.8	42.3	56.1	11.1	2.0	52.9	19.0	12.7	44.4	49.8	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	42.3	56.1	11.1	2.0	52.9	19.0	12.7	44.4	49.8	2.4
Queue Length 50th (ft)	51	226	218	36	0	22	160	147	22	249	0
Queue Length 95th (ft)	99	#300	m#276	m50	m11	m24	m170	m146	45	#346	15
Internal Link Dist (ft)		638		714			596			987	
Turn Bay Length (ft)	150		500		350	100		500	600		500
Base Capacity (vph)	244	1138	631	1411	763	57	884	1316	275	1164	1072
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.90	0.98	0.32	0.46	0.74	0.71	0.84	0.27	0.92	0.14

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	795	858	647	316	326	474
v/c Ratio	0.27	1.06	0.25	0.50	0.96	0.54
Control Delay	5.5	65.5	2.2	38.2	80.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	65.5	2.2	38.2	80.1	5.7
Queue Length 50th (ft)	57	~580	20	92	207	0
Queue Length 95th (ft)	73	#817	31	135	#379	44
Internal Link Dist (ft)	1518		638		1839	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2916	806	2636	627	340	883
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	1.06	0.25	0.50	0.96	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	842	1268	200	511	26	895	421	21	142	26
v/c Ratio	0.29	0.92	0.64	1.01	0.49	0.05	0.94	0.62	0.34	0.67	0.13
Control Delay	47.1	37.8	4.6	114.9	30.3	6.3	50.5	17.3	61.5	56.5	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	37.8	4.6	114.9	30.3	6.3	50.5	17.3	61.5	56.5	15.2
Queue Length 50th (ft)	18	226	97	~67	145	0	284	131	13	87	0
Queue Length 95th (ft)	m20	m#348	m169	#142	199	14	#435	245	38	148	24
Internal Link Dist (ft)		714			1091			678		795	
Turn Bay Length (ft)	200			500			700				
Base Capacity (vph)	92	919	1993	198	1050	560	950	676	62	259	242
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.92	0.64	1.01	0.49	0.05	0.94	0.62	0.34	0.55	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

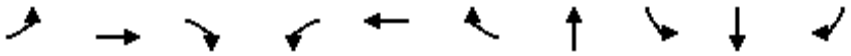
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	858	326	1784	126	479	1289
v/c Ratio	1.05	0.65	0.94	0.32	1.02	0.53
Control Delay	55.3	20.9	43.5	19.3	62.0	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	20.9	43.5	19.3	62.0	18.6
Queue Length 50th (ft)	~309	126	317	39	~174	260
Queue Length 95th (ft)	m#263	m124	#401	88	m#194	m278
Internal Link Dist (ft)	767		613			596
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	819	505	1894	392	468	2447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.65	0.94	0.32	1.02	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	217	1098	5	5	1462	27	15	119	227	311
v/c Ratio	0.74	0.36	0.00	0.07	0.70	0.04	0.04	0.42	0.60	0.48
Control Delay	50.0	6.8	3.2	48.4	27.0	7.6	23.1	36.7	25.0	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	6.8	3.2	48.4	27.0	7.6	23.1	36.7	25.0	18.5
Queue Length 50th (ft)	103	91	0	3	296	0	5	67	73	117
Queue Length 95th (ft)	m200	123	m2	15	356	17	21	125	164	190
Internal Link Dist (ft)		663			1298		294		753	
Turn Bay Length (ft)	400			200		300		500		
Base Capacity (vph)	358	3084	1037	71	2074	638	413	286	377	698
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.36	0.00	0.07	0.70	0.04	0.04	0.42	0.60	0.45

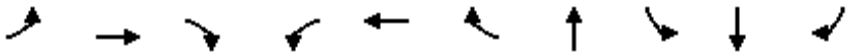
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	337	1032	5	1832	98	15	144	185	285
v/c Ratio	0.94	0.31	0.07	0.89	0.17	0.05	0.66	0.85	0.59
Control Delay	70.8	5.5	39.6	19.3	2.1	27.7	53.9	71.4	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.8	5.5	39.6	19.3	2.1	27.7	53.9	71.4	10.0
Queue Length 50th (ft)	207	67	3	134	1	5	90	119	0
Queue Length 95th (ft)	#372	117	m5	#193	m7	23	#177	#256	77
Internal Link Dist (ft)		1928		663		347		751	
Turn Bay Length (ft)	500		200		400		500		
Base Capacity (vph)	374	3322	71	2069	579	297	219	217	482
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.31	0.07	0.89	0.17	0.05	0.66	0.85	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	272	875	5	5	1147	33	15	161	210	297
v/c Ratio	0.80	0.31	0.01	0.07	0.74	0.08	0.03	0.51	0.68	0.43
Control Delay	49.1	8.3	4.2	48.4	34.0	9.3	20.1	35.9	41.3	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	8.3	4.2	48.4	34.0	9.3	20.1	35.9	41.3	12.7
Queue Length 50th (ft)	130	75	0	3	240	0	4	89	120	96
Queue Length 95th (ft)	m#216	104	m2	15	303	22	20	158	#231	150
Internal Link Dist (ft)		663			1298		294		753	
Turn Bay Length (ft)	400			200		300		500		
Base Capacity (vph)	383	2848	958	71	1546	424	499	314	310	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.31	0.01	0.07	0.74	0.08	0.03	0.51	0.68	0.40

Intersection Summary

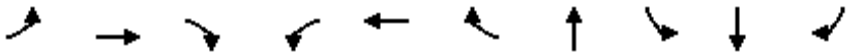
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	522	967	5	1391	98	15	93	166	214
v/c Ratio	0.98	0.29	0.07	0.96	0.22	0.06	0.52	0.82	0.56
Control Delay	66.4	4.7	38.2	29.6	1.1	29.1	50.0	64.9	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	4.7	38.2	29.6	1.1	29.1	50.0	64.9	11.5
Queue Length 50th (ft)	323	56	3	85	0	5	57	93	0
Queue Length 95th (ft)	#544	101	m5	#394	m0	24	113	#221	70
Internal Link Dist (ft)		1716		663		347		751	
Turn Bay Length (ft)	500		200		400		500		
Base Capacity (vph)	531	3384	71	1456	438	264	179	202	383
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.29	0.07	0.96	0.22	0.06	0.52	0.82	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	402	1554	5	5	1750	33	15	79	149	305
v/c Ratio	0.94	0.43	0.00	0.07	0.88	0.07	0.06	0.49	0.78	0.51
Control Delay	74.6	4.8	2.6	48.4	33.9	6.8	29.1	49.8	59.4	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	4.8	2.6	48.4	33.9	6.8	29.1	49.8	59.4	19.4
Queue Length 50th (ft)	268	96	0	3	376	0	5	48	79	125
Queue Length 95th (ft)	#439	132	m1	15	#450	19	24	100	#195	206
Internal Link Dist (ft)		663			1298		294		753	
Turn Bay Length (ft)	400			200		300		500		
Base Capacity (vph)	444	3641	1179	71	1990	493	265	161	191	615
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.43	0.00	0.07	0.88	0.07	0.06	0.49	0.78	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	685	1837	5	1957	163	15	63	124	106
v/c Ratio	1.38	0.52	0.07	1.05	0.25	0.06	0.42	0.68	0.41
Control Delay	211.2	6.3	43.8	45.7	0.5	29.1	47.3	48.2	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	211.2	6.3	43.8	45.7	0.5	29.1	47.3	48.2	12.8
Queue Length 50th (ft)	~582	136	3	~509	0	5	38	58	0
Queue Length 95th (ft)	#800	235	m4	#593	m0	24	84	#153	50
Internal Link Dist (ft)		1784		663		347		751	
Turn Bay Length (ft)	500		200		400		500		
Base Capacity (vph)	498	3542	71	1869	650	267	151	182	256
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.38	0.52	0.07	1.05	0.25	0.06	0.42	0.68	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

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FUTURE (2035) ALTERNATIVE 5A

RAMP METERING ANALYSIS

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URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Pico to NB 710

AM Peak Hour Vol/PCE:	500	780
PM Peak Hour Vol/PCE:	880	1320
MD Peak Hour Vol/PCE:	310	500

Meter rate is for 3 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	110	100	10	10	1320	110	1200	1400	-	3000	300	-	110	0.8
5:10 PM	110	100	20	10	1320	110	1200	1550	-	3000	600	-	110	1.7
5:15 PM	110	100	30	10	1320	110	1200	1650	-	3000	900	-	110	2.5
5:20 PM	110	100	40	10	1320	110	1200	1800	-	3000	1200	-	110	3.3
5:25 PM	110	100	50	10	1320	110	1200	1900	-	3000	1500	-	110	4.2
5:30 PM	110	100	60	10	1320	110	1200	2000	-	3000	1800	-	110	5.0
5:35 PM	110	100	70	10	1320	110	1200	2150	-	3000	2100	-	110	5.8
5:40 PM	110	100	80	10	1320	110	1200	2250	-	3000	2400	-	110	6.7
5:45 PM	110	100	90	10	1320	110	1200	2400	-	3000	2700	-	110	7.5
5:50 PM	110	100	100	10	1320	110	1200	2500	-	3000	3000	-	110	8.3
5:55 PM	110	100	110	10	1320	110	1200	2600	2750	3000	3300	300	110	9.2
6:00 PM	110	100	120	10	1320	110	1200	2750	3000	3000	3600	600	110	10.0
	1,320	**1,200**		**120**		**1,320**							**1,320**	**65.00**
		MAX Q (VEH/LN)=	**120**	**MAX RATE (VPH)=**	**1,320**					**MAX Q (FT/LN)=**	**3,600**	**600**	**110**	

(Min=480, Max=1200 vph/lane)

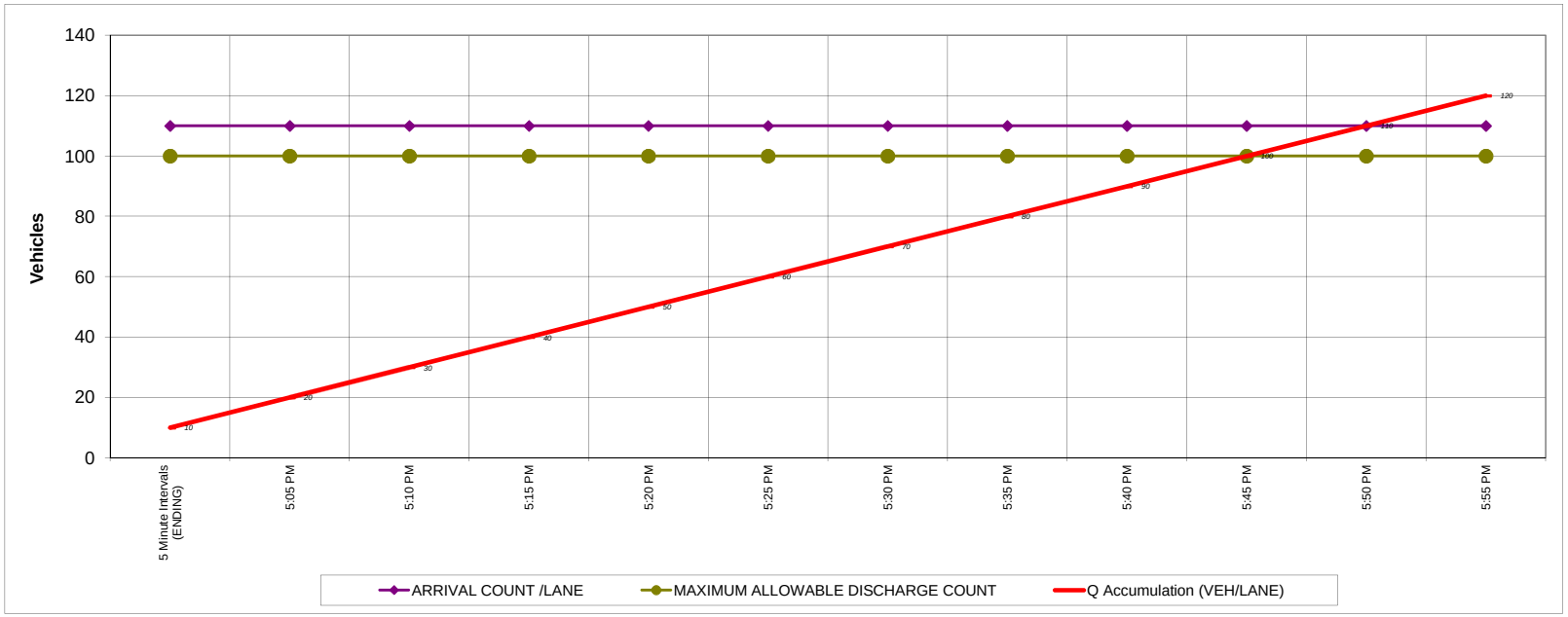
Meter Rate = **1200**

Avg Delay/veh (hr)= 0.049

Avg Delay/veh (sec)= **177**

	INPUT
LANES=	**1**
Ramp Length=	3000
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to NB 710

AM Peak Hour Vol/PCE:	1090	1290
PM Peak Hour Vol/PCE:	1200	1360
MD Peak Hour Vol/PCE:	1520	1920

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	80	75	5	5	960	160	895	1000	-	2000	163	-	80	0.5
1:10 PM	80	75	11	5	960	160	895	1050	-	2000	325	-	80	0.9
1:15 PM	80	75	16	5	960	160	895	1150	-	2000	488	-	80	1.4
1:20 PM	80	75	22	5	960	160	895	1200	-	2000	650	-	80	1.8
1:25 PM	80	75	27	5	960	160	895	1250	-	2000	813	-	80	2.3
1:30 PM	80	75	33	5	960	160	895	1350	-	2000	975	-	80	2.7
1:35 PM	80	75	38	5	960	160	895	1400	-	2000	1138	-	80	3.2
1:40 PM	80	75	43	5	960	160	895	1450	-	2000	1300	-	80	3.6
1:45 PM	80	75	49	5	960	160	895	1500	-	2000	1463	-	80	4.1
1:50 PM	80	75	54	5	960	160	895	1600	-	2000	1625	-	80	4.5
1:55 PM	80	75	60	5	960	160	895	1650	-	2000	1788	-	80	5.0
2:00 PM	80	75	65	5	960	160	895	1700	-	2000	1950	-	80	5.4
	960	**895**		**65**		**1,920**							**960**	**35.21**
		MAX Q (VEH/LN)=	**65**	**MAX RATE (VPH)=**	**960**					**MAX Q (FT/LN)=**	**1,950**	**-**	**80**	

(Min=480, Max=1200 vph/lane)

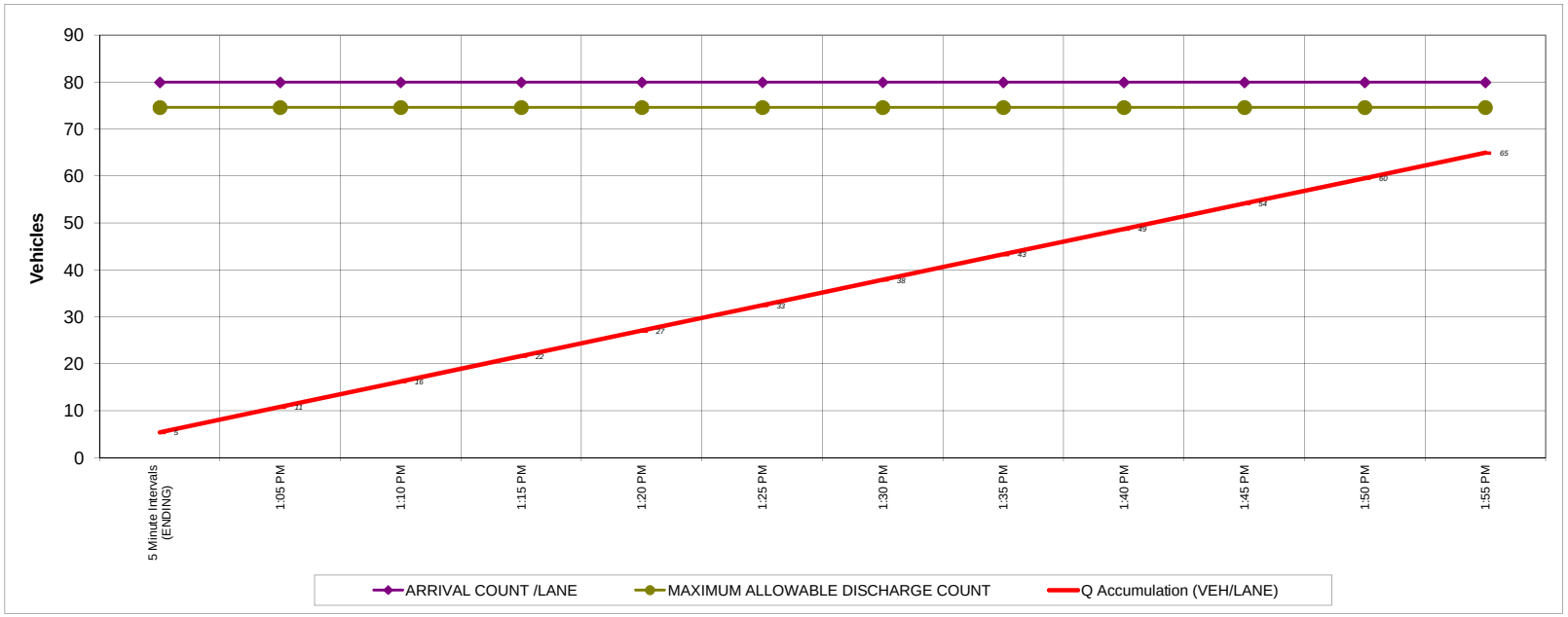
Meter Rate = **895**

Avg Delay/veh (hr)= 0.037

Avg Delay/veh (sec)= **132**

	INPUT
LANES=	**2**
Ramp Length=	2000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to SB 710

AM Peak Hour Vol/PCE:	520	580
PM Peak Hour Vol/PCE:	480	580
MD Peak Hour Vol/PCE:	580	740

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	31	29	2	2	370	62	345	350	-	870	63	-	31	0.2
1:10 PM	31	29	4	2	370	62	345	400	-	870	125	-	31	0.3
1:15 PM	31	29	6	2	370	62	345	400	-	870	188	-	31	0.5
1:20 PM	31	29	8	2	370	62	345	450	-	870	250	-	31	0.7
1:25 PM	31	29	10	2	370	62	345	450	-	870	313	-	31	0.9
1:30 PM	31	29	13	2	370	62	345	500	-	870	375	-	31	1.0
1:35 PM	31	29	15	2	370	62	345	500	-	870	437	-	31	1.2
1:40 PM	31	29	17	2	370	62	345	550	-	870	500	-	31	1.4
1:45 PM	31	29	19	2	370	62	345	550	-	870	562	-	31	1.6
1:50 PM	31	29	21	2	370	62	345	600	-	870	625	-	31	1.7
1:55 PM	31	29	23	2	370	62	345	600	-	870	687	-	31	1.9
2:00 PM	31	29	25	2	370	62	345	650	-	870	750	-	31	2.1
	370	**345**		**25**		**740**							**370**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**750**	**-**	**31**	

(Min=240, Max=900vph/lane)

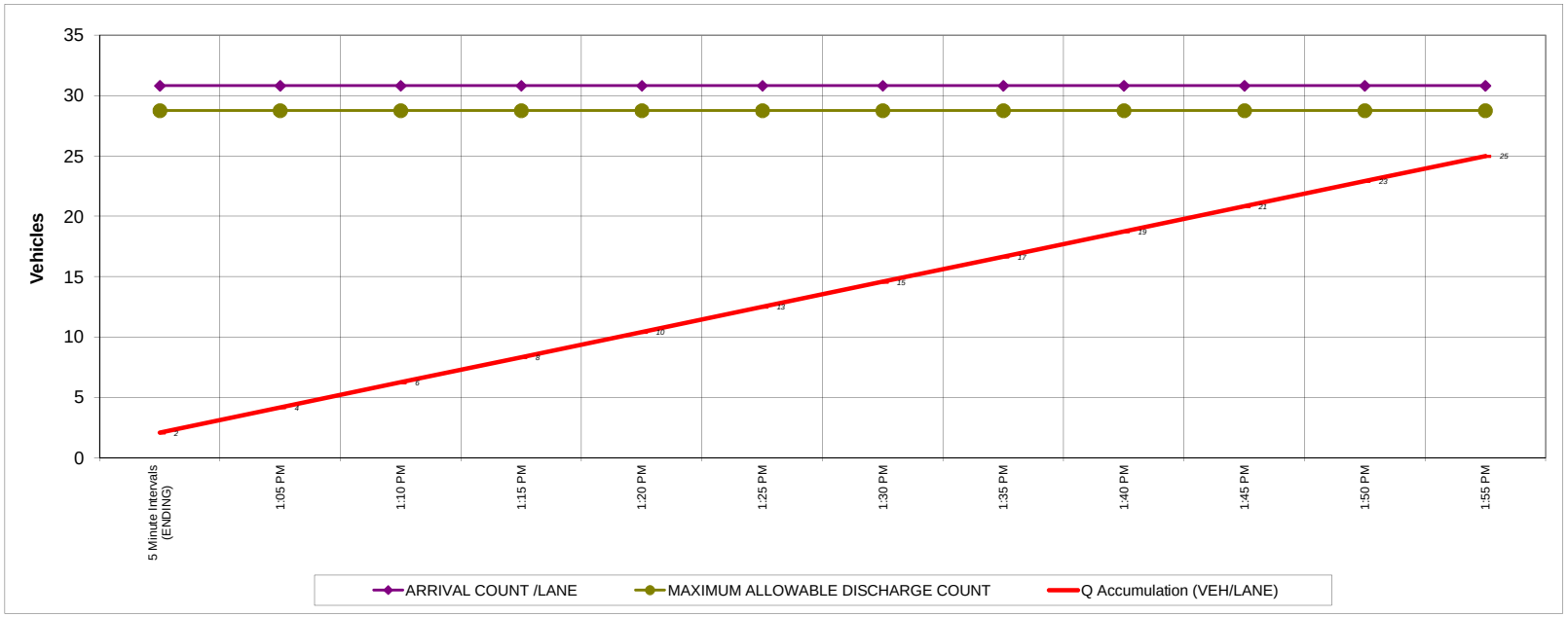
Meter Rate = **345**

Avg Delay/veh (hr)= 0.037

Avg Delay/veh (sec)= **132**

	INPUT
LANES=	**2**
Ramp Length=	870
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to NB 710

AM Peak Hour Vol/PCE:	1050	1290
PM Peak Hour Vol/PCE:	1020	1280
MD Peak Hour Vol/PCE:	1550	2090

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	87	84	3	3	1045	174	1010	1050	-	1090	88	-	87	0.2
1:10 PM	87	84	6	3	1045	174	1010	1100	-	1090	175	-	87	0.5
1:15 PM	87	84	9	3	1045	174	1010	1150	-	1090	263	-	87	0.7
1:20 PM	87	84	12	3	1045	174	1010	1150	-	1090	350	-	87	1.0
1:25 PM	87	84	15	3	1045	174	1010	1200	-	1090	438	-	87	1.2
1:30 PM	87	84	18	3	1045	174	1010	1250	-	1090	525	-	87	1.5
1:35 PM	87	84	20	3	1045	174	1010	1250	-	1090	613	-	87	1.7
1:40 PM	87	84	23	3	1045	174	1010	1300	-	1090	700	-	87	1.9
1:45 PM	87	84	26	3	1045	174	1010	1350	-	1090	788	-	87	2.2
1:50 PM	87	84	29	3	1045	174	1010	1350	-	1090	875	-	87	2.4
1:55 PM	87	84	32	3	1045	174	1010	1400	-	1090	963	-	87	2.7
2:00 PM	87	84	35	3	1045	174	1010	1450	-	1090	1050	-	87	2.9
	1,045	**1,010**		**35**		**2,090**							**1,045**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,045**					**MAX Q (FT/LN)=**	**1,050**	**-**	**87**	

(Min=780, Max=1380vph/lane)

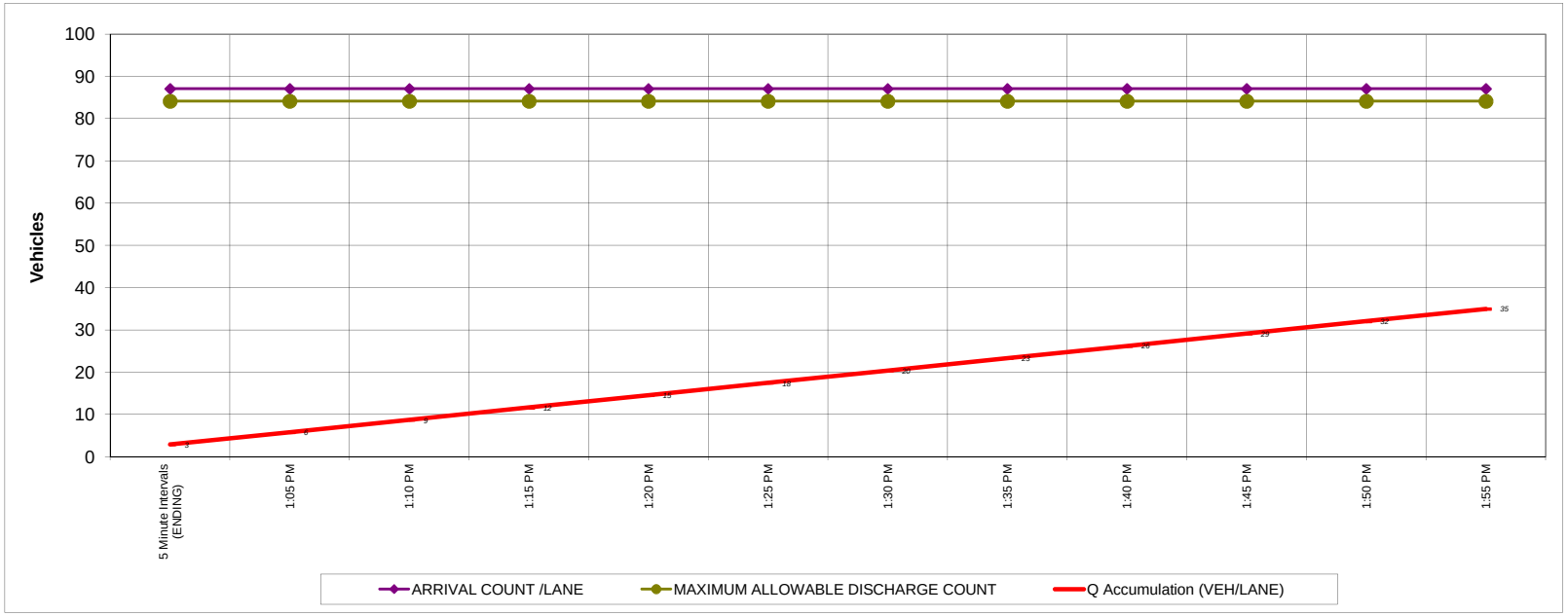
Meter Rate = **1010**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **65**

	INPUT
LANES=	**2**
Ramp Length=	1090
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to SB 710

AM Peak Hour Vol/PCE:	220	260
PM Peak Hour Vol/PCE:	270	300
MD Peak Hour Vol/PCE:	450	520

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	22	20	2	2	260	43	240	250	-	1250	50	-	22	0.1
1:10 PM	22	20	3	2	260	43	240	300	-	1250	100	-	22	0.3
1:15 PM	22	20	5	2	260	43	240	300	-	1250	150	-	22	0.4
1:20 PM	22	20	7	2	260	43	240	300	-	1250	200	-	22	0.6
1:25 PM	22	20	8	2	260	43	240	350	-	1250	250	-	22	0.7
1:30 PM	22	20	10	2	260	43	240	350	-	1250	300	-	22	0.8
1:35 PM	22	20	12	2	260	43	240	400	-	1250	350	-	22	1.0
1:40 PM	22	20	13	2	260	43	240	400	-	1250	400	-	22	1.1
1:45 PM	22	20	15	2	260	43	240	400	-	1250	450	-	22	1.3
1:50 PM	22	20	17	2	260	43	240	450	-	1250	500	-	22	1.4
1:55 PM	22	20	18	2	260	43	240	450	-	1250	550	-	22	1.5
2:00 PM	22	20	20	2	260	43	240	500	-	1250	600	-	22	1.7
	260	**240**		**20**		**520**							**260**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**260**					**MAX Q (FT/LN)=**	**600**	**-**	**22**	

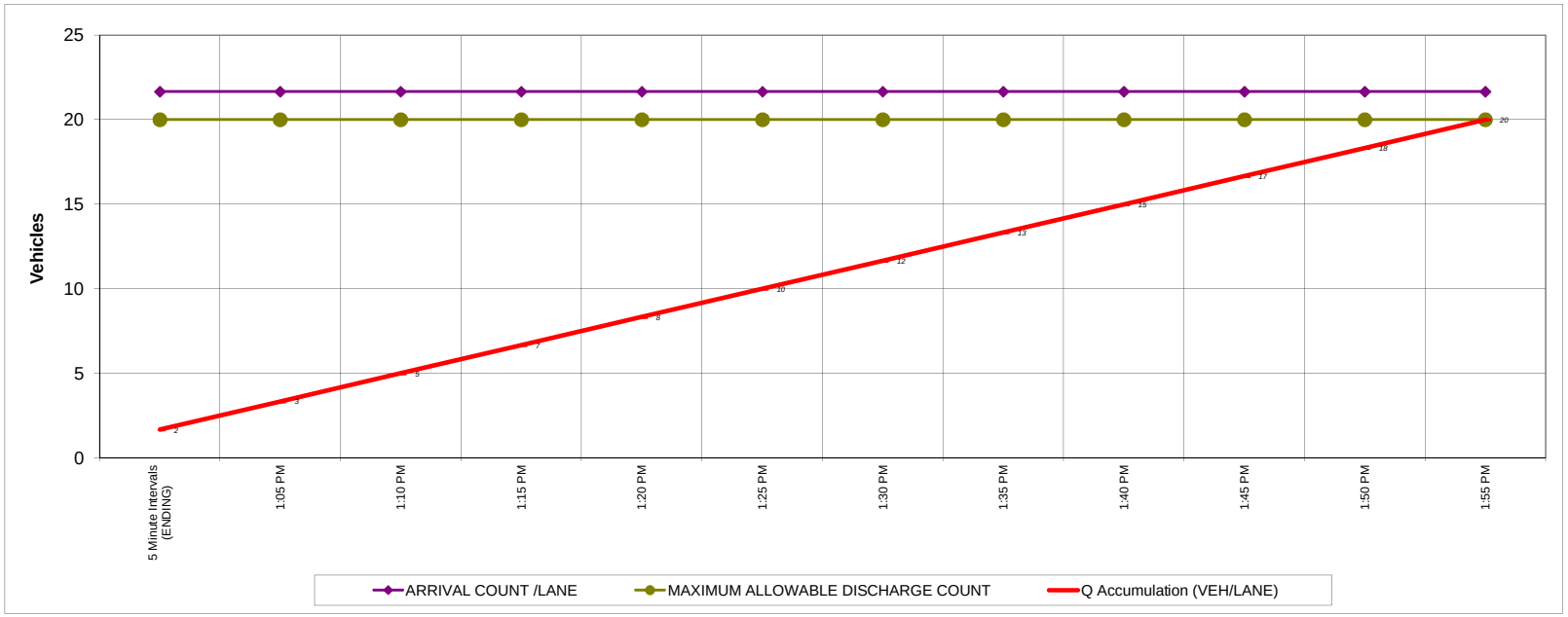
(Min=240, Max=900vph/lane)

Meter Rate = **240**

	INPUT
LANES=	**2**
Ramp Length=	1250
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.042
Avg Delay/veh (sec)= **150**

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to NB 710

AM Peak Hour Vol/PCE:	1510	1530
PM Peak Hour Vol/PCE:	1410	1420
MD Peak Hour Vol/PCE:	1370	1380

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	64	61	3	3	765	128	735	750	-	950	75	-	64	0.2
7:10 AM	64	61	5	3	765	128	735	800	-	950	150	-	64	0.4
7:15 AM	64	61	8	3	765	128	735	850	-	950	225	-	64	0.6
7:20 AM	64	61	10	3	765	128	735	850	-	950	300	-	64	0.8
7:25 AM	64	61	13	3	765	128	735	900	-	950	375	-	64	1.0
7:30 AM	64	61	15	3	765	128	735	900	-	950	450	-	64	1.3
7:35 AM	64	61	18	3	765	128	735	950	-	950	525	-	64	1.5
7:40 AM	64	61	20	3	765	128	735	1000	-	950	600	-	64	1.7
7:45 AM	64	61	23	3	765	128	735	1000	-	950	675	-	64	1.9
7:50 AM	64	61	25	3	765	128	735	1050	-	950	750	-	64	2.1
7:55 AM	64	61	28	3	765	128	735	1050	-	950	825	-	64	2.3
8:00 AM	64	61	30	3	765	128	735	1100	-	950	900	-	64	2.5
	765	**735**		**30**		**1,530**							**765**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**765**					**MAX Q (FT/LN)=**	**900**	**-**	**64**	

(Min=240, Max=900vph/lane)

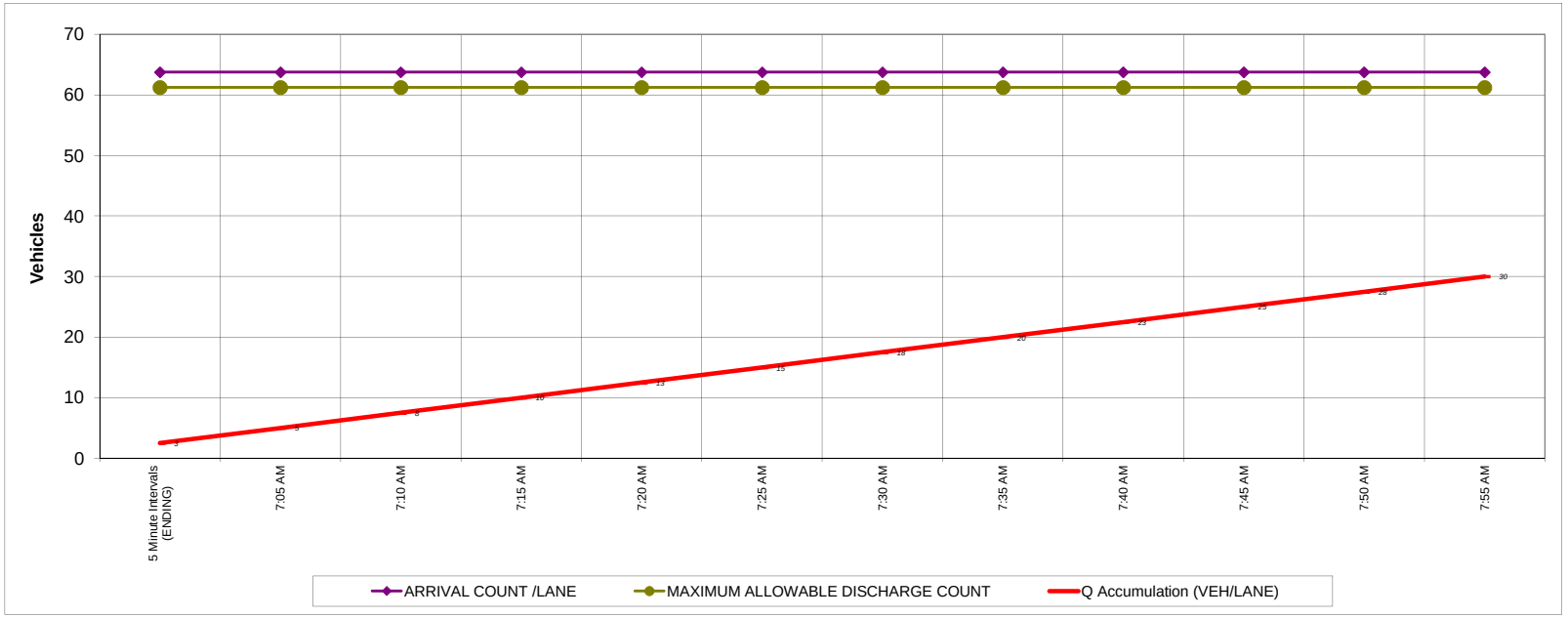
Meter Rate = **735**

Avg Delay/veh (hr)= 0.021

Avg Delay/veh (sec)= **76**

	INPUT
LANES=	**2**
Ramp Length=	950
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to SB 710

AM Peak Hour Vol/PCE:	1100	1160
PM Peak Hour Vol/PCE:	860	880
MD Peak Hour Vol/PCE:	650	680

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	48	47	2	2	580	97	560	600	-	700	50	-	48	0.1
7:10 AM	48	47	3	2	580	97	560	600	-	700	100	-	48	0.3
7:15 AM	48	47	5	2	580	97	560	600	-	700	150	-	48	0.4
7:20 AM	48	47	7	2	580	97	560	650	-	700	200	-	48	0.6
7:25 AM	48	47	8	2	580	97	560	650	-	700	250	-	48	0.7
7:30 AM	48	47	10	2	580	97	560	700	-	700	300	-	48	0.8
7:35 AM	48	47	12	2	580	97	560	700	-	700	350	-	48	1.0
7:40 AM	48	47	13	2	580	97	560	700	-	700	400	-	48	1.1
7:45 AM	48	47	15	2	580	97	560	750	-	700	450	-	48	1.3
7:50 AM	48	47	17	2	580	97	560	750	-	700	500	-	48	1.4
7:55 AM	48	47	18	2	580	97	560	800	-	700	550	-	48	1.5
8:00 AM	48	47	20	2	580	97	560	800	-	700	600	-	48	1.7
	580	**560**		**20**		**1,160**							**580**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**580**					**MAX Q (FT/LN)=**	**600**	**-**	**48**	

(Min=240, Max=900vph/lane)

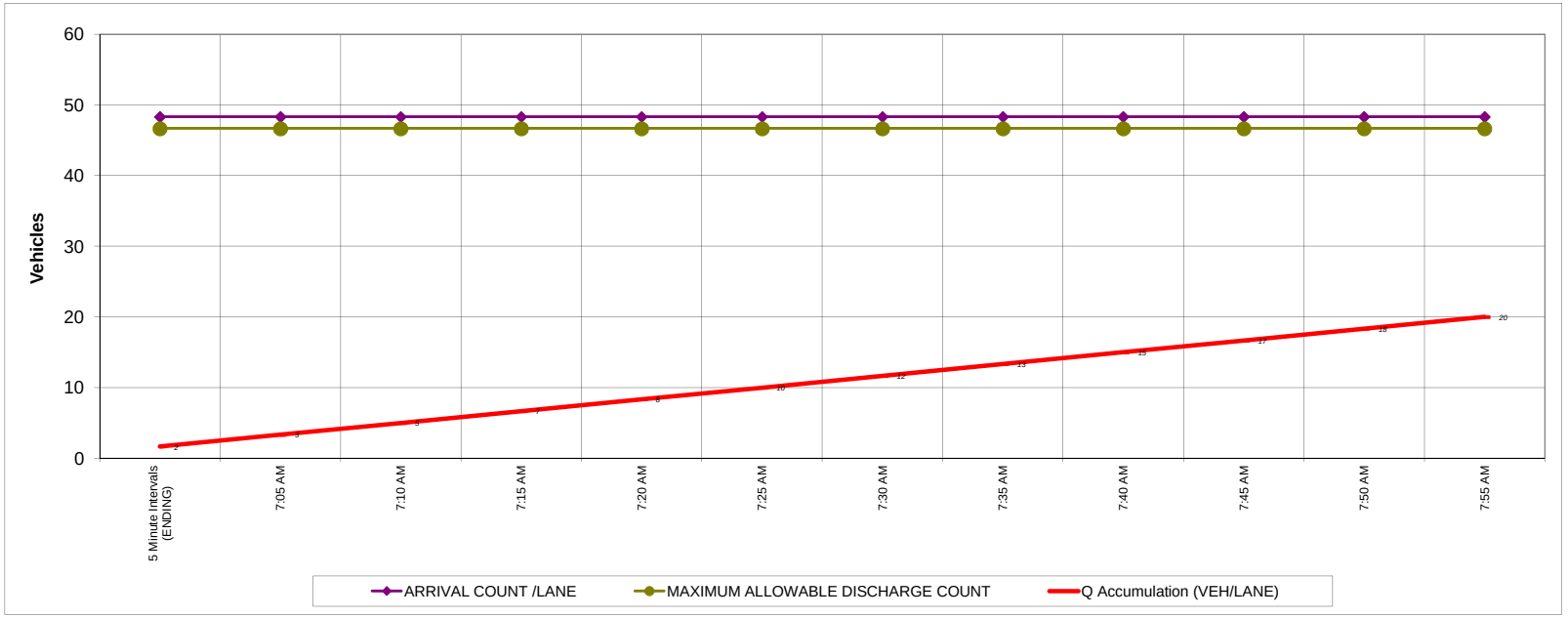
Meter Rate = **560**

Avg Delay/veh (hr)= 0.019

Avg Delay/veh (sec)= **67**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Del Amo On

AM Peak Hour Vol/PCE:	480	520
PM Peak Hour Vol/PCE:	1180	1240
MD Peak Hour Vol/PCE:	810	900

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	52	49	3	3	620	103	585	650	-	1065	87	-	52	0.2
5:10 PM	52	49	6	3	620	103	585	650	-	1065	175	-	52	0.5
5:15 PM	52	49	9	3	620	103	585	700	-	1065	263	-	52	0.7
5:20 PM	52	49	12	3	620	103	585	750	-	1065	350	-	52	1.0
5:25 PM	52	49	15	3	620	103	585	750	-	1065	438	-	52	1.2
5:30 PM	52	49	18	3	620	103	585	800	-	1065	525	-	52	1.5
5:35 PM	52	49	20	3	620	103	585	850	-	1065	613	-	52	1.7
5:40 PM	52	49	23	3	620	103	585	900	-	1065	700	-	52	1.9
5:45 PM	52	49	26	3	620	103	585	900	-	1065	787	-	52	2.2
5:50 PM	52	49	29	3	620	103	585	950	-	1065	875	-	52	2.4
5:55 PM	52	49	32	3	620	103	585	1000	-	1065	962	-	52	2.7
6:00 PM	52	49	35	3	620	103	585	1000	-	1065	1050	-	52	2.9
	620	585		35		1,240							620	18.96
		MAX Q (VEH/LN)=	35	MAX RATE (VPH)=	620					MAX Q (FT/LN)=	1,050	-	52	

(Min=240, Max=900vph/lane)

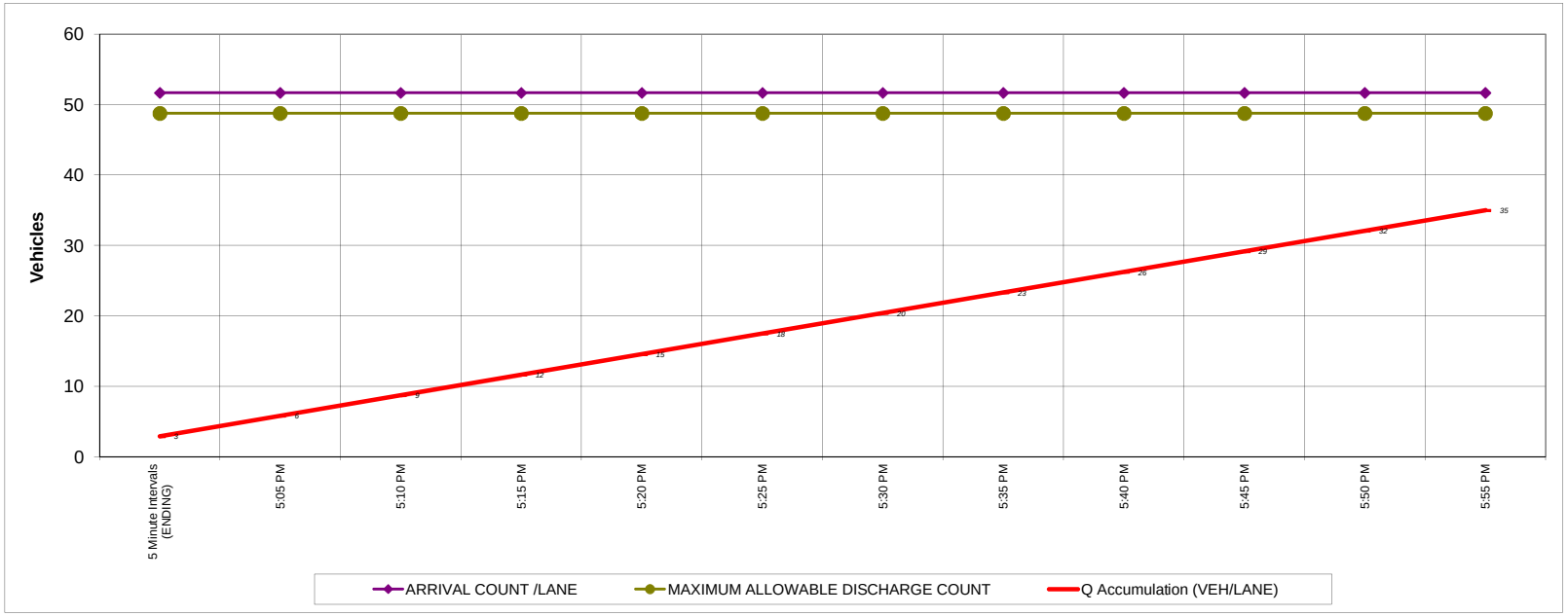
Meter Rate = 585

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= 110

	INPUT
LANES=	**2**
Ramp Length=	1065
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Del Amo On

AM Peak Hour Vol/PCE:	1130	1240
PM Peak Hour Vol/PCE:	840	880
MD Peak Hour Vol/PCE:	870	960

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	52	50	2	2	620	103	600	600	-	630	50	-	52	0.1
7:10 AM	52	50	3	2	620	103	600	650	-	630	100	-	52	0.3
7:15 AM	52	50	5	2	620	103	600	650	-	630	150	-	52	0.4
7:20 AM	52	50	7	2	620	103	600	700	-	630	200	-	52	0.6
7:25 AM	52	50	8	2	620	103	600	700	-	630	250	-	52	0.7
7:30 AM	52	50	10	2	620	103	600	700	-	630	300	-	52	0.8
7:35 AM	52	50	12	2	620	103	600	750	-	630	350	-	52	1.0
7:40 AM	52	50	13	2	620	103	600	750	-	630	400	-	52	1.1
7:45 AM	52	50	15	2	620	103	600	800	-	630	450	-	52	1.3
7:50 AM	52	50	17	2	620	103	600	800	-	630	500	-	52	1.4
7:55 AM	52	50	18	2	620	103	600	800	-	630	550	-	52	1.5
8:00 AM	52	50	20	2	620	103	600	850	-	630	600	-	52	1.7
	620	**600**		**20**		**1,240**							**620**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**620**					**MAX Q (FT/LN)=**	**600**	**-**	**52**	

(Min=240, Max=900vph/lane)

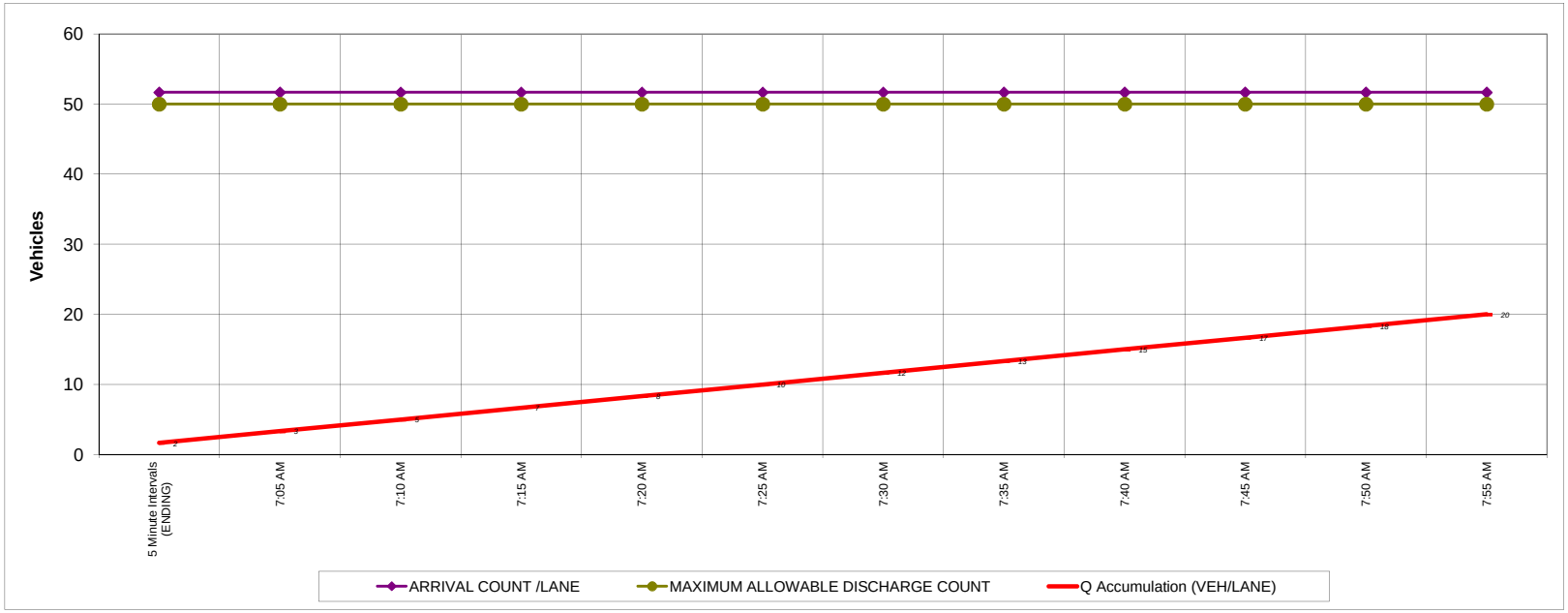
Meter Rate = **600**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**2**
Ramp Length=	630
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Long Beach On

AM Peak Hour Vol/PCE:	600	620
PM Peak Hour Vol/PCE:	680	700
MD Peak Hour Vol/PCE:	630	670

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	29	25	4	4	350	58	300	400	-	1520	125	-	29	0.3
5:10 PM	29	25	8	4	350	58	300	450	-	1520	250	-	29	0.7
5:15 PM	29	25	13	4	350	58	300	500	-	1520	375	-	29	1.0
5:20 PM	29	25	17	4	350	58	300	550	-	1520	500	-	29	1.4
5:25 PM	29	25	21	4	350	58	300	600	-	1520	625	-	29	1.7
5:30 PM	29	25	25	4	350	58	300	650	-	1520	750	-	29	2.1
5:35 PM	29	25	29	4	350	58	300	700	-	1520	875	-	29	2.4
5:40 PM	29	25	33	4	350	58	300	750	-	1520	1000	-	29	2.8
5:45 PM	29	25	38	4	350	58	300	800	-	1520	1125	-	29	3.1
5:50 PM	29	25	42	4	350	58	300	850	-	1520	1250	-	29	3.5
5:55 PM	29	25	46	4	350	58	300	900	-	1520	1375	-	29	3.8
6:00 PM	29	25	50	4	350	58	300	950	-	1520	1500	-	29	4.2
	350	**300**		**50**		**700**							**350**	**27.08**
		MAX Q (VEH/LN)=	**50**	**MAX RATE (VPH)=**	**350**					**MAX Q (FT/LN)=**	**1,500**	**-**	**29**	

(Min=240, Max=900vph/lane)

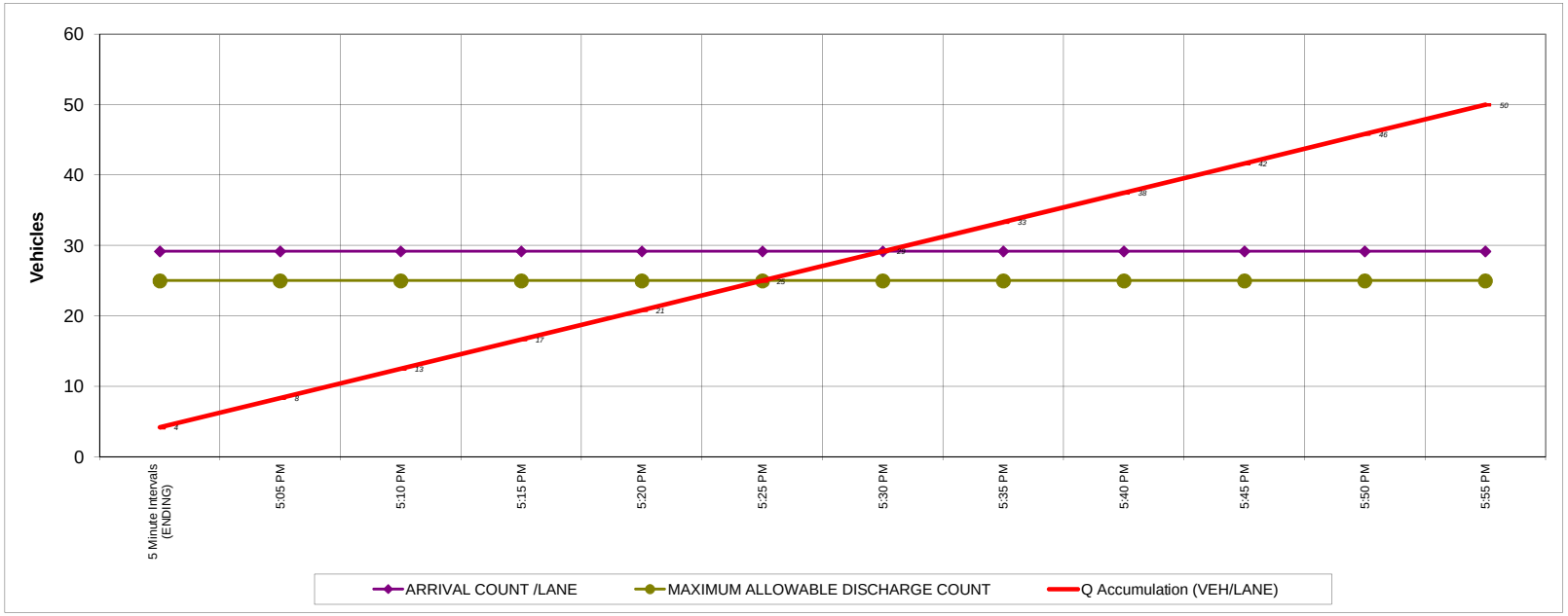
Meter Rate = **300**

Avg Delay/veh (hr)= 0.077

Avg Delay/veh (sec)= **279**

	INPUT
LANES=	**2**
Ramp Length=	1520
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Long Beach On

AM Peak Hour Vol/PCE:	730	770
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	560	630

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	32	30	2	2	385	64	365	400	-	700	50	-	32	0.1
7:10 AM	32	30	3	2	385	64	365	400	-	700	100	-	32	0.3
7:15 AM	32	30	5	2	385	64	365	400	-	700	150	-	32	0.4
7:20 AM	32	30	7	2	385	64	365	450	-	700	200	-	32	0.6
7:25 AM	32	30	8	2	385	64	365	450	-	700	250	-	32	0.7
7:30 AM	32	30	10	2	385	64	365	500	-	700	300	-	32	0.8
7:35 AM	32	30	12	2	385	64	365	500	-	700	350	-	32	1.0
7:40 AM	32	30	13	2	385	64	365	500	-	700	400	-	32	1.1
7:45 AM	32	30	15	2	385	64	365	550	-	700	450	-	32	1.3
7:50 AM	32	30	17	2	385	64	365	550	-	700	500	-	32	1.4
7:55 AM	32	30	18	2	385	64	365	600	-	700	550	-	32	1.5
8:00 AM	32	30	20	2	385	64	365	600	-	700	600	-	32	1.7
	385	**365**		**20**		**770**							**385**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**385**					**MAX Q (FT/LN)=**	**600**	**-**	**32**	

(Min=240, Max=900vph/lane)

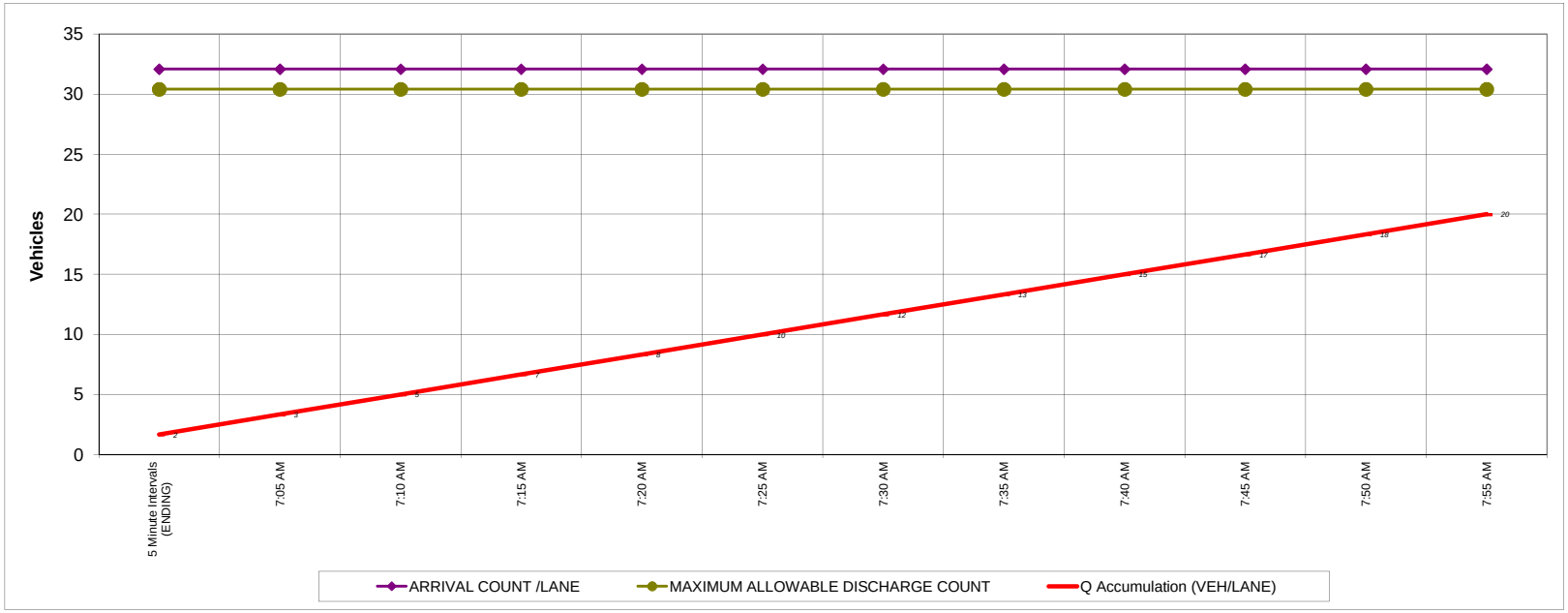
Meter Rate = **365**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **101**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Alondra On

AM Peak Hour Vol/PCE:	740	760
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	680	730

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	32	30	2	2	380	63	360	400	-	680	50	-	32	0.1
7:10 AM	32	30	3	2	380	63	360	400	-	680	100	-	32	0.3
7:15 AM	32	30	5	2	380	63	360	400	-	680	150	-	32	0.4
7:20 AM	32	30	7	2	380	63	360	450	-	680	200	-	32	0.6
7:25 AM	32	30	8	2	380	63	360	450	-	680	250	-	32	0.7
7:30 AM	32	30	10	2	380	63	360	500	-	680	300	-	32	0.8
7:35 AM	32	30	12	2	380	63	360	500	-	680	350	-	32	1.0
7:40 AM	32	30	13	2	380	63	360	500	-	680	400	-	32	1.1
7:45 AM	32	30	15	2	380	63	360	550	-	680	450	-	32	1.3
7:50 AM	32	30	17	2	380	63	360	550	-	680	500	-	32	1.4
7:55 AM	32	30	18	2	380	63	360	600	-	680	550	-	32	1.5
8:00 AM	32	30	20	2	380	63	360	600	-	680	600	-	32	1.7
	380	**360**		**20**		**760**							**380**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**380**					**MAX Q (FT/LN)=**	**600**	**-**	**32**	

(Min=240, Max=900vph/lane)

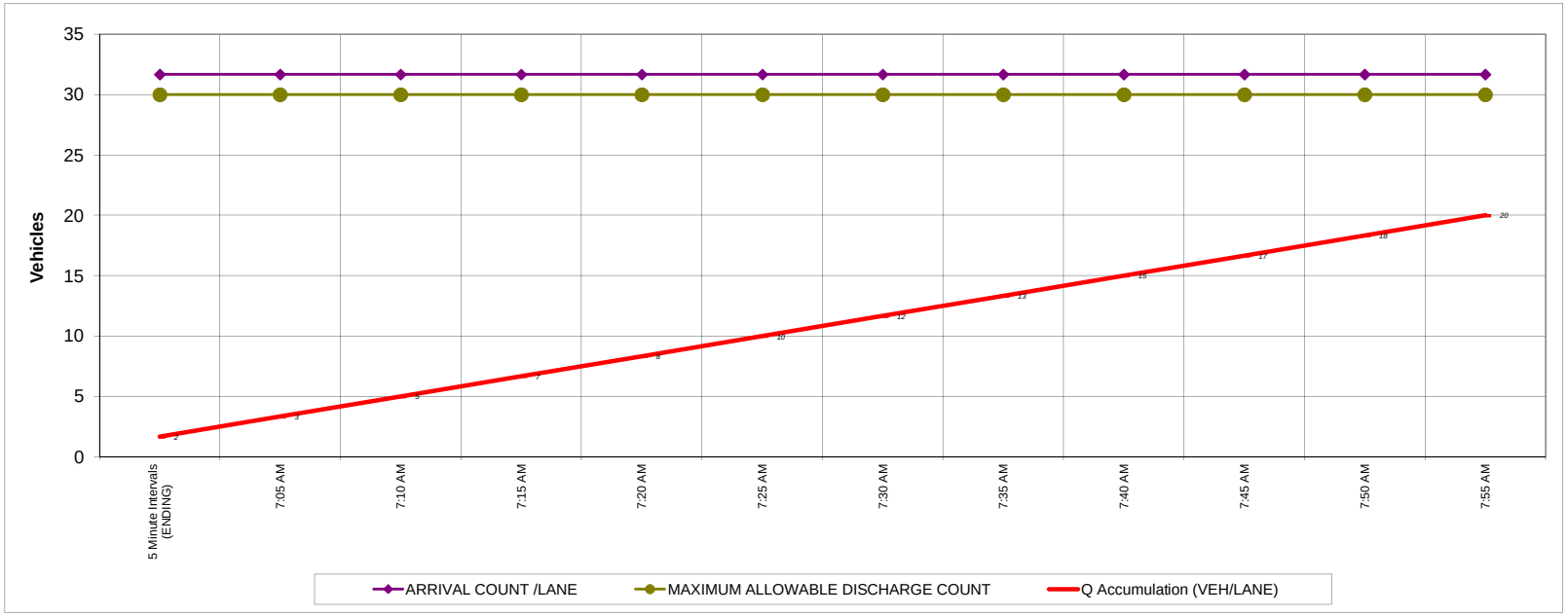
Meter Rate = **360**

Avg Delay/veh (hr)= 0.029

Avg Delay/veh (sec)= **103**

	INPUT
LANES=	**2**
Ramp Length=	680
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Alondra On

AM Peak Hour Vol/PCE:	720	770
PM Peak Hour Vol/PCE:	610	650
MD Peak Hour Vol/PCE:	780	880

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	37	33	3	3	440	73	400	450	-	1350	100	-	37	0.3
1:10 PM	37	33	7	3	440	73	400	500	-	1350	200	-	37	0.6
1:15 PM	37	33	10	3	440	73	400	550	-	1350	300	-	37	0.8
1:20 PM	37	33	13	3	440	73	400	600	-	1350	400	-	37	1.1
1:25 PM	37	33	17	3	440	73	400	600	-	1350	500	-	37	1.4
1:30 PM	37	33	20	3	440	73	400	650	-	1350	600	-	37	1.7
1:35 PM	37	33	23	3	440	73	400	700	-	1350	700	-	37	1.9
1:40 PM	37	33	27	3	440	73	400	750	-	1350	800	-	37	2.2
1:45 PM	37	33	30	3	440	73	400	800	-	1350	900	-	37	2.5
1:50 PM	37	33	33	3	440	73	400	800	-	1350	1000	-	37	2.8
1:55 PM	37	33	37	3	440	73	400	850	-	1350	1100	-	37	3.1
2:00 PM	37	33	40	3	440	73	400	900	-	1350	1200	-	37	3.3
	440	400		40		880							440	21.67
	MAX Q (VEH/LN)=		40	MAX RATE (VPH)=	440					MAX Q (FT/LN)=	1,200	-	37	

(Min=240, Max=900vph/lane)

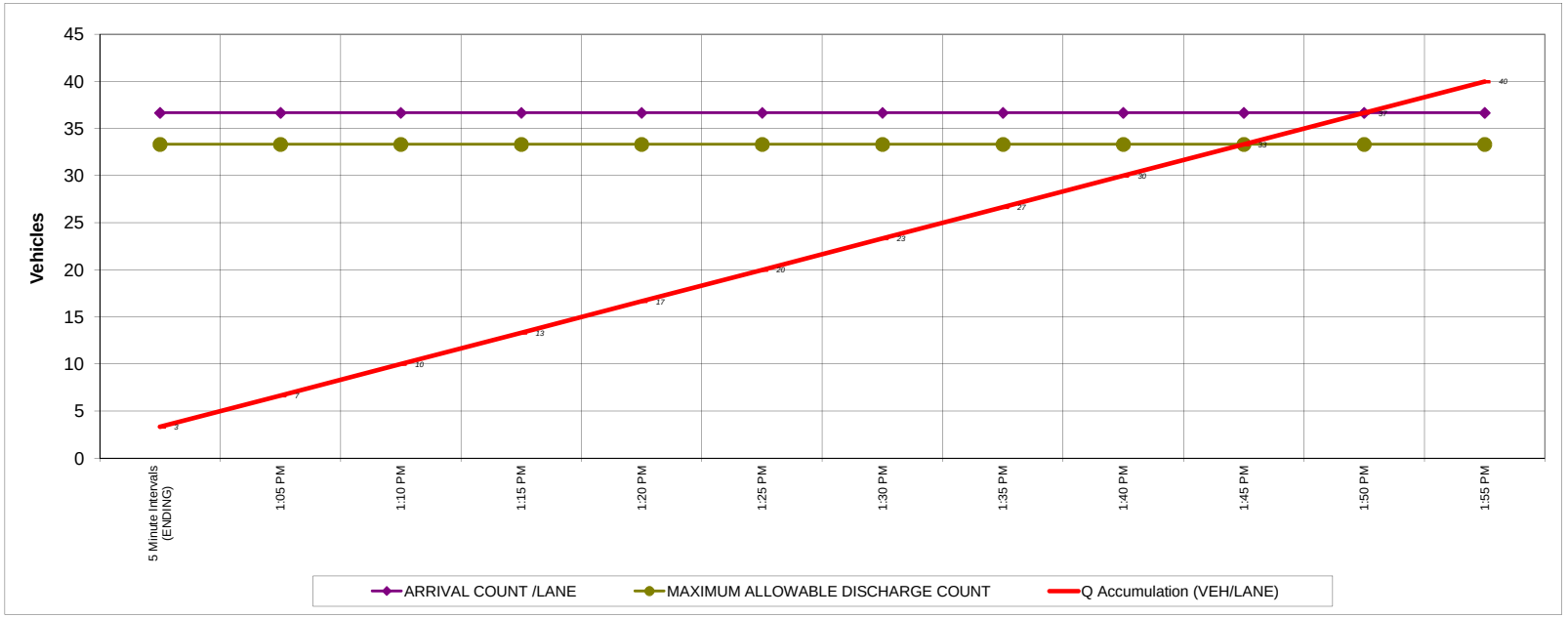
Meter Rate = 400

Avg Delay/veh (hr)= 0.049

Avg Delay/veh (sec)= 177

	INPUT
LANES=	**2**
Ramp Length=	1350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Artesia On

AM Peak Hour Vol/PCE:	710	730
PM Peak Hour Vol/PCE:	300	310
MD Peak Hour Vol/PCE:	630	680

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	61	60	0	0	730	61	725	700	-	170	12	-	61	0.0
7:10 AM	61	60	1	0	730	61	725	700	-	170	25	-	61	0.1
7:15 AM	61	60	1	0	730	61	725	700	-	170	37	-	61	0.1
7:20 AM	61	60	2	0	730	61	725	750	-	170	50	-	61	0.1
7:25 AM	61	60	2	0	730	61	725	750	-	170	62	-	61	0.2
7:30 AM	61	60	2	0	730	61	725	750	-	170	75	-	61	0.2
7:35 AM	61	60	3	0	730	61	725	750	-	170	87	-	61	0.2
7:40 AM	61	60	3	0	730	61	725	750	-	170	100	-	61	0.3
7:45 AM	61	60	4	0	730	61	725	750	-	170	113	-	61	0.3
7:50 AM	61	60	4	0	730	61	725	750	-	170	125	-	61	0.3
7:55 AM	61	60	5	0	730	61	725	750	-	170	137	-	61	0.4
8:00 AM	61	60	5	0	730	61	725	750	-	170	150	-	61	0.4
	730	**725**		**5**		**730**							**730**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**730**					**MAX Q (FT/LN)=**	**150**	**-**	**61**	

(Min=240, Max=900vph/lane)

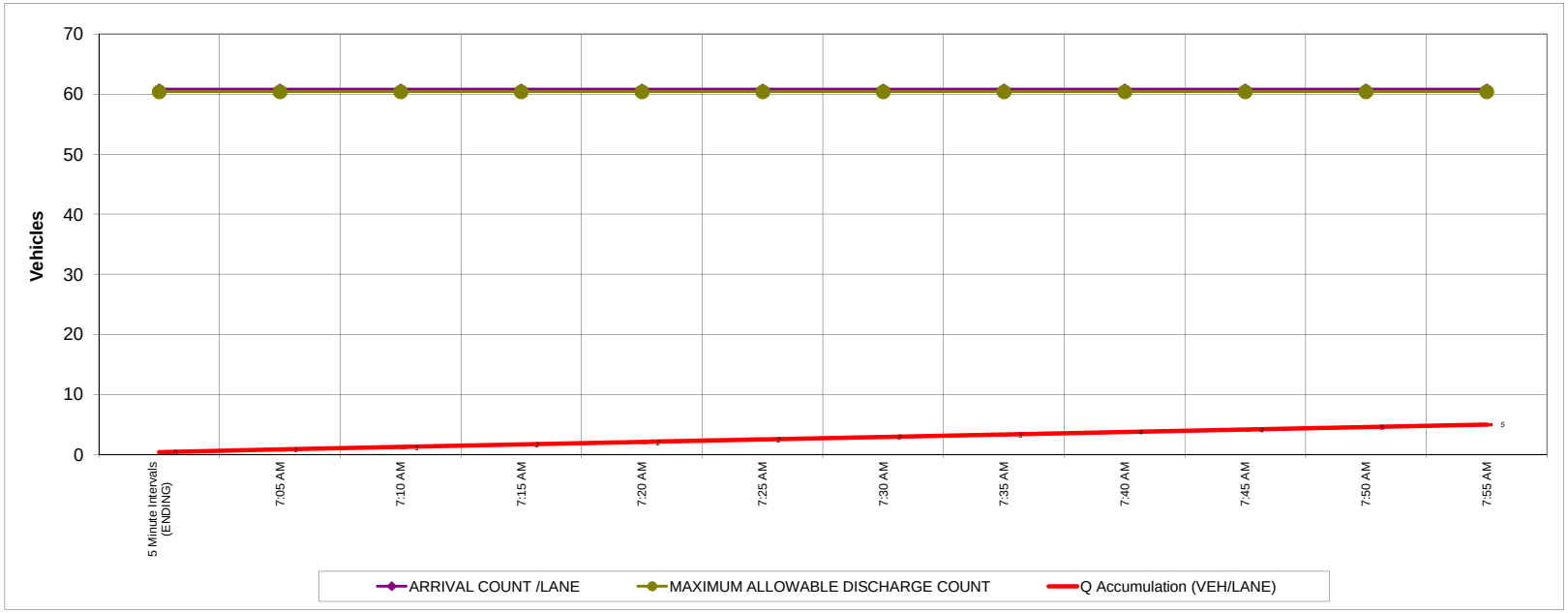
Meter Rate = **725**

Avg Delay/veh (hr)= 0.004

Avg Delay/veh (sec)= **13**

	INPUT
LANES=	**1**
Ramp Length=	170
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Rosecrans On

AM Peak Hour Vol/PCE:	490	520
PM Peak Hour Vol/PCE:	470	500
MD Peak Hour Vol/PCE:	350	390

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	22	20	2	2	260	43	240	250	-	2710	50	-	22	0.1
7:10 AM	22	20	3	2	260	43	240	300	-	2710	100	-	22	0.3
7:15 AM	22	20	5	2	260	43	240	300	-	2710	150	-	22	0.4
7:20 AM	22	20	7	2	260	43	240	300	-	2710	200	-	22	0.6
7:25 AM	22	20	8	2	260	43	240	350	-	2710	250	-	22	0.7
7:30 AM	22	20	10	2	260	43	240	350	-	2710	300	-	22	0.8
7:35 AM	22	20	12	2	260	43	240	400	-	2710	350	-	22	1.0
7:40 AM	22	20	13	2	260	43	240	400	-	2710	400	-	22	1.1
7:45 AM	22	20	15	2	260	43	240	400	-	2710	450	-	22	1.3
7:50 AM	22	20	17	2	260	43	240	450	-	2710	500	-	22	1.4
7:55 AM	22	20	18	2	260	43	240	450	-	2710	550	-	22	1.5
8:00 AM	22	20	20	2	260	43	240	500	-	2710	600	-	22	1.7
	260	**240**		**20**		**520**							**260**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**260**					**MAX Q (FT/LN)=**	**600**	**-**	**22**	

(Min=240, Max=900vph/lane)

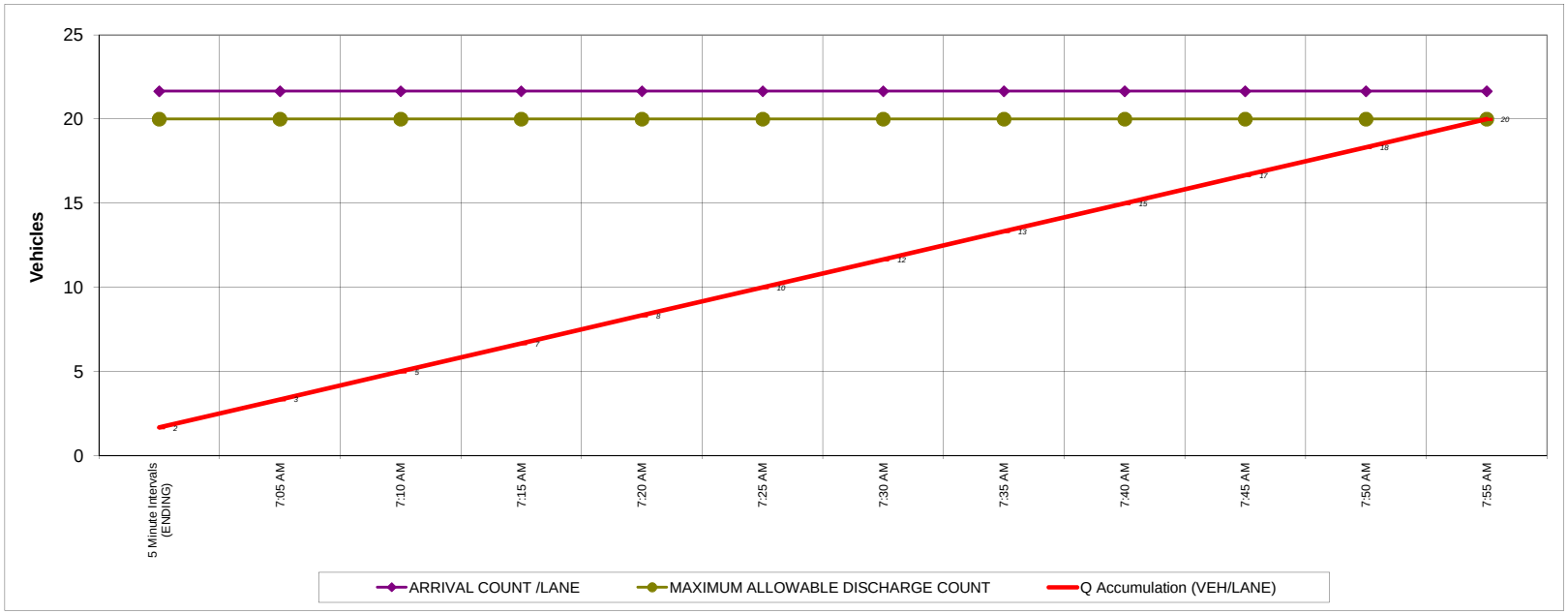
Meter Rate = **240**

Avg Delay/veh (hr)= 0.042

Avg Delay/veh (sec)= **150**

	INPUT
LANES=	**2**
Ramp Length=	2710
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Rosecrans On

AM Peak Hour Vol/PCE:	380	390
PM Peak Hour Vol/PCE:	210	230
MD Peak Hour Vol/PCE:	110	120

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:10 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:15 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:20 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:25 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:30 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:35 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:40 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:45 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:50 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
7:55 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
8:00 AM	16	20	0		195	33	240	-	-	1180	-	-	0	0.0
	195	**240**		**-**		**390**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**195**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

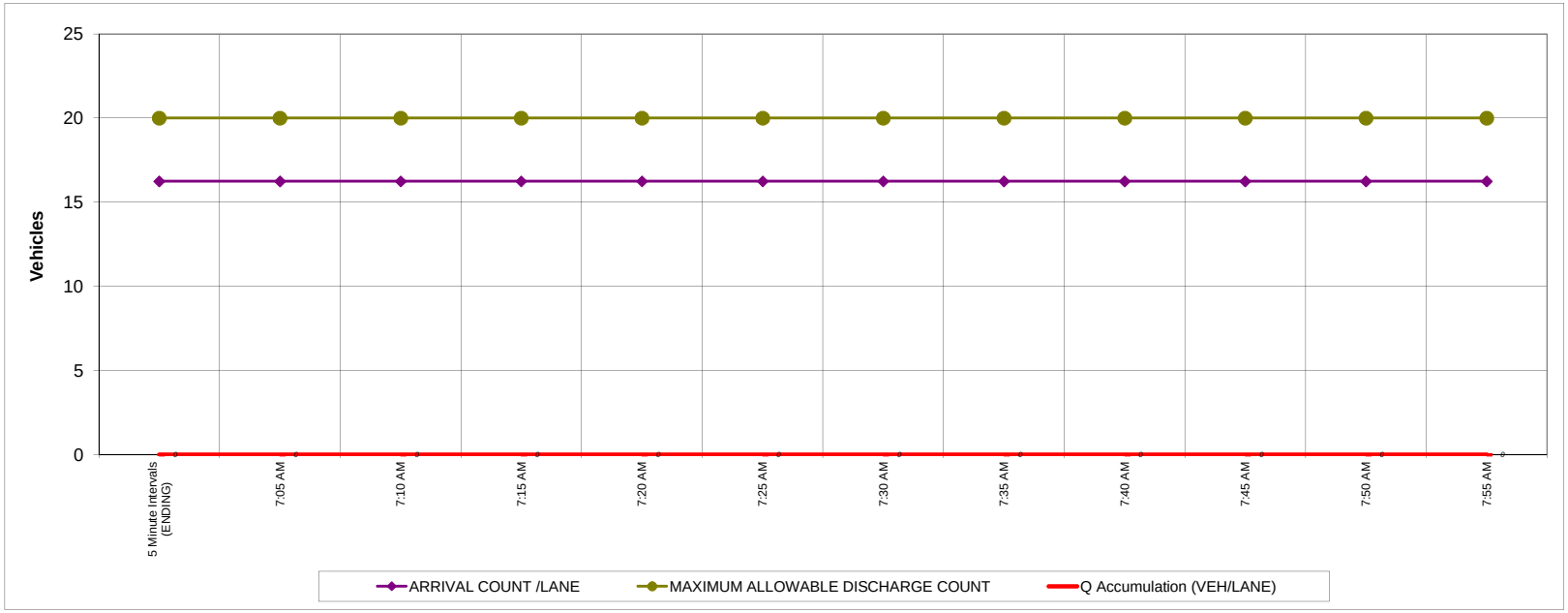
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**2**
Ramp Length=	1180
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Rosecrans On

AM Peak Hour Vol/PCE:	810	860
PM Peak Hour Vol/PCE:	430	450
MD Peak Hour Vol/PCE:	460	530

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	36	33	3	3	430	72	395	450	-	1200	88	-	36	0.2
7:10 AM	36	33	6	3	430	72	395	500	-	1200	175	-	36	0.5
7:15 AM	36	33	9	3	430	72	395	500	-	1200	263	-	36	0.7
7:20 AM	36	33	12	3	430	72	395	550	-	1200	350	-	36	1.0
7:25 AM	36	33	15	3	430	72	395	600	-	1200	438	-	36	1.2
7:30 AM	36	33	18	3	430	72	395	600	-	1200	525	-	36	1.5
7:35 AM	36	33	20	3	430	72	395	650	-	1200	613	-	36	1.7
7:40 AM	36	33	23	3	430	72	395	700	-	1200	700	-	36	1.9
7:45 AM	36	33	26	3	430	72	395	700	-	1200	788	-	36	2.2
7:50 AM	36	33	29	3	430	72	395	750	-	1200	875	-	36	2.4
7:55 AM	36	33	32	3	430	72	395	800	-	1200	963	-	36	2.7
8:00 AM	36	33	35	3	430	72	395	850	-	1200	1050	-	36	2.9
	430	**395**		**35**		**860**							**430**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**430**					**MAX Q (FT/LN)=**	**1,050**	**-**	**36**	

(Min=240, Max=900vph/lane)

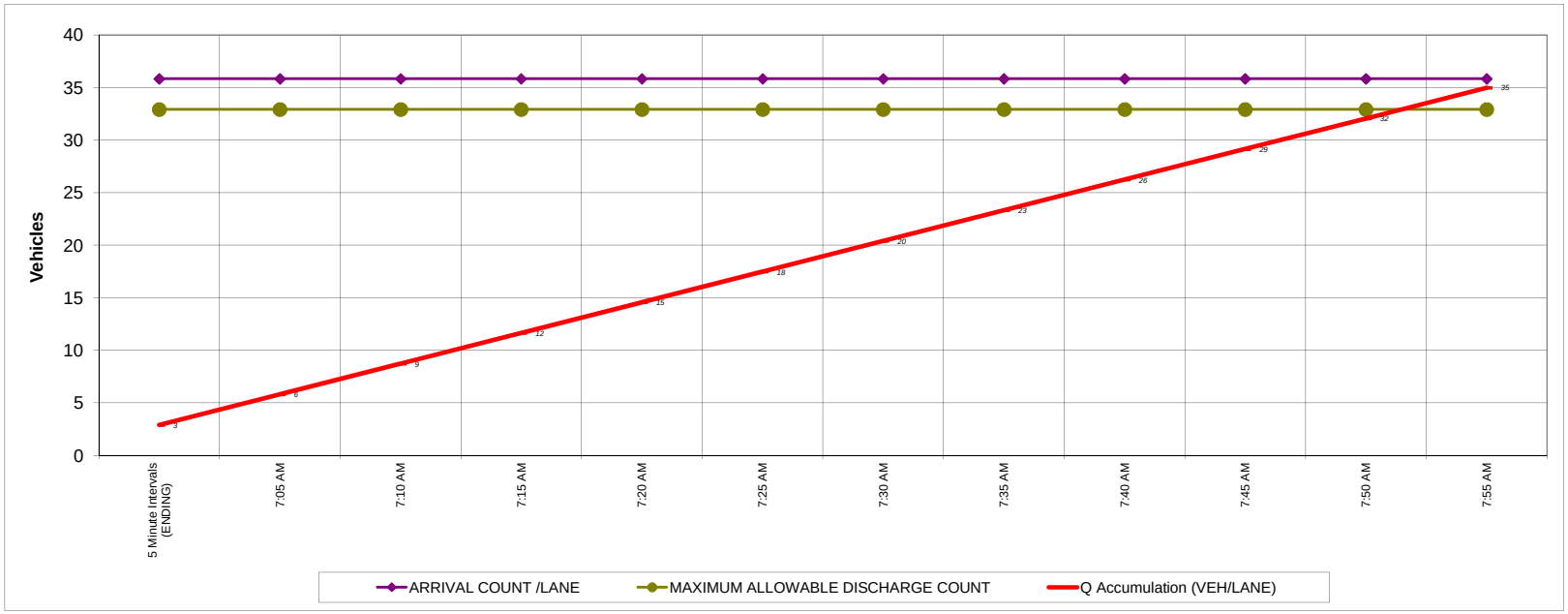
Meter Rate = **395**

Avg Delay/veh (hr)= 0.044

Avg Delay/veh (sec)= **159**

	INPUT
LANES=	**2**
Ramp Length=	1200
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Imperial On

AM Peak Hour Vol/PCE:	1270	1310
PM Peak Hour Vol/PCE:	1030	1070
MD Peak Hour Vol/PCE:	1120	1190

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	55	53	2	2	655	109	630	650	-	850	63	-	55	0.2
7:10 AM	55	53	4	2	655	109	630	700	-	850	125	-	55	0.3
7:15 AM	55	53	6	2	655	109	630	700	-	850	188	-	55	0.5
7:20 AM	55	53	8	2	655	109	630	750	-	850	250	-	55	0.7
7:25 AM	55	53	10	2	655	109	630	750	-	850	313	-	55	0.9
7:30 AM	55	53	13	2	655	109	630	800	-	850	375	-	55	1.0
7:35 AM	55	53	15	2	655	109	630	800	-	850	438	-	55	1.2
7:40 AM	55	53	17	2	655	109	630	850	-	850	500	-	55	1.4
7:45 AM	55	53	19	2	655	109	630	850	-	850	563	-	55	1.6
7:50 AM	55	53	21	2	655	109	630	900	-	850	625	-	55	1.7
7:55 AM	55	53	23	2	655	109	630	900	-	850	688	-	55	1.9
8:00 AM	55	53	25	2	655	109	630	950	-	850	750	-	55	2.1
	655	**630**		**25**		**1,310**							**655**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**655**					**MAX Q (FT/LN)=**	**750**	**-**	**55**	

(Min=240, Max=900vph/lane)

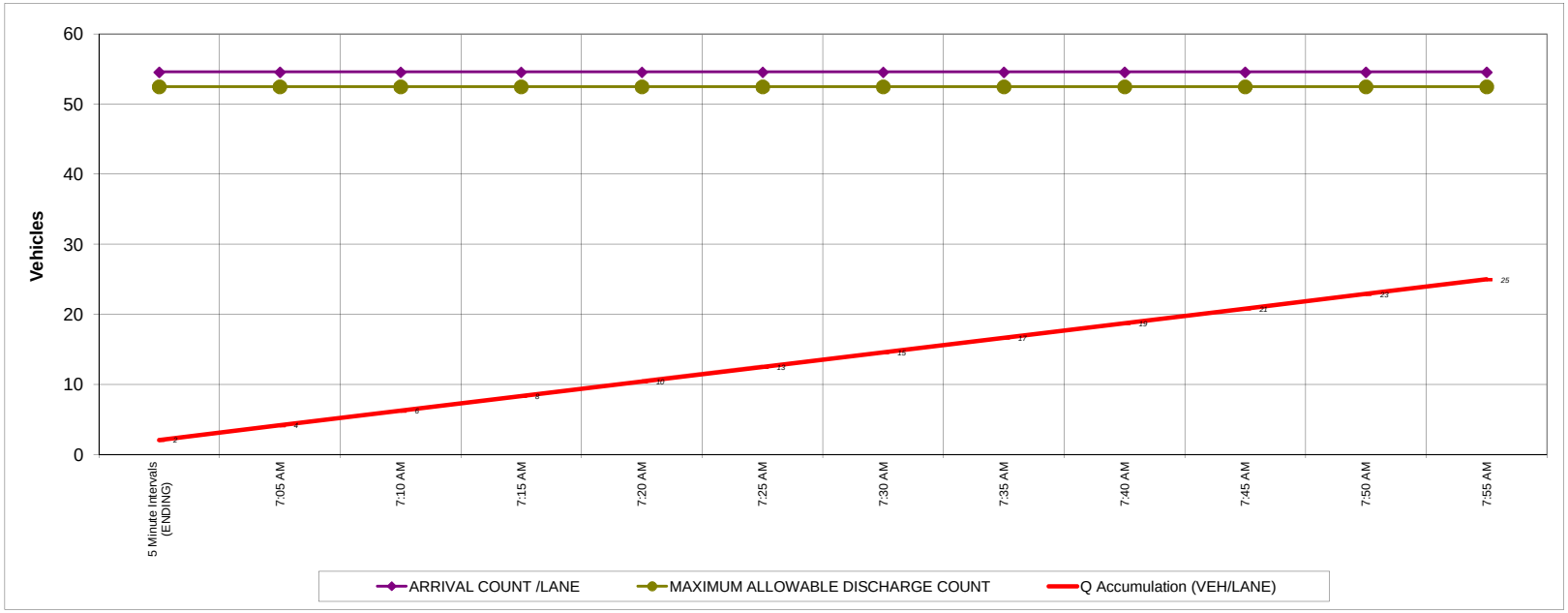
Meter Rate = **630**

Avg Delay/veh (hr)= 0.021

Avg Delay/veh (sec)= **74**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Imperial On

AM Peak Hour Vol/PCE:	1620	1650
PM Peak Hour Vol/PCE:	990	1030
MD Peak Hour Vol/PCE:	1200	1270

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	69	66	3	3	825	138	790	850	-	1110	88	-	69	0.2
7:10 AM	69	66	6	3	825	138	790	850	-	1110	175	-	69	0.5
7:15 AM	69	66	9	3	825	138	790	900	-	1110	263	-	69	0.7
7:20 AM	69	66	12	3	825	138	790	950	-	1110	350	-	69	1.0
7:25 AM	69	66	15	3	825	138	790	1000	-	1110	438	-	69	1.2
7:30 AM	69	66	18	3	825	138	790	1000	-	1110	525	-	69	1.5
7:35 AM	69	66	20	3	825	138	790	1050	-	1110	613	-	69	1.7
7:40 AM	69	66	23	3	825	138	790	1100	-	1110	700	-	69	1.9
7:45 AM	69	66	26	3	825	138	790	1100	-	1110	788	-	69	2.2
7:50 AM	69	66	29	3	825	138	790	1150	-	1110	875	-	69	2.4
7:55 AM	69	66	32	3	825	138	790	1200	-	1110	963	-	69	2.7
8:00 AM	69	66	35	3	825	138	790	1200	-	1110	1050	-	69	2.9
	825	**790**		**35**		**1,650**							**825**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**825**					**MAX Q (FT/LN)=**	**1,050**	**-**	**69**	

(Min=240, Max=900vph/lane)

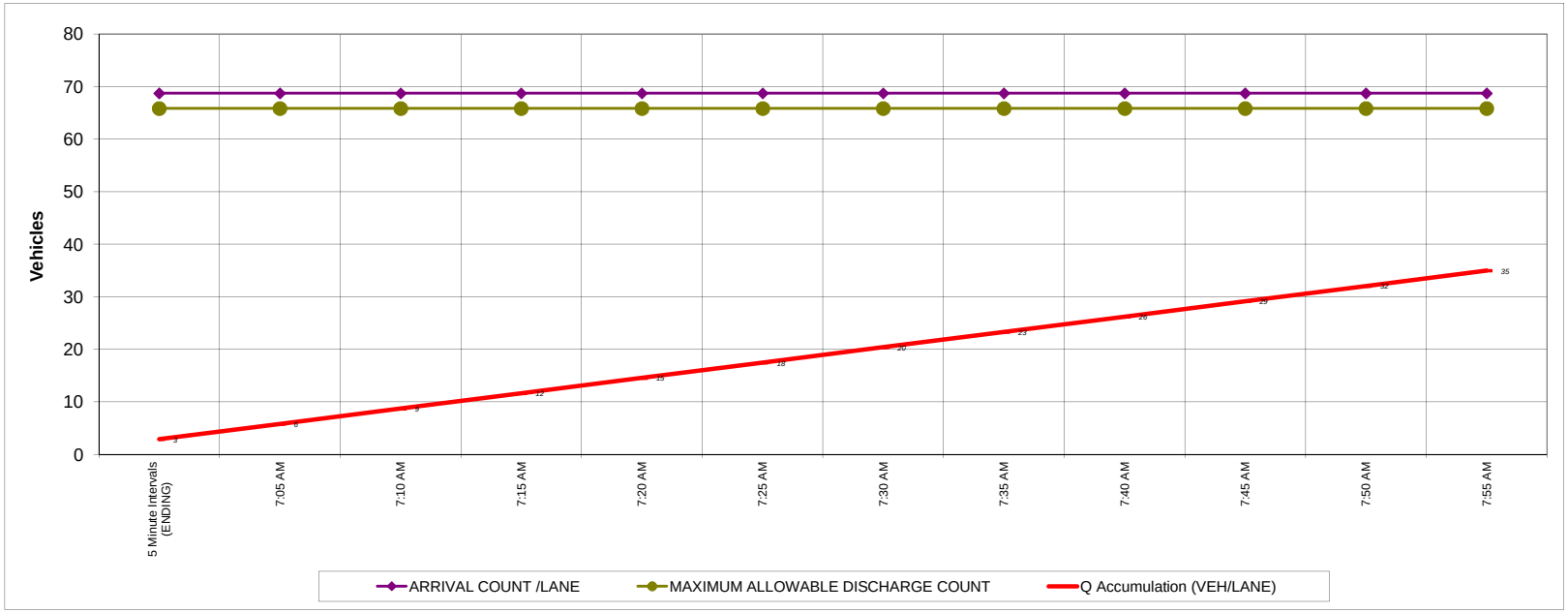
Meter Rate = **790**

Avg Delay/veh (hr)= 0.023

Avg Delay/veh (sec)= **83**

	INPUT
LANES=	**2**
Ramp Length=	1110
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-WB Firestone On

AM Peak Hour Vol/PCE:	520	530
PM Peak Hour Vol/PCE:	540	560
MD Peak Hour Vol/PCE:	610	640

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	27	25	2	2	320	53	300	300	-	650	50	-	27	0.1
1:10 PM	27	25	3	2	320	53	300	350	-	650	100	-	27	0.3
1:15 PM	27	25	5	2	320	53	300	350	-	650	150	-	27	0.4
1:20 PM	27	25	7	2	320	53	300	400	-	650	200	-	27	0.6
1:25 PM	27	25	8	2	320	53	300	400	-	650	250	-	27	0.7
1:30 PM	27	25	10	2	320	53	300	400	-	650	300	-	27	0.8
1:35 PM	27	25	12	2	320	53	300	450	-	650	350	-	27	1.0
1:40 PM	27	25	13	2	320	53	300	450	-	650	400	-	27	1.1
1:45 PM	27	25	15	2	320	53	300	500	-	650	450	-	27	1.3
1:50 PM	27	25	17	2	320	53	300	500	-	650	500	-	27	1.4
1:55 PM	27	25	18	2	320	53	300	500	-	650	550	-	27	1.5
2:00 PM	27	25	20	2	320	53	300	550	-	650	600	-	27	1.7
	320	300		20		640							320	10.83
		MAX Q (VEH/LN)=	20	MAX RATE (VPH)=	320					MAX Q (FT/LN)=	600	-	27	

(Min=240, Max=900vph/lane)

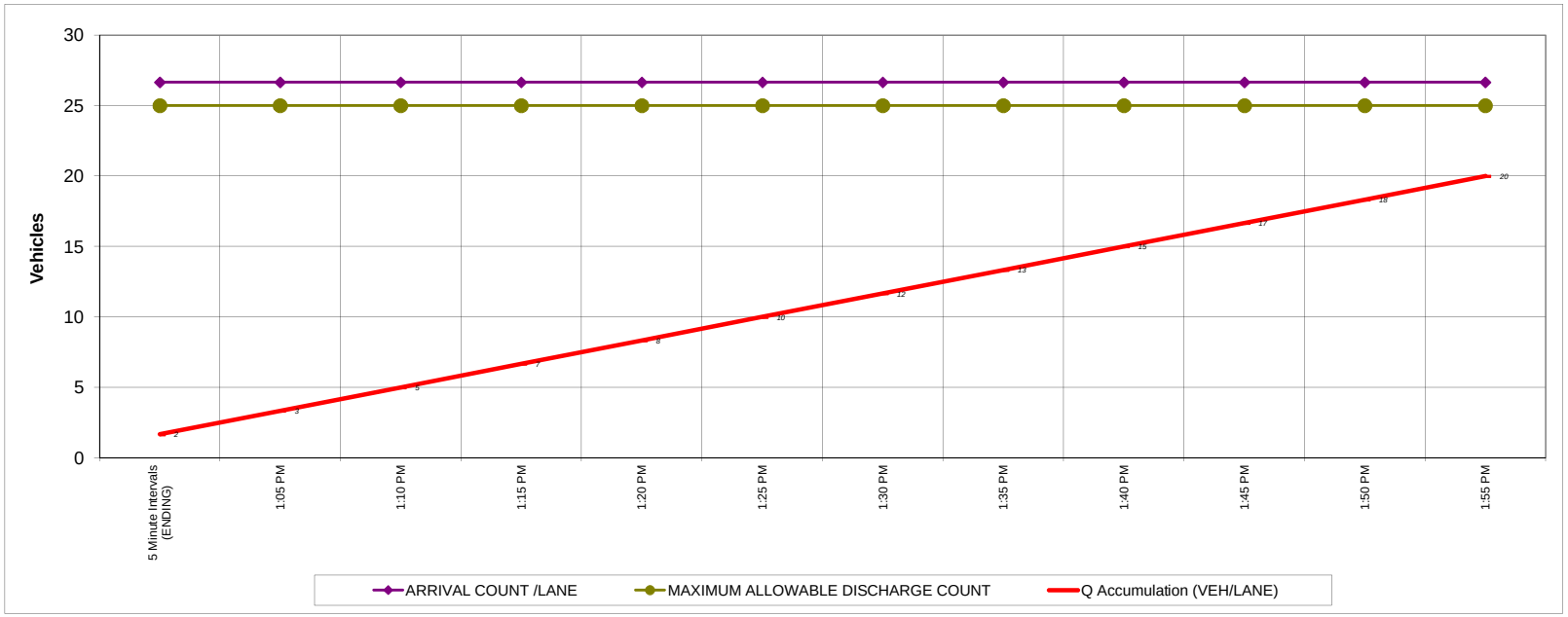
Meter Rate = 300

Avg Delay/veh (hr)= 0.034

Avg Delay/veh (sec)= 122

	INPUT
LANES=	2
Ramp Length=	650
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-EB Firestone On

AM Peak Hour Vol/PCE:	690	720
PM Peak Hour Vol/PCE:	300	310
MD Peak Hour Vol/PCE:	590	630

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	28	2	2	360	60	340	350	-	700	50	-	30	0.1
7:10 AM	30	28	3	2	360	60	340	400	-	700	100	-	30	0.3
7:15 AM	30	28	5	2	360	60	340	400	-	700	150	-	30	0.4
7:20 AM	30	28	7	2	360	60	340	400	-	700	200	-	30	0.6
7:25 AM	30	28	8	2	360	60	340	450	-	700	250	-	30	0.7
7:30 AM	30	28	10	2	360	60	340	450	-	700	300	-	30	0.8
7:35 AM	30	28	12	2	360	60	340	500	-	700	350	-	30	1.0
7:40 AM	30	28	13	2	360	60	340	500	-	700	400	-	30	1.1
7:45 AM	30	28	15	2	360	60	340	500	-	700	450	-	30	1.3
7:50 AM	30	28	17	2	360	60	340	550	-	700	500	-	30	1.4
7:55 AM	30	28	18	2	360	60	340	550	-	700	550	-	30	1.5
8:00 AM	30	28	20	2	360	60	340	600	-	700	600	-	30	1.7
	360	**340**		**20**		**720**							**360**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**600**	**-**	**30**	

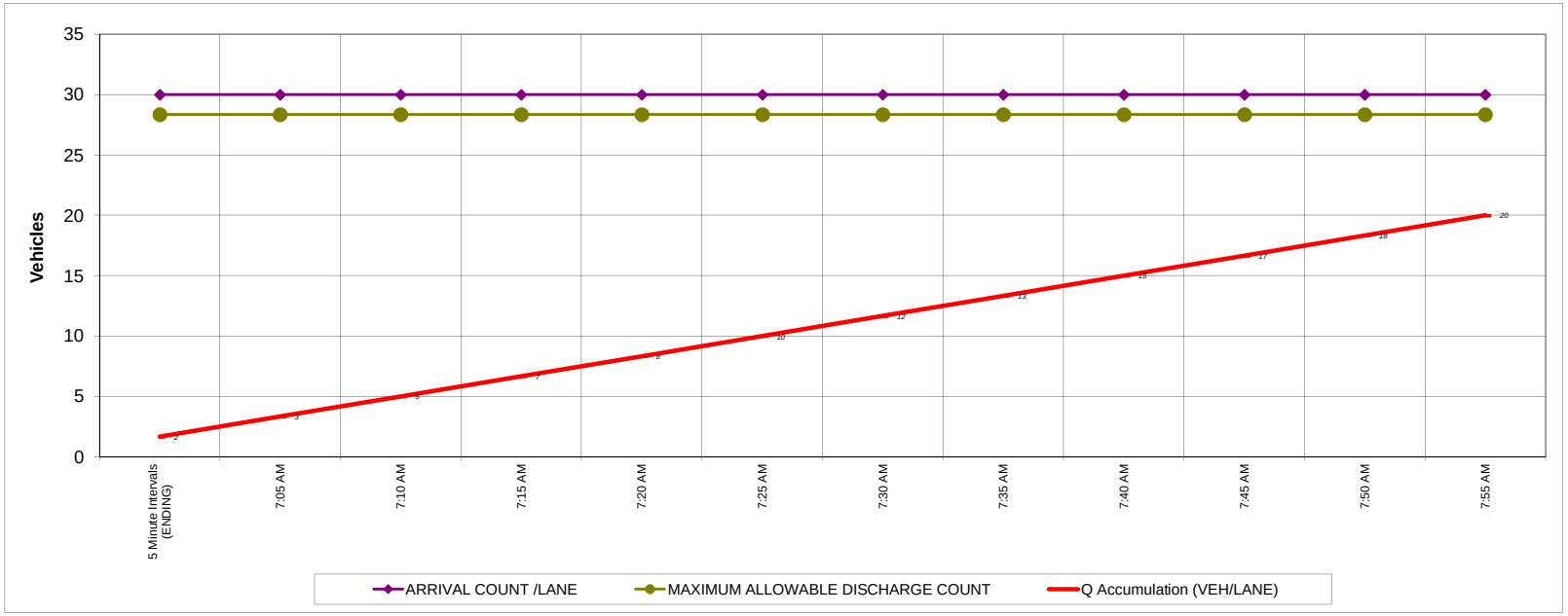
(Min=240, Max=900vph/lane)

Meter Rate = **340**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.030
Avg Delay/veh (sec)= **108**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Firestone On

AM Peak Hour Vol/PCE:	730	800
PM Peak Hour Vol/PCE:	380	400
MD Peak Hour Vol/PCE:	730	880

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	37	35	2	2	440	73	420	450	-	700	50	-	37	0.1
1:10 PM	37	35	3	2	440	73	420	450	-	700	100	-	37	0.3
1:15 PM	37	35	5	2	440	73	420	500	-	700	150	-	37	0.4
1:20 PM	37	35	7	2	440	73	420	500	-	700	200	-	37	0.6
1:25 PM	37	35	8	2	440	73	420	500	-	700	250	-	37	0.7
1:30 PM	37	35	10	2	440	73	420	550	-	700	300	-	37	0.8
1:35 PM	37	35	12	2	440	73	420	550	-	700	350	-	37	1.0
1:40 PM	37	35	13	2	440	73	420	600	-	700	400	-	37	1.1
1:45 PM	37	35	15	2	440	73	420	600	-	700	450	-	37	1.3
1:50 PM	37	35	17	2	440	73	420	600	-	700	500	-	37	1.4
1:55 PM	37	35	18	2	440	73	420	650	-	700	550	-	37	1.5
2:00 PM	37	35	20	2	440	73	420	650	-	700	600	-	37	1.7
	440	**420**		**20**		**880**							**440**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**440**					**MAX Q (FT/LN)=**	**600**	**-**	**37**	

(Min=240, Max=900vph/lane)

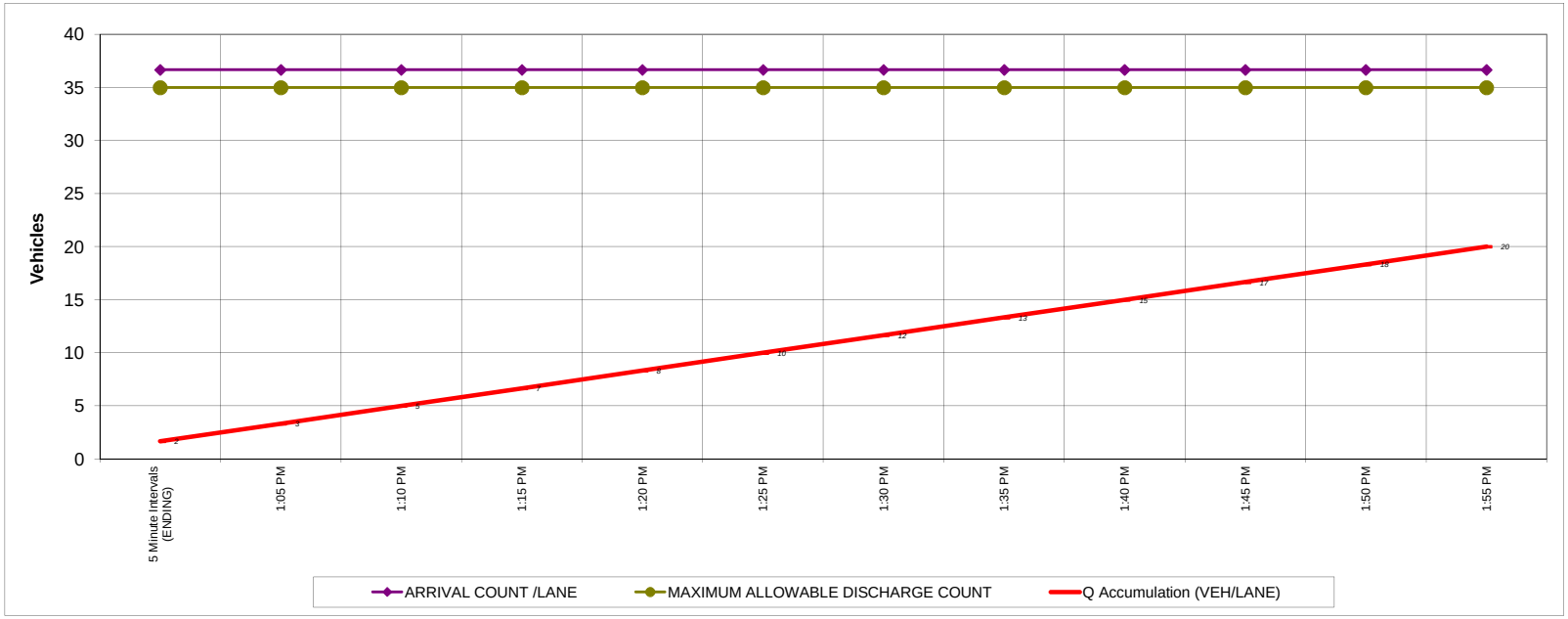
Meter Rate = **420**

Avg Delay/veh (hr)= 0.025

Avg Delay/veh (sec)= **89**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Firestone On

AM Peak Hour Vol/PCE:	750	840
PM Peak Hour Vol/PCE:	670	730
MD Peak Hour Vol/PCE:	310	350

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	35	32	3	3	420	70	385	450	-	1080	87	-	35	0.2
7:10 AM	35	32	6	3	420	70	385	450	-	1080	175	-	35	0.5
7:15 AM	35	32	9	3	420	70	385	500	-	1080	263	-	35	0.7
7:20 AM	35	32	12	3	420	70	385	550	-	1080	350	-	35	1.0
7:25 AM	35	32	15	3	420	70	385	550	-	1080	438	-	35	1.2
7:30 AM	35	32	18	3	420	70	385	600	-	1080	525	-	35	1.5
7:35 AM	35	32	20	3	420	70	385	650	-	1080	613	-	35	1.7
7:40 AM	35	32	23	3	420	70	385	700	-	1080	700	-	35	1.9
7:45 AM	35	32	26	3	420	70	385	700	-	1080	787	-	35	2.2
7:50 AM	35	32	29	3	420	70	385	750	-	1080	875	-	35	2.4
7:55 AM	35	32	32	3	420	70	385	800	-	1080	962	-	35	2.7
8:00 AM	35	32	35	3	420	70	385	800	-	1080	1050	-	35	2.9
	420	**385**		**35**		**840**							**420**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**420**					**MAX Q (FT/LN)=**	**1,050**	**-**	**35**	

(Min=240, Max=900vph/lane)

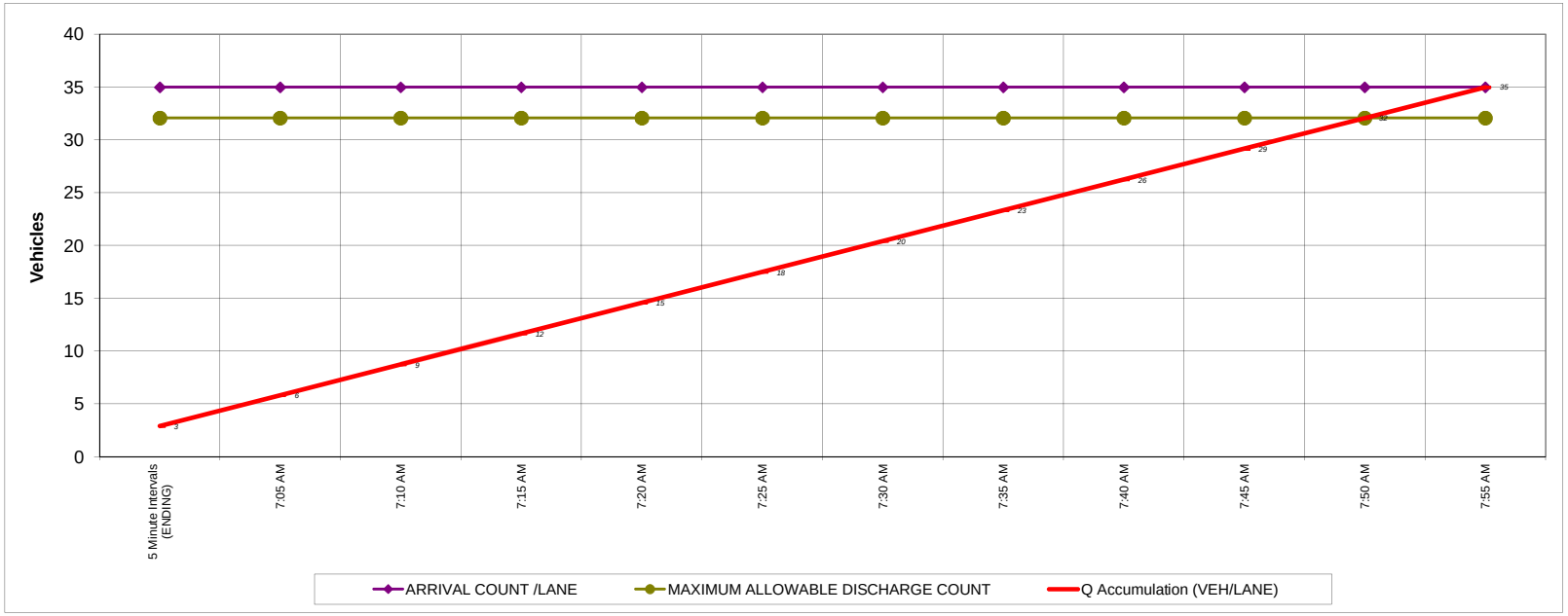
Meter Rate = **385**

Avg Delay/veh (hr)= 0.045

Avg Delay/veh (sec)= **163**

	INPUT
LANES=	**2**
Ramp Length=	1080
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Florence On

AM Peak Hour Vol/PCE:	870	900
PM Peak Hour Vol/PCE:	820	850
MD Peak Hour Vol/PCE:	880	920

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	36	2	2	460	77	435	450	-	900	63	-	38	0.2
1:10 PM	38	36	4	2	460	77	435	500	-	900	125	-	38	0.3
1:15 PM	38	36	6	2	460	77	435	500	-	900	188	-	38	0.5
1:20 PM	38	36	8	2	460	77	435	550	-	900	250	-	38	0.7
1:25 PM	38	36	10	2	460	77	435	550	-	900	313	-	38	0.9
1:30 PM	38	36	13	2	460	77	435	600	-	900	375	-	38	1.0
1:35 PM	38	36	15	2	460	77	435	600	-	900	438	-	38	1.2
1:40 PM	38	36	17	2	460	77	435	650	-	900	500	-	38	1.4
1:45 PM	38	36	19	2	460	77	435	650	-	900	563	-	38	1.6
1:50 PM	38	36	21	2	460	77	435	700	-	900	625	-	38	1.7
1:55 PM	38	36	23	2	460	77	435	700	-	900	688	-	38	1.9
2:00 PM	38	36	25	2	460	77	435	750	-	900	750	-	38	2.1
	460	**435**		**25**		**920**							**460**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**460**					**MAX Q (FT/LN)=**	**750**	**-**	**38**	

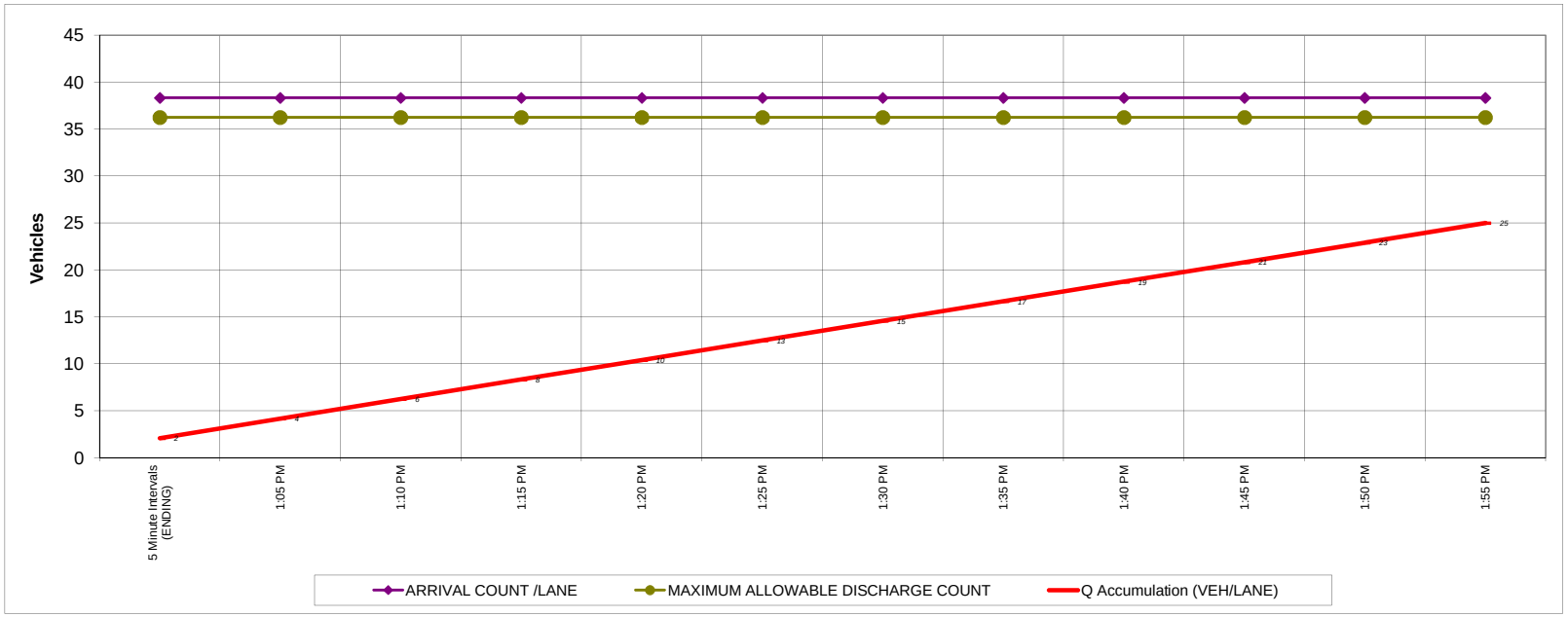
(Min=240, Max=900vph/lane)

Meter Rate = **435**

	INPUT
LANES=	**2**
Ramp Length=	900
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.029
Avg Delay/veh (sec)= **106**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Florence On

AM Peak Hour Vol/PCE:	760	780
PM Peak Hour Vol/PCE:	950	1040
MD Peak Hour Vol/PCE:	920	1000

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	43	40	3	3	520	87	485	550	-	1150	87	-	43	0.2
5:10 PM	43	40	6	3	520	87	485	550	-	1150	175	-	43	0.5
5:15 PM	43	40	9	3	520	87	485	600	-	1150	263	-	43	0.7
5:20 PM	43	40	12	3	520	87	485	650	-	1150	350	-	43	1.0
5:25 PM	43	40	15	3	520	87	485	650	-	1150	438	-	43	1.2
5:30 PM	43	40	18	3	520	87	485	700	-	1150	525	-	43	1.5
5:35 PM	43	40	20	3	520	87	485	750	-	1150	613	-	43	1.7
5:40 PM	43	40	23	3	520	87	485	800	-	1150	700	-	43	1.9
5:45 PM	43	40	26	3	520	87	485	800	-	1150	788	-	43	2.2
5:50 PM	43	40	29	3	520	87	485	850	-	1150	875	-	43	2.4
5:55 PM	43	40	32	3	520	87	485	900	-	1150	962	-	43	2.7
6:00 PM	43	40	35	3	520	87	485	900	-	1150	1050	-	43	2.9
	520	**485**		**35**		**1,040**							**520**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**520**					**MAX Q (FT/LN)=**	**1,050**	**-**	**43**	

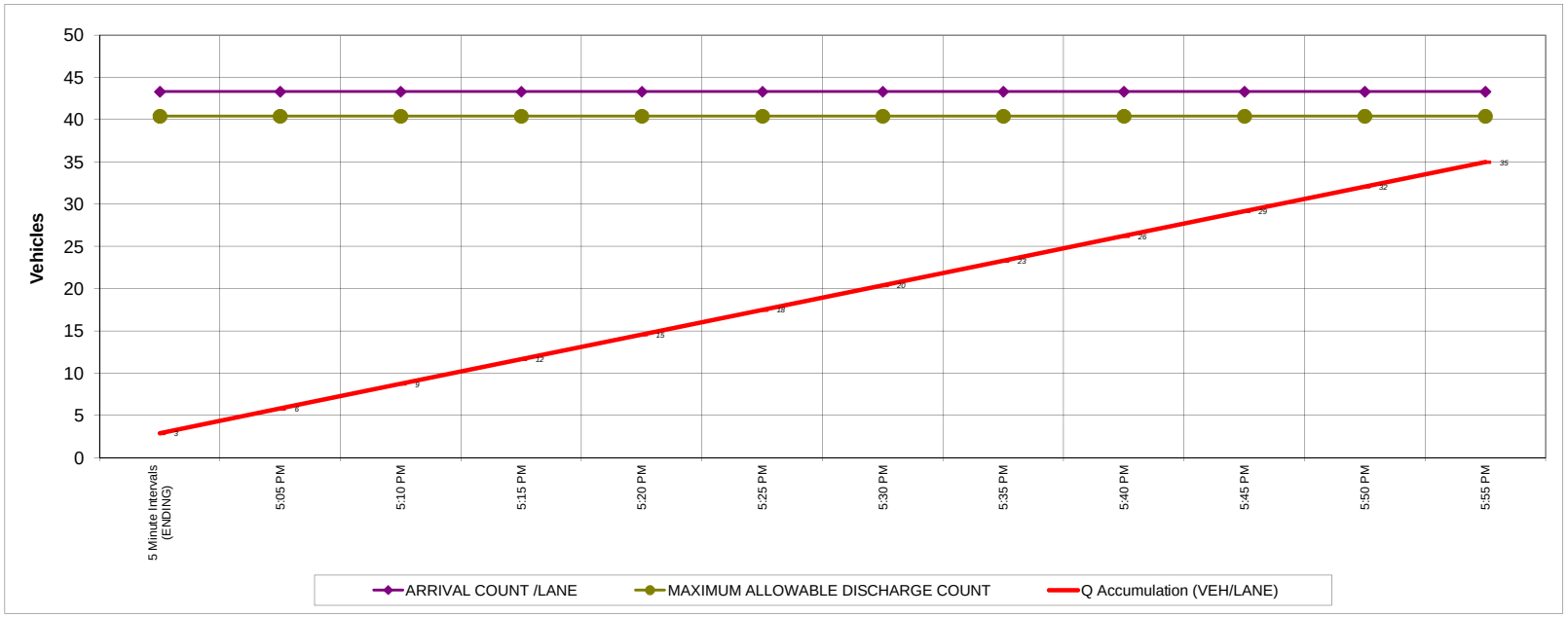
(Min=240, Max=900vph/lane)

Meter Rate = **485**

	INPUT
LANES=	**2**
Ramp Length=	1150
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.036
Avg Delay/veh (sec)= **131**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	1230	1280
PM Peak Hour Vol/PCE:	1070	1140
MD Peak Hour Vol/PCE:	1350	1400

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	58	55	3	3	700	117	660	700	-	1300	100	-	58	0.3
1:10 PM	58	55	7	3	700	117	660	750	-	1300	200	-	58	0.6
1:15 PM	58	55	10	3	700	117	660	800	-	1300	300	-	58	0.8
1:20 PM	58	55	13	3	700	117	660	850	-	1300	400	-	58	1.1
1:25 PM	58	55	17	3	700	117	660	900	-	1300	500	-	58	1.4
1:30 PM	58	55	20	3	700	117	660	900	-	1300	600	-	58	1.7
1:35 PM	58	55	23	3	700	117	660	950	-	1300	700	-	58	1.9
1:40 PM	58	55	27	3	700	117	660	1000	-	1300	800	-	58	2.2
1:45 PM	58	55	30	3	700	117	660	1050	-	1300	900	-	58	2.5
1:50 PM	58	55	33	3	700	117	660	1100	-	1300	1000	-	58	2.8
1:55 PM	58	55	37	3	700	117	660	1100	-	1300	1100	-	58	3.1
2:00 PM	58	55	40	3	700	117	660	1150	-	1300	1200	-	58	3.3
	700	**660**		**40**		**1,400**							**700**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**700**					**MAX Q (FT/LN)=**	**1,200**	**-**	**58**	

(Min=240, Max=900vph/lane)

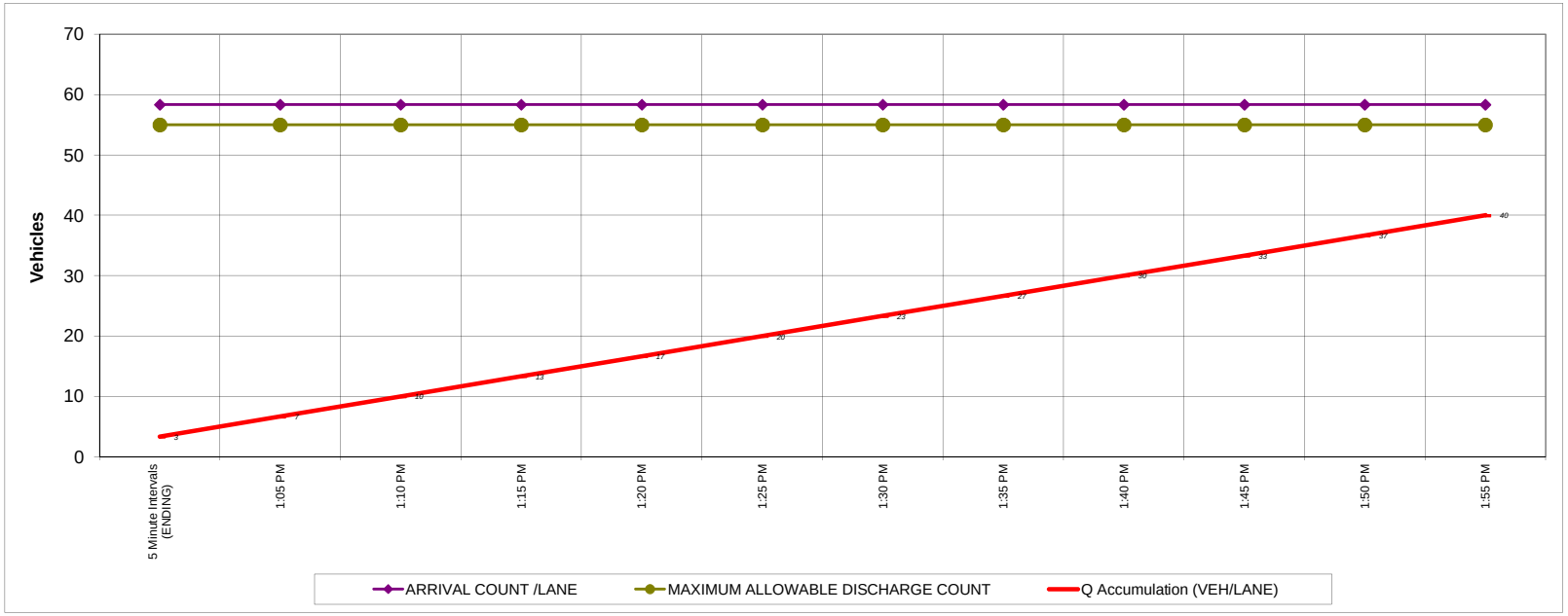
Meter Rate = **660**

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= **111**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	540	620
PM Peak Hour Vol/PCE:	740	780
MD Peak Hour Vol/PCE:	630	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	33	30	3	3	390	65	355	400	-	1120	87	-	33	0.2
5:10 PM	33	30	6	3	390	65	355	450	-	1120	175	-	33	0.5
5:15 PM	33	30	9	3	390	65	355	450	-	1120	263	-	33	0.7
5:20 PM	33	30	12	3	390	65	355	500	-	1120	350	-	33	1.0
5:25 PM	33	30	15	3	390	65	355	550	-	1120	438	-	33	1.2
5:30 PM	33	30	18	3	390	65	355	600	-	1120	525	-	33	1.5
5:35 PM	33	30	20	3	390	65	355	600	-	1120	613	-	33	1.7
5:40 PM	33	30	23	3	390	65	355	650	-	1120	700	-	33	1.9
5:45 PM	33	30	26	3	390	65	355	700	-	1120	787	-	33	2.2
5:50 PM	33	30	29	3	390	65	355	700	-	1120	875	-	33	2.4
5:55 PM	33	30	32	3	390	65	355	750	-	1120	962	-	33	2.7
6:00 PM	33	30	35	3	390	65	355	800	-	1120	1050	-	33	2.9
	390	**355**		**35**		**780**							**390**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**390**					**MAX Q (FT/LN)=**	**1,050**	**-**	**33**	

(Min=240, Max=900vph/lane)

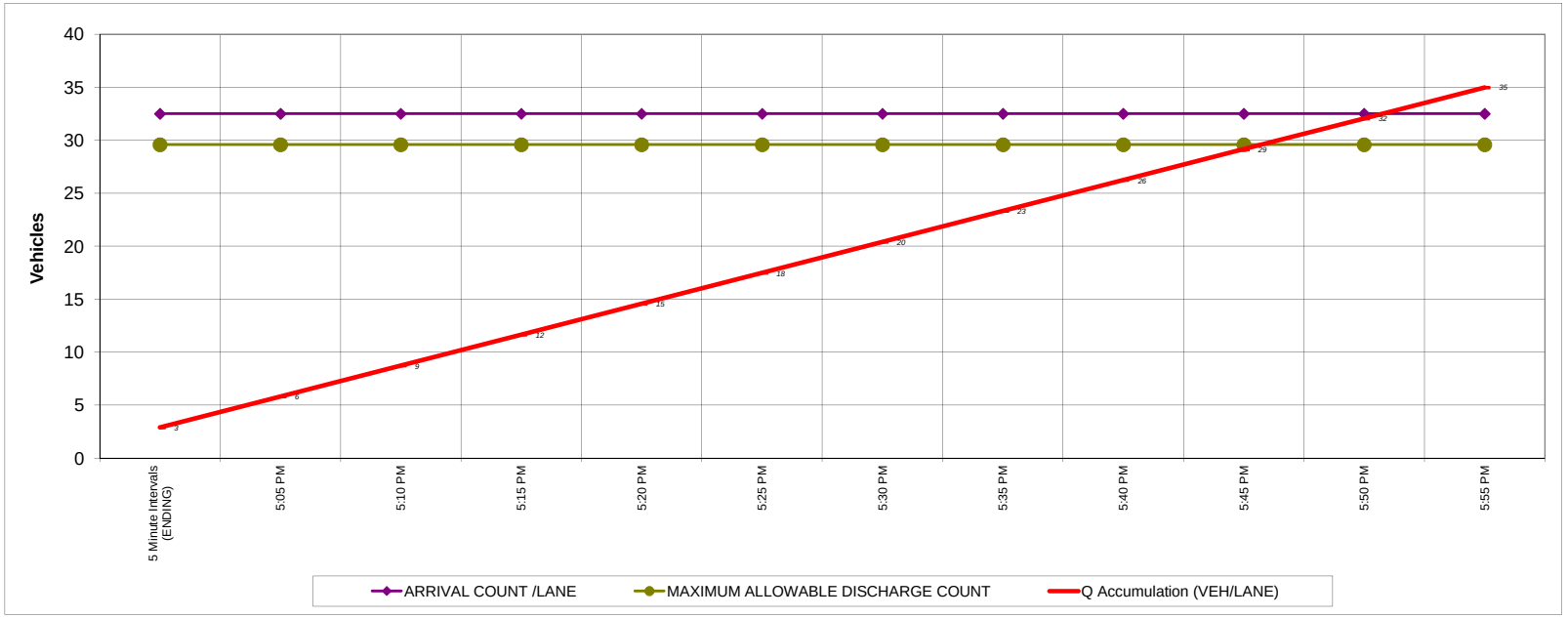
Meter Rate = **355**

Avg Delay/veh (hr)= 0.049

Avg Delay/veh (sec)= **175**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Storage is Adequate



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I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	850	1210
PM Peak Hour Vol/PCE:	1390	1860
MD Peak Hour Vol/PCE:	1200	1720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	78	75	3	3	930	155	900	950	-	1000	75	-	78	0.2
5:10 PM	78	75	5	3	930	155	900	950	-	1000	150	-	78	0.4
5:15 PM	78	75	8	3	930	155	900	1000	-	1000	225	-	78	0.6
5:20 PM	78	75	10	3	930	155	900	1050	-	1000	300	-	78	0.8
5:25 PM	78	75	13	3	930	155	900	1050	-	1000	375	-	78	1.0
5:30 PM	78	75	15	3	930	155	900	1100	-	1000	450	-	78	1.3
5:35 PM	78	75	18	3	930	155	900	1100	-	1000	525	-	78	1.5
5:40 PM	78	75	20	3	930	155	900	1150	-	1000	600	-	78	1.7
5:45 PM	78	75	23	3	930	155	900	1200	-	1000	675	-	78	1.9
5:50 PM	78	75	25	3	930	155	900	1200	-	1000	750	-	78	2.1
5:55 PM	78	75	28	3	930	155	900	1250	-	1000	825	-	78	2.3
6:00 PM	78	75	30	3	930	155	900	1250	-	1000	900	-	78	2.5
	930	**900**		**30**		**1,860**							**930**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**930**					**MAX Q (FT/LN)=**	**900**	**-**	**78**	

(Min=240, Max=900vph/lane)

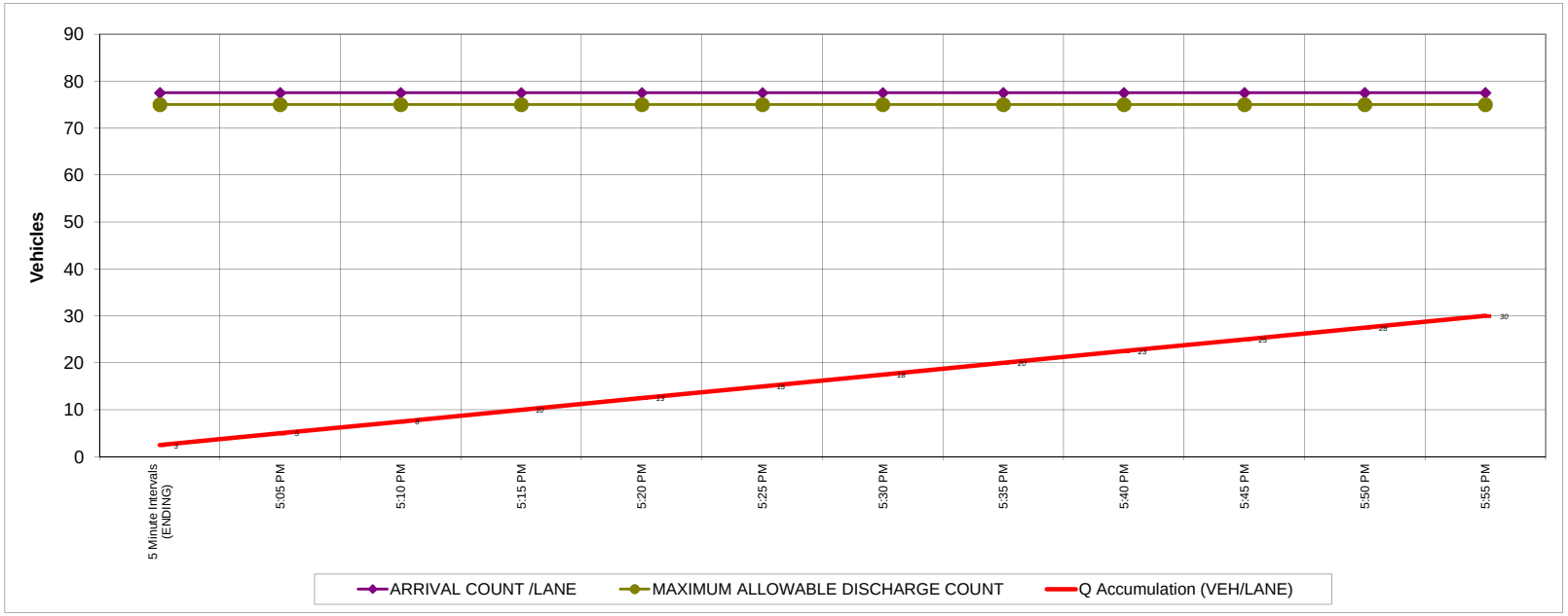
Meter Rate = **900**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**2**
Ramp Length=	1000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	1240	1290
PM Peak Hour Vol/PCE:	1530	1610
MD Peak Hour Vol/PCE:	1690	1810

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	75	70	6	6	905	151	835	950	-	2210	175	-	75	0.5
1:10 PM	75	70	12	6	905	151	835	1000	-	2210	350	-	75	1.0
1:15 PM	75	70	18	6	905	151	835	1100	-	2210	525	-	75	1.5
1:20 PM	75	70	23	6	905	151	835	1150	-	2210	700	-	75	1.9
1:25 PM	75	70	29	6	905	151	835	1250	-	2210	875	-	75	2.4
1:30 PM	75	70	35	6	905	151	835	1300	-	2210	1050	-	75	2.9
1:35 PM	75	70	41	6	905	151	835	1350	-	2210	1225	-	75	3.4
1:40 PM	75	70	47	6	905	151	835	1450	-	2210	1400	-	75	3.9
1:45 PM	75	70	53	6	905	151	835	1500	-	2210	1575	-	75	4.4
1:50 PM	75	70	58	6	905	151	835	1600	-	2210	1750	-	75	4.9
1:55 PM	75	70	64	6	905	151	835	1650	-	2210	1925	-	75	5.3
2:00 PM	75	70	70	6	905	151	835	1700	-	2210	2100	-	75	5.8
	905	**835**		**70**		**1,810**							**905**	**37.92**
		MAX Q (VEH/LN)=	**70**	**MAX RATE (VPH)=**	**905**					**MAX Q (FT/LN)=**	**2,100**	**-**	**75**	

(Min=240, Max=900vph/lane)

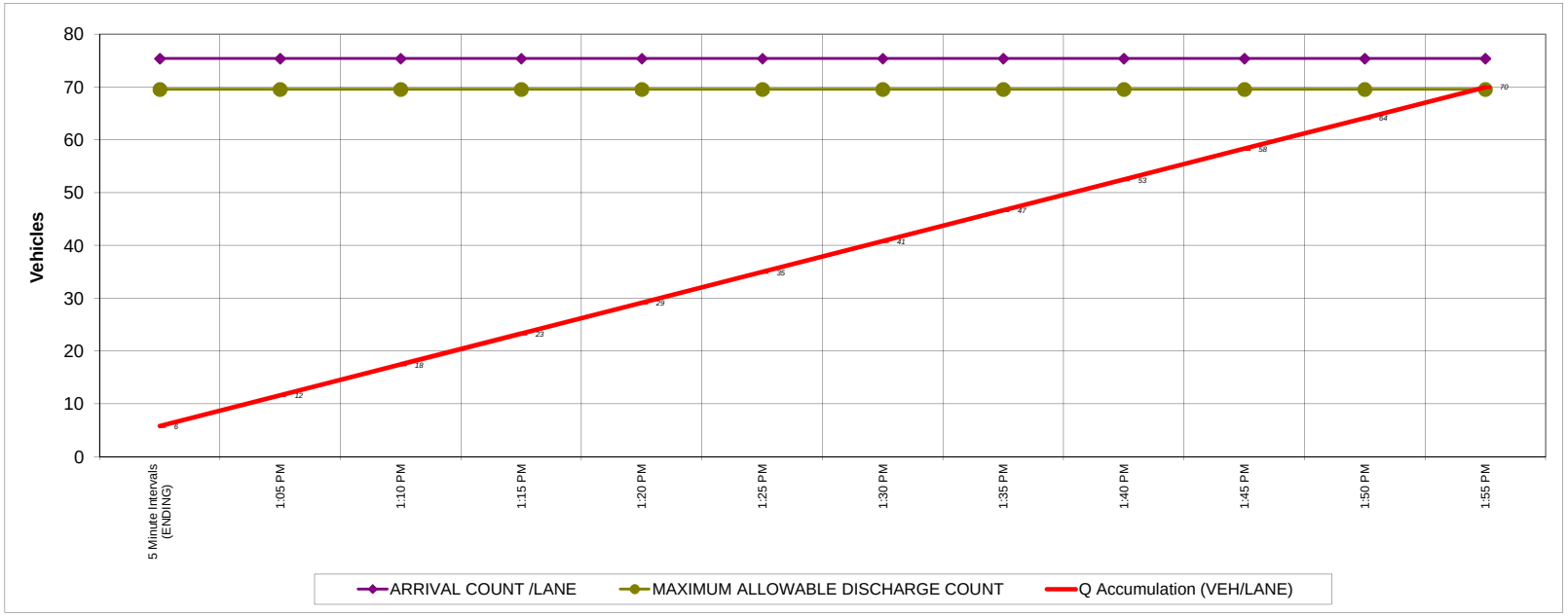
Meter Rate = **835**

Avg Delay/veh (hr)= 0.042

Avg Delay/veh (sec)= **151**

	INPUT
LANES=	**2**
Ramp Length=	2210
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	230	290
PM Peak Hour Vol/PCE:	400	520
MD Peak Hour Vol/PCE:	280	370

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	43	40	3	3	520	43	485	550	-	1200	87	-	43	0.2
5:10 PM	43	40	6	3	520	43	485	550	-	1200	175	-	43	0.5
5:15 PM	43	40	9	3	520	43	485	600	-	1200	263	-	43	0.7
5:20 PM	43	40	12	3	520	43	485	650	-	1200	350	-	43	1.0
5:25 PM	43	40	15	3	520	43	485	650	-	1200	438	-	43	1.2
5:30 PM	43	40	18	3	520	43	485	700	-	1200	525	-	43	1.5
5:35 PM	43	40	20	3	520	43	485	750	-	1200	613	-	43	1.7
5:40 PM	43	40	23	3	520	43	485	800	-	1200	700	-	43	1.9
5:45 PM	43	40	26	3	520	43	485	800	-	1200	788	-	43	2.2
5:50 PM	43	40	29	3	520	43	485	850	-	1200	875	-	43	2.4
5:55 PM	43	40	32	3	520	43	485	900	-	1200	962	-	43	2.7
6:00 PM	43	40	35	3	520	43	485	900	-	1200	1050	-	43	2.9
	520	**485**		**35**		**520**							**520**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**520**					**MAX Q (FT/LN)=**	**1,050**	**-**	**43**	

(Min=240, Max=900vph/lane)

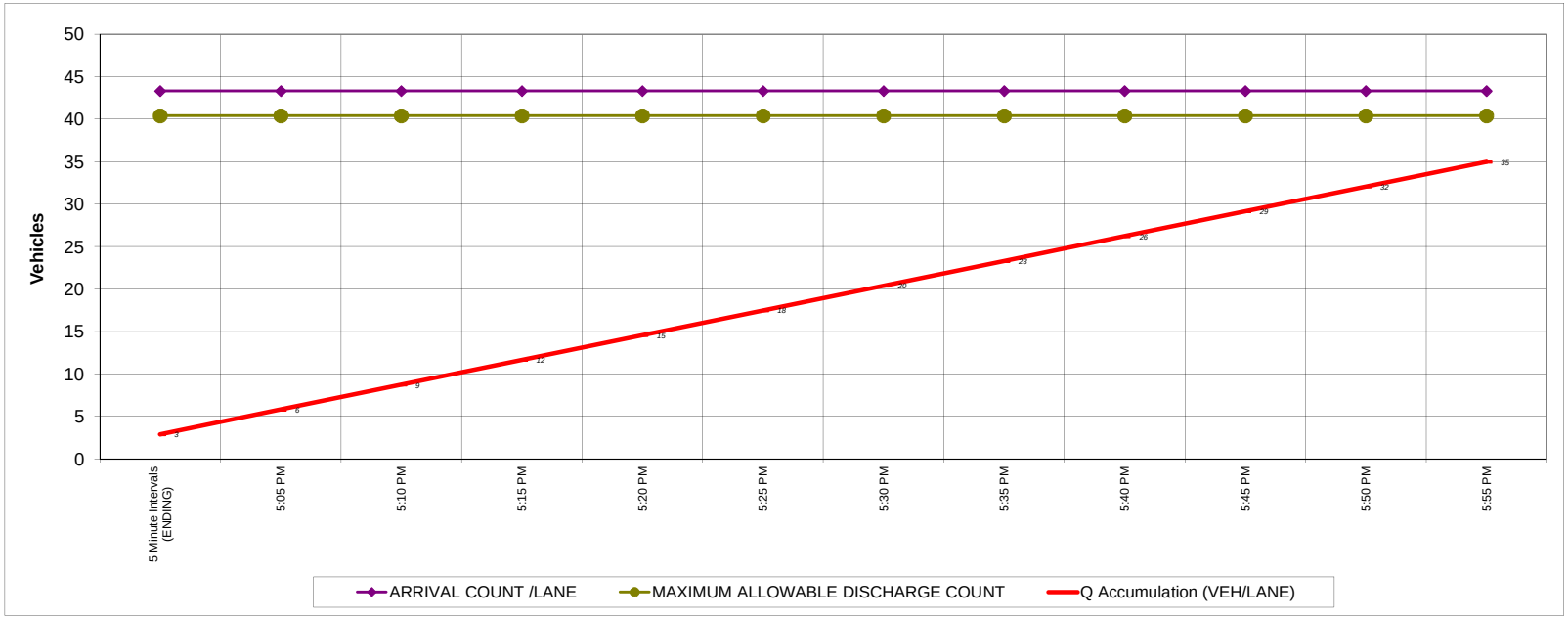
Meter Rate = **485**

Avg Delay/veh (hr)= 0.036

Avg Delay/veh (sec)= **131**

	INPUT
LANES=	**1**
Ramp Length=	1200
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Washington On

AM Peak Hour Vol/PCE:	400	540
PM Peak Hour Vol/PCE:	780	910
MD Peak Hour Vol/PCE:	570	780

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	76	73	3	3	910	76	880	900	-	1000	75	-	76	0.2
5:10 PM	76	73	5	3	910	76	880	950	-	1000	150	-	76	0.4
5:15 PM	76	73	8	3	910	76	880	1000	-	1000	225	-	76	0.6
5:20 PM	76	73	10	3	910	76	880	1000	-	1000	300	-	76	0.8
5:25 PM	76	73	13	3	910	76	880	1050	-	1000	375	-	76	1.0
5:30 PM	76	73	15	3	910	76	880	1050	-	1000	450	-	76	1.3
5:35 PM	76	73	18	3	910	76	880	1100	-	1000	525	-	76	1.5
5:40 PM	76	73	20	3	910	76	880	1150	-	1000	600	-	76	1.7
5:45 PM	76	73	23	3	910	76	880	1150	-	1000	675	-	76	1.9
5:50 PM	76	73	25	3	910	76	880	1200	-	1000	750	-	76	2.1
5:55 PM	76	73	28	3	910	76	880	1200	-	1000	825	-	76	2.3
6:00 PM	76	73	30	3	910	76	880	1250	-	1000	900	-	76	2.5
	910	**880**		**30**		**910**							**910**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**910**					**MAX Q (FT/LN)=**	**900**	**-**	**76**	

(Min=240, Max=900vph/lane)

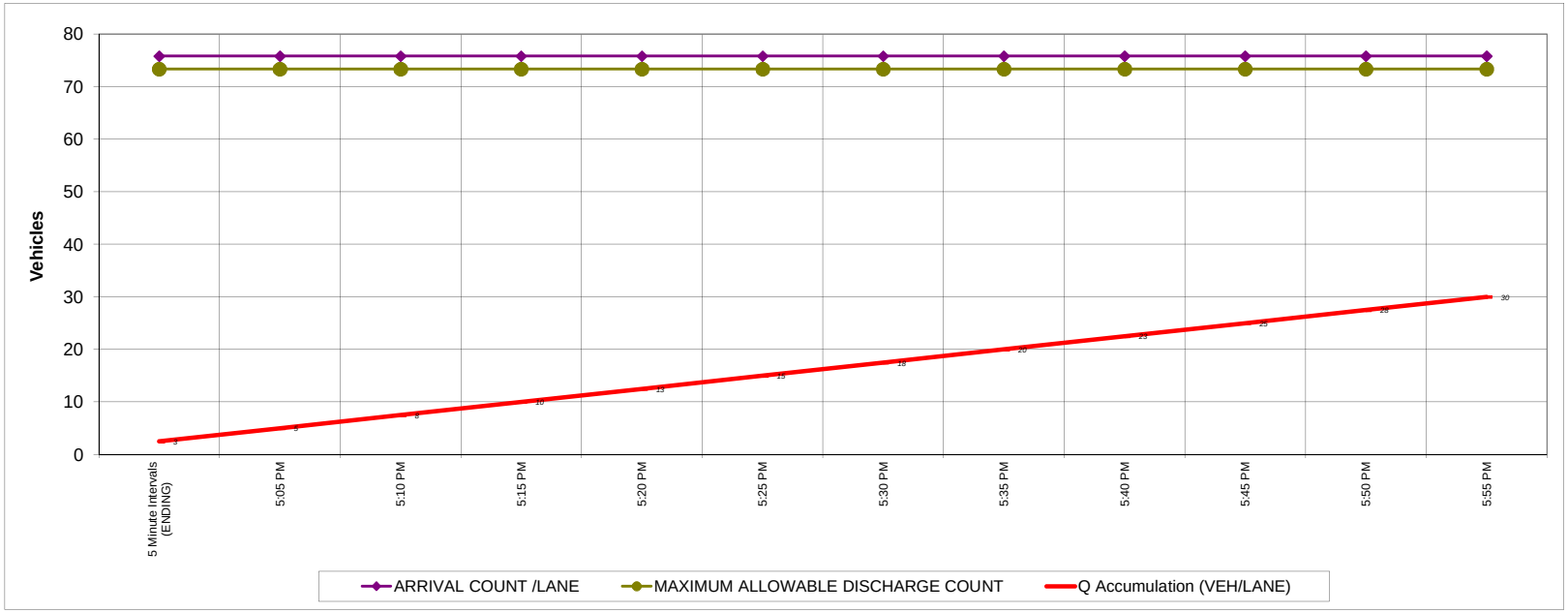
Meter Rate = **880**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **64**

	INPUT
LANES=	**1**
Ramp Length=	1000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Olympic to NB 710

AM Peak Hour Vol/PCE:	295	320
PM Peak Hour Vol/PCE:	38	40
MD Peak Hour Vol/PCE:	368	400

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	33	33	1	1	400	33	390	400	-	450	25	-	33	0.1
1:10 PM	33	33	2	1	400	33	390	400	-	450	50	-	33	0.1
1:15 PM	33	33	3	1	400	33	390	400	-	450	75	-	33	0.2
1:20 PM	33	33	3	1	400	33	390	400	-	450	100	-	33	0.3
1:25 PM	33	33	4	1	400	33	390	450	-	450	125	-	33	0.3
1:30 PM	33	33	5	1	400	33	390	450	-	450	150	-	33	0.4
1:35 PM	33	33	6	1	400	33	390	450	-	450	175	-	33	0.5
1:40 PM	33	33	7	1	400	33	390	450	-	450	200	-	33	0.6
1:45 PM	33	33	8	1	400	33	390	450	-	450	225	-	33	0.6
1:50 PM	33	33	8	1	400	33	390	500	-	450	250	-	33	0.7
1:55 PM	33	33	9	1	400	33	390	500	-	450	275	-	33	0.8
2:00 PM	33	33	10	1	400	33	390	500	-	450	300	-	33	0.8
	400	**390**		**10**		**400**							**400**	**5.42**
		MAX Q (VEH/LN)=	**10**	**MAX RATE (VPH)=**	**400**					**MAX Q (FT/LN)=**	**300**	**-**	**33**	

(Min=240, Max=9\00 vph/lane)

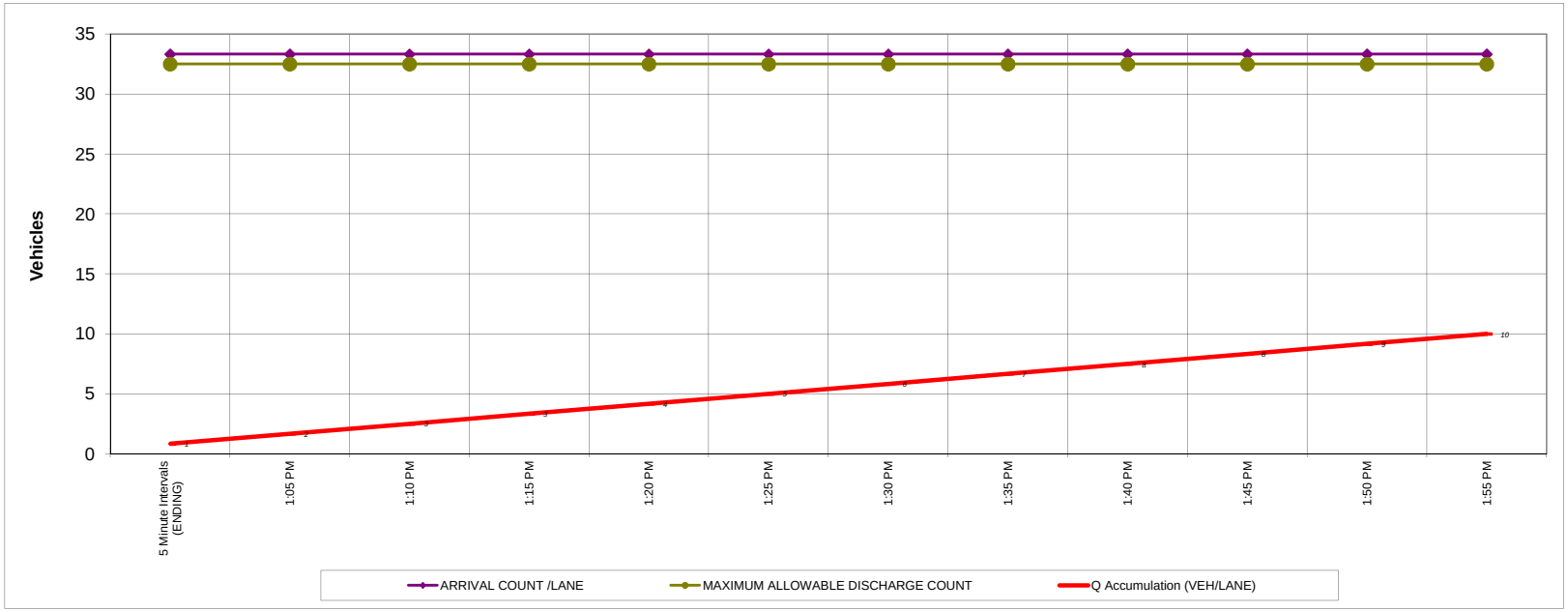
Meter Rate = **390**

Avg Delay/veh (hr)= 0.014

Avg Delay/veh (sec)= **49**

	INPUT
LANES=	**1**
Ramp Length=	450
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Eastern to SB 710

AM Peak Hour Vol/PCE:	945	970
PM Peak Hour Vol/PCE:	1119	1170
MD Peak Hour Vol/PCE:	958	1000

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	49	48	0	0	585	98	580	550	-	260	13	-	49	0.0
5:10 PM	49	48	1	0	585	98	580	550	-	260	25	-	49	0.1
5:15 PM	49	48	1	0	585	98	580	600	-	260	38	-	49	0.1
5:20 PM	49	48	2	0	585	98	580	600	-	260	50	-	49	0.1
5:25 PM	49	48	2	0	585	98	580	600	-	260	63	-	49	0.2
5:30 PM	49	48	3	0	585	98	580	600	-	260	75	-	49	0.2
5:35 PM	49	48	3	0	585	98	580	600	-	260	88	-	49	0.2
5:40 PM	49	48	3	0	585	98	580	600	-	260	100	-	49	0.3
5:45 PM	49	48	4	0	585	98	580	600	-	260	113	-	49	0.3
5:50 PM	49	48	4	0	585	98	580	600	-	260	125	-	49	0.3
5:55 PM	49	48	5	0	585	98	580	600	-	260	138	-	49	0.4
6:00 PM	49	48	5	0	585	98	580	600	-	260	150	-	49	0.4
	585	**580**		**5**		**1,170**							**585**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**150**	**-**	**49**	

(Min=240, Max=900 vph/lane)

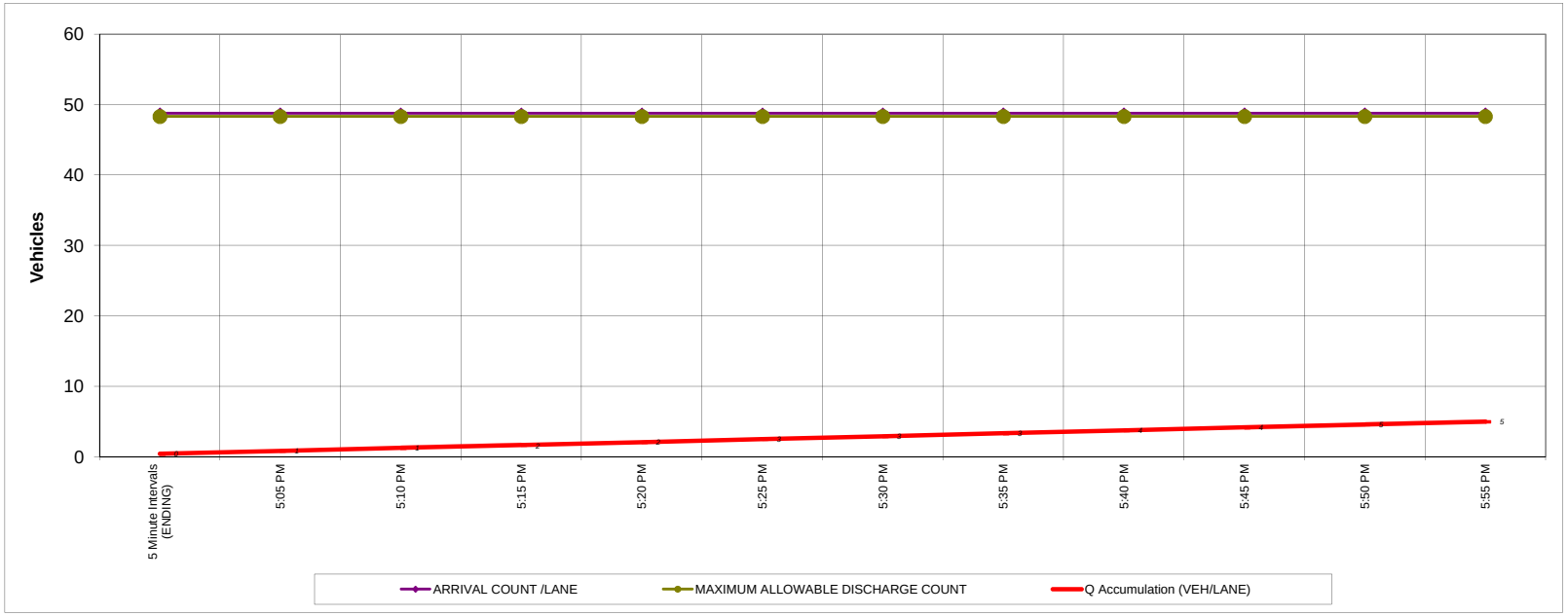
Meter Rate = **580**

Avg Delay/veh (hr)= 0.005

Avg Delay/veh (sec)= **17**

	INPUT
LANES=	**2**
Ramp Length=	260
Car Length (ft)=	30

Storage is Adequate



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FUTURE (2035) ALTERNATIVE 6A

INTERSECTION LEVEL OF SERVICE (LOS) ANALYSIS

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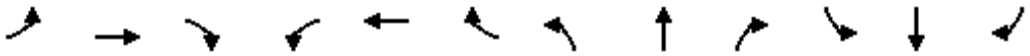
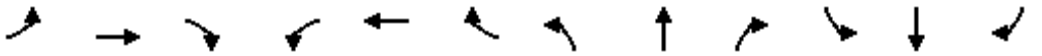


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.95		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (prot)	760	2317		1809	1600	1153		1697	739		2336	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (perm)	760	2317		1809	1600	1153		1697	739		2336	
Volume (vph)	5	45	25	550	20	465	130	90	450	540	35	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	47	26	579	21	489	137	95	474	568	37	337
RTOR Reduction (vph)	0	22	0	0	0	290	0	0	0	0	77	0
Lane Group Flow (vph)	5	51	0	579	21	199	0	232	474	0	865	0
Heavy Vehicles (%)	100%	0%	68%	63%	0%	18%	56%	100%	84%	20%	100%	10%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	17.0		24.5	40.7	40.7		15.5	100.0		27.0	
Effective Green, g (s)	0.8	17.0		24.5	40.7	40.7		15.5	100.0		27.0	
Actuated g/C Ratio	0.01	0.17		0.24	0.41	0.41		0.16	1.00		0.27	
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)	6	394		443	651	469		263	739		631	
v/s Ratio Prot	0.01	0.02		c0.32	0.01			c0.14			c0.37	
v/s Ratio Perm						0.17			c0.64			
v/c Ratio	0.83	0.13		1.31	0.03	0.42		0.91dl	0.64		1.36dl	
Uniform Delay, d1	49.5	35.2		37.8	17.8	21.3		41.4	0.0		36.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	251.1	0.7		153.7	0.1	2.8		27.3	4.2		177.1	
Delay (s)	300.7	35.9		191.4	17.9	24.1		68.7	4.2		213.6	
Level of Service	F	D		F	B	C		E	A		F	
Approach Delay (s)		52.9			112.9			25.4			213.6	
Approach LOS		D			F			C			F	

Intersection Summary			
HCM Average Control Delay	123.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

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

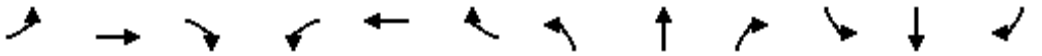
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		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)	2920	4241	1320	1490	4191		2863	2830		2920	4007	1333
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)	2920	4241	1320	1490	4191		2863	2830		2920	4007	1333
Volume (vph)	235	970	160	60	1165	105	265	585	70	75	235	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1021	168	63	1226	111	279	616	74	79	247	211
RTOR Reduction (vph)	0	0	103	0	14	0	0	11	0	0	0	169
Lane Group Flow (vph)	247	1021	65	63	1323	0	279	679	0	79	247	42
Heavy Vehicles (%)	1%	3%	3%	2%	3%	2%	3%	6%	3%	1%	9%	2%
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)	8.8	30.9	30.9	6.4	28.5		10.7	23.5		3.2	16.0	16.0
Effective Green, g (s)	8.8	30.9	30.9	6.4	28.5		10.7	23.5		3.2	16.0	16.0
Actuated g/C Ratio	0.11	0.39	0.39	0.08	0.36		0.13	0.29		0.04	0.20	0.20
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	1638	510	119	1493		383	831		117	801	267
v/s Ratio Prot	c0.08	0.24		0.04	c0.32		c0.10	c0.24		0.03	0.06	
v/s Ratio Perm			0.05									0.03
v/c Ratio	0.77	0.62	0.13	0.53	0.89		0.73	0.82		0.68	0.31	0.16
Uniform Delay, d1	34.6	19.8	15.8	35.4	24.2		33.3	26.2		37.9	27.3	26.4
Progression Factor	0.72	0.48	0.41	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.5	1.4	0.4	4.2	8.1		6.8	8.7		14.3	1.0	1.3
Delay (s)	33.2	10.9	7.0	39.6	32.3		40.0	35.0		52.2	28.3	27.7
Level of Service	C	B	A	D	C		D	C		D	C	C
Approach Delay (s)		14.3			32.7			36.4			31.6	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1476	4012		1322	4206		2782	2951	1271	2217	2951	1308
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)	1476	4012		1322	4206		2782	2951	1271	2217	2951	1308
Volume (vph)	470	1000	340	20	935	50	560	610	45	55	255	305
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	495	1053	358	21	984	53	589	642	47	58	268	321
RTOR Reduction (vph)	0	46	0	0	5	0	0	0	33	0	0	281
Lane Group Flow (vph)	495	1365	0	21	1032	0	589	642	14	58	268	40
Heavy Vehicles (%)	3%	6%	1%	15%	3%	4%	6%	3%	7%	33%	3%	4%
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)	42.6	67.0		4.2	28.6		26.8	38.8	38.8	4.0	16.0	16.0
Effective Green, g (s)	42.6	67.0		4.2	28.6		26.8	38.8	38.8	4.0	16.0	16.0
Actuated g/C Ratio	0.33	0.52		0.03	0.22		0.21	0.30	0.30	0.03	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	484	2068		43	925		574	881	379	68	363	161
v/s Ratio Prot	c0.34	0.34		0.02	c0.25		c0.21	0.22		0.03	c0.09	
v/s Ratio Perm									0.01			0.03
v/c Ratio	1.02	0.66		0.49	1.12		1.03	0.73	0.04	0.85	0.74	0.25
Uniform Delay, d1	43.7	23.1		61.8	50.7		51.6	40.9	32.3	62.7	55.0	51.5
Progression Factor	0.69	0.51		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	46.1	1.6		8.5	66.8		44.4	5.3	0.2	60.8	12.6	3.6
Delay (s)	76.4	13.4		70.3	117.5		96.0	46.1	32.5	123.5	67.6	55.1
Level of Service	E	B		E	F		F	D	C	F	E	E
Approach Delay (s)		29.8			116.6			68.6			66.4	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM Average Control Delay	63.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3010	1193	1505	2980	1462	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3010	1193	1505	2980	1462	1360
Volume (vph)	1020	110	560	1260	270	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1074	116	589	1326	284	63
RTOR Reduction (vph)	0	51	0	0	0	42
Lane Group Flow (vph)	1074	65	589	1326	284	21
Heavy Vehicles (%)	1%	14%	1%	2%	4%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	23.0	35.0	23.0	50.0	12.0	23.0
Effective Green, g (s)	23.0	35.0	23.0	50.0	12.0	23.0
Actuated g/C Ratio	0.33	0.50	0.33	0.71	0.17	0.33
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)	989	665	495	2129	251	447
v/s Ratio Prot	c0.36	0.02	c0.39	0.44	c0.19	0.02
v/s Ratio Perm		0.04				
v/c Ratio	1.09	0.10	1.19	0.62	1.13	0.05
Uniform Delay, d1	23.5	9.2	23.5	5.1	29.0	16.0
Progression Factor	0.35	0.02	1.00	1.00	1.00	1.00
Incremental Delay, d2	51.3	0.0	104.1	1.4	96.9	0.0
Delay (s)	59.6	0.2	127.6	6.5	125.9	16.1
Level of Service	E	A	F	A	F	B
Approach Delay (s)	53.8			43.8	105.9	
Approach LOS	D			D	F	

Intersection Summary			
HCM Average Control Delay	53.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1248	1490	2980	2891	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1248	1490	2980	2891	1333
Volume (vph)	810	360	300	1230	620	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	853	379	316	1295	653	337
RTOR Reduction (vph)	0	249	0	0	0	0
Lane Group Flow (vph)	853	130	316	1295	653	337
Heavy Vehicles (%)	3%	9%	2%	2%	2%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.0	24.0	17.0	45.0	17.0	70.0
Effective Green, g (s)	24.0	24.0	17.0	45.0	17.0	70.0
Actuated g/C Ratio	0.34	0.34	0.24	0.64	0.24	1.00
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)	1012	428	362	1916	702	1333
v/s Ratio Prot	c0.29		c0.21	0.43		
v/s Ratio Perm		0.10			c0.23	0.25
v/c Ratio	0.84	0.30	0.87	0.68	0.93	0.25
Uniform Delay, d1	21.3	16.9	25.5	7.9	25.9	0.0
Progression Factor	1.00	1.00	0.95	0.79	1.00	1.00
Incremental Delay, d2	8.5	1.8	14.8	1.3	18.9	0.5
Delay (s)	29.8	18.7	39.1	7.5	44.9	0.5
Level of Service	C	B	D	A	D	A
Approach Delay (s)	26.4			13.7	29.7	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			3010	1421	1183
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			3010	1421	1183
Volume (vph)	935	0	0	1760	70	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	984	0	0	1853	74	105
RTOR Reduction (vph)	0	0	0	0	0	93
Lane Group Flow (vph)	984	0	0	1853	74	12
Heavy Vehicles (%)	1%	0%	0%	1%	7%	15%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	62.7			62.7	9.3	9.3
Effective Green, g (s)	62.7			62.7	9.3	9.3
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)	2359			2359	165	138
v/s Ratio Prot	0.33			c0.62	c0.05	0.01
v/s Ratio Perm						
v/c Ratio	0.42			0.79	0.45	0.09
Uniform Delay, d1	2.8			4.9	33.0	31.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			2.7	1.9	0.3
Delay (s)	3.3			7.6	34.9	31.8
Level of Service	A			A	C	C
Approach Delay (s)	3.3			7.6	33.1	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	935	340	340	1490	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	984	358	358	1568	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.71	
vC, conflicting volume			984		2663	671
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			984		2929	671
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			48		100	100
cM capacity (veh/h)			691		4	404

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	656	686	358	784	784
Volume Left	0	0	358	0	0
Volume Right	0	358	0	0	0
cSH	1700	1700	691	1700	1700
Volume to Capacity	0.39	0.40	0.52	0.46	0.46
Queue Length 95th (ft)	0	0	75	0	0
Control Delay (s)	0.0	0.0	15.7	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		2.9		
Approach LOS					

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2951	1333		4086		2891		1225			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2951	1333		4086		2891		1225			
Volume (vph)	0	810	290	0	880	230	570	0	260	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	853	305	0	926	242	600	0	274	0	0	0
RTOR Reduction (vph)	0	0	127	0	61	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	853	178	0	1107	0	600	0	274	0	0	0
Heavy Vehicles (%)	0%	3%	2%	0%	4%	2%	2%	0%	11%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		35.0	35.0		35.0		17.0		60.0			
Effective Green, g (s)		35.0	35.0		35.0		17.0		60.0			
Actuated g/C Ratio		0.58	0.58		0.58		0.28		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1721	778		2384		819		1225			
v/s Ratio Prot		c0.29			0.27		c0.21					
v/s Ratio Perm			0.13						0.22			
v/c Ratio		0.50	0.23		0.46		0.73		0.22			
Uniform Delay, d1		7.3	6.0		7.1		19.4		0.0			
Progression Factor		0.77	0.08		1.00		1.00		1.00			
Incremental Delay, d2		0.9	0.6		0.7		3.4		0.4			
Delay (s)		6.6	1.1		7.8		22.9		0.4			
Level of Service		A	A		A		C		A			
Approach Delay (s)		5.1			7.8			15.8			0.0	
Approach LOS		A			A			B			A	

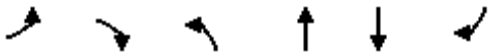
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2843	1386		2980	1283				2782		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2843	1386		2980	1283				2782		2347
Volume (vph)	0	850	810	0	1210	240	0	0	0	250	0	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	895	853	0	1274	253	0	0	0	263	0	663
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	54
Lane Group Flow (vph)	0	913	832	0	1274	253	0	0	0	263	0	609
Heavy Vehicles (%)	0%	2%	6%	0%	2%	6%	0%	0%	0%	6%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.7	60.0		33.7	60.0				18.3		18.3
Effective Green, g (s)		33.7	60.0		33.7	60.0				18.3		18.3
Actuated g/C Ratio		0.56	1.00		0.56	1.00				0.31		0.31
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)		1597	1386		1674	1283				849		716
v/s Ratio Prot		0.32			c0.43					0.09		c0.26
v/s Ratio Perm			0.60			0.20						
v/c Ratio		0.57	0.60		0.76	0.20				0.31		0.85
Uniform Delay, d1		8.5	0.0		10.1	0.0				16.0		19.6
Progression Factor		1.00	1.00		0.74	1.00				1.00		1.00
Incremental Delay, d2		1.5	0.7		2.7	0.1				0.2		9.6
Delay (s)		10.0	0.7		10.1	0.1				16.2		29.1
Level of Service		A	A		B	A				B		C
Approach Delay (s)		5.6			8.5			0.0			25.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

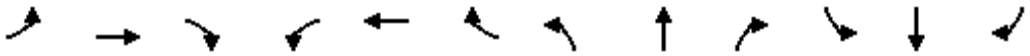
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1271	1394	2951	1553	1236
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1520	1271	901	2951	1553	1236
Volume (vph)	5	265	90	160	220	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	279	95	168	232	11
RTOR Reduction (vph)	0	239	0	0	0	4
Lane Group Flow (vph)	5	40	95	168	232	7
Heavy Vehicles (%)	0%	7%	9%	3%	3%	10%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.5	6.5	30.5	30.5	30.5	30.5
Effective Green, g (s)	6.5	6.5	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
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)	220	184	611	2000	1053	838
v/s Ratio Prot	0.00			0.06	c0.15	
v/s Ratio Perm		c0.03	0.11			0.01
v/c Ratio	0.02	0.22	0.16	0.08	0.22	0.01
Uniform Delay, d1	16.5	17.0	2.6	2.5	2.7	2.4
Progression Factor	1.00	1.00	0.64	0.64	1.00	1.00
Incremental Delay, d2	0.0	0.6	0.5	0.1	0.5	0.0
Delay (s)	16.6	17.6	2.1	1.7	3.2	2.4
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			1.8	3.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1083		3946	1158	2863		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1083		3946	1158	2863		2347			
Volume (vph)	0	1390	690	0	1230	1220	430	0	390	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1463	726	0	1295	1284	453	0	411	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1463	726	0	1452	1110	453	0	407	0	0	0
Heavy Vehicles (%)	0%	2%	8%	0%	3%	1%	3%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		34.0	90.0		34.0	90.0	48.0		48.0			
Effective Green, g (s)		34.0	90.0		34.0	90.0	48.0		48.0			
Actuated g/C Ratio		0.38	1.00		0.38	1.00	0.53		0.53			
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)		1529	1083		1491	1158	1527		1252			
v/s Ratio Prot		0.36			0.37		0.16		0.17			
v/s Ratio Perm			0.67			c0.96						
v/c Ratio		0.96	0.67		0.97	0.96	0.30		0.32			
Uniform Delay, d1		27.3	0.0		27.6	0.0	11.6		11.9			
Progression Factor		0.95	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		11.5	1.2		17.8	17.2	0.1		0.2			
Delay (s)		37.5	1.2		45.4	17.2	11.8		12.0			
Level of Service		D	A		D	B	B		B			
Approach Delay (s)		25.4			33.2			11.9			0.0	
Approach LOS		C			C			B			A	

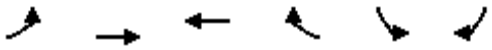
Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		0.93	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3958	1125		3737	1136				2808		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3958	1125		3737	1136				2808		2324
Volume (vph)	0	1700	810	0	580	1080	0	0	0	380	0	600
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1789	853	0	611	1137	0	0	0	400	0	632
RTOR Reduction (vph)	0	9	198	0	160	0	0	0	0	0	0	483
Lane Group Flow (vph)	0	1930	505	0	1019	569	0	0	0	400	0	149
Heavy Vehicles (%)	0%	3%	4%	0%	2%	3%	0%	0%	0%	5%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		64.7	64.7		64.7	90.0				17.3		17.3
Effective Green, g (s)		64.7	64.7		64.7	90.0				17.3		17.3
Actuated g/C Ratio		0.72	0.72		0.72	1.00				0.19		0.19
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)		2845	809		2686	1136				540		447
v/s Ratio Prot		c0.49			0.27					c0.14		
v/s Ratio Perm			0.45			0.50						0.06
v/c Ratio		0.68	0.62		0.38	0.50				0.74		0.33
Uniform Delay, d1		6.9	6.5		4.9	0.0				34.2		31.4
Progression Factor		1.00	1.00		0.63	1.00				1.00		1.00
Incremental Delay, d2		1.3	3.6		0.4	0.1				5.4		0.4
Delay (s)		8.3	10.1		3.4	0.1				39.7		31.8
Level of Service		A	B		A	A				D		C
Approach Delay (s)		8.7			2.3			0.0			34.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1421	3865	4200	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1421	3865	4200	1347	2920	1347
Volume (vph)	150	850	2625	340	415	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	895	2763	358	437	179
RTOR Reduction (vph)	0	0	0	108	0	134
Lane Group Flow (vph)	158	895	2763	250	437	45
Heavy Vehicles (%)	7%	13%	4%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	103.0	85.0	85.0	19.0	19.0
Effective Green, g (s)	14.0	103.0	85.0	85.0	19.0	19.0
Actuated g/C Ratio	0.11	0.79	0.65	0.65	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	3062	2746	881	427	197
v/s Ratio Prot	c0.11	0.23	c0.66		c0.15	
v/s Ratio Perm				0.19		0.03
v/c Ratio	1.03	0.29	1.01	0.28	1.02	0.23
Uniform Delay, d1	58.0	3.6	22.5	9.6	55.5	49.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.7	0.1	18.7	0.2	49.6	2.7
Delay (s)	139.7	3.7	41.2	9.7	105.1	51.7
Level of Service	F	A	D	A	F	D
Approach Delay (s)		24.1	37.6		89.6	
Approach LOS		C	D		F	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4007	680	760	4007		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4007	680	760	4007		1474	680				
Volume (vph)	0	1390	400	10	1930	0	500	0	10	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1463	421	11	2032	0	526	0	11	0	0	0
RTOR Reduction (vph)	0	0	157	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	1463	264	11	2032	0	526	2	0	0	0	0
Heavy Vehicles (%)	0%	9%	100%	100%	9%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		56.4	56.4	1.6	62.0		20.0	20.0				
Effective Green, g (s)		56.4	56.4	1.6	62.0		20.0	20.0				
Actuated g/C Ratio		0.63	0.63	0.02	0.69		0.22	0.22				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2511	426	14	2760		328	151				
v/s Ratio Prot		0.37		0.01	c0.51		c0.36	0.00				
v/s Ratio Perm			0.39									
v/c Ratio		0.58	0.62	0.79	0.74		1.60	0.02				
Uniform Delay, d1		9.9	10.3	44.0	8.8		35.0	27.3				
Progression Factor		1.00	1.00	0.75	0.47		1.00	1.00				
Incremental Delay, d2		1.0	6.6	125.3	1.7		285.5	0.0				
Delay (s)		10.9	16.9	158.2	5.8		320.5	27.4				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		12.2			6.7			314.5			0.0	
Approach LOS		B			A			F			A	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	3798	2633	4160	2808	2397
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	3798	2633	4160	2808	2397
Volume (vph)	580	540	210	1000	490	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	611	568	221	1053	516	168
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	611	568	221	1053	516	168
Heavy Vehicles (%)	5%	15%	12%	5%	5%	23%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	26.0	46.4	11.7	32.1	19.9	19.9
Effective Green, g (s)	26.0	46.4	11.7	32.1	19.9	19.9
Actuated g/C Ratio	0.29	0.52	0.13	0.36	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	811	1958	342	1484	621	530
v/s Ratio Prot	c0.22	0.15	0.08	c0.25	c0.18	0.07
v/s Ratio Perm						
v/c Ratio	0.75	0.29	0.65	0.71	0.83	0.32
Uniform Delay, d1	29.1	12.4	37.2	24.9	33.4	29.4
Progression Factor	0.68	0.37	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.3	4.2	2.9	9.2	0.3
Delay (s)	23.2	4.9	41.3	27.8	42.7	29.7
Level of Service	C	A	D	C	D	C
Approach Delay (s)		14.4		30.2		
Approach LOS		B		C		

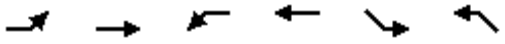
Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2359	3640	1966	4241	2587	2782
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2359	3640	1966	4241	2587	2782
Volume (vph)	550	565	10	1645	390	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	579	595	11	1732	411	253
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	579	595	11	1732	411	253
Heavy Vehicles (%)	25%	20%	50%	3%	14%	6%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.0	54.2	0.8	35.0	13.0	13.0
Effective Green, g (s)	20.0	54.2	0.8	35.0	13.0	13.0
Actuated g/C Ratio	0.25	0.68	0.01	0.44	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	590	2466	20	1855	420	452
v/s Ratio Prot	c0.25	0.16	0.01	c0.41	c0.16	0.09
v/s Ratio Perm						
v/c Ratio	0.98	0.24	0.55	0.93	0.98	0.56
Uniform Delay, d1	29.8	5.0	39.4	21.4	33.4	30.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.2	0.2	28.9	10.2	37.8	1.5
Delay (s)	62.0	5.2	68.3	31.6	71.2	32.4
Level of Service	E	A	E	C	E	C
Approach Delay (s)		33.2		31.8		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	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	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	2951	2705	4368	2891	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	2951	2705	4368	2891	2949
Volume (vph)	630	715	570	745	400	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	663	753	600	784	421	147
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	663	753	600	784	421	147
Heavy Vehicles (%)	2%	3%	9%	0%	2%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	35.0	49.4	28.4	42.8	20.2	20.2
Effective Green, g (s)	35.0	49.4	28.4	42.8	20.2	20.2
Actuated g/C Ratio	0.32	0.45	0.26	0.39	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)	920	1325	698	1700	531	542
v/s Ratio Prot	c0.23	c0.26	c0.22	0.18	c0.15	0.05
v/s Ratio Perm						
v/c Ratio	0.72	0.57	0.86	0.46	0.79	0.27
Uniform Delay, d1	33.2	22.4	38.9	25.0	42.9	38.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	1.8	10.3	0.9	8.0	0.3
Delay (s)	36.0	24.2	49.2	25.9	50.9	38.8
Level of Service	D	C	D	C	D	D
Approach Delay (s)		29.7		36.0		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2542	4325	2863	4368	2835	2705
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2542	4325	2863	4368	2835	2705
Volume (vph)	270	365	510	1025	420	680
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	384	537	1079	442	716
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	384	537	1079	442	716
Heavy Vehicles (%)	16%	1%	3%	0%	4%	9%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	8.8	15.1	12.6	18.9	17.1	17.1
Effective Green, g (s)	8.8	15.1	12.6	18.9	17.1	17.1
Actuated g/C Ratio	0.15	0.27	0.22	0.33	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	394	1150	635	1453	853	814
v/s Ratio Prot	c0.11	0.09	c0.19	c0.25	0.16	c0.26
v/s Ratio Perm						
v/c Ratio	0.72	0.33	0.85	0.74	0.52	0.88
Uniform Delay, d1	22.8	16.8	21.2	16.8	16.4	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	0.2	10.1	2.1	0.5	10.7
Delay (s)	29.2	17.0	31.3	18.9	17.0	29.6
Level of Service	C	B	C	B	B	C
Approach Delay (s)		22.2		23.0		
Approach LOS		C		C		

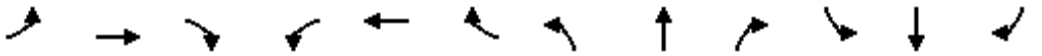
Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2782	4282	2808	4241	2835	2657
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2782	4282	2808	4241	2835	2657
Volume (vph)	270	850	300	685	510	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	895	316	721	537	137
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	895	316	721	537	137
Heavy Vehicles (%)	6%	2%	5%	3%	4%	11%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	6.0	14.3	6.0	14.3	10.0	10.0
Effective Green, g (s)	6.0	14.3	6.0	14.3	10.0	10.0
Actuated g/C Ratio	0.14	0.34	0.14	0.34	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	395	1448	398	1434	670	628
v/s Ratio Prot	0.10	c0.21	c0.11	0.17	c0.19	0.05
v/s Ratio Perm						
v/c Ratio	0.72	0.62	0.79	0.50	0.80	0.22
Uniform Delay, d1	17.3	11.7	17.6	11.2	15.2	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.2	0.8	10.4	0.3	6.9	0.2
Delay (s)	23.5	12.5	28.0	11.4	22.1	13.2
Level of Service	C	B	C	B	C	B
Approach Delay (s)		15.2		16.5		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4264			4241	1333			2370	2891		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4264			4241	1333			2370	2891		1295
Volume (vph)	90	1880	55	0	1755	160	0	0	420	470	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1979	58	0	1847	168	0	0	442	495	0	16
RTOR Reduction (vph)	0	3	0	0	0	101	0	0	16	0	0	13
Lane Group Flow (vph)	95	2034	0	0	1847	67	0	0	426	495	0	3
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	1%	2%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Effective Green, g (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Actuated g/C Ratio	0.07	0.51			0.40	0.40			0.18	0.18		0.18
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)	101	2179			1696	533			421	514		230
v/s Ratio Prot	0.06	c0.48			c0.44					c0.17		
v/s Ratio Perm						0.05			c0.18			0.00
v/c Ratio	0.94	0.93			1.09	0.13			1.01	0.96		0.01
Uniform Delay, d1	41.8	20.6			27.0	17.1			37.0	36.7		30.5
Progression Factor	1.00	1.00			0.71	0.25			1.00	0.96		0.94
Incremental Delay, d2	70.3	8.9			50.0	0.5			47.1	28.7		0.0
Delay (s)	112.1	29.5			69.2	4.7			84.1	64.1		28.7
Level of Service	F	C			E	A			F	E		C
Approach Delay (s)		33.2			63.8			84.1			62.9	
Approach LOS		C			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4368	2891	4241	2782	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4368	2891	4241	2782	2891
Volume (vph)	370	820	730	655	270	520
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	389	863	768	689	284	547
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	389	863	768	689	284	547
Heavy Vehicles (%)	4%	0%	2%	3%	6%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.1	29.8	27.6	38.3	20.6	20.6
Effective Green, g (s)	19.1	29.8	27.6	38.3	20.6	20.6
Actuated g/C Ratio	0.21	0.33	0.31	0.43	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	602	1446	887	1805	637	662
v/s Ratio Prot	0.14	c0.20	c0.27	0.16	0.10	c0.19
v/s Ratio Perm						
v/c Ratio	0.65	0.60	0.87	0.38	0.45	0.83
Uniform Delay, d1	32.4	25.1	29.5	17.7	29.8	33.0
Progression Factor	0.79	0.74	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.6	8.9	0.6	0.5	8.3
Delay (s)	26.3	19.2	38.3	18.3	30.3	41.3
Level of Service	C	B	D	B	C	D
Approach Delay (s)		21.4		28.9		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	2951	2835	2951	2863	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	2951	2835	2951	2863	2835
Volume (vph)	280	935	570	810	220	280
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	984	600	853	232	295
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	295	984	600	853	232	295
Heavy Vehicles (%)	4%	3%	4%	3%	3%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.5	34.4	22.1	44.0	11.5	11.5
Effective Green, g (s)	12.5	34.4	22.1	44.0	11.5	11.5
Actuated g/C Ratio	0.16	0.43	0.28	0.55	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	443	1269	783	1623	412	408
v/s Ratio Prot	0.10	c0.33	c0.21	0.29	0.08	c0.10
v/s Ratio Perm						
v/c Ratio	0.67	0.78	0.77	0.53	0.56	0.72
Uniform Delay, d1	31.8	19.5	26.6	11.4	31.9	32.7
Progression Factor	1.00	1.00	0.41	0.15	1.00	1.00
Incremental Delay, d2	3.8	4.7	2.7	0.7	1.8	6.2
Delay (s)	35.5	24.2	13.7	2.4	33.7	39.0
Level of Service	D	C	B	A	C	D
Approach Delay (s)		26.8		7.1		
Approach LOS		C		A		

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4160	2730	4325	2808	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4160	2730	4325	2808	2920
Volume (vph)	520	820	420	1295	310	720
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	547	863	442	1363	326	758
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	547	863	442	1363	326	758
Heavy Vehicles (%)	2%	5%	8%	1%	5%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.8	50.9	30.0	53.1	37.1	37.1
Effective Green, g (s)	27.8	50.9	30.0	53.1	37.1	37.1
Actuated g/C Ratio	0.21	0.39	0.23	0.41	0.29	0.29
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)	618	1629	630	1767	801	833
v/s Ratio Prot	c0.19	0.21	0.16	c0.32	0.12	c0.26
v/s Ratio Perm						
v/c Ratio	0.89	0.53	0.70	0.77	0.41	0.91
Uniform Delay, d1	49.6	30.4	45.9	33.2	37.6	44.8
Progression Factor	1.00	1.00	0.41	0.27	1.00	1.00
Incremental Delay, d2	14.2	1.2	1.4	1.3	0.3	13.7
Delay (s)	63.8	31.6	20.2	10.3	37.9	58.5
Level of Service	E	C	C	B	D	E
Approach Delay (s)		44.1		12.7		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2764			2338	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2764			2338	760	680
Volume (vph)	270	0	0	230	85	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	0	0	242	89	111
RTOR Reduction (vph)	0	0	0	0	0	35
Lane Group Flow (vph)	284	0	0	242	89	76
Heavy Vehicles (%)	10%	0%	0%	30%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.1			11.1	40.9	40.9
Effective Green, g (s)	11.1			11.1	40.9	40.9
Actuated g/C Ratio	0.18			0.18	0.68	0.68
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)	511			433	518	464
v/s Ratio Prot	0.10			c0.10	c0.12	
v/s Ratio Perm						0.11
v/c Ratio	0.56			0.56	0.17	0.16
Uniform Delay, d1	22.2			22.2	3.4	3.4
Progression Factor	0.76			1.00	1.00	1.00
Incremental Delay, d2	1.3			1.6	0.7	0.8
Delay (s)	18.1			23.8	4.2	4.2
Level of Service	B			C	A	A
Approach Delay (s)	18.1			23.8	4.2	
Approach LOS	B			C	A	

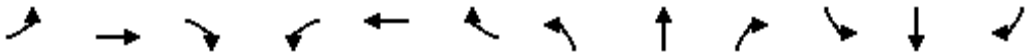
Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2764	680	760	2492		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2764	680	760	2492		
Volume (vph)	270	85	105	205	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	89	111	216	0	0
RTOR Reduction (vph)	0	30	0	0	0	0
Lane Group Flow (vph)	284	59	111	216	0	0
Heavy Vehicles (%)	10%	100%	100%	22%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	39.9	39.9	12.1	60.0		
Effective Green, g (s)	39.9	39.9	12.1	60.0		
Actuated g/C Ratio	0.66	0.66	0.20	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1838	452	153	2492		
v/s Ratio Prot	c0.10		c0.15	0.09		
v/s Ratio Perm		0.09				
v/c Ratio	0.15	0.13	0.73	0.09		
Uniform Delay, d1	3.8	3.7	22.4	0.0		
Progression Factor	1.00	1.00	0.60	1.00		
Incremental Delay, d2	0.0	0.1	14.3	0.0		
Delay (s)	3.8	3.8	27.7	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.8			9.4	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

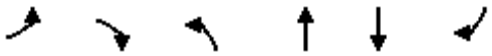
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1333	1295	1246	1212		1448	2628		1169	2891	
Flt Permitted	0.35	1.00	1.00	0.66	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	527	1333	1295	870	1212		1448	2628		1169	2891	
Volume (vph)	10	140	585	75	80	50	250	655	150	75	545	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	147	616	79	84	53	263	689	158	79	574	5
RTOR Reduction (vph)	0	0	72	0	22	0	0	18	0	0	1	0
Lane Group Flow (vph)	11	147	544	79	115	0	263	829	0	79	578	0
Heavy Vehicles (%)	5%	20%	5%	22%	24%	25%	5%	5%	45%	30%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	14.4	14.4	44.7	20.2	20.2		30.3	53.1		9.9	32.7	
Effective Green, g (s)	14.4	14.4	44.7	20.2	20.2		30.3	53.1		9.9	32.7	
Actuated g/C Ratio	0.14	0.14	0.45	0.20	0.20		0.30	0.53		0.10	0.33	
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)	83	192	579	201	245		439	1395		116	945	
v/s Ratio Prot	0.00	0.11	c0.28	0.03	c0.10		0.18	c0.32		0.07	0.20	
v/s Ratio Perm	0.02		0.14	0.05								
v/c Ratio	0.13	0.77	0.94	0.39	0.47		0.60	0.59		0.68	0.61	
Uniform Delay, d1	37.1	41.2	26.4	35.0	35.2		29.7	16.1		43.5	28.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	16.5	23.2	1.3	1.4		2.2	1.9		15.2	3.0	
Delay (s)	37.9	57.7	49.6	36.3	36.6		31.9	17.9		58.7	31.3	
Level of Service	D	E	D	D	D		C	B		E	C	
Approach Delay (s)		50.9			36.5			21.2			34.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.0%	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)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	2077	1172	1169	5242	2812	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	2077	1172	1169	5242	2812	
Volume (vph)	260	115	160	1230	915	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	121	168	1295	963	79
RTOR Reduction (vph)	0	102	0	0	6	0
Lane Group Flow (vph)	274	19	168	1295	1036	0
Heavy Vehicles (%)	42%	16%	30%	5%	5%	30%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	15.4	15.4	17.1	45.2	55.5	
Effective Green, g (s)	15.4	15.4	17.1	45.2	55.5	
Actuated g/C Ratio	0.15	0.15	0.17	0.45	0.56	
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)	320	180	200	2369	1561	
v/s Ratio Prot	c0.13		c0.14	0.25	c0.37	
v/s Ratio Perm		0.02				
v/c Ratio	0.86	0.10	0.84	0.55	0.66	
Uniform Delay, d1	41.2	36.4	40.1	19.9	15.7	
Progression Factor	1.00	1.00	1.00	1.00	0.36	
Incremental Delay, d2	19.6	0.3	25.4	0.9	0.7	
Delay (s)	60.8	36.6	65.5	20.9	6.4	
Level of Service	E	D	E	C	A	
Approach Delay (s)	53.4			26.0	6.4	
Approach LOS	D			C	A	

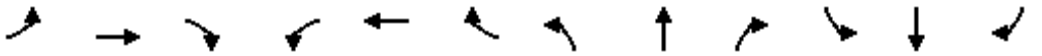
Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2714	2196	1490	2787	
Flt Permitted		0.91		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1331		2808	1318			2714	2196	1490	2787	
Volume (vph)	5	0	5	480	5	50	0	1090	400	30	505	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	505	5	53	0	1147	421	32	532	5
RTOR Reduction (vph)	0	4	0	0	32	0	0	0	231	0	1	0
Lane Group Flow (vph)	0	6	0	505	26	0	0	1147	190	32	536	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	12%	9%	2%	9%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		15.4		21.0	40.4			45.2	45.2	2.4	30.5	
Effective Green, g (s)		15.4		21.0	40.4			45.2	45.2	2.4	30.5	
Actuated g/C Ratio		0.15		0.21	0.40			0.45	0.45	0.02	0.30	
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)		205		590	532			1227	993	36	850	
v/s Ratio Prot				c0.18	c0.02			c0.42	0.09	0.02	c0.19	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.86	0.05			0.93	0.19	0.89	0.63	
Uniform Delay, d1		35.9		38.0	18.1			26.0	16.4	48.7	29.9	
Progression Factor		1.00		1.00	1.00			0.38	0.20	1.00	1.00	
Incremental Delay, d2		0.1		11.7	0.0			12.1	0.3	104.6	3.5	
Delay (s)		36.0		49.7	18.2			22.0	3.7	153.2	33.5	
Level of Service		D		D	B			C	A	F	C	
Approach Delay (s)		36.0			46.5			17.1			40.2	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

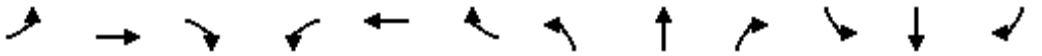
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1568	4312		2928	4219	1350	1538	4107	2333	2956	4071	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1568	4312		2928	4219	1350	1538	4107	2333	2956	4071	2422
Volume (vph)	125	720	40	220	480	385	50	900	615	250	1080	775
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	758	42	232	505	405	53	947	647	263	1137	816
RTOR Reduction (vph)	0	6	0	0	0	99	0	0	54	0	0	95
Lane Group Flow (vph)	132	794	0	232	505	306	53	947	593	263	1137	721
Heavy Vehicles (%)	3%	7%	3%	7%	10%	7%	5%	13%	9%	6%	14%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	23.2		16.0	23.2	36.4	4.8	31.6	47.6	13.2	40.0	56.0
Effective Green, g (s)	16.0	23.2		16.0	23.2	36.4	4.8	31.6	47.6	13.2	40.0	56.0
Actuated g/C Ratio	0.16	0.23		0.16	0.23	0.36	0.05	0.32	0.48	0.13	0.40	0.56
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)	251	1000		468	979	491	74	1298	1111	390	1628	1453
v/s Ratio Prot	0.08	c0.18		0.08	0.12	0.08	0.03	c0.23	0.09	0.09	c0.28	c0.08
v/s Ratio Perm						0.14			0.17			0.22
v/c Ratio	0.53	0.79		0.50	0.52	0.62	0.72	0.73	0.53	0.67	0.70	0.50
Uniform Delay, d1	38.5	36.1		38.3	33.5	26.2	46.9	30.4	18.4	41.4	25.0	13.4
Progression Factor	1.27	1.17		0.74	0.69	0.98	0.30	0.04	0.59	1.38	0.75	1.18
Incremental Delay, d2	1.9	6.3		0.7	1.7	2.2	12.8	1.5	0.2	3.7	2.1	0.1
Delay (s)	50.8	48.8		28.9	25.0	27.7	27.0	2.9	11.1	60.9	20.7	15.9
Level of Service	D	D		C	C	C	C	A	B	E	C	B
Approach Delay (s)		49.1			26.7			6.9			23.7	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.0%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4337	1403		4337					3013	1635	2445
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4337	1403		4337					3013	1635	2445
Volume (vph)	0	670	295	0	1305	0	0	0	0	215	470	555
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	705	311	0	1374	0	0	0	0	226	495	584
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	0	16
Lane Group Flow (vph)	0	705	183	0	1374	0	0	0	0	226	495	568
Heavy Vehicles (%)	0%	7%	3%	3%	7%	0%	0%	0%	0%	4%	4%	4%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		56.6	56.6		56.6					35.4	35.4	35.4
Effective Green, g (s)		56.6	56.6		56.6					35.4	35.4	35.4
Actuated g/C Ratio		0.57	0.57		0.57					0.35	0.35	0.35
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)		2455	794		2455					1067	579	866
v/s Ratio Prot		0.16			c0.32					0.08	c0.30	
v/s Ratio Perm			0.13									0.23
v/c Ratio		0.29	0.23		0.56					0.21	0.85	0.66
Uniform Delay, d1		11.2	10.8		13.8					22.6	29.9	27.2
Progression Factor		1.00	1.00		0.54					1.00	1.00	1.00
Incremental Delay, d2		0.3	0.7		0.8					0.1	11.8	1.8
Delay (s)		11.5	11.5		8.3					22.7	41.7	29.0
Level of Service		B	B		A					C	D	C
Approach Delay (s)		11.5			8.3			0.0			32.7	
Approach LOS		B			A			A			C	

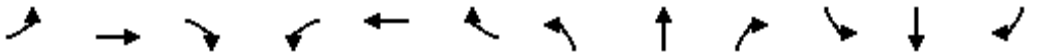
Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	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	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3312	2707	3335	3252	1583	3400	1680		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3312	2707	3335	3252	1583	3400	1680		1770	1810	1583
Volume (vph)	30	990	565	165	745	25	315	140	205	35	120	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1042	595	174	784	26	332	147	216	37	126	26
RTOR Reduction (vph)	0	0	217	0	0	11	0	55	0	0	0	23
Lane Group Flow (vph)	32	1042	378	174	784	15	332	308	0	37	126	3
Heavy Vehicles (%)	2%	9%	5%	5%	11%	2%	3%	3%	3%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	46.2	63.5	8.6	51.2	59.5	17.3	20.9		8.3	11.9	11.9
Effective Green, g (s)	3.6	46.2	63.5	8.6	51.2	59.5	17.3	20.9		8.3	11.9	11.9
Actuated g/C Ratio	0.04	0.46	0.64	0.09	0.51	0.60	0.17	0.21		0.08	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	64	1530	1827	287	1665	1005	588	351		147	215	188
v/s Ratio Prot	0.02	c0.31	0.04	c0.05	c0.24	0.00	c0.10	c0.18		0.02	0.07	
v/s Ratio Perm			0.10			0.01						0.00
v/c Ratio	0.50	0.68	0.21	0.61	0.47	0.02	0.56	0.88		0.25	0.59	0.02
Uniform Delay, d1	47.3	21.1	7.7	44.1	15.7	8.3	37.9	38.3		42.9	41.7	38.9
Progression Factor	0.78	0.43	0.42	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.4	1.8	0.0	3.6	1.0	0.0	1.2	21.2		0.9	4.0	0.0
Delay (s)	41.1	11.0	3.2	47.7	16.6	8.3	39.1	59.5		43.8	45.8	38.9
Level of Service	D	B	A	D	B	A	D	E		D	D	D
Approach Delay (s)		8.8			21.9			49.8			44.4	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

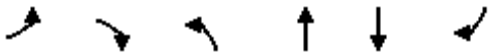
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3136	1389					5268	1403	3042	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3136	1389					5268	1403	3042	4071	
Volume (vph)	0	175	590	0	0	0	0	1565	330	215	1125	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	184	621	0	0	0	0	1647	347	226	1184	0
RTOR Reduction (vph)	0	0	20	0	0	0	0	0	226	0	0	0
Lane Group Flow (vph)	0	184	601	0	0	0	0	1647	121	226	1184	0
Heavy Vehicles (%)	0%	3%	4%	0%	0%	0%	0%	11%	3%	3%	14%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		44.2	44.2					34.8	34.8	9.0	47.8	
Effective Green, g (s)		44.2	44.2					34.8	34.8	9.0	47.8	
Actuated g/C Ratio		0.44	0.44					0.35	0.35	0.09	0.48	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1386	614					1833	488	274	1946	
v/s Ratio Prot		0.06						c0.31		c0.07	0.29	
v/s Ratio Perm			c0.43						0.09			
v/c Ratio		0.13	0.98					0.90	0.25	0.82	0.61	
Uniform Delay, d1		16.5	27.4					30.9	23.3	44.7	19.2	
Progression Factor		0.48	0.46					1.00	1.00	0.57	0.24	
Incremental Delay, d2		0.0	25.9					7.5	1.2	13.8	1.1	
Delay (s)		8.0	38.6					38.4	24.5	39.1	5.7	
Level of Service		A	D					D	C	D	A	
Approach Delay (s)		31.6			0.0			36.0			11.1	
Approach LOS		C			A			D			B	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

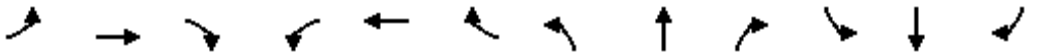
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2469		4219	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2469		4219	4107	
Volume (vph)	0	730	0	1410	1375	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	768	0	1484	1447	0
RTOR Reduction (vph)	0	19	0	0	0	0
Lane Group Flow (vph)	0	749	0	1484	1447	0
Heavy Vehicles (%)	0%	3%	0%	10%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		34.5		57.5	57.5	
Effective Green, g (s)		34.5		57.5	57.5	
Actuated g/C Ratio		0.34		0.58	0.58	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		852		2426	2362	
v/s Ratio Prot				0.35	c0.35	
v/s Ratio Perm		c0.30				
v/c Ratio		0.88		0.61	0.61	
Uniform Delay, d1		30.8		13.9	13.9	
Progression Factor		1.00		0.52	1.00	
Incremental Delay, d2		10.2		0.8	1.2	
Delay (s)		41.0		8.0	15.1	
Level of Service		D		A	B	
Approach Delay (s)	41.0			8.0	15.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

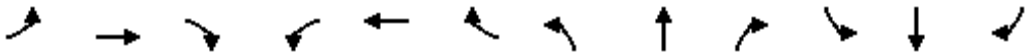
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Volume (vph)	215	1045	125	75	1120	55	155	690	140	120	645	265
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)	234	1136	136	82	1217	60	168	750	152	130	701	288
RTOR Reduction (vph)	0	0	80	0	0	40	0	0	34	0	0	23
Lane Group Flow (vph)	234	1136	56	82	1217	20	168	750	118	130	701	265
Heavy Vehicles (%)	20%	18%	4%	4%	23%	4%	5%	2%	1%	3%	3%	20%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Effective Green, g (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Actuated g/C Ratio	0.17	0.42	0.42	0.10	0.34	0.34	0.11	0.24	0.34	0.09	0.22	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	229	1632	576	148	1283	472	169	760	537	141	690	518
v/s Ratio Prot	c0.17	0.29		0.05	c0.32		c0.11	c0.24	0.02	0.08	0.22	0.09
v/s Ratio Perm			0.04			0.01			0.06			0.13
v/c Ratio	1.02	0.70	0.10	0.55	0.95	0.04	0.99	0.99	0.22	0.92	1.02	0.51
Uniform Delay, d1	41.5	24.1	17.8	43.2	32.1	22.1	44.5	37.8	23.9	45.2	39.0	23.3
Progression Factor	1.10	0.72	1.45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	62.7	2.3	0.3	4.4	15.5	0.2	67.2	29.1	0.2	52.6	38.3	0.9
Delay (s)	108.4	19.7	26.2	47.7	47.6	22.3	111.6	66.9	24.1	97.8	77.3	24.1
Level of Service	F	B	C	D	D	C	F	E	C	F	E	C
Approach Delay (s)		34.1			46.5			67.9			66.0	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	51.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

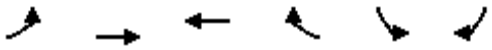
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2304	4472			4359	1204	2748		1268			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2304	4472			4359	1204	2748		1268			
Volume (vph)	185	1375	0	0	1355	355	90	0	120	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)	201	1495	0	0	1473	386	98	0	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	139	0	0	56	0	0	0
Lane Group Flow (vph)	201	1495	0	0	1473	247	98	0	74	0	0	0
Heavy Vehicles (%)	36%	16%	0%	0%	19%	20%	14%	0%	14%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.0	80.9			63.9	63.9	11.1		11.1			
Effective Green, g (s)	13.0	80.9			63.9	63.9	11.1		11.1			
Actuated g/C Ratio	0.13	0.81			0.64	0.64	0.11		0.11			
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)	300	3618			2785	769	305		141			
v/s Ratio Prot	c0.09	0.33			c0.34							
v/s Ratio Perm						0.20	0.04		c0.06			
v/c Ratio	0.67	0.41			0.53	0.32	0.32		0.52			
Uniform Delay, d1	41.5	2.7			9.8	8.2	41.0		42.0			
Progression Factor	0.80	0.54			0.49	0.05	1.00		1.00			
Incremental Delay, d2	5.4	0.3			0.4	0.6	0.6		3.5			
Delay (s)	38.6	1.8			5.3	1.1	41.6		45.5			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		6.2			4.4			43.8			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.6%	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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6156	4359		3242	2515
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6156	4359		3242	2515
Volume (vph)	0	930	1445	0	630	370
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1011	1571	0	685	402
RTOR Reduction (vph)	0	0	0	0	0	21
Lane Group Flow (vph)	0	1011	1571	0	685	381
Heavy Vehicles (%)	0%	25%	19%	0%	8%	13%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		53.0	53.0		39.0	39.0
Effective Green, g (s)		53.0	53.0		39.0	39.0
Actuated g/C Ratio		0.53	0.53		0.39	0.39
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)		3263	2310		1264	981
v/s Ratio Prot		0.16	c0.36			
v/s Ratio Perm					c0.21	0.15
v/c Ratio		0.31	0.68		0.54	0.39
Uniform Delay, d1		13.2	17.3		23.6	21.9
Progression Factor		0.04	0.27		1.00	1.00
Incremental Delay, d2		0.2	1.4		1.7	1.2
Delay (s)		0.7	6.1		25.3	23.1
Level of Service		A	A		C	C
Approach Delay (s)		0.7	6.1		24.5	
Approach LOS		A	A		C	

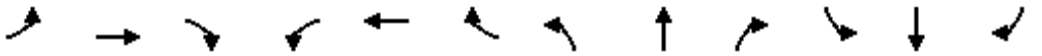
Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1822	3967	1445	1170	5148	736	1615	850	1129	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.55	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)	1822	3967	1445	1170	5148	736	938	850	1129	421	1615	722
Volume (vph)	295	815	90	310	1310	195	50	20	30	85	305	230
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)	321	886	98	337	1424	212	54	22	33	92	332	250
RTOR Reduction (vph)	0	0	72	0	0	94	0	0	20	0	0	46
Lane Group Flow (vph)	321	886	26	337	1424	118	54	22	13	92	332	204
Heavy Vehicles (%)	72%	17%	0%	38%	7%	59%	0%	100%	28%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	20.4	26.3	26.3	30.7	36.6	55.6	11.2	8.0	38.7	31.0	23.8	44.2
Effective Green, g (s)	20.4	26.3	26.3	30.7	36.6	55.6	11.2	8.0	38.7	31.0	23.8	44.2
Actuated g/C Ratio	0.20	0.26	0.26	0.31	0.37	0.56	0.11	0.08	0.39	0.31	0.24	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	372	1043	380	359	1884	439	127	68	482	204	384	348
v/s Ratio Prot	0.18	c0.22		c0.29	0.28	0.05	0.01	0.03	0.01	c0.09	c0.21	0.12
v/s Ratio Perm			0.02			0.11	0.03		0.00	0.05		0.16
v/c Ratio	0.86	0.85	0.07	0.94	0.76	0.27	0.43	0.32	0.03	0.45	0.86	0.59
Uniform Delay, d1	38.4	35.0	27.7	33.7	27.8	11.6	40.8	43.4	19.0	27.0	36.6	21.0
Progression Factor	1.00	1.00	1.00	1.26	1.01	1.09	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.2	8.6	0.3	27.1	2.3	0.2	2.3	2.8	0.0	1.6	17.9	2.5
Delay (s)	56.7	43.6	28.0	69.5	30.4	12.9	43.1	46.2	19.0	28.5	54.5	23.5
Level of Service	E	D	C	E	C	B	D	D	B	C	D	C
Approach Delay (s)		45.7			35.2			36.4			39.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Volume (vph)	215	1045	125	75	1120	55	155	690	140	120	645	265
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)	234	1136	136	82	1217	60	168	750	152	130	701	288
RTOR Reduction (vph)	0	0	80	0	0	40	0	0	34	0	0	23
Lane Group Flow (vph)	234	1136	56	82	1217	20	168	750	118	130	701	265
Heavy Vehicles (%)	20%	18%	4%	4%	23%	4%	5%	2%	1%	3%	3%	20%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Effective Green, g (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Actuated g/C Ratio	0.17	0.42	0.42	0.10	0.34	0.34	0.11	0.24	0.34	0.09	0.22	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	229	1632	576	148	1283	472	169	760	537	141	690	518
v/s Ratio Prot	c0.17	0.29		0.05	c0.32		c0.11	c0.24	0.02	0.08	0.22	0.09
v/s Ratio Perm			0.04			0.01			0.06			0.13
v/c Ratio	1.02	0.70	0.10	0.55	0.95	0.04	0.99	0.99	0.22	0.92	1.02	0.51
Uniform Delay, d1	41.5	24.1	17.8	43.2	32.1	22.1	44.5	37.8	23.9	45.2	39.0	23.3
Progression Factor	1.09	1.10	2.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	60.9	2.1	0.3	4.4	15.5	0.2	67.2	29.1	0.2	52.6	38.3	0.9
Delay (s)	106.3	28.7	50.1	47.7	47.6	22.3	111.6	66.9	24.1	97.8	77.3	24.1
Level of Service	F	C	D	D	D	C	F	E	C	F	E	C
Approach Delay (s)		42.7			46.5			67.9			66.0	
Approach LOS		D			D			E			E	

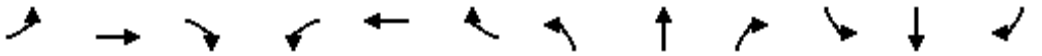
Intersection Summary			
HCM Average Control Delay	54.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	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	0.97	0.91			0.81	1.00	0.97		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)	2575	4550			6466	1346	1945		1242			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2575	4550			6466	1346	1945		1242			
Volume (vph)	185	1290	0	0	1355	355	320	0	205	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)	201	1402	0	0	1473	386	348	0	223	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	226	0	0	28	0	0	0
Lane Group Flow (vph)	201	1402	0	0	1473	160	348	0	195	0	0	0
Heavy Vehicles (%)	36%	14%	0%	0%	19%	20%	80%	0%	30%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	12.6	58.0			41.4	41.4	34.0		34.0			
Effective Green, g (s)	12.6	58.0			41.4	41.4	34.0		34.0			
Actuated g/C Ratio	0.13	0.58			0.41	0.41	0.34		0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	324	2639			2677	557	661		422			
v/s Ratio Prot	c0.08	c0.31			0.23							
v/s Ratio Perm						0.12	c0.18		0.16			
v/c Ratio	0.62	0.53			0.55	0.29	0.53		0.46			
Uniform Delay, d1	41.4	12.7			22.2	19.5	26.5		25.8			
Progression Factor	0.78	0.95			0.50	0.41	1.00		1.00			
Incremental Delay, d2	3.3	0.7			0.5	0.8	3.0		3.6			
Delay (s)	35.8	12.9			11.6	8.8	29.5		29.5			
Level of Service	D	B			B	A	C		C			
Approach Delay (s)		15.7			11.0			29.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

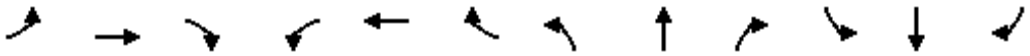
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6256	1413	2238	4021					3242		2515
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6256	1413	2238	4021					3242		2515
Volume (vph)	0	845	335	175	1500	0	0	0	0	630	0	370
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	918	364	190	1630	0	0	0	0	685	0	402
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	918	158	190	1630	0	0	0	0	685	0	372
Heavy Vehicles (%)	0%	23%	80%	40%	29%	0%	0%	0%	0%	8%	0%	13%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		43.5	43.5	11.5	59.0					33.0		33.0
Effective Green, g (s)		43.5	43.5	11.5	59.0					33.0		33.0
Actuated g/C Ratio		0.44	0.44	0.12	0.59					0.33		0.33
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)		2721	615	257	2372					1070		830
v/s Ratio Prot		0.15		0.08	c0.41							
v/s Ratio Perm			0.11							c0.21		0.15
v/c Ratio		0.34	0.26	0.74	0.69					0.64		0.45
Uniform Delay, d1		18.7	18.0	42.8	14.1					28.5		26.3
Progression Factor		1.00	1.00	1.41	0.49					1.00		1.00
Incremental Delay, d2		0.3	1.0	9.1	1.4					2.9		1.7
Delay (s)		19.0	19.0	69.6	8.3					31.4		28.1
Level of Service		B	B	E	A					C		C
Approach Delay (s)		19.0			14.7			0.0			30.2	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

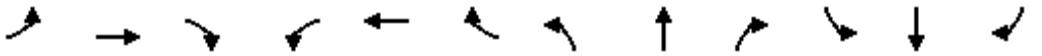
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.91		1.00	1.00	0.85		1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1520	2082		1735	1600	1360		2168	735		2317	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (perm)	1520	2082		1735	1600	1360		2168	735		2317	
Volume (vph)	5	50	75	550	25	260	100	320	305	110	85	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	53	79	579	26	274	105	337	321	116	89	63
RTOR Reduction (vph)	0	69	0	0	0	145	0	0	0	0	30	0
Lane Group Flow (vph)	5	63	0	579	26	129	0	442	321	0	238	0
Heavy Vehicles (%)	0%	0%	55%	70%	0%	0%	50%	35%	85%	0%	72%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	12.8		35.2	47.2	47.2		22.0	100.0		14.0	
Effective Green, g (s)	0.8	12.8		35.2	47.2	47.2		22.0	100.0		14.0	
Actuated g/C Ratio	0.01	0.13		0.35	0.47	0.47		0.22	1.00		0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	12	266		611	755	642		477	735		324	
v/s Ratio Prot	0.00	0.03		c0.33	0.02			c0.20			c0.10	
v/s Ratio Perm						0.10			c0.44			
v/c Ratio	0.42	0.24		0.95	0.03	0.20		0.93	0.44		0.73	
Uniform Delay, d1	49.4	39.2		31.5	14.2	15.4		38.2	0.0		41.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.1		23.9	0.1	0.7		24.0	1.9		8.4	
Delay (s)	71.1	41.3		55.4	14.3	16.1		62.3	1.9		49.6	
Level of Service	E	D		E	B	B		E	A		D	
Approach Delay (s)		42.4			41.9			36.9			49.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

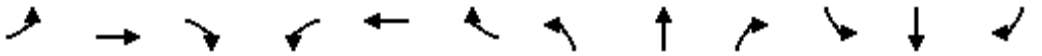
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2891	4200	1308	1476	4117		2730	2628		2863	4044	1347
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)	2891	4200	1308	1476	4117		2730	2628		2863	4044	1347
Volume (vph)	215	1135	535	105	1055	160	260	415	115	175	275	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	226	1195	563	111	1111	168	274	437	121	184	289	242
RTOR Reduction (vph)	0	0	321	0	23	0	0	28	0	0	0	166
Lane Group Flow (vph)	226	1195	242	111	1256	0	274	530	0	184	289	76
Heavy Vehicles (%)	2%	4%	4%	3%	4%	4%	8%	13%	8%	3%	8%	1%
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)	9.0	34.0	34.0	10.0	35.0		12.0	22.0		8.0	18.0	18.0
Effective Green, g (s)	9.0	34.0	34.0	10.0	35.0		12.0	22.0		8.0	18.0	18.0
Actuated g/C Ratio	0.10	0.38	0.38	0.11	0.39		0.13	0.24		0.09	0.20	0.20
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)	289	1587	494	164	1601		364	642		254	809	269
v/s Ratio Prot	c0.08	0.28		0.08	c0.31		0.10	c0.20		c0.06	0.07	
v/s Ratio Perm			0.19									0.06
v/c Ratio	0.78	0.75	0.49	0.68	0.78		0.75	0.83		0.72	0.36	0.28
Uniform Delay, d1	39.5	24.3	21.4	38.4	24.2		37.6	32.2		39.9	31.0	30.5
Progression Factor	0.88	0.44	0.49	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	2.5	2.6	10.5	3.9		8.5	11.6		9.8	1.2	2.6
Delay (s)	44.6	13.3	13.0	49.0	28.1		46.1	43.8		49.7	32.2	33.1
Level of Service	D	B	B	D	C		D	D		D	C	C
Approach Delay (s)		16.8			29.8			44.5			37.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1490	3854		1407	4145		2610	2868	1172	2201	2895	1283
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)	1490	3854		1407	4145		2610	2868	1172	2201	2895	1283
Volume (vph)	395	835	365	50	765	45	465	355	45	35	340	365
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	879	384	53	805	47	489	374	47	37	358	384
RTOR Reduction (vph)	0	65	0	0	6	0	0	0	32	0	0	333
Lane Group Flow (vph)	416	1198	0	53	846	0	489	374	15	37	358	51
Heavy Vehicles (%)	2%	10%	4%	8%	4%	13%	13%	6%	16%	34%	5%	6%
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)	36.8	54.4		8.0	25.6		25.6	38.6	38.6	3.0	16.0	16.0
Effective Green, g (s)	36.8	54.4		8.0	25.6		25.6	38.6	38.6	3.0	16.0	16.0
Actuated g/C Ratio	0.31	0.45		0.07	0.21		0.21	0.32	0.32	0.02	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)	457	1747		94	884		557	923	377	55	386	171
v/s Ratio Prot	c0.28	0.31		0.04	c0.20		c0.19	0.13		0.02	c0.12	
v/s Ratio Perm									0.01			0.04
v/c Ratio	0.91	0.69		0.56	0.96		0.88	0.41	0.04	0.67	0.93	0.30
Uniform Delay, d1	40.0	26.0		54.3	46.7		45.7	31.7	28.0	58.0	51.4	46.9
Progression Factor	0.61	0.40		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.2	2.1		7.5	21.6		14.6	1.3	0.2	27.8	30.7	4.4
Delay (s)	45.6	12.5		61.8	68.2		60.2	33.1	28.2	85.8	82.1	51.4
Level of Service	D	B		E	E		E	C	C	F	F	D
Approach Delay (s)		20.7			67.9			47.4			67.2	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	44.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1236	1476	2895	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1236	1476	2895	1520	1360
Volume (vph)	950	290	390	600	80	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1000	305	411	632	84	53
RTOR Reduction (vph)	0	103	0	0	0	37
Lane Group Flow (vph)	1000	202	411	632	84	16
Heavy Vehicles (%)	3%	10%	3%	5%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	30.3	36.3	21.7	56.0	6.0	21.7
Effective Green, g (s)	30.3	36.3	21.7	56.0	6.0	21.7
Actuated g/C Ratio	0.43	0.52	0.31	0.80	0.09	0.31
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)	1277	712	458	2316	130	422
v/s Ratio Prot	c0.34	0.02	c0.28	0.22	c0.06	0.01
v/s Ratio Perm		0.14				
v/c Ratio	0.78	0.28	0.90	0.27	0.65	0.04
Uniform Delay, d1	17.0	9.5	23.1	1.8	31.0	16.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	0.2	19.8	0.3	10.5	0.0
Delay (s)	21.9	9.7	42.9	2.1	41.5	16.9
Level of Service	C	A	D	A	D	B
Approach Delay (s)	19.0			18.2	32.0	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	1153	1476	2923	2808	1295
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	1153	1476	2923	2808	1295
Volume (vph)	760	360	130	550	650	480
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	379	137	579	684	505
RTOR Reduction (vph)	0	224	0	0	0	0
Lane Group Flow (vph)	800	155	137	579	684	505
Heavy Vehicles (%)	4%	18%	3%	4%	5%	5%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.5	24.5	6.4	34.9	17.1	60.0
Effective Green, g (s)	24.5	24.5	6.4	34.9	17.1	60.0
Actuated g/C Ratio	0.41	0.41	0.11	0.58	0.29	1.00
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)	1194	471	157	1700	800	1295
v/s Ratio Prot	c0.27		c0.09	0.20		
v/s Ratio Perm		0.13			c0.24	0.39
v/c Ratio	0.67	0.33	0.87	0.34	0.85	0.39
Uniform Delay, d1	14.5	12.1	26.4	6.5	20.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	1.9	37.6	0.5	8.9	0.9
Delay (s)	17.5	14.0	64.0	7.1	29.2	0.9
Level of Service	B	B	E	A	C	A
Approach Delay (s)	16.3			18.0	17.1	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	60.0	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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	545	0	0	850	30	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	574	0	0	895	32	105
RTOR Reduction (vph)	0	0	0	0	0	93
Lane Group Flow (vph)	574	0	0	895	32	12
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	45.4			45.4	6.6	6.6
Effective Green, g (s)	45.4			45.4	6.6	6.6
Actuated g/C Ratio	0.76			0.76	0.11	0.11
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)	2278			2255	167	150
v/s Ratio Prot	0.19			c0.30	c0.02	0.01
v/s Ratio Perm						
v/c Ratio	0.25			0.40	0.19	0.08
Uniform Delay, d1	2.2			2.5	24.3	24.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.5	0.6	0.2
Delay (s)	2.5			3.1	24.8	24.2
Level of Service	A			A	C	C
Approach Delay (s)	2.5			3.1	24.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	545	320	290	590	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	574	337	305	621	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked						
vC, conflicting volume			574		1663	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			574		1663	455
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		100	100
cM capacity (veh/h)			982		62	558

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	382	528	305	311	311
Volume Left	0	0	305	0	0
Volume Right	0	337	0	0	0
cSH	1700	1700	982	1700	1700
Volume to Capacity	0.22	0.31	0.31	0.18	0.18
Queue Length 95th (ft)	0	0	33	0	0
Control Delay (s)	0.0	0.0	10.3	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.4		
Approach LOS					

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1320		4053		2835		1106			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1320		4053		2835		1106			
Volume (vph)	0	625	260	0	490	130	490	0	270	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	658	274	0	516	137	516	0	284	0	0	0
RTOR Reduction (vph)	0	0	112	0	56	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	658	162	0	597	0	516	0	284	0	0	0
Heavy Vehicles (%)	0%	5%	3%	0%	5%	2%	4%	0%	23%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		32.5	32.5		32.5		14.5		55.0			
Effective Green, g (s)		32.5	32.5		32.5		14.5		55.0			
Actuated g/C Ratio		0.59	0.59		0.59		0.26		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1711	780		2395		747		1106			
v/s Ratio Prot		c0.23			0.15		c0.18					
v/s Ratio Perm			0.12						0.26			
v/c Ratio		0.38	0.21		0.25		0.69		0.26			
Uniform Delay, d1		6.0	5.2		5.4		18.2		0.0			
Progression Factor		0.97	0.15		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.6		0.2		2.8		0.6			
Delay (s)		6.4	1.4		5.6		21.0		0.6			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.9			5.6			13.7			0.0	
Approach LOS		A			A			B			A	

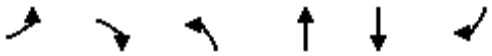
Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2855	1324		2923	1193				2705		2280
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2855	1324		2923	1193				2705		2280
Volume (vph)	0	615	300	0	930	50	0	0	0	270	0	550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	647	316	0	979	53	0	0	0	284	0	579
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	97
Lane Group Flow (vph)	0	647	316	0	979	53	0	0	0	284	0	482
Heavy Vehicles (%)	0%	2%	11%	0%	4%	14%	0%	0%	0%	9%	0%	5%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		31.4	55.0		31.4	55.0				15.6		15.6
Effective Green, g (s)		31.4	55.0		31.4	55.0				15.6		15.6
Actuated g/C Ratio		0.57	1.00		0.57	1.00				0.28		0.28
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)		1630	1324		1669	1193				767		647
v/s Ratio Prot		0.23			c0.33					0.10		c0.21
v/s Ratio Perm			0.24			0.04						
v/c Ratio		0.40	0.24		0.59	0.04				0.37		0.75
Uniform Delay, d1		6.5	0.0		7.6	0.0				15.8		17.9
Progression Factor		1.00	1.00		0.56	1.00				1.00		1.00
Incremental Delay, d2		0.7	0.1		1.3	0.0				0.3		4.7
Delay (s)		7.3	0.1		5.6	0.0				16.1		22.6
Level of Service		A	A		A	A				B		C
Approach Delay (s)		4.9			5.3			0.0			20.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

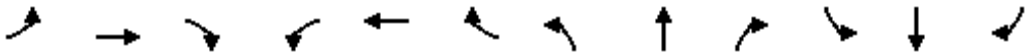
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1382	1204	1333	2895	1524	1133
Flt Permitted	0.95	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	1382	1204	834	2895	1524	1133
Volume (vph)	10	105	130	170	255	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	111	137	179	268	5
RTOR Reduction (vph)	0	100	0	0	0	1
Lane Group Flow (vph)	11	11	137	179	268	4
Heavy Vehicles (%)	10%	13%	14%	5%	5%	20%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	4.5	4.5	32.5	32.5	32.5	32.5
Effective Green, g (s)	4.5	4.5	32.5	32.5	32.5	32.5
Actuated g/C Ratio	0.10	0.10	0.72	0.72	0.72	0.72
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)	138	120	602	2091	1101	818
v/s Ratio Prot	0.01			0.06	c0.18	
v/s Ratio Perm		c0.01	0.16			0.00
v/c Ratio	0.08	0.09	0.23	0.09	0.24	0.00
Uniform Delay, d1	18.4	18.4	2.1	1.9	2.1	1.7
Progression Factor	1.00	1.00	0.78	0.71	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.8	0.1	0.5	0.0
Delay (s)	18.6	18.7	2.4	1.4	2.6	1.8
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.7			1.8	2.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	983		3949	1147	2610		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	983		3949	1147	2610		2347			
Volume (vph)	0	1335	480	0	1305	1210	400	0	830	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1405	505	0	1374	1274	421	0	874	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1405	505	0	1524	1113	421	0	868	0	0	0
Heavy Vehicles (%)	0%	2%	19%	0%	3%	2%	13%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		47.0	120.0		47.0	120.0	65.0		65.0			
Effective Green, g (s)		47.0	120.0		47.0	120.0	65.0		65.0			
Actuated g/C Ratio		0.39	1.00		0.39	1.00	0.54		0.54			
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)		1585	983		1547	1147	1414		1271			
v/s Ratio Prot		0.35			0.39		0.16		0.37			
v/s Ratio Perm			0.51			c0.97						
v/c Ratio		0.89	0.51		0.99	0.97	0.30		0.68			
Uniform Delay, d1		34.0	0.0		36.2	0.0	15.0		20.0			
Progression Factor		0.91	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		6.4	0.4		19.6	19.7	0.1		1.5			
Delay (s)		37.2	0.4		55.8	19.7	15.1		21.5			
Level of Service		D	A		E	B	B		C			
Approach Delay (s)		27.5			40.6			19.5			0.0	
Approach LOS		C			D			B			A	

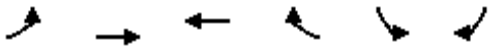
Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		0.96	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3858	1083		3770	1083				2782		2258
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3858	1083		3770	1083				2782		2258
Volume (vph)	0	1285	520	0	815	890	0	0	0	530	0	750
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1353	547	0	858	937	0	0	0	558	0	789
RTOR Reduction (vph)	0	0	212	0	43	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	1353	335	0	1130	622	0	0	0	558	0	655
Heavy Vehicles (%)	0%	7%	8%	0%	4%	8%	0%	0%	0%	6%	0%	6%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		73.5	73.5		73.5	120.0				38.5		38.5
Effective Green, g (s)		73.5	73.5		73.5	120.0				38.5		38.5
Actuated g/C Ratio		0.61	0.61		0.61	1.00				0.32		0.32
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)		2363	663		2309	1083				893		724
v/s Ratio Prot		0.35			0.30					0.20		
v/s Ratio Perm			0.31			c0.57						c0.29
v/c Ratio		0.57	0.51		0.49	0.57				0.62		0.90
Uniform Delay, d1		13.9	13.0		12.9	0.0				34.6		39.0
Progression Factor		1.00	1.00		0.50	1.00				1.00		1.00
Incremental Delay, d2		1.0	2.7		0.6	0.2				1.4		14.7
Delay (s)		14.9	15.8		6.9	0.2				36.0		53.7
Level of Service		B	B		A	A				D		D
Approach Delay (s)		15.1			4.6			0.0			46.3	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

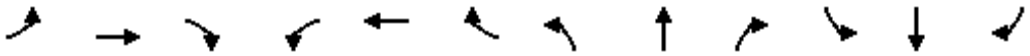
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1476	3865	3766	1347	2920	1333
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1476	3865	3766	1347	2920	1333
Volume (vph)	295	1280	1310	305	435	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	1347	1379	321	458	226
RTOR Reduction (vph)	0	0	0	189	0	181
Lane Group Flow (vph)	311	1347	1379	132	458	45
Heavy Vehicles (%)	3%	13%	16%	1%	1%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	19.0	56.0	33.0	33.0	16.0	16.0
Effective Green, g (s)	19.0	56.0	33.0	33.0	16.0	16.0
Actuated g/C Ratio	0.24	0.70	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	2706	1553	556	584	267
v/s Ratio Prot	c0.21	0.35	c0.37		c0.16	
v/s Ratio Perm				0.10		0.03
v/c Ratio	0.89	0.50	0.89	0.24	0.78	0.17
Uniform Delay, d1	29.5	5.5	21.8	15.3	30.4	26.5
Progression Factor	1.00	1.00	0.60	0.18	1.00	1.00
Incremental Delay, d2	22.4	0.7	7.6	1.0	10.1	1.4
Delay (s)	51.9	6.2	20.8	3.8	40.5	27.9
Level of Service	D	A	C	A	D	C
Approach Delay (s)		14.8	17.5		36.3	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		3900	680	760	3900		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		3900	680	760	3900		1474	680				
Volume (vph)	0	1960	520	30	2680	0	470	0	30	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2063	547	32	2821	0	495	0	32	0	0	0
RTOR Reduction (vph)	0	0	162	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	2063	385	32	2821	0	495	7	0	0	0	0
Heavy Vehicles (%)	0%	12%	100%	100%	12%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		78.0	78.0	4.0	86.0		26.0	26.0				
Effective Green, g (s)		78.0	78.0	4.0	86.0		26.0	26.0				
Actuated g/C Ratio		0.65	0.65	0.03	0.72		0.22	0.22				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2535	442	25	2795		319	147				
v/s Ratio Prot		0.53		0.04	c0.72		c0.34	0.01				
v/s Ratio Perm			0.57									
v/c Ratio		0.81	0.87	1.28	1.01		1.55	0.05				
Uniform Delay, d1		15.6	17.0	58.0	17.0		47.0	37.2				
Progression Factor		1.00	1.00	0.85	0.46		1.00	1.00				
Incremental Delay, d2		3.0	20.4	229.4	15.2		263.2	0.1				
Delay (s)		18.6	37.4	278.5	23.1		310.2	37.3				
Level of Service		B	D	F	C		F	D				
Approach Delay (s)		22.5			26.0			293.7			0.0	
Approach LOS		C			C			F			A	

Intersection Summary			
HCM Average Control Delay	48.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2610	4044	1979	4368	2808	2397
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2610	4044	1979	4368	2808	2397
Volume (vph)	1030	550	140	1420	420	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1084	579	147	1495	442	589
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1084	579	147	1495	442	589
Heavy Vehicles (%)	13%	8%	49%	0%	5%	23%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	44.0	68.6	13.4	38.0	26.0	26.0
Effective Green, g (s)	44.0	68.6	13.4	38.0	26.0	26.0
Actuated g/C Ratio	0.37	0.57	0.11	0.32	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	957	2312	221	1383	608	519
v/s Ratio Prot	c0.42	0.14	0.07	c0.34	0.16	c0.25
v/s Ratio Perm						
v/c Ratio	1.13	0.25	0.67	1.08	0.73	1.13
Uniform Delay, d1	38.0	12.8	51.1	41.0	43.7	47.0
Progression Factor	0.59	0.10	1.00	1.00	1.00	1.00
Incremental Delay, d2	67.8	0.1	7.3	49.3	4.3	82.2
Delay (s)	90.3	1.4	58.5	90.3	48.0	129.2
Level of Service	F	A	E	F	D	F
Approach Delay (s)		59.4		87.4		
Approach LOS		E		F		

Intersection Summary			
HCM Average Control Delay	78.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	1992	4368	1638	4325	2397	2564
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	1992	4368	1638	4325	2397	2564
Volume (vph)	950	1135	20	690	510	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1000	1195	21	726	537	221
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1000	1195	21	726	537	221
Heavy Vehicles (%)	48%	0%	80%	1%	23%	15%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	49.0	64.0	2.0	17.0	22.0	22.0
Effective Green, g (s)	49.0	64.0	2.0	17.0	22.0	22.0
Actuated g/C Ratio	0.49	0.64	0.02	0.17	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	976	2796	33	735	527	564
v/s Ratio Prot	c0.50	0.27	0.01	c0.17	c0.22	0.09
v/s Ratio Perm						
v/c Ratio	1.02	0.43	0.64	0.99	1.02	0.39
Uniform Delay, d1	25.5	8.9	48.6	41.4	39.0	33.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.2	0.5	33.9	30.4	44.1	0.5
Delay (s)	60.7	9.4	82.5	71.7	83.1	33.7
Level of Service	E	A	F	E	F	C
Approach Delay (s)		32.8		72.1		
Approach LOS		C		E		

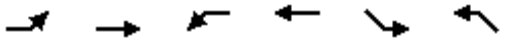
Intersection Summary			
HCM Average Control Delay	48.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	2980	2657	4368	2949	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	2980	2657	4368	2949	2863
Volume (vph)	480	335	240	230	700	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	505	353	253	242	737	158
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	505	353	253	242	737	158
Heavy Vehicles (%)	2%	2%	11%	0%	0%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	34.0	50.9	15.3	32.2	31.8	31.8
Effective Green, g (s)	34.0	50.9	15.3	32.2	31.8	31.8
Actuated g/C Ratio	0.31	0.46	0.14	0.29	0.29	0.29
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)	894	1379	370	1279	853	828
v/s Ratio Prot	c0.17	c0.12	c0.10	0.06	c0.25	0.06
v/s Ratio Perm						
v/c Ratio	0.56	0.26	0.68	0.19	0.86	0.19
Uniform Delay, d1	31.8	18.0	45.0	29.1	37.1	29.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.4	5.2	0.3	9.1	0.1
Delay (s)	32.6	18.5	50.2	29.5	46.1	29.5
Level of Service	C	B	D	C	D	C
Approach Delay (s)		26.8		40.1		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2610	4241	2782	3971	2835	2437
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2610	4241	2782	3971	2835	2437
Volume (vph)	640	435	340	375	630	520
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	458	358	395	663	547
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	674	458	358	395	663	547
Heavy Vehicles (%)	13%	3%	6%	10%	4%	21%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.6	31.3	14.6	21.3	22.1	22.1
Effective Green, g (s)	24.6	31.3	14.6	21.3	22.1	22.1
Actuated g/C Ratio	0.31	0.39	0.18	0.27	0.28	0.28
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)	803	1659	508	1057	783	673
v/s Ratio Prot	c0.26	0.11	0.13	c0.10	c0.23	0.22
v/s Ratio Perm						
v/c Ratio	0.84	0.28	0.70	0.37	0.85	0.81
Uniform Delay, d1	25.9	16.6	30.7	23.9	27.4	27.0
Progression Factor	0.94	0.74	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.5	0.3	4.4	1.0	8.4	7.4
Delay (s)	30.9	12.6	35.1	24.9	35.8	34.4
Level of Service	C	B	D	C	D	C
Approach Delay (s)		23.5		29.8		
Approach LOS		C		C		

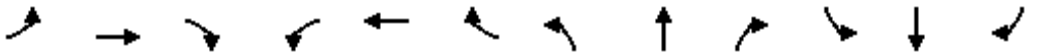
Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2756	4282	2756	4160	2782	2610
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2756	4282	2756	4160	2782	2610
Volume (vph)	310	510	350	380	750	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	537	368	400	789	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	326	537	368	400	789	189
Heavy Vehicles (%)	7%	2%	7%	5%	6%	13%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.5	11.9	9.7	10.1	18.4	18.4
Effective Green, g (s)	11.5	11.9	9.7	10.1	18.4	18.4
Actuated g/C Ratio	0.22	0.23	0.19	0.19	0.35	0.35
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)	610	980	514	808	984	924
v/s Ratio Prot	0.12	c0.13	c0.13	0.10	c0.28	0.07
v/s Ratio Perm						
v/c Ratio	0.53	0.55	0.72	0.50	0.80	0.20
Uniform Delay, d1	17.9	17.7	19.9	18.7	15.2	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.6	4.7	0.5	4.8	0.1
Delay (s)	18.8	18.3	24.6	19.2	19.9	11.8
Level of Service	B	B	C	B	B	B
Approach Delay (s)		18.5		21.8		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	52.0	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4226			4282	1320			2370	2891		1153
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4226			4282	1320			2370	2891		1153
Volume (vph)	90	1495	30	0	1875	210	0	0	415	345	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1574	32	0	1974	221	0	0	437	363	0	16
RTOR Reduction (vph)	0	2	0	0	0	130	0	0	46	0	0	13
Lane Group Flow (vph)	95	1604	0	0	1974	91	0	0	391	363	0	3
Heavy Vehicles (%)	0%	3%	6%	0%	2%	3%	0%	0%	1%	2%	0%	18%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.2	47.2			37.0	37.0			16.0	14.8		14.8
Effective Green, g (s)	6.2	47.2			37.0	37.0			16.0	14.8		14.8
Actuated g/C Ratio	0.07	0.52			0.41	0.41			0.18	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)	105	2216			1760	543			421	475		190
v/s Ratio Prot	c0.06	0.38			c0.46					c0.13		
v/s Ratio Perm						0.07			c0.16			0.00
v/c Ratio	0.90	0.72			1.12	0.17			0.93	0.76		0.01
Uniform Delay, d1	41.6	16.4			26.5	16.8			36.4	35.9		31.5
Progression Factor	1.00	1.00			0.67	0.24			1.00	0.95		0.96
Incremental Delay, d2	58.1	2.1			62.2	0.6			26.6	7.0		0.0
Delay (s)	99.7	18.5			80.0	4.7			63.0	41.2		30.2
Level of Service	F	B			E	A			E	D		C
Approach Delay (s)		23.0			72.4			63.0			40.8	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM Average Control Delay	51.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2705	4368	2808	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2705	4368	2808	2808
Volume (vph)	420	535	580	365	310	910
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	563	611	384	326	958
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	563	611	384	326	958
Heavy Vehicles (%)	5%	3%	9%	0%	5%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.3	20.9	23.3	24.9	33.8	33.8
Effective Green, g (s)	19.3	20.9	23.3	24.9	33.8	33.8
Actuated g/C Ratio	0.21	0.23	0.26	0.28	0.38	0.38
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)	602	985	700	1208	1055	1055
v/s Ratio Prot	0.16	c0.13	c0.23	0.09	0.12	c0.34
v/s Ratio Perm						
v/c Ratio	0.73	0.57	0.87	0.32	0.31	0.91
Uniform Delay, d1	33.0	30.6	31.9	25.8	19.9	26.6
Progression Factor	1.00	0.79	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.5	11.6	0.7	0.2	11.1
Delay (s)	36.0	25.6	43.6	26.5	20.0	37.8
Level of Service	D	C	D	C	C	D
Approach Delay (s)		30.1		37.0		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	3040	2730	3040	2705	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	3040	2730	3040	2705	2835
Volume (vph)	260	1055	750	365	320	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1111	789	384	337	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	274	1111	789	384	337	642
Heavy Vehicles (%)	5%	0%	8%	0%	9%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	13.1	33.0	25.0	44.9	20.0	20.0
Effective Green, g (s)	13.1	33.0	25.0	44.9	20.0	20.0
Actuated g/C Ratio	0.15	0.37	0.28	0.50	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	409	1115	758	1517	601	630
v/s Ratio Prot	0.10	c0.37	c0.29	0.13	0.12	c0.23
v/s Ratio Perm						
v/c Ratio	0.67	1.00	1.04	0.25	0.56	1.02
Uniform Delay, d1	36.4	28.4	32.5	12.9	31.1	35.0
Progression Factor	1.00	1.00	0.51	0.39	1.00	1.00
Incremental Delay, d2	4.1	26.1	37.5	0.3	1.2	40.7
Delay (s)	40.5	54.6	54.2	5.3	32.3	75.7
Level of Service	D	D	D	A	C	E
Approach Delay (s)		51.8		38.1		
Approach LOS		D		D		

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4082	2587	4325	2730	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4082	2587	4325	2730	2835
Volume (vph)	420	770	490	710	320	550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	811	516	747	337	579
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	811	516	747	337	579
Heavy Vehicles (%)	3%	7%	14%	1%	8%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	23.1	42.0	37.0	55.9	29.0	29.0
Effective Green, g (s)	23.1	42.0	37.0	55.9	29.0	29.0
Actuated g/C Ratio	0.19	0.35	0.31	0.47	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	551	1429	798	2015	660	685
v/s Ratio Prot	c0.15	c0.20	c0.20	0.17	0.12	c0.20
v/s Ratio Perm						
v/c Ratio	0.80	0.57	0.65	0.37	0.51	0.85
Uniform Delay, d1	46.3	31.6	35.9	20.7	39.4	43.4
Progression Factor	1.00	1.00	0.40	0.35	1.00	1.00
Incremental Delay, d2	8.2	1.6	0.9	0.3	0.7	9.4
Delay (s)	54.5	33.3	15.4	7.6	40.0	52.8
Level of Service	D	C	B	A	D	D
Approach Delay (s)		40.8		10.8		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2764			2054	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2764			2054	760	680
Volume (vph)	180	0	0	240	135	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	0	0	253	142	174
RTOR Reduction (vph)	0	0	0	0	0	58
Lane Group Flow (vph)	189	0	0	253	142	116
Heavy Vehicles (%)	10%	0%	0%	48%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.9			11.9	40.1	40.1
Effective Green, g (s)	11.9			11.9	40.1	40.1
Actuated g/C Ratio	0.20			0.20	0.67	0.67
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)	548			407	508	454
v/s Ratio Prot	0.07			c0.12	c0.19	
v/s Ratio Perm						0.17
v/c Ratio	0.34			0.62	0.28	0.26
Uniform Delay, d1	20.7			22.0	4.1	4.0
Progression Factor	0.73			1.00	1.00	1.00
Incremental Delay, d2	0.4			2.9	1.4	1.4
Delay (s)	15.5			24.9	5.4	5.3
Level of Service	B			C	A	A
Approach Delay (s)	15.5			24.9	5.4	
Approach LOS	B			C	A	

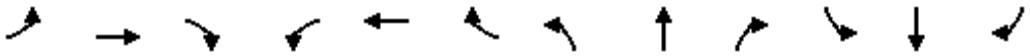
Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2764	680	760	1974		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2764	680	760	1974		
Volume (vph)	180	80	100	275	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	84	105	289	0	0
RTOR Reduction (vph)	0	28	0	0	0	0
Lane Group Flow (vph)	189	56	105	289	0	0
Heavy Vehicles (%)	10%	100%	100%	54%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	40.3	40.3	11.7	60.0		
Effective Green, g (s)	40.3	40.3	11.7	60.0		
Actuated g/C Ratio	0.67	0.67	0.19	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1856	457	148	1974		
v/s Ratio Prot	0.07		c0.14	c0.15		
v/s Ratio Perm		0.08				
v/c Ratio	0.10	0.12	0.71	0.15		
Uniform Delay, d1	3.5	3.5	22.6	0.0		
Progression Factor	1.00	1.00	0.68	1.00		
Incremental Delay, d2	0.0	0.1	12.8	0.0		
Delay (s)	3.5	3.6	28.2	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.5			7.5	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		

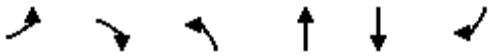
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1231	1295	1078	928		1448	2596		1126	2891	
Flt Permitted	0.31	1.00	1.00	0.69	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	480	1231	1295	786	928		1448	2596		1126	2891	
Volume (vph)	10	95	400	90	90	95	150	450	120	55	715	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	100	421	95	95	100	158	474	126	58	753	7
RTOR Reduction (vph)	0	0	133	0	41	0	0	19	0	0	1	0
Lane Group Flow (vph)	11	100	288	95	154	0	158	581	0	58	759	0
Heavy Vehicles (%)	5%	30%	5%	41%	56%	62%	5%	5%	45%	35%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.5	13.5	28.9	21.1	21.1		15.4	53.3		8.8	46.7	
Effective Green, g (s)	13.5	13.5	28.9	21.1	21.1		15.4	53.3		8.8	46.7	
Actuated g/C Ratio	0.14	0.14	0.29	0.21	0.21		0.15	0.53		0.09	0.47	
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)	73	166	374	190	196		223	1384		99	1350	
v/s Ratio Prot	0.00	0.08	c0.12	0.04	c0.17		0.11	0.22		0.05	c0.26	
v/s Ratio Perm	0.02		0.10	0.06								
v/c Ratio	0.15	0.60	0.77	0.50	0.79		0.71	0.42		0.59	0.56	
Uniform Delay, d1	38.2	40.7	32.5	35.4	37.3		40.2	14.0		43.8	19.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.0	9.4	2.1	18.4		9.9	0.9		8.6	1.7	
Delay (s)	39.1	46.8	41.9	37.5	55.7		50.0	15.0		52.4	21.0	
Level of Service	D	D	D	D	E		D	B		D	C	
Approach Delay (s)		42.8			49.7			22.3			23.2	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

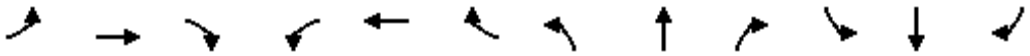
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1890	1007	1134	5242	2660	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1890	1007	1134	5242	2660	
Volume (vph)	260	95	85	980	950	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	100	89	1032	1000	163
RTOR Reduction (vph)	0	83	0	0	12	0
Lane Group Flow (vph)	274	17	89	1032	1151	0
Heavy Vehicles (%)	56%	35%	34%	5%	5%	54%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	17.2	17.2	8.9	55.3	61.9	
Effective Green, g (s)	17.2	17.2	8.9	55.3	61.9	
Actuated g/C Ratio	0.17	0.17	0.09	0.55	0.62	
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)	325	173	101	2899	1647	
v/s Ratio Prot	c0.14		c0.08	0.20	c0.43	
v/s Ratio Perm		0.02				
v/c Ratio	0.84	0.10	0.88	0.36	0.70	
Uniform Delay, d1	40.1	34.9	45.0	12.4	12.8	
Progression Factor	1.00	1.00	1.00	1.00	0.09	
Incremental Delay, d2	17.7	0.3	53.4	0.3	0.8	
Delay (s)	57.8	35.1	98.4	12.8	2.0	
Level of Service	E	D	F	B	A	
Approach Delay (s)	51.7			19.6	2.0	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

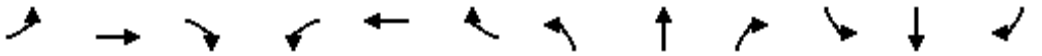
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.87			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2730	1331			2621	2118	1490	2714	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1345		2730	1331			2621	2118	1490	2714	
Volume (vph)	5	0	5	100	5	30	0	985	255	25	1000	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	105	5	32	0	1037	268	26	1053	5
RTOR Reduction (vph)	0	4	0	0	22	0	0	0	120	0	1	0
Lane Group Flow (vph)	0	6	0	105	15	0	0	1037	148	26	1057	0
Heavy Vehicles (%)	2%	2%	2%	8%	2%	5%	2%	16%	13%	2%	12%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		17.2		9.1	30.3			55.3	55.3	2.4	48.8	
Effective Green, g (s)		17.2		9.1	30.3			55.3	55.3	2.4	48.8	
Actuated g/C Ratio		0.17		0.09	0.30			0.55	0.55	0.02	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)		231		248	403			1449	1171	36	1324	
v/s Ratio Prot				c0.04	c0.01			c0.40	0.07	0.02	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.42	0.04			0.72	0.13	0.72	0.80	
Uniform Delay, d1		34.4		43.0	24.6			16.5	10.7	48.5	21.5	
Progression Factor		1.00		1.00	1.00			0.56	0.36	1.00	1.00	
Incremental Delay, d2		0.0		1.2	0.0			2.8	0.2	52.1	5.1	
Delay (s)		34.5		44.1	24.6			12.0	4.1	100.6	26.6	
Level of Service		C		D	C			B	A	F	C	
Approach Delay (s)		34.5			39.0			10.4			28.4	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

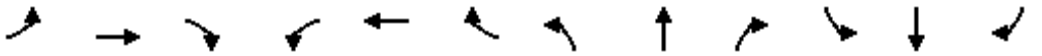
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	4225		2956	4107	1376	1538	4420	2377	2984	4420	2355
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	4225		2956	4107	1376	1538	4420	2377	2984	4420	2355
Volume (vph)	140	650	40	315	335	350	60	685	910	265	775	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	684	42	332	353	368	63	721	958	279	816	279
RTOR Reduction (vph)	0	7	0	0	0	103	0	0	36	0	0	159
Lane Group Flow (vph)	147	719	0	332	353	265	63	721	922	279	816	120
Heavy Vehicles (%)	8%	9%	7%	6%	13%	5%	5%	5%	7%	5%	5%	8%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	14.5	23.2		26.0	34.7	48.5	6.4	21.0	47.0	13.8	28.4	42.9
Effective Green, g (s)	14.5	23.2		26.0	34.7	48.5	6.4	21.0	47.0	13.8	28.4	42.9
Actuated g/C Ratio	0.14	0.23		0.26	0.35	0.48	0.06	0.21	0.47	0.14	0.28	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	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)	217	980		769	1425	667	98	928	1212	412	1255	1104
v/s Ratio Prot	0.10	c0.17		0.11	0.09	0.05	0.04	c0.16	c0.20	0.09	c0.18	0.02
v/s Ratio Perm						0.14			0.19			0.04
v/c Ratio	0.68	0.73		0.43	0.25	0.40	0.64	0.78	0.76	0.68	0.65	0.11
Uniform Delay, d1	40.5	35.5		30.8	23.3	16.4	45.7	37.3	21.9	41.0	31.4	17.1
Progression Factor	0.86	0.81		0.63	0.51	1.12	0.48	0.40	0.29	0.95	0.94	1.16
Incremental Delay, d2	8.0	4.8		0.3	0.4	0.3	7.2	3.4	1.5	4.2	2.5	0.0
Delay (s)	42.7	33.6		19.8	12.2	18.8	29.0	18.3	7.7	43.3	32.0	19.9
Level of Service	D	C		B	B	B	C	B	A	D	C	B
Approach Delay (s)		35.2			16.9			12.9			31.8	
Approach LOS		D			B			B			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4181	1363		4181					2984	1619	2422
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4181	1363		4181					2984	1619	2422
Volume (vph)	0	740	420	0	660	0	0	0	0	90	320	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	779	442	0	695	0	0	0	0	95	337	258
RTOR Reduction (vph)	0	0	135	0	0	0	0	0	0	0	0	195
Lane Group Flow (vph)	0	779	307	0	695	0	0	0	0	95	337	63
Heavy Vehicles (%)	0%	11%	6%	8%	11%	0%	0%	0%	0%	5%	5%	5%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		67.6	67.6		67.6					24.4	24.4	24.4
Effective Green, g (s)		67.6	67.6		67.6					24.4	24.4	24.4
Actuated g/C Ratio		0.68	0.68		0.68					0.24	0.24	0.24
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2826	921		2826					728	395	591
v/s Ratio Prot		0.19			0.17					0.03	c0.21	
v/s Ratio Perm			c0.23									0.03
v/c Ratio		0.28	0.33		0.25					0.13	0.85	0.11
Uniform Delay, d1		6.5	6.8		6.3					29.5	36.1	29.3
Progression Factor		1.00	1.00		0.70					1.00	1.00	1.00
Incremental Delay, d2		0.2	1.0		0.2					0.1	16.2	0.1
Delay (s)		6.7	7.8		4.6					29.6	52.3	29.4
Level of Service		A	A		A					C	D	C
Approach Delay (s)		7.1			4.6			0.0			40.6	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	3312	2656	3273	3312	1495	3273	1664		1671	1776	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	3312	2656	3273	3312	1495	3273	1664		1671	1776	1495
Volume (vph)	25	775	1025	205	765	30	210	55	40	35	240	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	816	1079	216	805	32	221	58	42	37	253	26
RTOR Reduction (vph)	0	0	141	0	0	16	0	24	0	0	0	21
Lane Group Flow (vph)	26	816	938	216	805	16	221	76	0	37	253	5
Heavy Vehicles (%)	9%	9%	7%	7%	9%	8%	7%	7%	7%	8%	7%	8%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.4	36.2	56.3	9.8	43.6	51.2	20.1	30.4		7.6	17.9	17.9
Effective Green, g (s)	2.4	36.2	56.3	9.8	43.6	51.2	20.1	30.4		7.6	17.9	17.9
Actuated g/C Ratio	0.02	0.36	0.56	0.10	0.44	0.51	0.20	0.30		0.08	0.18	0.18
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)	40	1199	1495	321	1444	825	658	506		127	318	268
v/s Ratio Prot	0.02	c0.25	c0.13	c0.07	0.24	0.00	0.07	0.05		0.02	c0.14	
v/s Ratio Perm			0.23			0.01						0.00
v/c Ratio	0.65	0.68	0.63	0.67	0.56	0.02	0.34	0.15		0.29	0.80	0.02
Uniform Delay, d1	48.4	27.0	14.8	43.6	21.0	12.0	34.2	25.4		43.7	39.3	33.8
Progression Factor	1.00	0.78	0.49	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	22.0	2.1	0.5	5.5	1.6	0.0	0.3	0.1		1.3	12.9	0.0
Delay (s)	70.6	23.2	7.7	49.0	22.6	12.0	34.5	25.5		44.9	52.2	33.8
Level of Service	E	C	A	D	C	B	C	C		D	D	C
Approach Delay (s)		15.2			27.7			31.7			49.8	
Approach LOS		B			C			C			D	

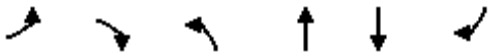
Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3047	1338					5365	1363	2956	4144	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3047	1338					5365	1363	2956	4144	
Volume (vph)	0	270	470	0	0	0	0	1655	455	275	855	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	284	495	0	0	0	0	1742	479	289	900	0
RTOR Reduction (vph)	0	0	80	0	0	0	0	0	192	0	0	0
Lane Group Flow (vph)	0	284	415	0	0	0	0	1742	287	289	900	0
Heavy Vehicles (%)	0%	6%	8%	0%	0%	0%	0%	9%	6%	6%	12%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		36.5	36.5					38.7	38.7	12.8	55.5	
Effective Green, g (s)		36.5	36.5					38.7	38.7	12.8	55.5	
Actuated g/C Ratio		0.36	0.36					0.39	0.39	0.13	0.56	
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)		1112	488					2076	527	378	2300	
v/s Ratio Prot		0.09						c0.32		c0.10	0.22	
v/s Ratio Perm			c0.31						0.21			
v/c Ratio		0.26	0.85					0.84	0.54	0.76	0.39	
Uniform Delay, d1		22.2	29.2					27.8	23.8	42.1	12.6	
Progression Factor		0.63	0.45					1.00	1.00	0.76	1.20	
Incremental Delay, d2		0.1	10.9					4.3	4.0	7.3	0.4	
Delay (s)		14.0	24.1					32.1	27.8	39.1	15.6	
Level of Service		B	C					C	C	D	B	
Approach Delay (s)		20.4			0.0			31.2			21.3	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

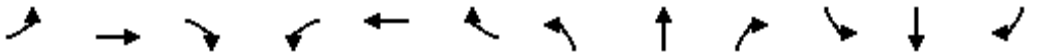
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2377		4219	4144	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2377		4219	4144	
Volume (vph)	0	305	0	1175	1000	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	321	0	1237	1053	0
RTOR Reduction (vph)	0	133	0	0	0	0
Lane Group Flow (vph)	0	188	0	1237	1053	0
Heavy Vehicles (%)	0%	7%	0%	10%	12%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		12.0		80.0	80.0	
Effective Green, g (s)		12.0		80.0	80.0	
Actuated g/C Ratio		0.12		0.80	0.80	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		285		3375	3315	
v/s Ratio Prot				c0.29	0.25	
v/s Ratio Perm		c0.08				
v/c Ratio		0.66		0.37	0.32	
Uniform Delay, d1		42.1		2.8	2.7	
Progression Factor		1.00		0.44	1.00	
Incremental Delay, d2		5.6		0.2	0.3	
Delay (s)		47.7		1.5	2.9	
Level of Service		D		A	A	
Approach Delay (s)	47.7			1.5	2.9	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.5%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1417	3967	1257	1568	3933	1403	1468	3076	1403	1599	3167	1235
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1417	3967	1257	1568	3933	1403	1468	3076	1403	1599	3167	1235
Volume (vph)	195	1090	130	90	1115	45	120	495	145	90	545	150
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)	212	1185	141	98	1212	49	130	538	158	98	592	163
RTOR Reduction (vph)	0	0	79	0	0	32	0	0	49	0	0	34
Lane Group Flow (vph)	212	1185	62	98	1212	17	130	538	109	98	592	129
Heavy Vehicles (%)	14%	17%	15%	3%	18%	3%	10%	5%	3%	1%	2%	17%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.2	44.0	44.0	8.7	35.5	35.5	10.7	22.7	31.4	8.6	20.6	37.8
Effective Green, g (s)	17.2	44.0	44.0	8.7	35.5	35.5	10.7	22.7	31.4	8.6	20.6	37.8
Actuated g/C Ratio	0.17	0.44	0.44	0.09	0.36	0.36	0.11	0.23	0.31	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	244	1745	553	136	1396	498	157	698	497	138	652	516
v/s Ratio Prot	c0.15	0.30		0.06	c0.31		c0.09	0.17	0.02	0.06	c0.19	0.04
v/s Ratio Perm			0.05			0.01			0.06			0.06
v/c Ratio	0.87	0.68	0.11	0.72	0.87	0.03	0.83	0.77	0.22	0.71	0.91	0.25
Uniform Delay, d1	40.3	22.4	16.5	44.5	30.1	21.1	43.7	36.2	25.3	44.5	38.8	21.4
Progression Factor	1.11	0.81	1.68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.0	2.0	0.4	17.1	7.5	0.1	28.7	5.3	0.2	15.8	16.4	0.3
Delay (s)	69.7	20.1	28.2	61.5	37.6	21.2	72.4	41.5	25.5	60.3	55.2	21.6
Level of Service	E	C	C	E	D	C	E	D	C	E	E	C
Approach Delay (s)		27.7			38.7			43.3			49.3	
Approach LOS		C			D			D			D	

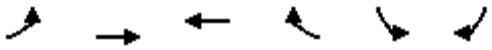
Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2270	4433			4510	1225	2655		1225			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2270	4433			4510	1225	2655		1225			
Volume (vph)	185	1240	0	0	1085	415	95	0	125	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)	201	1348	0	0	1179	451	103	0	136	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	165	0	0	69	0	0	0
Lane Group Flow (vph)	201	1348	0	0	1179	286	103	0	67	0	0	0
Heavy Vehicles (%)	38%	17%	0%	0%	15%	18%	18%	0%	18%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.5	81.0			63.5	63.5	11.0		11.0			
Effective Green, g (s)	13.5	81.0			63.5	63.5	11.0		11.0			
Actuated g/C Ratio	0.14	0.81			0.64	0.64	0.11		0.11			
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)	306	3591			2864	778	292		135			
v/s Ratio Prot	c0.09	0.30			c0.26							
v/s Ratio Perm						0.23	0.04		c0.05			
v/c Ratio	0.66	0.38			0.41	0.37	0.35		0.49			
Uniform Delay, d1	41.1	2.6			9.0	8.7	41.2		41.9			
Progression Factor	0.81	1.18			0.27	0.82	1.00		1.00			
Incremental Delay, d2	4.8	0.3			0.3	0.9	0.7		2.8			
Delay (s)	37.9	3.3			2.7	8.0	41.9		44.7			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		7.8			4.2			43.5			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6206	4510		3127	2153
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6206	4510		3127	2153
Volume (vph)	0	930	1180	0	495	265
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1011	1283	0	538	288
RTOR Reduction (vph)	0	0	0	0	0	38
Lane Group Flow (vph)	0	1011	1283	0	538	250
Heavy Vehicles (%)	0%	24%	15%	0%	12%	32%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		51.0	51.0		41.0	41.0
Effective Green, g (s)		51.0	51.0		41.0	41.0
Actuated g/C Ratio		0.51	0.51		0.41	0.41
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)		3165	2300		1282	883
v/s Ratio Prot		0.16	c0.28			
v/s Ratio Perm					c0.17	0.12
v/c Ratio		0.32	0.56		0.42	0.28
Uniform Delay, d1		14.3	16.8		21.0	19.7
Progression Factor		0.29	0.37		1.00	1.00
Incremental Delay, d2		0.2	0.9		1.0	0.8
Delay (s)		4.4	7.1		22.0	20.5
Level of Service		A	A		C	C
Approach Delay (s)		4.4	7.1		21.5	
Approach LOS		A	A		C	

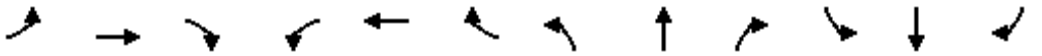
Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1567	4001	1445	1042	4918	1084	1615	850	1112	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.59	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1567	4001	1445	1042	4918	1084	1004	850	1112	499	1615	722
Volume (vph)	390	805	80	230	965	250	30	20	50	75	240	165
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)	424	875	87	250	1049	272	33	22	54	82	261	179
RTOR Reduction (vph)	0	0	57	0	0	165	0	0	31	0	0	51
Lane Group Flow (vph)	424	875	30	250	1049	107	33	22	23	82	261	128
Heavy Vehicles (%)	100%	16%	0%	55%	12%	8%	0%	100%	30%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	29.8	34.6	34.6	27.5	32.3	39.2	17.4	15.0	42.5	25.9	19.5	49.3
Effective Green, g (s)	29.8	34.6	34.6	27.5	32.3	39.2	17.4	15.0	42.5	25.9	19.5	49.3
Actuated g/C Ratio	0.30	0.35	0.35	0.28	0.32	0.39	0.17	0.15	0.42	0.26	0.20	0.49
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	467	1384	500	287	1589	468	189	128	517	151	315	385
v/s Ratio Prot	c0.27	c0.22		0.24	0.21	0.02	0.00	0.03	0.01	c0.04	c0.16	0.10
v/s Ratio Perm			0.02			0.08	0.03		0.01	0.10		0.08
v/c Ratio	0.91	0.63	0.06	0.87	0.66	0.23	0.17	0.17	0.04	0.54	0.83	0.33
Uniform Delay, d1	33.8	27.4	21.8	34.6	29.1	20.3	34.8	37.1	16.8	31.3	38.6	15.4
Progression Factor	1.00	1.00	1.00	1.31	0.75	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1	2.2	0.2	21.5	1.9	0.2	0.4	0.6	0.0	3.9	16.2	0.5
Delay (s)	54.9	29.6	22.1	66.6	23.9	1.6	35.3	37.7	16.9	35.2	54.9	15.9
Level of Service	D	C	C	E	C	A	D	D	B	D	D	B
Approach Delay (s)		36.9			26.8			26.7			38.4	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1417	3967	1257	1568	3933	1403	1468	3076	1403	1599	3167	1235
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1417	3967	1257	1568	3933	1403	1468	3076	1403	1599	3167	1235
Volume (vph)	195	1090	130	90	1115	45	120	495	145	90	545	150
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)	212	1185	141	98	1212	49	130	538	158	98	592	163
RTOR Reduction (vph)	0	0	79	0	0	32	0	0	49	0	0	34
Lane Group Flow (vph)	212	1185	62	98	1212	17	130	538	109	98	592	129
Heavy Vehicles (%)	14%	17%	15%	3%	18%	3%	10%	5%	3%	1%	2%	17%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.1	44.0	44.0	8.7	35.6	35.6	10.7	22.7	31.4	8.6	20.6	37.7
Effective Green, g (s)	17.1	44.0	44.0	8.7	35.6	35.6	10.7	22.7	31.4	8.6	20.6	37.7
Actuated g/C Ratio	0.17	0.44	0.44	0.09	0.36	0.36	0.11	0.23	0.31	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	242	1745	553	136	1400	499	157	698	497	138	652	515
v/s Ratio Prot	c0.15	0.30		0.06	c0.31		c0.09	0.17	0.02	0.06	c0.19	0.04
v/s Ratio Perm			0.05			0.01			0.06			0.06
v/c Ratio	0.88	0.68	0.11	0.72	0.87	0.03	0.83	0.77	0.22	0.71	0.91	0.25
Uniform Delay, d1	40.4	22.4	16.5	44.5	30.0	21.0	43.7	36.2	25.3	44.5	38.8	21.4
Progression Factor	1.14	1.03	2.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.7	1.9	0.4	17.1	7.4	0.1	28.7	5.3	0.2	15.8	16.4	0.3
Delay (s)	71.8	25.1	38.7	61.5	37.4	21.1	72.4	41.5	25.5	60.3	55.2	21.7
Level of Service	E	C	D	E	D	C	E	D	C	E	E	C
Approach Delay (s)		32.8			38.5			43.3			49.4	
Approach LOS		C			D			D			D	

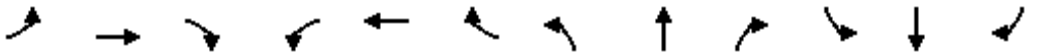
Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

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			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2537	4433			6691	1369	2036		1272			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2537	4433			6691	1369	2036		1272			
Volume (vph)	185	1165	0	0	1085	415	260	0	200	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)	201	1266	0	0	1179	451	283	0	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	258	0	0	44	0	0	0
Lane Group Flow (vph)	201	1266	0	0	1179	193	283	0	173	0	0	0
Heavy Vehicles (%)	38%	17%	0%	0%	15%	18%	72%	0%	27%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.1	60.0			42.9	42.9	32.0		32.0			
Effective Green, g (s)	13.1	60.0			42.9	42.9	32.0		32.0			
Actuated g/C Ratio	0.13	0.60			0.43	0.43	0.32		0.32			
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)	332	2660			2870	587	652		407			
v/s Ratio Prot	c0.08	c0.29			0.18							
v/s Ratio Perm						0.14	c0.14		0.14			
v/c Ratio	0.61	0.48			0.41	0.33	0.43		0.42			
Uniform Delay, d1	41.0	11.2			19.8	19.0	26.8		26.8			
Progression Factor	0.89	0.93			0.37	1.30	1.00		1.00			
Incremental Delay, d2	2.9	0.6			0.3	1.0	2.1		3.2			
Delay (s)	39.4	11.0			7.5	25.6	28.9		30.0			
Level of Service	D	B			A	C	C		C			
Approach Delay (s)		14.9			12.5			29.4			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	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	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6206	1429	2338	4150					3127		2153
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6206	1429	2338	4150					3127		2153
Volume (vph)	0	855	430	230	1115	0	0	0	0	495	0	265
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	929	467	250	1212	0	0	0	0	538	0	288
RTOR Reduction (vph)	0	0	265	0	0	0	0	0	0	0	0	99
Lane Group Flow (vph)	0	929	202	250	1212	0	0	0	0	538	0	189
Heavy Vehicles (%)	0%	24%	78%	34%	25%	0%	0%	0%	0%	12%	0%	32%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		43.2	43.2	14.8	62.0					30.0		30.0
Effective Green, g (s)		43.2	43.2	14.8	62.0					30.0		30.0
Actuated g/C Ratio		0.43	0.43	0.15	0.62					0.30		0.30
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2681	617	346	2573					938		646
v/s Ratio Prot		0.15		c0.11	c0.29							
v/s Ratio Perm			0.14							c0.17		0.09
v/c Ratio		0.35	0.33	0.72	0.47					0.57		0.29
Uniform Delay, d1		19.0	18.8	40.6	10.2					29.6		26.9
Progression Factor		1.00	1.00	1.67	0.69					1.00		1.00
Incremental Delay, d2		0.4	1.4	6.8	0.6					2.5		1.1
Delay (s)		19.3	20.2	74.8	7.7					32.1		28.0
Level of Service		B	C	E	A					C		C
Approach Delay (s)		19.6			19.1			0.0			30.7	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

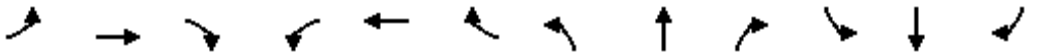
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.85		1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (prot)	1520	1780		1809	1600	1360		1613	723		2190	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (perm)	1520	1780		1809	1600	1360		1613	723		2190	
Volume (vph)	5	5	395	540	55	385	120	180	200	310	110	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	416	568	58	405	126	189	211	326	116	11
RTOR Reduction (vph)	0	341	0	0	0	218	0	0	0	0	2	0
Lane Group Flow (vph)	5	80	0	568	58	187	0	315	211	0	451	0
Heavy Vehicles (%)	0%	0%	46%	63%	0%	0%	62%	100%	88%	10%	100%	30%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	18.0		29.0	46.2	46.2		18.0	100.0		19.0	
Effective Green, g (s)	0.8	18.0		29.0	46.2	46.2		18.0	100.0		19.0	
Actuated g/C Ratio	0.01	0.18		0.29	0.46	0.46		0.18	1.00		0.19	
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)	12	320		525	739	628		290	723		416	
v/s Ratio Prot	0.00	0.04		c0.31	0.04			c0.20			c0.21	
v/s Ratio Perm						0.14			c0.29			
v/c Ratio	0.42	0.25		1.08	0.08	0.30		1.09	0.29		1.23dl	
Uniform Delay, d1	49.4	35.2		35.5	15.0	16.8		41.0	0.0		40.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	1.9		63.2	0.2	1.2		77.8	1.0		68.9	
Delay (s)	71.1	37.1		98.7	15.2	18.0		118.8	1.0		109.4	
Level of Service	E	D		F	B	B		F	A		F	
Approach Delay (s)		37.5			62.3			71.6			109.4	
Approach LOS		D			E			E			F	

Intersection Summary			
HCM Average Control Delay	68.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

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

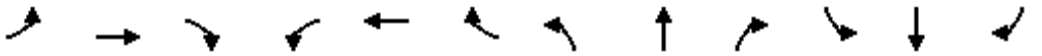
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2920	4241	1320	1505	4179		2808	2809		2863	4241	1347
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)	2920	4241	1320	1505	4179		2808	2809		2863	4241	1347
Volume (vph)	275	1180	400	125	995	115	220	430	105	265	655	380
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	289	1242	421	132	1047	121	232	453	111	279	689	400
RTOR Reduction (vph)	0	0	247	0	18	0	0	27	0	0	0	219
Lane Group Flow (vph)	289	1242	174	132	1150	0	232	537	0	279	689	181
Heavy Vehicles (%)	1%	3%	3%	1%	3%	2%	5%	6%	1%	3%	3%	1%
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)	9.9	28.0	28.0	9.0	27.1		8.9	18.0		9.0	18.1	18.1
Effective Green, g (s)	9.9	28.0	28.0	9.0	27.1		8.9	18.0		9.0	18.1	18.1
Actuated g/C Ratio	0.12	0.35	0.35	0.11	0.34		0.11	0.22		0.11	0.23	0.23
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)	361	1484	462	169	1416		312	632		322	960	305
v/s Ratio Prot	0.10	c0.29		0.09	c0.28		0.08	c0.19		0.10	c0.16	
v/s Ratio Perm			0.13									0.13
v/c Ratio	0.80	0.84	0.38	0.78	0.81		0.74	0.85		0.87	0.72	0.59
Uniform Delay, d1	34.1	23.9	19.5	34.5	24.1		34.4	29.7		34.9	28.6	27.7
Progression Factor	0.99	0.72	0.50	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.4	3.5	1.4	20.5	5.2		9.2	13.4		20.9	4.6	8.2
Delay (s)	41.2	20.7	11.1	55.0	29.3		43.7	43.1		55.8	33.2	35.9
Level of Service	D	C	B	E	C		D	D		E	C	D
Approach Delay (s)		21.7			31.9			43.3			38.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1448	4061		1505	4184		2863	2951	1183	2835	2951	1295
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)	1448	4061		1505	4184		2863	2951	1183	2835	2951	1295
Volume (vph)	285	1405	605	70	830	50	575	765	75	170	665	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	1479	637	74	874	53	605	805	79	179	700	174
RTOR Reduction (vph)	0	70	0	0	6	0	0	0	54	0	0	138
Lane Group Flow (vph)	300	2046	0	74	921	0	605	805	25	179	700	36
Heavy Vehicles (%)	5%	3%	2%	1%	3%	12%	3%	3%	15%	4%	3%	5%
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)	23.0	48.0		4.0	29.0		19.0	35.0	35.0	7.0	23.0	23.0
Effective Green, g (s)	23.0	48.0		4.0	29.0		19.0	35.0	35.0	7.0	23.0	23.0
Actuated g/C Ratio	0.21	0.44		0.04	0.26		0.17	0.32	0.32	0.06	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	303	1772		55	1103		495	939	376	180	617	271
v/s Ratio Prot	0.21	c0.50		0.05	c0.22		c0.21	0.27		0.06	c0.24	
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.99	1.15		1.35	0.84		1.22	0.86	0.07	0.99	1.13	0.13
Uniform Delay, d1	43.4	31.0		53.0	38.2		45.5	35.2	26.1	51.5	43.5	35.4
Progression Factor	1.01	0.35		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	43.1	75.0		238.5	7.5		117.1	10.0	0.3	65.1	79.3	1.0
Delay (s)	86.8	85.8		291.5	45.7		162.6	45.1	26.5	116.6	122.8	36.4
Level of Service	F	F		F	D		F	D	C	F	F	D
Approach Delay (s)		85.9			63.9			91.9			107.5	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	87.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1320	1476	2980	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1320	1476	2980	1520	1360
Volume (vph)	1405	340	380	750	110	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1479	358	400	789	116	126
RTOR Reduction (vph)	0	60	0	0	0	94
Lane Group Flow (vph)	1479	298	400	789	116	32
Heavy Vehicles (%)	2%	3%	3%	2%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	34.0	40.0	18.0	56.0	6.0	18.0
Effective Green, g (s)	34.0	40.0	18.0	56.0	6.0	18.0
Actuated g/C Ratio	0.49	0.57	0.26	0.80	0.09	0.26
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)	1447	830	380	2384	130	350
v/s Ratio Prot	c0.50	0.03	c0.27	0.26	c0.08	0.02
v/s Ratio Perm		0.19				
v/c Ratio	1.02	0.36	1.05	0.33	0.89	0.09
Uniform Delay, d1	18.0	8.1	26.0	1.9	31.7	19.8
Progression Factor	0.51	0.07	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.5	0.2	60.7	0.4	47.7	0.1
Delay (s)	35.7	0.8	86.7	2.3	79.3	19.9
Level of Service	D	A	F	A	E	B
Approach Delay (s)	28.9			30.7	48.4	
Approach LOS	C			C	D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1308	1462	2980	2863	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1308	1462	2980	2863	1333
Volume (vph)	1155	370	120	740	290	590
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1216	389	126	779	305	621
RTOR Reduction (vph)	0	175	0	0	0	0
Lane Group Flow (vph)	1216	214	126	779	305	621
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	38.5	38.5	7.2	49.7	12.3	70.0
Effective Green, g (s)	38.5	38.5	7.2	49.7	12.3	70.0
Actuated g/C Ratio	0.55	0.55	0.10	0.71	0.18	1.00
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)	1639	719	150	2116	503	1333
v/s Ratio Prot	c0.41		c0.09	0.26		
v/s Ratio Perm		0.16			0.11	c0.47
v/c Ratio	0.74	0.30	0.84	0.37	0.61	0.47
Uniform Delay, d1	12.0	8.5	30.8	4.0	26.6	0.0
Progression Factor	1.00	1.00	1.05	1.02	1.00	1.00
Incremental Delay, d2	3.1	1.1	30.1	0.5	2.1	1.2
Delay (s)	15.0	9.5	62.4	4.5	28.7	1.2
Level of Service	B	A	E	A	C	A
Approach Delay (s)	13.7			12.6	10.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	1495	0	0	985	50	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1574	0	0	1037	53	253
RTOR Reduction (vph)	0	0	0	0	0	24
Lane Group Flow (vph)	1574	0	0	1037	53	229
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	38.5			38.5	13.5	13.5
Effective Green, g (s)	38.5			38.5	13.5	13.5
Actuated g/C Ratio	0.64			0.64	0.22	0.22
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)	1931			1912	342	306
v/s Ratio Prot	c0.52			0.35	0.03	c0.17
v/s Ratio Perm						
v/c Ratio	0.82			0.54	0.15	0.75
Uniform Delay, d1	8.1			5.9	18.7	21.7
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	3.9			1.1	0.2	9.6
Delay (s)	12.0			7.0	18.9	31.3
Level of Service	B			A	B	C
Approach Delay (s)	12.0			7.0	29.1	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1495	10	160	875	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1574	11	168	921	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.91	
vC, conflicting volume			1574		2376	792
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1574		2413	792
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			60		100	100
cM capacity (veh/h)			424		15	336

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	1049	535	168	461	461
Volume Left	0	0	168	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	424	1700	1700
Volume to Capacity	0.62	0.31	0.40	0.27	0.27
Queue Length 95th (ft)	0	0	47	0	0
Control Delay (s)	0.0	0.0	19.0	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		2.9		
Approach LOS					

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1333		4085		2891		1248			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1333		4085		2891		1248			
Volume (vph)	0	925	290	0	795	210	750	0	360	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	974	305	0	837	221	789	0	379	0	0	0
RTOR Reduction (vph)	0	0	158	0	103	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	974	147	0	955	0	789	0	379	0	0	0
Heavy Vehicles (%)	0%	5%	2%	0%	4%	2%	2%	0%	9%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		21.7	21.7		21.7		15.3		45.0			
Effective Green, g (s)		21.7	21.7		21.7		15.3		45.0			
Actuated g/C Ratio		0.48	0.48		0.48		0.34		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1396	643		1970		983		1248			
v/s Ratio Prot		c0.34			0.23		c0.27					
v/s Ratio Perm			0.11						0.30			
v/c Ratio		0.70	0.23		0.48		0.80		0.30			
Uniform Delay, d1		9.1	6.8		7.9		13.5		0.0			
Progression Factor		0.83	3.67		1.00		1.00		1.00			
Incremental Delay, d2		2.6	0.7		0.9		4.8		0.6			
Delay (s)		10.1	25.6		8.7		18.3		0.6			
Level of Service		B	C		A		B		A			
Approach Delay (s)		13.8			8.7			12.6			0.0	
Approach LOS		B			A			B			A	

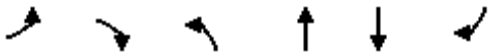
Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2773	1441		2951	1360				2891		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2773	1441		2951	1360				2891		2347
Volume (vph)	0	905	410	0	1465	80	0	0	0	310	0	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	953	432	0	1542	84	0	0	0	326	0	768
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	35
Lane Group Flow (vph)	0	953	432	0	1542	84	0	0	0	326	0	733
Heavy Vehicles (%)	0%	5%	2%	0%	3%	0%	0%	0%	0%	2%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		52.7	90.0		52.7	90.0				29.3		29.3
Effective Green, g (s)		52.7	90.0		52.7	90.0				29.3		29.3
Actuated g/C Ratio		0.59	1.00		0.59	1.00				0.33		0.33
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)		1624	1441		1728	1360				941		764
v/s Ratio Prot		0.34			c0.52					0.11		c0.31
v/s Ratio Perm			0.30			0.06						
v/c Ratio		0.59	0.30		0.89	0.06				0.35		0.96
Uniform Delay, d1		11.8	0.0		16.2	0.0				23.1		29.8
Progression Factor		1.00	1.00		0.93	1.00				1.00		1.00
Incremental Delay, d2		1.6	0.1		5.7	0.0				0.2		22.8
Delay (s)		13.3	0.1		20.9	0.0				23.3		52.5
Level of Service		B	A		C	A				C		D
Approach Delay (s)		9.2			19.8			0.0			43.8	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

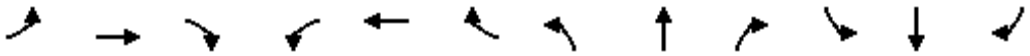
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1382	1248	1407	2980	1569	1360
Flt Permitted	0.95	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1382	1248	846	2980	1569	1360
Volume (vph)	10	200	215	240	295	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	211	226	253	311	5
RTOR Reduction (vph)	0	182	0	0	0	2
Lane Group Flow (vph)	11	29	226	253	311	3
Heavy Vehicles (%)	10%	9%	8%	2%	2%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	30.8	30.8	30.8	30.8
Effective Green, g (s)	6.2	6.2	30.8	30.8	30.8	30.8
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	172	579	2040	1074	931
v/s Ratio Prot	0.01			0.08	0.20	
v/s Ratio Perm		c0.02	c0.27			0.00
v/c Ratio	0.06	0.17	0.39	0.12	0.29	0.00
Uniform Delay, d1	16.9	17.1	3.1	2.4	2.8	2.2
Progression Factor	1.00	1.00	0.96	0.32	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.8	0.0	0.7	0.0
Delay (s)	17.0	17.6	3.7	0.8	3.5	2.3
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			2.2	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

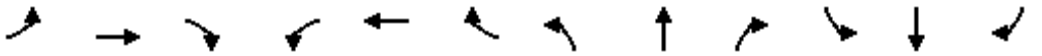
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.97	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1073		3876	1147	2808		2370			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1073		3876	1147	2808		2370			
Volume (vph)	0	1740	360	0	1180	1090	810	0	910	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1832	379	0	1242	1147	853	0	958	0	0	0
RTOR Reduction (vph)	0	0	0	0	27	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1832	379	0	1485	877	853	0	952	0	0	0
Heavy Vehicles (%)	0%	2%	9%	0%	4%	2%	5%	0%	1%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		55.5	110.0		55.5	110.0	46.5		46.5			
Effective Green, g (s)		55.5	110.0		55.5	110.0	46.5		46.5			
Actuated g/C Ratio		0.50	1.00		0.50	1.00	0.42		0.42			
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)		2042	1073		1956	1147	1187		1002			
v/s Ratio Prot		c0.45			0.38		0.30		c0.40			
v/s Ratio Perm			0.35			0.76						
v/c Ratio		0.90	0.35		0.76	0.76	0.72		0.95			
Uniform Delay, d1		24.7	0.0		21.9	0.0	26.3		30.6			
Progression Factor		0.87	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		4.6	0.1		2.8	3.1	2.1		17.4			
Delay (s)		26.1	0.1		24.7	3.1	28.4		48.0			
Level of Service		C	A		C	A	C		D			
Approach Delay (s)		21.7			16.8			38.8			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

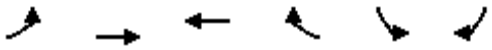
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3953	1136		3969	1114				2835		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3953	1136		3969	1114				2835		2347
Volume (vph)	0	1280	710	0	1390	600	0	0	0	820	0	660
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1347	747	0	1463	632	0	0	0	863	0	695
RTOR Reduction (vph)	0	9	274	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	1472	339	0	1463	632	0	0	0	863	0	665
Heavy Vehicles (%)	0%	3%	3%	0%	4%	5%	0%	0%	0%	4%	0%	2%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		60.8	60.8		60.8	110.0				41.2		41.2
Effective Green, g (s)		60.8	60.8		60.8	110.0				41.2		41.2
Actuated g/C Ratio		0.55	0.55		0.55	1.00				0.37		0.37
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)		2185	628		2194	1114				1062		879
v/s Ratio Prot		c0.37			0.37					c0.30		
v/s Ratio Perm			0.30			0.57						0.28
v/c Ratio		0.67	0.54		0.67	0.57				0.81		0.76
Uniform Delay, d1		17.5	15.7		17.4	0.0				30.9		30.0
Progression Factor		1.00	1.00		0.68	1.00				1.00		1.00
Incremental Delay, d2		1.7	3.3		1.1	0.4				4.8		3.8
Delay (s)		19.2	19.0		12.9	0.4				35.8		33.8
Level of Service		B	B		B	A				D		C
Approach Delay (s)		19.1			9.2			0.0			34.9	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1382	4200	4082	1333	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1382	4200	4082	1333	2920	1347
Volume (vph)	105	2280	1620	140	575	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	2400	1705	147	605	258
RTOR Reduction (vph)	0	0	0	76	0	146
Lane Group Flow (vph)	111	2400	1705	71	605	112
Heavy Vehicles (%)	10%	4%	7%	2%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	45.0	34.0	34.0	17.0	17.0
Effective Green, g (s)	7.0	45.0	34.0	34.0	17.0	17.0
Actuated g/C Ratio	0.10	0.64	0.49	0.49	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	138	2700	1983	647	709	327
v/s Ratio Prot	0.08	c0.57	0.42		c0.21	
v/s Ratio Perm				0.05		0.08
v/c Ratio	0.80	0.89	0.86	0.11	0.85	0.34
Uniform Delay, d1	30.8	10.4	15.9	9.8	25.3	21.9
Progression Factor	1.00	1.00	0.40	0.01	1.00	1.00
Incremental Delay, d2	27.7	4.9	4.7	0.3	12.4	2.8
Delay (s)	58.6	15.3	11.0	0.4	37.7	24.7
Level of Service	E	B	B	A	D	C
Approach Delay (s)		17.2	10.2		33.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4325	680	760	4282		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4325	680	760	4282		1474	680				
Volume (vph)	0	1650	420	20	2010	0	430	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1737	442	21	2116	0	453	0	21	0	0	0
RTOR Reduction (vph)	0	0	162	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1737	280	21	2116	0	453	4	0	0	0	0
Heavy Vehicles (%)	0%	1%	100%	100%	2%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		50.6	50.6	2.4	57.0		15.0	15.0				
Effective Green, g (s)		50.6	50.6	2.4	57.0		15.0	15.0				
Actuated g/C Ratio		0.63	0.63	0.03	0.71		0.19	0.19				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2736	430	23	3051		276	128				
v/s Ratio Prot		0.40		0.03	c0.49		c0.31	0.01				
v/s Ratio Perm			0.41									
v/c Ratio		0.63	0.65	0.91	0.69		1.64	0.03				
Uniform Delay, d1		9.0	9.2	38.7	6.5		32.5	26.6				
Progression Factor		1.00	1.00	0.73	0.42		1.00	1.00				
Incremental Delay, d2		1.1	7.4	136.1	1.1		304.4	0.1				
Delay (s)		10.2	16.6	164.2	3.9		336.9	26.7				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		11.5			5.5			323.2			0.0	
Approach LOS		B			A			F			A	

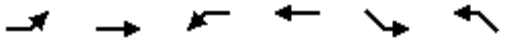
Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	4241	1966	4368	2891	2610
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	4241	1966	4368	2891	2610
Volume (vph)	730	640	120	1160	470	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	768	674	126	1221	495	211
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	768	674	126	1221	495	211
Heavy Vehicles (%)	1%	3%	50%	0%	2%	13%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.8	43.5	8.2	25.9	16.3	16.3
Effective Green, g (s)	25.8	43.5	8.2	25.9	16.3	16.3
Actuated g/C Ratio	0.32	0.54	0.10	0.32	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	942	2306	202	1414	589	532
v/s Ratio Prot	c0.26	0.16	0.06	c0.28	c0.17	0.08
v/s Ratio Perm						
v/c Ratio	0.82	0.29	0.62	0.86	0.84	0.40
Uniform Delay, d1	24.9	9.9	34.4	25.4	30.6	27.6
Progression Factor	0.66	0.35	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.4	0.3	5.9	7.2	10.5	0.5
Delay (s)	20.8	3.8	40.3	32.6	41.1	28.1
Level of Service	C	A	D	C	D	C
Approach Delay (s)		12.8		33.3		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

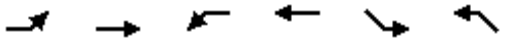
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2520	4160	1966	4200	2705	2137
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2520	4160	1966	4200	2705	2137
Volume (vph)	620	1075	10	820	510	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	653	1132	11	863	537	84
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	653	1132	11	863	537	84
Heavy Vehicles (%)	17%	5%	50%	4%	9%	38%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	17.5	33.4	0.8	16.7	13.8	13.8
Effective Green, g (s)	17.5	33.4	0.8	16.7	13.8	13.8
Actuated g/C Ratio	0.29	0.56	0.01	0.28	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	735	2316	26	1169	622	492
v/s Ratio Prot	c0.26	0.27	0.01	c0.21	c0.20	0.04
v/s Ratio Perm						
v/c Ratio	0.89	0.49	0.42	0.74	0.86	0.17
Uniform Delay, d1	20.3	8.1	29.4	19.7	22.2	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.6	0.7	10.7	4.2	11.9	0.2
Delay (s)	32.9	8.8	40.1	23.9	34.1	18.7
Level of Service	C	A	D	C	C	B
Approach Delay (s)		17.6		24.1		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

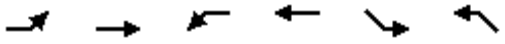
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	3010	2808	4325	2920	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	3010	2808	4325	2920	2949
Volume (vph)	730	655	230	1615	800	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	768	689	242	1700	842	200
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	768	689	242	1700	842	200
Heavy Vehicles (%)	1%	1%	5%	1%	1%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.0	54.5	13.5	41.0	30.0	30.0
Effective Green, g (s)	27.0	54.5	13.5	41.0	30.0	30.0
Actuated g/C Ratio	0.25	0.50	0.12	0.37	0.27	0.27
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)	717	1491	345	1612	796	804
v/s Ratio Prot	c0.26	0.23	0.09	c0.39	c0.29	0.07
v/s Ratio Perm						
v/c Ratio	1.07	0.46	0.70	1.05	1.06	0.25
Uniform Delay, d1	41.5	18.2	46.3	34.5	40.0	31.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.3	1.0	6.3	38.4	48.3	0.2
Delay (s)	95.8	19.2	52.6	72.9	88.3	31.4
Level of Service	F	B	D	E	F	C
Approach Delay (s)		59.6		70.4		
Approach LOS		E		E		

Intersection Summary			
HCM Average Control Delay	68.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2949	4082	2949	2478
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2949	4082	2949	2478
Volume (vph)	770	1405	150	650	410	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	811	1479	158	684	432	453
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	811	1479	158	684	432	453
Heavy Vehicles (%)	5%	3%	0%	7%	0%	19%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	35.0	7.7	17.7	15.3	15.3
Effective Green, g (s)	25.0	35.0	7.7	17.7	15.3	15.3
Actuated g/C Ratio	0.36	0.50	0.11	0.25	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1003	2121	324	1032	645	542
v/s Ratio Prot	c0.29	0.35	0.05	c0.17	0.15	c0.18
v/s Ratio Perm						
v/c Ratio	0.81	0.70	0.49	0.66	0.67	0.84
Uniform Delay, d1	20.3	13.4	29.3	23.5	25.0	26.1
Progression Factor	0.81	0.71	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.9	1.2	3.4	2.6	10.7
Delay (s)	18.7	10.4	30.5	26.8	27.7	36.9
Level of Service	B	B	C	C	C	D
Approach Delay (s)		13.3		27.5		
Approach LOS		B		C		

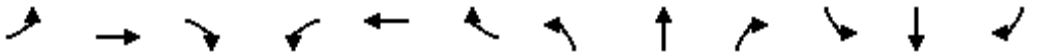
Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4241	2891	4241	2863	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4241	2891	4241	2863	2756
Volume (vph)	270	1400	280	990	500	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1474	295	1042	526	242
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1474	295	1042	526	242
Heavy Vehicles (%)	4%	3%	2%	3%	3%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.3	21.6	7.9	18.2	12.5	12.5
Effective Green, g (s)	11.3	21.6	7.9	18.2	12.5	12.5
Actuated g/C Ratio	0.21	0.40	0.15	0.34	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	593	1696	423	1429	663	638
v/s Ratio Prot	0.10	c0.35	0.10	c0.25	c0.18	0.09
v/s Ratio Perm						
v/c Ratio	0.48	0.87	0.70	0.73	0.79	0.38
Uniform Delay, d1	18.8	14.9	21.9	15.7	19.5	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	5.0	5.0	1.9	6.5	0.4
Delay (s)	19.4	19.9	26.9	17.6	26.0	17.9
Level of Service	B	B	C	B	C	B
Approach Delay (s)		19.8		19.7		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.5%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4206			4282	1333			2370	2891		1214
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4206			4282	1333			2370	2891		1214
Volume (vph)	230	1720	115	0	1850	225	0	0	185	475	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	1811	121	0	1947	237	0	0	195	500	0	21
RTOR Reduction (vph)	0	8	0	0	0	144	0	0	19	0	0	16
Lane Group Flow (vph)	242	1924	0	0	1947	93	0	0	176	500	0	5
Heavy Vehicles (%)	0%	3%	1%	0%	2%	2%	0%	0%	1%	2%	0%	12%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	10.0	47.0			33.0	33.0			11.7	19.3		19.3
Effective Green, g (s)	10.0	47.0			33.0	33.0			11.7	19.3		19.3
Actuated g/C Ratio	0.11	0.52			0.37	0.37			0.13	0.21		0.21
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)	169	2196			1570	489			308	620		260
v/s Ratio Prot	c0.16	0.46			c0.45					c0.17		
v/s Ratio Perm						0.07			c0.07			0.00
v/c Ratio	1.43	0.88			1.24	0.19			0.57	0.81		0.02
Uniform Delay, d1	40.0	18.9			28.5	19.4			36.8	33.6		27.9
Progression Factor	1.00	1.00			0.66	0.44			1.00	0.95		0.91
Incremental Delay, d2	224.9	5.3			113.1	0.8			2.5	7.1		0.0
Delay (s)	264.9	24.2			131.7	9.3			39.3	38.9		25.4
Level of Service	F	C			F	A			D	D		C
Approach Delay (s)		51.0			118.4			39.3			38.3	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM Average Control Delay	78.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4160	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4160	2808	2891
Volume (vph)	330	1070	480	765	150	720
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	1126	505	805	158	758
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	347	1126	505	805	158	758
Heavy Vehicles (%)	2%	3%	2%	5%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	17.1	32.3	18.8	34.0	26.9	26.9
Effective Green, g (s)	17.1	32.3	18.8	34.0	26.9	26.9
Actuated g/C Ratio	0.19	0.36	0.21	0.38	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	549	1522	604	1572	839	864
v/s Ratio Prot	0.12	c0.27	c0.17	0.19	0.06	c0.26
v/s Ratio Perm						
v/c Ratio	0.63	0.74	0.84	0.51	0.19	0.88
Uniform Delay, d1	33.6	25.2	34.1	21.6	23.4	30.0
Progression Factor	0.76	0.69	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	1.7	9.8	1.2	0.1	10.0
Delay (s)	26.7	19.1	43.9	22.8	23.5	40.0
Level of Service	C	B	D	C	C	D
Approach Delay (s)		20.9		30.9		
Approach LOS		C		C		

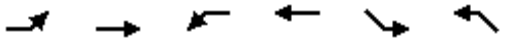
Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2782	2951	2863	2951	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2782	2951	2863	2951	2863	2920
Volume (vph)	210	1385	360	905	300	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	221	1458	379	953	316	389
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	221	1458	379	953	316	389
Heavy Vehicles (%)	6%	3%	3%	3%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.0	44.0	12.0	45.0	12.0	12.0
Effective Green, g (s)	11.0	44.0	12.0	45.0	12.0	12.0
Actuated g/C Ratio	0.14	0.55	0.15	0.56	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	383	1623	429	1660	429	438
v/s Ratio Prot	0.08	c0.49	c0.13	0.32	0.11	c0.13
v/s Ratio Perm						
v/c Ratio	0.58	0.90	0.88	0.57	0.74	0.89
Uniform Delay, d1	32.3	16.0	33.3	11.3	32.5	33.3
Progression Factor	1.00	1.00	0.90	0.48	1.00	1.00
Incremental Delay, d2	2.1	8.3	12.2	0.8	6.5	19.1
Delay (s)	34.4	24.3	42.0	6.3	39.0	52.5
Level of Service	C	C	D	A	D	D
Approach Delay (s)		25.6		16.5		
Approach LOS		C		B		

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4200	2835	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4200	2835	2891
Volume (vph)	320	1500	620	650	170	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	1579	653	684	179	663
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	337	1579	653	684	179	663
Heavy Vehicles (%)	2%	3%	2%	4%	4%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.6	44.8	26.6	51.8	26.6	26.6
Effective Green, g (s)	19.6	44.8	26.6	51.8	26.6	26.6
Actuated g/C Ratio	0.18	0.41	0.24	0.47	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	515	1727	699	1978	686	699
v/s Ratio Prot	0.12	c0.37	c0.23	0.16	0.06	c0.23
v/s Ratio Perm						
v/c Ratio	0.65	0.91	0.93	0.35	0.26	0.95
Uniform Delay, d1	42.0	30.8	40.8	18.4	33.7	41.0
Progression Factor	1.00	1.00	0.80	0.39	1.00	1.00
Incremental Delay, d2	3.0	9.0	10.0	0.2	0.2	22.0
Delay (s)	45.0	39.8	42.9	7.4	33.9	63.0
Level of Service	D	D	D	A	C	E
Approach Delay (s)		40.7		24.7		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2764			2357	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2764			2357	760	680
Volume (vph)	300	0	0	295	140	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	0	0	311	147	179
RTOR Reduction (vph)	0	0	0	0	0	83
Lane Group Flow (vph)	316	0	0	311	147	96
Heavy Vehicles (%)	10%	0%	0%	29%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	10.5			10.5	21.5	21.5
Effective Green, g (s)	10.5			10.5	21.5	21.5
Actuated g/C Ratio	0.26			0.26	0.54	0.54
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)	726			619	409	366
v/s Ratio Prot	0.11			c0.13	c0.19	
v/s Ratio Perm						0.14
v/c Ratio	0.44			0.50	0.36	0.26
Uniform Delay, d1	12.3			12.5	5.3	5.0
Progression Factor	0.53			1.00	1.00	1.00
Incremental Delay, d2	0.4			0.6	2.4	1.7
Delay (s)	6.9			13.2	7.8	6.7
Level of Service	A			B	A	A
Approach Delay (s)	6.9			13.2	7.2	
Approach LOS	A			B	A	

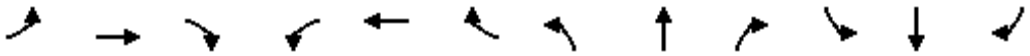
Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2764	680	760	2097		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2764	680	760	2097		
Volume (vph)	300	55	65	375	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	316	58	68	395	0	0
RTOR Reduction (vph)	0	24	0	0	0	0
Lane Group Flow (vph)	316	34	68	395	0	0
Heavy Vehicles (%)	10%	100%	100%	45%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	23.4	23.4	8.6	40.0		
Effective Green, g (s)	23.4	23.4	8.6	40.0		
Actuated g/C Ratio	0.58	0.58	0.21	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1617	398	163	2097		
v/s Ratio Prot	0.11		c0.09	c0.19		
v/s Ratio Perm		0.05				
v/c Ratio	0.20	0.09	0.42	0.19		
Uniform Delay, d1	3.9	3.6	13.5	0.0		
Progression Factor	1.00	1.00	0.85	1.00		
Incremental Delay, d2	0.1	0.1	1.6	0.0		
Delay (s)	3.9	3.7	13.1	0.0		
Level of Service	A	A	B	A		
Approach Delay (s)	3.9			2.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	2.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

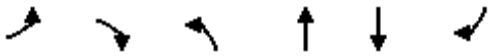
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1391	1295	1126	980		1448	2671		1216	2893	
Flt Permitted	0.22	1.00	1.00	0.67	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	341	1391	1295	790	980		1448	2671		1216	2893	
Volume (vph)	10	135	585	100	120	135	250	600	160	70	1055	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	142	616	105	126	142	263	632	168	74	1111	5
RTOR Reduction (vph)	0	0	49	0	37	0	0	23	0	0	0	0
Lane Group Flow (vph)	11	142	567	105	231	0	263	777	0	74	1116	0
Heavy Vehicles (%)	5%	15%	5%	35%	45%	55%	5%	5%	30%	25%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.7	18.7	40.7	27.4	27.4		22.0	46.6		9.2	33.8	
Effective Green, g (s)	18.7	18.7	40.7	27.4	27.4		22.0	46.6		9.2	33.8	
Actuated g/C Ratio	0.19	0.19	0.41	0.27	0.27		0.22	0.47		0.09	0.34	
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)	73	260	527	248	269		319	1245		112	978	
v/s Ratio Prot	0.00	0.10	c0.24	0.04	c0.24		0.18	0.29		0.06	c0.39	
v/s Ratio Perm	0.03		0.20	0.08								
v/c Ratio	0.15	0.55	1.08	0.42	0.86		0.82	0.62		0.66	1.14	
Uniform Delay, d1	34.1	36.8	29.6	30.4	34.5		37.2	20.1		43.9	33.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	2.3	61.0	1.2	22.8		15.7	2.4		13.7	75.9	
Delay (s)	35.1	39.1	90.7	31.6	57.2		52.9	22.5		57.6	109.0	
Level of Service	D	D	F	C	E		D	C		E	F	
Approach Delay (s)		80.4			50.0			30.0			105.8	
Approach LOS		F			D			C			F	

Intersection Summary			
HCM Average Control Delay	70.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	1966	1088	1188	5242	2808	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1088	1188	5242	2808	
Volume (vph)	340	135	190	1345	1105	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	142	200	1416	1163	105
RTOR Reduction (vph)	0	116	0	0	7	0
Lane Group Flow (vph)	358	26	200	1416	1261	0
Heavy Vehicles (%)	50%	25%	28%	5%	5%	28%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	18.3	18.3	17.0	53.0	52.7	
Effective Green, g (s)	18.3	18.3	17.0	53.0	52.7	
Actuated g/C Ratio	0.18	0.18	0.17	0.53	0.53	
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)	360	199	202	2778	1480	
v/s Ratio Prot	c0.18		c0.17	0.27	c0.45	
v/s Ratio Perm		0.02				
v/c Ratio	0.99	0.13	0.99	0.51	0.85	
Uniform Delay, d1	40.8	34.2	41.4	15.1	20.3	
Progression Factor	1.00	1.00	1.00	1.00	0.21	
Incremental Delay, d2	45.7	0.3	60.3	0.7	1.8	
Delay (s)	86.5	34.5	101.7	15.8	6.0	
Level of Service	F	C	F	B	A	
Approach Delay (s)	71.7			26.4	6.0	
Approach LOS	E			C	A	

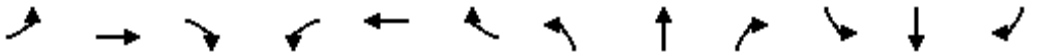
Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2643	2137	1490	2840	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1342		2808	1318			2643	2137	1490	2840	
Volume (vph)	5	0	5	150	5	50	0	1055	625	40	1055	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	158	5	53	0	1111	658	42	1111	5
RTOR Reduction (vph)	0	4	0	0	37	0	0	0	309	0	1	0
Lane Group Flow (vph)	0	6	0	158	21	0	0	1111	349	42	1115	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	15%	12%	2%	7%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		18.3		8.7	31.0			53.0	53.0	4.0	40.0	
Effective Green, g (s)		18.3		8.7	31.0			53.0	53.0	4.0	40.0	
Actuated g/C Ratio		0.18		0.09	0.31			0.53	0.53	0.04	0.40	
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)		246		244	409			1401	1133	60	1136	
v/s Ratio Prot				c0.06	c0.02			c0.42	0.16	0.03	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.65	0.05			0.79	0.31	0.70	0.98	
Uniform Delay, d1		33.5		44.2	24.2			19.1	13.2	47.4	29.6	
Progression Factor		1.00		1.00	1.00			0.48	0.32	1.00	1.00	
Incremental Delay, d2		0.0		5.8	0.1			3.8	0.6	30.0	22.7	
Delay (s)		33.6		50.0	24.3			13.0	4.7	77.4	52.3	
Level of Service		C		D	C			B	A	E	D	
Approach Delay (s)		33.6			43.1			9.9			53.2	
Approach LOS		C			D			A			D	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

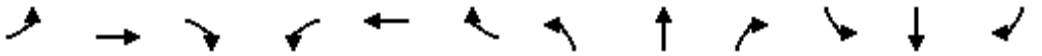
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1538	4017		2901	4036	1350	1538	4036	2422	2984	4036	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1538	4017		2901	4036	1350	1538	4036	2422	2984	4036	2422
Volume (vph)	95	745	50	415	325	330	100	790	715	220	1054	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	784	53	437	342	347	105	832	753	232	1109	258
RTOR Reduction (vph)	0	7	0	0	0	114	0	0	41	0	0	136
Lane Group Flow (vph)	100	830	0	437	342	233	105	832	712	232	1109	122
Heavy Vehicles (%)	5%	15%	6%	8%	15%	7%	5%	15%	5%	5%	15%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.1	25.6		17.5	27.0	39.9	9.9	28.0	45.5	12.9	31.0	47.1
Effective Green, g (s)	16.1	25.6		17.5	27.0	39.9	9.9	28.0	45.5	12.9	31.0	47.1
Actuated g/C Ratio	0.16	0.26		0.18	0.27	0.40	0.10	0.28	0.46	0.13	0.31	0.47
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)	248	1028		508	1090	593	152	1130	1102	385	1251	1238
v/s Ratio Prot	0.07	c0.21		c0.15	0.08	0.05	0.07	0.21	0.11	c0.08	c0.27	0.02
v/s Ratio Perm						0.12			0.18			0.03
v/c Ratio	0.40	0.81		0.86	0.31	0.39	0.69	0.74	0.65	0.60	0.89	0.10
Uniform Delay, d1	37.6	34.9		40.1	29.1	21.4	43.6	32.7	21.0	41.1	32.8	14.7
Progression Factor	0.65	0.62		0.73	0.73	0.63	0.76	0.46	1.43	0.79	0.75	4.49
Incremental Delay, d2	1.0	6.4		12.2	0.6	0.4	10.2	3.4	1.0	2.4	8.8	0.0
Delay (s)	25.4	28.1		41.6	21.9	13.8	43.3	18.3	31.1	35.0	33.5	65.9
Level of Service	C	C		D	C	B	D	B	C	C	C	E
Approach Delay (s)		27.9			27.0			25.6			38.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

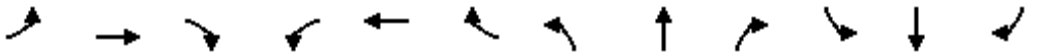
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4036	1290		4219					2928	1589	2377
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4036	1290		4219					2928	1589	2377
Volume (vph)	0	770	755	0	670	0	0	0	0	120	700	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	811	795	0	705	0	0	0	0	126	737	158
RTOR Reduction (vph)	0	0	62	0	0	0	0	0	0	0	0	85
Lane Group Flow (vph)	0	811	733	0	705	0	0	0	0	126	737	73
Heavy Vehicles (%)	0%	15%	12%	7%	10%	0%	0%	0%	0%	7%	7%	7%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		48.0	48.0		48.0					44.0	44.0	44.0
Effective Green, g (s)		48.0	48.0		48.0					44.0	44.0	44.0
Actuated g/C Ratio		0.48	0.48		0.48					0.44	0.44	0.44
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1937	619		2025					1288	699	1046
v/s Ratio Prot		0.20			0.17					0.04	c0.46	
v/s Ratio Perm			c0.57									0.03
v/c Ratio		0.42	1.18		0.35					0.10	1.05	0.07
Uniform Delay, d1		16.9	26.0		16.2					16.4	28.0	16.2
Progression Factor		1.00	1.00		0.20					1.00	1.00	1.00
Incremental Delay, d2		0.7	98.7		0.5					0.0	49.3	0.0
Delay (s)		17.6	124.7		3.7					16.4	77.3	16.2
Level of Service		B	F		A					B	E	B
Approach Delay (s)		70.6			3.7			0.0			60.3	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

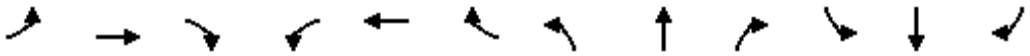
c Critical Lane Group



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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3195	2707	3335	3223	1583	3273	1581		1770	1652	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3195	2707	3335	3223	1583	3273	1581		1770	1652	1583
Volume (vph)	25	910	745	250	650	25	395	100	105	25	195	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	958	784	263	684	26	416	105	111	26	205	26
RTOR Reduction (vph)	0	0	131	0	0	11	0	35	0	0	0	22
Lane Group Flow (vph)	26	958	653	263	684	15	416	181	0	26	205	4
Heavy Vehicles (%)	2%	13%	5%	5%	12%	2%	7%	15%	7%	2%	15%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	37.8	54.7	13.4	49.2	56.2	16.9	25.8		7.0	15.9	15.9
Effective Green, g (s)	2.0	37.8	54.7	13.4	49.2	56.2	16.9	25.8		7.0	15.9	15.9
Actuated g/C Ratio	0.02	0.38	0.55	0.13	0.49	0.56	0.17	0.26		0.07	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	35	1208	1589	447	1586	953	553	408		124	263	252
v/s Ratio Prot	0.01	c0.30	0.07	c0.08	0.21	0.00	c0.13	0.11		0.01	c0.12	
v/s Ratio Perm			0.17			0.01						0.00
v/c Ratio	0.74	0.79	0.41	0.59	0.43	0.02	0.75	0.44		0.21	0.78	0.02
Uniform Delay, d1	48.7	27.6	13.2	40.7	16.4	9.7	39.6	31.1		43.9	40.4	35.5
Progression Factor	0.94	0.77	0.47	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	43.8	3.7	0.1	2.0	0.9	0.0	5.7	0.8		0.8	13.6	0.0
Delay (s)	89.7	25.0	6.3	42.7	17.2	9.7	45.3	31.9		44.7	53.9	35.5
Level of Service	F	C	A	D	B	A	D	C		D	D	D
Approach Delay (s)		17.6			23.9			40.7			51.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

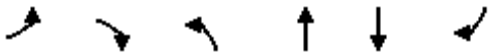
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2936	1350					5316	1314	2848	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2936	1350					5316	1314	2848	4071	
Volume (vph)	0	485	970	0	0	0	0	1605	580	385	1135	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	511	1021	0	0	0	0	1689	611	405	1195	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	21	0	0	0
Lane Group Flow (vph)	0	511	1021	0	0	0	0	1689	590	405	1195	0
Heavy Vehicles (%)	0%	10%	7%	0%	0%	0%	0%	10%	10%	10%	14%	0%
Turn Type			Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		19.9	100.0					51.3	51.3	16.8	72.1	
Effective Green, g (s)		19.9	100.0					51.3	51.3	16.8	72.1	
Actuated g/C Ratio		0.20	1.00					0.51	0.51	0.17	0.72	
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)		584	1350					2727	674	478	2935	
v/s Ratio Prot		0.17						0.32		0.14	0.29	
v/s Ratio Perm			c0.76						c0.45			
v/c Ratio		0.88	0.76					0.62	0.88	0.85	0.41	
Uniform Delay, d1		38.8	0.0					17.4	21.5	40.4	5.5	
Progression Factor		0.89	1.00					1.00	1.00	0.62	0.35	
Incremental Delay, d2		1.5	0.4					1.1	14.8	6.4	0.2	
Delay (s)		36.1	0.4					18.4	36.4	31.3	2.1	
Level of Service		D	A					B	D	C	A	
Approach Delay (s)		12.3			0.0			23.2			9.5	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

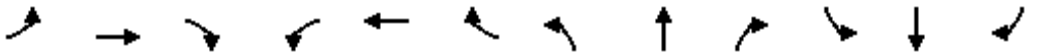
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		1.00		0.91	0.91	
Frt		0.86		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1374		4144	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1374		4144	4107	
Volume (vph)	0	270	0	1215	1250	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	284	0	1279	1316	0
RTOR Reduction (vph)	0	24	0	0	0	0
Lane Group Flow (vph)	0	260	0	1279	1316	0
Heavy Vehicles (%)	0%	7%	0%	12%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		22.3		69.7	69.7	
Effective Green, g (s)		22.3		69.7	69.7	
Actuated g/C Ratio		0.22		0.70	0.70	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		306		2888	2863	
v/s Ratio Prot				0.31	c0.32	
v/s Ratio Perm		c0.19				
v/c Ratio		0.85		0.44	0.46	
Uniform Delay, d1		37.2		6.6	6.8	
Progression Factor		1.00		0.47	1.00	
Incremental Delay, d2		19.2		0.4	0.5	
Delay (s)		56.5		3.5	7.3	
Level of Service		E		A	A	
Approach Delay (s)	56.5			3.5	7.3	
Approach LOS	E			A	A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1392	4071	963	1599	4036	1431	1154	3136	1445	1615	3167	1290
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1392	4071	963	1599	4036	1431	1154	3136	1445	1615	3167	1290
Volume (vph)	175	1475	55	125	1245	75	45	530	105	135	840	405
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)	190	1603	60	136	1353	82	49	576	114	147	913	440
RTOR Reduction (vph)	0	0	36	0	0	53	0	0	29	0	0	24
Lane Group Flow (vph)	190	1603	24	136	1353	29	49	576	85	147	913	416
Heavy Vehicles (%)	16%	14%	50%	1%	15%	1%	40%	3%	0%	0%	2%	12%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.6	40.2	40.2	9.6	35.2	35.2	4.0	22.7	32.3	11.5	30.2	44.8
Effective Green, g (s)	14.6	40.2	40.2	9.6	35.2	35.2	4.0	22.7	32.3	11.5	30.2	44.8
Actuated g/C Ratio	0.15	0.40	0.40	0.10	0.35	0.35	0.04	0.23	0.32	0.12	0.30	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	1637	387	154	1421	504	46	712	525	186	956	630
v/s Ratio Prot	c0.14	c0.39		0.09	0.34		0.04	0.18	0.02	c0.09	c0.29	0.10
v/s Ratio Perm			0.03			0.02			0.04			0.23
v/c Ratio	0.94	0.98	0.06	0.88	0.95	0.06	1.07	0.81	0.16	0.79	0.96	0.66
Uniform Delay, d1	42.2	29.5	18.3	44.6	31.6	21.4	48.0	36.6	24.2	43.1	34.2	21.6
Progression Factor	1.29	0.57	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.5	16.1	0.3	40.4	14.9	0.2	152.4	6.8	0.1	20.0	19.0	2.6
Delay (s)	95.1	32.8	11.1	85.0	46.5	21.6	200.4	43.3	24.3	63.1	53.2	24.2
Level of Service	F	C	B	F	D	C	F	D	C	E	D	C
Approach Delay (s)		38.5			48.5			50.8			45.7	
Approach LOS		D			D			D			D	

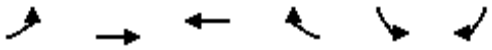
Intersection Summary			
HCM Average Control Delay	44.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2448	4590			4550	1268	2410		1165			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2448	4590			4550	1268	2410		1165			
Volume (vph)	235	1700	0	0	1210	545	90	0	140	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)	255	1848	0	0	1315	592	98	0	152	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	255	0	0	23	0	0	0
Lane Group Flow (vph)	255	1848	0	0	1315	337	98	0	129	0	0	0
Heavy Vehicles (%)	28%	13%	0%	0%	14%	14%	30%	0%	24%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	15.3	76.2			56.9	56.9	15.8		15.8			
Effective Green, g (s)	15.3	76.2			56.9	56.9	15.8		15.8			
Actuated g/C Ratio	0.15	0.76			0.57	0.57	0.16		0.16			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	375	3498			2589	721	381		184			
v/s Ratio Prot	c0.10	c0.40			0.29							
v/s Ratio Perm						0.27	0.04		c0.11			
v/c Ratio	0.68	0.53			0.51	0.47	0.26		0.70			
Uniform Delay, d1	40.0	4.7			13.1	12.7	36.9		39.9			
Progression Factor	1.04	0.64			0.59	1.58	1.00		1.00			
Incremental Delay, d2	4.6	0.5			0.4	1.1	0.4		11.5			
Delay (s)	46.4	3.6			8.1	21.1	37.3		51.4			
Level of Service	D	A			A	C	D		D			
Approach Delay (s)		8.8			12.1			45.9			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

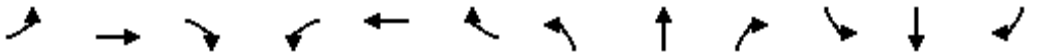
c Critical Lane Group



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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6634	4510		3183	2311
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6634	4510		3183	2311
Volume (vph)	0	1540	1300	0	395	245
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1674	1413	0	429	266
RTOR Reduction (vph)	0	0	0	0	0	38
Lane Group Flow (vph)	0	1674	1413	0	429	228
Heavy Vehicles (%)	0%	16%	15%	15%	10%	23%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		55.0	55.0		37.0	37.0
Effective Green, g (s)		55.0	55.0		37.0	37.0
Actuated g/C Ratio		0.55	0.55		0.37	0.37
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)		3649	2481		1178	855
v/s Ratio Prot		0.25	c0.31			
v/s Ratio Perm					c0.13	0.10
v/c Ratio		0.46	0.57		0.36	0.27
Uniform Delay, d1		13.5	14.7		22.9	22.0
Progression Factor		0.15	0.28		1.00	1.00
Incremental Delay, d2		0.2	0.8		0.9	0.8
Delay (s)		2.3	4.9		23.8	22.8
Level of Service		A	A		C	C
Approach Delay (s)		2.3	4.9		23.4	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

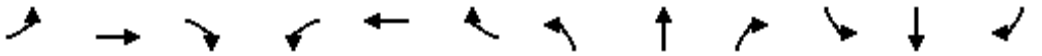
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1780	4219	1403	1188	4962	944	1615	850	1010	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.57	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1780	4219	1403	1188	4962	944	963	850	1010	508	1615	722
Volume (vph)	400	1420	75	175	1070	300	50	10	30	90	280	250
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)	435	1543	82	190	1163	326	54	11	33	98	304	272
RTOR Reduction (vph)	0	0	46	0	0	191	0	0	22	0	0	44
Lane Group Flow (vph)	435	1543	36	190	1163	135	54	11	11	98	304	228
Heavy Vehicles (%)	76%	10%	3%	36%	11%	24%	0%	100%	43%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	26.9	43.0	43.0	17.4	33.5	41.5	18.8	15.6	33.0	27.6	20.4	47.3
Effective Green, g (s)	26.9	43.0	43.0	17.4	33.5	41.5	18.8	15.6	33.0	27.6	20.4	47.3
Actuated g/C Ratio	0.27	0.43	0.43	0.17	0.34	0.42	0.19	0.16	0.33	0.28	0.20	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	479	1814	603	207	1662	430	202	133	374	164	329	370
v/s Ratio Prot	c0.24	c0.37		0.16	0.23	0.03	0.01	0.01	0.01	c0.05	c0.19	0.17
v/s Ratio Perm			0.03			0.12	0.04		0.01	0.12		0.15
v/c Ratio	0.91	0.85	0.06	0.92	0.70	0.31	0.27	0.08	0.03	0.60	0.92	0.62
Uniform Delay, d1	35.4	25.6	16.7	40.6	28.9	19.7	34.1	36.1	22.7	30.7	39.0	19.6
Progression Factor	1.00	1.00	1.00	1.02	0.90	2.13	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	5.2	0.2	36.3	2.2	0.4	0.7	0.3	0.0	5.7	30.6	3.0
Delay (s)	56.1	30.9	16.9	77.6	28.1	42.3	34.8	36.4	22.7	36.4	69.7	22.7
Level of Service	E	C	B	E	C	D	C	D	C	D	E	C
Approach Delay (s)		35.6			36.5			30.9			45.9	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1392	4071	963	1599	4036	1431	1154	3136	1445	1615	3167	1290
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1392	4071	963	1599	4036	1431	1154	3136	1445	1615	3167	1290
Volume (vph)	175	1475	55	125	1245	75	45	530	105	135	840	405
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)	190	1603	60	136	1353	82	49	576	114	147	913	440
RTOR Reduction (vph)	0	0	36	0	0	53	0	0	29	0	0	24
Lane Group Flow (vph)	190	1603	24	136	1353	29	49	576	85	147	913	416
Heavy Vehicles (%)	16%	14%	50%	1%	15%	1%	40%	3%	0%	0%	2%	12%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.6	40.2	40.2	9.6	35.2	35.2	4.0	22.7	32.3	11.5	30.2	44.8
Effective Green, g (s)	14.6	40.2	40.2	9.6	35.2	35.2	4.0	22.7	32.3	11.5	30.2	44.8
Actuated g/C Ratio	0.15	0.40	0.40	0.10	0.35	0.35	0.04	0.23	0.32	0.12	0.30	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	1637	387	154	1421	504	46	712	525	186	956	630
v/s Ratio Prot	c0.14	c0.39		0.09	0.34		0.04	0.18	0.02	c0.09	c0.29	0.10
v/s Ratio Perm			0.03			0.02			0.04			0.23
v/c Ratio	0.94	0.98	0.06	0.88	0.95	0.06	1.07	0.81	0.16	0.79	0.96	0.66
Uniform Delay, d1	42.2	29.5	18.3	44.6	31.6	21.4	48.0	36.6	24.2	43.1	34.2	21.6
Progression Factor	0.98	0.64	0.46	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.0	15.1	0.2	40.4	14.9	0.2	152.4	6.8	0.1	20.0	19.0	2.6
Delay (s)	79.3	34.1	8.8	85.0	46.5	21.6	200.4	43.3	24.3	63.1	53.2	24.2
Level of Service	E	C	A	F	D	C	F	D	C	E	D	C
Approach Delay (s)		37.9			48.5			50.8			45.7	
Approach LOS		D			D			D			D	

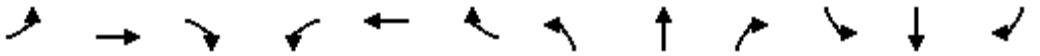
Intersection Summary			
HCM Average Control Delay	44.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2736	4590			6750	1417	1945		1242			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2736	4590			6750	1417	1945		1242			
Volume (vph)	235	1610	0	0	1210	545	340	0	230	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)	255	1750	0	0	1315	592	370	0	250	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	348	0	0	13	0	0	0
Lane Group Flow (vph)	255	1750	0	0	1315	244	370	0	237	0	0	0
Heavy Vehicles (%)	28%	13%	0%	0%	14%	14%	80%	0%	30%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.8	59.0			41.2	41.2	33.0		33.0			
Effective Green, g (s)	13.8	59.0			41.2	41.2	33.0		33.0			
Actuated g/C Ratio	0.14	0.59			0.41	0.41	0.33		0.33			
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)	378	2708			2781	584	642		410			
v/s Ratio Prot	0.09	c0.38			0.19							
v/s Ratio Perm						0.17	0.19		c0.19			
v/c Ratio	0.67	0.65			0.47	0.42	0.58		0.58			
Uniform Delay, d1	41.0	13.6			21.5	20.9	27.7		27.7			
Progression Factor	1.16	0.71			1.02	5.29	1.00		1.00			
Incremental Delay, d2	4.3	1.1			0.3	1.1	3.7		5.9			
Delay (s)	52.0	10.7			22.3	111.5	31.5		33.6			
Level of Service	D	B			C	F	C		C			
Approach Delay (s)		16.0			50.0			32.3			0.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.1%	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	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6634	1496	2410	4021					3183		2292
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6634	1496	2410	4021					3183		2292
Volume (vph)	0	1450	420	290	1260	0	0	0	0	395	0	245
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1576	457	315	1370	0	0	0	0	429	0	266
RTOR Reduction (vph)	0	0	258	0	0	0	0	0	0	0	0	89
Lane Group Flow (vph)	0	1576	199	315	1370	0	0	0	0	429	0	177
Heavy Vehicles (%)	0%	16%	70%	30%	29%	15%	0%	0%	0%	10%	0%	24%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		43.5	43.5	18.5	66.0					26.0		26.0
Effective Green, g (s)		43.5	43.5	18.5	66.0					26.0		26.0
Actuated g/C Ratio		0.44	0.44	0.18	0.66					0.26		0.26
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)		2886	651	446	2654					828		596
v/s Ratio Prot		c0.24		c0.13	0.34							
v/s Ratio Perm			0.13							c0.13		0.08
v/c Ratio		0.55	0.31	0.71	0.52					0.52		0.30
Uniform Delay, d1		20.9	18.4	38.2	8.8					31.6		29.7
Progression Factor		1.00	1.00	1.46	0.77					1.00		1.00
Incremental Delay, d2		0.7	1.2	4.5	0.6					2.3		1.3
Delay (s)		21.7	19.6	60.1	7.4					34.0		30.9
Level of Service		C	B	E	A					C		C
Approach Delay (s)		21.2			17.3			0.0			32.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

FUTURE (2035) ALTERNATIVE 6A

INTERSECTION QUEUING ANALYSIS

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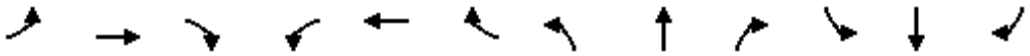
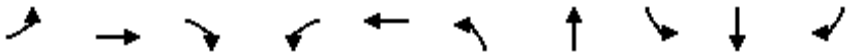


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	47	26	579	21	489	137	95	474	568	37	337
v/c Ratio	0.09	0.19	0.07	1.01	0.03	0.65	0.24	0.82	0.64	1.05	0.47	0.72
Control Delay	45.2	38.8	4.2	77.4	20.4	6.8	29.5	88.5	4.2	91.4	60.2	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	38.8	4.2	77.4	20.4	6.8	29.5	88.5	4.2	91.4	60.2	11.2
Queue Length 50th (ft)	3	27	0	~211	8	0	34	58	0	~204	23	0
Queue Length 95th (ft)	14	63	10	#318	25	90	66	#144	0	#311	53	37
Internal Link Dist (ft)		738			419			857			397	
Turn Bay Length (ft)	120					150				220		220
Base Capacity (vph)	91	243	385	571	645	757	580	128	739	541	176	511
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.19	0.07	1.01	0.03	0.65	0.24	0.74	0.64	1.05	0.21	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

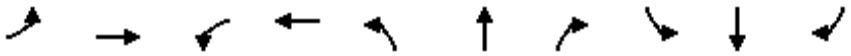


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	247	1021	168	63	1337	279	690	79	247	211
v/c Ratio	0.85	0.59	0.26	0.45	0.84	0.79	0.82	0.54	0.31	0.49
Control Delay	48.6	10.6	2.1	44.8	28.5	51.4	36.1	51.6	28.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	10.6	2.1	44.8	28.5	51.4	36.1	51.6	28.5	8.5
Queue Length 50th (ft)	67	68	0	30	215	71	168	20	38	0
Queue Length 95th (ft)	m#108	110	m6	69	275	#129	#268	#46	61	55
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	292	1723	636	149	1591	358	843	146	801	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.59	0.26	0.42	0.84	0.78	0.82	0.54	0.31	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	495	1411	21	1037	589	642	47	58	268	321
v/c Ratio	1.06	0.65	0.32	1.03	1.06	0.73	0.11	0.68	0.74	0.73
Control Delay	90.3	12.1	72.2	84.2	104.2	47.2	10.0	98.1	68.0	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.3	12.1	72.2	84.2	104.2	47.2	10.0	98.1	68.0	15.9
Queue Length 50th (ft)	~461	179	17	~340	~280	261	0	25	116	0
Queue Length 95th (ft)	#684	206	47	#436	#397	334	30	#62	#169	99
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	466	2186	71	1007	556	881	412	85	363	442
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.65	0.30	1.03	1.06	0.73	0.11	0.68	0.74	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1074	116	589	1326	284	63
v/c Ratio	1.09	0.16	1.19	0.62	1.13	0.13
Control Delay	75.9	5.7	129.9	6.8	128.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	5.7	129.9	6.8	128.3	5.8
Queue Length 50th (ft)	~281	17	~314	122	~146	0
Queue Length 95th (ft)	#400	44	#496	172	#284	24
Internal Link Dist (ft)	2411			1592	569	
Turn Bay Length (ft)			800			
Base Capacity (vph)	989	710	495	2129	251	489
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.16	1.19	0.62	1.13	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	853	379	316	1295
v/c Ratio	0.46	0.41	0.83	0.43
Control Delay	7.8	2.1	39.1	0.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	2.1	39.1	0.3
Queue Length 50th (ft)	87	0	134	0
Queue Length 95th (ft)	124	27	m#231	m0
Internal Link Dist (ft)	208			2411
Turn Bay Length (ft)			490	
Base Capacity (vph)	1855	925	383	2980
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.41	0.83	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

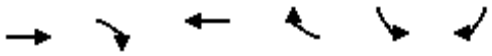
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	984	1853	74	105
v/c Ratio	0.42	0.79	0.45	0.45
Control Delay	3.7	8.8	40.6	13.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.7	8.8	40.6	13.6
Queue Length 50th (ft)	60	199	35	0
Queue Length 95th (ft)	110	384	72	42
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2358	2358	284	321
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.79	0.26	0.33

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	853	305	1168	600	274
v/c Ratio	0.50	0.34	0.48	0.73	0.22
Control Delay	7.4	0.9	7.7	24.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	0.9	7.7	24.7	0.4
Queue Length 50th (ft)	67	0	64	101	0
Queue Length 95th (ft)	96	2	120	130	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1721	905	2444	1156	1225
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.34	0.48	0.52	0.22

Intersection Summary

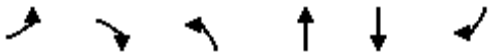


Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	916	832	1274	253	263	663
v/c Ratio	0.57	0.60	0.76	0.20	0.31	0.86
Control Delay	10.7	1.9	11.1	0.3	16.6	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	1.9	11.1	0.3	16.6	30.3
Queue Length 50th (ft)	112	0	182	0	35	107
Queue Length 95th (ft)	167	0	255	m0	60	#198
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1600	1379	1674	1276	927	834
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.60	0.76	0.20	0.28	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	279	95	168	232	11
v/c Ratio	0.02	0.62	0.15	0.08	0.21	0.01
Control Delay	13.2	9.3	2.9	2.2	4.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	9.3	2.9	2.2	4.5	2.8
Queue Length 50th (ft)	1	0	7	5	14	0
Queue Length 95th (ft)	6	41	m20	m15	59	5
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	642	698	643	2104	1107	885
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.15	0.08	0.21	0.01

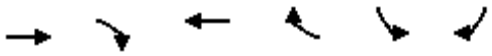
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1463	726	1475	1104	453	411
v/c Ratio	0.96	0.67	0.97	0.95	0.30	0.33
Control Delay	38.5	8.4	44.7	20.3	12.3	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	8.4	44.7	20.3	12.3	12.5
Queue Length 50th (ft)	262	127	308	0	69	68
Queue Length 95th (ft)	#416	310	#426	#204	99	102
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1529	1083	1522	1158	1527	1256
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.67	0.97	0.95	0.30	0.33

Intersection Summary

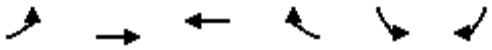
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1939	703	1179	569	400	632
v/c Ratio	0.68	0.70	0.41	0.50	0.74	0.68
Control Delay	8.9	4.8	2.0	7.4	42.7	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	4.8	2.0	7.4	42.7	7.7
Queue Length 50th (ft)	193	0	17	105	111	9
Queue Length 95th (ft)	288	39	m18	m96	153	57
Internal Link Dist (ft)	479		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2853	1006	2860	1135	655	1000
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.70	0.41	0.50	0.61	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	158	895	2763	358	437	179
v/c Ratio	1.03	0.29	1.01	0.36	1.02	0.54
Control Delay	137.6	3.9	41.4	2.6	103.8	17.2
Queue Delay	0.0	0.0	18.1	0.0	0.0	0.0
Total Delay	137.6	3.9	59.5	2.6	103.8	17.2
Queue Length 50th (ft)	~143	62	~817	13	~202	16
Queue Length 95th (ft)	#286	75	#976	49	#309	91
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	153	3062	2746	988	427	331
Starvation Cap Reductn	0	0	132	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.29	1.06	0.36	1.02	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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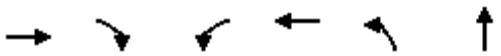

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	1463	421	11	2032	526	11
v/c Ratio	0.56	0.71	0.32	0.74	1.60	0.04
Control Delay	10.1	9.2	55.5	6.0	313.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	9.2	55.5	6.0	313.2	0.3
Queue Length 50th (ft)	129	0	6	65	~223	0
Queue Length 95th (ft)	220	86	m16	76	#323	0
Internal Link Dist (ft)	564			369		492
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2618	590	34	2760	328	337
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.71	0.32	0.74	1.60	0.03

Intersection Summary

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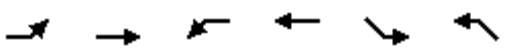
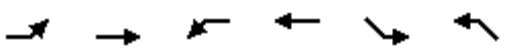
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	611	568	221	1053	516	168
v/c Ratio	0.75	0.29	0.65	0.71	0.83	0.32
Control Delay	25.6	5.2	46.2	28.7	45.6	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	5.2	46.2	28.7	45.6	30.5
Queue Length 50th (ft)	162	25	61	191	141	40
Queue Length 95th (ft)	224	15	98	246	197	68
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	811	1957	380	1482	686	586
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.29	0.58	0.71	0.75	0.29

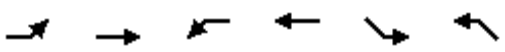
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	579	595	11	1732	411	253
v/c Ratio	0.98	0.23	0.11	0.93	0.98	0.56
Control Delay	64.8	4.4	38.9	32.5	74.8	36.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.8	4.4	38.9	32.5	74.8	36.3
Queue Length 50th (ft)	148	27	2	290	106	60
Queue Length 95th (ft)	#253	57	10	#404	#196	97
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	590	2612	98	1855	420	452
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.23	0.11	0.93	0.98	0.56

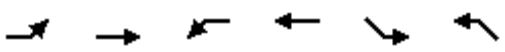
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	663	753	600	784	421	147
v/c Ratio	0.72	0.57	0.86	0.46	0.79	0.27
Control Delay	38.5	26.3	51.5	26.7	54.0	39.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	26.3	51.5	26.7	54.0	39.0
Queue Length 50th (ft)	212	204	207	149	147	46
Queue Length 95th (ft)	280	308	259	198	195	73
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	920	1324	836	1698	631	643
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.57	0.72	0.46	0.67	0.23

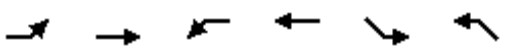
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	384	537	1079	442	716
v/c Ratio	0.73	0.34	0.85	0.74	0.52	0.88
Control Delay	37.2	17.9	37.3	20.5	19.6	34.5
Queue Delay	0.0	0.0	0.0	0.1	0.0	2.0
Total Delay	37.2	17.9	37.3	20.6	19.6	36.6
Queue Length 50th (ft)	51	39	96	120	67	125
Queue Length 95th (ft)	#103	61	#176	163	106	#219
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	403	1256	654	1563	887	847
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	48	0	50
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.31	0.82	0.71	0.50	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	895	316	721	537	137
v/c Ratio	0.72	0.62	0.79	0.50	0.81	0.25
Control Delay	32.0	13.7	37.5	12.4	29.0	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	13.7	37.5	12.4	29.0	15.4
Queue Length 50th (ft)	35	63	40	48	65	14
Queue Length 95th (ft)	#86	93	#97	73	#139	32
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	396	1621	399	1605	671	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.55	0.79	0.45	0.80	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

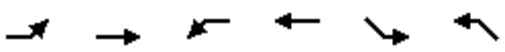
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	2037	1847	168	442	495	16
v/c Ratio	0.94	0.93	1.09	0.26	1.01	0.96	0.07
Control Delay	120.0	30.1	71.3	1.7	83.1	67.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	120.0	30.1	71.3	1.7	83.1	67.0	14.1
Queue Length 50th (ft)	55	375	~443	6	~141	145	1
Queue Length 95th (ft)	#150	#509	#542	m10	#252	#236	m8
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	101	2183	1696	634	437	514	243
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.93	1.09	0.26	1.01	0.96	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

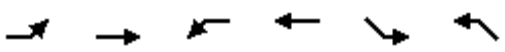
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	389	863	768	689	284	547
v/c Ratio	0.65	0.60	0.87	0.38	0.45	0.83
Control Delay	27.7	20.4	40.5	18.9	31.7	44.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	20.4	40.5	18.9	31.7	44.3
Queue Length 50th (ft)	101	142	207	97	70	150
Queue Length 95th (ft)	m103	m160	268	132	105	206
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	599	1450	996	1811	711	739
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.60	0.77	0.38	0.40	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

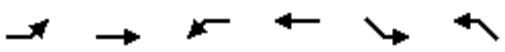


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	295	984	600	853	232	295
v/c Ratio	0.67	0.77	0.77	0.52	0.57	0.72
Control Delay	39.5	24.7	16.0	2.5	37.6	44.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	24.7	16.0	2.5	37.6	44.0
Queue Length 50th (ft)	71	215	101	15	56	73
Queue Length 95th (ft)	110	294	m131	m29	91	#122
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	496	1273	780	1625	429	425
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.77	0.77	0.52	0.54	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	547	863	442	1363	326	758
v/c Ratio	0.89	0.53	0.70	0.77	0.41	0.91
Control Delay	66.4	32.4	21.5	10.8	38.7	60.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	32.4	21.5	10.8	38.7	60.3
Queue Length 50th (ft)	227	209	124	203	111	309
Queue Length 95th (ft)	#300	256	m132	m210	154	388
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	667	1628	630	1767	864	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.53	0.70	0.77	0.38	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

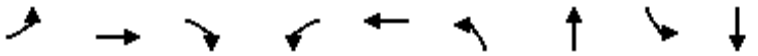
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	284	242	89	111
v/c Ratio	0.55	0.56	0.17	0.22
Control Delay	20.6	26.7	5.4	2.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.6	26.7	5.4	2.4
Queue Length 50th (ft)	50	42	9	0
Queue Length 95th (ft)	75	66	31	17
Internal Link Dist (ft)	228	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1152	974	518	499
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.25	0.17	0.22

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	284	89	111	216
v/c Ratio	0.15	0.18	0.66	0.09
Control Delay	5.4	2.9	28.7	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.4	2.9	28.7	0.1
Queue Length 50th (ft)	17	0	41	0
Queue Length 95th (ft)	43	18	m65	0
Internal Link Dist (ft)	3486			228
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1910	497	367	2492
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.18	0.30	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	147	616	79	137	263	847	79	579
v/c Ratio	0.06	0.77	0.88	0.53	0.48	0.54	0.57	0.61	0.64
Control Delay	36.9	67.2	27.5	46.5	32.8	31.4	18.3	61.2	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	67.2	27.5	46.5	32.8	31.4	18.3	61.2	35.4
Queue Length 50th (ft)	6	90	161	38	53	135	207	48	183
Queue Length 95th (ft)	22	#178	#356	#107	129	208	268	96	244
Internal Link Dist (ft)		2169			3486		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	179	213	710	150	303	521	1490	164	914
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.69	0.87	0.53	0.45	0.50	0.57	0.48	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	121	168	1295	1042
v/c Ratio	0.86	0.43	0.75	0.53	0.75
Control Delay	66.4	12.2	60.9	19.9	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	12.2	60.9	20.0	6.6
Queue Length 50th (ft)	88	0	102	170	0
Queue Length 95th (ft)	#156	50	#207	205	m77
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	332	289	228	2462	1435
Starvation Cap Reductn	0	0	0	0	13
Spillback Cap Reductn	0	0	0	126	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.42	0.74	0.55	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	505	58	1147	421	32	537
v/c Ratio	0.05	0.86	0.10	0.90	0.34	0.53	0.67
Control Delay	27.9	55.5	6.9	19.9	0.9	78.7	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	27.9	55.5	6.9	19.9	1.1	78.7	35.9
Queue Length 50th (ft)	3	165	2	372	3	20	155
Queue Length 95th (ft)	18	#266	27	#512	m6	#66	213
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	217	585	562	1274	1255	60	837
Starvation Cap Reductn	0	0	0	0	283	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.86	0.10	0.90	0.43	0.53	0.64

Intersection Summary

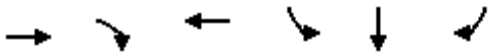
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	132	800	232	505	405	53	947	647	263	1137	816
v/c Ratio	0.53	0.77	0.50	0.50	0.67	0.58	0.75	0.56	0.67	0.70	0.53
Control Delay	57.4	46.9	31.8	24.5	13.3	27.6	3.6	5.9	64.0	21.4	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	57.4	46.9	31.8	24.5	13.3	27.6	3.6	5.9	64.0	21.4	11.3
Queue Length 50th (ft)	70	194	74	63	66	29	0	0	73	70	285
Queue Length 95th (ft)	150	238	106	110	110	m30	m1	m4	m126	m173	m339
Internal Link Dist (ft)		633		710			585			395	
Turn Bay Length (ft)	150		500		350	100		500	350		
Base Capacity (vph)	251	1041	468	1013	634	92	1263	1146	473	1628	1539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	287
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.77	0.50	0.50	0.64	0.58	0.75	0.56	0.56	0.70	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	705	311	1374	226	495	584
v/c Ratio	0.29	0.34	0.56	0.21	0.86	0.66
Control Delay	13.0	3.4	9.2	21.4	43.9	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	3.4	9.2	21.4	43.9	29.0
Queue Length 50th (ft)	80	4	158	51	289	169
Queue Length 95th (ft)	136	54	261	63	346	189
Internal Link Dist (ft)	1062		633		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2456	922	2456	1476	801	1210
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.34	0.56	0.15	0.62	0.48

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	1042	595	174	784	26	332	363	37	126	26
v/c Ratio	0.31	0.66	0.29	0.75	0.46	0.03	0.56	0.90	0.25	0.59	0.12
Control Delay	40.8	10.9	0.5	65.9	17.8	3.4	41.5	56.4	45.6	52.2	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	10.9	0.5	65.9	17.8	3.4	41.5	56.4	45.6	52.2	15.2
Queue Length 50th (ft)	22	130	0	57	175	0	99	181	23	77	0
Queue Length 95th (ft)	m31	281	1	#108	261	11	140	#333	51	130	23
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	106	1584	2050	233	1718	1034	607	440	283	416	384
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.29	0.75	0.46	0.03	0.55	0.82	0.13	0.30	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	184	621	1647	347	226	1184
v/c Ratio	0.13	0.98	0.90	0.49	0.82	0.61
Control Delay	8.0	41.0	39.2	5.2	45.9	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	41.0	39.2	5.2	45.9	5.8
Queue Length 50th (ft)	13	382	290	0	73	63
Queue Length 95th (ft)	m25	m#556	#367	61	m#125	75
Internal Link Dist (ft)	808		504			585
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1411	645	1831	714	274	1944
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.96	0.90	0.49	0.82	0.61

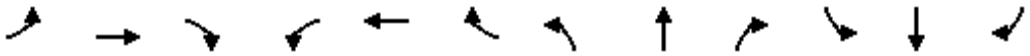
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	768	1484	1447
v/c Ratio	0.88	0.61	0.61
Control Delay	41.3	8.8	16.7
Queue Delay	0.0	0.0	0.0
Total Delay	41.3	8.8	16.7
Queue Length 50th (ft)	251	120	206
Queue Length 95th (ft)	287	135	321
Internal Link Dist (ft)		395	657
Turn Bay Length (ft)			
Base Capacity (vph)	1127	2424	2360
Starvation Cap Reductn	0	14	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.68	0.62	0.61

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	1136	136	82	1217	60	168	750	152	130	701	288
v/c Ratio	1.02	0.70	0.21	0.55	0.95	0.12	0.99	0.99	0.27	0.92	1.02	0.53
Control Delay	108.9	20.1	5.8	57.3	48.4	6.8	114.3	68.5	15.1	104.6	78.0	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.9	20.1	5.8	57.3	48.4	6.8	114.3	68.5	15.1	104.6	78.0	22.6
Queue Length 50th (ft)	~165	134	12	50	274	0	109	251	42	84	~242	115
Queue Length 95th (ft)	#320	176	m40	99	#373	27	#242	#377	88	#198	#365	198
Internal Link Dist (ft)		1962			822			1011			883	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	229	1632	656	171	1283	512	169	760	589	141	690	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.70	0.21	0.48	0.95	0.12	0.99	0.99	0.26	0.92	1.02	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

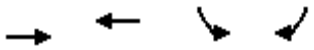
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1495	1473	386	98	130
v/c Ratio	0.67	0.41	0.53	0.42	0.32	0.66
Control Delay	43.3	2.0	6.0	0.9	42.2	38.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	43.3	2.1	6.0	0.9	42.2	38.2
Queue Length 50th (ft)	55	8	59	0	30	41
Queue Length 95th (ft)	93	104	m172	m0	51	97
Internal Link Dist (ft)		405	1962			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	461	3617	2784	909	605	328
Starvation Cap Reductn	0	537	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.49	0.53	0.42	0.16	0.40

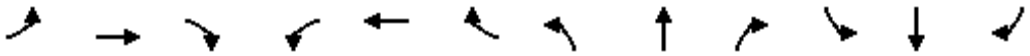
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1011	1571	685	402
v/c Ratio	0.31	0.68	0.54	0.40
Control Delay	0.7	6.2	25.6	21.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	0.7	6.2	25.6	21.5
Queue Length 50th (ft)	2	97	171	94
Queue Length 95th (ft)	3	33	226	139
Internal Link Dist (ft)	519	405	2412	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3263	2310	1264	1002
Starvation Cap Reductn	0	1	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.68	0.54	0.40

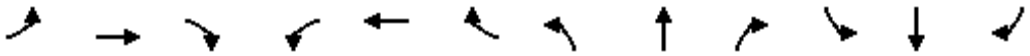
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	321	886	98	337	1424	212	54	22	33	92	332	250
v/c Ratio	0.87	0.78	0.20	0.94	0.71	0.39	0.40	0.22	0.07	0.45	0.93	0.66
Control Delay	61.6	40.0	7.4	72.0	29.1	4.5	41.5	41.5	3.8	36.4	71.4	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	40.0	7.4	72.0	29.1	4.5	41.5	41.5	3.8	36.4	71.4	22.3
Queue Length 50th (ft)	100	200	0	230	176	0	35	14	0	45	108	75
Queue Length 95th (ft)	#170	#276	40	#388	257	m59	54	34	13	93	#193	172
Internal Link Dist (ft)		647			519			697			611	
Turn Bay Length (ft)	400		200	200		300	200			400		400
Base Capacity (vph)	401	1138	485	374	2010	537	135	170	489	204	371	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.78	0.20	0.90	0.71	0.39	0.40	0.13	0.07	0.45	0.89	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	1136	136	82	1217	60	168	750	152	130	701	288
v/c Ratio	1.02	0.70	0.21	0.55	0.95	0.12	0.99	0.99	0.27	0.92	1.02	0.53
Control Delay	106.8	29.4	10.6	57.3	48.4	6.8	114.3	68.5	15.1	104.6	78.0	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.8	29.4	10.6	57.3	48.4	6.8	114.3	68.5	15.1	104.6	78.0	22.6
Queue Length 50th (ft)	~166	259	24	50	274	0	109	251	42	84	~242	115
Queue Length 95th (ft)	#323	311	77	99	#373	27	#242	#377	88	#198	#365	198
Internal Link Dist (ft)		1119			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	229	1632	656	171	1283	512	169	760	589	141	690	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.70	0.21	0.48	0.95	0.12	0.99	0.99	0.26	0.92	1.02	0.53

Intersection Summary

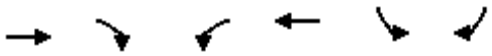
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1402	1473	386	348	223
v/c Ratio	0.62	0.53	0.55	0.49	0.53	0.50
Control Delay	39.9	13.0	11.9	2.3	30.1	25.5
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	39.9	13.2	11.9	2.3	30.1	25.5
Queue Length 50th (ft)	57	191	106	1	91	90
Queue Length 95th (ft)	87	293	m158	m22	136	163
Internal Link Dist (ft)		410	331			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	515	2639	2676	783	661	450
Starvation Cap Reductn	0	441	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.64	0.55	0.49	0.53	0.50

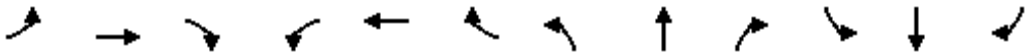
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	918	364	190	1630	685	402
v/c Ratio	0.34	0.44	0.74	0.69	0.64	0.47
Control Delay	19.7	4.1	74.3	8.4	31.8	25.5
Queue Delay	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	19.7	4.1	74.3	8.9	31.8	25.5
Queue Length 50th (ft)	92	0	58	87	189	101
Queue Length 95th (ft)	126	32	87	88	251	150
Internal Link Dist (ft)	347			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2720	820	425	2372	1070	860
Starvation Cap Reductn	0	0	0	314	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.44	0.45	0.79	0.64	0.47

Intersection Summary

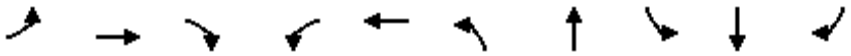


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	53	79	579	26	274	105	337	321	116	89	63
v/c Ratio	0.08	0.15	0.21	1.19	0.03	0.29	0.33	1.19	0.44	0.42	0.50	0.18
Control Delay	49.2	33.6	4.1	138.8	15.6	1.9	43.3	149.3	1.9	47.2	44.6	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	33.6	4.1	138.8	15.6	1.9	43.3	149.3	1.9	47.2	44.6	5.7
Queue Length 50th (ft)	3	28	0	~230	9	0	32	~260	0	36	49	0
Queue Length 95th (ft)	15	66	16	#337	25	31	58	#432	0	62	100	21
Internal Link Dist (ft)		738			419			857			397	
Turn Bay Length (ft)	120					150				220		220
Base Capacity (vph)	61	346	406	486	774	942	388	284	735	472	223	348
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.15	0.19	1.19	0.03	0.29	0.27	1.19	0.44	0.25	0.40	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

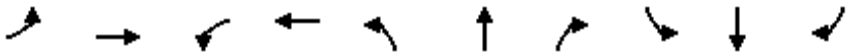
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	226	1195	563	111	1279	274	558	184	289	242
v/c Ratio	0.78	0.75	0.69	0.68	0.79	0.75	0.83	0.72	0.36	0.56
Control Delay	50.7	13.5	5.3	60.4	27.8	52.0	42.6	57.5	32.5	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	13.5	5.3	60.4	27.8	52.0	42.6	57.5	32.5	12.5
Queue Length 50th (ft)	71	112	16	62	223	78	148	53	52	16
Queue Length 95th (ft)	m87	m132	m21	#140	282	#135	#236	#102	78	86
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	289	1587	815	164	1623	364	670	254	809	436
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.75	0.69	0.68	0.79	0.75	0.83	0.72	0.36	0.56

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	416	1263	53	852	489	374	47	37	358	384
v/c Ratio	0.93	0.67	0.50	0.88	0.94	0.41	0.11	0.40	0.93	0.76
Control Delay	54.2	10.9	68.5	55.2	74.1	34.3	9.6	69.1	82.5	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	10.9	68.5	55.2	74.1	34.3	9.6	69.1	82.5	15.6
Queue Length 50th (ft)	322	139	40	232	193	124	0	14	146	0
Queue Length 95th (ft)	#494	165	83	#304	#297	172	29	33	#239	#111
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	447	1887	129	973	522	923	409	92	386	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.67	0.41	0.88	0.94	0.41	0.11	0.40	0.93	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1000	305	411	632	84	53
v/c Ratio	0.78	0.38	0.90	0.27	0.65	0.12
Control Delay	23.1	4.3	48.0	2.1	56.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.1	4.3	48.0	2.1	56.4	6.1
Queue Length 50th (ft)	193	17	162	23	36	0
Queue Length 95th (ft)	#277	54	#314	34	#99	22
Internal Link Dist (ft)	2132			1261	569	
Turn Bay Length (ft)		350	350			
Base Capacity (vph)	1279	803	485	2317	130	482
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.38	0.85	0.27	0.65	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	800	379	137	579
v/c Ratio	0.35	0.39	0.66	0.20
Control Delay	3.5	1.6	41.7	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.5	1.6	41.7	0.2
Queue Length 50th (ft)	44	0	47	0
Queue Length 95th (ft)	65	17	#114	0
Internal Link Dist (ft)	329			2132
Turn Bay Length (ft)			490	
Base Capacity (vph)	2261	978	221	2923
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.39	0.62	0.20

Intersection Summary

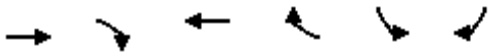
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	574	895	32	105
v/c Ratio	0.25	0.40	0.19	0.43
Control Delay	2.7	3.4	26.3	11.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.7	3.4	26.3	11.9
Queue Length 50th (ft)	19	35	11	0
Queue Length 95th (ft)	45	79	31	36
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2276	2253	557	565
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.40	0.06	0.19

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	658	274	653	516	284
v/c Ratio	0.38	0.31	0.27	0.69	0.26
Control Delay	7.3	1.0	5.1	22.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	1.0	5.1	22.9	0.6
Queue Length 50th (ft)	61	0	24	78	0
Queue Length 95th (ft)	88	4	51	104	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1711	892	2452	1186	1106
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.31	0.27	0.44	0.26

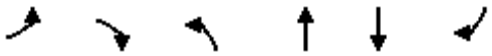
Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	647	316	979	53	284	579
v/c Ratio	0.40	0.24	0.59	0.04	0.37	0.78
Control Delay	8.4	0.4	6.4	0.1	16.2	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.4	0.4	6.4	0.1	16.2	21.0
Queue Length 50th (ft)	57	0	35	0	37	73
Queue Length 95th (ft)	108	0	168	m0	57	114
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1628	1308	1667	1179	984	915
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.24	0.59	0.04	0.29	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	111	137	179	268	5
v/c Ratio	0.05	0.41	0.21	0.08	0.22	0.01
Control Delay	15.8	9.2	3.0	1.7	3.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	9.2	3.0	1.7	3.5	2.4
Queue Length 50th (ft)	3	0	11	6	17	0
Queue Length 95th (ft)	11	29	m24	m12	53	2
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	553	548	642	2297	1209	900
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.20	0.21	0.08	0.22	0.01

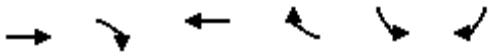
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1405	505	1535	1113	421	874
v/c Ratio	0.89	0.51	0.99	0.97	0.30	0.68
Control Delay	37.7	8.8	55.7	23.2	15.7	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	8.8	55.7	23.2	15.7	23.1
Queue Length 50th (ft)	296	144	446	0	88	264
Queue Length 95th (ft)	437	523	#572	#236	120	347
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1585	983	1557	1147	1414	1278
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.51	0.99	0.97	0.30	0.68

Intersection Summary

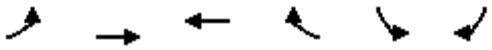
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1353	547	1173	622	558	789
v/c Ratio	0.57	0.63	0.50	0.57	0.62	0.92
Control Delay	16.6	4.9	7.0	13.5	36.9	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	4.9	7.0	13.5	36.9	44.6
Queue Length 50th (ft)	226	0	58	198	189	264
Queue Length 95th (ft)	357	86	m105	m197	208	306
Internal Link Dist (ft)	475		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2363	875	2353	1077	1206	1091
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.63	0.50	0.58	0.46	0.72

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

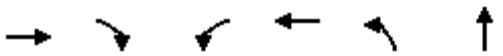


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	311	1347	1379	321	458	226
v/c Ratio	0.89	0.50	0.89	0.43	0.78	0.51
Control Delay	58.3	6.3	21.8	2.1	41.5	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	6.3	21.8	2.1	41.5	8.6
Queue Length 50th (ft)	150	94	185	3	112	0
Queue Length 95th (ft)	#296	122	#245	m0	#181	57
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	351	2706	1553	744	584	447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.50	0.89	0.43	0.78	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



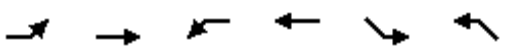
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	2063	547	32	2821	495	32
v/c Ratio	0.81	0.91	1.28	1.01	1.55	0.15
Control Delay	19.0	24.8	271.6	24.8	296.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.0	24.8	271.6	24.8	296.5	1.5
Queue Length 50th (ft)	401	24	~33	~861	~278	0
Queue Length 95th (ft)	475	#130	m#48	m136	#387	0
Internal Link Dist (ft)	564			370		489
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2535	604	25	2795	319	273
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.91	1.28	1.01	1.55	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1084	579	147	1495	442	589
v/c Ratio	1.13	0.25	0.67	1.08	0.73	1.13
Control Delay	92.0	1.5	65.6	88.6	51.6	125.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.0	1.5	65.6	88.6	51.6	125.1
Queue Length 50th (ft)	~506	17	56	~474	165	~273
Queue Length 95th (ft)	#640	m28	91	#571	224	#388
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	957	2312	264	1383	608	519
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.25	0.56	1.08	0.73	1.13

Intersection Summary

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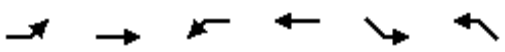
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1000	1195	21	726	537	221
v/c Ratio	1.02	0.41	0.26	0.99	1.02	0.39
Control Delay	61.9	8.8	53.6	72.7	83.8	35.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	8.8	53.6	72.7	83.8	35.7
Queue Length 50th (ft)	~352	100	6	171	~182	62
Queue Length 95th (ft)	#476	169	19	#256	#292	97
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	976	2900	82	735	527	564
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.41	0.26	0.99	1.02	0.39

Intersection Summary

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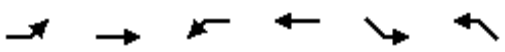
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

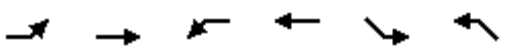


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	505	353	253	242	737	158
v/c Ratio	0.45	0.23	0.70	0.21	1.06	0.23
Control Delay	26.3	15.5	55.8	32.2	91.3	35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	15.5	55.8	32.2	91.3	35.1
Queue Length 50th (ft)	133	68	89	49	~294	46
Queue Length 95th (ft)	180	107	127	72	#413	75
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	1130	1546	773	1152	697	677
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.23	0.33	0.21	1.06	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

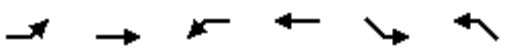
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	674	458	358	395	663	547
v/c Ratio	0.84	0.28	0.70	0.37	0.85	0.81
Control Delay	33.2	13.5	38.4	26.5	38.6	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	13.5	38.4	26.5	38.6	37.6
Queue Length 50th (ft)	169	49	86	62	153	124
Queue Length 95th (ft)	m227	m66	127	93	#218	185
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	881	1661	591	1059	855	735
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.28	0.61	0.37	0.78	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	326	537	368	400	789	189
v/c Ratio	0.54	0.55	0.72	0.50	0.80	0.23
Control Delay	22.9	20.5	32.2	21.9	23.8	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	20.5	32.2	21.9	23.8	13.6
Queue Length 50th (ft)	49	57	59	43	110	20
Queue Length 95th (ft)	87	85	#127	70	#215	43
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	609	1281	531	1256	1073	951
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.42	0.69	0.32	0.74	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

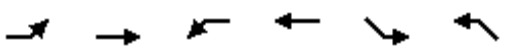
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	1606	1974	221	437	363	16
v/c Ratio	0.90	0.72	1.12	0.33	0.94	0.76	0.08
Control Delay	112.5	19.0	82.5	1.8	61.7	45.2	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.5	19.0	82.5	1.8	61.7	45.2	14.7
Queue Length 50th (ft)	~63	249	~456	5	123	89	1
Queue Length 95th (ft)	#160	308	m#557	m7	#226	131	m14
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	105	2219	1760	673	467	514	218
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.72	1.12	0.33	0.94	0.71	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

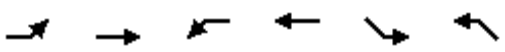
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	563	611	384	326	958
v/c Ratio	0.74	0.57	0.87	0.32	0.31	0.91
Control Delay	38.0	26.8	46.6	28.0	20.3	39.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	26.8	46.6	28.0	20.3	39.7
Queue Length 50th (ft)	127	94	167	67	63	250
Queue Length 95th (ft)	m170	m133	#249	96	95	#363
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	655	985	751	1208	1123	1123
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.57	0.81	0.32	0.29	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	274	1111	789	384	337	642
v/c Ratio	0.67	1.00	1.04	0.25	0.56	1.02
Control Delay	44.7	55.9	57.6	5.5	35.3	77.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	55.9	57.6	5.5	35.3	77.0
Queue Length 50th (ft)	76	326	~255	17	88	~194
Queue Length 95th (ft)	115	#474	#356	m35	131	#308
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	468	1115	758	1516	601	630
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.00	1.04	0.25	0.56	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
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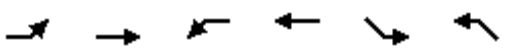
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	811	516	747	337	579
v/c Ratio	0.80	0.57	0.65	0.37	0.51	0.84
Control Delay	57.5	34.7	16.7	8.3	41.3	54.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	34.7	16.7	8.3	41.3	54.8
Queue Length 50th (ft)	170	184	101	32	117	222
Queue Length 95th (ft)	214	255	m140	m110	149	263
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	716	1427	798	2014	842	874
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.57	0.65	0.37	0.40	0.66

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

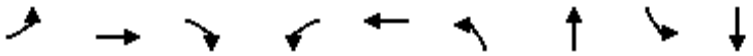
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	189	253	142	174
v/c Ratio	0.35	0.62	0.28	0.34
Control Delay	16.2	28.4	6.7	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.2	28.4	6.7	3.1
Queue Length 50th (ft)	31	44	17	0
Queue Length 95th (ft)	51	71	52	21
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1060	787	508	512
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.32	0.28	0.34

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	189	84	105	289
v/c Ratio	0.10	0.17	0.65	0.15
Control Delay	5.3	3.0	29.7	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.3	3.0	29.7	0.1
Queue Length 50th (ft)	10	0	37	0
Queue Length 95th (ft)	32	19	m61	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1930	500	355	1974
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.17	0.30	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	100	421	95	195	158	600	58	760
v/c Ratio	0.10	0.60	0.82	0.51	0.82	0.71	0.40	0.52	0.53
Control Delay	36.9	54.9	25.5	43.5	53.3	57.1	15.0	58.3	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	54.9	25.5	43.5	53.3	57.1	15.0	58.3	21.7
Queue Length 50th (ft)	6	61	113	52	87	96	102	36	166
Queue Length 95th (ft)	21	109	152	95	#182	160	198	76	300
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	112	259	558	216	289	277	1505	146	1445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.39	0.75	0.44	0.67	0.57	0.40	0.40	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	100	89	1032	1163
v/c Ratio	0.84	0.39	0.76	0.35	0.69
Control Delay	63.2	12.2	81.0	12.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.3
Total Delay	63.2	12.2	81.0	12.8	3.0
Queue Length 50th (ft)	86	0	56	109	4
Queue Length 95th (ft)	#153	46	#136	134	8
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	343	265	126	2983	1704
Starvation Cap Reductn	0	0	0	0	138
Spillback Cap Reductn	0	0	0	245	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.80	0.38	0.71	0.38	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	105	37	1037	268	26	1058
v/c Ratio	0.04	0.42	0.09	0.70	0.20	0.37	0.79
Control Delay	26.4	48.3	10.3	12.0	0.9	62.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	48.3	10.3	12.0	0.9	62.2	27.9
Queue Length 50th (ft)	3	32	2	298	3	17	310
Queue Length 95th (ft)	17	59	25	382	m7	#51	#423
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	249	273	448	1491	1321	70	1347
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.08	0.70	0.20	0.37	0.79

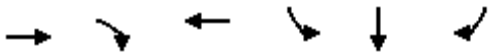
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	147	726	332	353	368	63	721	958	279	816	279
v/c Ratio	0.68	0.71	0.43	0.24	0.48	0.55	0.78	0.77	0.72	0.65	0.22
Control Delay	49.6	32.3	21.3	12.4	6.6	30.8	18.4	7.8	50.7	33.0	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	32.3	21.3	12.4	6.6	30.8	18.4	7.8	50.7	33.0	2.3
Queue Length 50th (ft)	82	86	98	63	125	30	172	75	84	161	0
Queue Length 95th (ft)	99	105	111	46	44	m38	m198	92	m117	188	m47
Internal Link Dist (ft)		626		720			598			398	
Turn Bay Length (ft)	150		500		350	100			350		
Base Capacity (vph)	269	1021	769	1457	770	123	928	1245	388	1256	1326
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.71	0.43	0.24	0.48	0.51	0.78	0.77	0.72	0.65	0.21

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	779	442	695	95	337	258
v/c Ratio	0.28	0.42	0.25	0.14	0.85	0.33
Control Delay	7.6	2.5	5.3	28.0	55.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	2.5	5.3	28.0	55.1	4.3
Queue Length 50th (ft)	63	5	37	24	207	0
Queue Length 95th (ft)	113	49	71	39	271	28
Internal Link Dist (ft)	1068		626		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2824	1056	2824	1343	729	1232
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.42	0.25	0.07	0.46	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	816	1079	216	805	32	221	100	37	253	26
v/c Ratio	0.27	0.68	0.66	0.68	0.53	0.04	0.34	0.19	0.29	0.80	0.09
Control Delay	50.0	24.1	4.3	54.7	22.4	4.4	36.0	18.1	48.7	57.4	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	24.1	4.3	54.7	22.4	4.4	36.0	18.1	48.7	57.4	12.9
Queue Length 50th (ft)	16	195	47	69	178	0	61	29	23	154	0
Queue Length 95th (ft)	m22	243	80	108	283	14	98	71	53	236	22
Internal Link Dist (ft)		720			1091			549		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	99	1199	1640	330	1523	998	663	529	267	373	334
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.68	0.66	0.65	0.53	0.03	0.33	0.19	0.14	0.68	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	284	495	1742	479	289	900
v/c Ratio	0.26	0.87	0.84	0.67	0.77	0.39
Control Delay	14.5	25.3	32.5	13.5	44.1	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	25.3	32.5	13.5	44.1	15.8
Queue Length 50th (ft)	36	74	291	79	102	160
Queue Length 95th (ft)	m60	m#374	343	200	m#155	192
Internal Link Dist (ft)	842		478			598
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1127	574	2077	720	388	2299
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.86	0.84	0.67	0.74	0.39

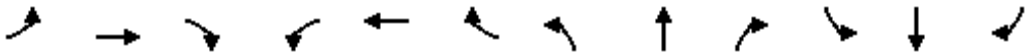
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	321	1237	1053
v/c Ratio	0.77	0.37	0.32
Control Delay	34.3	1.6	3.3
Queue Delay	0.0	0.0	0.0
Total Delay	34.3	1.6	3.3
Queue Length 50th (ft)	59	18	49
Queue Length 95th (ft)	105	39	88
Internal Link Dist (ft)		398	657
Turn Bay Length (ft)			
Base Capacity (vph)	975	3374	3314
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.33	0.37	0.32

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	212	1185	141	98	1212	49	130	538	158	98	592	163
v/c Ratio	0.87	0.68	0.22	0.72	0.87	0.09	0.83	0.77	0.29	0.71	0.91	0.30
Control Delay	76.0	20.5	6.1	73.9	38.6	7.2	82.5	44.8	14.2	72.0	58.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.0	20.5	6.1	73.9	38.6	7.2	82.5	44.8	14.2	72.0	58.4	13.8
Queue Length 50th (ft)	143	154	12	62	267	0	82	168	37	62	194	42
Queue Length 95th (ft)	m#264	231	m54	#141	#357	25	#184	231	86	#139	#292	89
Internal Link Dist (ft)		1936			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	255	1748	633	141	1397	530	161	707	546	144	665	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.68	0.22	0.70	0.87	0.09	0.81	0.76	0.29	0.68	0.89	0.29

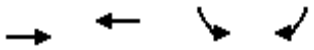
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1348	1179	451	103	136
v/c Ratio	0.65	0.38	0.41	0.48	0.35	0.67
Control Delay	42.5	3.8	3.1	2.2	43.2	35.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	3.8	3.1	2.2	43.2	35.3
Queue Length 50th (ft)	54	27	22	0	32	36
Queue Length 95th (ft)	100	184	m78	m0	53	93
Internal Link Dist (ft)		402	1936			
Turn Bay Length (ft)				300		
Base Capacity (vph)	477	3593	2866	943	637	353
Starvation Cap Reductn	0	518	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.44	0.41	0.48	0.16	0.39

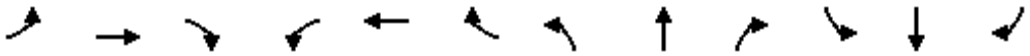
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1011	1283	538	288
v/c Ratio	0.32	0.56	0.42	0.31
Control Delay	4.4	7.2	22.3	16.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.4	7.2	22.3	16.3
Queue Length 50th (ft)	17	61	123	52
Queue Length 95th (ft)	22	35	168	86
Internal Link Dist (ft)	548	402	1312	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3165	2300	1282	921
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.56	0.42	0.31

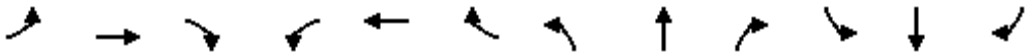
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	424	875	87	250	1049	272	33	22	54	82	261	179
v/c Ratio	0.91	0.61	0.15	0.87	0.63	0.43	0.17	0.19	0.10	0.56	0.83	0.41
Control Delay	57.9	30.8	7.0	70.3	24.4	2.0	28.8	39.6	3.6	46.0	60.6	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	30.8	7.0	70.3	24.4	2.0	28.8	39.6	3.6	46.0	60.6	8.4
Queue Length 50th (ft)	127	186	0	169	98	0	15	12	0	41	83	22
Queue Length 95th (ft)	#209	242	36	#278	167	6	39	35	18	86	#146	67
Internal Link Dist (ft)		735			548			648			512	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	517	1445	578	333	1663	636	200	153	576	147	339	452
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.61	0.15	0.75	0.63	0.43	0.17	0.14	0.09	0.56	0.77	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	212	1185	141	98	1212	49	130	538	158	98	592	163
v/c Ratio	0.87	0.68	0.22	0.72	0.87	0.09	0.83	0.77	0.29	0.71	0.91	0.30
Control Delay	76.8	25.6	8.1	73.9	38.5	7.2	82.5	44.8	14.2	72.0	58.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.8	25.6	8.1	73.9	38.5	7.2	82.5	44.8	14.2	72.0	58.4	13.8
Queue Length 50th (ft)	125	269	21	62	267	0	82	168	37	62	194	42
Queue Length 95th (ft)	#265	313	60	#141	#357	25	#184	231	86	#139	#292	89
Internal Link Dist (ft)		999			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	255	1748	633	141	1399	530	161	707	546	144	665	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.68	0.22	0.70	0.87	0.09	0.81	0.76	0.29	0.68	0.89	0.29

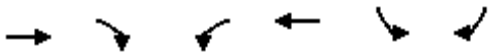
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1266	1179	451	283	217
v/c Ratio	0.60	0.48	0.41	0.53	0.43	0.48
Control Delay	43.3	11.1	7.7	4.5	29.4	23.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	11.1	7.7	4.5	29.4	23.0
Queue Length 50th (ft)	68	154	52	8	72	76
Queue Length 95th (ft)	100	200	m107	m86	111	148
Internal Link Dist (ft)		410	451			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	507	2660	2869	844	652	451
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.48	0.41	0.53	0.43	0.48

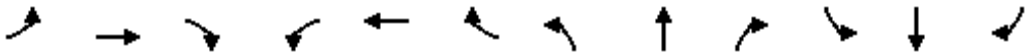
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	929	467	250	1212	538	288
v/c Ratio	0.35	0.53	0.72	0.47	0.57	0.39
Control Delay	19.9	4.4	78.8	7.7	32.5	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	4.4	78.8	7.7	32.5	15.3
Queue Length 50th (ft)	92	0	89	57	148	39
Queue Length 95th (ft)	129	36	124	67	203	79
Internal Link Dist (ft)	461			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2680	882	538	2573	938	745
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.53	0.46	0.47	0.57	0.39

Intersection Summary

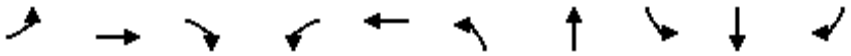


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	209	212	568	58	405	126	189	211	326	116	11
v/c Ratio	0.08	0.65	0.46	1.08	0.08	0.48	0.35	1.03	0.29	0.80	0.81	0.05
Control Delay	49.2	16.3	5.2	98.6	16.6	4.0	39.4	116.5	1.0	56.7	76.7	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	16.3	5.2	98.6	16.6	4.0	39.4	116.5	1.0	56.7	76.7	8.4
Queue Length 50th (ft)	3	3	0	~210	18	0	36	~135	0	103	70	0
Queue Length 95th (ft)	15	84	28	#317	47	56	67	#274	0	#164	#149	9
Internal Link Dist (ft)		738			419			857			397	
Turn Bay Length (ft)	120					150				220		220
Base Capacity (vph)	61	322	462	525	749	852	365	183	723	429	176	238
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.65	0.46	1.08	0.08	0.48	0.35	1.03	0.29	0.76	0.66	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

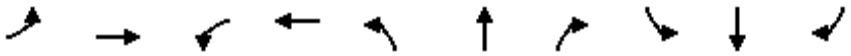
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	289	1242	421	132	1168	232	564	279	689	400
v/c Ratio	0.80	0.84	0.59	0.78	0.82	0.74	0.86	0.87	0.72	0.76
Control Delay	45.6	21.3	4.0	66.5	29.3	50.4	42.5	62.4	33.6	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	21.3	4.0	66.5	29.3	50.4	42.5	62.4	33.6	20.3
Queue Length 50th (ft)	67	171	15	65	188	58	134	72	117	50
Queue Length 95th (ft)	m84	m211	m17	#157	243	#109	#223	#139	158	#194
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	365	1484	709	169	1433	316	659	322	959	523
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.84	0.59	0.78	0.82	0.73	0.86	0.87	0.72	0.76

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	300	2116	74	927	605	805	79	179	700	174
v/c Ratio	0.99	1.15	1.35	0.84	1.22	0.86	0.18	0.99	1.13	0.43
Control Delay	88.3	86.8	279.9	45.9	156.6	45.7	7.2	118.1	119.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.3	86.8	279.9	45.9	156.6	45.7	7.2	118.1	119.6	9.1
Queue Length 50th (ft)	184	~628	~69	224	~271	279	0	66	~303	0
Queue Length 95th (ft)	m#299	#704	#166	280	#382	#384	35	#140	#423	58
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	303	1843	55	1108	495	939	430	180	617	408
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.15	1.35	0.84	1.22	0.86	0.18	0.99	1.13	0.43

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1479	358	400	789	116	126
v/c Ratio	1.02	0.41	1.05	0.33	0.89	0.28
Control Delay	44.1	2.6	90.0	2.3	91.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	2.6	90.0	2.3	91.3	6.4
Queue Length 50th (ft)	~338	8	~193	31	51	0
Queue Length 95th (ft)	#494	24	#351	44	#141	37
Internal Link Dist (ft)	2144			1060	569	
Turn Bay Length (ft)		350	350			
Base Capacity (vph)	1447	882	380	2384	130	443
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.41	1.05	0.33	0.89	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	1216	389	126	779
v/c Ratio	0.62	0.39	0.70	0.32
Control Delay	9.5	1.9	52.4	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.5	1.9	52.4	1.7
Queue Length 50th (ft)	154	0	54	25
Queue Length 95th (ft)	215	28	m#118	m32
Internal Link Dist (ft)	198			2144
Turn Bay Length (ft)			490	
Base Capacity (vph)	1963	994	188	2405
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.39	0.67	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1574	1037	53	253
v/c Ratio	0.81	0.54	0.21	0.77
Control Delay	13.9	7.8	21.3	35.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	7.8	21.3	35.2
Queue Length 50th (ft)	206	100	18	72
Queue Length 95th (ft)	#396	152	38	#160
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	1932	1913	405	385
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.81	0.54	0.13	0.66

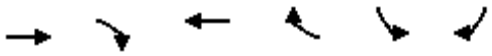
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	974	305	1058	789	379
v/c Ratio	0.70	0.38	0.51	0.81	0.30
Control Delay	10.4	4.6	7.6	21.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	4.6	7.6	21.5	0.6
Queue Length 50th (ft)	138	39	49	89	0
Queue Length 95th (ft)	125	57	77	#167	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1399	802	2077	1028	1248
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.38	0.51	0.77	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

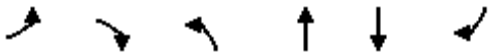


Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	953	432	1542	84	326	768
v/c Ratio	0.59	0.30	0.89	0.06	0.35	0.96
Control Delay	13.8	0.5	22.1	0.1	24.1	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	0.5	22.1	0.1	24.1	52.3
Queue Length 50th (ft)	177	0	404	0	71	225
Queue Length 95th (ft)	239	0	#572	m0	106	#357
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1622	1439	1727	1358	964	817
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.30	0.89	0.06	0.34	0.94

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	211	226	253	311	5
v/c Ratio	0.05	0.56	0.39	0.12	0.28	0.01
Control Delay	14.5	9.1	5.0	1.0	4.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	9.1	5.0	1.0	4.6	2.8
Queue Length 50th (ft)	3	0	13	1	21	0
Queue Length 95th (ft)	11	38	m23	m9	74	3
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	491	580	580	2144	1129	980
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.39	0.12	0.28	0.01

Intersection Summary

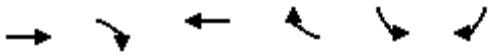
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1832	379	1512	877	853	958
v/c Ratio	0.90	0.35	0.76	0.76	0.72	0.95
Control Delay	27.1	1.1	24.6	4.9	30.2	49.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	1.1	24.6	4.9	30.2	49.5
Queue Length 50th (ft)	317	0	320	0	245	351
Queue Length 95th (ft)	#518	m18	389	0	319	#503
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	2043	1065	1984	1139	1225	1040
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.36	0.76	0.77	0.70	0.92

Intersection Summary

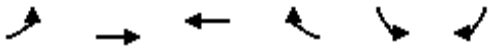
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1481	613	1463	632	863	695
v/c Ratio	0.68	0.68	0.67	0.57	0.81	0.76
Control Delay	19.7	5.5	13.4	10.4	37.8	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	5.5	13.4	10.4	37.8	34.0
Queue Length 50th (ft)	282	0	193	240	271	219
Queue Length 95th (ft)	341	73	225	265	351	300
Internal Link Dist (ft)	454		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2193	902	2194	1114	1108	947
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.68	0.67	0.57	0.78	0.73

Intersection Summary

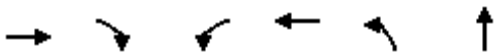


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	111	2400	1705	147	605	258
v/c Ratio	0.80	0.89	0.86	0.20	0.85	0.55
Control Delay	72.9	16.1	11.8	0.6	39.2	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	16.1	11.8	0.6	39.2	11.9
Queue Length 50th (ft)	48	271	96	0	128	22
Queue Length 95th (ft)	#131	358	125	m0	#213	86
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	138	2700	1983	723	709	473
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.89	0.86	0.20	0.85	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



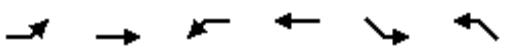
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	1737	442	21	2116	453	21
v/c Ratio	0.62	0.74	0.55	0.69	1.64	0.08
Control Delay	9.9	10.3	75.2	4.0	330.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	10.3	75.2	4.0	330.8	0.6
Queue Length 50th (ft)	184	0	11	36	~171	0
Queue Length 95th (ft)	232	#236	m#23	41	#261	0
Internal Link Dist (ft)	564			370		494
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2822	598	38	3051	276	339
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.74	0.55	0.69	1.64	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

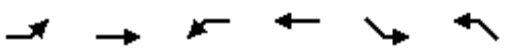
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	768	674	126	1221	495	211
v/c Ratio	0.84	0.29	0.55	0.84	0.84	0.40
Control Delay	25.5	4.0	42.0	31.5	44.7	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	4.0	42.0	31.5	44.7	29.8
Queue Length 50th (ft)	182	11	30	206	122	46
Queue Length 95th (ft)	#279	15	57	#271	#195	78
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	913	2347	270	1456	614	555
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.29	0.47	0.84	0.81	0.38

Intersection Summary

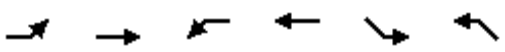
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	653	1132	11	863	537	84
v/c Ratio	0.89	0.45	0.08	0.73	0.87	0.22
Control Delay	37.3	7.5	27.7	24.6	39.1	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	7.5	27.7	24.6	39.1	20.8
Queue Length 50th (ft)	113	63	2	105	95	12
Queue Length 95th (ft)	#202	129	8	146	#173	28
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	756	2541	139	1175	631	499
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.45	0.08	0.73	0.85	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

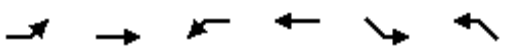


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	768	689	242	1700	842	200
v/c Ratio	0.89	0.34	0.70	0.79	2.88	0.68
Control Delay	50.3	8.6	57.6	27.2	876.5	60.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	8.6	57.6	27.2	876.5	60.2
Queue Length 50th (ft)	261	103	84	363	~528	71
Queue Length 95th (ft)	329	136	126	447	#651	#113
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	956	2011	383	2144	292	295
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.34	0.63	0.79	2.88	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

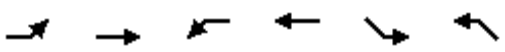
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	811	1479	158	684	432	453
v/c Ratio	0.81	0.70	0.49	0.66	0.67	0.84
Control Delay	20.7	10.8	34.7	27.4	30.6	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	10.8	34.7	27.4	30.6	41.5
Queue Length 50th (ft)	162	153	33	98	87	95
Queue Length 95th (ft)	m174	m170	60	136	131	#165
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	1003	2121	337	1031	674	566
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.70	0.47	0.66	0.64	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1474	295	1042	526	242
v/c Ratio	0.48	0.87	0.70	0.73	0.79	0.38
Control Delay	22.9	22.5	33.0	19.1	30.7	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	22.5	33.0	19.1	30.7	19.6
Queue Length 50th (ft)	43	154	48	102	82	34
Queue Length 95th (ft)	76	#243	#95	142	#149	61
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	594	1716	428	1522	683	657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.86	0.69	0.68	0.77	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

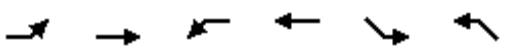
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	242	1932	1947	237	195	500	21
v/c Ratio	1.43	0.88	1.24	0.37	0.59	0.81	0.08
Control Delay	257.6	24.9	134.8	3.1	39.8	43.9	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	257.6	24.9	134.8	3.1	39.8	43.9	12.4
Queue Length 50th (ft)	~188	342	~530	16	53	137	1
Queue Length 95th (ft)	#334	421	#604	m23	86	#248	m14
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	169	2207	1571	633	439	619	276
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.43	0.88	1.24	0.37	0.44	0.81	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

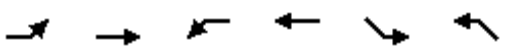


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	347	1126	505	805	158	758
v/c Ratio	0.64	0.74	0.84	0.51	0.19	0.88
Control Delay	28.8	20.0	47.7	23.4	23.4	42.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	20.0	47.7	23.4	23.4	42.5
Queue Length 50th (ft)	84	179	140	132	32	202
Queue Length 95th (ft)	m105	m235	#211	172	56	#278
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	546	1526	642	1578	905	932
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.74	0.79	0.51	0.17	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

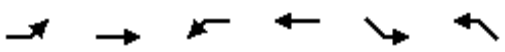


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	221	1458	379	953	316	389
v/c Ratio	0.58	0.90	0.88	0.57	0.74	0.89
Control Delay	39.0	25.4	46.5	6.4	44.2	57.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	25.4	46.5	6.4	44.2	57.7
Queue Length 50th (ft)	54	316	73	39	78	99
Queue Length 95th (ft)	89	#488	m#138	111	#134	#177
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	383	1623	429	1660	429	438
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.90	0.88	0.57	0.74	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	337	1579	653	684	179	663
v/c Ratio	0.65	0.91	0.93	0.35	0.26	0.95
Control Delay	48.7	40.5	44.9	7.5	34.8	64.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.7	40.5	44.9	7.5	34.8	64.8
Queue Length 50th (ft)	114	384	254	30	52	237
Queue Length 95th (ft)	163	#490	m272	m35	84	#349
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	526	1727	710	1978	696	710
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.91	0.92	0.35	0.26	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

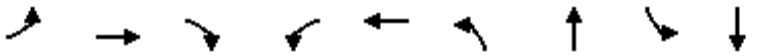
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	316	311	147	179
v/c Ratio	0.43	0.50	0.36	0.40
Control Delay	7.9	14.6	10.4	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.9	14.6	10.4	5.0
Queue Length 50th (ft)	31	31	15	0
Queue Length 95th (ft)	1	44	63	29
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1106	943	408	448
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.33	0.36	0.40

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	316	58	68	395
v/c Ratio	0.18	0.13	0.36	0.19
Control Delay	5.9	3.5	13.9	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.9	3.5	13.9	0.2
Queue Length 50th (ft)	17	0	7	0
Queue Length 95th (ft)	38	13	m34	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1729	447	285	2097
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.13	0.24	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	142	616	105	268	263	800	74	1116
v/c Ratio	0.06	0.68	1.18	0.74	1.00	0.82	0.54	0.58	0.94
Control Delay	34.5	55.8	120.5	64.7	86.1	59.5	17.5	59.7	45.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	55.8	120.5	64.7	86.1	59.5	17.5	59.7	45.9
Queue Length 50th (ft)	6	87	~308	55	140	161	165	45	353
Queue Length 95th (ft)	21	147	#460	#154	#328	#296	254	91	#537
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	182	264	523	142	269	319	1472	159	1182
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.54	1.18	0.74	1.00	0.82	0.54	0.47	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	358	142	200	1416	1268
v/c Ratio	1.01	0.46	0.99	0.50	0.92
Control Delay	92.6	11.4	104.4	15.8	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	92.6	11.4	104.4	15.8	11.5
Queue Length 50th (ft)	~121	0	129	164	0
Queue Length 95th (ft)	#215	54	#274	196	m65
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	354	312	202	2820	1384
Starvation Cap Reductn	0	0	0	0	4
Spillback Cap Reductn	0	0	0	201	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.01	0.46	0.99	0.54	0.92

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	158	58	1111	658	42	1116
v/c Ratio	0.04	0.63	0.13	0.78	0.45	0.55	0.98
Control Delay	26.5	55.6	8.9	12.9	1.2	73.0	53.4
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	26.5	55.6	8.9	12.9	1.3	73.0	53.4
Queue Length 50th (ft)	3	51	2	327	3	27	363
Queue Length 95th (ft)	17	#85	31	m396	m10	#77	#516
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	245	253	445	1422	1454	77	1136
Starvation Cap Reductn	0	0	0	0	206	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.62	0.13	0.78	0.53	0.55	0.98

Intersection Summary

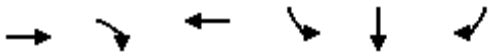
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	100	837	437	342	347	105	832	753	232	1109	258
v/c Ratio	0.41	0.81	0.86	0.31	0.50	0.69	0.74	0.66	0.60	0.89	0.19
Control Delay	29.6	28.4	45.8	22.0	7.7	53.5	18.5	16.8	39.2	33.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	28.4	45.8	22.0	7.7	53.5	18.5	16.8	39.2	33.9	7.7
Queue Length 50th (ft)	39	72	146	72	71	72	175	239	70	231	82
Queue Length 95th (ft)	80	87	m#216	m71	m99	m#129	206	328	m103	104	m36
Internal Link Dist (ft)		627		710			590			403	
Turn Bay Length (ft)	150		500		350	200		500	350		
Base Capacity (vph)	246	1039	522	1096	692	154	1130	1155	388	1251	1362
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.81	0.84	0.31	0.50	0.68	0.74	0.65	0.60	0.89	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	811	795	705	126	737	158
v/c Ratio	0.42	1.17	0.35	0.12	1.05	0.14
Control Delay	17.8	114.1	3.8	18.6	78.3	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	114.1	3.8	18.6	78.3	3.5
Queue Length 50th (ft)	118	~566	33	23	~517	1
Queue Length 95th (ft)	152	#799	49	41	#741	21
Internal Link Dist (ft)	1068		627		1916	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	1937	681	2025	1288	699	1131
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	1.17	0.35	0.10	1.05	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	958	784	263	684	26	416	216	26	205	26
v/c Ratio	0.28	0.74	0.44	0.72	0.41	0.03	0.76	0.49	0.21	0.78	0.09
Control Delay	48.5	23.1	3.6	54.9	17.1	3.8	49.3	28.2	47.4	60.7	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.5	23.1	3.6	54.9	17.1	3.8	49.3	28.2	47.4	60.7	13.9
Queue Length 50th (ft)	16	269	59	85	130	0	130	87	16	124	0
Queue Length 95th (ft)	m23	366	113	#136	210	11	184	163	42	#217	23
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	94	1286	1757	367	1665	1142	564	442	283	297	306
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.74	0.45	0.72	0.41	0.02	0.74	0.49	0.09	0.69	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	511	1021	1689	611	405	1195
v/c Ratio	0.87	0.76	0.62	0.88	0.85	0.41
Control Delay	36.9	0.7	18.9	36.8	34.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	0.7	18.9	36.8	34.9	2.2
Queue Length 50th (ft)	160	0	220	321	125	70
Queue Length 95th (ft)	m140	m0	259	#562	m131	m64
Internal Link Dist (ft)	859		184			590
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	617	1350	2729	696	484	2933
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.76	0.62	0.88	0.84	0.41

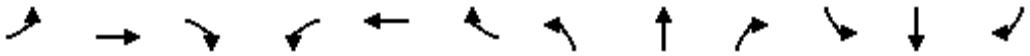
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	284	1279	1316
v/c Ratio	0.86	0.44	0.46
Control Delay	55.9	4.0	8.3
Queue Delay	0.0	0.0	0.0
Total Delay	55.9	4.0	8.3
Queue Length 50th (ft)	158	47	118
Queue Length 95th (ft)	226	71	206
Internal Link Dist (ft)		403	657
Turn Bay Length (ft)			
Base Capacity (vph)	595	2887	2861
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.44	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	1603	60	136	1353	82	49	576	114	147	913	440
v/c Ratio	0.94	0.96	0.14	0.89	0.93	0.14	0.84	0.84	0.21	0.79	0.95	0.68
Control Delay	98.7	30.5	3.6	95.0	43.5	5.7	129.4	49.6	15.6	72.5	55.5	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	98.7	30.5	3.6	95.0	43.5	5.7	129.4	49.6	15.6	72.5	55.5	24.6
Queue Length 50th (ft)	131	184	2	88	300	0	32	185	31	92	304	194
Queue Length 95th (ft)	m#268	#460	m12	#206	#399	31	#103	#271	71	#191	#443	317
Internal Link Dist (ft)		1975			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	203	1669	430	153	1453	568	58	690	541	194	957	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.96	0.14	0.89	0.93	0.14	0.84	0.83	0.21	0.76	0.95	0.68

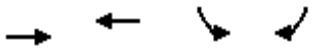
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	255	1848	1315	592	98	152
v/c Ratio	0.68	0.53	0.51	0.61	0.26	0.73
Control Delay	50.3	4.1	9.1	4.1	36.5	52.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	4.1	9.1	4.1	36.5	52.2
Queue Length 50th (ft)	86	51	62	4	28	77
Queue Length 95th (ft)	130	157	m309	m293	47	134
Internal Link Dist (ft)		362	1975			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	465	3498	2591	977	578	300
Starvation Cap Reductn	0	122	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.55	0.51	0.61	0.17	0.51

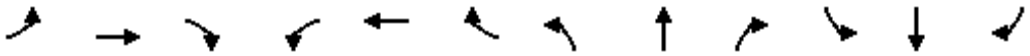
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1674	1413	429	266
v/c Ratio	0.46	0.57	0.36	0.30
Control Delay	2.3	5.0	24.1	18.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.3	5.0	24.1	18.1
Queue Length 50th (ft)	12	28	101	51
Queue Length 95th (ft)	19	31	141	85
Internal Link Dist (ft)	548	362	1409	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3649	2481	1178	893
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.57	0.36	0.30

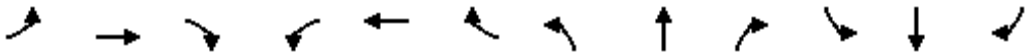
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	435	1543	82	190	1163	326	54	11	33	98	304	272
v/c Ratio	0.91	0.84	0.12	0.92	0.68	0.53	0.26	0.09	0.09	0.61	0.92	0.66
Control Delay	59.8	31.0	5.0	82.8	28.6	8.1	30.6	36.9	7.2	47.1	73.8	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	31.0	5.0	82.8	28.6	8.1	30.6	36.9	7.2	47.1	73.8	20.5
Queue Length 50th (ft)	134	328	1	130	109	13	25	6	0	50	100	79
Queue Length 95th (ft)	#219	#402	29	#260	224	145	55	22	19	#104	#181	180
Internal Link Dist (ft)		715			548			815			543	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	516	1847	659	214	1705	613	207	145	393	162	339	424
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.84	0.12	0.89	0.68	0.53	0.26	0.08	0.08	0.60	0.90	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	1603	60	136	1353	82	49	576	114	147	913	440
v/c Ratio	0.94	0.96	0.14	0.89	0.93	0.14	0.84	0.84	0.21	0.79	0.95	0.68
Control Delay	84.8	31.7	2.9	95.0	43.5	5.7	129.4	49.6	15.6	72.5	55.5	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.8	31.7	2.9	95.0	43.5	5.7	129.4	49.6	15.6	72.5	55.5	24.6
Queue Length 50th (ft)	111	377	6	88	300	0	32	185	31	92	304	194
Queue Length 95th (ft)	#256	#477	m11	#206	#399	31	#103	#271	71	#191	#443	317
Internal Link Dist (ft)		1075			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	203	1669	430	153	1453	568	58	690	541	194	957	651
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.96	0.14	0.89	0.93	0.14	0.84	0.83	0.21	0.76	0.95	0.68

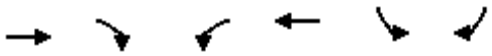
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	255	1750	1315	592	370	250
v/c Ratio	0.68	0.65	0.47	0.64	0.58	0.59
Control Delay	56.0	10.9	22.7	12.6	32.0	32.5
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	56.0	11.0	22.7	12.6	32.0	32.5
Queue Length 50th (ft)	83	175	183	180	100	122
Queue Length 95th (ft)	m120	205	m214	m213	148	207
Internal Link Dist (ft)		407	375			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	438	2708	2783	932	642	423
Starvation Cap Reductn	0	210	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.70	0.47	0.64	0.58	0.59

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1576	457	315	1370	429	266
v/c Ratio	0.55	0.50	0.71	0.52	0.52	0.39
Control Delay	22.4	4.2	62.9	7.5	34.3	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.4	4.2	62.9	7.5	34.3	18.2
Queue Length 50th (ft)	179	0	112	82	120	42
Queue Length 95th (ft)	232	35	157	91	169	81
Internal Link Dist (ft)	425			407		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2886	909	651	2654	828	685
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.50	0.48	0.52	0.52	0.39

Intersection Summary

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FUTURE (2035) ALTERNATIVE 6A

RAMP METERING ANALYSIS

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URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Pico to NB 710

AM Peak Hour Vol/PCE:	260	310
PM Peak Hour Vol/PCE:	510	560
MD Peak Hour Vol/PCE:	270	330

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	47	39	8	8	560	47	465	650	-	3000	238	-	47	0.7
5:10 PM	47	39	16	8	560	47	465	750	-	3000	475	-	47	1.3
5:15 PM	47	39	24	8	560	47	465	800	-	3000	713	-	47	2.0
5:20 PM	47	39	32	8	560	47	465	900	-	3000	950	-	47	2.6
5:25 PM	47	39	40	8	560	47	465	1000	-	3000	1188	-	47	3.3
5:30 PM	47	39	48	8	560	47	465	1100	-	3000	1425	-	47	4.0
5:35 PM	47	39	55	8	560	47	465	1200	-	3000	1663	-	47	4.6
5:40 PM	47	39	63	8	560	47	465	1300	-	3000	1900	-	47	5.3
5:45 PM	47	39	71	8	560	47	465	1400	-	3000	2138	-	47	5.9
5:50 PM	47	39	79	8	560	47	465	1500	-	3000	2375	-	47	6.6
5:55 PM	47	39	87	8	560	47	465	1600	-	3000	2613	-	47	7.3
6:00 PM	47	39	95	8	560	47	465	1700	-	3000	2850	-	47	7.9
	560	**465**		**95**		**560**							**560**	**51.46**
	MAX Q (VEH/LN)=		**95**	**MAX RATE (VPH)=**	**560**					**MAX Q (FT/LN)=**	**2,850**	**-**	**47**	

(Min=240, Max=9\00 vph/lane)

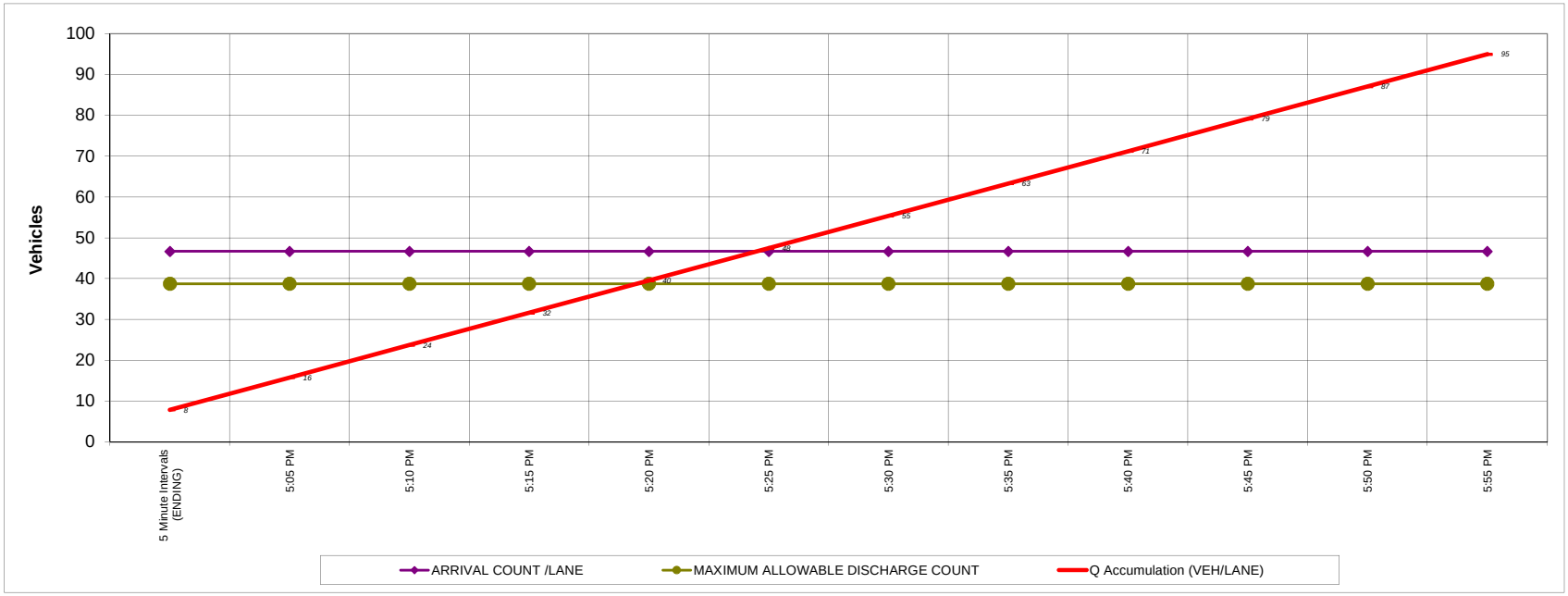
Meter Rate = **465**

Avg Delay/veh (hr)= 0.092

Avg Delay/veh (sec)= **331**

	INPUT
LANES=	**1**
Ramp Length=	3000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to NB 710

AM Peak Hour Vol/PCE:	1100	1160
PM Peak Hour Vol/PCE:	1150	1170
MD Peak Hour Vol/PCE:	1360	1500

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	63	57	5	5	750	125	685	800	-	2000	163	-	63	0.5
1:10 PM	63	57	11	5	750	125	685	850	-	2000	325	-	63	0.9
1:15 PM	63	57	16	5	750	125	685	900	-	2000	488	-	63	1.4
1:20 PM	63	57	22	5	750	125	685	1000	-	2000	650	-	63	1.8
1:25 PM	63	57	27	5	750	125	685	1050	-	2000	813	-	63	2.3
1:30 PM	63	57	33	5	750	125	685	1100	-	2000	975	-	63	2.7
1:35 PM	63	57	38	5	750	125	685	1200	-	2000	1138	-	63	3.2
1:40 PM	63	57	43	5	750	125	685	1250	-	2000	1300	-	63	3.6
1:45 PM	63	57	49	5	750	125	685	1300	-	2000	1463	-	63	4.1
1:50 PM	63	57	54	5	750	125	685	1400	-	2000	1625	-	63	4.5
1:55 PM	63	57	60	5	750	125	685	1450	-	2000	1788	-	63	5.0
2:00 PM	63	57	65	5	750	125	685	1500	-	2000	1950	-	63	5.4
	750	**685**		**65**		**1,500**							**750**	**35.21**
		MAX Q (VEH/LN)=	**65**	**MAX RATE (VPH)=**	**750**					**MAX Q (FT/LN)=**	**1,950**	**-**	**63**	

(Min=240, Max=900 vph/lane)

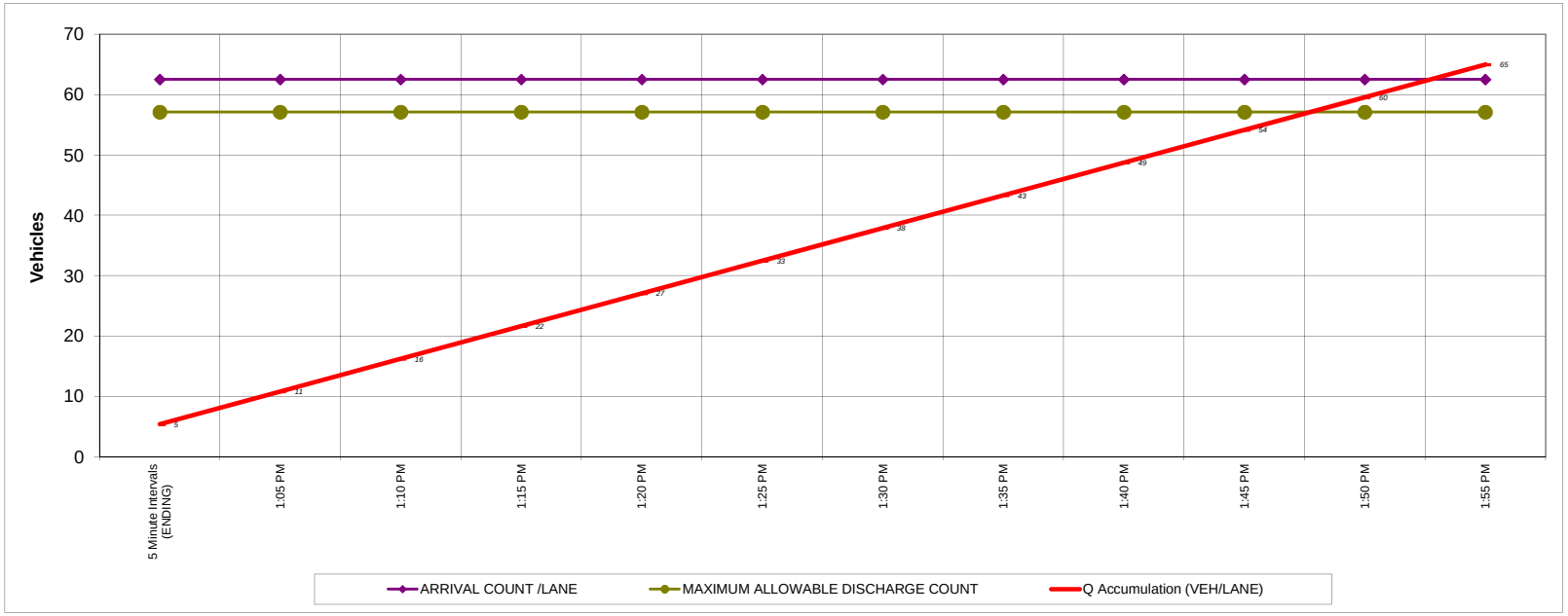
Meter Rate = **685**

Avg Delay/veh (hr)= 0.047

Avg Delay/veh (sec)= **169**

	INPUT
LANES=	**2**
Ramp Length=	2000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to SB 710

AM Peak Hour Vol/PCE:	490	540
PM Peak Hour Vol/PCE:	420	500
MD Peak Hour Vol/PCE:	550	700

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	29	27	2	2	350	58	325	350	-	870	63	-	29	0.2
1:10 PM	29	27	4	2	350	58	325	400	-	870	125	-	29	0.3
1:15 PM	29	27	6	2	350	58	325	400	-	870	188	-	29	0.5
1:20 PM	29	27	8	2	350	58	325	450	-	870	250	-	29	0.7
1:25 PM	29	27	10	2	350	58	325	450	-	870	312	-	29	0.9
1:30 PM	29	27	13	2	350	58	325	500	-	870	375	-	29	1.0
1:35 PM	29	27	15	2	350	58	325	500	-	870	437	-	29	1.2
1:40 PM	29	27	17	2	350	58	325	550	-	870	500	-	29	1.4
1:45 PM	29	27	19	2	350	58	325	550	-	870	562	-	29	1.6
1:50 PM	29	27	21	2	350	58	325	600	-	870	625	-	29	1.7
1:55 PM	29	27	23	2	350	58	325	600	-	870	687	-	29	1.9
2:00 PM	29	27	25	2	350	58	325	650	-	870	750	-	29	2.1
	350	**325**		**25**		**700**							**350**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**350**					**MAX Q (FT/LN)=**	**750**	**-**	**29**	

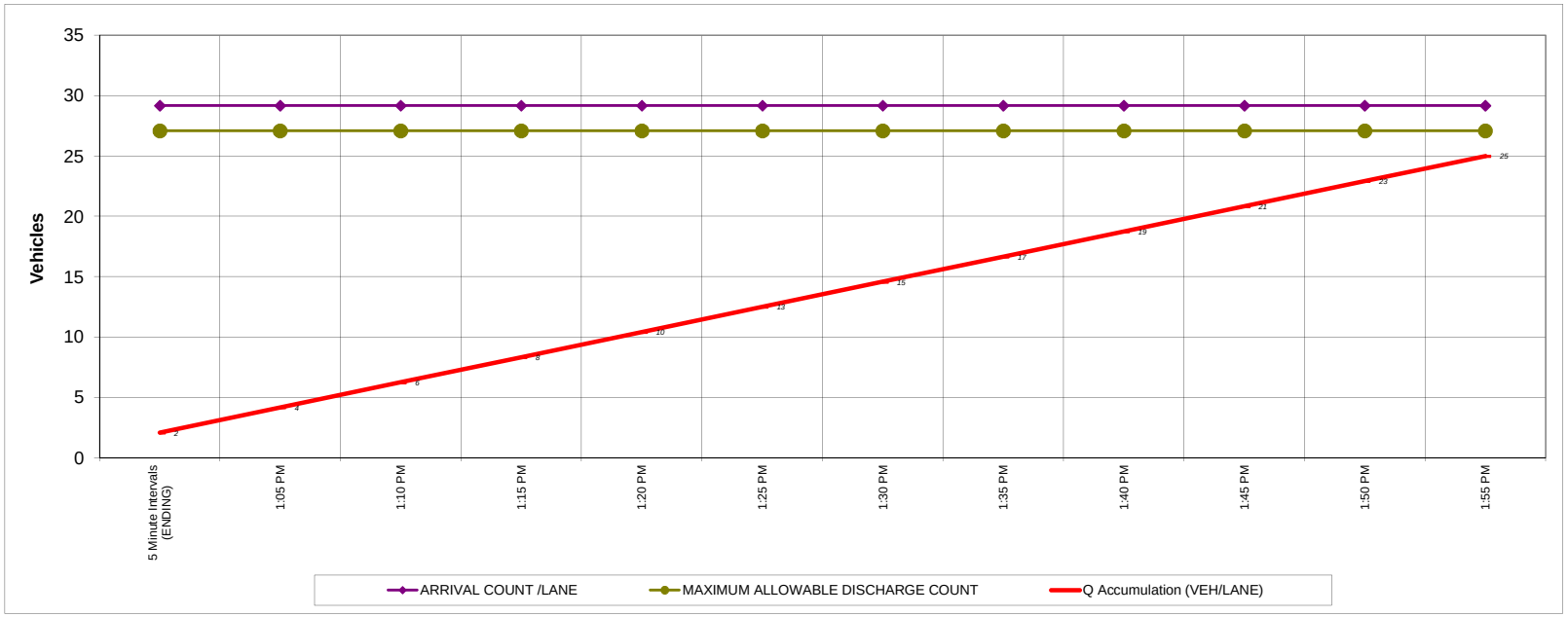
(Min=240, Max=900vph/lane)

Meter Rate = **325**

	INPUT
LANES=	**2**
Ramp Length=	870
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.039
Avg Delay/veh (sec)= **139**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to NB 710

AM Peak Hour Vol/PCE:	1050	1240
PM Peak Hour Vol/PCE:	1040	1200
MD Peak Hour Vol/PCE:	1450	2070

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	86	83	3	3	1035	173	1000	1050	-	1090	87	-	86	0.2
1:10 PM	86	83	6	3	1035	173	1000	1100	-	1090	175	-	86	0.5
1:15 PM	86	83	9	3	1035	173	1000	1100	-	1090	262	-	86	0.7
1:20 PM	86	83	12	3	1035	173	1000	1150	-	1090	350	-	86	1.0
1:25 PM	86	83	15	3	1035	173	1000	1200	-	1090	437	-	86	1.2
1:30 PM	86	83	17	3	1035	173	1000	1200	-	1090	525	-	86	1.5
1:35 PM	86	83	20	3	1035	173	1000	1250	-	1090	612	-	86	1.7
1:40 PM	86	83	23	3	1035	173	1000	1300	-	1090	700	-	86	1.9
1:45 PM	86	83	26	3	1035	173	1000	1350	-	1090	787	-	86	2.2
1:50 PM	86	83	29	3	1035	173	1000	1350	-	1090	875	-	86	2.4
1:55 PM	86	83	32	3	1035	173	1000	1400	-	1090	962	-	86	2.7
2:00 PM	86	83	35	3	1035	173	1000	1450	-	1090	1050	-	86	2.9
	1,035	**1,000**		**35**		**2,070**							**1,035**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,035**					**MAX Q (FT/LN)=**	**1,050**	**-**	**86**	

(Min=480, Max=1200 vph/lane)

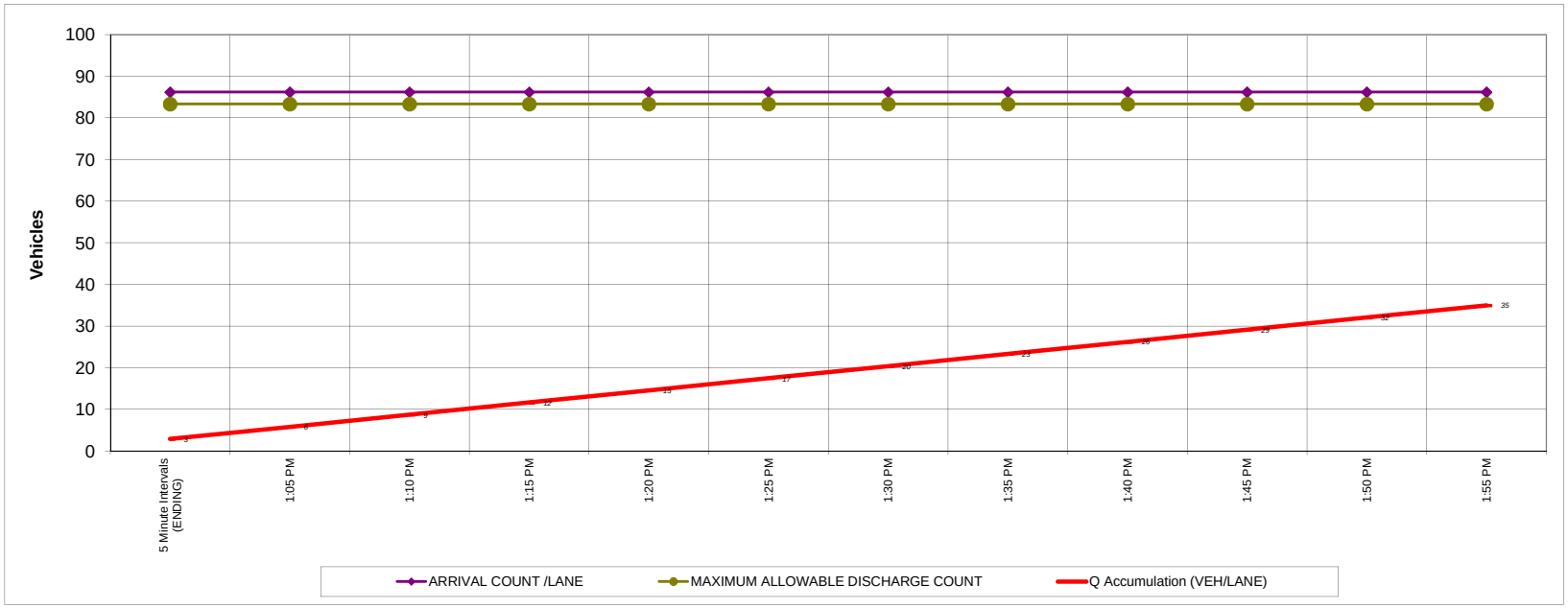
Meter Rate = **1000**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **66**

	INPUT
LANES=	**2**
Ramp Length=	1090
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to SB 710

AM Peak Hour Vol/PCE:	180	210
PM Peak Hour Vol/PCE:	260	290
MD Peak Hour Vol/PCE:	440	520

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	22	20	2	2	260	43	240	250	-	1250	50	-	22	0.1
1:10 PM	22	20	3	2	260	43	240	300	-	1250	100	-	22	0.3
1:15 PM	22	20	5	2	260	43	240	300	-	1250	150	-	22	0.4
1:20 PM	22	20	7	2	260	43	240	300	-	1250	200	-	22	0.6
1:25 PM	22	20	8	2	260	43	240	350	-	1250	250	-	22	0.7
1:30 PM	22	20	10	2	260	43	240	350	-	1250	300	-	22	0.8
1:35 PM	22	20	12	2	260	43	240	400	-	1250	350	-	22	1.0
1:40 PM	22	20	13	2	260	43	240	400	-	1250	400	-	22	1.1
1:45 PM	22	20	15	2	260	43	240	400	-	1250	450	-	22	1.3
1:50 PM	22	20	17	2	260	43	240	450	-	1250	500	-	22	1.4
1:55 PM	22	20	18	2	260	43	240	450	-	1250	550	-	22	1.5
2:00 PM	22	20	20	2	260	43	240	500	-	1250	600	-	22	1.7
	260	**240**		**20**		**520**							**260**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**260**					**MAX Q (FT/LN)=**	**600**	**-**	**22**	

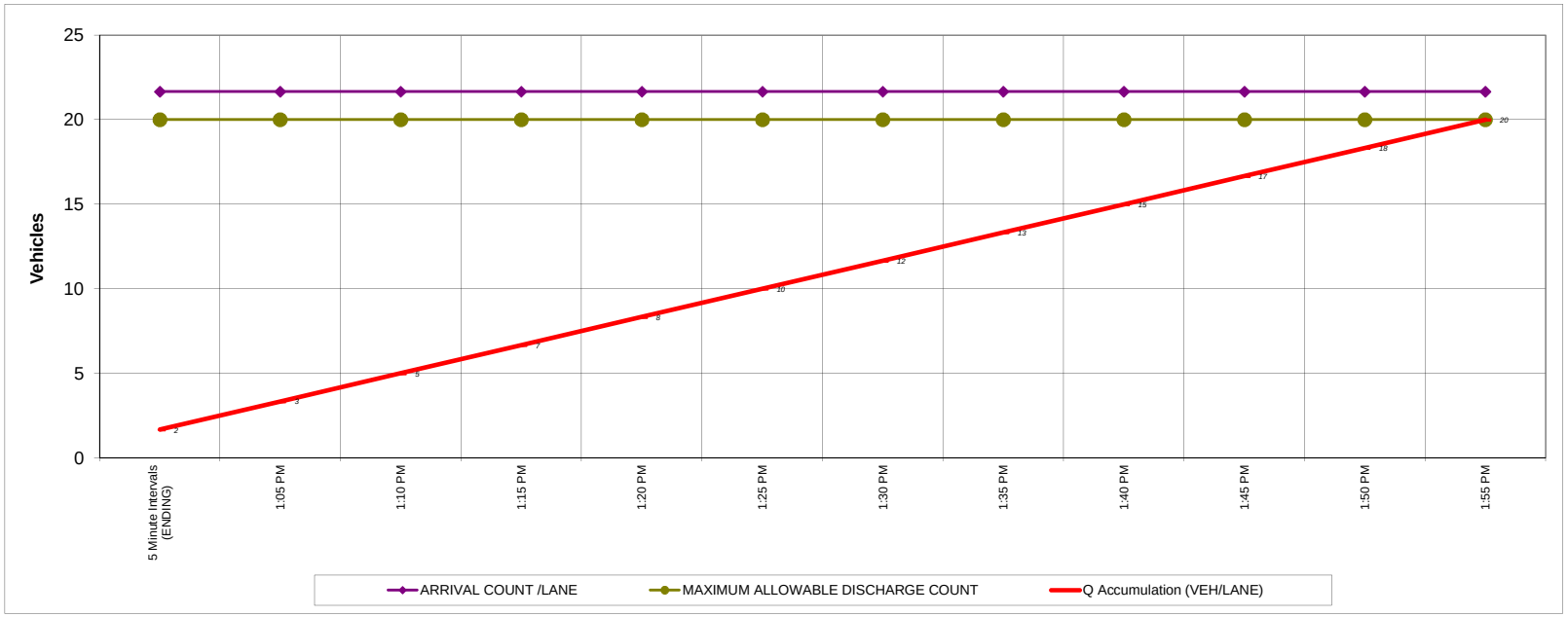
(Min=240, Max=900vph/lane)

Meter Rate = **240**

	INPUT
LANES=	**2**
Ramp Length=	1250
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.042
Avg Delay/veh (sec)= **150**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to NB 710

AM Peak Hour Vol/PCE:	1420	1430
PM Peak Hour Vol/PCE:	1300	1310
MD Peak Hour Vol/PCE:	1350	1360

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	60	57	3	3	715	119	685	700	-	950	75	-	60	0.2
7:10 AM	60	57	5	3	715	119	685	750	-	950	150	-	60	0.4
7:15 AM	60	57	8	3	715	119	685	800	-	950	225	-	60	0.6
7:20 AM	60	57	10	3	715	119	685	800	-	950	300	-	60	0.8
7:25 AM	60	57	13	3	715	119	685	850	-	950	375	-	60	1.0
7:30 AM	60	57	15	3	715	119	685	850	-	950	450	-	60	1.3
7:35 AM	60	57	18	3	715	119	685	900	-	950	525	-	60	1.5
7:40 AM	60	57	20	3	715	119	685	950	-	950	600	-	60	1.7
7:45 AM	60	57	23	3	715	119	685	950	-	950	675	-	60	1.9
7:50 AM	60	57	25	3	715	119	685	1000	-	950	750	-	60	2.1
7:55 AM	60	57	28	3	715	119	685	1000	-	950	825	-	60	2.3
8:00 AM	60	57	30	3	715	119	685	1050	-	950	900	-	60	2.5
	715	**685**		**30**		**1,430**							**715**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**715**					**MAX Q (FT/LN)=**	**900**	**-**	**60**	

(Min=240, Max=900vph/lane)

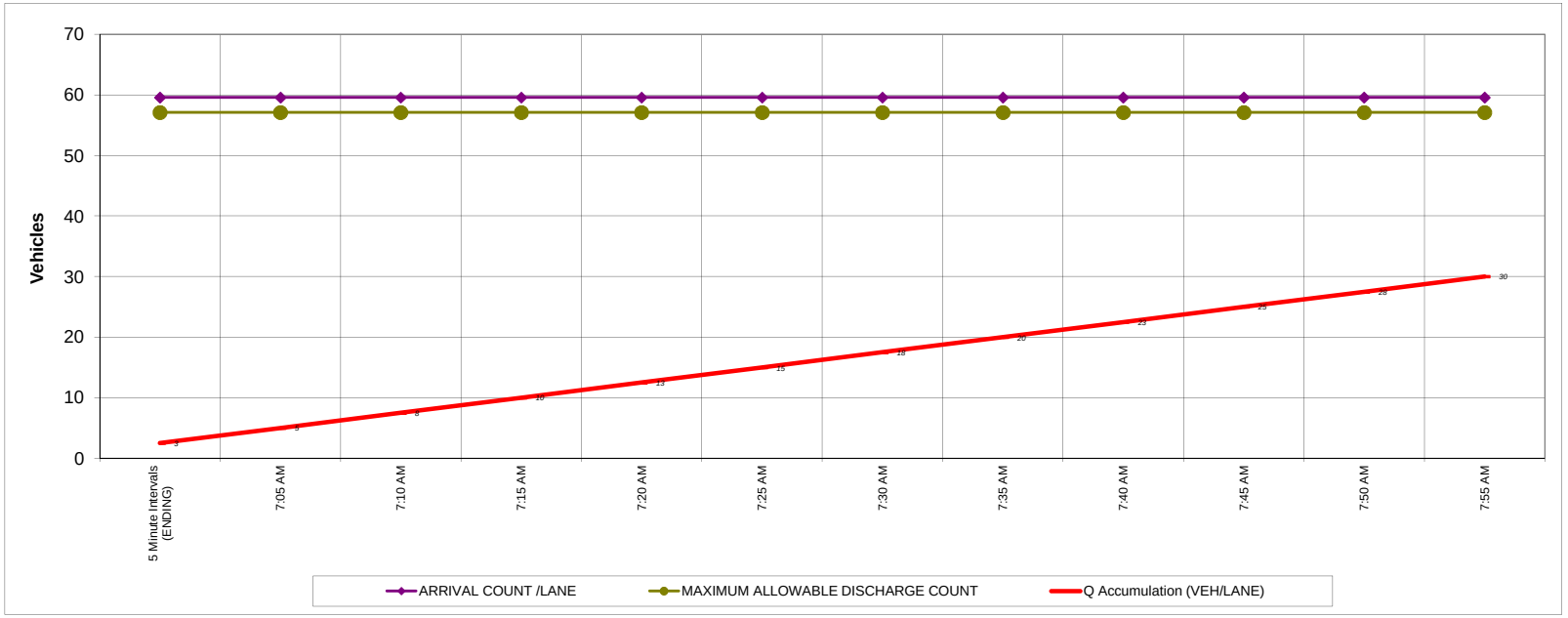
Meter Rate = **685**

Avg Delay/veh (hr)= 0.023

Avg Delay/veh (sec)= **82**

	INPUT
LANES=	**2**
Ramp Length=	950
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to SB 710

AM Peak Hour Vol/PCE:	1100	1160
PM Peak Hour Vol/PCE:	830	850
MD Peak Hour Vol/PCE:	620	650

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	48	47	2	2	580	97	560	600	-	700	50	-	48	0.1
7:10 AM	48	47	3	2	580	97	560	600	-	700	100	-	48	0.3
7:15 AM	48	47	5	2	580	97	560	600	-	700	150	-	48	0.4
7:20 AM	48	47	7	2	580	97	560	650	-	700	200	-	48	0.6
7:25 AM	48	47	8	2	580	97	560	650	-	700	250	-	48	0.7
7:30 AM	48	47	10	2	580	97	560	700	-	700	300	-	48	0.8
7:35 AM	48	47	12	2	580	97	560	700	-	700	350	-	48	1.0
7:40 AM	48	47	13	2	580	97	560	700	-	700	400	-	48	1.1
7:45 AM	48	47	15	2	580	97	560	750	-	700	450	-	48	1.3
7:50 AM	48	47	17	2	580	97	560	750	-	700	500	-	48	1.4
7:55 AM	48	47	18	2	580	97	560	800	-	700	550	-	48	1.5
8:00 AM	48	47	20	2	580	97	560	800	-	700	600	-	48	1.7
	580	**560**		**20**		**1,160**							**580**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**580**					**MAX Q (FT/LN)=**	**600**	**-**	**48**	

(Min=240, Max=900vph/lane)

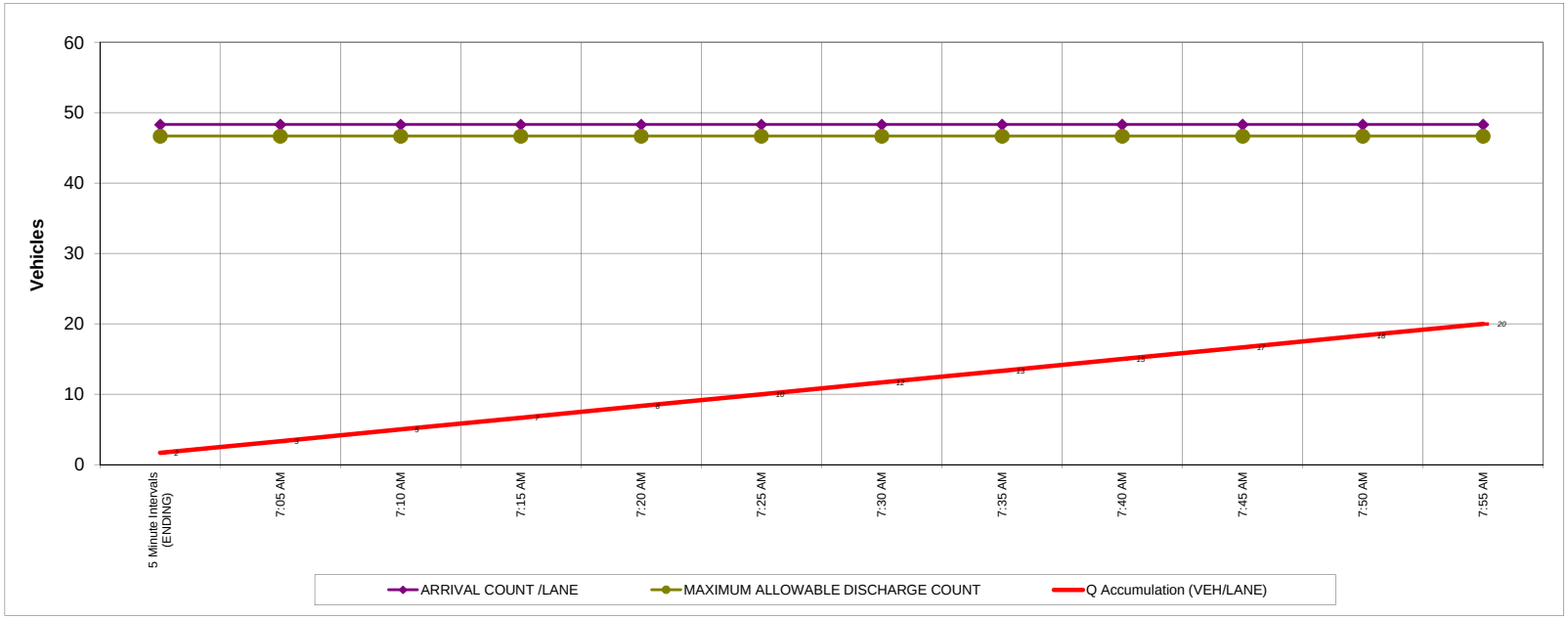
Meter Rate = **560**

Avg Delay/veh (hr)= 0.019

Avg Delay/veh (sec)= **67**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Del Amo On

AM Peak Hour Vol/PCE:	660	720
PM Peak Hour Vol/PCE:	1080	1130
MD Peak Hour Vol/PCE:	850	950

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	47	44	3	3	565	94	530	600	-	1065	87	-	47	0.2
5:10 PM	47	44	6	3	565	94	530	600	-	1065	175	-	47	0.5
5:15 PM	47	44	9	3	565	94	530	650	-	1065	263	-	47	0.7
5:20 PM	47	44	12	3	565	94	530	700	-	1065	350	-	47	1.0
5:25 PM	47	44	15	3	565	94	530	700	-	1065	438	-	47	1.2
5:30 PM	47	44	18	3	565	94	530	750	-	1065	525	-	47	1.5
5:35 PM	47	44	20	3	565	94	530	800	-	1065	612	-	47	1.7
5:40 PM	47	44	23	3	565	94	530	800	-	1065	700	-	47	1.9
5:45 PM	47	44	26	3	565	94	530	850	-	1065	787	-	47	2.2
5:50 PM	47	44	29	3	565	94	530	900	-	1065	875	-	47	2.4
5:55 PM	47	44	32	3	565	94	530	950	-	1065	962	-	47	2.7
6:00 PM	47	44	35	3	565	94	530	950	-	1065	1050	-	47	2.9
	565	**530**		**35**		**1,130**							**565**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**565**					**MAX Q (FT/LN)=**	**1,050**	**-**	**47**	

(Min=240, Max=900vph/lane)

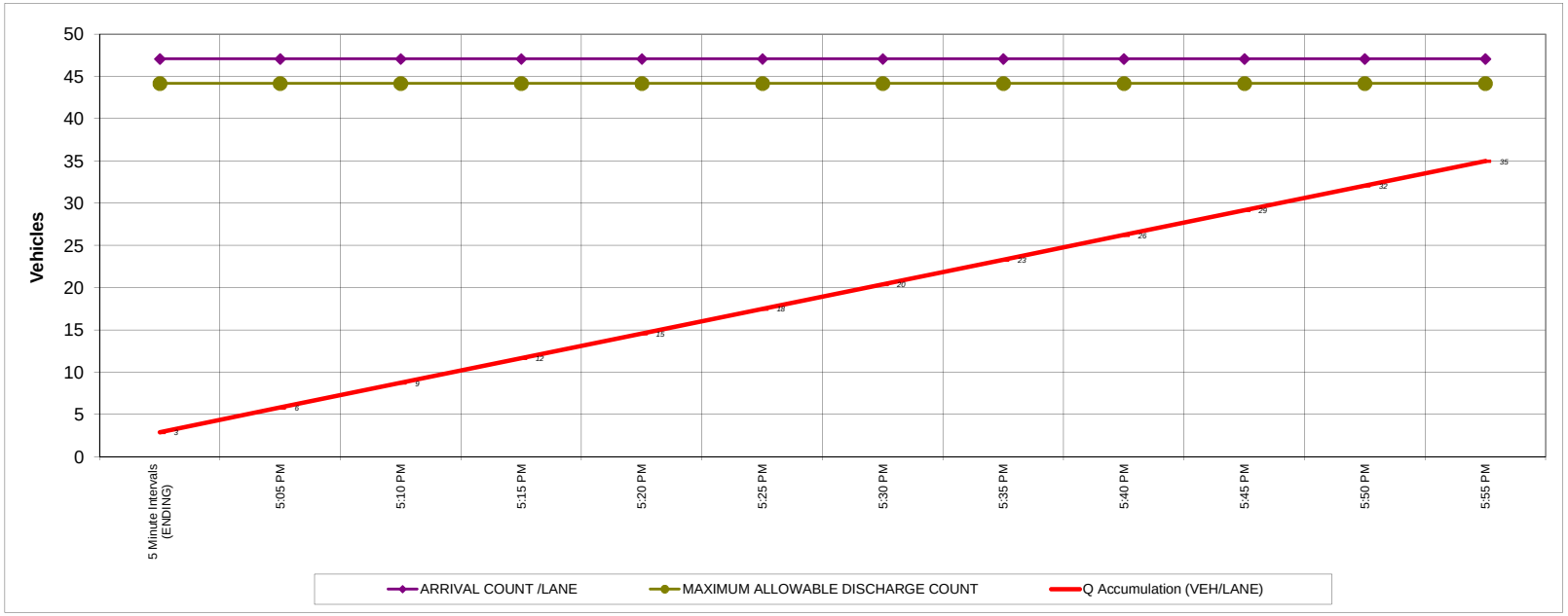
Meter Rate = **530**

Avg Delay/veh (hr)= 0.034

Avg Delay/veh (sec)= **121**

	INPUT
LANES=	**2**
Ramp Length=	1065
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Del Amo On

AM Peak Hour Vol/PCE:	1140	1220
PM Peak Hour Vol/PCE:	830	870
MD Peak Hour Vol/PCE:	980	1080

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	51	49	2	2	610	102	590	600	-	630	50	-	51	0.1
7:10 AM	51	49	3	2	610	102	590	650	-	630	100	-	51	0.3
7:15 AM	51	49	5	2	610	102	590	650	-	630	150	-	51	0.4
7:20 AM	51	49	7	2	610	102	590	650	-	630	200	-	51	0.6
7:25 AM	51	49	8	2	610	102	590	700	-	630	250	-	51	0.7
7:30 AM	51	49	10	2	610	102	590	700	-	630	300	-	51	0.8
7:35 AM	51	49	12	2	610	102	590	750	-	630	350	-	51	1.0
7:40 AM	51	49	13	2	610	102	590	750	-	630	400	-	51	1.1
7:45 AM	51	49	15	2	610	102	590	750	-	630	450	-	51	1.3
7:50 AM	51	49	17	2	610	102	590	800	-	630	500	-	51	1.4
7:55 AM	51	49	18	2	610	102	590	800	-	630	550	-	51	1.5
8:00 AM	51	49	20	2	610	102	590	850	-	630	600	-	51	1.7
	610	**590**		**20**		**1,220**							**610**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**610**					**MAX Q (FT/LN)=**	**600**	**-**	**51**	

(Min=240, Max=900vph/lane)

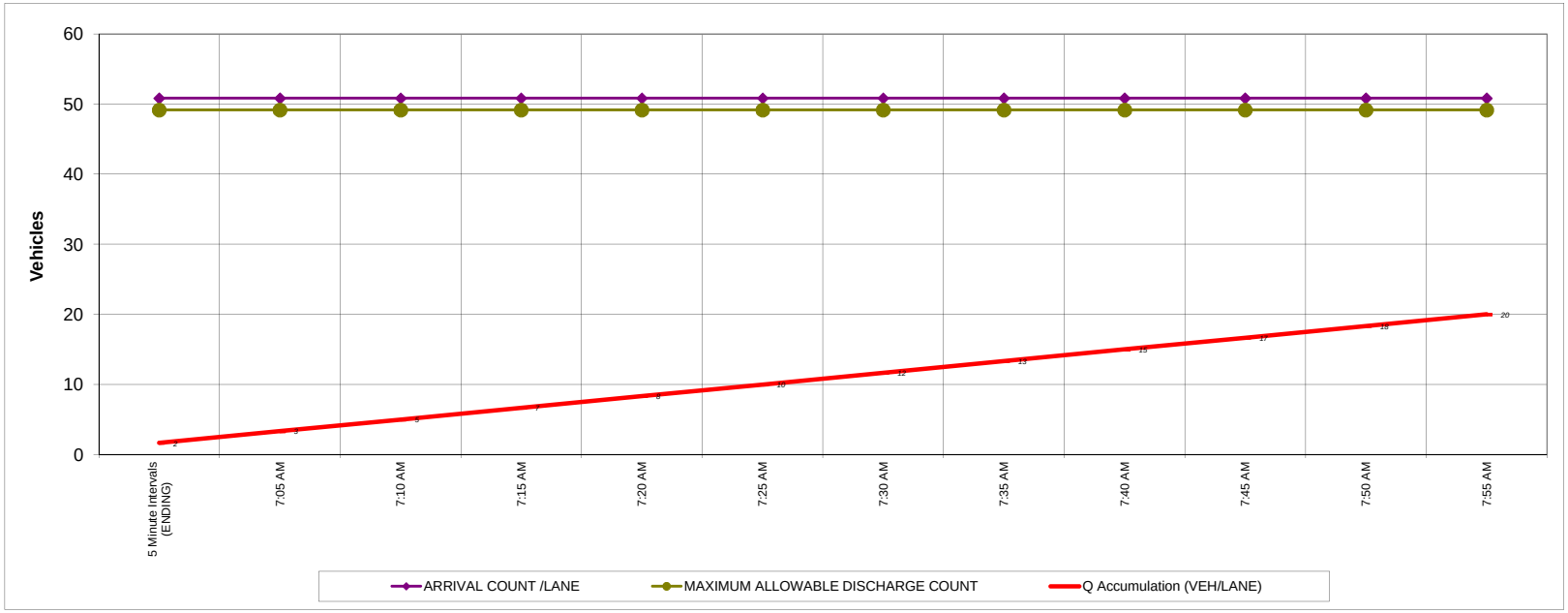
Meter Rate = **590**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **64**

	INPUT
LANES=	**2**
Ramp Length=	630
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Long Beach On

AM Peak Hour Vol/PCE:	670	690
PM Peak Hour Vol/PCE:	720	740
MD Peak Hour Vol/PCE:	680	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	31	27	4	4	370	62	320	400	-	1520	125	-	31	0.3
5:10 PM	31	27	8	4	370	62	320	450	-	1520	250	-	31	0.7
5:15 PM	31	27	13	4	370	62	320	500	-	1520	375	-	31	1.0
5:20 PM	31	27	17	4	370	62	320	550	-	1520	500	-	31	1.4
5:25 PM	31	27	21	4	370	62	320	600	-	1520	625	-	31	1.7
5:30 PM	31	27	25	4	370	62	320	650	-	1520	750	-	31	2.1
5:35 PM	31	27	29	4	370	62	320	700	-	1520	875	-	31	2.4
5:40 PM	31	27	33	4	370	62	320	750	-	1520	1000	-	31	2.8
5:45 PM	31	27	38	4	370	62	320	800	-	1520	1125	-	31	3.1
5:50 PM	31	27	42	4	370	62	320	850	-	1520	1250	-	31	3.5
5:55 PM	31	27	46	4	370	62	320	900	-	1520	1375	-	31	3.8
6:00 PM	31	27	50	4	370	62	320	950	-	1520	1500	-	31	4.2
	370	320		50		740							370	27.08
	MAX Q (VEH/LN)=		50	MAX RATE (VPH)=	370					MAX Q (FT/LN)=	1,500	-	31	

(Min=240, Max=900vph/lane)

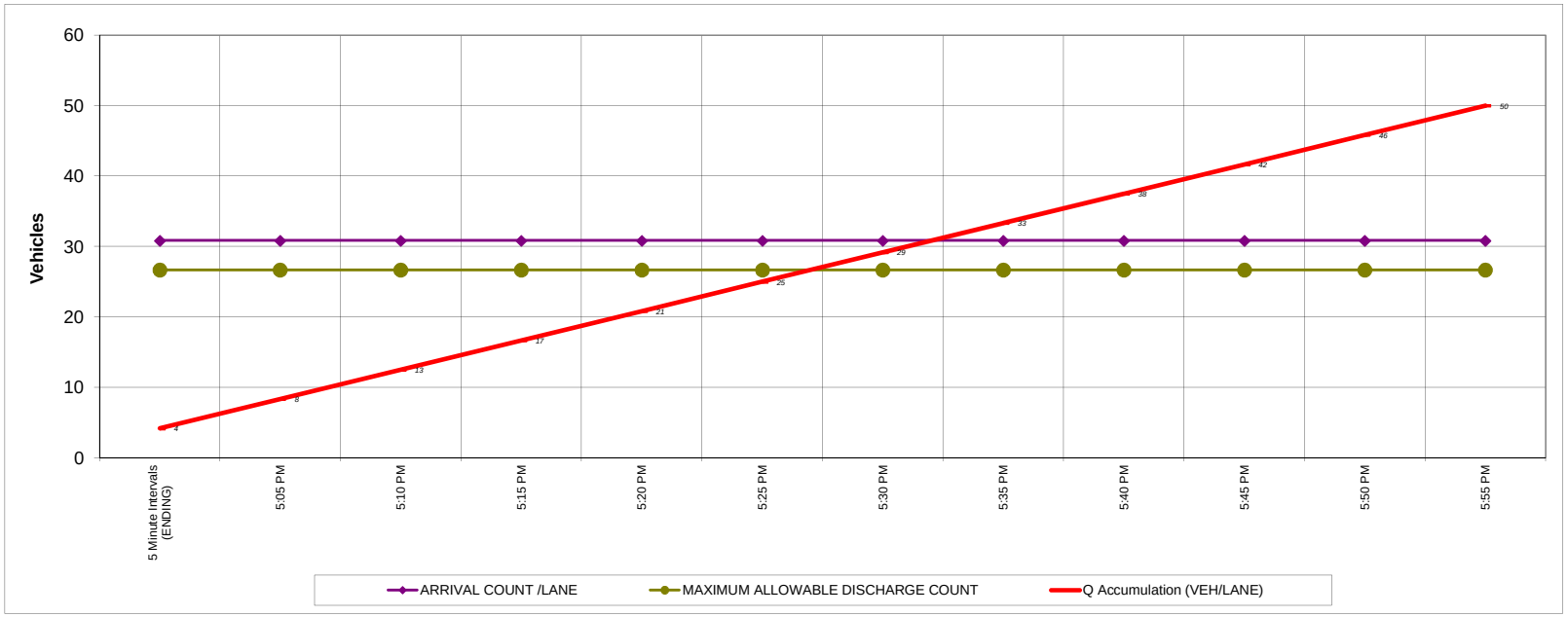
Meter Rate = 320

Avg Delay/veh (hr)= 0.073

Avg Delay/veh (sec)= 264

	INPUT
LANES=	**2**
Ramp Length=	1520
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Long Beach On

AM Peak Hour Vol/PCE:	660	700
PM Peak Hour Vol/PCE:	490	510
MD Peak Hour Vol/PCE:	490	560

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	29	28	2	2	350	58	330	350	-	700	50	-	29	0.1
7:10 AM	29	28	3	2	350	58	330	350	-	700	100	-	29	0.3
7:15 AM	29	28	5	2	350	58	330	400	-	700	150	-	29	0.4
7:20 AM	29	28	7	2	350	58	330	400	-	700	200	-	29	0.6
7:25 AM	29	28	8	2	350	58	330	450	-	700	250	-	29	0.7
7:30 AM	29	28	10	2	350	58	330	450	-	700	300	-	29	0.8
7:35 AM	29	28	12	2	350	58	330	450	-	700	350	-	29	1.0
7:40 AM	29	28	13	2	350	58	330	500	-	700	400	-	29	1.1
7:45 AM	29	28	15	2	350	58	330	500	-	700	450	-	29	1.3
7:50 AM	29	28	17	2	350	58	330	550	-	700	500	-	29	1.4
7:55 AM	29	28	18	2	350	58	330	550	-	700	550	-	29	1.5
8:00 AM	29	28	20	2	350	58	330	550	-	700	600	-	29	1.7
	350	**330**		**20**		**700**							**350**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**350**					**MAX Q (FT/LN)=**	**600**	**-**	**29**	

(Min=240, Max=900vph/lane)

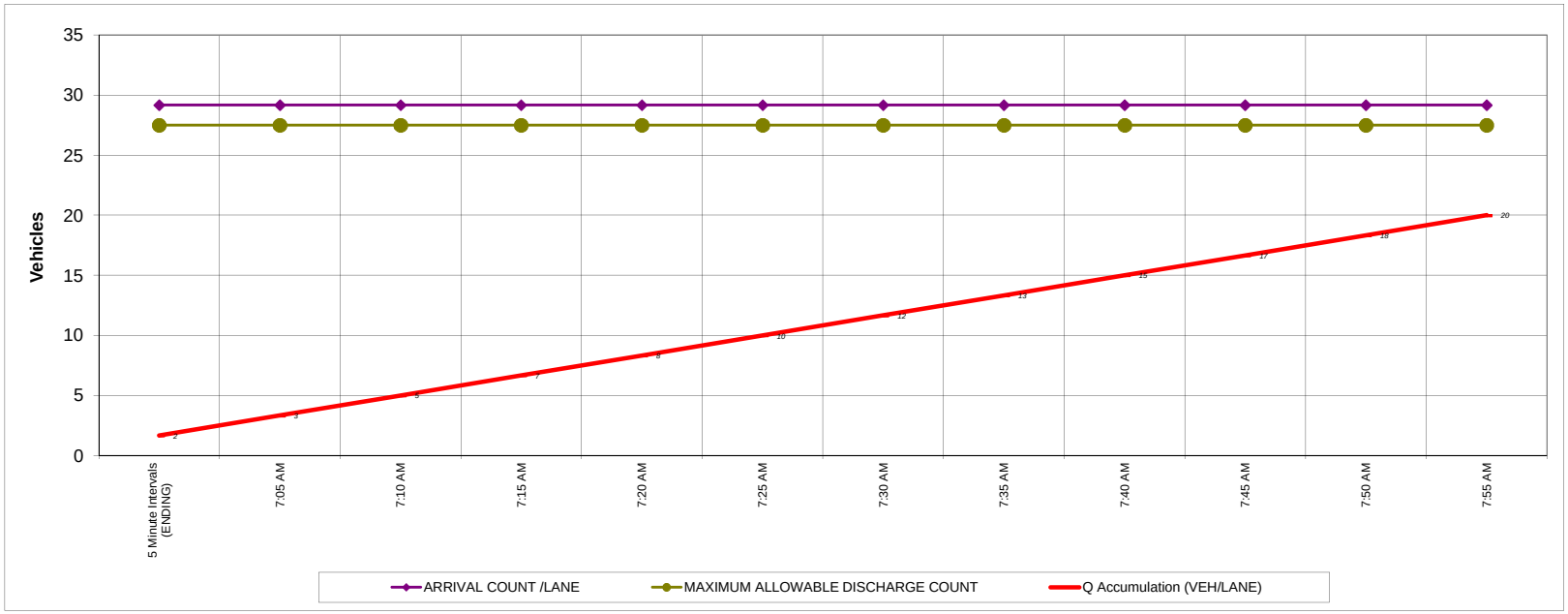
Meter Rate = **330**

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= **111**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Artesia On

AM Peak Hour Vol/PCE:	680	710
PM Peak Hour Vol/PCE:	170	170
MD Peak Hour Vol/PCE:	610	660

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	29	0	0	355	59	350	350	-	170	13	-	30	0.0
7:10 AM	30	29	1	0	355	59	350	350	-	170	25	-	30	0.1
7:15 AM	30	29	1	0	355	59	350	350	-	170	38	-	30	0.1
7:20 AM	30	29	2	0	355	59	350	350	-	170	50	-	30	0.1
7:25 AM	30	29	2	0	355	59	350	350	-	170	63	-	30	0.2
7:30 AM	30	29	3	0	355	59	350	350	-	170	75	-	30	0.2
7:35 AM	30	29	3	0	355	59	350	350	-	170	88	-	30	0.2
7:40 AM	30	29	3	0	355	59	350	350	-	170	100	-	30	0.3
7:45 AM	30	29	4	0	355	59	350	400	-	170	113	-	30	0.3
7:50 AM	30	29	4	0	355	59	350	400	-	170	125	-	30	0.3
7:55 AM	30	29	5	0	355	59	350	400	-	170	138	-	30	0.4
8:00 AM	30	29	5	0	355	59	350	400	-	170	150	-	30	0.4
	355	**350**		**5**		**710**							**355**	**2.71**
	MAX Q (VEH/LN)=		**5**	**MAX RATE (VPH)=**	**355**					**MAX Q (FT/LN)=**	**150**	**-**	**30**	

(Min=240, Max=900vph/lane)

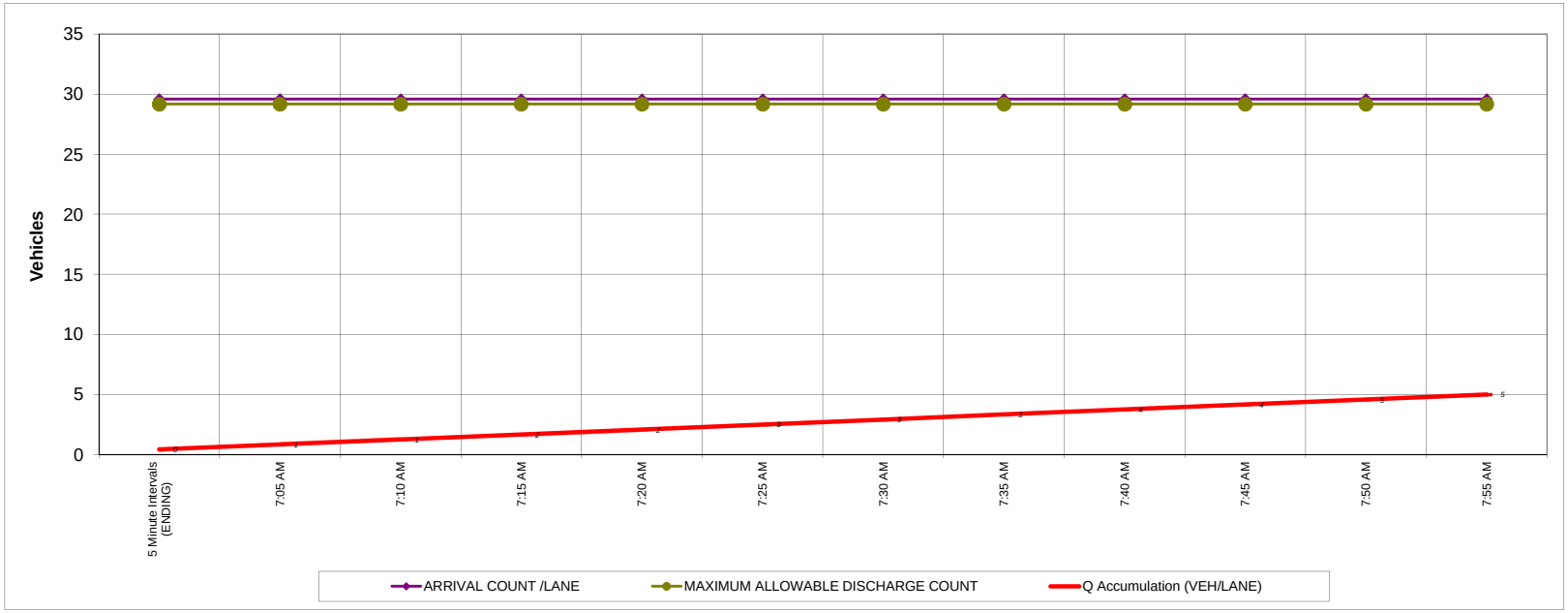
Meter Rate = **350**

Avg Delay/veh (hr)= 0.008

Avg Delay/veh (sec)= **27**

	INPUT
LANES=	**2**
Ramp Length=	170
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Alondra On

AM Peak Hour Vol/PCE:	770	800
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	700	750

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	32	2	2	400	67	380	400	-	680	50	-	33	0.1
7:10 AM	33	32	3	2	400	67	380	400	-	680	100	-	33	0.3
7:15 AM	33	32	5	2	400	67	380	450	-	680	150	-	33	0.4
7:20 AM	33	32	7	2	400	67	380	450	-	680	200	-	33	0.6
7:25 AM	33	32	8	2	400	67	380	500	-	680	250	-	33	0.7
7:30 AM	33	32	10	2	400	67	380	500	-	680	300	-	33	0.8
7:35 AM	33	32	12	2	400	67	380	500	-	680	350	-	33	1.0
7:40 AM	33	32	13	2	400	67	380	550	-	680	400	-	33	1.1
7:45 AM	33	32	15	2	400	67	380	550	-	680	450	-	33	1.3
7:50 AM	33	32	17	2	400	67	380	600	-	680	500	-	33	1.4
7:55 AM	33	32	18	2	400	67	380	600	-	680	550	-	33	1.5
8:00 AM	33	32	20	2	400	67	380	600	-	680	600	-	33	1.7
	400	**380**		**20**		**800**							**400**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**400**					**MAX Q (FT/LN)=**	**600**	**-**	**33**	

(Min=240, Max=900vph/lane)

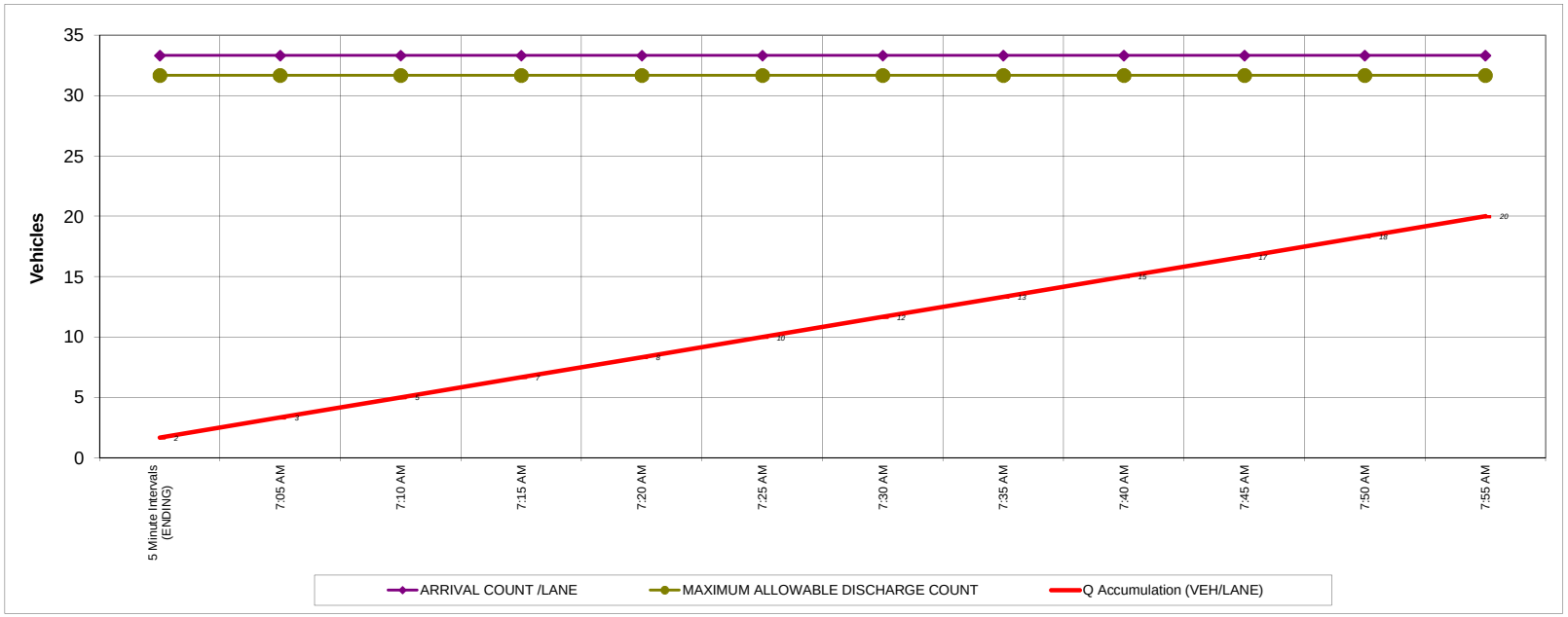
Meter Rate = **380**

Avg Delay/veh (hr)= 0.027

Avg Delay/veh (sec)= **98**

	INPUT
LANES=	**2**
Ramp Length=	680
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Alondra On

AM Peak Hour Vol/PCE:	650	710
PM Peak Hour Vol/PCE:	570	600
MD Peak Hour Vol/PCE:	680	770

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	32	29	3	3	385	64	345	400	-	1350	100	-	32	0.3
1:10 PM	32	29	7	3	385	64	345	450	-	1350	200	-	32	0.6
1:15 PM	32	29	10	3	385	64	345	500	-	1350	300	-	32	0.8
1:20 PM	32	29	13	3	385	64	345	500	-	1350	400	-	32	1.1
1:25 PM	32	29	17	3	385	64	345	550	-	1350	500	-	32	1.4
1:30 PM	32	29	20	3	385	64	345	600	-	1350	600	-	32	1.7
1:35 PM	32	29	23	3	385	64	345	650	-	1350	700	-	32	1.9
1:40 PM	32	29	27	3	385	64	345	700	-	1350	800	-	32	2.2
1:45 PM	32	29	30	3	385	64	345	700	-	1350	900	-	32	2.5
1:50 PM	32	29	33	3	385	64	345	750	-	1350	1000	-	32	2.8
1:55 PM	32	29	37	3	385	64	345	800	-	1350	1100	-	32	3.1
2:00 PM	32	29	40	3	385	64	345	850	-	1350	1200	-	32	3.3
	385	**345**		**40**		**770**							**385**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**385**					**MAX Q (FT/LN)=**	**1,200**	**-**	**32**	

(Min=240, Max=900vph/lane)

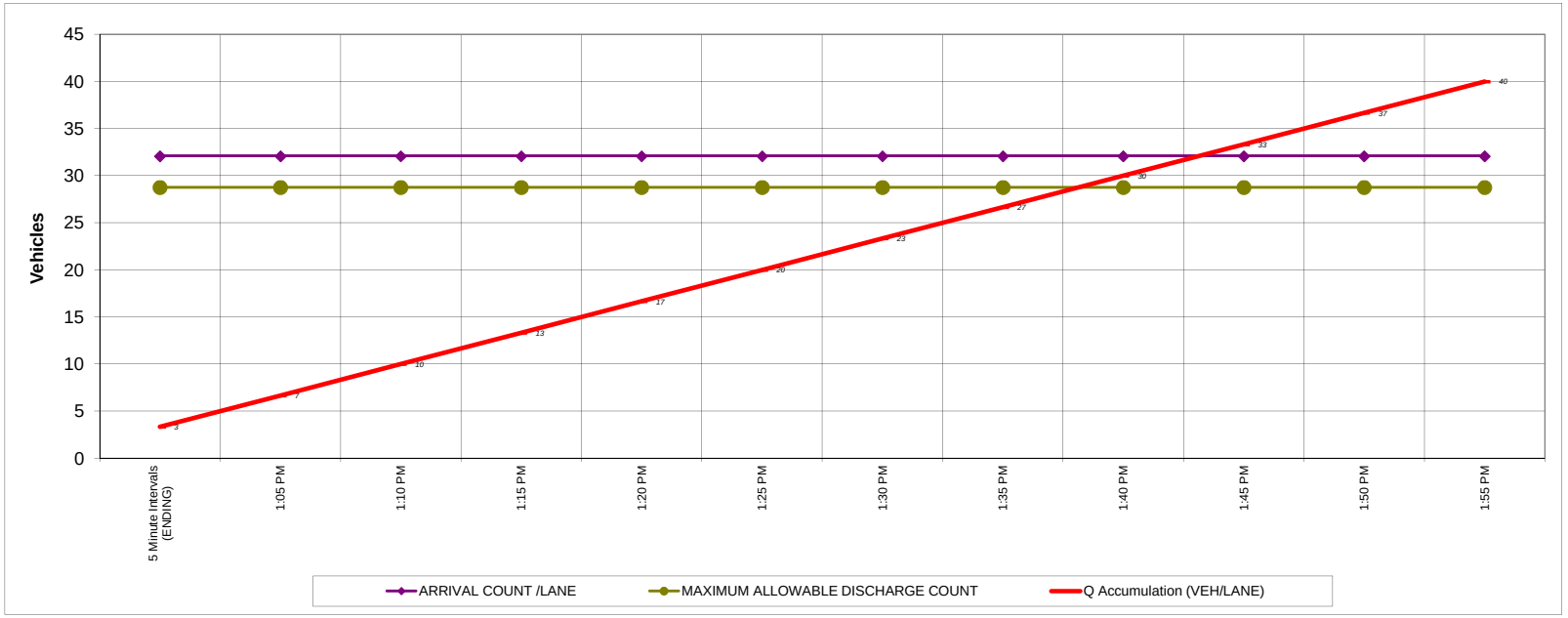
Meter Rate = **345**

Avg Delay/veh (hr)= 0.056

Avg Delay/veh (sec)= **203**

	INPUT
LANES=	**2**
Ramp Length=	1350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-FC Off

AM Peak Hour Vol/PCE:	440	880
PM Peak Hour Vol/PCE:	220	440
MD Peak Hour Vol/PCE:	220	440

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	37	29	8	8	440	73	345	500	-	3220	238	-	37	0.7
7:10 AM	37	29	16	8	440	73	345	600	-	3220	475	-	37	1.3
7:15 AM	37	29	24	8	440	73	345	700	-	3220	713	-	37	2.0
7:20 AM	37	29	32	8	440	73	345	800	-	3220	950	-	37	2.6
7:25 AM	37	29	40	8	440	73	345	900	-	3220	1188	-	37	3.3
7:30 AM	37	29	48	8	440	73	345	1000	-	3220	1425	-	37	4.0
7:35 AM	37	29	55	8	440	73	345	1100	-	3220	1663	-	37	4.6
7:40 AM	37	29	63	8	440	73	345	1200	-	3220	1900	-	37	5.3
7:45 AM	37	29	71	8	440	73	345	1250	-	3220	2138	-	37	5.9
7:50 AM	37	29	79	8	440	73	345	1350	-	3220	2375	-	37	6.6
7:55 AM	37	29	87	8	440	73	345	1450	-	3220	2613	-	37	7.3
8:00 AM	37	29	95	8	440	73	345	1550	-	3220	2850	-	37	7.9
	440	**345**		**95**		**880**							**440**	**51.46**
		MAX Q (VEH/LN)=	**95**	**MAX RATE (VPH)=**	**440**					**MAX Q (FT/LN)=**	**2,850**	**-**	**37**	

(Min=240, Max=900vph/lane)

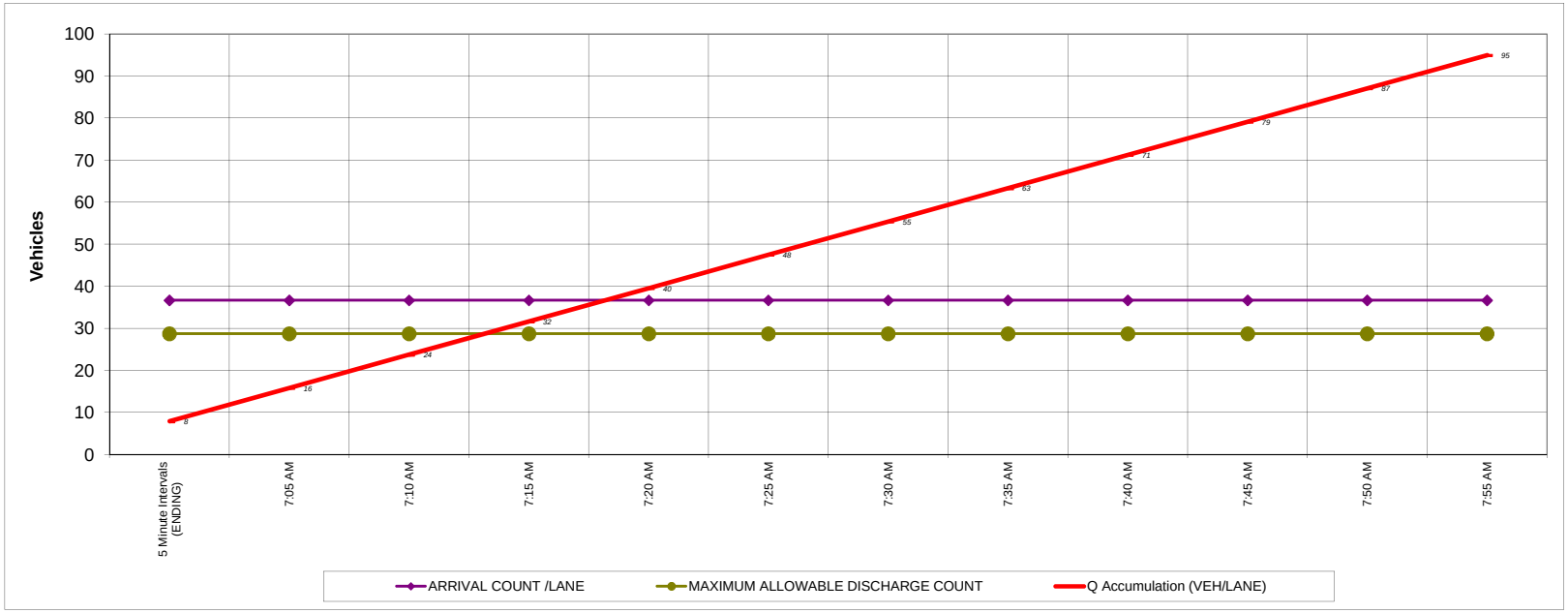
Meter Rate = **345**

Avg Delay/veh (hr)= 0.117

Avg Delay/veh (sec)= **421**

	INPUT
LANES=	**2**
Ramp Length=	3220
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	320	640
PM Peak Hour Vol/PCE:	540	1080
MD Peak Hour Vol/PCE:	450	900

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	90	75	15	15	1080	90	895	1250	-	2610	463	-	90	1.3
5:10 PM	90	75	31	15	1080	90	895	1450	-	2610	925	-	90	2.6
5:15 PM	90	75	46	15	1080	90	895	1600	-	2610	1388	-	90	3.9
5:20 PM	90	75	62	15	1080	90	895	1800	-	2610	1850	-	90	5.1
5:25 PM	90	75	77	15	1080	90	895	2000	-	2610	2313	-	90	6.4
5:30 PM	90	75	93	15	1080	90	895	2150	2250	2610	2775	165	90	7.7
5:35 PM	90	75	108	15	1080	90	895	2350	2600	2610	3238	628	90	9.0
5:40 PM	90	75	123	15	1080	90	895	2550	2950	2610	3700	1090	90	10.3
5:45 PM	90	75	139	15	1080	90	895	2700	3350	2610	4163	1553	90	11.6
5:50 PM	90	75	154	15	1080	90	895	2900	3700	2610	4625	2015	90	12.8
5:55 PM	90	75	170	15	1080	90	895	3100	4100	2610	5088	2478	90	14.1
6:00 PM	90	75	185	15	1080	90	895	3300	4450	2610	5550	2940	90	15.4
	1,080	**895**		**185**		**1,080**							**1,080**	**100.21**
		MAX Q (VEH/LN)=	**185**	**MAX RATE (VPH)=**	**1,080**					**MAX Q (FT/LN)=**	**5,550**	**2,940**	**90**	

(Min=240, Max=900 vph/lane)

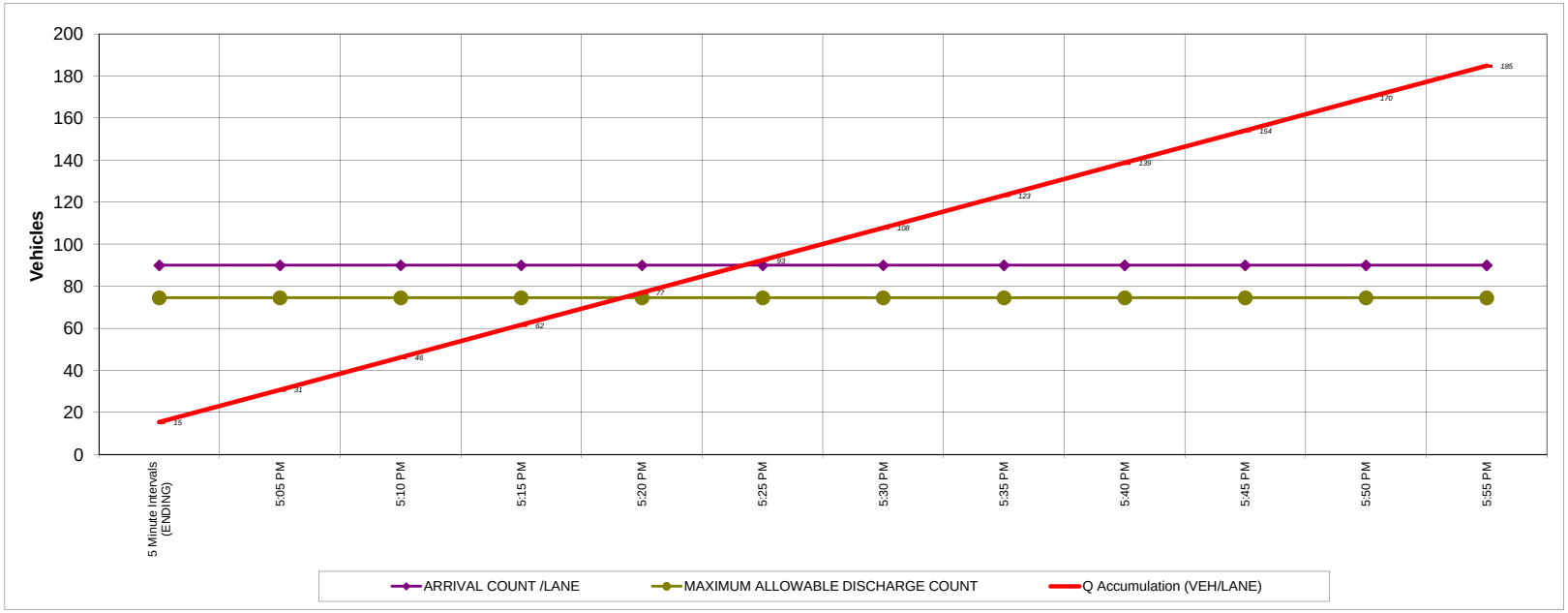
Meter Rate = **895**

Avg Delay/veh (hr)= 0.093

Avg Delay/veh (sec)= **334**

	INPUT
LANES=	**1**
Ramp Length=	2610
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Rosecrans On

AM Peak Hour Vol/PCE:	520	530
PM Peak Hour Vol/PCE:	500	510
MD Peak Hour Vol/PCE:	390	400

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	22	20	2	2	265	44	240	250	-	2710	63	-	22	0.2
7:10 AM	22	20	4	2	265	44	240	300	-	2710	125	-	22	0.3
7:15 AM	22	20	6	2	265	44	240	300	-	2710	188	-	22	0.5
7:20 AM	22	20	8	2	265	44	240	350	-	2710	250	-	22	0.7
7:25 AM	22	20	10	2	265	44	240	350	-	2710	313	-	22	0.9
7:30 AM	22	20	13	2	265	44	240	400	-	2710	375	-	22	1.0
7:35 AM	22	20	15	2	265	44	240	400	-	2710	438	-	22	1.2
7:40 AM	22	20	17	2	265	44	240	450	-	2710	500	-	22	1.4
7:45 AM	22	20	19	2	265	44	240	450	-	2710	563	-	22	1.6
7:50 AM	22	20	21	2	265	44	240	500	-	2710	625	-	22	1.7
7:55 AM	22	20	23	2	265	44	240	500	-	2710	687	-	22	1.9
8:00 AM	22	20	25	2	265	44	240	550	-	2710	750	-	22	2.1
	265	**240**		**25**		**530**							**265**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**265**					**MAX Q (FT/LN)=**	**750**	**-**	**22**	

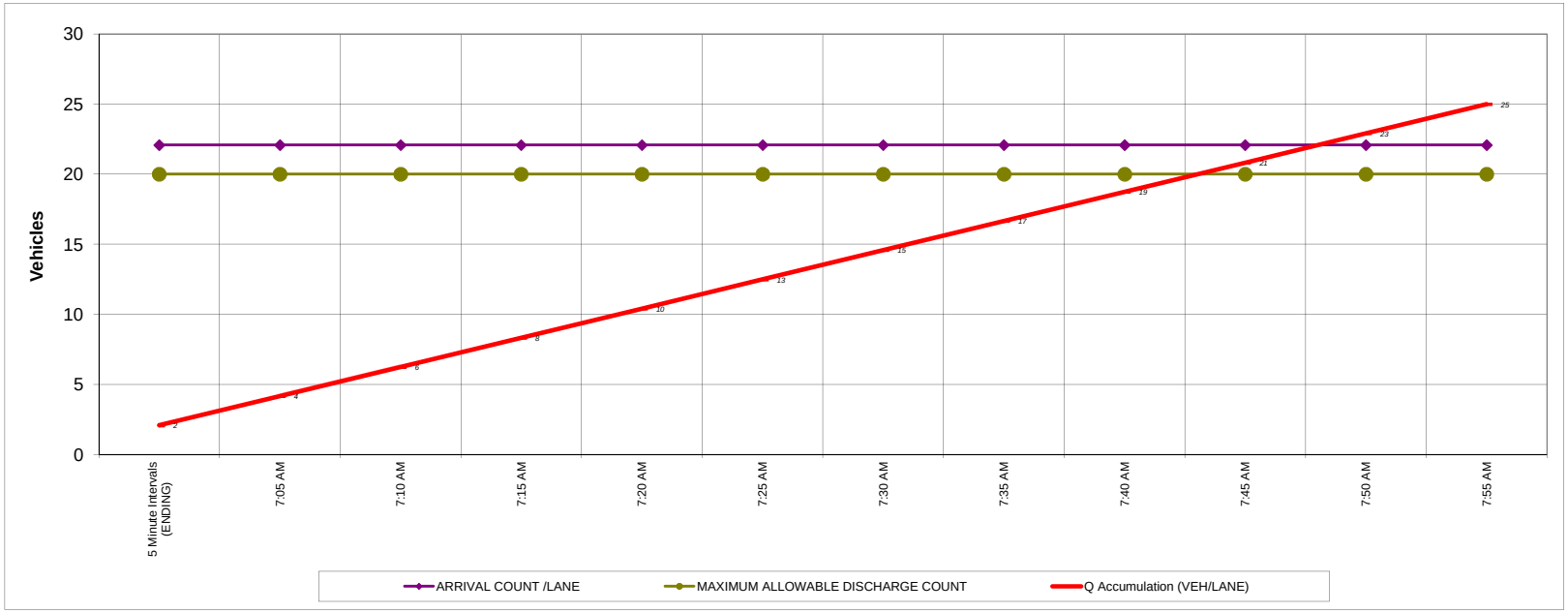
(Min=240, Max=900vph/lane)

Meter Rate = **240**

	INPUT
LANES=	**2**
Ramp Length=	2710
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.051
Avg Delay/veh (sec)= **184**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Rosecrans On

AM Peak Hour Vol/PCE:	360	370
PM Peak Hour Vol/PCE:	150	150
MD Peak Hour Vol/PCE:	110	120

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:10 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:15 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:20 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:25 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:30 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:35 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:40 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:45 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:50 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:55 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
8:00 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
	185	**240**		**-**		**370**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**185**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

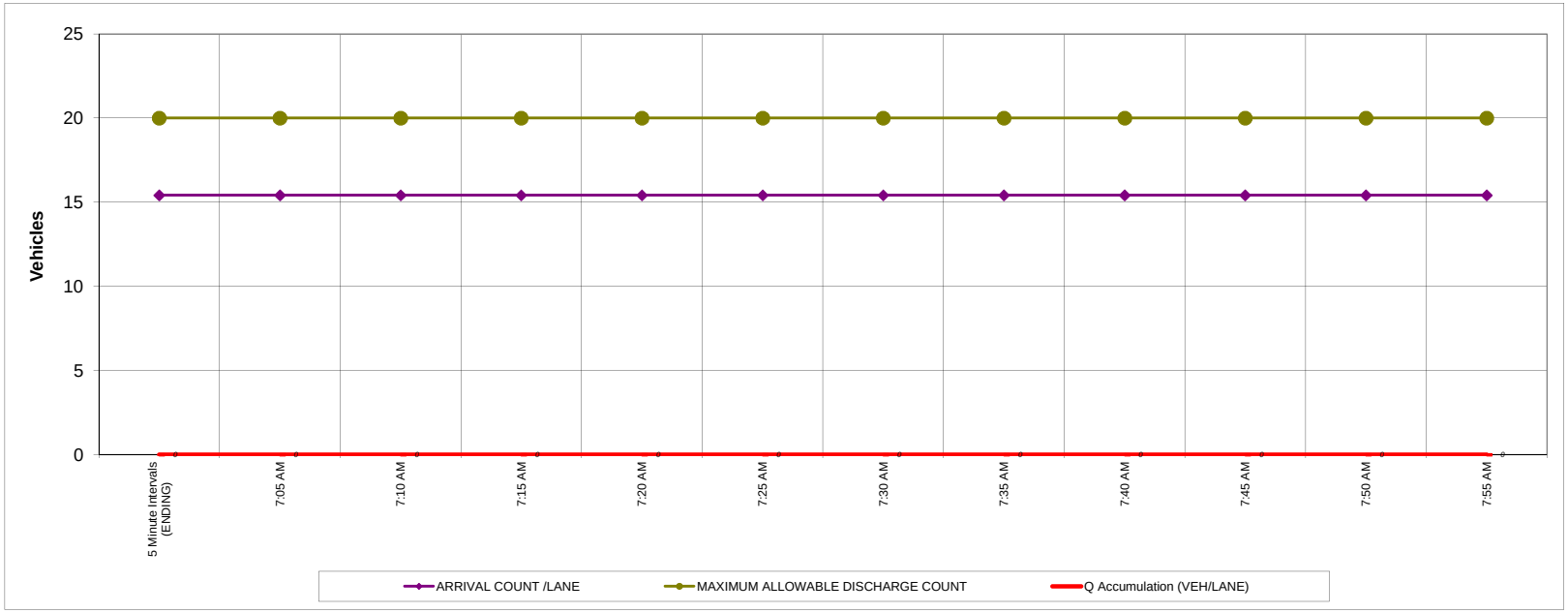
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**2**
Ramp Length=	1180
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Rosecrans On

AM Peak Hour Vol/PCE:	690	740
PM Peak Hour Vol/PCE:	340	350
MD Peak Hour Vol/PCE:	240	270

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	31	28	3	3	370	62	335	400	-	1200	88	-	31	0.2
7:10 AM	31	28	6	3	370	62	335	400	-	1200	175	-	31	0.5
7:15 AM	31	28	9	3	370	62	335	450	-	1200	263	-	31	0.7
7:20 AM	31	28	12	3	370	62	335	500	-	1200	350	-	31	1.0
7:25 AM	31	28	15	3	370	62	335	500	-	1200	438	-	31	1.2
7:30 AM	31	28	18	3	370	62	335	550	-	1200	525	-	31	1.5
7:35 AM	31	28	20	3	370	62	335	600	-	1200	613	-	31	1.7
7:40 AM	31	28	23	3	370	62	335	650	-	1200	700	-	31	1.9
7:45 AM	31	28	26	3	370	62	335	650	-	1200	788	-	31	2.2
7:50 AM	31	28	29	3	370	62	335	700	-	1200	875	-	31	2.4
7:55 AM	31	28	32	3	370	62	335	750	-	1200	963	-	31	2.7
8:00 AM	31	28	35	3	370	62	335	750	-	1200	1050	-	31	2.9
	370	**335**		**35**		**740**							**370**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**1,050**	**-**	**31**	

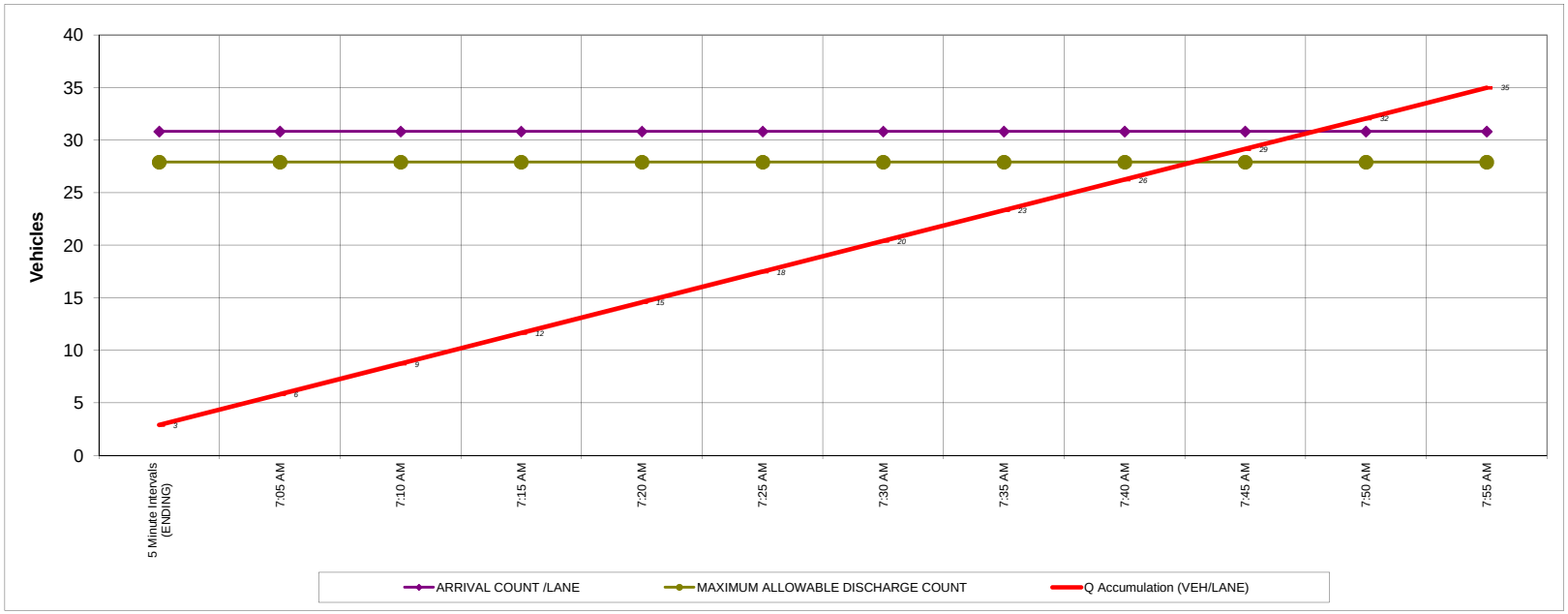
(Min=240, Max=900vph/lane)

Meter Rate = **335**

	INPUT
LANES=	**2**
Ramp Length=	1200
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.051
Avg Delay/veh (sec)= **184**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Imperial On

AM Peak Hour Vol/PCE:	630	670
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	590	620

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	28	26	2	2	335	56	310	350	-	850	63	-	28	0.2
7:10 AM	28	26	4	2	335	56	310	350	-	850	125	-	28	0.3
7:15 AM	28	26	6	2	335	56	310	400	-	850	188	-	28	0.5
7:20 AM	28	26	8	2	335	56	310	400	-	850	250	-	28	0.7
7:25 AM	28	26	10	2	335	56	310	450	-	850	312	-	28	0.9
7:30 AM	28	26	13	2	335	56	310	450	-	850	375	-	28	1.0
7:35 AM	28	26	15	2	335	56	310	500	-	850	437	-	28	1.2
7:40 AM	28	26	17	2	335	56	310	500	-	850	500	-	28	1.4
7:45 AM	28	26	19	2	335	56	310	550	-	850	562	-	28	1.6
7:50 AM	28	26	21	2	335	56	310	550	-	850	625	-	28	1.7
7:55 AM	28	26	23	2	335	56	310	600	-	850	687	-	28	1.9
8:00 AM	28	26	25	2	335	56	310	600	-	850	750	-	28	2.1
	335	**310**		**25**		**670**							**335**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**335**					**MAX Q (FT/LN)=**	**750**	**-**	**28**	

(Min=240, Max=900vph/lane)

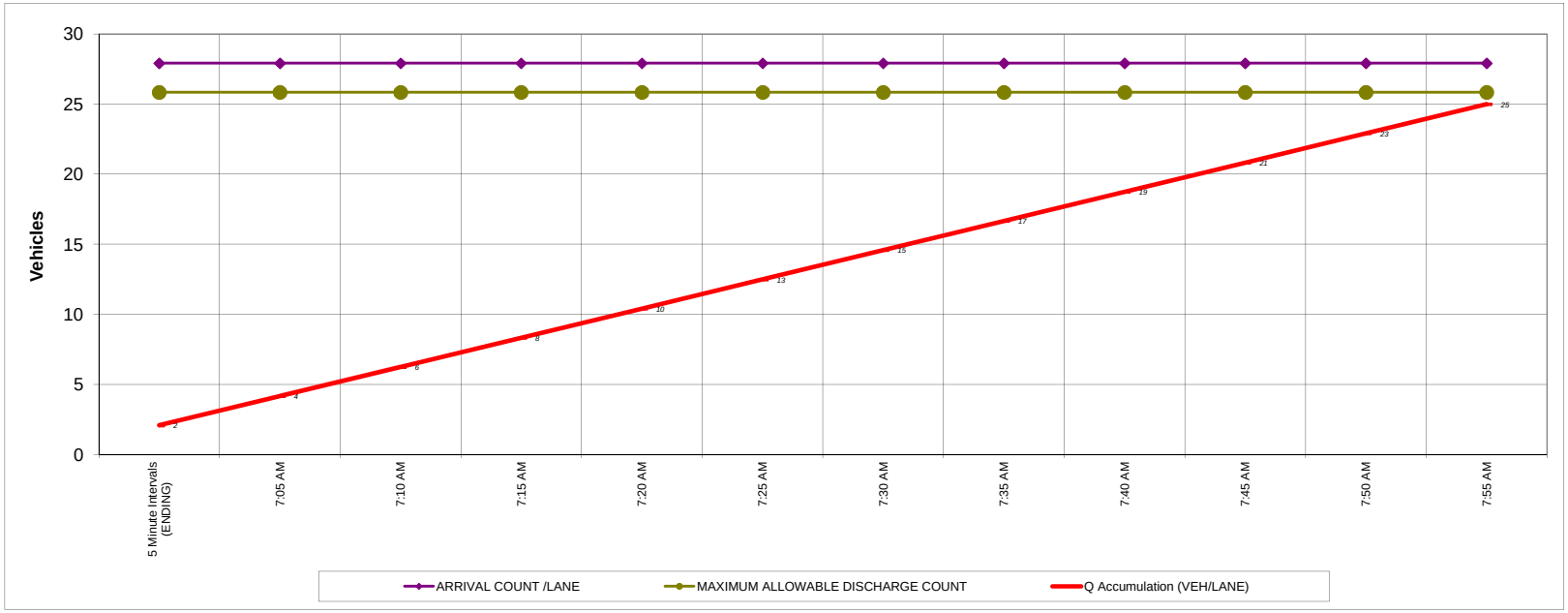
Meter Rate = **310**

Avg Delay/veh (hr)= 0.040

Avg Delay/veh (sec)= **146**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Imperial On

AM Peak Hour Vol/PCE:	2310	2380
PM Peak Hour Vol/PCE:	1460	1500
MD Peak Hour Vol/PCE:	1880	1990

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	99	96	3	3	1190	198	1155	1200	-	1110	88	-	99	0.2
7:10 AM	99	96	6	3	1190	198	1155	1250	-	1110	175	-	99	0.5
7:15 AM	99	96	9	3	1190	198	1155	1250	-	1110	263	-	99	0.7
7:20 AM	99	96	12	3	1190	198	1155	1300	-	1110	350	-	99	1.0
7:25 AM	99	96	15	3	1190	198	1155	1350	-	1110	438	-	99	1.2
7:30 AM	99	96	18	3	1190	198	1155	1400	-	1110	525	-	99	1.5
7:35 AM	99	96	20	3	1190	198	1155	1400	-	1110	613	-	99	1.7
7:40 AM	99	96	23	3	1190	198	1155	1450	-	1110	700	-	99	1.9
7:45 AM	99	96	26	3	1190	198	1155	1500	-	1110	788	-	99	2.2
7:50 AM	99	96	29	3	1190	198	1155	1500	-	1110	875	-	99	2.4
7:55 AM	99	96	32	3	1190	198	1155	1550	-	1110	963	-	99	2.7
8:00 AM	99	96	35	3	1190	198	1155	1600	-	1110	1050	-	99	2.9
	1,190	**1,155**		**35**		**2,380**							**1,190**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,190**					**MAX Q (FT/LN)=**	**1,050**	**-**	**99**	

(Min=480, Max=1200vph/lane)

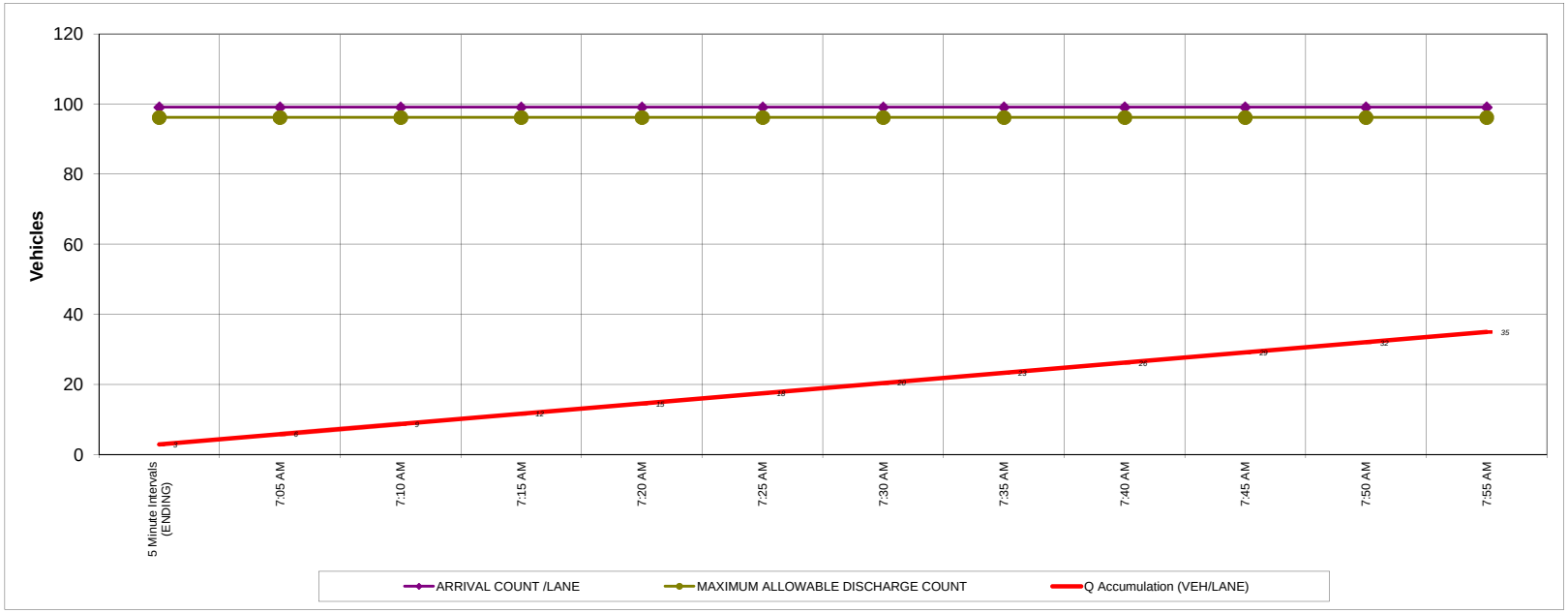
Meter Rate = **1155**

Avg Delay/veh (hr)= 0.016

Avg Delay/veh (sec)= **57**

	INPUT
LANES=	**2**
Ramp Length=	1110
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-EB Firestone On

AM Peak Hour Vol/PCE:	860	890
PM Peak Hour Vol/PCE:	480	500
MD Peak Hour Vol/PCE:	660	700

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	37	35	2	2	445	74	425	450	-	700	50	-	37	0.1
7:10 AM	37	35	3	2	445	74	425	450	-	700	100	-	37	0.3
7:15 AM	37	35	5	2	445	74	425	500	-	700	150	-	37	0.4
7:20 AM	37	35	7	2	445	74	425	500	-	700	200	-	37	0.6
7:25 AM	37	35	8	2	445	74	425	500	-	700	250	-	37	0.7
7:30 AM	37	35	10	2	445	74	425	550	-	700	300	-	37	0.8
7:35 AM	37	35	12	2	445	74	425	550	-	700	350	-	37	1.0
7:40 AM	37	35	13	2	445	74	425	600	-	700	400	-	37	1.1
7:45 AM	37	35	15	2	445	74	425	600	-	700	450	-	37	1.3
7:50 AM	37	35	17	2	445	74	425	600	-	700	500	-	37	1.4
7:55 AM	37	35	18	2	445	74	425	650	-	700	550	-	37	1.5
8:00 AM	37	35	20	2	445	74	425	650	-	700	600	-	37	1.7
	445	**425**		**20**		**890**							**445**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**445**					**MAX Q (FT/LN)=**	**600**	**-**	**37**	

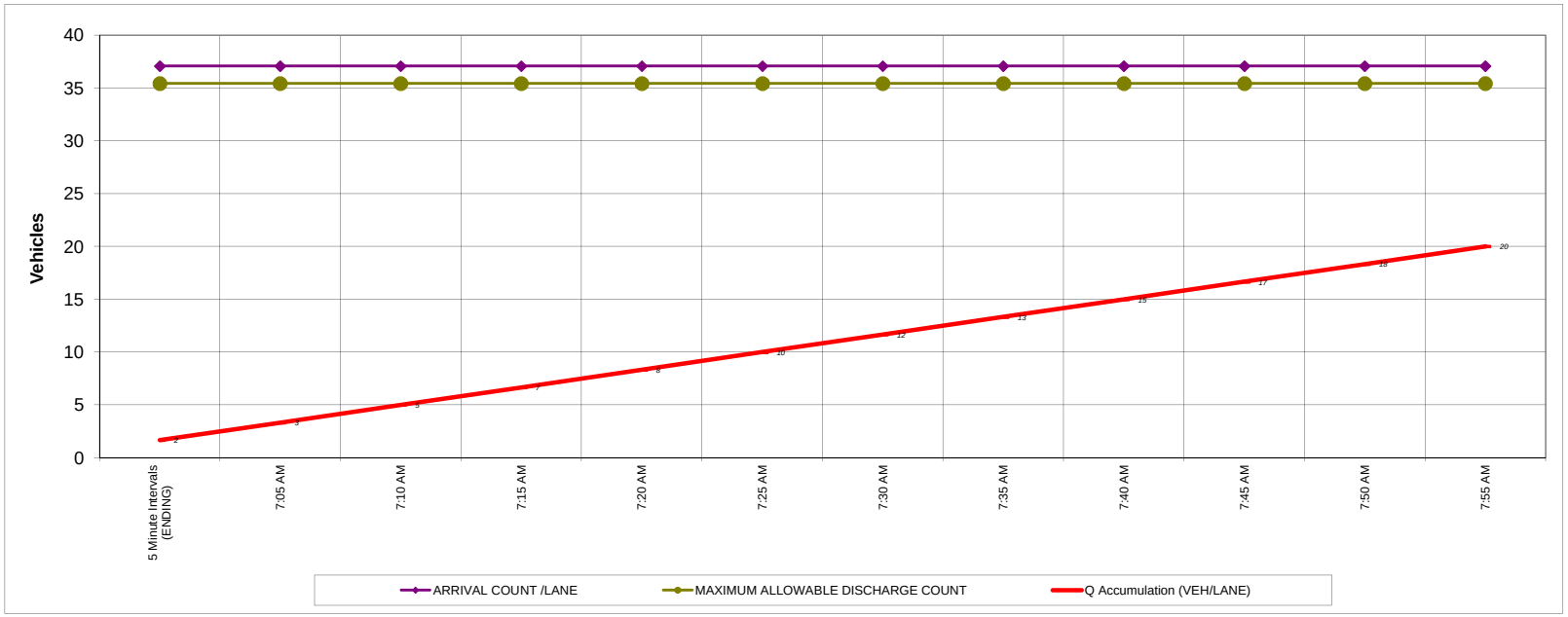
(Min=240, Max=900vph/lane)

Meter Rate = **425**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.024
Avg Delay/veh (sec)= **88**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-WB Firestone On

AM Peak Hour Vol/PCE:	1050	1080
PM Peak Hour Vol/PCE:	970	1000
MD Peak Hour Vol/PCE:	1030	1100

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	46	44	2	2	550	92	530	550	-	650	50	-	46	0.1
1:10 PM	46	44	3	2	550	92	530	550	-	650	100	-	46	0.3
1:15 PM	46	44	5	2	550	92	530	600	-	650	150	-	46	0.4
1:20 PM	46	44	7	2	550	92	530	600	-	650	200	-	46	0.6
1:25 PM	46	44	8	2	550	92	530	650	-	650	250	-	46	0.7
1:30 PM	46	44	10	2	550	92	530	650	-	650	300	-	46	0.8
1:35 PM	46	44	12	2	550	92	530	650	-	650	350	-	46	1.0
1:40 PM	46	44	13	2	550	92	530	700	-	650	400	-	46	1.1
1:45 PM	46	44	15	2	550	92	530	700	-	650	450	-	46	1.3
1:50 PM	46	44	17	2	550	92	530	750	-	650	500	-	46	1.4
1:55 PM	46	44	18	2	550	92	530	750	-	650	550	-	46	1.5
2:00 PM	46	44	20	2	550	92	530	750	-	650	600	-	46	1.7
	550	**530**		**20**		**1,100**							**550**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**550**					**MAX Q (FT/LN)=**	**600**	**-**	**46**	

(Min=240, Max=900vph/lane)

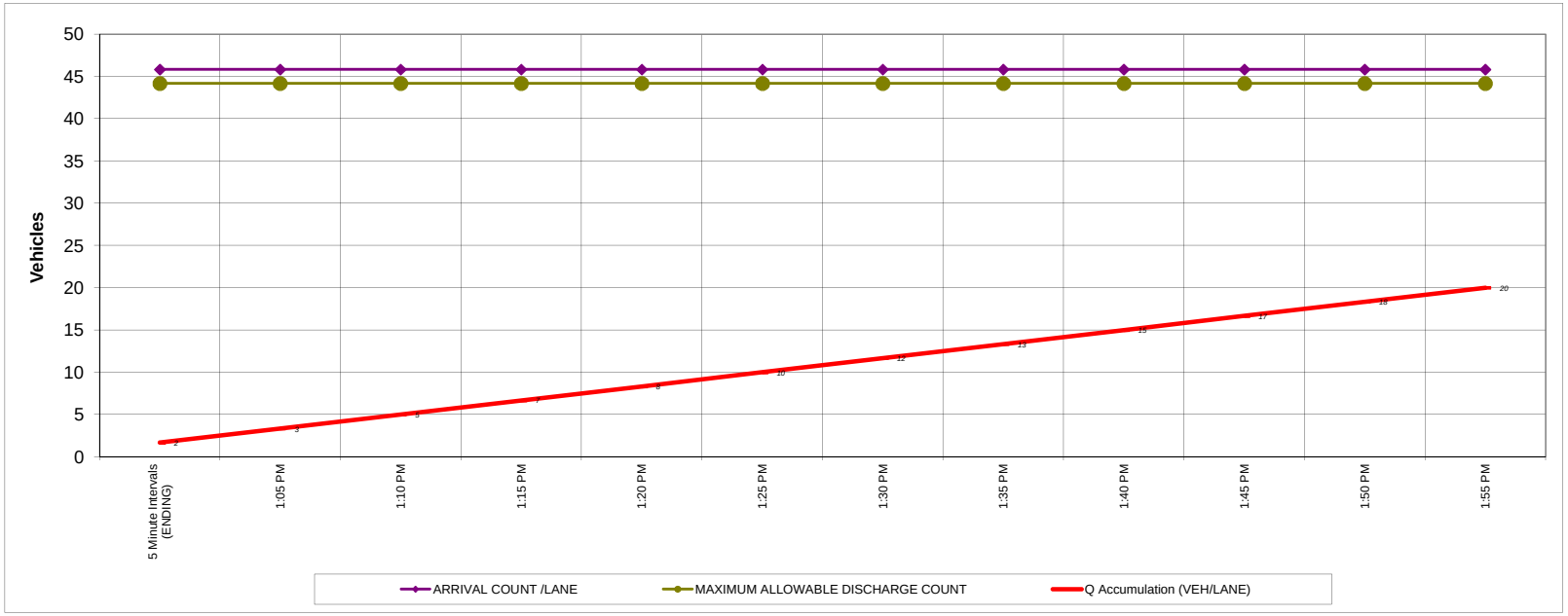
Meter Rate = **530**

Avg Delay/veh (hr)= 0.020

Avg Delay/veh (sec)= **71**

	INPUT
LANES=	**2**
Ramp Length=	650
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Firestone On

AM Peak Hour Vol/PCE:	1140	1170
PM Peak Hour Vol/PCE:	920	950
MD Peak Hour Vol/PCE:	870	920

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	49	46	3	3	585	98	550	600	-	1080	88	-	49	0.2
7:10 AM	49	46	6	3	585	98	550	650	-	1080	175	-	49	0.5
7:15 AM	49	46	9	3	585	98	550	650	-	1080	263	-	49	0.7
7:20 AM	49	46	12	3	585	98	550	700	-	1080	350	-	49	1.0
7:25 AM	49	46	15	3	585	98	550	750	-	1080	438	-	49	1.2
7:30 AM	49	46	18	3	585	98	550	750	-	1080	525	-	49	1.5
7:35 AM	49	46	20	3	585	98	550	800	-	1080	613	-	49	1.7
7:40 AM	49	46	23	3	585	98	550	850	-	1080	700	-	49	1.9
7:45 AM	49	46	26	3	585	98	550	900	-	1080	788	-	49	2.2
7:50 AM	49	46	29	3	585	98	550	900	-	1080	875	-	49	2.4
7:55 AM	49	46	32	3	585	98	550	950	-	1080	963	-	49	2.7
8:00 AM	49	46	35	3	585	98	550	1000	-	1080	1050	-	49	2.9
	585	**550**		**35**		**1,170**							**585**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**1,050**	**-**	**49**	

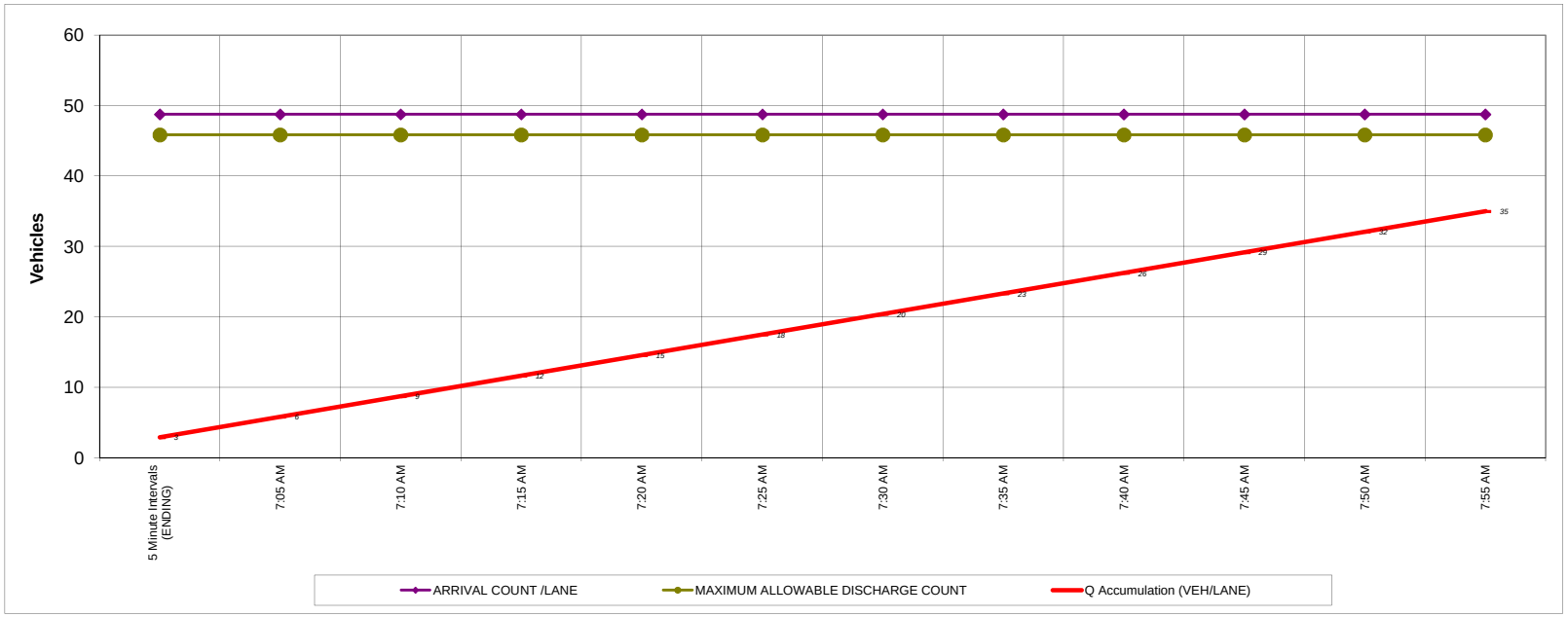
(Min=240, Max=900vph/lane)

Meter Rate = **550**

	INPUT
LANES=	**2**
Ramp Length=	1080
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.032
Avg Delay/veh (sec)= **117**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Firestone On

AM Peak Hour Vol/PCE:	750	780
PM Peak Hour Vol/PCE:	390	410
MD Peak Hour Vol/PCE:	540	600

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	31	2	2	390	65	370	400	-	700	50	-	33	0.1
7:10 AM	33	31	3	2	390	65	370	400	-	700	100	-	33	0.3
7:15 AM	33	31	5	2	390	65	370	450	-	700	150	-	33	0.4
7:20 AM	33	31	7	2	390	65	370	450	-	700	200	-	33	0.6
7:25 AM	33	31	8	2	390	65	370	450	-	700	250	-	33	0.7
7:30 AM	33	31	10	2	390	65	370	500	-	700	300	-	33	0.8
7:35 AM	33	31	12	2	390	65	370	500	-	700	350	-	33	1.0
7:40 AM	33	31	13	2	390	65	370	550	-	700	400	-	33	1.1
7:45 AM	33	31	15	2	390	65	370	550	-	700	450	-	33	1.3
7:50 AM	33	31	17	2	390	65	370	550	-	700	500	-	33	1.4
7:55 AM	33	31	18	2	390	65	370	600	-	700	550	-	33	1.5
8:00 AM	33	31	20	2	390	65	370	600	-	700	600	-	33	1.7
	390	**370**		**20**		**780**							**390**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**390**					**MAX Q (FT/LN)=**	**600**	**-**	**33**	

(Min=240, Max=900vph/lane)

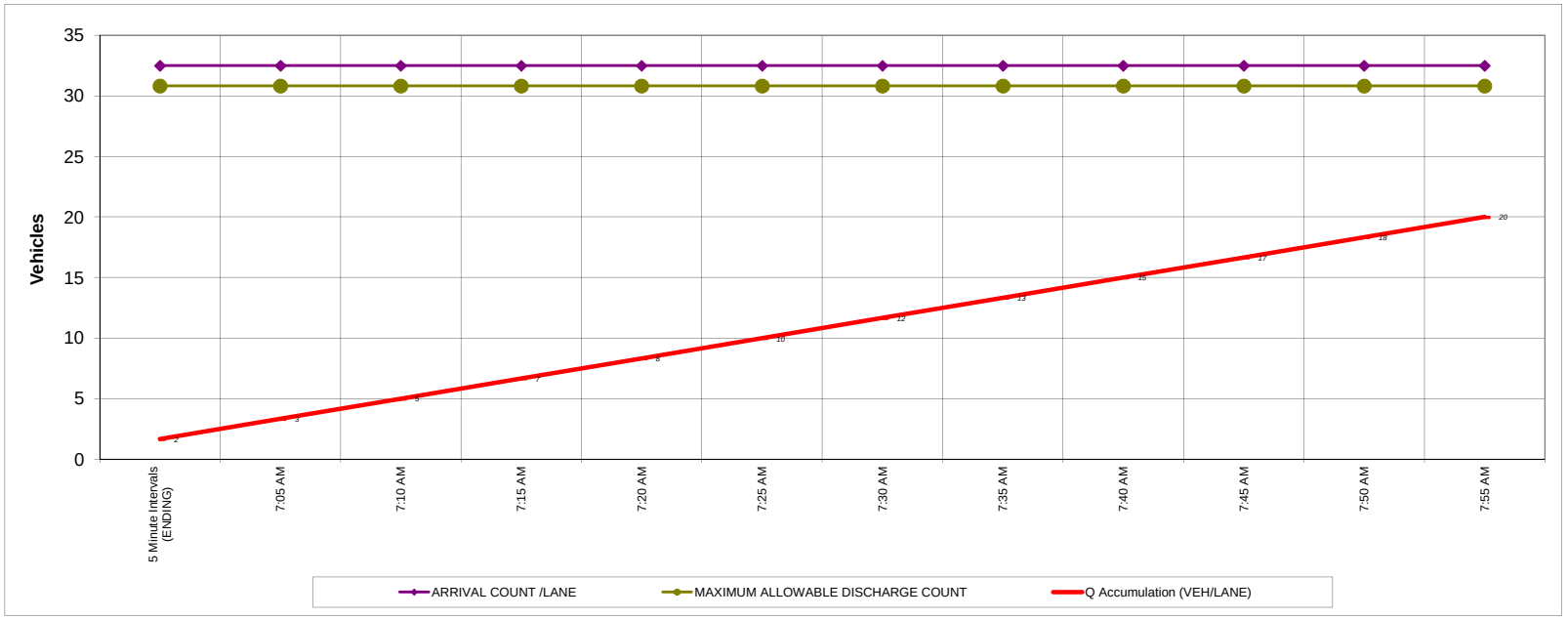
Meter Rate = **370**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **100**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB Patata On FC

AM Peak Hour Vol/PCE:	190	380
PM Peak Hour Vol/PCE:	120	240
MD Peak Hour Vol/PCE:	180	360

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:10 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:15 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:20 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:25 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:30 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:35 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:40 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:45 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:50 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
7:55 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
8:00 AM	16	20	0		190	32	240	-	-	1000	-	-	0	0.0
	190	**240**		**-**		**380**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**190**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

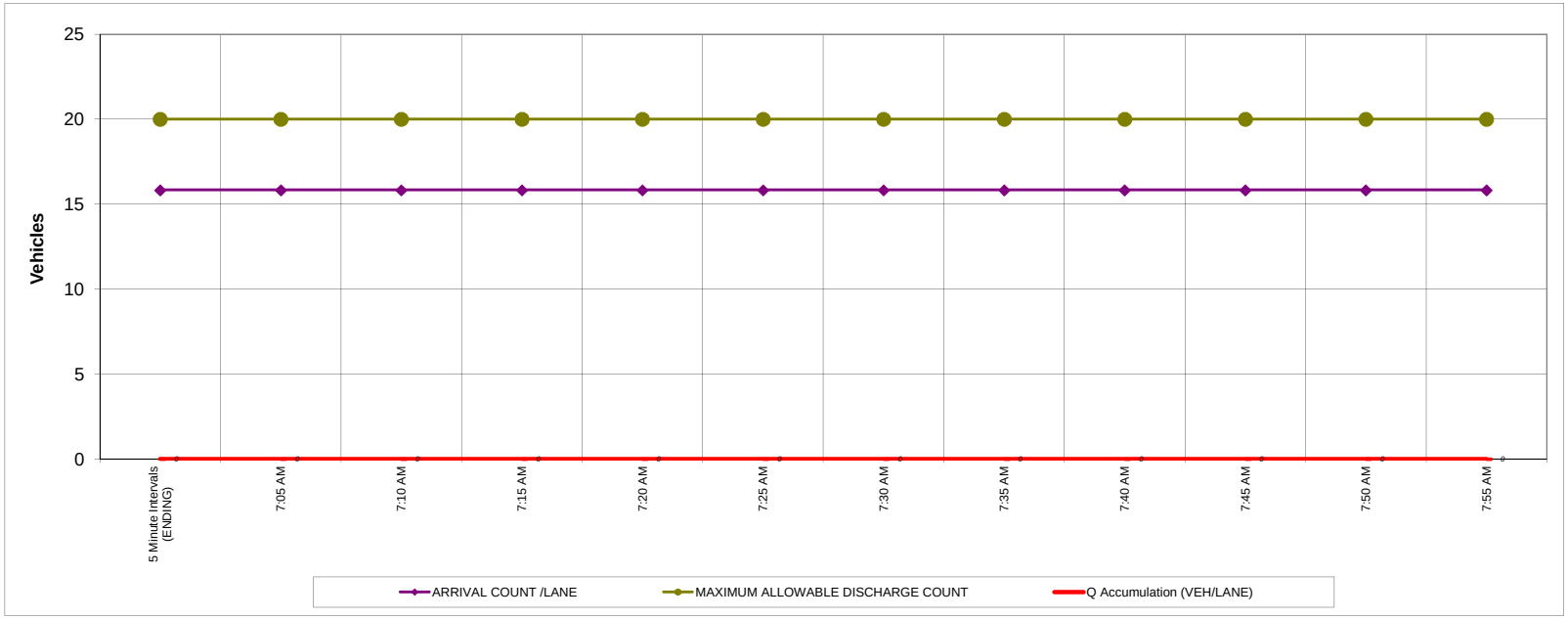
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**2**
Ramp Length=	1000
Car Length (ft)=	60

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Florence On

AM Peak Hour Vol/PCE:	530	540
PM Peak Hour Vol/PCE:	540	560
MD Peak Hour Vol/PCE:	690	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	30	28	2	2	360	60	335	350	-	900	63	-	30	0.2
1:10 PM	30	28	4	2	360	60	335	400	-	900	125	-	30	0.3
1:15 PM	30	28	6	2	360	60	335	400	-	900	188	-	30	0.5
1:20 PM	30	28	8	2	360	60	335	450	-	900	250	-	30	0.7
1:25 PM	30	28	10	2	360	60	335	450	-	900	313	-	30	0.9
1:30 PM	30	28	13	2	360	60	335	500	-	900	375	-	30	1.0
1:35 PM	30	28	15	2	360	60	335	500	-	900	438	-	30	1.2
1:40 PM	30	28	17	2	360	60	335	550	-	900	500	-	30	1.4
1:45 PM	30	28	19	2	360	60	335	550	-	900	563	-	30	1.6
1:50 PM	30	28	21	2	360	60	335	600	-	900	625	-	30	1.7
1:55 PM	30	28	23	2	360	60	335	600	-	900	688	-	30	1.9
2:00 PM	30	28	25	2	360	60	335	650	-	900	750	-	30	2.1
	360	**335**		**25**		**720**							**360**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**750**	**-**	**30**	

(Min=240, Max=900vph/lane)

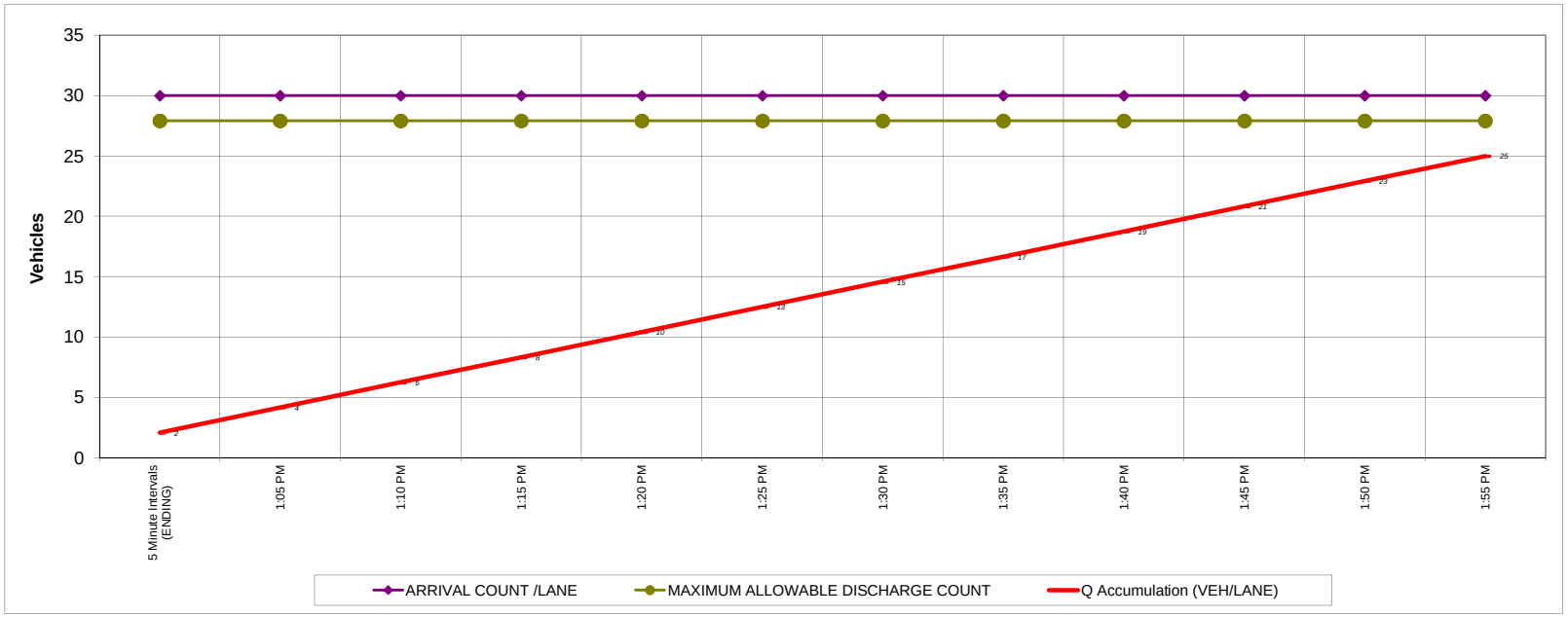
Meter Rate = **335**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **135**

	INPUT
LANES=	**2**
Ramp Length=	900
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Florence On

AM Peak Hour Vol/PCE:	980	1010
PM Peak Hour Vol/PCE:	1060	1090
MD Peak Hour Vol/PCE:	1090	1170

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	49	46	3	3	585	98	550	600	-	1150	88	-	49	0.2
1:10 PM	49	46	6	3	585	98	550	650	-	1150	175	-	49	0.5
1:15 PM	49	46	9	3	585	98	550	650	-	1150	263	-	49	0.7
1:20 PM	49	46	12	3	585	98	550	700	-	1150	350	-	49	1.0
1:25 PM	49	46	15	3	585	98	550	750	-	1150	438	-	49	1.2
1:30 PM	49	46	18	3	585	98	550	750	-	1150	525	-	49	1.5
1:35 PM	49	46	20	3	585	98	550	800	-	1150	613	-	49	1.7
1:40 PM	49	46	23	3	585	98	550	850	-	1150	700	-	49	1.9
1:45 PM	49	46	26	3	585	98	550	900	-	1150	788	-	49	2.2
1:50 PM	49	46	29	3	585	98	550	900	-	1150	875	-	49	2.4
1:55 PM	49	46	32	3	585	98	550	950	-	1150	963	-	49	2.7
2:00 PM	49	46	35	3	585	98	550	1000	-	1150	1050	-	49	2.9
	585	**550**		**35**		**1,170**							**585**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**1,050**	**-**	**49**	

(Min=240, Max=900vph/lane)

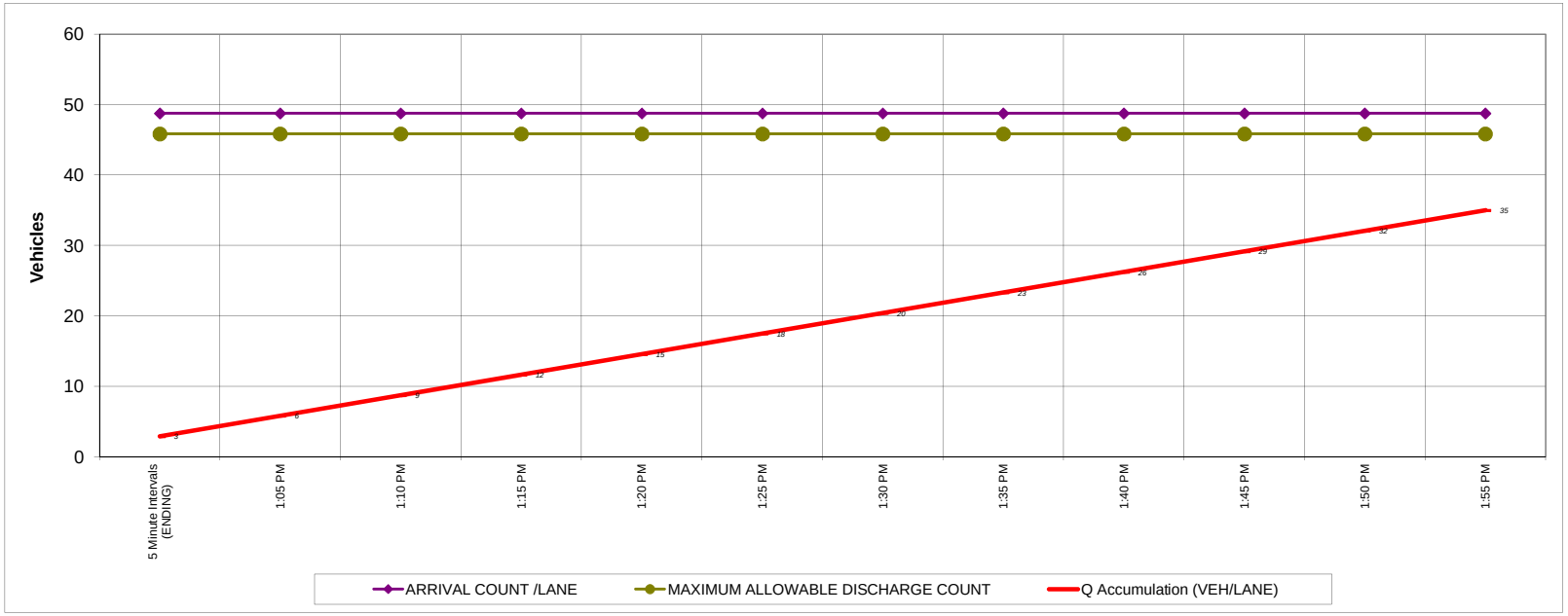
Meter Rate = **550**

Avg Delay/veh (hr)= 0.032

Avg Delay/veh (sec)= **117**

	INPUT
LANES=	**2**
Ramp Length=	1150
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	740	770
PM Peak Hour Vol/PCE:	680	700
MD Peak Hour Vol/PCE:	860	910

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	35	3	3	455	76	415	450	-	1300	100	-	38	0.3
1:10 PM	38	35	7	3	455	76	415	500	-	1300	200	-	38	0.6
1:15 PM	38	35	10	3	455	76	415	550	-	1300	300	-	38	0.8
1:20 PM	38	35	13	3	455	76	415	600	-	1300	400	-	38	1.1
1:25 PM	38	35	17	3	455	76	415	650	-	1300	500	-	38	1.4
1:30 PM	38	35	20	3	455	76	415	650	-	1300	600	-	38	1.7
1:35 PM	38	35	23	3	455	76	415	700	-	1300	700	-	38	1.9
1:40 PM	38	35	27	3	455	76	415	750	-	1300	800	-	38	2.2
1:45 PM	38	35	30	3	455	76	415	800	-	1300	900	-	38	2.5
1:50 PM	38	35	33	3	455	76	415	850	-	1300	1000	-	38	2.8
1:55 PM	38	35	37	3	455	76	415	850	-	1300	1100	-	38	3.1
2:00 PM	38	35	40	3	455	76	415	900	-	1300	1200	-	38	3.3
	455	**415**		**40**		**910**							**455**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**455**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

(Min=240, Max=900vph/lane)

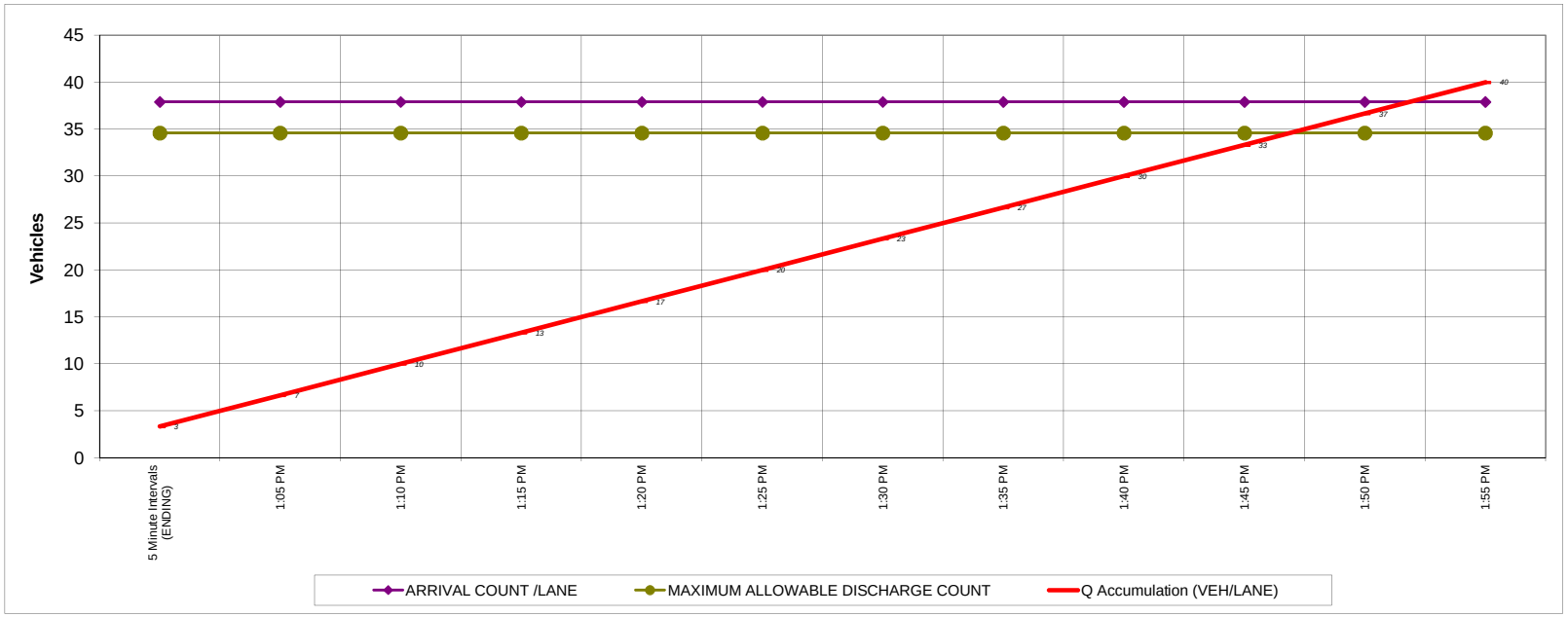
Meter Rate = **415**

Avg Delay/veh (hr)= 0.048

Avg Delay/veh (sec)= **171**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	810	870
PM Peak Hour Vol/PCE:	1030	1050
MD Peak Hour Vol/PCE:	860	970

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	44	41	3	3	525	88	490	550	-	1120	88	-	44	0.2
5:10 PM	44	41	6	3	525	88	490	550	-	1120	175	-	44	0.5
5:15 PM	44	41	9	3	525	88	490	600	-	1120	263	-	44	0.7
5:20 PM	44	41	12	3	525	88	490	650	-	1120	350	-	44	1.0
5:25 PM	44	41	15	3	525	88	490	700	-	1120	438	-	44	1.2
5:30 PM	44	41	18	3	525	88	490	700	-	1120	525	-	44	1.5
5:35 PM	44	41	20	3	525	88	490	750	-	1120	613	-	44	1.7
5:40 PM	44	41	23	3	525	88	490	800	-	1120	700	-	44	1.9
5:45 PM	44	41	26	3	525	88	490	800	-	1120	788	-	44	2.2
5:50 PM	44	41	29	3	525	88	490	850	-	1120	875	-	44	2.4
5:55 PM	44	41	32	3	525	88	490	900	-	1120	963	-	44	2.7
6:00 PM	44	41	35	3	525	88	490	900	-	1120	1050	-	44	2.9
	525	**490**		**35**		**1,050**							**525**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**525**					**MAX Q (FT/LN)=**	**1,050**	**-**	**44**	

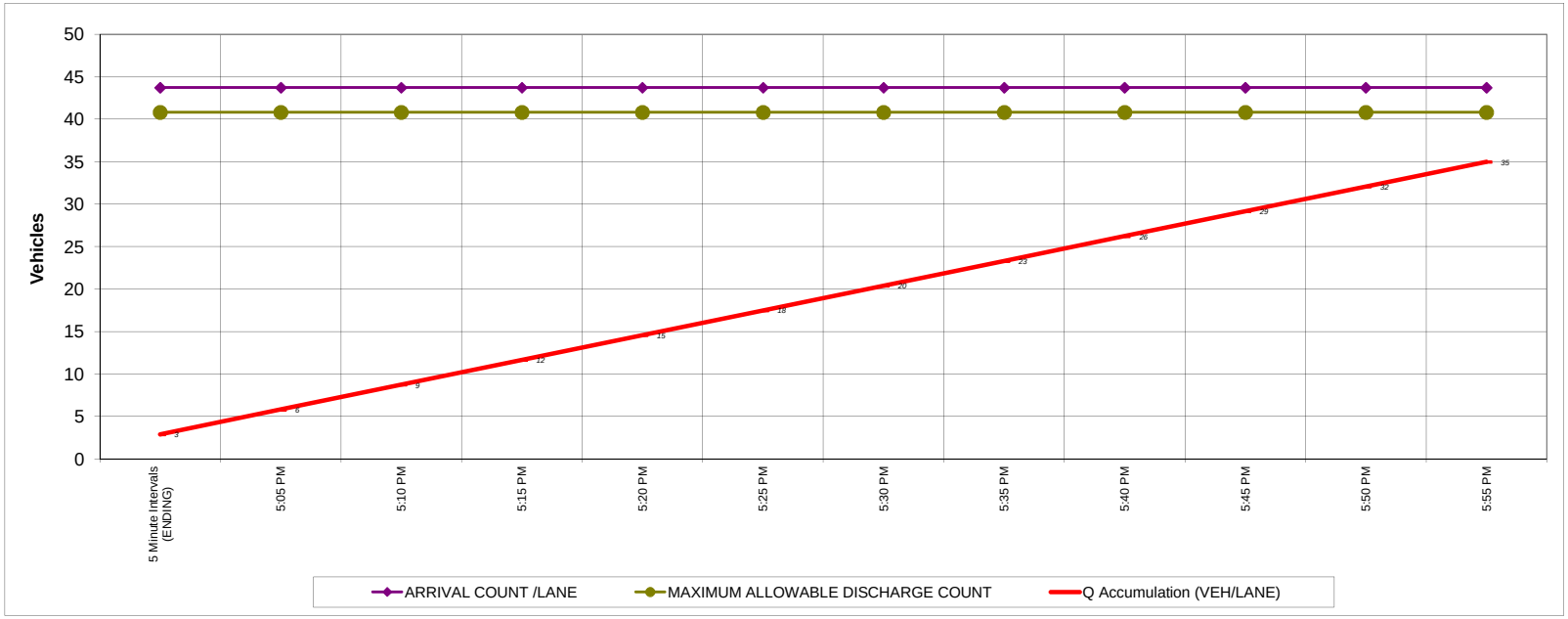
(Min=240, Max=900vph/lane)

Meter Rate = **490**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.036
Avg Delay/veh (sec)= **130**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	740	770
PM Peak Hour Vol/PCE:	680	700
MD Peak Hour Vol/PCE:	860	910

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	35	3	3	455	76	415	450	-	1300	100	-	38	0.3
1:10 PM	38	35	7	3	455	76	415	500	-	1300	200	-	38	0.6
1:15 PM	38	35	10	3	455	76	415	550	-	1300	300	-	38	0.8
1:20 PM	38	35	13	3	455	76	415	600	-	1300	400	-	38	1.1
1:25 PM	38	35	17	3	455	76	415	650	-	1300	500	-	38	1.4
1:30 PM	38	35	20	3	455	76	415	650	-	1300	600	-	38	1.7
1:35 PM	38	35	23	3	455	76	415	700	-	1300	700	-	38	1.9
1:40 PM	38	35	27	3	455	76	415	750	-	1300	800	-	38	2.2
1:45 PM	38	35	30	3	455	76	415	800	-	1300	900	-	38	2.5
1:50 PM	38	35	33	3	455	76	415	850	-	1300	1000	-	38	2.8
1:55 PM	38	35	37	3	455	76	415	850	-	1300	1100	-	38	3.1
2:00 PM	38	35	40	3	455	76	415	900	-	1300	1200	-	38	3.3
	455	**415**		**40**		**910**							**455**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**455**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

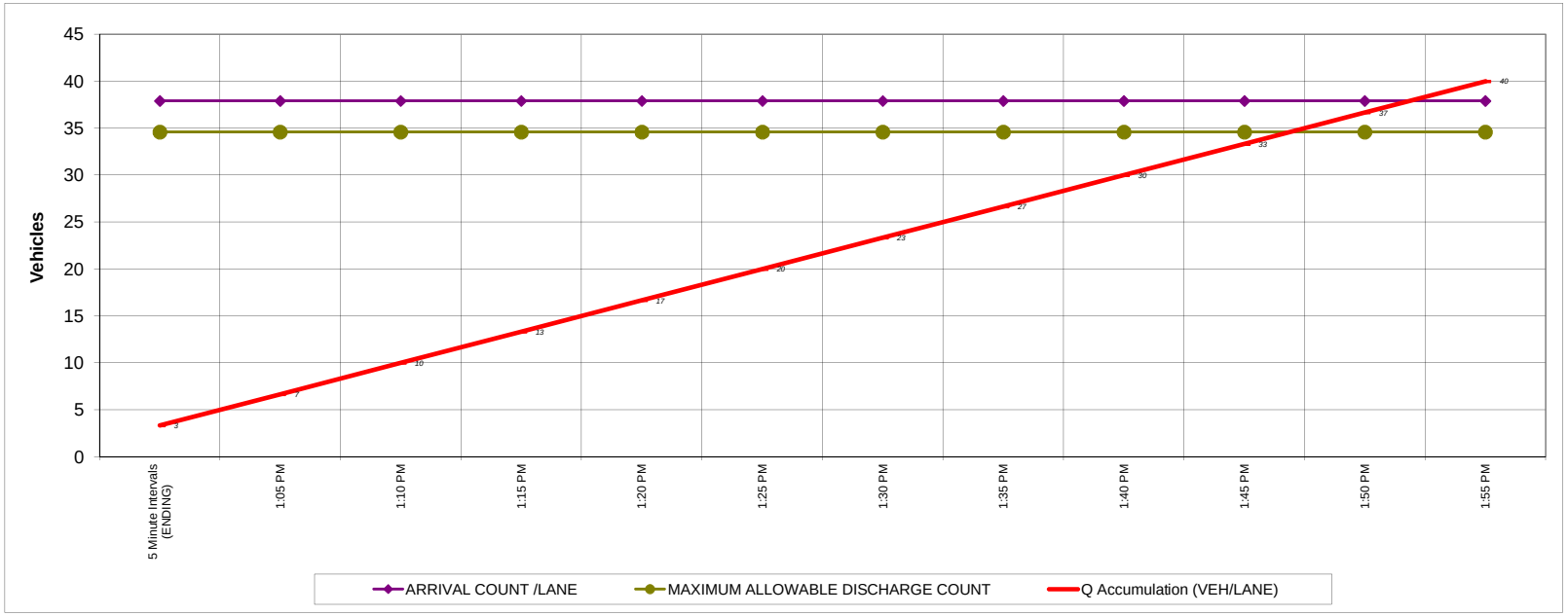
(Min=240, Max=900vph/lane)

Meter Rate = **415**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.048
Avg Delay/veh (sec)= **171**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	810	870
PM Peak Hour Vol/PCE:	1030	1050
MD Peak Hour Vol/PCE:	860	970

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	44	41	3	3	525	88	490	550	-	1120	88	-	44	0.2
5:10 PM	44	41	6	3	525	88	490	550	-	1120	175	-	44	0.5
5:15 PM	44	41	9	3	525	88	490	600	-	1120	263	-	44	0.7
5:20 PM	44	41	12	3	525	88	490	650	-	1120	350	-	44	1.0
5:25 PM	44	41	15	3	525	88	490	700	-	1120	438	-	44	1.2
5:30 PM	44	41	18	3	525	88	490	700	-	1120	525	-	44	1.5
5:35 PM	44	41	20	3	525	88	490	750	-	1120	613	-	44	1.7
5:40 PM	44	41	23	3	525	88	490	800	-	1120	700	-	44	1.9
5:45 PM	44	41	26	3	525	88	490	800	-	1120	788	-	44	2.2
5:50 PM	44	41	29	3	525	88	490	850	-	1120	875	-	44	2.4
5:55 PM	44	41	32	3	525	88	490	900	-	1120	963	-	44	2.7
6:00 PM	44	41	35	3	525	88	490	900	-	1120	1050	-	44	2.9
	525	**490**		**35**		**1,050**							**525**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**525**					**MAX Q (FT/LN)=**	**1,050**	**-**	**44**	

(Min=240, Max=900vph/lane)

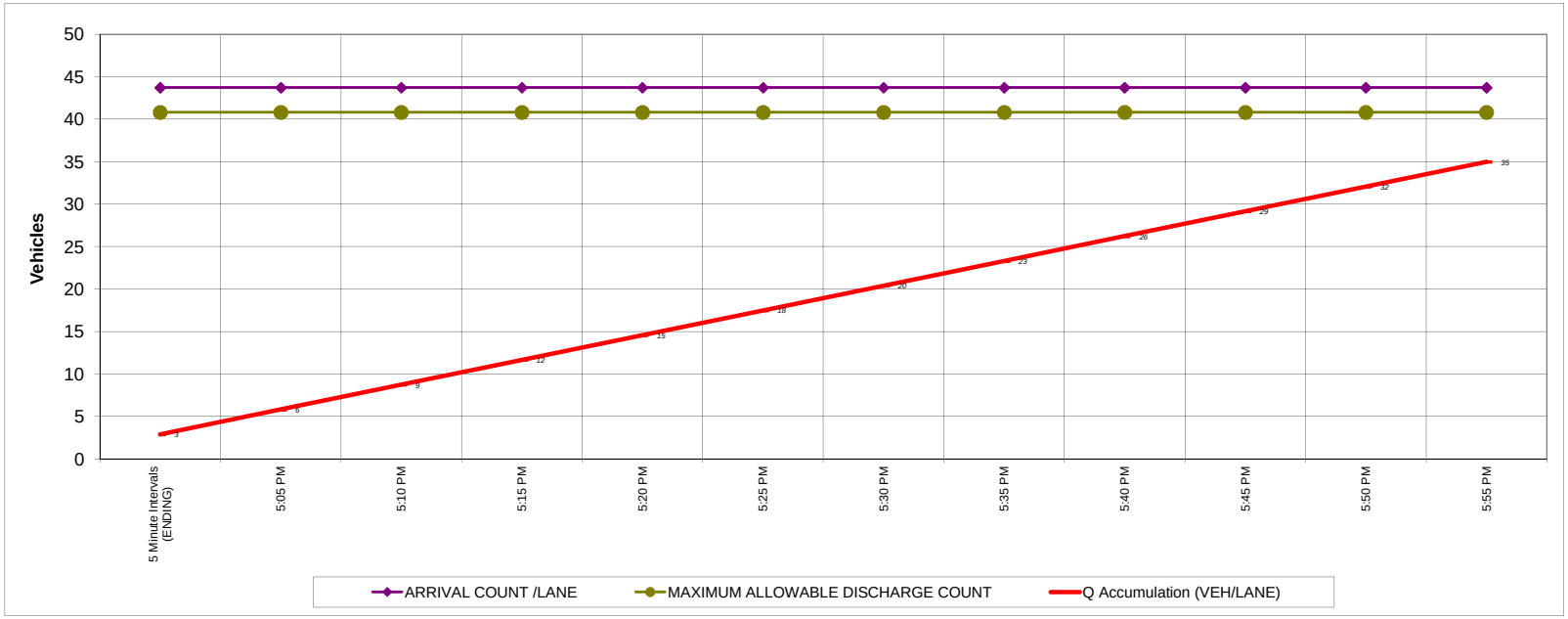
Meter Rate = **490**

Avg Delay/veh (hr)= 0.036

Avg Delay/veh (sec)= **130**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	860	1720
PM Peak Hour Vol/PCE:	1060	2120
MD Peak Hour Vol/PCE:	1050	2100

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	88	82	7	7	1060	177	980	1100	-	2500	200	-	88	0.6
5:10 PM	88	82	13	7	1060	177	980	1200	-	2500	400	-	88	1.1
5:15 PM	88	82	20	7	1060	177	980	1300	-	2500	600	-	88	1.7
5:20 PM	88	82	27	7	1060	177	980	1350	-	2500	800	-	88	2.2
5:25 PM	88	82	33	7	1060	177	980	1450	-	2500	1000	-	88	2.8
5:30 PM	88	82	40	7	1060	177	980	1500	-	2500	1200	-	88	3.3
5:35 PM	88	82	47	7	1060	177	980	1600	-	2500	1400	-	88	3.9
5:40 PM	88	82	53	7	1060	177	980	1700	-	2500	1600	-	88	4.4
5:45 PM	88	82	60	7	1060	177	980	1750	-	2500	1800	-	88	5.0
5:50 PM	88	82	67	7	1060	177	980	1850	-	2500	2000	-	88	5.6
5:55 PM	88	82	73	7	1060	177	980	1900	-	2500	2200	-	88	6.1
6:00 PM	88	82	80	7	1060	177	980	2000	-	2500	2400	-	88	6.7
	1,060	**980**		**80**		**2,120**							**1,060**	**43.33**
		MAX Q (VEH/LN)=	**80**	**MAX RATE (VPH)=**	**1,060**					**MAX Q (FT/LN)=**	**2,400**	**-**	**88**	

(Min=480, Max=1200 vph/lane)

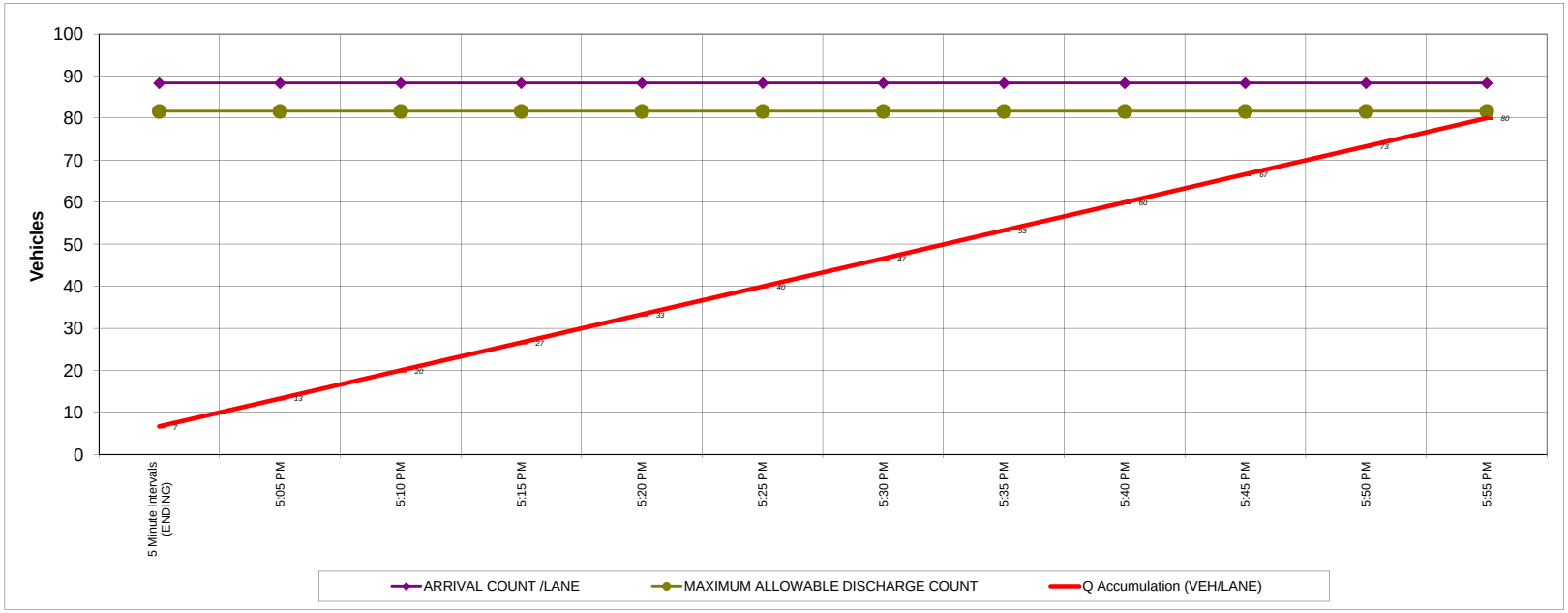
Meter Rate = **980**

Avg Delay/veh (hr)= 0.041

Avg Delay/veh (sec)= **147**

	INPUT
LANES=	**2**
Ramp Length=	2500
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	850	890
PM Peak Hour Vol/PCE:	1190	1250
MD Peak Hour Vol/PCE:	1470	1570

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	65	62	3	3	785	131	745	800	-	1300	100	-	65	0.3
1:10 PM	65	62	7	3	785	131	745	850	-	1300	200	-	65	0.6
1:15 PM	65	62	10	3	785	131	745	900	-	1300	300	-	65	0.8
1:20 PM	65	62	13	3	785	131	745	900	-	1300	400	-	65	1.1
1:25 PM	65	62	17	3	785	131	745	950	-	1300	500	-	65	1.4
1:30 PM	65	62	20	3	785	131	745	1000	-	1300	600	-	65	1.7
1:35 PM	65	62	23	3	785	131	745	1050	-	1300	700	-	65	1.9
1:40 PM	65	62	27	3	785	131	745	1100	-	1300	800	-	65	2.2
1:45 PM	65	62	30	3	785	131	745	1100	-	1300	900	-	65	2.5
1:50 PM	65	62	33	3	785	131	745	1150	-	1300	1000	-	65	2.8
1:55 PM	65	62	37	3	785	131	745	1200	-	1300	1100	-	65	3.1
2:00 PM	65	62	40	3	785	131	745	1250	-	1300	1200	-	65	3.3
	785	**745**		**40**		**1,570**							**785**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**785**					**MAX Q (FT/LN)=**	**1,200**	**-**	**65**	

(Min=240, Max=900vph/lane)

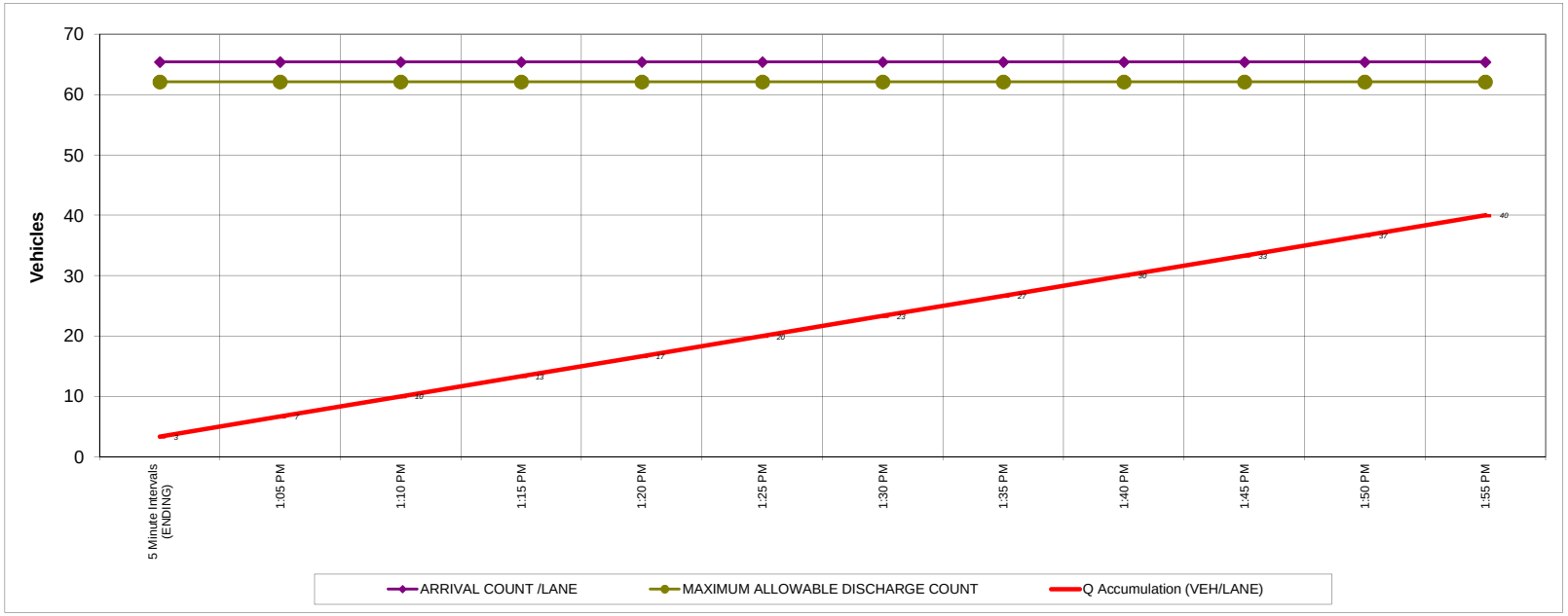
Meter Rate = **745**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **99**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	910	970
PM Peak Hour Vol/PCE:	1820	2020
MD Peak Hour Vol/PCE:	1260	1390

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	84	78	6	6	1010	168	935	1050	-	2350	188	-	84	0.5
5:10 PM	84	78	13	6	1010	168	935	1150	-	2350	375	-	84	1.0
5:15 PM	84	78	19	6	1010	168	935	1200	-	2350	563	-	84	1.6
5:20 PM	84	78	25	6	1010	168	935	1300	-	2350	750	-	84	2.1
5:25 PM	84	78	31	6	1010	168	935	1350	-	2350	938	-	84	2.6
5:30 PM	84	78	38	6	1010	168	935	1450	-	2350	1125	-	84	3.1
5:35 PM	84	78	44	6	1010	168	935	1500	-	2350	1313	-	84	3.6
5:40 PM	84	78	50	6	1010	168	935	1600	-	2350	1500	-	84	4.2
5:45 PM	84	78	56	6	1010	168	935	1650	-	2350	1688	-	84	4.7
5:50 PM	84	78	63	6	1010	168	935	1750	-	2350	1875	-	84	5.2
5:55 PM	84	78	69	6	1010	168	935	1800	-	2350	2063	-	84	5.7
6:00 PM	84	78	75	6	1010	168	935	1900	-	2350	2250	-	84	6.3
	1,010	**935**		**75**		**2,020**							**1,010**	**40.63**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**1,010**					**MAX Q (FT/LN)=**	**2,250**	**-**	**84**	

(Min=480, Max=1200vph/lane)

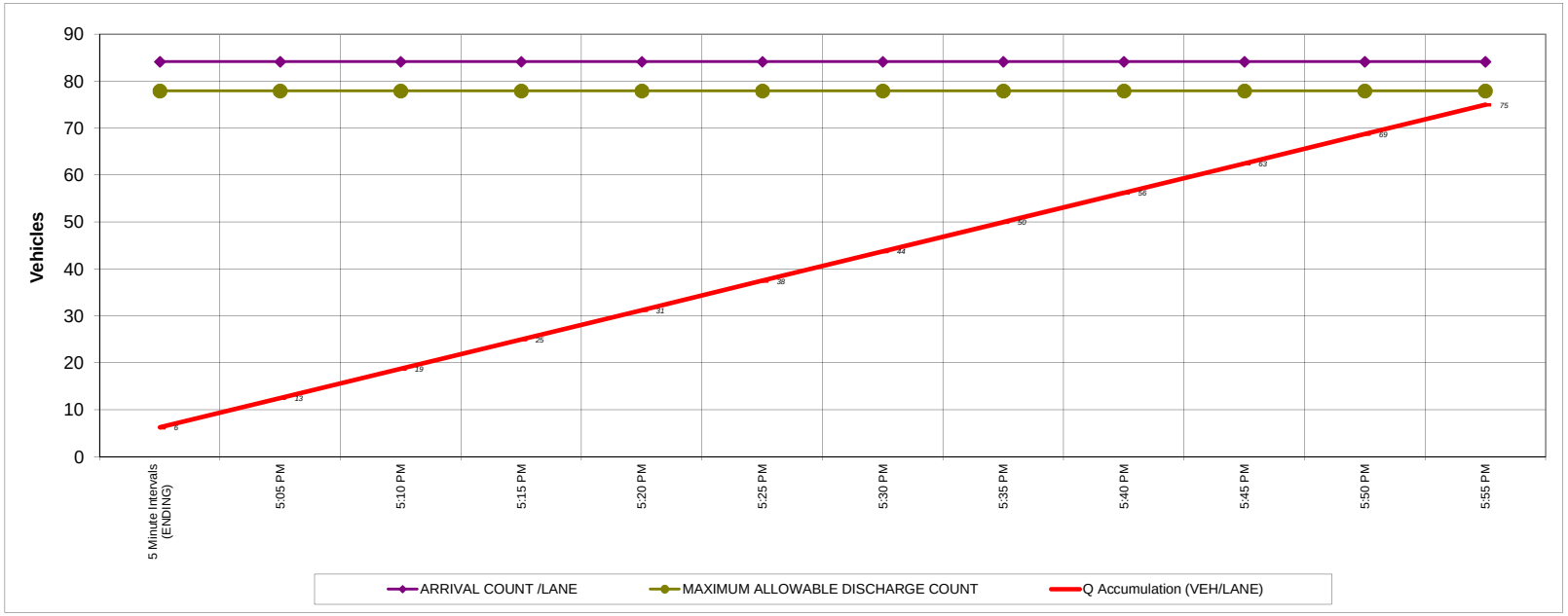
Meter Rate = **935**

Avg Delay/veh (hr)= 0.0402228

Avg Delay/veh (sec)= **145**

	INPUT
LANES=	**2**
Ramp Length=	2350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	540	680
PM Peak Hour Vol/PCE:	780	920
MD Peak Hour Vol/PCE:	600	740

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	38	36	2	2	460	77	435	450	-	850	63	-	38	0.2
5:10 PM	38	36	4	2	460	77	435	500	-	850	125	-	38	0.3
5:15 PM	38	36	6	2	460	77	435	500	-	850	188	-	38	0.5
5:20 PM	38	36	8	2	460	77	435	550	-	850	250	-	38	0.7
5:25 PM	38	36	10	2	460	77	435	550	-	850	313	-	38	0.9
5:30 PM	38	36	13	2	460	77	435	600	-	850	375	-	38	1.0
5:35 PM	38	36	15	2	460	77	435	600	-	850	438	-	38	1.2
5:40 PM	38	36	17	2	460	77	435	650	-	850	500	-	38	1.4
5:45 PM	38	36	19	2	460	77	435	650	-	850	563	-	38	1.6
5:50 PM	38	36	21	2	460	77	435	700	-	850	625	-	38	1.7
5:55 PM	38	36	23	2	460	77	435	700	-	850	688	-	38	1.9
6:00 PM	38	36	25	2	460	77	435	750	-	850	750	-	38	2.1
	460	**435**		**25**		**920**							**460**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**460**					**MAX Q (FT/LN)=**	**750**	**-**	**38**	

(Min=240, Max=900vph/lane)

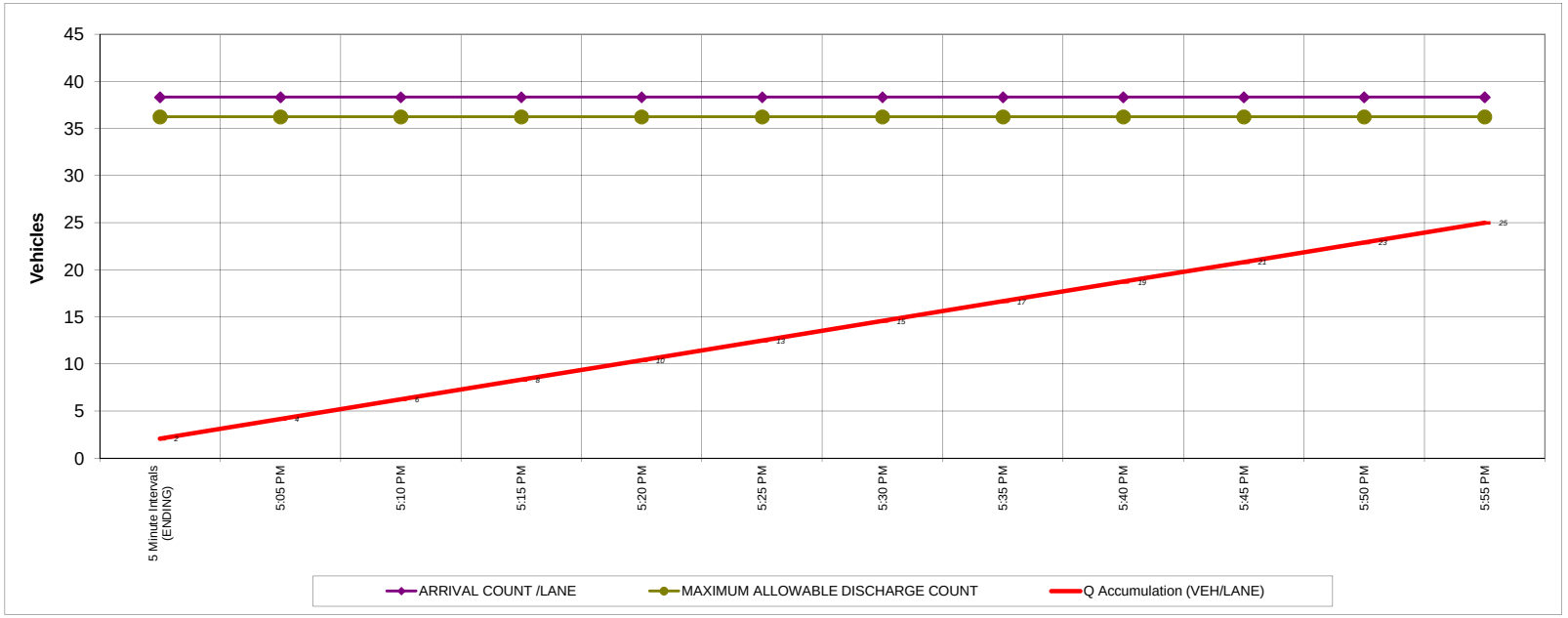
Meter Rate = **435**

Avg Delay/veh (hr)= 0.029

Avg Delay/veh (sec)= **106**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	860	1720
PM Peak Hour Vol/PCE:	1060	2120
MD Peak Hour Vol/PCE:	1050	2100

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	88	82	6	6	1060	177	985	1100	-	2300	188	-	88	0.5
5:10 PM	88	82	13	6	1060	177	985	1200	-	2300	375	-	88	1.0
5:15 PM	88	82	19	6	1060	177	985	1250	-	2300	562	-	88	1.6
5:20 PM	88	82	25	6	1060	177	985	1350	-	2300	750	-	88	2.1
5:25 PM	88	82	31	6	1060	177	985	1400	-	2300	937	-	88	2.6
5:30 PM	88	82	37	6	1060	177	985	1500	-	2300	1125	-	88	3.1
5:35 PM	88	82	44	6	1060	177	985	1550	-	2300	1313	-	88	3.6
5:40 PM	88	82	50	6	1060	177	985	1650	-	2300	1500	-	88	4.2
5:45 PM	88	82	56	6	1060	177	985	1700	-	2300	1688	-	88	4.7
5:50 PM	88	82	62	6	1060	177	985	1800	-	2300	1875	-	88	5.2
5:55 PM	88	82	69	6	1060	177	985	1850	-	2300	2063	-	88	5.7
6:00 PM	88	82	75	6	1060	177	985	1950	-	2300	2250	-	88	6.2
	1,060	**985**		**75**		**2,120**							**1,060**	**40.62**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**1,060**					**MAX Q (FT/LN)=**	**2,250**	**-**	**88**	

(Min=480, Max=1200 vph/lane)

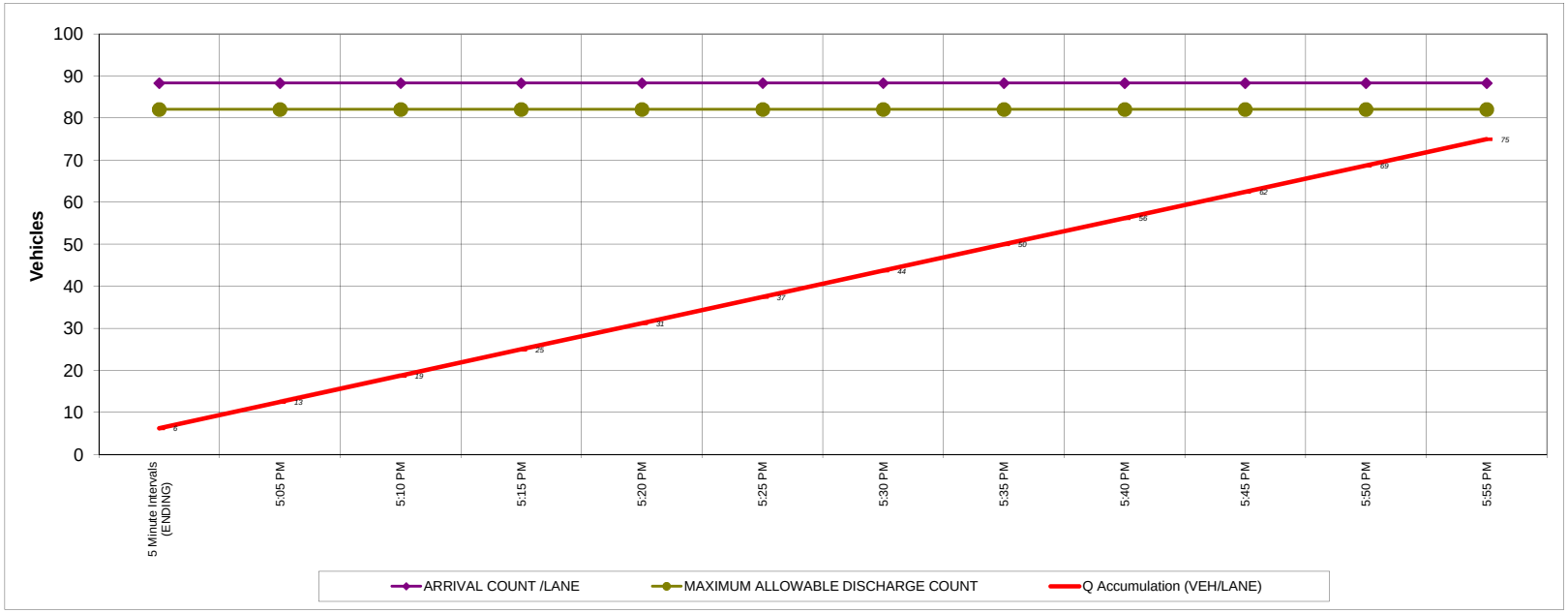
Meter Rate = **985**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **138**

	INPUT
LANES=	**2**
Ramp Length=	2300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	320	640
PM Peak Hour Vol/PCE:	340	680
MD Peak Hour Vol/PCE:	380	760

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	32	20	11	11	380	63	245	500	-	4100	338	-	32	0.9
1:10 PM	32	20	23	11	380	63	245	650	-	4100	675	-	32	1.9
1:15 PM	32	20	34	11	380	63	245	750	-	4100	1013	-	32	2.8
1:20 PM	32	20	45	11	380	63	245	900	-	4100	1350	-	32	3.8
1:25 PM	32	20	56	11	380	63	245	1050	-	4100	1688	-	32	4.7
1:30 PM	32	20	68	11	380	63	245	1150	-	4100	2025	-	32	5.6
1:35 PM	32	20	79	11	380	63	245	1300	-	4100	2363	-	32	6.6
1:40 PM	32	20	90	11	380	63	245	1450	-	4100	2700	-	32	7.5
1:45 PM	32	20	101	11	380	63	245	1550	-	4100	3038	-	32	8.4
1:50 PM	32	20	113	11	380	63	245	1700	-	4100	3375	-	32	9.4
1:55 PM	32	20	124	11	380	63	245	1850	-	4100	3713	-	32	10.3
2:00 PM	32	20	135	11	380	63	245	2000	-	4100	4050	-	32	11.3
	380	**245**		**135**		**760**							**380**	**73.13**
		MAX Q (VEH/LN)=	**135**	**MAX RATE (VPH)=**	**380**					**MAX Q (FT/LN)=**	**4,050**	**-**	**32**	

(Min=240, Max=900vph/lane)

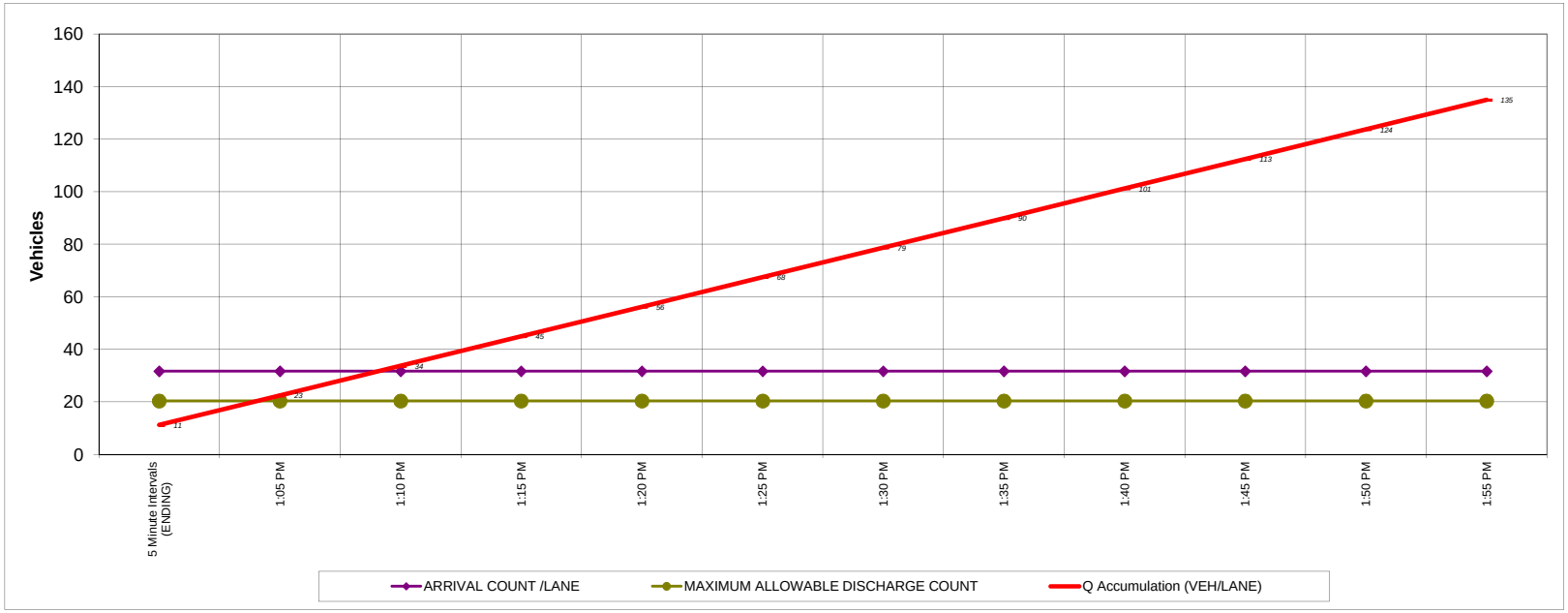
Meter Rate = **245**

Avg Delay/veh (hr)= 0.192

Avg Delay/veh (sec)= **693**

	INPUT
LANES=	**2**
Ramp Length=	4100
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	850	890
PM Peak Hour Vol/PCE:	1190	1250
MD Peak Hour Vol/PCE:	1470	1570

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	65	62	3	3	785	131	745	800	-	1300	100	-	65	0.3
1:10 PM	65	62	7	3	785	131	745	850	-	1300	200	-	65	0.6
1:15 PM	65	62	10	3	785	131	745	900	-	1300	300	-	65	0.8
1:20 PM	65	62	13	3	785	131	745	900	-	1300	400	-	65	1.1
1:25 PM	65	62	17	3	785	131	745	950	-	1300	500	-	65	1.4
1:30 PM	65	62	20	3	785	131	745	1000	-	1300	600	-	65	1.7
1:35 PM	65	62	23	3	785	131	745	1050	-	1300	700	-	65	1.9
1:40 PM	65	62	27	3	785	131	745	1100	-	1300	800	-	65	2.2
1:45 PM	65	62	30	3	785	131	745	1100	-	1300	900	-	65	2.5
1:50 PM	65	62	33	3	785	131	745	1150	-	1300	1000	-	65	2.8
1:55 PM	65	62	37	3	785	131	745	1200	-	1300	1100	-	65	3.1
2:00 PM	65	62	40	3	785	131	745	1250	-	1300	1200	-	65	3.3
	785	**745**		**40**		**1,570**							**785**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**785**					**MAX Q (FT/LN)=**	**1,200**	**-**	**65**	

(Min=240, Max=900vph/lane)

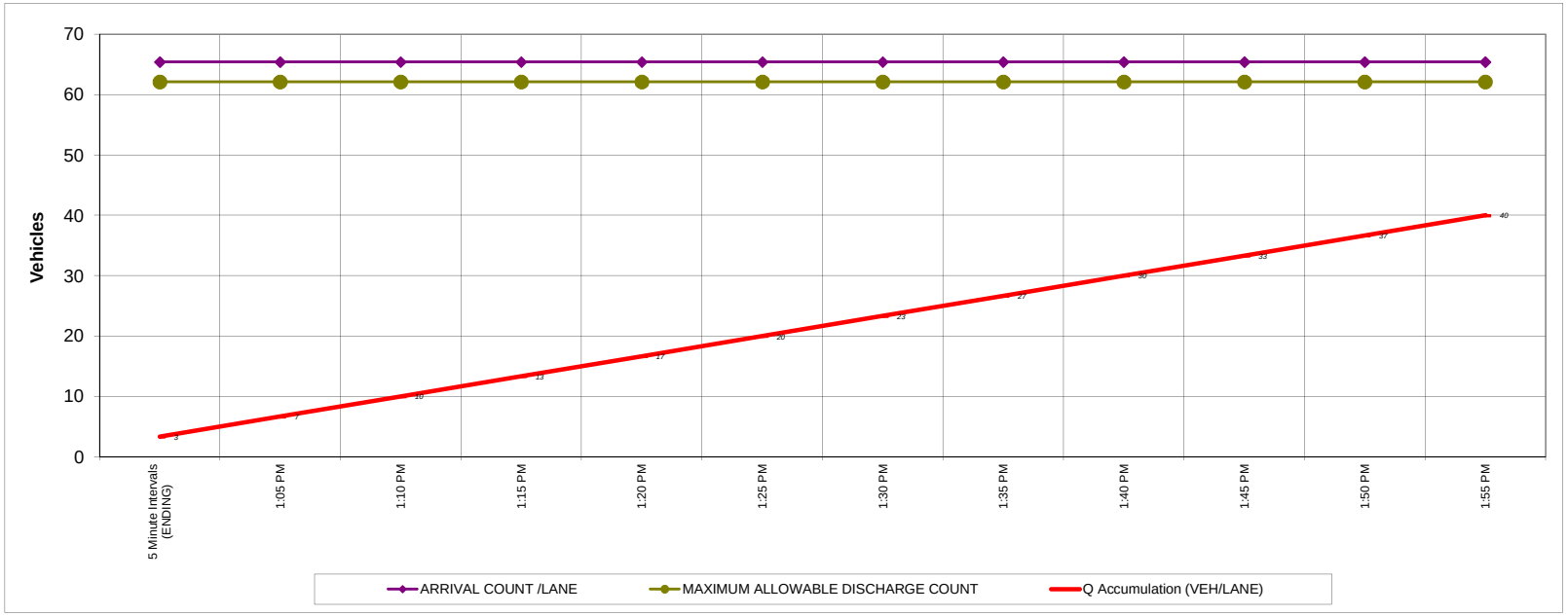
Meter Rate = **745**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **99**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	910	970
PM Peak Hour Vol/PCE:	1820	2020
MD Peak Hour Vol/PCE:	1260	1390

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	84	77	7	7	1010	168	925	1050	-	2600	213	-	84	0.6
5:10 PM	84	77	14	7	1010	168	925	1150	-	2600	425	-	84	1.2
5:15 PM	84	77	21	7	1010	168	925	1250	-	2600	638	-	84	1.8
5:20 PM	84	77	28	7	1010	168	925	1350	-	2600	850	-	84	2.4
5:25 PM	84	77	35	7	1010	168	925	1400	-	2600	1063	-	84	3.0
5:30 PM	84	77	43	7	1010	168	925	1500	-	2600	1275	-	84	3.5
5:35 PM	84	77	50	7	1010	168	925	1600	-	2600	1488	-	84	4.1
5:40 PM	84	77	57	7	1010	168	925	1650	-	2600	1700	-	84	4.7
5:45 PM	84	77	64	7	1010	168	925	1750	-	2600	1913	-	84	5.3
5:50 PM	84	77	71	7	1010	168	925	1850	-	2600	2125	-	84	5.9
5:55 PM	84	77	78	7	1010	168	925	1900	-	2600	2338	-	84	6.5
6:00 PM	84	77	85	7	1010	168	925	2000	-	2600	2550	-	84	7.1
	1,010	**925**		**85**		**2,020**							**1,010**	**46.04**
		MAX Q (VEH/LN)=	**85**	**MAX RATE (VPH)=**	**1,010**					**MAX Q (FT/LN)=**	**2,550**	**-**	**84**	

(Min=480, Max=1200vph/lane)

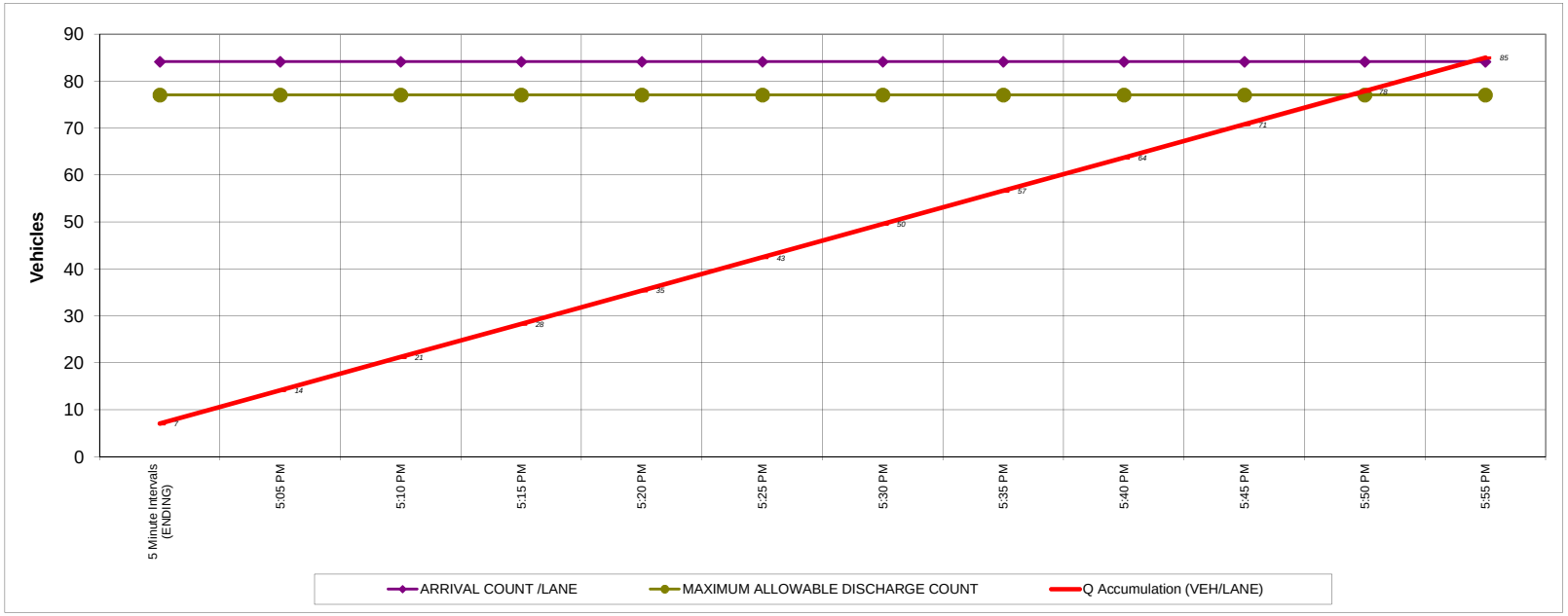
Meter Rate = **925**

Avg Delay/veh (hr)= 0.0455858

Avg Delay/veh (sec)= **164**

	INPUT
LANES=	**2**
Ramp Length=	2600
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	540	680
PM Peak Hour Vol/PCE:	780	1090
MD Peak Hour Vol/PCE:	600	780

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	45	43	2	2	545	91	520	550	-	850	63	-	45	0.2
5:10 PM	45	43	4	2	545	91	520	550	-	850	125	-	45	0.3
5:15 PM	45	43	6	2	545	91	520	600	-	850	188	-	45	0.5
5:20 PM	45	43	8	2	545	91	520	600	-	850	250	-	45	0.7
5:25 PM	45	43	10	2	545	91	520	650	-	850	313	-	45	0.9
5:30 PM	45	43	13	2	545	91	520	650	-	850	375	-	45	1.0
5:35 PM	45	43	15	2	545	91	520	700	-	850	438	-	45	1.2
5:40 PM	45	43	17	2	545	91	520	700	-	850	500	-	45	1.4
5:45 PM	45	43	19	2	545	91	520	750	-	850	563	-	45	1.6
5:50 PM	45	43	21	2	545	91	520	750	-	850	625	-	45	1.7
5:55 PM	45	43	23	2	545	91	520	800	-	850	688	-	45	1.9
6:00 PM	45	43	25	2	545	91	520	800	-	850	750	-	45	2.1
	545	**520**		**25**		**1,090**							**545**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**545**					**MAX Q (FT/LN)=**	**750**	**-**	**45**	

(Min=240, Max=900vph/lane)

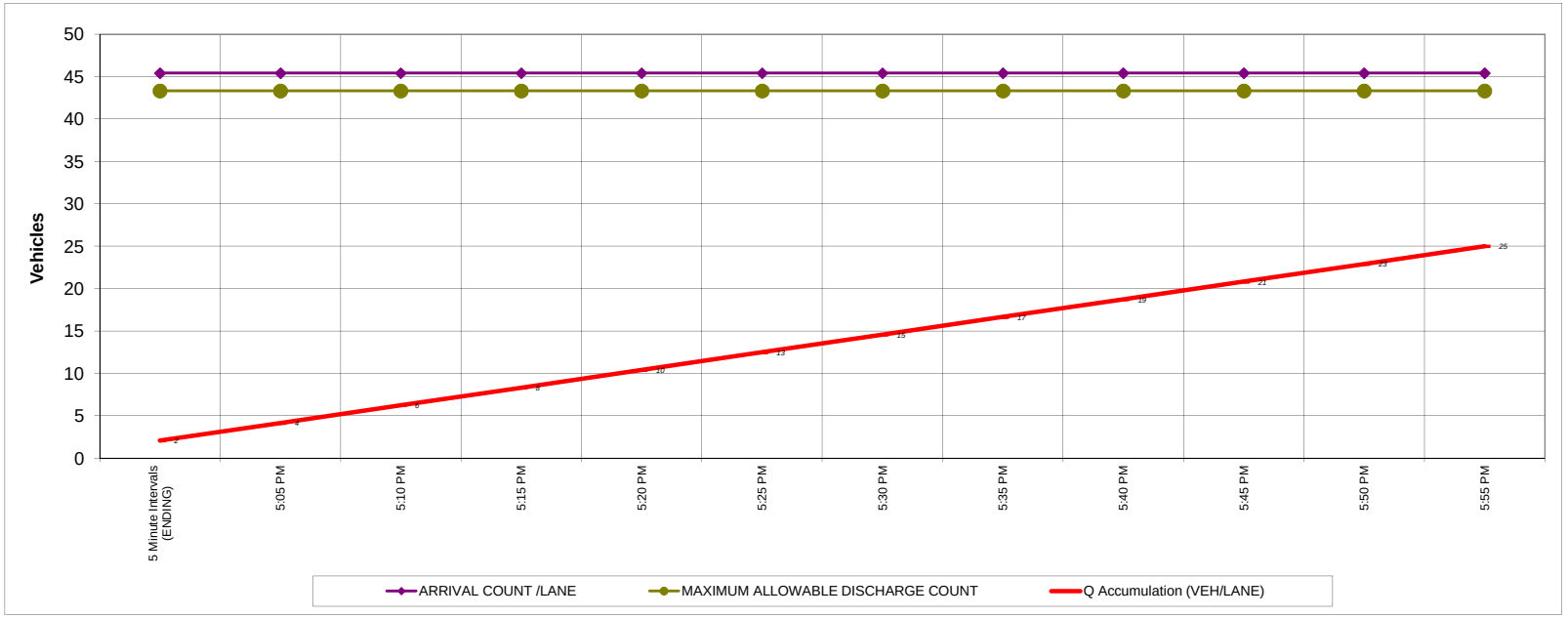
Meter Rate = **520**

Avg Delay/veh (hr)= 0.025

Avg Delay/veh (sec)= **89**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Olympic to NB 710

AM Peak Hour Vol/PCE:	300	310
PM Peak Hour Vol/PCE:	280	300
MD Peak Hour Vol/PCE:	280	290

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	26	25	1	1	310	26	300	300	-	450	25	-	26	0.1
7:10 AM	26	25	2	1	310	26	300	300	-	450	50	-	26	0.1
7:15 AM	26	25	3	1	310	26	300	300	-	450	75	-	26	0.2
7:20 AM	26	25	3	1	310	26	300	350	-	450	100	-	26	0.3
7:25 AM	26	25	4	1	310	26	300	350	-	450	125	-	26	0.3
7:30 AM	26	25	5	1	310	26	300	350	-	450	150	-	26	0.4
7:35 AM	26	25	6	1	310	26	300	350	-	450	175	-	26	0.5
7:40 AM	26	25	7	1	310	26	300	350	-	450	200	-	26	0.6
7:45 AM	26	25	7	1	310	26	300	400	-	450	225	-	26	0.6
7:50 AM	26	25	8	1	310	26	300	400	-	450	250	-	26	0.7
7:55 AM	26	25	9	1	310	26	300	400	-	450	275	-	26	0.8
8:00 AM	26	25	10	1	310	26	300	400	-	450	300	-	26	0.8
	310	**300**		**10**		**310**							**310**	**5.42**
		MAX Q (VEH/LN)=	**10**	**MAX RATE (VPH)=**	**310**					**MAX Q (FT/LN)=**	**300**	**-**	**26**	

(Min=240, Max=9\00 vph/lane)

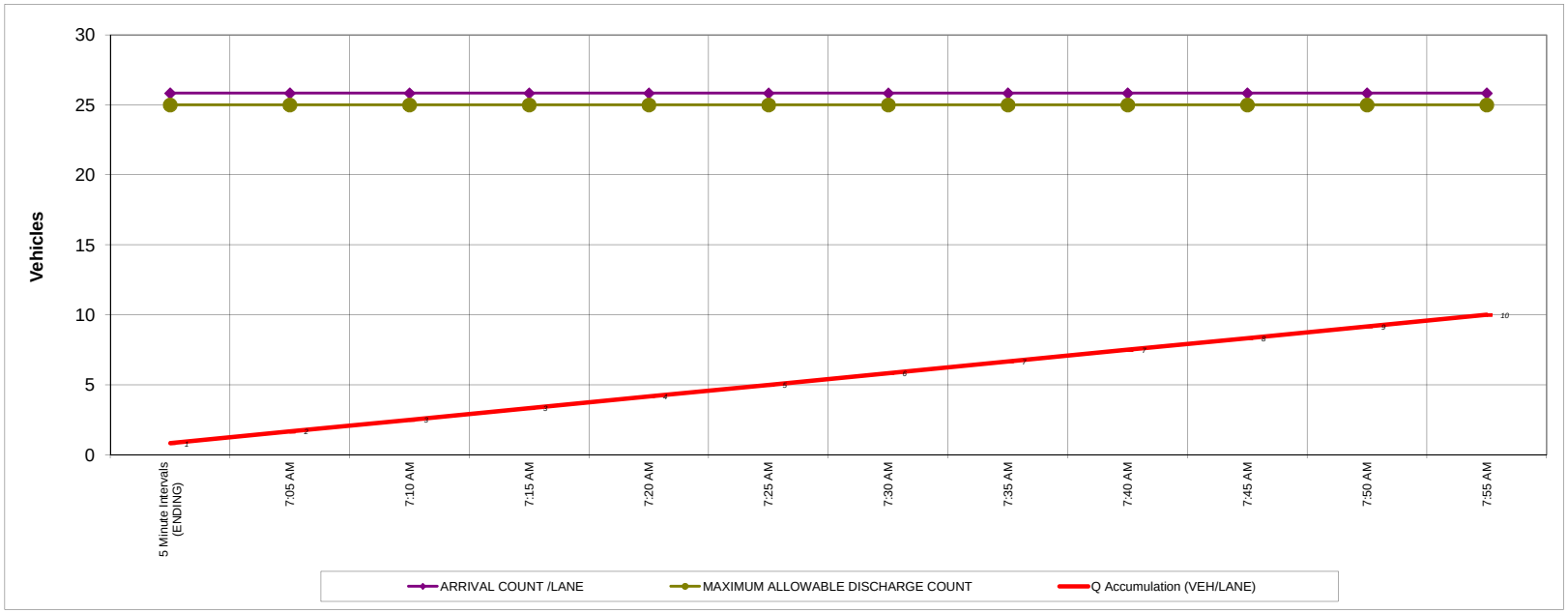
Meter Rate = **300**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**1**
Ramp Length=	450
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Eastern to SB 710

AM Peak Hour Vol/PCE:	740	810
PM Peak Hour Vol/PCE:	730	770
MD Peak Hour Vol/PCE:	800	870

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	36	36	0	0	435	73	430	400	-	260	12	-	36	0.0
1:10 PM	36	36	1	0	435	73	430	400	-	260	25	-	36	0.1
1:15 PM	36	36	1	0	435	73	430	450	-	260	37	-	36	0.1
1:20 PM	36	36	2	0	435	73	430	450	-	260	50	-	36	0.1
1:25 PM	36	36	2	0	435	73	430	450	-	260	62	-	36	0.2
1:30 PM	36	36	2	0	435	73	430	450	-	260	75	-	36	0.2
1:35 PM	36	36	3	0	435	73	430	450	-	260	87	-	36	0.2
1:40 PM	36	36	3	0	435	73	430	450	-	260	100	-	36	0.3
1:45 PM	36	36	4	0	435	73	430	450	-	260	112	-	36	0.3
1:50 PM	36	36	4	0	435	73	430	450	-	260	125	-	36	0.3
1:55 PM	36	36	5	0	435	73	430	450	-	260	137	-	36	0.4
2:00 PM	36	36	5	0	435	73	430	450	-	260	150	-	36	0.4
	435	**430**		**5**		**870**							**435**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**435**					**MAX Q (FT/LN)=**	**150**	**-**	**36**	

(Min=240, Max=900 vph/lane)

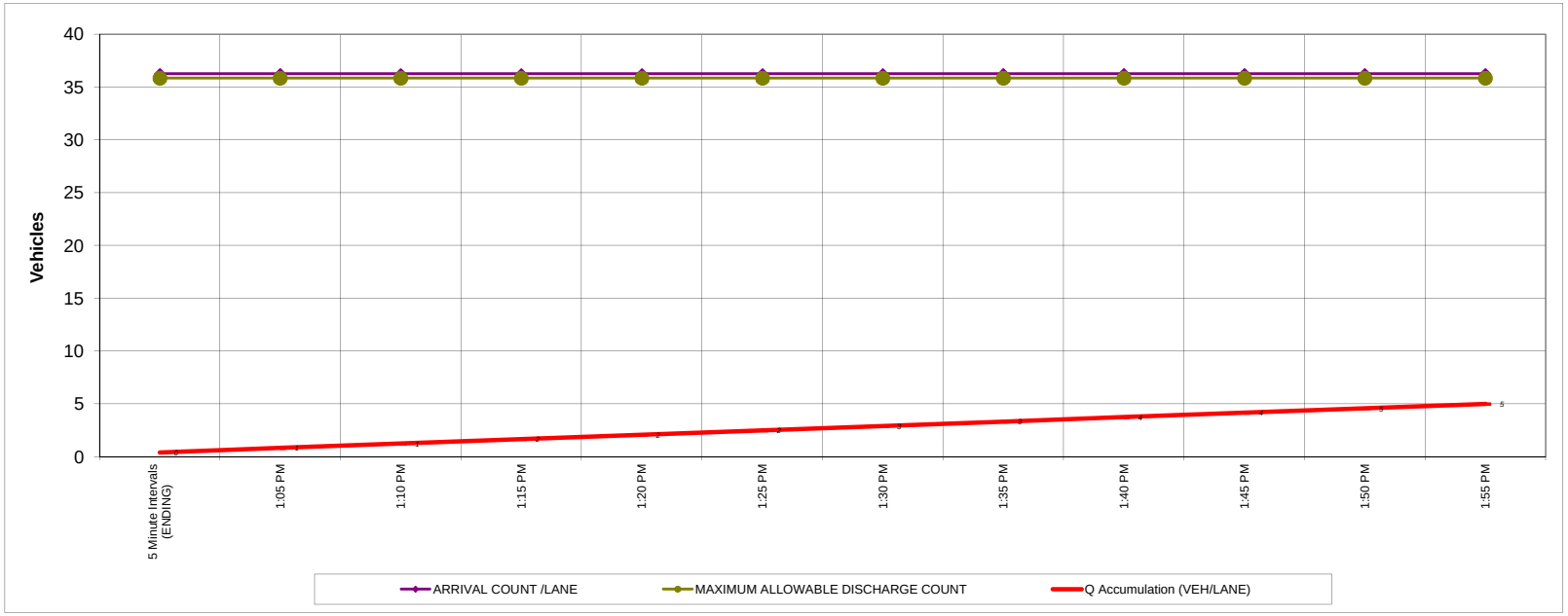
Meter Rate = **430**

Avg Delay/veh (hr)= 0.006

Avg Delay/veh (sec)= **22**

	INPUT
LANES=	**2**
Ramp Length=	260
Car Length (ft)=	30

Storage is Adequate



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FUTURE (2035) ALTERNATIVE 6B

INTERSECTION LEVEL OF SERVICE (LOS) ANALYSIS

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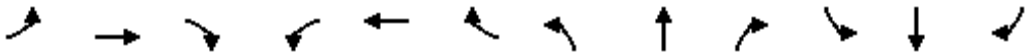
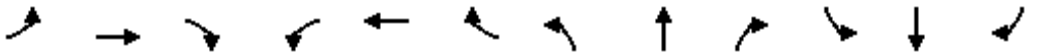


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.94		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (prot)	760	2032		1809	1600	1133		1612	747		2375	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (perm)	760	2032		1809	1600	1133		1612	747		2375	
Volume (vph)	5	45	30	565	15	465	135	110	445	540	45	330
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	47	32	595	16	489	142	116	468	568	47	347
RTOR Reduction (vph)	0	27	0	0	0	0	0	0	392	0	78	0
Lane Group Flow (vph)	5	52	0	595	16	489	0	258	76	0	884	0
Heavy Vehicles (%)	100%	0%	100%	63%	0%	20%	70%	100%	82%	16%	100%	9%
Turn Type	Prot			Prot		Free	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						Free			8			
Actuated Green, G (s)	1.0	17.0		25.0	41.0	100.0		16.0	16.0		26.0	
Effective Green, g (s)	1.0	17.0		25.0	41.0	100.0		16.0	16.0		26.0	
Actuated g/C Ratio	0.01	0.17		0.25	0.41	1.00		0.16	0.16		0.26	
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)	8	345		452	656	1133		258	120		618	
v/s Ratio Prot	0.01	0.03		c0.33	0.01			c0.16			c0.37	
v/s Ratio Perm						c0.43			0.10			
v/c Ratio	0.62	0.15		1.32	0.02	0.43		1.00	0.63		1.43	
Uniform Delay, d1	49.3	35.4		37.5	17.6	0.0		42.0	39.2		37.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	97.8	0.9		157.4	0.1	1.2		56.0	10.3		202.6	
Delay (s)	147.1	36.3		194.9	17.6	1.2		98.0	49.6		239.6	
Level of Service	F	D		F	B	A		F	D		F	
Approach Delay (s)		42.9			106.2			66.8			239.6	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM Average Control Delay	139.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

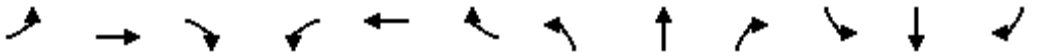
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		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)	2920	4241	1320	1490	4229		2863	2828		2920	3900	1333
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)	2920	4241	1320	1490	4229		2863	2828		2920	3900	1333
Volume (vph)	235	965	165	60	1165	105	270	580	65	75	235	195
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1016	174	63	1226	111	284	611	68	79	247	205
RTOR Reduction (vph)	0	0	106	0	14	0	0	11	0	0	0	164
Lane Group Flow (vph)	247	1016	68	63	1323	0	284	668	0	79	247	41
Heavy Vehicles (%)	1%	3%	3%	2%	2%	2%	3%	6%	5%	1%	12%	2%
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)	9.7	31.1	31.1	6.2	27.6		10.7	23.5		3.2	16.0	16.0
Effective Green, g (s)	9.7	31.1	31.1	6.2	27.6		10.7	23.5		3.2	16.0	16.0
Actuated g/C Ratio	0.12	0.39	0.39	0.08	0.35		0.13	0.29		0.04	0.20	0.20
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)	354	1649	513	115	1459		383	831		117	780	267
v/s Ratio Prot	0.08	c0.24		0.04	c0.31		c0.10	c0.24		0.03	0.06	
v/s Ratio Perm			0.05									0.03
v/c Ratio	0.70	0.62	0.13	0.55	0.91		0.74	0.80		0.68	0.32	0.15
Uniform Delay, d1	33.7	19.7	15.8	35.5	25.0		33.3	26.1		37.9	27.3	26.4
Progression Factor	0.63	0.37	0.37	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.7	1.4	0.4	5.3	9.8		7.5	8.2		14.3	1.1	1.2
Delay (s)	26.1	8.7	6.3	40.8	34.7		40.9	34.3		52.2	28.4	27.6
Level of Service	C	A	A	D	C		D	C		D	C	C
Approach Delay (s)		11.4			35.0			36.2			31.6	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1462	4008		1216	4205		2808	2980	1295	2106	2841	1295
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)	1462	4008		1216	4205		2808	2980	1295	2106	2841	1295
Volume (vph)	260	1430	605	70	850	45	590	725	80	165	635	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1505	637	74	895	47	621	763	84	174	668	168
RTOR Reduction (vph)	0	59	0	0	4	0	0	0	59	0	0	134
Lane Group Flow (vph)	274	2083	0	74	938	0	621	763	25	174	668	34
Heavy Vehicles (%)	4%	5%	2%	25%	3%	5%	5%	2%	5%	40%	7%	5%
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)	30.0	58.0		7.0	35.0		23.0	38.0	38.0	11.0	26.0	26.0
Effective Green, g (s)	30.0	58.0		7.0	35.0		23.0	38.0	38.0	11.0	26.0	26.0
Actuated g/C Ratio	0.23	0.45		0.05	0.27		0.18	0.29	0.29	0.08	0.20	0.20
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)	337	1788		65	1132		497	871	379	178	568	259
v/s Ratio Prot	0.19	c0.52		c0.06	0.22		c0.22	0.26		0.08	c0.24	
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.81	1.17		1.14	0.83		1.25	0.88	0.06	0.98	1.18	0.13
Uniform Delay, d1	47.3	36.0		61.5	44.7		53.5	43.8	33.2	59.4	52.0	42.7
Progression Factor	0.76	0.68		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.7	80.7		154.3	7.0		128.2	12.0	0.3	60.2	96.6	1.0
Delay (s)	49.8	105.2		215.8	51.7		181.7	55.8	33.5	119.6	148.6	43.7
Level of Service	D	F		F	D		F	E	C	F	F	D
Approach Delay (s)		99.0			63.7			107.8			126.2	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	99.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3010	1204	1505	3010	1462	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3010	1204	1505	3010	1462	1360
Volume (vph)	1015	110	560	1265	260	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1068	116	589	1332	274	63
RTOR Reduction (vph)	0	51	0	0	0	42
Lane Group Flow (vph)	1068	65	589	1332	274	21
Heavy Vehicles (%)	1%	13%	1%	1%	4%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	24.0	35.0	23.0	51.0	11.0	23.0
Effective Green, g (s)	24.0	35.0	23.0	51.0	11.0	23.0
Actuated g/C Ratio	0.34	0.50	0.33	0.73	0.16	0.33
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)	1032	671	495	2193	230	447
v/s Ratio Prot	c0.35	0.02	c0.39	0.44	c0.19	0.02
v/s Ratio Perm		0.04				
v/c Ratio	1.03	0.10	1.19	0.61	1.19	0.05
Uniform Delay, d1	23.0	9.2	23.5	4.6	29.5	16.0
Progression Factor	0.36	0.02	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.9	0.0	104.1	1.3	120.8	0.0
Delay (s)	42.3	0.2	127.6	5.9	150.3	16.1
Level of Service	D	A	F	A	F	B
Approach Delay (s)	38.2			43.2	125.2	
Approach LOS	D			D	F	

Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1248	1490	2980	2891	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1248	1490	2980	2891	1333
Volume (vph)	805	360	290	1235	620	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	847	379	305	1300	653	337
RTOR Reduction (vph)	0	244	0	0	0	0
Lane Group Flow (vph)	847	135	305	1300	653	337
Heavy Vehicles (%)	3%	9%	2%	2%	2%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	25.0	25.0	16.0	45.0	17.0	70.0
Effective Green, g (s)	25.0	25.0	16.0	45.0	17.0	70.0
Actuated g/C Ratio	0.36	0.36	0.23	0.64	0.24	1.00
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)	1054	446	341	1916	702	1333
v/s Ratio Prot	c0.29		c0.20	0.44		
v/s Ratio Perm		0.11			c0.23	0.25
v/c Ratio	0.80	0.30	0.89	0.68	0.93	0.25
Uniform Delay, d1	20.3	16.2	26.2	7.9	25.9	0.0
Progression Factor	1.00	1.00	0.81	0.52	1.00	1.00
Incremental Delay, d2	6.5	1.7	18.6	1.4	18.9	0.5
Delay (s)	26.8	18.0	39.9	5.5	44.9	0.5
Level of Service	C	B	D	A	D	A
Approach Delay (s)	24.1			12.0	29.7	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			3010	1448	1271
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			3010	1448	1271
Volume (vph)	930	0	0	1750	60	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	979	0	0	1842	63	105
RTOR Reduction (vph)	0	0	0	0	0	94
Lane Group Flow (vph)	979	0	0	1842	63	11
Heavy Vehicles (%)	1%	0%	0%	1%	5%	7%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	63.6			63.6	8.4	8.4
Effective Green, g (s)	63.6			63.6	8.4	8.4
Actuated g/C Ratio	0.80			0.80	0.11	0.11
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)	2393			2393	152	133
v/s Ratio Prot	0.33			c0.61	c0.04	0.01
v/s Ratio Perm						
v/c Ratio	0.41			0.77	0.41	0.08
Uniform Delay, d1	2.5			4.3	33.5	32.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			2.5	1.8	0.3
Delay (s)	3.0			6.8	35.3	32.6
Level of Service	A			A	D	C
Approach Delay (s)	3.0			6.8	33.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	930	360	320	1490	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	979	379	337	1568	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.73	
vC, conflicting volume			979		2626	679
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			979		2855	679
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			52		100	100
cM capacity (veh/h)			695		5	399

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	653	705	337	784	784
Volume Left	0	0	337	0	0
Volume Right	0	379	0	0	0
cSH	1700	1700	695	1700	1700
Volume to Capacity	0.38	0.41	0.48	0.46	0.46
Queue Length 95th (ft)	0	0	67	0	0
Control Delay (s)	0.0	0.0	15.0	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.6		
Approach LOS					

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2951	1333		4112		2891		1225			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2951	1333		4112		2891		1225			
Volume (vph)	0	810	280	0	875	240	570	0	260	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	853	295	0	921	253	600	0	274	0	0	0
RTOR Reduction (vph)	0	0	123	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	853	172	0	1109	0	600	0	274	0	0	0
Heavy Vehicles (%)	0%	3%	2%	0%	3%	2%	2%	0%	11%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		35.0	35.0		35.0		17.0		60.0			
Effective Green, g (s)		35.0	35.0		35.0		17.0		60.0			
Actuated g/C Ratio		0.58	0.58		0.58		0.28		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1721	778		2399		819		1225			
v/s Ratio Prot		c0.29			0.27		c0.21					
v/s Ratio Perm			0.13						0.22			
v/c Ratio		0.50	0.22		0.46		0.73		0.22			
Uniform Delay, d1		7.3	6.0		7.1		19.4		0.0			
Progression Factor		0.76	0.06		1.00		1.00		1.00			
Incremental Delay, d2		0.9	0.5		0.6		3.4		0.4			
Delay (s)		6.5	0.9		7.8		22.9		0.4			
Level of Service		A	A		A		C		A			
Approach Delay (s)		5.1			7.8			15.8			0.0	
Approach LOS		A			A			B			A	

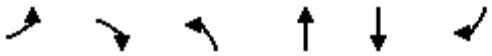
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2868	1386		2980	1295				2756		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2868	1386		2980	1295				2756		2347
Volume (vph)	0	850	810	0	1215	230	0	0	0	240	0	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	895	853	0	1279	242	0	0	0	253	0	663
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	53
Lane Group Flow (vph)	0	917	828	0	1279	242	0	0	0	253	0	610
Heavy Vehicles (%)	0%	1%	6%	0%	2%	5%	0%	0%	0%	7%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.7	60.0		33.7	60.0				18.3		18.3
Effective Green, g (s)		33.7	60.0		33.7	60.0				18.3		18.3
Actuated g/C Ratio		0.56	1.00		0.56	1.00				0.31		0.31
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)		1611	1386		1674	1295				841		716
v/s Ratio Prot		0.32			c0.43					0.09		c0.26
v/s Ratio Perm			0.60			0.19						
v/c Ratio		0.57	0.60		0.76	0.19				0.30		0.85
Uniform Delay, d1		8.5	0.0		10.1	0.0				16.0		19.6
Progression Factor		1.00	1.00		0.73	1.00				1.00		1.00
Incremental Delay, d2		1.5	0.7		2.7	0.1				0.2		9.6
Delay (s)		9.9	0.7		10.1	0.1				16.2		29.2
Level of Service		A	A		B	A				B		C
Approach Delay (s)		5.6			8.5			0.0			25.6	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

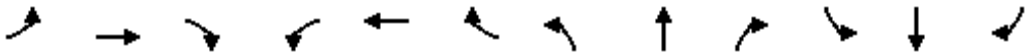
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1271	1394	2951	1553	1236
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1520	1271	901	2951	1553	1236
Volume (vph)	5	265	90	160	220	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	279	95	168	232	11
RTOR Reduction (vph)	0	239	0	0	0	4
Lane Group Flow (vph)	5	40	95	168	232	7
Heavy Vehicles (%)	0%	7%	9%	3%	3%	10%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.5	6.5	30.5	30.5	30.5	30.5
Effective Green, g (s)	6.5	6.5	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
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)	220	184	611	2000	1053	838
v/s Ratio Prot	0.00			0.06	c0.15	
v/s Ratio Perm		c0.03	0.11			0.01
v/c Ratio	0.02	0.22	0.16	0.08	0.22	0.01
Uniform Delay, d1	16.5	17.0	2.6	2.5	2.7	2.4
Progression Factor	1.00	1.00	0.61	0.61	1.00	1.00
Incremental Delay, d2	0.0	0.6	0.5	0.1	0.5	0.0
Delay (s)	16.6	17.6	2.1	1.6	3.2	2.4
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			1.8	3.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

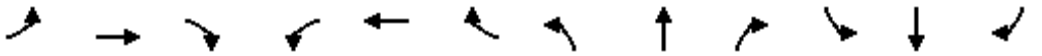
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4087	1083		3947	1158	2863		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4087	1083		3947	1158	2863		2347			
Volume (vph)	0	1385	670	0	1225	1240	420	0	400	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1458	705	0	1289	1305	442	0	421	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1458	705	0	1441	1136	442	0	417	0	0	0
Heavy Vehicles (%)	0%	1%	8%	0%	3%	1%	3%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		33.0	90.0		33.0	90.0	49.0		49.0			
Effective Green, g (s)		33.0	90.0		33.0	90.0	49.0		49.0			
Actuated g/C Ratio		0.37	1.00		0.37	1.00	0.54		0.54			
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)		1499	1083		1447	1158	1559		1278			
v/s Ratio Prot		0.36			0.37		0.15		0.18			
v/s Ratio Perm			0.65			c0.98						
v/c Ratio		0.97	0.65		1.00	0.98	0.28		0.33			
Uniform Delay, d1		28.1	0.0		28.4	0.0	11.0		11.4			
Progression Factor		0.95	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		14.2	1.0		22.7	21.9	0.1		0.2			
Delay (s)		40.9	1.0		51.1	21.9	11.1		11.5			
Level of Service		D	A		D	C	B		B			
Approach Delay (s)		27.9			38.3			11.3			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

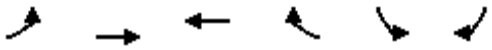
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		0.93	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3959	1136		3737	1136				2808		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3959	1136		3737	1136				2808		2324
Volume (vph)	0	1685	820	0	575	1070	0	0	0	370	0	600
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1774	863	0	605	1126	0	0	0	389	0	632
RTOR Reduction (vph)	0	9	197	0	157	0	0	0	0	0	0	490
Lane Group Flow (vph)	0	1921	510	0	1011	563	0	0	0	389	0	142
Heavy Vehicles (%)	0%	3%	3%	0%	2%	3%	0%	0%	0%	5%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		64.9	64.9		64.9	90.0				17.1		17.1
Effective Green, g (s)		64.9	64.9		64.9	90.0				17.1		17.1
Actuated g/C Ratio		0.72	0.72		0.72	1.00				0.19		0.19
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)		2855	819		2695	1136				534		442
v/s Ratio Prot		c0.49			0.27					c0.14		
v/s Ratio Perm			0.45			0.50						0.06
v/c Ratio		0.67	0.62		0.38	0.50				0.73		0.32
Uniform Delay, d1		6.8	6.4		4.8	0.0				34.3		31.4
Progression Factor		1.00	1.00		0.60	1.00				1.00		1.00
Incremental Delay, d2		1.3	3.5		0.4	0.1				4.9		0.4
Delay (s)		8.1	9.9		3.2	0.1				39.2		31.9
Level of Service		A	A		A	A				D		C
Approach Delay (s)		8.6			2.2			0.0			34.7	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1421	3865	4200	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1421	3865	4200	1347	2920	1347
Volume (vph)	150	850	2625	340	415	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	895	2763	358	437	179
RTOR Reduction (vph)	0	0	0	108	0	134
Lane Group Flow (vph)	158	895	2763	250	437	45
Heavy Vehicles (%)	7%	13%	4%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	103.0	85.0	85.0	19.0	19.0
Effective Green, g (s)	14.0	103.0	85.0	85.0	19.0	19.0
Actuated g/C Ratio	0.11	0.79	0.65	0.65	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	3062	2746	881	427	197
v/s Ratio Prot	c0.11	0.23	c0.66		c0.15	
v/s Ratio Perm				0.19		0.03
v/c Ratio	1.03	0.29	1.01	0.28	1.02	0.23
Uniform Delay, d1	58.0	3.6	22.5	9.6	55.5	49.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.7	0.1	18.7	0.2	49.6	2.7
Delay (s)	139.7	3.7	41.2	9.7	105.1	51.7
Level of Service	F	A	D	A	F	D
Approach Delay (s)		24.1	37.6		89.6	
Approach LOS		C	D		F	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4044	680	760	4007		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4044	680	760	4007		1474	680				
Volume (vph)	0	1380	420	10	1910	0	520	0	10	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1453	442	11	2011	0	547	0	11	0	0	0
RTOR Reduction (vph)	0	0	170	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1453	272	11	2011	0	547	3	0	0	0	0
Heavy Vehicles (%)	0%	8%	100%	100%	9%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		55.4	55.4	1.6	61.0		21.0	21.0				
Effective Green, g (s)		55.4	55.4	1.6	61.0		21.0	21.0				
Actuated g/C Ratio		0.62	0.62	0.02	0.68		0.23	0.23				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2489	419	14	2716		344	159				
v/s Ratio Prot		0.36		0.01	c0.50		c0.37	0.00				
v/s Ratio Perm			0.40									
v/c Ratio		0.58	0.65	0.79	0.74		1.59	0.02				
Uniform Delay, d1		10.4	11.1	44.0	9.4		34.5	26.6				
Progression Factor		1.00	1.00	0.76	0.47		1.00	1.00				
Incremental Delay, d2		1.0	7.6	126.0	1.8		279.0	0.0				
Delay (s)		11.4	18.7	159.4	6.2		313.5	26.6				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		13.1			7.0			307.8			0.0	
Approach LOS		B			A			F			A	

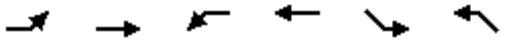
Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	3865	2633	4200	2808	2417
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	3865	2633	4200	2808	2417
Volume (vph)	560	550	210	980	490	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	589	579	221	1032	516	168
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	589	579	221	1032	516	168
Heavy Vehicles (%)	3%	13%	12%	4%	5%	22%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	46.1	11.7	32.8	20.2	20.2
Effective Green, g (s)	25.0	46.1	11.7	32.8	20.2	20.2
Actuated g/C Ratio	0.28	0.51	0.13	0.36	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	795	1980	342	1531	630	542
v/s Ratio Prot	c0.21	0.15	0.08	c0.25	c0.18	0.07
v/s Ratio Perm						
v/c Ratio	0.74	0.29	0.65	0.67	0.82	0.31
Uniform Delay, d1	29.6	12.6	37.2	24.1	33.2	29.1
Progression Factor	0.67	0.36	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.3	4.2	2.4	8.2	0.3
Delay (s)	23.0	4.8	41.3	26.5	41.3	29.4
Level of Service	C	A	D	C	D	C
Approach Delay (s)		14.0		29.1		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

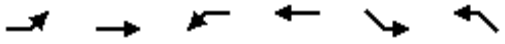
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2457	3551	1843	4241	2610	2782
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2457	3551	1843	4241	2610	2782
Volume (vph)	570	515	10	1665	430	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	542	11	1753	453	253
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	600	542	11	1753	453	253
Heavy Vehicles (%)	20%	23%	60%	3%	13%	6%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.0	53.2	0.8	34.0	14.0	14.0
Effective Green, g (s)	20.0	53.2	0.8	34.0	14.0	14.0
Actuated g/C Ratio	0.25	0.67	0.01	0.42	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)	614	2361	18	1802	457	487
v/s Ratio Prot	c0.24	0.15	0.01	c0.41	c0.17	0.09
v/s Ratio Perm						
v/c Ratio	0.98	0.23	0.61	0.97	0.99	0.52
Uniform Delay, d1	29.8	5.3	39.4	22.5	32.9	29.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.3	0.2	48.7	15.7	39.7	0.9
Delay (s)	60.0	5.5	88.1	38.2	72.6	30.9
Level of Service	E	A	F	D	E	C
Approach Delay (s)		34.2		38.5		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

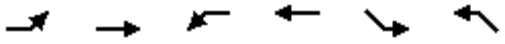
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	2980	2681	4368	2891	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	2980	2681	4368	2891	2949
Volume (vph)	620	765	560	755	370	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	653	805	589	795	389	147
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	653	805	589	795	389	147
Heavy Vehicles (%)	1%	2%	10%	0%	2%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	34.0	50.8	28.2	45.0	19.0	19.0
Effective Green, g (s)	34.0	50.8	28.2	45.0	19.0	19.0
Actuated g/C Ratio	0.31	0.46	0.26	0.41	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	903	1376	687	1787	499	509
v/s Ratio Prot	c0.22	c0.27	c0.22	0.18	c0.13	0.05
v/s Ratio Perm						
v/c Ratio	0.72	0.59	0.86	0.44	0.78	0.29
Uniform Delay, d1	33.8	21.8	39.0	23.5	43.5	39.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.8	10.3	0.8	7.6	0.3
Delay (s)	36.7	23.7	49.3	24.3	51.1	39.9
Level of Service	D	C	D	C	D	D
Approach Delay (s)		29.5		34.9		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2542	4160	2949	4200	2949	2705
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2542	4160	2949	4200	2949	2705
Volume (vph)	270	360	510	1020	420	670
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	379	537	1074	442	705
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	379	537	1074	442	705
Heavy Vehicles (%)	16%	5%	0%	4%	0%	9%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	8.7	15.3	12.5	19.1	17.0	17.0
Effective Green, g (s)	8.7	15.3	12.5	19.1	17.0	17.0
Actuated g/C Ratio	0.15	0.27	0.22	0.34	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	389	1121	649	1412	883	810
v/s Ratio Prot	c0.11	0.09	0.18	c0.26	0.15	c0.26
v/s Ratio Perm						
v/c Ratio	0.73	0.34	0.83	0.76	0.50	0.87
Uniform Delay, d1	22.9	16.7	21.1	16.8	16.4	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.9	0.2	8.5	2.5	0.4	10.1
Delay (s)	29.8	16.9	29.7	19.3	16.8	28.9
Level of Service	C	B	C	B	B	C
Approach Delay (s)		22.4		22.7		
Approach LOS		C		C		

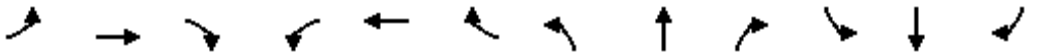
Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2756	4282	2808	4241	2835	2681
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2756	4282	2808	4241	2835	2681
Volume (vph)	270	855	300	685	510	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	900	316	721	537	137
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	900	316	721	537	137
Heavy Vehicles (%)	7%	2%	5%	3%	4%	10%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	6.0	14.3	6.0	14.3	10.0	10.0
Effective Green, g (s)	6.0	14.3	6.0	14.3	10.0	10.0
Actuated g/C Ratio	0.14	0.34	0.14	0.34	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	391	1448	398	1434	670	634
v/s Ratio Prot	0.10	c0.21	c0.11	0.17	c0.19	0.05
v/s Ratio Perm						
v/c Ratio	0.73	0.62	0.79	0.50	0.80	0.22
Uniform Delay, d1	17.4	11.7	17.6	11.2	15.2	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.6	0.8	10.4	0.3	6.9	0.2
Delay (s)	24.0	12.6	28.0	11.4	22.1	13.2
Level of Service	C	B	C	B	C	B
Approach Delay (s)		15.3		16.5		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4264			4241	1333			2370	2891		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4264			4241	1333			2370	2891		1295
Volume (vph)	90	1875	55	0	1750	155	0	0	415	475	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1974	58	0	1842	163	0	0	437	500	0	16
RTOR Reduction (vph)	0	3	0	0	0	98	0	0	15	0	0	13
Lane Group Flow (vph)	95	2029	0	0	1842	65	0	0	422	500	0	3
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	1%	2%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Effective Green, g (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Actuated g/C Ratio	0.07	0.51			0.40	0.40			0.18	0.18		0.18
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)	101	2179			1696	533			421	514		230
v/s Ratio Prot	0.06	c0.48			c0.43					c0.17		
v/s Ratio Perm						0.05			c0.18			0.00
v/c Ratio	0.94	0.93			1.09	0.12			1.00	0.97		0.01
Uniform Delay, d1	41.8	20.5			27.0	17.0			37.0	36.8		30.5
Progression Factor	1.00	1.00			0.72	0.25			1.00	0.96		0.90
Incremental Delay, d2	70.3	8.7			48.9	0.4			44.6	31.0		0.0
Delay (s)	112.1	29.2			68.4	4.8			81.6	66.2		27.5
Level of Service	F	C			E	A			F	E		C
Approach Delay (s)		32.9			63.2			81.6			65.0	
Approach LOS		C			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4325	2891	4200	2756	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4325	2891	4200	2756	2891
Volume (vph)	350	835	730	645	270	520
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	879	768	679	284	547
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	368	879	768	679	284	547
Heavy Vehicles (%)	3%	1%	2%	4%	7%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.1	29.8	27.6	39.3	20.6	20.6
Effective Green, g (s)	18.1	29.8	27.6	39.3	20.6	20.6
Actuated g/C Ratio	0.20	0.33	0.31	0.44	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	576	1432	887	1834	631	662
v/s Ratio Prot	0.13	c0.20	c0.27	0.16	0.10	c0.19
v/s Ratio Perm						
v/c Ratio	0.64	0.61	0.87	0.37	0.45	0.83
Uniform Delay, d1	33.0	25.3	29.5	17.0	29.8	33.0
Progression Factor	0.79	0.74	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.6	8.9	0.6	0.5	8.3
Delay (s)	26.9	19.4	38.3	17.6	30.3	41.3
Level of Service	C	B	D	B	C	D
Approach Delay (s)		21.6		28.6		
Approach LOS		C		C		

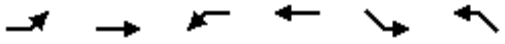
Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	2951	2863	2951	2835	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	2951	2863	2951	2835	2835
Volume (vph)	280	935	570	810	220	280
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	984	600	853	232	295
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	295	984	600	853	232	295
Heavy Vehicles (%)	4%	3%	3%	3%	4%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.5	34.4	22.1	44.0	11.5	11.5
Effective Green, g (s)	12.5	34.4	22.1	44.0	11.5	11.5
Actuated g/C Ratio	0.16	0.43	0.28	0.55	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	443	1269	791	1623	408	408
v/s Ratio Prot	0.10	c0.33	c0.21	0.29	0.08	c0.10
v/s Ratio Perm						
v/c Ratio	0.67	0.78	0.76	0.53	0.57	0.72
Uniform Delay, d1	31.8	19.5	26.5	11.4	31.9	32.7
Progression Factor	1.00	1.00	0.49	0.15	1.00	1.00
Incremental Delay, d2	3.8	4.7	2.4	0.7	1.8	6.2
Delay (s)	35.5	24.2	15.4	2.4	33.8	39.0
Level of Service	D	C	B	A	C	D
Approach Delay (s)		26.8		7.8		
Approach LOS		C		A		

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4160	2782	4325	2808	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4160	2782	4325	2808	2920
Volume (vph)	520	820	440	1305	310	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	547	863	463	1374	326	768
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	547	863	463	1374	326	768
Heavy Vehicles (%)	2%	5%	6%	1%	5%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.8	49.7	31.0	52.9	37.3	37.3
Effective Green, g (s)	27.8	49.7	31.0	52.9	37.3	37.3
Actuated g/C Ratio	0.21	0.38	0.24	0.41	0.29	0.29
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)	618	1590	663	1760	806	838
v/s Ratio Prot	c0.19	0.21	0.17	c0.32	0.12	c0.26
v/s Ratio Perm						
v/c Ratio	0.89	0.54	0.70	0.78	0.40	0.92
Uniform Delay, d1	49.6	31.3	45.2	33.5	37.4	44.8
Progression Factor	1.00	1.00	0.41	0.28	1.00	1.00
Incremental Delay, d2	14.2	1.3	1.3	1.4	0.3	14.5
Delay (s)	63.8	32.6	19.6	10.7	37.7	59.4
Level of Service	E	C	B	B	D	E
Approach Delay (s)		44.7		13.0		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2949	4325	2863	4368	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2949	4325	2863	4368	2863	2920
Volume (vph)	550	830	410	1240	350	670
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	579	874	432	1305	368	705
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	579	874	432	1305	368	705
Heavy Vehicles (%)	0%	1%	3%	0%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	28.6	51.6	31.0	54.0	35.4	35.4
Effective Green, g (s)	28.6	51.6	31.0	54.0	35.4	35.4
Actuated g/C Ratio	0.22	0.40	0.24	0.42	0.27	0.27
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)	649	1717	683	1814	780	795
v/s Ratio Prot	c0.20	0.20	0.15	c0.30	0.13	c0.24
v/s Ratio Perm						
v/c Ratio	0.89	0.51	0.63	0.72	0.47	0.89
Uniform Delay, d1	49.2	29.6	44.4	31.7	39.5	45.4
Progression Factor	1.00	1.00	0.48	0.35	1.00	1.00
Incremental Delay, d2	14.5	1.1	1.2	1.6	0.5	11.7
Delay (s)	63.7	30.7	22.4	12.6	39.9	57.0
Level of Service	E	C	C	B	D	E
Approach Delay (s)		43.9		15.0		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	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	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2492			2357	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2492			2357	760	680
Volume (vph)	270	0	0	235	85	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	0	0	247	89	111
RTOR Reduction (vph)	0	0	0	0	0	36
Lane Group Flow (vph)	284	0	0	247	89	75
Heavy Vehicles (%)	22%	0%	0%	29%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.4			11.4	40.6	40.6
Effective Green, g (s)	11.4			11.4	40.6	40.6
Actuated g/C Ratio	0.19			0.19	0.68	0.68
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)	473			448	514	460
v/s Ratio Prot	c0.11			0.10	c0.12	
v/s Ratio Perm						0.11
v/c Ratio	0.60			0.55	0.17	0.16
Uniform Delay, d1	22.2			22.0	3.6	3.5
Progression Factor	0.75			1.00	1.00	1.00
Incremental Delay, d2	2.1			1.5	0.7	0.8
Delay (s)	18.8			23.5	4.3	4.3
Level of Service	B			C	A	A
Approach Delay (s)	18.8			23.5	4.3	
Approach LOS	B			C	A	

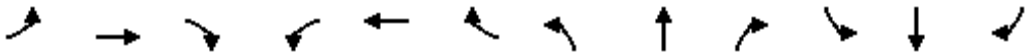
Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2492	680	760	2555		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2492	680	760	2555		
Volume (vph)	270	95	115	205	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	100	121	216	0	0
RTOR Reduction (vph)	0	35	0	0	0	0
Lane Group Flow (vph)	284	65	121	216	0	0
Heavy Vehicles (%)	22%	100%	100%	19%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	39.2	39.2	12.8	60.0		
Effective Green, g (s)	39.2	39.2	12.8	60.0		
Actuated g/C Ratio	0.65	0.65	0.21	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1628	444	162	2555		
v/s Ratio Prot	c0.11		c0.16	0.08		
v/s Ratio Perm		0.10				
v/c Ratio	0.17	0.15	0.75	0.08		
Uniform Delay, d1	4.1	4.0	22.1	0.0		
Progression Factor	1.00	1.00	0.59	1.00		
Incremental Delay, d2	0.1	0.2	15.6	0.0		
Delay (s)	4.1	4.1	28.7	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	4.1			10.3	0.0	
Approach LOS	A			B	A	

Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

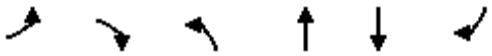
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1143	1295	1322	1224		1448	2604		1126	2890	
Flt Permitted	0.39	1.00	1.00	0.66	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	587	1143	1295	923	1224		1448	2604		1126	2890	
Volume (vph)	10	140	580	75	80	50	250	650	150	75	550	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	147	611	79	84	53	263	684	158	79	579	7
RTOR Reduction (vph)	0	0	65	0	22	0	0	18	0	0	1	0
Lane Group Flow (vph)	11	147	546	79	115	0	263	824	0	79	585	0
Heavy Vehicles (%)	5%	40%	5%	15%	20%	28%	5%	5%	50%	35%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	16.1	16.1	45.1	21.2	21.2		29.0	51.7		10.3	33.0	
Effective Green, g (s)	16.1	16.1	45.1	21.2	21.2		29.0	51.7		10.3	33.0	
Actuated g/C Ratio	0.16	0.16	0.45	0.21	0.21		0.29	0.52		0.10	0.33	
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)	101	184	584	219	259		420	1346		116	954	
v/s Ratio Prot	0.00	0.13	c0.27	0.02	c0.09		0.18	c0.32		0.07	0.20	
v/s Ratio Perm	0.02		0.15	0.06								
v/c Ratio	0.11	0.80	0.94	0.36	0.44		0.63	0.61		0.68	0.61	
Uniform Delay, d1	35.7	40.4	26.1	34.0	34.3		30.8	17.1		43.3	28.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	21.0	22.4	1.0	1.2		2.9	2.1		15.2	2.9	
Delay (s)	36.2	61.4	48.4	35.0	35.5		33.7	19.1		58.5	31.1	
Level of Service	D	E	D	C	D		C	B		E	C	
Approach Delay (s)		50.7			35.3			22.6			34.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

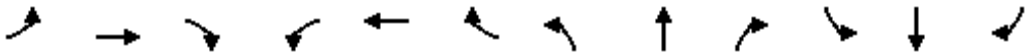
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	1966	1046	1169	5242	2811	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1046	1169	5242	2811	
Volume (vph)	260	115	160	1230	910	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	121	168	1295	958	79
RTOR Reduction (vph)	0	102	0	0	6	0
Lane Group Flow (vph)	274	19	168	1295	1031	0
Heavy Vehicles (%)	50%	30%	30%	5%	5%	30%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	15.6	15.6	17.1	45.7	55.3	
Effective Green, g (s)	15.6	15.6	17.1	45.7	55.3	
Actuated g/C Ratio	0.16	0.16	0.17	0.46	0.55	
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)	307	163	200	2396	1554	
v/s Ratio Prot	c0.14		c0.14	0.25	c0.37	
v/s Ratio Perm		0.02				
v/c Ratio	0.89	0.12	0.84	0.54	0.66	
Uniform Delay, d1	41.4	36.3	40.1	19.6	15.8	
Progression Factor	1.00	1.00	1.00	1.00	0.40	
Incremental Delay, d2	26.1	0.3	25.4	0.9	0.7	
Delay (s)	67.4	36.6	65.5	20.5	7.0	
Level of Service	E	D	E	C	A	
Approach Delay (s)	58.0			25.6	7.0	
Approach LOS	E			C	A	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

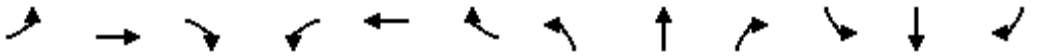
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2667	2196	1490	2812	
Flt Permitted		0.91		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1332		2808	1318			2667	2196	1490	2812	
Volume (vph)	5	0	5	470	5	50	0	1090	400	30	515	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	495	5	53	0	1147	421	32	542	5
RTOR Reduction (vph)	0	4	0	0	32	0	0	0	229	0	1	0
Lane Group Flow (vph)	0	6	0	495	26	0	0	1147	192	32	546	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	14%	9%	2%	8%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		15.6		20.3	39.9			45.7	45.7	2.4	31.0	
Effective Green, g (s)		15.6		20.3	39.9			45.7	45.7	2.4	31.0	
Actuated g/C Ratio		0.16		0.20	0.40			0.46	0.46	0.02	0.31	
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)		208		570	526			1219	1004	36	872	
v/s Ratio Prot				c0.18	c0.02			c0.43	0.09	0.02	c0.19	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.87	0.05			0.94	0.19	0.89	0.63	
Uniform Delay, d1		35.8		38.6	18.4			25.9	16.2	48.7	29.5	
Progression Factor		1.00		1.00	1.00			0.39	0.19	1.00	1.00	
Incremental Delay, d2		0.1		13.2	0.0			12.9	0.3	104.6	3.4	
Delay (s)		35.8		51.8	18.5			23.0	3.4	153.2	32.9	
Level of Service		D		D	B			C	A	F	C	
Approach Delay (s)		35.8			48.3			17.8			39.6	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

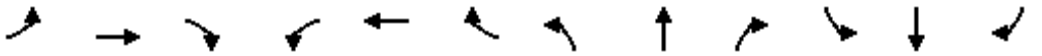
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1568	4350		2928	4297	1350	1538	4107	2355	2956	4071	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1568	4350		2928	4297	1350	1538	4107	2355	2956	4071	2422
Volume (vph)	150	725	40	225	480	385	50	900	610	245	1095	795
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	763	42	237	505	405	53	947	642	258	1153	837
RTOR Reduction (vph)	0	6	0	0	0	102	0	0	61	0	0	92
Lane Group Flow (vph)	158	799	0	237	505	303	53	947	581	258	1153	745
Heavy Vehicles (%)	3%	6%	3%	7%	8%	7%	5%	13%	8%	6%	14%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	18.0	23.2		16.0	21.2	34.8	4.8	31.2	47.2	13.6	40.0	58.0
Effective Green, g (s)	18.0	23.2		16.0	21.2	34.8	4.8	31.2	47.2	13.6	40.0	58.0
Actuated g/C Ratio	0.18	0.23		0.16	0.21	0.35	0.05	0.31	0.47	0.14	0.40	0.58
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)	282	1009		468	911	524	74	1281	1112	402	1628	1405
v/s Ratio Prot	0.10	c0.18		0.08	0.12	c0.08	0.03	c0.23	0.08	0.09	c0.28	0.10
v/s Ratio Perm						0.15			0.16			0.21
v/c Ratio	0.56	0.79		0.51	0.55	0.58	0.72	0.74	0.52	0.64	0.71	0.53
Uniform Delay, d1	37.4	36.1		38.4	35.2	26.6	46.9	30.8	18.5	40.9	25.1	12.7
Progression Factor	0.79	0.90		0.68	0.67	1.07	0.30	0.06	0.39	1.21	0.58	2.62
Incremental Delay, d2	2.5	6.2		0.8	2.2	1.4	8.8	1.1	0.1	2.8	2.1	0.2
Delay (s)	32.1	38.6		27.0	25.6	30.0	23.0	3.1	7.4	52.1	16.7	33.5
Level of Service	C	D		C	C	C	C	A	A	D	B	C
Approach Delay (s)		37.5			27.4			5.4			27.0	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4378	1403		4378					3013	1635	2445
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4378	1403		4378					3013	1635	2445
Volume (vph)	0	650	290	0	1325	0	0	0	0	265	545	680
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	305	0	1395	0	0	0	0	279	574	716
RTOR Reduction (vph)	0	0	118	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	684	187	0	1395	0	0	0	0	279	574	704
Heavy Vehicles (%)	0%	6%	3%	3%	6%	0%	0%	0%	0%	4%	4%	4%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		51.7	51.7		51.7					40.3	40.3	40.3
Effective Green, g (s)		51.7	51.7		51.7					40.3	40.3	40.3
Actuated g/C Ratio		0.52	0.52		0.52					0.40	0.40	0.40
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)		2263	725		2263					1214	659	985
v/s Ratio Prot		0.16			c0.32					0.09	c0.35	
v/s Ratio Perm			0.13									0.29
v/c Ratio		0.30	0.26		0.62					0.23	0.87	0.71
Uniform Delay, d1		13.8	13.5		17.1					19.6	27.5	25.0
Progression Factor		1.00	1.00		0.65					1.00	1.00	1.00
Incremental Delay, d2		0.3	0.9		1.1					0.1	12.1	2.5
Delay (s)		14.2	14.3		12.2					19.7	39.5	27.5
Level of Service		B	B		B					B	D	C
Approach Delay (s)		14.2			12.2			0.0			30.5	
Approach LOS		B			B			A			C	

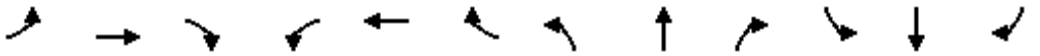
Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	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	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3343	2707	3335	3312	1583	3400	1686		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3343	2707	3335	3312	1583	3400	1686		1770	1810	1583
Volume (vph)	30	990	560	160	750	25	310	150	200	30	120	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1042	589	168	789	26	326	158	211	32	126	32
RTOR Reduction (vph)	0	0	215	0	0	11	0	49	0	0	0	28
Lane Group Flow (vph)	32	1042	374	168	789	15	326	320	0	32	126	4
Heavy Vehicles (%)	2%	8%	5%	5%	9%	2%	3%	3%	3%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	45.2	63.5	8.6	50.2	58.8	18.3	21.6		8.6	11.9	11.9
Effective Green, g (s)	3.6	45.2	63.5	8.6	50.2	58.8	18.3	21.6		8.6	11.9	11.9
Actuated g/C Ratio	0.04	0.45	0.64	0.09	0.50	0.59	0.18	0.22		0.09	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	64	1511	1827	287	1663	994	622	364		152	215	188
v/s Ratio Prot	0.02	c0.31	0.04	c0.05	c0.24	0.00	c0.10	c0.19		0.02	0.07	
v/s Ratio Perm			0.10			0.01						0.00
v/c Ratio	0.50	0.69	0.20	0.59	0.47	0.02	0.52	0.88		0.21	0.59	0.02
Uniform Delay, d1	47.3	21.8	7.7	44.0	16.3	8.6	36.9	37.9		42.5	41.7	38.9
Progression Factor	0.83	0.40	0.44	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	1.9	0.0	3.0	1.0	0.0	0.8	20.5		0.7	4.0	0.0
Delay (s)	43.7	10.7	3.4	47.0	17.2	8.6	37.7	58.4		43.2	45.8	38.9
Level of Service	D	B	A	D	B	A	D	E		D	D	D
Approach Delay (s)		8.8			22.1			48.7			44.2	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

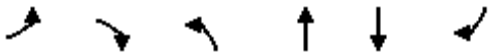
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3136	1389					5268	1403	3042	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3136	1389					5268	1403	3042	4071	
Volume (vph)	0	150	685	0	0	0	0	1560	340	230	1130	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	158	721	0	0	0	0	1642	358	242	1189	0
RTOR Reduction (vph)	0	0	15	0	0	0	0	0	243	0	0	0
Lane Group Flow (vph)	0	158	706	0	0	0	0	1642	115	242	1189	0
Heavy Vehicles (%)	0%	3%	4%	0%	0%	0%	0%	11%	3%	3%	14%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		48.0	48.0					32.0	32.0	8.0	44.0	
Effective Green, g (s)		48.0	48.0					32.0	32.0	8.0	44.0	
Actuated g/C Ratio		0.48	0.48					0.32	0.32	0.08	0.44	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1505	667					1686	449	243	1791	
v/s Ratio Prot		0.05						c0.31		c0.08	0.29	
v/s Ratio Perm			c0.51						0.08			
v/c Ratio		0.10	1.06					0.97	0.26	1.00	0.66	
Uniform Delay, d1		14.2	26.0					33.6	25.2	46.0	22.2	
Progression Factor		0.68	0.46					1.00	1.00	0.57	0.24	
Incremental Delay, d2		0.0	46.3					16.5	1.4	47.8	1.4	
Delay (s)		9.6	58.3					50.1	26.5	74.0	6.7	
Level of Service		A	E					D	C	E	A	
Approach Delay (s)		49.6			0.0			45.9			18.1	
Approach LOS		D			A			D			B	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		

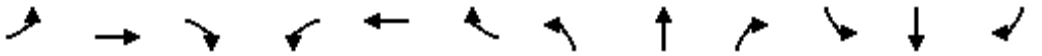
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2469		4219	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2469		4219	4107	
Volume (vph)	0	740	0	1435	1395	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	779	0	1511	1468	0
RTOR Reduction (vph)	0	18	0	0	0	0
Lane Group Flow (vph)	0	761	0	1511	1468	0
Heavy Vehicles (%)	0%	3%	0%	10%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		35.1		56.9	56.9	
Effective Green, g (s)		35.1		56.9	56.9	
Actuated g/C Ratio		0.35		0.57	0.57	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		867		2401	2337	
v/s Ratio Prot				c0.36	0.36	
v/s Ratio Perm		c0.31				
v/c Ratio		0.88		0.63	0.63	
Uniform Delay, d1		30.4		14.5	14.5	
Progression Factor		1.00		0.99	1.00	
Incremental Delay, d2		10.0		0.9	1.3	
Delay (s)		40.5		15.2	15.7	
Level of Service		D		B	B	
Approach Delay (s)	40.5			15.2	15.7	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1553	3047	1225	3072	4641	1389	1615	4462	1376	1357	3967	1363
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1553	3047	1225	3072	4641	1389	1615	4462	1376	1357	3967	1363
Volume (vph)	125	545	80	465	350	520	25	1145	765	70	470	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	574	84	489	368	547	26	1205	805	74	495	568
RTOR Reduction (vph)	0	0	62	0	0	125	0	0	0	0	0	87
Lane Group Flow (vph)	132	574	22	489	368	422	26	1205	805	74	495	481
Heavy Vehicles (%)	4%	6%	18%	2%	0%	4%	0%	4%	5%	19%	17%	6%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	16.7	25.8	31.4	21.0	30.1	53.3	5.6	34.0	120.0	23.2	51.6	68.3
Effective Green, g (s)	16.7	25.8	31.4	21.0	30.1	53.3	5.6	34.0	120.0	23.2	51.6	68.3
Actuated g/C Ratio	0.14	0.22	0.26	0.18	0.25	0.44	0.05	0.28	1.00	0.19	0.43	0.57
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)	216	655	361	538	1164	617	75	1264	1376	262	1706	776
v/s Ratio Prot	0.09	c0.19	0.00	c0.16	0.08	c0.13	0.02	c0.27		0.05	0.12	0.09
v/s Ratio Perm			0.02			0.17			c0.58			0.27
v/c Ratio	0.61	0.88	0.06	0.91	0.32	0.68	0.35	0.95	0.59	0.28	0.29	0.62
Uniform Delay, d1	48.6	45.6	33.2	48.6	36.6	26.6	55.4	42.2	0.0	41.3	22.3	17.2
Progression Factor	0.56	0.50	0.05	0.73	0.63	1.21	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.5	13.9	0.1	14.4	0.5	2.2	2.8	16.4	1.8	0.6	0.4	1.5
Delay (s)	31.8	36.6	1.8	50.0	23.4	34.3	58.2	58.6	1.8	41.9	22.7	18.7
Level of Service	C	D	A	D	C	C	E	E	A	D	C	B
Approach Delay (s)		32.1			36.9			36.1			21.9	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4420	1363	1538	4550	3042	1302
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4420	1363	1538	4550	3042	1302
Volume (vph)	510	420	450	465	160	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	537	442	474	489	168	253
RTOR Reduction (vph)	0	0	0	0	0	227
Lane Group Flow (vph)	537	442	474	489	168	26
Heavy Vehicles (%)	5%	6%	5%	2%	3%	11%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	38.8	120.0	57.0	99.8	12.2	12.2
Effective Green, g (s)	38.8	120.0	57.0	99.8	12.2	12.2
Actuated g/C Ratio	0.32	1.00	0.48	0.83	0.10	0.10
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)	1429	1363	731	3784	309	132
v/s Ratio Prot	c0.12		c0.31	0.11	c0.06	
v/s Ratio Perm		0.32				0.02
v/c Ratio	0.38	0.32	0.65	0.13	0.54	0.19
Uniform Delay, d1	31.3	0.0	23.9	1.9	51.3	49.4
Progression Factor	1.00	1.00	0.75	0.98	1.00	1.00
Incremental Delay, d2	0.8	0.6	1.7	0.1	2.0	0.7
Delay (s)	32.0	0.6	19.6	1.9	53.2	50.1
Level of Service	C	A	B	A	D	D
Approach Delay (s)	17.9			10.6	51.4	
Approach LOS	B			B	D	

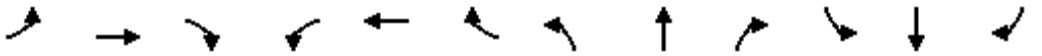
Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
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)	1805	3343	1599	3433	3505	1615	3433	3314		1805	1740	
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)	1805	3343	1599	3433	3505	1615	3433	3314		1805	1740	
Volume (vph)	10	1040	330	140	770	5	555	855	160	5	400	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	1095	347	147	811	5	584	900	168	5	421	11
RTOR Reduction (vph)	0	0	0	0	0	2	0	13	0	0	1	0
Lane Group Flow (vph)	11	1095	347	147	811	3	584	1055	0	5	431	0
Heavy Vehicles (%)	0%	8%	1%	2%	3%	0%	2%	4%	19%	0%	9%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	1.6	41.4	120.0	8.4	48.2	62.8	22.3	39.6		14.6	31.9	
Effective Green, g (s)	1.6	41.4	120.0	8.4	48.2	62.8	22.3	39.6		14.6	31.9	
Actuated g/C Ratio	0.01	0.34	1.00	0.07	0.40	0.52	0.19	0.33		0.12	0.27	
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)	24	1153	1599	240	1408	899	638	1094		220	463	
v/s Ratio Prot	0.01	c0.33		c0.04	c0.23	0.00	c0.17	c0.32		0.00	0.25	
v/s Ratio Perm			0.22			0.00						
v/c Ratio	0.46	0.95	0.22	0.61	0.58	0.00	0.92	0.96		0.02	0.93	
Uniform Delay, d1	58.8	38.3	0.0	54.2	27.9	13.7	47.9	39.5		46.4	43.0	
Progression Factor	0.76	0.51	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.8	13.5	0.2	4.6	1.7	0.0	17.8	19.1		0.0	25.6	
Delay (s)	54.3	32.9	0.2	58.8	29.7	13.7	65.7	58.6		46.5	68.6	
Level of Service	D	C	A	E	C	B	E	E		D	E	
Approach Delay (s)		25.3			34.0			61.1			68.4	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

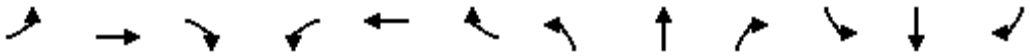
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	3900	1389	1509	3743	1350	1524	3136	1389	1495	3106	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	3900	1389	1509	3743	1350	1524	3136	1389	1495	3106	1204
Volume (vph)	220	1050	120	75	1130	60	160	695	145	120	650	275
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)	239	1141	130	82	1228	65	174	755	158	130	707	299
RTOR Reduction (vph)	0	0	74	0	0	42	0	0	38	0	0	22
Lane Group Flow (vph)	239	1141	56	82	1228	23	174	755	120	130	707	277
Heavy Vehicles (%)	8%	19%	4%	7%	24%	7%	6%	3%	4%	8%	4%	20%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	24.0	31.7	9.0	22.0	38.0
Effective Green, g (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	24.0	31.7	9.0	22.0	38.0
Actuated g/C Ratio	0.16	0.43	0.43	0.08	0.35	0.35	0.11	0.24	0.32	0.09	0.22	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	239	1689	601	116	1310	473	168	753	496	135	683	506
v/s Ratio Prot	c0.16	0.29		0.05	c0.33		c0.11	c0.24	0.02	0.09	0.23	0.09
v/s Ratio Perm			0.04			0.02			0.07			0.14
v/c Ratio	1.00	0.68	0.09	0.71	0.94	0.05	1.04	1.00	0.24	0.96	1.04	0.55
Uniform Delay, d1	42.0	22.7	16.8	45.0	31.4	21.5	44.5	38.0	25.3	45.3	39.0	24.3
Progression Factor	0.90	0.88	1.44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.6	2.0	0.3	17.8	13.8	0.2	79.2	33.4	0.3	65.7	43.8	1.2
Delay (s)	93.6	22.1	24.5	62.9	45.2	21.7	123.7	71.4	25.5	111.0	82.8	25.5
Level of Service	F	C	C	E	D	C	F	E	C	F	F	C
Approach Delay (s)		33.6			45.2			73.1			71.0	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	53.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

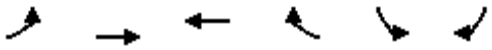
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2287	4510			4359	1204	2748		1268			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2287	4510			4359	1204	2748		1268			
Volume (vph)	200	1400	0	0	1380	360	85	0	125	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)	217	1522	0	0	1500	391	92	0	136	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	149	0	0	55	0	0	0
Lane Group Flow (vph)	217	1522	0	0	1500	242	92	0	81	0	0	0
Heavy Vehicles (%)	37%	15%	0%	0%	19%	20%	14%	0%	14%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	14.7	80.5			61.8	61.8	11.5		11.5			
Effective Green, g (s)	14.7	80.5			61.8	61.8	11.5		11.5			
Actuated g/C Ratio	0.15	0.80			0.62	0.62	0.12		0.12			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	336	3631			2694	744	316		146			
v/s Ratio Prot	c0.09	0.34			c0.34							
v/s Ratio Perm						0.20	0.03		c0.06			
v/c Ratio	0.65	0.42			0.56	0.32	0.29		0.56			
Uniform Delay, d1	40.2	2.9			11.1	9.1	40.5		41.8			
Progression Factor	0.90	0.46			0.55	0.59	1.00		1.00			
Incremental Delay, d2	4.1	0.3			0.5	0.7	0.5		4.5			
Delay (s)	40.3	1.7			6.7	6.1	41.0		46.4			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		6.5			6.5			44.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

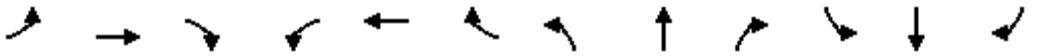
c Critical Lane Group



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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6206	4359		3303	2409
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6206	4359		3303	2409
Volume (vph)	0	945	1465	0	635	375
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1027	1592	0	690	408
RTOR Reduction (vph)	0	0	0	0	0	22
Lane Group Flow (vph)	0	1027	1592	0	690	386
Heavy Vehicles (%)	0%	24%	19%	0%	6%	18%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		54.0	54.0		38.0	38.0
Effective Green, g (s)		54.0	54.0		38.0	38.0
Actuated g/C Ratio		0.54	0.54		0.38	0.38
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)		3351	2354		1255	915
v/s Ratio Prot		0.17	c0.37			
v/s Ratio Perm					c0.21	0.16
v/c Ratio		0.31	0.68		0.55	0.42
Uniform Delay, d1		12.7	16.7		24.3	22.9
Progression Factor		0.10	0.59		1.00	1.00
Incremental Delay, d2		0.1	1.3		1.7	1.4
Delay (s)		1.5	11.2		26.0	24.3
Level of Service		A	B		C	C
Approach Delay (s)		1.5	11.2		25.4	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

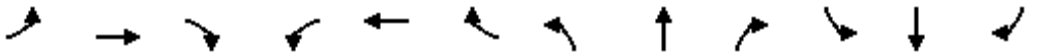
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	4001	1175	1154	5148	709	1242	1133	1257	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.56	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)	1741	4001	1175	1154	5148	709	726	1133	1257	406	1615	722
Volume (vph)	300	825	90	320	1320	200	50	20	30	90	310	220
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)	326	897	98	348	1435	217	54	22	33	98	337	239
RTOR Reduction (vph)	0	0	74	0	0	97	0	0	20	0	0	42
Lane Group Flow (vph)	326	897	24	348	1435	120	54	22	13	98	337	197
Heavy Vehicles (%)	80%	16%	23%	40%	7%	65%	30%	50%	15%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	21.3	24.8	24.8	32.4	35.9	55.5	10.4	7.2	39.6	30.8	23.6	44.9
Effective Green, g (s)	21.3	24.8	24.8	32.4	35.9	55.5	10.4	7.2	39.6	30.8	23.6	44.9
Actuated g/C Ratio	0.21	0.25	0.25	0.32	0.36	0.56	0.10	0.07	0.40	0.31	0.24	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	371	992	291	374	1848	422	92	82	548	204	381	353
v/s Ratio Prot	0.19	c0.22		c0.30	0.28	0.06	0.02	0.02	0.01	c0.09	c0.21	0.12
v/s Ratio Perm			0.02			0.11	0.04		0.00	0.05		0.15
v/c Ratio	0.88	0.90	0.08	0.93	0.78	0.29	0.59	0.27	0.02	0.48	0.88	0.56
Uniform Delay, d1	38.1	36.4	28.9	32.7	28.5	11.8	42.0	43.9	18.4	27.3	36.9	20.3
Progression Factor	1.00	1.00	1.00	1.14	1.26	2.20	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.3	13.1	0.6	24.9	2.6	0.3	9.2	1.8	0.0	1.8	20.9	1.9
Delay (s)	58.4	49.6	29.4	62.3	38.3	26.2	51.2	45.7	18.4	29.1	57.7	22.2
Level of Service	E	D	C	E	D	C	D	D	B	C	E	C
Approach Delay (s)		50.3			41.2			40.2			41.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	44.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3933	1389	1553	3773	1389	1538	3167	1431	1568	3136	1204
Volume (vph)	220	1050	120	75	1130	60	160	695	145	120	650	275
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)	239	1141	130	82	1228	65	174	755	158	130	707	299
RTOR Reduction (vph)	0	0	76	0	0	43	0	0	34	0	0	21
Lane Group Flow (vph)	239	1141	54	82	1228	22	174	755	124	130	707	278
Heavy Vehicles (%)	20%	18%	4%	4%	23%	4%	5%	2%	1%	3%	3%	20%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Effective Green, g (s)	17.0	41.5	41.5	9.5	34.0	34.0	11.0	24.0	33.5	9.0	22.0	39.0
Actuated g/C Ratio	0.17	0.42	0.42	0.10	0.34	0.34	0.11	0.24	0.34	0.09	0.22	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	229	1632	576	148	1283	472	169	760	537	141	690	518
v/s Ratio Prot	c0.18	0.29		0.05	c0.33		c0.11	c0.24	0.02	0.08	0.23	0.09
v/s Ratio Perm			0.04			0.02			0.06			0.14
v/c Ratio	1.04	0.70	0.09	0.55	0.96	0.05	1.03	0.99	0.23	0.92	1.02	0.54
Uniform Delay, d1	41.5	24.1	17.8	43.2	32.3	22.1	44.5	37.9	24.0	45.2	39.0	23.5
Progression Factor	0.91	0.91	2.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	66.8	2.2	0.3	4.4	16.8	0.2	77.2	30.8	0.2	52.6	40.7	1.1
Delay (s)	104.5	24.1	40.1	47.7	49.0	22.3	121.7	68.8	24.2	97.8	79.7	24.6
Level of Service	F	C	D	D	D	C	F	E	C	F	E	C
Approach Delay (s)		38.2			47.7			70.8			67.2	
Approach LOS		D			D			E			E	

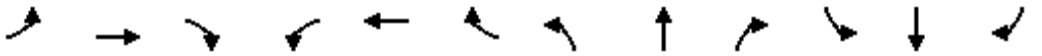
Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2575	4550			6466	1346	1945		1242			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2575	4550			6466	1346	1945		1242			
Volume (vph)	180	1310	0	0	1380	360	305	0	215	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)	196	1424	0	0	1500	391	332	0	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	228	0	0	26	0	0	0
Lane Group Flow (vph)	196	1424	0	0	1500	163	332	0	208	0	0	0
Heavy Vehicles (%)	36%	14%	0%	0%	19%	20%	80%	0%	30%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	12.2	58.0			41.8	41.8	34.0		34.0			
Effective Green, g (s)	12.2	58.0			41.8	41.8	34.0		34.0			
Actuated g/C Ratio	0.12	0.58			0.42	0.42	0.34		0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	314	2639			2703	563	661		422			
v/s Ratio Prot	c0.08	c0.31			0.23							
v/s Ratio Perm						0.12	c0.17		0.17			
v/c Ratio	0.62	0.54			0.55	0.29	0.50		0.49			
Uniform Delay, d1	41.7	12.8			22.1	19.3	26.3		26.2			
Progression Factor	0.82	0.89			0.67	1.27	1.00		1.00			
Incremental Delay, d2	3.5	0.7			0.5	0.7	2.7		4.1			
Delay (s)	37.6	12.1			15.2	25.2	29.0		30.2			
Level of Service	D	B			B	C	C		C			
Approach Delay (s)		15.2			17.3			29.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

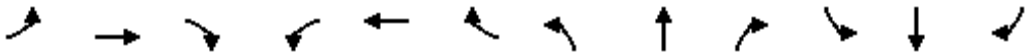
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6256	1339	1958	4052					3242		2515
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6256	1339	1958	4052					3242		2515
Volume (vph)	0	855	430	90	1595	0	0	0	0	635	0	375
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	929	467	98	1734	0	0	0	0	690	0	408
RTOR Reduction (vph)	0	0	248	0	0	0	0	0	0	0	0	23
Lane Group Flow (vph)	0	929	219	98	1734	0	0	0	0	690	0	385
Heavy Vehicles (%)	0%	23%	90%	60%	28%	0%	0%	0%	0%	8%	0%	13%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		46.8	46.8	8.2	59.0					33.0		33.0
Effective Green, g (s)		46.8	46.8	8.2	59.0					33.0		33.0
Actuated g/C Ratio		0.47	0.47	0.08	0.59					0.33		0.33
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)		2928	627	161	2391					1070		830
v/s Ratio Prot		0.15		0.05	c0.43							
v/s Ratio Perm			0.16							c0.21		0.15
v/c Ratio		0.32	0.35	0.61	0.73					0.64		0.46
Uniform Delay, d1		16.6	16.9	44.3	14.7					28.5		26.5
Progression Factor		1.00	1.00	1.38	0.47					1.00		1.00
Incremental Delay, d2		0.3	1.5	5.4	1.7					3.0		1.9
Delay (s)		16.9	18.4	66.4	8.6					31.5		28.4
Level of Service		B	B	E	A					C		C
Approach Delay (s)		17.4			11.7			0.0			30.3	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

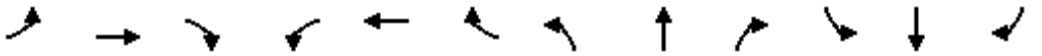
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.91		1.00	1.00	0.85		1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1520	2060		1705	1600	1360		2179	716		2328	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (perm)	1520	2060		1705	1600	1360		2179	716		2328	
Volume (vph)	5	55	95	555	30	250	120	340	300	105	90	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	58	100	584	32	263	126	358	316	111	95	68
RTOR Reduction (vph)	0	87	0	0	0	141	0	0	0	0	33	0
Lane Group Flow (vph)	5	71	0	584	32	122	0	484	316	0	241	0
Heavy Vehicles (%)	0%	0%	53%	73%	0%	0%	54%	32%	90%	0%	67%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	12.8		34.2	46.2	46.2		22.9	100.0		14.1	
Effective Green, g (s)	0.8	12.8		34.2	46.2	46.2		22.9	100.0		14.1	
Actuated g/C Ratio	0.01	0.13		0.34	0.46	0.46		0.23	1.00		0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	12	264		583	739	628		499	716		328	
v/s Ratio Prot	0.00	0.03		c0.34	0.02			c0.22			c0.10	
v/s Ratio Perm						0.09			c0.44			
v/c Ratio	0.42	0.27		1.00	0.04	0.19		0.97	0.44		0.74	
Uniform Delay, d1	49.4	39.4		32.9	14.8	15.9		38.2	0.0		41.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.5		37.7	0.1	0.7		32.2	2.0		8.3	
Delay (s)	71.1	41.9		70.6	14.9	16.6		70.4	2.0		49.5	
Level of Service	E	D		E	B	B		E	A		D	
Approach Delay (s)		42.7			52.4			43.4			49.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

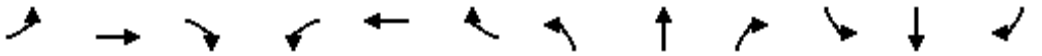
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2891	4200	1308	1448	4122		2730	2607		2863	4082	1360
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)	2891	4200	1308	1448	4122		2730	2607		2863	4082	1360
Volume (vph)	225	1145	555	105	1045	160	260	415	110	170	280	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	1205	584	111	1100	168	274	437	116	179	295	247
RTOR Reduction (vph)	0	0	313	0	22	0	0	26	0	0	0	190
Lane Group Flow (vph)	237	1205	271	111	1246	0	274	527	0	179	295	57
Heavy Vehicles (%)	2%	4%	4%	5%	4%	3%	8%	14%	9%	3%	7%	0%
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)	10.0	34.5	34.5	9.5	34.0		12.0	22.0		8.0	18.0	18.0
Effective Green, g (s)	10.0	34.5	34.5	9.5	34.0		12.0	22.0		8.0	18.0	18.0
Actuated g/C Ratio	0.11	0.38	0.38	0.11	0.38		0.13	0.24		0.09	0.20	0.20
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	1610	501	153	1557		364	637		254	816	272
v/s Ratio Prot	0.08	c0.29		0.08	c0.30		0.10	c0.20		c0.06	0.07	
v/s Ratio Perm			0.21									0.04
v/c Ratio	0.74	0.75	0.54	0.73	0.80		0.75	0.83		0.70	0.36	0.21
Uniform Delay, d1	38.7	24.0	21.6	39.0	25.0		37.6	32.2		39.9	31.0	30.1
Progression Factor	0.62	0.42	0.52	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	2.3	3.0	15.7	4.4		8.5	11.7		8.6	1.2	1.7
Delay (s)	30.1	12.4	14.2	54.7	29.4		46.1	43.9		48.4	32.3	31.8
Level of Service	C	B	B	D	C		D	D		D	C	C
Approach Delay (s)		15.0			31.4			44.6			36.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1434	3830		1421	4074		2705	2951	1320	2340	2895	1214
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)	1434	3830		1421	4074		2705	2951	1320	2340	2895	1214
Volume (vph)	410	855	380	45	780	40	465	330	40	35	315	375
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	432	900	400	47	821	42	489	347	42	37	332	395
RTOR Reduction (vph)	0	65	0	0	5	0	0	0	29	0	0	342
Lane Group Flow (vph)	432	1235	0	47	858	0	489	347	13	37	332	53
Heavy Vehicles (%)	6%	10%	6%	7%	6%	15%	9%	3%	3%	26%	5%	12%
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)	36.8	55.6		7.8	26.6		24.6	37.6	37.6	3.0	16.0	16.0
Effective Green, g (s)	36.8	55.6		7.8	26.6		24.6	37.6	37.6	3.0	16.0	16.0
Actuated g/C Ratio	0.31	0.46		0.06	0.22		0.20	0.31	0.31	0.02	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)	440	1775		92	903		555	925	414	59	386	162
v/s Ratio Prot	c0.30	0.32		0.03	c0.21		c0.18	0.12		0.02	c0.11	
v/s Ratio Perm									0.01			0.04
v/c Ratio	0.98	0.70		0.51	0.95		0.88	0.38	0.03	0.63	0.86	0.33
Uniform Delay, d1	41.3	25.5		54.3	46.1		46.3	32.1	28.6	57.9	50.9	47.1
Progression Factor	0.65	0.41		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	36.8	2.2		4.7	20.1		15.1	1.2	0.1	19.0	21.4	5.3
Delay (s)	63.4	12.7		59.0	66.2		61.4	33.2	28.7	76.9	72.3	52.4
Level of Service	E	B		E	E		E	C	C	E	E	D
Approach Delay (s)		25.3			65.8			48.7			62.2	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1236	1476	2951	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1236	1476	2951	1520	1360
Volume (vph)	945	290	400	595	80	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	995	305	421	626	84	53
RTOR Reduction (vph)	0	115	0	0	0	36
Lane Group Flow (vph)	995	190	421	626	84	17
Heavy Vehicles (%)	3%	10%	3%	3%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	29.5	35.5	22.5	56.0	6.0	22.5
Effective Green, g (s)	29.5	35.5	22.5	56.0	6.0	22.5
Actuated g/C Ratio	0.42	0.51	0.32	0.80	0.09	0.32
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)	1244	697	474	2361	130	437
v/s Ratio Prot	c0.34	0.02	c0.29	0.21	c0.06	0.01
v/s Ratio Perm		0.13				
v/c Ratio	0.80	0.27	0.89	0.27	0.65	0.04
Uniform Delay, d1	17.7	9.9	22.6	1.8	31.0	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.2	18.0	0.3	10.5	0.0
Delay (s)	23.1	10.1	40.5	2.1	41.5	16.4
Level of Service	C	B	D	A	D	B
Approach Delay (s)	20.1			17.5	31.8	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	1143	1520	2923	2808	1283
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	1143	1520	2923	2808	1283
Volume (vph)	755	360	120	555	650	480
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	795	379	126	584	684	505
RTOR Reduction (vph)	0	224	0	0	0	0
Lane Group Flow (vph)	795	155	126	584	684	505
Heavy Vehicles (%)	4%	19%	0%	4%	5%	6%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.5	24.5	6.4	34.9	17.1	60.0
Effective Green, g (s)	24.5	24.5	6.4	34.9	17.1	60.0
Actuated g/C Ratio	0.41	0.41	0.11	0.58	0.29	1.00
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)	1194	467	162	1700	800	1283
v/s Ratio Prot	c0.27		c0.08	0.20		
v/s Ratio Perm		0.14			c0.24	0.39
v/c Ratio	0.67	0.33	0.78	0.34	0.85	0.39
Uniform Delay, d1	14.4	12.1	26.1	6.6	20.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.9	20.6	0.6	8.9	0.9
Delay (s)	17.4	14.0	46.7	7.1	29.2	0.9
Level of Service	B	B	D	A	C	A
Approach Delay (s)	16.3			14.1	17.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	545	0	0	835	40	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	574	0	0	879	42	95
RTOR Reduction (vph)	0	0	0	0	0	84
Lane Group Flow (vph)	574	0	0	879	42	11
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	45.3			45.3	6.7	6.7
Effective Green, g (s)	45.3			45.3	6.7	6.7
Actuated g/C Ratio	0.75			0.75	0.11	0.11
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)	2273			2250	170	152
v/s Ratio Prot	0.19			c0.29	c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.25			0.39	0.25	0.07
Uniform Delay, d1	2.2			2.6	24.3	23.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.5	0.8	0.2
Delay (s)	2.5			3.1	25.1	24.1
Level of Service	A			A	C	C
Approach Delay (s)	2.5			3.1	24.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	545	320	290	585	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	574	337	305	616	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked						
vC, conflicting volume			574		1661	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			574		1661	455
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		100	100
cM capacity (veh/h)			989		62	558

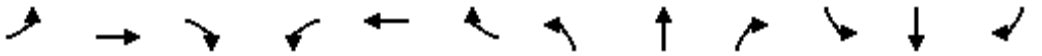
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	382	528	305	308	308
Volume Left	0	0	305	0	0
Volume Right	0	337	0	0	0
cSH	1700	1700	989	1700	1700
Volume to Capacity	0.22	0.31	0.31	0.18	0.18
Queue Length 95th (ft)	0	0	33	0	0
Control Delay (s)	0.0	0.0	10.3	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.4		
Approach LOS					

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1308		4069		2835		1115			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1308		4069		2835		1115			
Volume (vph)	0	630	250	0	485	130	490	0	270	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	663	263	0	511	137	516	0	284	0	0	0
RTOR Reduction (vph)	0	0	108	0	56	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	663	155	0	592	0	516	0	284	0	0	0
Heavy Vehicles (%)	0%	5%	4%	0%	5%	0%	4%	0%	22%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		32.5	32.5		32.5		14.5		55.0			
Effective Green, g (s)		32.5	32.5		32.5		14.5		55.0			
Actuated g/C Ratio		0.59	0.59		0.59		0.26		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1711	773		2404		747		1115			
v/s Ratio Prot		c0.23			0.15		c0.18					
v/s Ratio Perm			0.12						0.25			
v/c Ratio		0.39	0.20		0.25		0.69		0.25			
Uniform Delay, d1		6.0	5.2		5.4		18.2		0.0			
Progression Factor		0.83	0.08		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.5		0.2		2.8		0.6			
Delay (s)		5.6	1.0		5.6		21.0		0.6			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.3			5.6			13.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

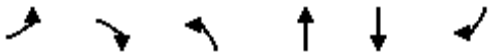
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2827	1336		2923	1088				2681		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2827	1336		2923	1088				2681		2347
Volume (vph)	0	680	310	0	935	40	0	0	0	200	0	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	716	326	0	984	42	0	0	0	211	0	474
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	101
Lane Group Flow (vph)	0	716	326	0	984	42	0	0	0	211	0	373
Heavy Vehicles (%)	0%	3%	10%	0%	4%	25%	0%	0%	0%	10%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.8	55.0		33.8	55.0				13.2		13.2
Effective Green, g (s)		33.8	55.0		33.8	55.0				13.2		13.2
Actuated g/C Ratio		0.61	1.00		0.61	1.00				0.24		0.24
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)		1737	1336		1796	1088				643		563
v/s Ratio Prot		0.25			c0.34					0.08		c0.16
v/s Ratio Perm			0.24			0.04						
v/c Ratio		0.41	0.24		0.55	0.04				0.33		0.66
Uniform Delay, d1		5.5	0.0		6.2	0.0				17.2		18.9
Progression Factor		1.00	1.00		0.50	1.00				1.00		1.00
Incremental Delay, d2		0.7	0.1		1.1	0.0				0.3		2.9
Delay (s)		6.2	0.1		4.1	0.0				17.5		21.8
Level of Service		A	A		A	A				B		C
Approach Delay (s)		4.3			4.0			0.0			20.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

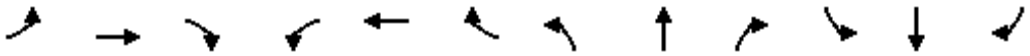
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1193	1322	2868	1509	1360
Flt Permitted	0.95	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	1520	1193	827	2868	1509	1360
Volume (vph)	10	105	130	170	255	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	111	137	179	268	5
RTOR Reduction (vph)	0	100	0	0	0	1
Lane Group Flow (vph)	11	11	137	179	268	4
Heavy Vehicles (%)	0%	14%	15%	6%	6%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	4.5	4.5	32.5	32.5	32.5	32.5
Effective Green, g (s)	4.5	4.5	32.5	32.5	32.5	32.5
Actuated g/C Ratio	0.10	0.10	0.72	0.72	0.72	0.72
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)	152	119	597	2071	1090	982
v/s Ratio Prot	0.01			0.06	c0.18	
v/s Ratio Perm		c0.01	0.17			0.00
v/c Ratio	0.07	0.09	0.23	0.09	0.25	0.00
Uniform Delay, d1	18.4	18.4	2.1	1.9	2.1	1.7
Progression Factor	1.00	1.00	1.51	0.94	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.8	0.1	0.5	0.0
Delay (s)	18.6	18.7	3.9	1.8	2.6	1.7
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.7			2.7	2.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

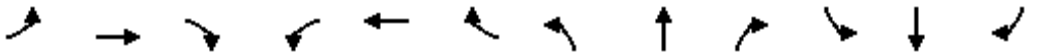
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.99	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1000		3909	1147	2633		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1000		3909	1147	2633		2347			
Volume (vph)	0	1335	470	0	1305	1150	410	0	830	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1405	495	0	1374	1211	432	0	874	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1405	495	0	1438	1143	432	0	870	0	0	0
Heavy Vehicles (%)	0%	2%	17%	0%	5%	2%	12%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		44.0	120.0		44.0	120.0	68.0		68.0			
Effective Green, g (s)		44.0	120.0		44.0	120.0	68.0		68.0			
Actuated g/C Ratio		0.37	1.00		0.37	1.00	0.57		0.57			
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)		1484	1000		1433	1147	1492		1330			
v/s Ratio Prot		0.35			0.37		0.16		0.37			
v/s Ratio Perm			0.50			c1.00						
v/c Ratio		0.95	0.49		1.00	1.00	0.29		0.65			
Uniform Delay, d1		36.9	0.0		38.0	0.0	13.5		17.9			
Progression Factor		0.91	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		11.8	0.3		24.5	25.5	0.1		1.2			
Delay (s)		45.4	0.3		62.5	25.5	13.6		19.1			
Level of Service		D	A		E	C	B		B			
Approach Delay (s)		33.7			46.2			17.3			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

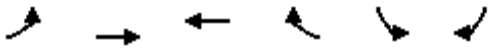
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		0.96	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3894	1083		3719	1083				2782		2237
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3894	1083		3719	1083				2782		2237
Volume (vph)	0	1275	520	0	815	900	0	0	0	530	0	750
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1342	547	0	858	947	0	0	0	558	0	789
RTOR Reduction (vph)	0	0	214	0	43	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	1342	333	0	1128	634	0	0	0	558	0	655
Heavy Vehicles (%)	0%	6%	8%	0%	6%	8%	0%	0%	0%	6%	0%	7%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		73.1	73.1		73.1	120.0				38.9		38.9
Effective Green, g (s)		73.1	73.1		73.1	120.0				38.9		38.9
Actuated g/C Ratio		0.61	0.61		0.61	1.00				0.32		0.32
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)		2372	660		2265	1083				902		725
v/s Ratio Prot		0.34			0.30					0.20		
v/s Ratio Perm			0.31			c0.59						c0.29
v/c Ratio		0.57	0.50		0.50	0.59				0.62		0.90
Uniform Delay, d1		14.0	13.2		13.2	0.0				34.3		38.8
Progression Factor		1.00	1.00		0.48	1.00				1.00		1.00
Incremental Delay, d2		1.0	2.7		0.6	0.1				1.3		14.6
Delay (s)		15.0	16.0		6.9	0.1				35.6		53.4
Level of Service		B	B		A	A				D		D
Approach Delay (s)		15.3			4.5			0.0			46.0	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

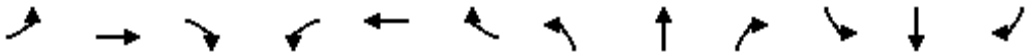
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1476	3865	3766	1347	2920	1333
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1476	3865	3766	1347	2920	1333
Volume (vph)	295	1270	1310	305	430	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	1337	1379	321	453	226
RTOR Reduction (vph)	0	0	0	189	0	181
Lane Group Flow (vph)	311	1337	1379	132	453	45
Heavy Vehicles (%)	3%	13%	16%	1%	1%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	19.0	56.0	33.0	33.0	16.0	16.0
Effective Green, g (s)	19.0	56.0	33.0	33.0	16.0	16.0
Actuated g/C Ratio	0.24	0.70	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	2706	1553	556	584	267
v/s Ratio Prot	c0.21	0.35	c0.37		c0.16	
v/s Ratio Perm				0.10		0.03
v/c Ratio	0.89	0.49	0.89	0.24	0.78	0.17
Uniform Delay, d1	29.5	5.5	21.8	15.3	30.3	26.5
Progression Factor	1.00	1.00	0.56	0.11	1.00	1.00
Incremental Delay, d2	22.4	0.6	7.6	1.0	9.7	1.4
Delay (s)	51.9	6.2	19.8	2.6	40.0	27.9
Level of Service	D	A	B	A	D	C
Approach Delay (s)		14.8	16.5		36.0	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		3935	680	760	3935		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		3935	680	760	3935		1474	680				
Volume (vph)	0	1935	590	30	2635	0	490	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2037	621	32	2774	0	516	0	21	0	0	0
RTOR Reduction (vph)	0	0	82	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	2037	539	32	2774	0	516	7	0	0	0	0
Heavy Vehicles (%)	0%	11%	100%	100%	11%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		custom	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4 2			8				6		
Actuated Green, G (s)		57.0	100.0	12.0	73.0		39.0	39.0				
Effective Green, g (s)		57.0	100.0	12.0	73.0		39.0	39.0				
Actuated g/C Ratio		0.48	0.83	0.10	0.61		0.32	0.32				
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)		1869	567	76	2394		479	221				
v/s Ratio Prot		0.52		0.04	c0.70		c0.35	0.01				
v/s Ratio Perm			0.79									
v/c Ratio		1.09	0.95	0.42	1.16		1.08	0.03				
Uniform Delay, d1		31.5	8.0	50.7	23.5		40.5	27.6				
Progression Factor		1.00	1.00	1.23	0.31		1.00	1.00				
Incremental Delay, d2		49.9	25.8	2.3	74.7		63.5	0.1				
Delay (s)		81.4	33.8	64.5	82.1		104.0	27.7				
Level of Service		F	C	E	F		F	C				
Approach Delay (s)		70.3			81.9			101.0			0.0	
Approach LOS		E			F			F			A	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2681	4007	1966	4368	2808	2378
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2681	4007	1966	4368	2808	2378
Volume (vph)	1000	545	140	1395	430	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1053	574	147	1468	453	568
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1053	574	147	1468	453	568
Heavy Vehicles (%)	10%	9%	50%	0%	5%	24%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	43.0	68.6	13.4	39.0	26.0	26.0
Effective Green, g (s)	43.0	68.6	13.4	39.0	26.0	26.0
Actuated g/C Ratio	0.36	0.57	0.11	0.32	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	961	2291	220	1420	608	515
v/s Ratio Prot	c0.39	0.14	0.07	c0.34	0.16	c0.24
v/s Ratio Perm						
v/c Ratio	1.10	0.25	0.67	1.03	0.75	1.10
Uniform Delay, d1	38.5	12.8	51.2	40.5	43.9	47.0
Progression Factor	0.25	0.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	44.9	0.0	7.5	33.1	4.9	70.8
Delay (s)	54.6	0.1	58.6	73.6	48.8	117.8
Level of Service	D	A	E	E	D	F
Approach Delay (s)		35.4		72.2		
Approach LOS		D		E		

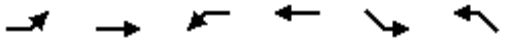
Intersection Summary			
HCM Average Control Delay	61.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	1979	4368	1474	4325	2397	2587
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	1979	4368	1474	4325	2397	2587
Volume (vph)	1010	1065	20	695	520	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1063	1121	21	732	547	221
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1063	1121	21	732	547	221
Heavy Vehicles (%)	49%	0%	100%	1%	23%	14%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	50.0	64.6	2.4	17.0	21.0	21.0
Effective Green, g (s)	50.0	64.6	2.4	17.0	21.0	21.0
Actuated g/C Ratio	0.50	0.65	0.02	0.17	0.21	0.21
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)	990	2822	35	735	503	543
v/s Ratio Prot	c0.54	0.26	0.01	c0.17	c0.23	0.09
v/s Ratio Perm						
v/c Ratio	1.07	0.40	0.60	1.00	1.09	0.41
Uniform Delay, d1	25.0	8.4	48.3	41.5	39.5	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.6	0.4	24.7	32.2	65.9	0.5
Delay (s)	75.6	8.8	73.0	73.7	105.4	34.6
Level of Service	E	A	E	E	F	C
Approach Delay (s)		41.3		73.7		
Approach LOS		D		E		

Intersection Summary			
HCM Average Control Delay	57.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	3010	2610	4007	2949	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	3010	2610	4007	2949	2756
Volume (vph)	440	430	240	230	700	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	453	253	242	737	158
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	463	453	253	242	737	158
Heavy Vehicles (%)	2%	1%	13%	9%	0%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	33.0	50.8	15.4	33.2	31.8	31.8
Effective Green, g (s)	33.0	50.8	15.4	33.2	31.8	31.8
Actuated g/C Ratio	0.30	0.46	0.14	0.30	0.29	0.29
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)	867	1390	365	1209	853	797
v/s Ratio Prot	c0.16	c0.15	c0.10	0.06	c0.25	0.06
v/s Ratio Perm						
v/c Ratio	0.53	0.33	0.69	0.20	0.86	0.20
Uniform Delay, d1	32.1	18.8	45.0	28.5	37.1	29.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6	5.6	0.4	9.1	0.1
Delay (s)	32.7	19.4	50.7	28.9	46.1	29.6
Level of Service	C	B	D	C	D	C
Approach Delay (s)		26.1		40.0		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2610	4241	2782	4007	2808	2437
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2610	4241	2782	4007	2808	2437
Volume (vph)	640	430	340	370	630	530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	453	358	389	663	558
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	674	453	358	389	663	558
Heavy Vehicles (%)	13%	3%	6%	9%	5%	21%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.0	31.4	14.6	19.0	22.0	22.0
Effective Green, g (s)	27.0	31.4	14.6	19.0	22.0	22.0
Actuated g/C Ratio	0.34	0.39	0.18	0.24	0.28	0.28
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)	881	1665	508	952	772	670
v/s Ratio Prot	c0.26	0.11	c0.13	c0.10	c0.24	0.23
v/s Ratio Perm						
v/c Ratio	0.77	0.27	0.70	0.41	0.86	0.83
Uniform Delay, d1	23.7	16.5	30.7	25.8	27.5	27.3
Progression Factor	0.96	0.90	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.3	4.4	1.3	9.4	8.7
Delay (s)	26.0	15.2	35.1	27.1	36.9	36.0
Level of Service	C	B	D	C	D	D
Approach Delay (s)		21.6		30.9		
Approach LOS		C		C		

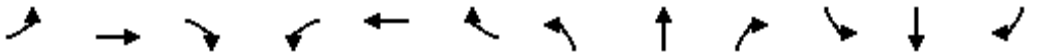
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2782	4282	2705	4082	2756	2657
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2782	4282	2705	4082	2756	2657
Volume (vph)	310	505	350	375	760	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	532	368	395	800	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	326	532	368	395	800	189
Heavy Vehicles (%)	6%	2%	9%	7%	7%	11%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.1	11.9	10.4	10.2	18.7	18.7
Effective Green, g (s)	12.1	11.9	10.4	10.2	18.7	18.7
Actuated g/C Ratio	0.23	0.22	0.20	0.19	0.35	0.35
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)	635	961	531	786	972	937
v/s Ratio Prot	0.12	c0.12	c0.14	0.10	c0.29	0.07
v/s Ratio Perm						
v/c Ratio	0.51	0.55	0.69	0.50	0.82	0.20
Uniform Delay, d1	17.9	18.2	19.8	19.1	15.6	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.7	3.9	0.5	5.7	0.1
Delay (s)	18.6	18.9	23.7	19.6	21.4	12.1
Level of Service	B	B	C	B	C	B
Approach Delay (s)		18.8		21.6		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4194			4282	1320			2370	2891		1153
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4194			4282	1320			2370	2891		1153
Volume (vph)	200	1505	100	0	1435	455	0	0	100	480	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1584	105	0	1511	479	0	0	105	505	0	16
RTOR Reduction (vph)	0	8	0	0	0	316	0	0	29	0	0	12
Lane Group Flow (vph)	211	1681	0	0	1511	163	0	0	76	505	0	4
Heavy Vehicles (%)	0%	3%	6%	0%	2%	3%	0%	0%	1%	2%	0%	18%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	14.1	48.8			30.7	30.7			7.1	22.1		22.1
Effective Green, g (s)	14.1	48.8			30.7	30.7			7.1	22.1		22.1
Actuated g/C Ratio	0.16	0.54			0.34	0.34			0.08	0.25		0.25
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)	238	2274			1461	450			187	710		283
v/s Ratio Prot	c0.14	0.40			c0.35					c0.17		
v/s Ratio Perm						0.12			c0.03			0.00
v/c Ratio	0.89	0.74			1.03	0.36			0.41	0.71		0.01
Uniform Delay, d1	37.2	15.7			29.6	22.3			39.5	31.0		25.7
Progression Factor	1.00	1.00			0.72	0.96			1.00	0.96		0.92
Incremental Delay, d2	30.1	2.2			31.8	2.1			1.5	3.3		0.0
Delay (s)	67.2	17.9			53.2	23.4			40.9	33.0		23.7
Level of Service	E	B			D	C			D	C		C
Approach Delay (s)		23.4			46.0			40.9			32.7	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2705	4368	2863	2782
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2705	4368	2863	2782
Volume (vph)	420	530	570	390	300	900
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	558	600	411	316	947
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	558	600	411	316	947
Heavy Vehicles (%)	5%	3%	9%	0%	3%	6%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.2	19.2	25.0	26.0	33.8	33.8
Effective Green, g (s)	18.2	19.2	25.0	26.0	33.8	33.8
Actuated g/C Ratio	0.20	0.21	0.28	0.29	0.38	0.38
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)	568	905	751	1262	1075	1045
v/s Ratio Prot	c0.16	0.13	c0.22	0.09	0.11	c0.34
v/s Ratio Perm						
v/c Ratio	0.78	0.62	0.80	0.33	0.29	0.91
Uniform Delay, d1	34.0	32.1	30.2	25.1	19.7	26.6
Progression Factor	1.13	1.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	2.0	6.0	0.7	0.2	11.1
Delay (s)	42.5	37.7	36.1	25.8	19.9	37.7
Level of Service	D	D	D	C	B	D
Approach Delay (s)		39.8		31.9		
Approach LOS		D		C		

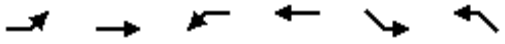
Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	3040	2730	3040	2705	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	3040	2730	3040	2705	2808
Volume (vph)	270	1105	750	370	320	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1163	789	389	337	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1163	789	389	337	642
Heavy Vehicles (%)	4%	0%	8%	0%	9%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	13.2	33.0	25.0	44.8	20.0	20.0
Effective Green, g (s)	13.2	33.0	25.0	44.8	20.0	20.0
Actuated g/C Ratio	0.15	0.37	0.28	0.50	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	1115	758	1513	601	624
v/s Ratio Prot	0.10	c0.38	c0.29	0.13	0.12	c0.23
v/s Ratio Perm						
v/c Ratio	0.68	1.04	1.04	0.26	0.56	1.03
Uniform Delay, d1	36.4	28.5	32.5	13.0	31.1	35.0
Progression Factor	1.00	1.00	0.69	0.32	1.00	1.00
Incremental Delay, d2	4.6	38.9	37.3	0.3	1.2	43.6
Delay (s)	41.0	67.4	59.8	4.5	32.3	78.6
Level of Service	D	E	E	A	C	E
Approach Delay (s)		62.2		41.5		
Approach LOS		E		D		

Intersection Summary			
HCM Average Control Delay	55.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4082	2633	4325	2705	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4082	2633	4325	2705	2835
Volume (vph)	420	760	500	705	320	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	800	526	742	337	589
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	800	526	742	337	589
Heavy Vehicles (%)	2%	7%	12%	1%	9%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	22.9	41.6	37.0	55.7	29.4	29.4
Effective Green, g (s)	22.9	41.6	37.0	55.7	29.4	29.4
Actuated g/C Ratio	0.19	0.35	0.31	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	1415	812	2008	663	695
v/s Ratio Prot	c0.15	c0.20	c0.20	0.17	0.12	c0.21
v/s Ratio Perm						
v/c Ratio	0.80	0.57	0.65	0.37	0.51	0.85
Uniform Delay, d1	46.4	31.9	35.9	20.8	39.1	43.2
Progression Factor	1.00	1.00	0.40	0.35	1.00	1.00
Incremental Delay, d2	8.2	1.6	0.9	0.3	0.6	9.4
Delay (s)	54.5	33.5	15.5	7.6	39.7	52.6
Level of Service	D	C	B	A	D	D
Approach Delay (s)		41.0		10.8		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	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	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4007	2542	4282	2782	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4007	2542	4282	2782	2835
Volume (vph)	440	755	520	690	370	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	795	547	726	389	568
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	463	795	547	726	389	568
Heavy Vehicles (%)	3%	9%	16%	2%	6%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.0	42.6	37.0	55.6	28.4	28.4
Effective Green, g (s)	24.0	42.6	37.0	55.6	28.4	28.4
Actuated g/C Ratio	0.20	0.36	0.31	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	573	1422	784	1984	658	671
v/s Ratio Prot	c0.16	c0.20	c0.22	0.17	0.14	c0.20
v/s Ratio Perm						
v/c Ratio	0.81	0.56	0.70	0.37	0.59	0.85
Uniform Delay, d1	45.8	31.1	36.6	20.8	40.6	43.7
Progression Factor	1.00	1.00	0.40	0.34	1.00	1.00
Incremental Delay, d2	8.2	1.6	1.3	0.3	1.4	9.7
Delay (s)	54.0	32.7	15.8	7.4	42.1	53.4
Level of Service	D	C	B	A	D	D
Approach Delay (s)		40.6		11.0		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2739			2203	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2739			2203	760	680
Volume (vph)	180	0	0	240	145	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	0	0	253	153	184
RTOR Reduction (vph)	0	0	0	0	0	60
Lane Group Flow (vph)	189	0	0	253	153	124
Heavy Vehicles (%)	11%	0%	0%	38%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.6			11.6	40.4	40.4
Effective Green, g (s)	11.6			11.6	40.4	40.4
Actuated g/C Ratio	0.19			0.19	0.67	0.67
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)	530			426	512	458
v/s Ratio Prot	0.07			c0.11	c0.20	
v/s Ratio Perm						0.18
v/c Ratio	0.36			0.59	0.30	0.27
Uniform Delay, d1	21.0			22.1	4.0	3.9
Progression Factor	0.71			1.00	1.00	1.00
Incremental Delay, d2	0.4			2.2	1.5	1.5
Delay (s)	15.4			24.3	5.5	5.4
Level of Service	B			C	A	A
Approach Delay (s)	15.4			24.3	5.4	
Approach LOS	B			C	A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2739	680	760	2097		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2739	680	760	2097		
Volume (vph)	180	90	110	275	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	95	116	289	0	0
RTOR Reduction (vph)	0	32	0	0	0	0
Lane Group Flow (vph)	189	63	116	289	0	0
Heavy Vehicles (%)	11%	100%	100%	45%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	39.5	39.5	12.5	60.0		
Effective Green, g (s)	39.5	39.5	12.5	60.0		
Actuated g/C Ratio	0.66	0.66	0.21	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1803	448	158	2097		
v/s Ratio Prot	0.07		c0.15	c0.14		
v/s Ratio Perm		0.09				
v/c Ratio	0.10	0.14	0.73	0.14		
Uniform Delay, d1	3.8	3.9	22.2	0.0		
Progression Factor	1.00	1.00	0.70	1.00		
Incremental Delay, d2	0.0	0.1	14.5	0.0		
Delay (s)	3.8	4.0	30.2	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.9			8.7	0.0	
Approach LOS	A			A	A	

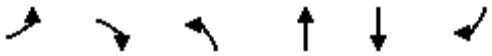
Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1185	1295	1169	967		1448	2573		1169	2891	
Flt Permitted	0.31	1.00	1.00	0.69	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	469	1185	1295	852	967		1448	2573		1169	2891	
Volume (vph)	10	95	400	90	90	95	150	450	120	55	715	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	100	421	95	95	100	158	474	126	58	753	7
RTOR Reduction (vph)	0	0	123	0	40	0	0	19	0	0	1	0
Lane Group Flow (vph)	11	100	298	95	155	0	158	581	0	58	759	0
Heavy Vehicles (%)	5%	35%	5%	30%	45%	60%	5%	5%	50%	30%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.8	13.8	29.3	20.8	20.8		15.5	53.9		8.5	46.9	
Effective Green, g (s)	13.8	13.8	29.3	20.8	20.8		15.5	53.9		8.5	46.9	
Actuated g/C Ratio	0.14	0.14	0.29	0.21	0.21		0.16	0.54		0.08	0.47	
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)	73	164	379	202	201		224	1387		99	1356	
v/s Ratio Prot	0.00	0.08	c0.12	0.04	c0.16		0.11	0.23		0.05	c0.26	
v/s Ratio Perm	0.02		0.11	0.06								
v/c Ratio	0.15	0.61	0.79	0.47	0.77		0.71	0.42		0.59	0.56	
Uniform Delay, d1	37.9	40.6	32.5	35.3	37.3		40.1	13.7		44.1	19.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.3	10.3	1.7	16.1		9.7	0.9		8.6	1.7	
Delay (s)	38.9	46.9	42.8	37.0	53.5		49.8	14.7		52.6	20.8	
Level of Service	D	D	D	D	D		D	B		D	C	
Approach Delay (s)		43.5			48.1			22.0			23.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

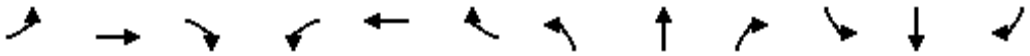
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1843	1007	1086	5242	2708	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1843	1007	1086	5242	2708	
Volume (vph)	260	95	85	980	950	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	100	89	1032	1000	163
RTOR Reduction (vph)	0	82	0	0	12	0
Lane Group Flow (vph)	274	18	89	1032	1151	0
Heavy Vehicles (%)	60%	35%	40%	5%	5%	40%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	17.8	17.8	9.5	54.7	60.7	
Effective Green, g (s)	17.8	17.8	9.5	54.7	60.7	
Actuated g/C Ratio	0.18	0.18	0.10	0.55	0.61	
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)	328	179	103	2867	1644	
v/s Ratio Prot	c0.15		c0.08	0.20	c0.43	
v/s Ratio Perm		0.02				
v/c Ratio	0.84	0.10	0.86	0.36	0.70	
Uniform Delay, d1	39.7	34.4	44.6	12.8	13.4	
Progression Factor	1.00	1.00	1.00	1.00	0.09	
Incremental Delay, d2	16.6	0.2	48.2	0.4	0.9	
Delay (s)	56.3	34.6	92.8	13.1	2.1	
Level of Service	E	C	F	B	A	
Approach Delay (s)	50.5			19.5	2.1	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

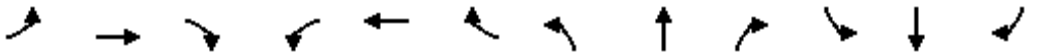
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.87			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2730	1331			2598	2081	1490	2763	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1347		2730	1331			2598	2081	1490	2763	
Volume (vph)	5	0	5	100	5	30	0	985	255	25	1000	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	105	5	32	0	1037	268	26	1053	5
RTOR Reduction (vph)	0	4	0	0	22	0	0	0	121	0	1	0
Lane Group Flow (vph)	0	6	0	105	15	0	0	1037	147	26	1057	0
Heavy Vehicles (%)	2%	2%	2%	8%	2%	5%	2%	17%	15%	2%	10%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		17.8		9.1	30.9			54.7	54.7	2.4	47.6	
Effective Green, g (s)		17.8		9.1	30.9			54.7	54.7	2.4	47.6	
Actuated g/C Ratio		0.18		0.09	0.31			0.55	0.55	0.02	0.48	
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)		240		248	411			1421	1138	36	1315	
v/s Ratio Prot				c0.04	c0.01			c0.40	0.07	0.02	c0.38	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.42	0.04			0.73	0.13	0.72	0.80	
Uniform Delay, d1		33.9		43.0	24.1			17.1	11.0	48.5	22.2	
Progression Factor		1.00		1.00	1.00			0.55	0.34	1.00	1.00	
Incremental Delay, d2		0.0		1.2	0.0			3.0	0.2	52.1	5.3	
Delay (s)		34.0		44.1	24.2			12.5	4.0	100.6	27.5	
Level of Service		C		D	C			B	A	F	C	
Approach Delay (s)		34.0			38.9			10.7			29.3	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

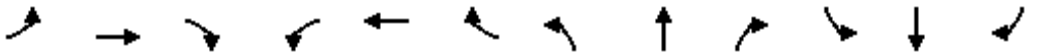
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	4153		2956	4107	1376	1538	4144	2377	2984	4107	2355
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	4153		2956	4107	1376	1538	4144	2377	2984	4107	2355
Volume (vph)	160	695	40	310	330	350	60	680	920	260	790	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	732	42	326	347	368	63	716	968	274	832	279
RTOR Reduction (vph)	0	6	0	0	0	108	0	0	33	0	0	156
Lane Group Flow (vph)	168	768	0	326	347	260	63	716	935	274	832	123
Heavy Vehicles (%)	8%	11%	8%	6%	13%	5%	5%	12%	7%	5%	13%	8%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	15.8	23.2		26.0	33.4	47.2	6.4	21.0	47.0	13.8	28.4	44.2
Effective Green, g (s)	15.8	23.2		26.0	33.4	47.2	6.4	21.0	47.0	13.8	28.4	44.2
Actuated g/C Ratio	0.16	0.23		0.26	0.33	0.47	0.06	0.21	0.47	0.14	0.28	0.44
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)	236	963		769	1372	649	98	870	1212	412	1166	1135
v/s Ratio Prot	0.11	c0.18		0.11	0.08	0.06	0.04	c0.17	c0.20	0.09	c0.20	0.02
v/s Ratio Perm						0.13			0.19			0.04
v/c Ratio	0.71	0.80		0.42	0.25	0.40	0.64	0.82	0.77	0.67	0.71	0.11
Uniform Delay, d1	39.9	36.2		30.8	24.2	17.2	45.7	37.7	22.0	40.9	32.1	16.4
Progression Factor	0.84	0.79		0.57	0.46	0.98	0.38	0.48	0.31	0.95	0.93	0.70
Incremental Delay, d2	9.5	6.7		0.3	0.4	0.4	6.8	4.4	1.5	3.9	3.6	0.0
Delay (s)	42.9	35.2		17.8	11.5	17.2	23.9	22.5	8.4	42.7	33.6	11.4
Level of Service	D	D		B	B	B	C	C	A	D	C	B
Approach Delay (s)		36.6			15.5			14.7			30.9	
Approach LOS		D			B			B			C	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

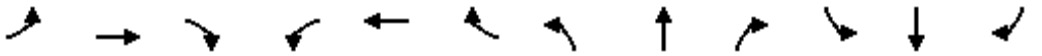
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4181	1363		4181					2901	1574	2355
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4181	1363		4181					2901	1574	2355
Volume (vph)	0	735	410	0	655	0	0	0	0	160	380	435
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	774	432	0	689	0	0	0	0	168	400	458
RTOR Reduction (vph)	0	0	143	0	0	0	0	0	0	0	0	164
Lane Group Flow (vph)	0	774	290	0	689	0	0	0	0	168	400	294
Heavy Vehicles (%)	0%	11%	6%	8%	11%	0%	0%	0%	0%	8%	8%	8%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		62.5	62.5		62.5					29.5	29.5	29.5
Effective Green, g (s)		62.5	62.5		62.5					29.5	29.5	29.5
Actuated g/C Ratio		0.62	0.62		0.62					0.29	0.29	0.29
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)		2613	852		2613					856	464	695
v/s Ratio Prot		0.19			0.16					0.06	c0.25	
v/s Ratio Perm			c0.21									0.13
v/c Ratio		0.30	0.34		0.26					0.20	0.86	0.42
Uniform Delay, d1		8.6	8.9		8.4					26.4	33.3	28.4
Progression Factor		1.00	1.00		0.82					1.00	1.00	1.00
Incremental Delay, d2		0.3	1.1		0.2					0.1	15.1	0.4
Delay (s)		8.9	10.0		7.2					26.5	48.5	28.8
Level of Service		A	B		A					C	D	C
Approach Delay (s)		9.3			7.2			0.0			36.1	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

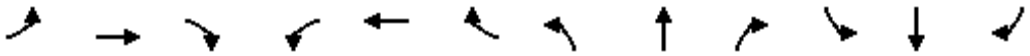
c Critical Lane Group



Movement	EBL	EBT	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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	3312	2656	3273	3343	1495	3273	1669		1671	1776	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	3312	2656	3273	3343	1495	3273	1669		1671	1776	1495
Volume (vph)	30	825	1020	200	760	30	205	60	40	35	250	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	868	1074	211	800	32	216	63	42	37	263	26
RTOR Reduction (vph)	0	0	146	0	0	16	0	22	0	0	0	21
Lane Group Flow (vph)	32	868	928	211	800	16	216	83	0	37	263	5
Heavy Vehicles (%)	9%	9%	7%	7%	8%	8%	7%	7%	7%	8%	7%	8%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	36.7	55.8	9.7	42.8	50.4	19.1	30.0		7.6	18.5	18.5
Effective Green, g (s)	3.6	36.7	55.8	9.7	42.8	50.4	19.1	30.0		7.6	18.5	18.5
Actuated g/C Ratio	0.04	0.37	0.56	0.10	0.43	0.50	0.19	0.30		0.08	0.18	0.18
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)	60	1216	1482	317	1431	813	625	501		127	329	277
v/s Ratio Prot	0.02	c0.26	c0.12	c0.06	0.24	0.00	0.07	0.05		0.02	c0.15	
v/s Ratio Perm			0.23			0.01						0.00
v/c Ratio	0.53	0.71	0.63	0.67	0.56	0.02	0.35	0.16		0.29	0.80	0.02
Uniform Delay, d1	47.4	27.1	15.0	43.6	21.5	12.4	35.0	25.8		43.7	39.0	33.3
Progression Factor	1.03	0.82	0.55	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	2.2	0.5	5.2	1.6	0.0	0.3	0.2		1.3	12.7	0.0
Delay (s)	54.4	24.5	8.7	48.8	23.1	12.4	35.4	25.9		44.9	51.7	33.3
Level of Service	D	C	A	D	C	B	D	C		D	D	C
Approach Delay (s)		16.4			28.0			32.3			49.5	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

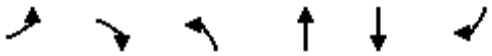
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3047	1338					5365	1363	2956	4144	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3047	1338					5365	1363	2956	4144	
Volume (vph)	0	260	530	0	0	0	0	1660	460	270	870	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	274	558	0	0	0	0	1747	484	284	916	0
RTOR Reduction (vph)	0	0	65	0	0	0	0	0	223	0	0	0
Lane Group Flow (vph)	0	274	493	0	0	0	0	1747	261	284	916	0
Heavy Vehicles (%)	0%	6%	8%	0%	0%	0%	0%	9%	6%	6%	12%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		38.4	38.4					37.8	37.8	11.8	53.6	
Effective Green, g (s)		38.4	38.4					37.8	37.8	11.8	53.6	
Actuated g/C Ratio		0.38	0.38					0.38	0.38	0.12	0.54	
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)		1170	514					2028	515	349	2221	
v/s Ratio Prot		0.09						c0.33		c0.10	0.22	
v/s Ratio Perm			c0.37						0.19			
v/c Ratio		0.23	0.96					0.86	0.51	0.81	0.41	
Uniform Delay, d1		20.8	30.0					28.7	23.9	43.0	13.8	
Progression Factor		0.62	0.46					1.00	1.00	0.69	1.02	
Incremental Delay, d2		0.1	24.6					5.1	3.5	10.7	0.4	
Delay (s)		12.9	38.5					33.8	27.5	40.5	14.6	
Level of Service		B	D					C	C	D	B	
Approach Delay (s)		30.1			0.0			32.4			20.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
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		

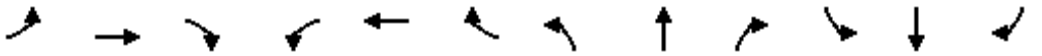
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2377		4219	4144	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2377		4219	4144	
Volume (vph)	0	305	0	1190	1010	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	321	0	1253	1063	0
RTOR Reduction (vph)	0	129	0	0	0	0
Lane Group Flow (vph)	0	192	0	1253	1063	0
Heavy Vehicles (%)	0%	7%	0%	10%	12%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		12.2		79.8	79.8	
Effective Green, g (s)		12.2		79.8	79.8	
Actuated g/C Ratio		0.12		0.80	0.80	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		290		3367	3307	
v/s Ratio Prot				c0.30	0.26	
v/s Ratio Perm		c0.08				
v/c Ratio		0.66		0.37	0.32	
Uniform Delay, d1		41.9		2.9	2.7	
Progression Factor		1.00		0.39	1.00	
Incremental Delay, d2		5.6		0.2	0.3	
Delay (s)		47.5		1.3	3.0	
Level of Service		D		A	A	
Approach Delay (s)	47.5			1.3	3.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.7%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1429	2784	1062	3042	4641	1326	1233	3900	1302	1615	4337	1376
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1429	2784	1062	3042	4641	1326	1233	3900	1302	1615	4337	1376
Volume (vph)	70	335	105	360	205	395	30	685	775	180	705	525
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	353	111	379	216	416	32	721	816	189	742	553
RTOR Reduction (vph)	0	0	56	0	0	250	0	0	0	0	0	121
Lane Group Flow (vph)	74	353	55	379	216	166	32	721	816	189	742	432
Heavy Vehicles (%)	13%	16%	36%	3%	0%	9%	31%	19%	11%	0%	7%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	27.1	26.0	34.2	19.1	18.0	36.4	8.2	40.5	120.0	18.4	50.7	77.8
Effective Green, g (s)	27.1	26.0	34.2	19.1	18.0	36.4	8.2	40.5	120.0	18.4	50.7	77.8
Actuated g/C Ratio	0.23	0.22	0.29	0.16	0.15	0.30	0.07	0.34	1.00	0.15	0.42	0.65
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)	323	603	303	484	696	402	84	1316	1302	248	1832	892
v/s Ratio Prot	0.05	0.13	0.01	c0.12	0.05	0.06	0.03	0.18		c0.12	0.17	0.11
v/s Ratio Perm			0.04			0.06			c0.63			0.20
v/c Ratio	0.23	0.59	0.18	0.78	0.31	0.41	0.38	0.55	0.63	0.76	0.41	0.48
Uniform Delay, d1	37.9	42.2	32.4	48.5	45.5	33.3	53.5	32.3	0.0	48.7	24.1	10.8
Progression Factor	0.62	0.32	0.20	0.57	0.83	3.22	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	3.8	0.3	7.0	1.0	0.6	2.9	1.6	2.3	12.9	0.7	0.4
Delay (s)	23.9	17.4	6.9	34.5	38.9	107.6	56.3	34.0	2.3	61.6	24.8	11.2
Level of Service	C	B	A	C	D	F	E	C	A	E	C	B
Approach Delay (s)		16.1			65.5			17.9			24.4	
Approach LOS		B			E			B			C	

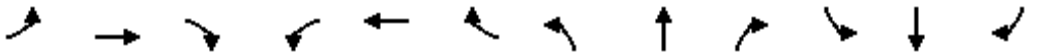
Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3900	1350	1495	4378	2823	1194
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3900	1350	1495	4378	2823	1194
Volume (vph)	405	610	480	280	165	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	426	642	505	295	174	111
RTOR Reduction (vph)	0	0	0	0	0	100
Lane Group Flow (vph)	426	642	505	295	174	11
Heavy Vehicles (%)	19%	7%	8%	6%	11%	21%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	33.6	120.0	62.0	99.6	12.4	12.4
Effective Green, g (s)	33.6	120.0	62.0	99.6	12.4	12.4
Actuated g/C Ratio	0.28	1.00	0.52	0.83	0.10	0.10
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)	1092	1350	772	3634	292	123
v/s Ratio Prot	0.11		c0.34	0.07	0.06	
v/s Ratio Perm		c0.48				0.01
v/c Ratio	0.39	0.48	0.65	0.08	0.60	0.09
Uniform Delay, d1	34.9	0.0	21.2	1.9	51.4	48.7
Progression Factor	1.00	1.00	0.87	0.81	1.00	1.00
Incremental Delay, d2	1.1	1.2	1.8	0.0	3.3	0.3
Delay (s)	36.0	1.2	20.2	1.5	54.7	49.0
Level of Service	D	A	C	A	D	D
Approach Delay (s)	15.1			13.3	52.5	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
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	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
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)	1805	3223	1482	3400	3471	1615	3183	3175		1805	1726	
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)	1805	3223	1482	3400	3471	1615	3183	3175		1805	1726	
Volume (vph)	10	845	435	460	825	15	125	530	135	5	575	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	889	458	484	868	16	132	558	142	5	605	5
RTOR Reduction (vph)	0	0	0	0	0	8	0	18	0	0	0	0
Lane Group Flow (vph)	11	889	458	484	868	8	132	682	0	5	610	0
Heavy Vehicles (%)	0%	12%	9%	3%	4%	0%	10%	8%	19%	0%	10%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	1.6	35.4	120.0	18.4	52.2	58.1	10.2	44.3		5.9	40.0	
Effective Green, g (s)	1.6	35.4	120.0	18.4	52.2	58.1	10.2	44.3		5.9	40.0	
Actuated g/C Ratio	0.01	0.29	1.00	0.15	0.44	0.48	0.08	0.37		0.05	0.33	
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)	24	951	1482	521	1510	782	271	1172		89	575	
v/s Ratio Prot	0.01	c0.28		c0.14	0.25	0.00	0.04	c0.21		0.00	c0.35	
v/s Ratio Perm			0.31			0.00						
v/c Ratio	0.46	0.93	0.31	0.93	0.57	0.01	0.49	0.58		0.06	1.06	
Uniform Delay, d1	58.8	41.2	0.0	50.2	25.5	16.0	52.4	30.4		54.4	40.0	
Progression Factor	0.95	0.80	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.3	14.1	0.4	22.9	1.6	0.0	1.4	0.7		0.3	54.7	
Delay (s)	66.2	47.0	0.4	73.1	27.1	16.0	53.8	31.2		54.7	94.7	
Level of Service	E	D	A	E	C	B	D	C		D	F	
Approach Delay (s)		31.5			43.3			34.7			94.4	
Approach LOS		C			D			C			F	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3836	1417	1553	3626	1363	1524	3019	1376	1495	3076	1165
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3836	1417	1553	3626	1363	1524	3019	1376	1495	3076	1165
Volume (vph)	190	110	125	95	1140	50	115	490	140	90	545	160
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)	207	120	136	103	1239	54	125	533	152	98	592	174
RTOR Reduction (vph)	0	0	76	0	0	32	0	0	102	0	0	26
Lane Group Flow (vph)	207	120	60	103	1239	22	125	533	50	98	592	148
Heavy Vehicles (%)	6%	21%	2%	4%	28%	6%	6%	7%	5%	8%	5%	24%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.9	44.1	44.1	10.9	40.1	40.1	9.0	22.0	32.9	7.0	20.0	34.9
Effective Green, g (s)	14.9	44.1	44.1	10.9	40.1	40.1	9.0	22.0	32.9	7.0	20.0	34.9
Actuated g/C Ratio	0.15	0.44	0.44	0.11	0.40	0.40	0.09	0.22	0.33	0.07	0.20	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	1692	625	169	1454	547	137	664	508	105	615	453
v/s Ratio Prot	c0.14	0.03		0.07	c0.34		c0.08	0.18	0.01	0.07	c0.19	0.05
v/s Ratio Perm			c0.04			0.02			0.03			0.08
v/c Ratio	0.91	0.07	0.10	0.61	0.85	0.04	0.91	0.80	0.10	0.93	0.96	0.33
Uniform Delay, d1	41.9	16.1	16.3	42.5	27.3	18.2	45.1	36.9	23.3	46.3	39.6	23.9
Progression Factor	1.09	0.75	1.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	34.8	0.1	0.3	6.1	6.5	0.1	51.0	7.0	0.1	66.4	27.0	0.4
Delay (s)	80.4	12.2	19.5	48.6	33.8	18.4	96.2	43.9	23.4	112.6	66.7	24.3
Level of Service	F	B	B	D	C	B	F	D	C	F	E	C
Approach Delay (s)		44.8			34.3			48.1			63.4	
Approach LOS		D			C			D			E	

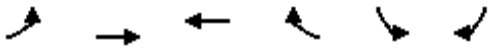
Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2238	4359			4150	1156	2429		1302			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2238	4359			4150	1156	2429		1302			
Volume (vph)	180	1265	0	0	1095	410	100	0	120	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)	196	1375	0	0	1190	446	109	0	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	158	0	0	72	0	0	0
Lane Group Flow (vph)	196	1375	0	0	1190	288	109	0	58	0	0	0
Heavy Vehicles (%)	40%	19%	0%	0%	25%	25%	29%	0%	11%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.0	81.5			64.5	64.5	10.5		10.5			
Effective Green, g (s)	13.0	81.5			64.5	64.5	10.5		10.5			
Actuated g/C Ratio	0.13	0.82			0.64	0.64	0.10		0.10			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	291	3553			2677	746	255		137			
v/s Ratio Prot	c0.09	0.32			c0.29							
v/s Ratio Perm						0.25	c0.04		0.04			
v/c Ratio	0.67	0.39			0.44	0.39	0.43		0.43			
Uniform Delay, d1	41.5	2.5			8.8	8.4	41.9		41.9			
Progression Factor	0.90	0.45			0.31	0.96	1.00		1.00			
Incremental Delay, d2	5.7	0.3			0.3	1.0	1.2		2.1			
Delay (s)	42.8	1.4			3.1	9.0	43.1		44.1			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		6.6			4.7			43.6			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

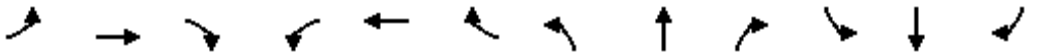
c Critical Lane Group



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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6156	4117		2870	2330
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6156	4117		2870	2330
Volume (vph)	0	940	1195	0	505	255
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1022	1299	0	549	277
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	0	1022	1299	0	549	240
Heavy Vehicles (%)	0%	25%	26%	0%	22%	22%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		51.0	51.0		41.0	41.0
Effective Green, g (s)		51.0	51.0		41.0	41.0
Actuated g/C Ratio		0.51	0.51		0.41	0.41
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)		3140	2100		1177	955
v/s Ratio Prot		0.17	c0.32			
v/s Ratio Perm					c0.19	0.10
v/c Ratio		0.33	0.62		0.47	0.25
Uniform Delay, d1		14.4	17.5		21.5	19.4
Progression Factor		0.17	0.56		1.00	1.00
Incremental Delay, d2		0.2	1.3		1.3	0.6
Delay (s)		2.6	11.1		22.9	20.0
Level of Service		A	B		C	C
Approach Delay (s)		2.6	11.1		21.9	
Approach LOS		A	B		C	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

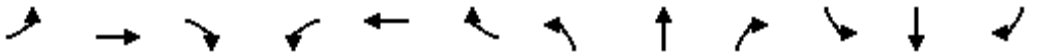
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	3967	1070	1009	4918	732	1196	1133	1070	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.59	1.00	1.00	0.57	1.00	1.00
Satd. Flow (perm)	1741	3967	1070	1009	4918	732	740	1133	1070	485	1615	722
Volume (vph)	385	835	80	240	975	235	30	20	50	75	245	170
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)	418	908	87	261	1060	255	33	22	54	82	266	185
RTOR Reduction (vph)	0	0	59	0	0	143	0	0	32	0	0	50
Lane Group Flow (vph)	418	908	28	261	1060	112	33	22	22	82	266	135
Heavy Vehicles (%)	80%	17%	35%	60%	12%	60%	35%	50%	35%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	27.0	32.3	32.3	28.3	33.6	43.8	15.6	13.2	41.5	27.4	21.0	48.0
Effective Green, g (s)	27.0	32.3	32.3	28.3	33.6	43.8	15.6	13.2	41.5	27.4	21.0	48.0
Actuated g/C Ratio	0.27	0.32	0.32	0.28	0.34	0.44	0.16	0.13	0.42	0.27	0.21	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	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	470	1281	346	286	1652	350	126	150	487	166	339	375
v/s Ratio Prot	0.24	c0.23		c0.26	0.22	c0.03	0.01	0.02	0.01	0.05	c0.16	0.10
v/s Ratio Perm			0.03			0.12	0.03		0.01	0.09		0.09
v/c Ratio	0.89	0.71	0.08	0.91	0.64	0.32	0.26	0.15	0.05	0.49	0.78	0.36
Uniform Delay, d1	35.1	29.7	23.5	34.7	28.1	18.4	36.6	38.4	17.4	29.4	37.4	16.3
Progression Factor	1.00	1.00	1.00	1.14	1.14	2.18	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.2	3.3	0.5	27.8	1.6	0.4	1.1	0.5	0.0	2.3	11.3	0.6
Delay (s)	53.3	33.1	24.0	67.2	33.8	40.4	37.7	38.9	17.5	31.7	48.7	16.9
Level of Service	D	C	C	E	C	D	D	D	B	C	D	B
Approach Delay (s)		38.5			40.4			27.9			35.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3836	1417	1553	3626	1363	1524	3019	1376	1495	3076	1165
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3836	1417	1553	3626	1363	1524	3019	1376	1495	3076	1165
Volume (vph)	190	1110	125	95	1140	50	115	490	140	90	545	160
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)	207	1207	136	103	1239	54	125	533	152	98	592	174
RTOR Reduction (vph)	0	0	76	0	0	34	0	0	57	0	0	34
Lane Group Flow (vph)	207	1207	60	103	1239	20	125	533	95	98	592	140
Heavy Vehicles (%)	6%	21%	2%	4%	28%	6%	6%	7%	5%	8%	5%	24%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.5	43.8	43.8	9.5	37.8	37.8	9.9	21.3	30.8	9.4	20.8	36.3
Effective Green, g (s)	15.5	43.8	43.8	9.5	37.8	37.8	9.9	21.3	30.8	9.4	20.8	36.3
Actuated g/C Ratio	0.16	0.44	0.44	0.10	0.38	0.38	0.10	0.21	0.31	0.09	0.21	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	1680	621	148	1371	515	151	643	479	141	640	469
v/s Ratio Prot	c0.14	0.31		0.07	c0.34		c0.08	0.18	0.02	0.07	c0.19	0.05
v/s Ratio Perm			0.04			0.01			0.05			0.07
v/c Ratio	0.88	0.72	0.10	0.70	0.90	0.04	0.83	0.83	0.20	0.70	0.93	0.30
Uniform Delay, d1	41.3	23.0	16.5	43.9	29.4	19.6	44.2	37.6	25.5	43.9	38.8	22.7
Progression Factor	0.91	0.86	2.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.3	2.4	0.3	13.3	10.0	0.1	29.5	8.7	0.2	13.8	19.3	0.4
Delay (s)	63.8	22.3	36.4	57.1	39.4	19.8	73.8	46.3	25.7	57.8	58.1	23.1
Level of Service	E	C	D	E	D	B	E	D	C	E	E	C
Approach Delay (s)		29.1			39.9			46.7			51.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2501	4433			6156	1292	2060		1262			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2501	4433			6156	1292	2060		1262			
Volume (vph)	180	1190	0	0	1095	410	270	0	195	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)	196	1293	0	0	1190	446	293	0	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	247	0	0	44	0	0	0
Lane Group Flow (vph)	196	1293	0	0	1190	199	293	0	168	0	0	0
Heavy Vehicles (%)	40%	17%	0%	0%	25%	25%	70%	0%	28%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	12.3	61.0			44.7	44.7	31.0		31.0			
Effective Green, g (s)	12.3	61.0			44.7	44.7	31.0		31.0			
Actuated g/C Ratio	0.12	0.61			0.45	0.45	0.31		0.31			
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)	308	2704			2752	578	639		391			
v/s Ratio Prot	c0.08	c0.29			0.19							
v/s Ratio Perm						0.15	c0.14		0.13			
v/c Ratio	0.64	0.48			0.43	0.34	0.46		0.43			
Uniform Delay, d1	41.7	10.7			19.0	18.1	27.7		27.5			
Progression Factor	0.84	0.84			0.57	3.03	1.00		1.00			
Incremental Delay, d2	4.0	0.6			0.3	1.0	2.4		3.4			
Delay (s)	39.0	9.6			11.1	55.7	30.1		30.9			
Level of Service	D	A			B	E	C		C			
Approach Delay (s)		13.5			23.2			30.4			0.0	
Approach LOS		B			C			C			A	

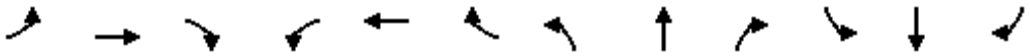
Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6256	1453	2238	3871					3072		2090
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6256	1453	2238	3871					3072		2090
Volume (vph)	0	865	525	125	1240	0	0	0	0	505	0	255
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	940	571	136	1348	0	0	0	0	549	0	277
RTOR Reduction (vph)	0	0	291	0	0	0	0	0	0	0	0	69
Lane Group Flow (vph)	0	940	280	136	1348	0	0	0	0	549	0	208
Heavy Vehicles (%)	0%	23%	75%	40%	34%	0%	0%	0%	0%	14%	0%	36%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		49.1	49.1	7.9	61.0					31.0		31.0
Effective Green, g (s)		49.1	49.1	7.9	61.0					31.0		31.0
Actuated g/C Ratio		0.49	0.49	0.08	0.61					0.31		0.31
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)		3072	713	177	2361					952		648
v/s Ratio Prot		0.15		c0.06	c0.35							
v/s Ratio Perm			0.19							c0.18		0.10
v/c Ratio		0.31	0.39	0.77	0.57					0.58		0.32
Uniform Delay, d1		15.2	16.1	45.2	11.7					29.0		26.4
Progression Factor		1.00	1.00	1.18	0.45					1.00		1.00
Incremental Delay, d2		0.3	1.6	16.6	0.9					2.5		1.3
Delay (s)		15.5	17.7	69.9	6.1					31.5		27.7
Level of Service		B	B	E	A					C		C
Approach Delay (s)		16.3			12.0			0.0			30.3	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

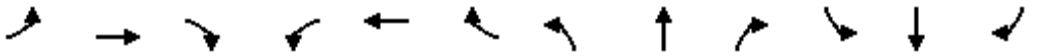


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.85		1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (prot)	1520	1699		1866	1600	1320		1659	712		2237	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (perm)	1520	1699		1866	1600	1320		1659	712		2237	
Volume (vph)	5	5	410	565	50	400	115	190	195	320	125	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	432	595	53	421	121	200	205	337	132	11
RTOR Reduction (vph)	0	372	0	0	0	231	0	0	0	0	2	0
Lane Group Flow (vph)	5	65	0	595	53	190	0	321	205	0	478	0
Heavy Vehicles (%)	0%	0%	53%	58%	0%	3%	68%	87%	91%	11%	84%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	13.8		32.2	45.2	45.2		18.0	100.0		20.0	
Effective Green, g (s)	0.8	13.8		32.2	45.2	45.2		18.0	100.0		20.0	
Actuated g/C Ratio	0.01	0.14		0.32	0.45	0.45		0.18	1.00		0.20	
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)	12	234		601	723	597		299	712		447	
v/s Ratio Prot	0.00	0.04		c0.32	0.03			c0.19			c0.21	
v/s Ratio Perm						0.14			c0.29			
v/c Ratio	0.42	0.28		0.99	0.07	0.32		1.07	0.29		1.23dl	
Uniform Delay, d1	49.4	38.6		33.7	15.5	17.5		41.0	0.0		40.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.9		34.1	0.2	1.4		73.0	1.0		62.6	
Delay (s)	71.1	41.5		67.8	15.7	18.9		114.0	1.0		102.6	
Level of Service	E	D		E	B	B		F	A		F	
Approach Delay (s)		41.9			46.0			69.9			102.6	
Approach LOS		D			D			E			F	

Intersection Summary			
HCM Average Control Delay	61.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

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

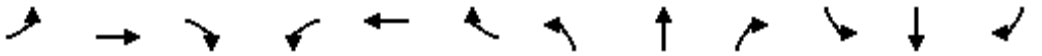
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2891	4241	1320	1520	4152		2891	2814		2891	4282	1360
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)	2891	4241	1320	1520	4152		2891	2814		2891	4282	1360
Volume (vph)	270	1160	400	125	1000	115	220	425	105	260	650	375
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1221	421	132	1053	121	232	447	111	274	684	395
RTOR Reduction (vph)	0	0	257	0	18	0	0	27	0	0	0	219
Lane Group Flow (vph)	284	1221	165	132	1156	0	232	531	0	274	684	176
Heavy Vehicles (%)	2%	3%	3%	0%	4%	0%	2%	6%	0%	2%	2%	0%
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)	9.9	26.0	26.0	10.0	26.1		8.9	18.0		10.0	19.1	19.1
Effective Green, g (s)	9.9	26.0	26.0	10.0	26.1		8.9	18.0		10.0	19.1	19.1
Actuated g/C Ratio	0.12	0.32	0.32	0.12	0.33		0.11	0.22		0.12	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)	358	1378	429	190	1355		322	633		361	1022	325
v/s Ratio Prot	0.10	c0.29		0.09	c0.28		0.08	c0.19		0.09	c0.16	
v/s Ratio Perm			0.12									0.13
v/c Ratio	0.79	0.89	0.38	0.69	0.85		0.72	0.84		0.76	0.67	0.54
Uniform Delay, d1	34.1	25.6	20.8	33.5	25.2		34.3	29.6		33.8	27.6	26.6
Progression Factor	1.01	0.74	0.54	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.9	5.3	1.5	10.5	7.0		7.7	12.6		8.9	3.5	6.3
Delay (s)	41.2	24.3	12.8	44.0	32.2		42.1	42.2		42.7	31.1	32.9
Level of Service	D	C	B	D	C		D	D		D	C	C
Approach Delay (s)		24.3			33.4			42.2			34.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1448	4124		1448	4203		2808	2980	1295	2949	2171	1271
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)	1448	4124		1448	4203		2808	2980	1295	2949	2171	1271
Volume (vph)	260	1430	605	70	850	45	590	725	80	165	635	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1505	637	74	895	47	621	763	84	174	668	168
RTOR Reduction (vph)	0	69	0	0	5	0	0	0	56	0	0	127
Lane Group Flow (vph)	274	2073	0	74	937	0	621	763	28	174	668	41
Heavy Vehicles (%)	5%	0%	4%	5%	2%	25%	5%	2%	5%	0%	40%	7%
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)	21.0	44.0		5.0	28.0		18.0	36.1	36.1	8.9	27.0	27.0
Effective Green, g (s)	21.0	44.0		5.0	28.0		18.0	36.1	36.1	8.9	27.0	27.0
Actuated g/C Ratio	0.19	0.40		0.05	0.25		0.16	0.33	0.33	0.08	0.25	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	276	1650		66	1070		459	978	425	239	533	312
v/s Ratio Prot	0.19	c0.50		0.05	c0.22		c0.22	0.26		0.06	c0.31	
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.99	1.26		1.12	0.88		1.35	0.78	0.06	0.73	1.25	0.13
Uniform Delay, d1	44.4	33.0		52.5	39.3		46.0	33.4	25.4	49.4	41.5	32.4
Progression Factor	0.98	0.44		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	46.3	119.5		147.7	10.0		172.7	6.1	0.3	10.5	128.8	0.9
Delay (s)	89.8	133.9		200.2	49.4		218.7	39.5	25.7	59.9	170.3	33.2
Level of Service	F	F		F	D		F	D	C	E	F	C
Approach Delay (s)		128.9			60.3			114.5			128.5	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	113.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1320	1476	2980	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1320	1476	2980	1520	1360
Volume (vph)	1395	350	370	750	110	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1468	368	389	789	116	126
RTOR Reduction (vph)	0	64	0	0	0	94
Lane Group Flow (vph)	1468	304	389	789	116	32
Heavy Vehicles (%)	2%	3%	3%	2%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	34.0	40.0	18.0	56.0	6.0	18.0
Effective Green, g (s)	34.0	40.0	18.0	56.0	6.0	18.0
Actuated g/C Ratio	0.49	0.57	0.26	0.80	0.09	0.26
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)	1447	830	380	2384	130	350
v/s Ratio Prot	c0.49	0.03	c0.26	0.26	c0.08	0.02
v/s Ratio Perm		0.20				
v/c Ratio	1.01	0.37	1.02	0.33	0.89	0.09
Uniform Delay, d1	18.0	8.1	26.0	1.9	31.7	19.8
Progression Factor	0.51	0.07	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.4	0.2	52.3	0.4	47.7	0.1
Delay (s)	33.6	0.7	78.3	2.3	79.3	19.9
Level of Service	C	A	E	A	E	B
Approach Delay (s)	27.0			27.4	48.4	
Approach LOS	C			C	D	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2980			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2980			2980	1520	1360
Volume (vph)	1395	0	0	750	110	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1468	0	0	789	116	126
RTOR Reduction (vph)	0	0	0	0	0	118
Lane Group Flow (vph)	1468	0	0	789	116	8
Heavy Vehicles (%)	2%	3%	3%	2%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	46.2			54.8	7.2	4.6
Effective Green, g (s)	46.2			54.8	7.2	4.6
Actuated g/C Ratio	0.66			0.78	0.10	0.07
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)	1967			2333	156	89
v/s Ratio Prot	c0.49			c0.26	c0.08	0.01
v/s Ratio Perm						
v/c Ratio	0.75			0.34	0.74	0.09
Uniform Delay, d1	8.0			2.2	30.5	30.7
Progression Factor	0.25			1.00	1.00	1.00
Incremental Delay, d2	2.0			0.4	17.3	0.5
Delay (s)	4.0			2.6	47.8	31.2
Level of Service	A			A	D	C
Approach Delay (s)	4.0			2.6	39.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1308	1462	2980	2863	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1308	1462	2980	2863	1333
Volume (vph)	1155	370	120	740	280	590
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1216	389	126	779	295	621
RTOR Reduction (vph)	0	174	0	0	0	0
Lane Group Flow (vph)	1216	215	126	779	295	621
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	38.6	38.6	7.2	49.8	12.2	70.0
Effective Green, g (s)	38.6	38.6	7.2	49.8	12.2	70.0
Actuated g/C Ratio	0.55	0.55	0.10	0.71	0.17	1.00
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)	1643	721	150	2120	499	1333
v/s Ratio Prot	c0.41		c0.09	0.26		
v/s Ratio Perm		0.16			0.10	c0.47
v/c Ratio	0.74	0.30	0.84	0.37	0.59	0.47
Uniform Delay, d1	11.9	8.4	30.8	3.9	26.6	0.0
Progression Factor	1.00	1.00	1.01	0.81	1.00	1.00
Incremental Delay, d2	3.0	1.1	30.5	0.5	1.9	1.2
Delay (s)	14.9	9.5	61.5	3.7	28.5	1.2
Level of Service	B	A	E	A	C	A
Approach Delay (s)	13.6			11.7	10.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	1485	0	0	985	40	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1563	0	0	1037	42	263
RTOR Reduction (vph)	0	0	0	0	0	25
Lane Group Flow (vph)	1563	0	0	1037	42	238
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	38.2			38.2	13.8	13.8
Effective Green, g (s)	38.2			38.2	13.8	13.8
Actuated g/C Ratio	0.64			0.64	0.23	0.23
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)	1916			1897	350	313
v/s Ratio Prot	c0.52			0.35	0.03	c0.18
v/s Ratio Perm						
v/c Ratio	0.82			0.55	0.12	0.76
Uniform Delay, d1	8.2			6.1	18.3	21.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	4.0			1.1	0.2	10.4
Delay (s)	12.2			7.2	18.4	32.0
Level of Service	B			A	B	C
Approach Delay (s)	12.2			7.2	30.1	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1485	10	170	855	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1563	11	179	900	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.91	
vC, conflicting volume			1563		2376	787
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1563		2412	787
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			58		100	100
cM capacity (veh/h)			428		15	339

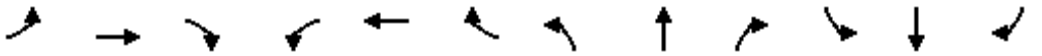
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	1042	532	179	450	450
Volume Left	0	0	179	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	428	1700	1700
Volume to Capacity	0.61	0.31	0.42	0.26	0.26
Queue Length 95th (ft)	0	0	51	0	0
Control Delay (s)	0.0	0.0	19.3	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		3.2		
Approach LOS					

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1333		4085		2891		1248			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1333		4085		2891		1248			
Volume (vph)	0	930	290	0	795	210	760	0	350	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	979	305	0	837	221	800	0	368	0	0	0
RTOR Reduction (vph)	0	0	157	0	103	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	979	148	0	955	0	800	0	368	0	0	0
Heavy Vehicles (%)	0%	5%	2%	0%	4%	2%	2%	0%	9%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		21.8	21.8		21.8		15.2		45.0			
Effective Green, g (s)		21.8	21.8		21.8		15.2		45.0			
Actuated g/C Ratio		0.48	0.48		0.48		0.34		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1402	646		1979		977		1248			
v/s Ratio Prot		c0.34			0.23		c0.28					
v/s Ratio Perm			0.11						0.29			
v/c Ratio		0.70	0.23		0.48		0.82		0.29			
Uniform Delay, d1		9.0	6.7		7.8		13.6		0.0			
Progression Factor		0.83	3.48		1.00		1.00		1.00			
Incremental Delay, d2		2.5	0.7		0.8		5.4		0.6			
Delay (s)		10.0	24.1		8.7		19.1		0.6			
Level of Service		B	C		A		B		A			
Approach Delay (s)		13.4			8.7			13.3			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

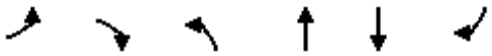
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2747	1470		2951	1360				2949		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2747	1470		2951	1360				2949		2324
Volume (vph)	0	910	400	0	1475	80	0	0	0	310	0	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	958	421	0	1553	84	0	0	0	326	0	768
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	34
Lane Group Flow (vph)	0	958	421	0	1553	84	0	0	0	326	0	734
Heavy Vehicles (%)	0%	6%	0%	0%	3%	0%	0%	0%	0%	0%	0%	3%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		52.5	90.0		52.5	90.0				29.5		29.5
Effective Green, g (s)		52.5	90.0		52.5	90.0				29.5		29.5
Actuated g/C Ratio		0.58	1.00		0.58	1.00				0.33		0.33
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)		1602	1470		1721	1360				967		762
v/s Ratio Prot		0.35			c0.53					0.11		c0.32
v/s Ratio Perm			0.29			0.06						
v/c Ratio		0.60	0.29		0.90	0.06				0.34		0.96
Uniform Delay, d1		12.0	0.0		16.5	0.0				22.9		29.7
Progression Factor		1.00	1.00		0.93	1.00				1.00		1.00
Incremental Delay, d2		1.7	0.1		6.2	0.0				0.2		23.9
Delay (s)		13.7	0.1		21.6	0.0				23.1		53.6
Level of Service		B	A		C	A				C		D
Approach Delay (s)		9.5			20.5			0.0			44.5	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

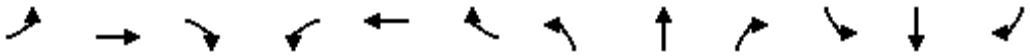
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1259	1394	2980	1569	1360
Flt Permitted	0.95	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1520	1259	839	2980	1569	1360
Volume (vph)	10	200	215	240	295	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	211	226	253	311	5
RTOR Reduction (vph)	0	182	0	0	0	2
Lane Group Flow (vph)	11	29	226	253	311	3
Heavy Vehicles (%)	0%	8%	9%	2%	2%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	30.8	30.8	30.8	30.8
Effective Green, g (s)	6.2	6.2	30.8	30.8	30.8	30.8
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
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)	209	173	574	2040	1074	931
v/s Ratio Prot	0.01			0.08	0.20	
v/s Ratio Perm		c0.02	c0.27			0.00
v/c Ratio	0.05	0.17	0.39	0.12	0.29	0.00
Uniform Delay, d1	16.8	17.1	3.1	2.4	2.8	2.2
Progression Factor	1.00	1.00	1.76	1.33	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.8	0.1	0.7	0.0
Delay (s)	17.0	17.6	6.2	3.3	3.5	2.3
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			4.7	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

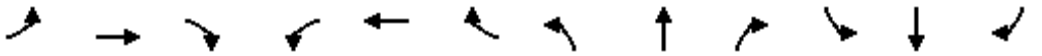
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.97	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1073		3901	1147	2808		2370			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1073		3901	1147	2808		2370			
Volume (vph)	0	1745	360	0	1170	1100	800	0	920	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1837	379	0	1232	1158	842	0	968	0	0	0
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1837	379	0	1489	871	842	0	962	0	0	0
Heavy Vehicles (%)	0%	2%	9%	0%	3%	2%	5%	0%	1%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		55.4	110.0		55.4	110.0	46.6		46.6			
Effective Green, g (s)		55.4	110.0		55.4	110.0	46.6		46.6			
Actuated g/C Ratio		0.50	1.00		0.50	1.00	0.42		0.42			
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)		2038	1073		1965	1147	1190		1004			
v/s Ratio Prot		c0.45			0.38		0.30		c0.41			
v/s Ratio Perm			0.35			0.76						
v/c Ratio		0.90	0.35		0.76	0.76	0.71		0.96			
Uniform Delay, d1		24.8	0.0		21.9	0.0	26.1		30.7			
Progression Factor		0.87	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		4.7	0.1		2.8	2.9	1.9		18.8			
Delay (s)		26.4	0.1		24.7	2.9	28.0		49.6			
Level of Service		C	A		C	A	C		D			
Approach Delay (s)		21.9			16.8			39.5			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

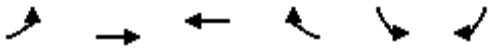
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3952	1136		3969	1114				2835		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3952	1136		3969	1114				2835		2347
Volume (vph)	0	1285	720	0	1370	600	0	0	0	820	0	660
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1353	758	0	1442	632	0	0	0	863	0	695
RTOR Reduction (vph)	0	10	277	0	0	0	0	0	0	0	0	31
Lane Group Flow (vph)	0	1482	342	0	1442	632	0	0	0	863	0	664
Heavy Vehicles (%)	0%	3%	3%	0%	4%	5%	0%	0%	0%	4%	0%	2%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		60.8	60.8		60.8	110.0				41.2		41.2
Effective Green, g (s)		60.8	60.8		60.8	110.0				41.2		41.2
Actuated g/C Ratio		0.55	0.55		0.55	1.00				0.37		0.37
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)		2184	628		2194	1114				1062		879
v/s Ratio Prot		c0.38			0.36					c0.30		
v/s Ratio Perm			0.30			0.57						0.28
v/c Ratio		0.68	0.54		0.66	0.57				0.81		0.76
Uniform Delay, d1		17.6	15.7		17.3	0.0				30.9		30.0
Progression Factor		1.00	1.00		0.68	1.00				1.00		1.00
Incremental Delay, d2		1.7	3.4		1.0	0.4				4.8		3.7
Delay (s)		19.3	19.1		12.8	0.4				35.8		33.7
Level of Service		B	B		B	A				D		C
Approach Delay (s)		19.3			9.0			0.0			34.9	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1382	4200	4082	1333	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1382	4200	4082	1333	2920	1347
Volume (vph)	105	2280	1635	135	570	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	2400	1721	142	600	258
RTOR Reduction (vph)	0	0	0	73	0	146
Lane Group Flow (vph)	111	2400	1721	69	600	112
Heavy Vehicles (%)	10%	4%	7%	2%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	45.0	34.0	34.0	17.0	17.0
Effective Green, g (s)	7.0	45.0	34.0	34.0	17.0	17.0
Actuated g/C Ratio	0.10	0.64	0.49	0.49	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	138	2700	1983	647	709	327
v/s Ratio Prot	0.08	c0.57	0.42		c0.21	
v/s Ratio Perm				0.05		0.08
v/c Ratio	0.80	0.89	0.87	0.11	0.85	0.34
Uniform Delay, d1	30.8	10.4	16.0	9.8	25.3	21.9
Progression Factor	1.00	1.00	0.41	0.01	1.00	1.00
Incremental Delay, d2	27.7	4.9	5.0	0.3	11.9	2.8
Delay (s)	58.6	15.3	11.5	0.4	37.2	24.7
Level of Service	E	B	B	A	D	C
Approach Delay (s)		17.2	10.7		33.4	
Approach LOS		B	B		C	

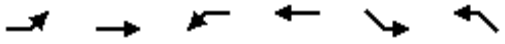
Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4282	680	760	4282		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4282	680	760	4282		1474	680				
Volume (vph)	0	1645	410	40	2000	0	450	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1732	432	42	2105	0	474	0	21	0	0	0
RTOR Reduction (vph)	0	0	173	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1732	259	42	2105	0	474	4	0	0	0	0
Heavy Vehicles (%)	0%	2%	100%	100%	2%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		48.0	48.0	4.0	56.0		16.0	16.0				
Effective Green, g (s)		48.0	48.0	4.0	56.0		16.0	16.0				
Actuated g/C Ratio		0.60	0.60	0.05	0.70		0.20	0.20				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2569	408	38	2997		295	136				
v/s Ratio Prot		0.40		0.06	c0.49		c0.32	0.01				
v/s Ratio Perm			0.38									
v/c Ratio		0.67	0.64	1.11	0.70		1.61	0.03				
Uniform Delay, d1		10.7	10.3	38.0	7.1		32.0	25.8				
Progression Factor		1.00	1.00	0.72	0.40		1.00	1.00				
Incremental Delay, d2		1.4	7.4	168.2	1.2		288.4	0.1				
Delay (s)		12.2	17.7	195.6	4.1		320.4	25.9				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		13.3			7.8			307.9			0.0	
Approach LOS		B			A			F			A	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	4200	2020	4368	2920	2610
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	4200	2020	4368	2920	2610
Volume (vph)	740	625	130	1170	470	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	779	658	137	1232	495	211
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	779	658	137	1232	495	211
Heavy Vehicles (%)	1%	4%	46%	0%	1%	13%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	42.0	9.7	26.7	16.3	16.3
Effective Green, g (s)	25.0	42.0	9.7	26.7	16.3	16.3
Actuated g/C Ratio	0.31	0.52	0.12	0.33	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	913	2205	245	1458	595	532
v/s Ratio Prot	c0.27	0.16	0.07	c0.28	c0.17	0.08
v/s Ratio Perm						
v/c Ratio	0.85	0.30	0.56	0.84	0.83	0.40
Uniform Delay, d1	25.8	10.7	33.1	24.7	30.5	27.6
Progression Factor	0.58	0.28	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9	0.3	2.8	6.2	9.7	0.5
Delay (s)	20.8	3.3	35.9	30.9	40.2	28.1
Level of Service	C	A	D	C	D	C
Approach Delay (s)		12.8		31.4		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2633	4160	1843	4200	2705	2184
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2633	4160	1843	4200	2705	2184
Volume (vph)	630	1085	10	820	500	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	663	1142	11	863	526	84
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	663	1142	11	863	526	84
Heavy Vehicles (%)	12%	5%	60%	4%	9%	35%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	16.7	33.5	0.8	17.6	13.7	13.7
Effective Green, g (s)	16.7	33.5	0.8	17.6	13.7	13.7
Actuated g/C Ratio	0.28	0.56	0.01	0.29	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	733	2323	25	1232	618	499
v/s Ratio Prot	c0.25	0.27	0.01	c0.21	c0.19	0.04
v/s Ratio Perm						
v/c Ratio	0.90	0.49	0.44	0.70	0.85	0.17
Uniform Delay, d1	20.9	8.1	29.4	18.9	22.2	18.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.6	0.7	11.9	3.3	10.9	0.2
Delay (s)	35.5	8.8	41.3	22.2	33.1	18.7
Level of Service	D	A	D	C	C	B
Approach Delay (s)		18.6		22.4		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	2980	2730	4325	2920	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	2980	2730	4325	2920	2949
Volume (vph)	710	670	230	1620	800	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	747	705	242	1705	842	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	747	705	242	1705	842	189
Heavy Vehicles (%)	2%	2%	8%	1%	1%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.0	54.0	14.0	41.0	30.0	30.0
Effective Green, g (s)	27.0	54.0	14.0	41.0	30.0	30.0
Actuated g/C Ratio	0.25	0.49	0.13	0.37	0.27	0.27
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)	710	1463	347	1612	796	804
v/s Ratio Prot	c0.26	0.24	0.09	c0.39	c0.29	0.06
v/s Ratio Perm						
v/c Ratio	1.05	0.48	0.70	1.06	1.06	0.24
Uniform Delay, d1	41.5	18.7	46.0	34.5	40.0	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	48.3	1.1	6.0	39.4	48.3	0.2
Delay (s)	89.8	19.8	52.0	73.9	88.3	31.2
Level of Service	F	B	D	E	F	C
Approach Delay (s)		55.8		71.2		
Approach LOS		E		E		

Intersection Summary			
HCM Average Control Delay	67.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4282	2808	4241	2863	2499
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4282	2808	4241	2863	2499
Volume (vph)	780	1400	150	650	410	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	821	1474	158	684	432	453
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	821	1474	158	684	432	453
Heavy Vehicles (%)	5%	2%	5%	3%	3%	18%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	35.0	7.7	17.7	15.3	15.3
Effective Green, g (s)	25.0	35.0	7.7	17.7	15.3	15.3
Actuated g/C Ratio	0.36	0.50	0.11	0.25	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1003	2141	309	1072	626	546
v/s Ratio Prot	c0.29	0.34	0.06	c0.16	0.15	c0.18
v/s Ratio Perm						
v/c Ratio	0.82	0.69	0.51	0.64	0.69	0.83
Uniform Delay, d1	20.4	13.3	29.4	23.3	25.2	26.1
Progression Factor	0.81	0.71	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.8	1.4	2.9	3.3	10.1
Delay (s)	19.0	10.2	30.8	26.2	28.4	36.2
Level of Service	B	B	C	C	C	D
Approach Delay (s)		13.4		27.1		
Approach LOS		B		C		

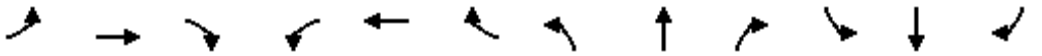
Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2891	4241	2863	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2891	4241	2863	2756
Volume (vph)	270	1395	280	985	510	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1468	295	1037	537	242
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1468	295	1037	537	242
Heavy Vehicles (%)	5%	3%	2%	3%	3%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.3	21.6	7.9	18.2	12.5	12.5
Effective Green, g (s)	11.3	21.6	7.9	18.2	12.5	12.5
Actuated g/C Ratio	0.21	0.40	0.15	0.34	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	588	1696	423	1429	663	638
v/s Ratio Prot	0.10	c0.35	0.10	c0.24	c0.19	0.09
v/s Ratio Perm						
v/c Ratio	0.48	0.87	0.70	0.73	0.81	0.38
Uniform Delay, d1	18.8	14.9	21.9	15.7	19.6	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	4.9	5.0	1.9	7.3	0.4
Delay (s)	19.4	19.8	26.9	17.6	26.9	17.9
Level of Service	B	B	C	B	C	B
Approach Delay (s)		19.7		19.6		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4206			4282	1333			2370	2891		1214
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4206			4282	1333			2370	2891		1214
Volume (vph)	225	1715	115	0	1855	230	0	0	185	475	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	1805	121	0	1953	242	0	0	195	500	0	21
RTOR Reduction (vph)	0	8	0	0	0	149	0	0	32	0	0	17
Lane Group Flow (vph)	237	1918	0	0	1953	93	0	0	163	500	0	4
Heavy Vehicles (%)	0%	3%	1%	0%	2%	2%	0%	0%	1%	2%	0%	12%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	13.2	49.2			32.0	32.0			10.4	18.4		18.4
Effective Green, g (s)	13.2	49.2			32.0	32.0			10.4	18.4		18.4
Actuated g/C Ratio	0.15	0.55			0.36	0.36			0.12	0.20		0.20
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)	223	2299			1522	474			274	591		248
v/s Ratio Prot	c0.16	0.46			c0.46					c0.17		
v/s Ratio Perm						0.07			c0.07			0.00
v/c Ratio	1.06	0.83			1.28	0.20			0.60	0.85		0.02
Uniform Delay, d1	38.4	17.0			29.0	20.1			37.8	34.4		28.6
Progression Factor	1.00	1.00			0.66	0.44			1.00	1.11		1.28
Incremental Delay, d2	77.8	3.8			132.0	0.8			3.5	10.2		0.0
Delay (s)	116.2	20.8			151.3	9.7			41.3	48.3		36.7
Level of Service	F	C			F	A			D	D		D
Approach Delay (s)		31.2			135.7			41.3			47.8	
Approach LOS		C			F			D			D	

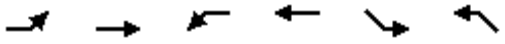
Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4160	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4160	2808	2891
Volume (vph)	330	1075	480	775	150	720
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	1132	505	816	158	758
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	347	1132	505	816	158	758
Heavy Vehicles (%)	2%	3%	2%	5%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	17.1	32.3	18.8	34.0	26.9	26.9
Effective Green, g (s)	17.1	32.3	18.8	34.0	26.9	26.9
Actuated g/C Ratio	0.19	0.36	0.21	0.38	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	549	1522	604	1572	839	864
v/s Ratio Prot	0.12	c0.27	c0.17	0.20	0.06	c0.26
v/s Ratio Perm						
v/c Ratio	0.63	0.74	0.84	0.52	0.19	0.88
Uniform Delay, d1	33.6	25.2	34.1	21.7	23.4	30.0
Progression Factor	1.04	1.06	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	1.7	9.8	1.2	0.1	10.0
Delay (s)	36.2	28.6	43.9	22.9	23.5	40.0
Level of Service	D	C	D	C	C	D
Approach Delay (s)		30.3		30.9		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

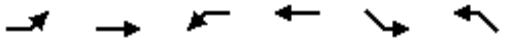
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	2951	2863	2980	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	2951	2863	2980	2863	2920
Volume (vph)	220	1370	370	905	300	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1442	389	953	316	389
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	232	1442	389	953	316	389
Heavy Vehicles (%)	5%	3%	3%	2%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.0	43.1	12.9	44.0	12.0	12.0
Effective Green, g (s)	12.0	43.1	12.9	44.0	12.0	12.0
Actuated g/C Ratio	0.15	0.54	0.16	0.55	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	421	1590	462	1639	429	438
v/s Ratio Prot	0.08	c0.49	c0.14	0.32	0.11	c0.13
v/s Ratio Perm						
v/c Ratio	0.55	0.91	0.84	0.58	0.74	0.89
Uniform Delay, d1	31.5	16.6	32.6	11.9	32.5	33.3
Progression Factor	1.00	1.00	0.87	0.46	1.00	1.00
Incremental Delay, d2	1.6	9.1	7.8	0.9	6.5	19.1
Delay (s)	33.1	25.7	36.1	6.4	39.0	52.5
Level of Service	C	C	D	A	D	D
Approach Delay (s)		26.7		15.0		
Approach LOS		C		B		

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

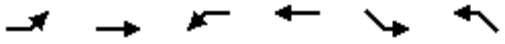
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4241	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4241	2808	2891
Volume (vph)	320	1485	610	660	170	620
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	1563	642	695	179	653
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	337	1563	642	695	179	653
Heavy Vehicles (%)	2%	3%	2%	3%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.8	45.8	25.8	51.8	26.4	26.4
Effective Green, g (s)	19.8	45.8	25.8	51.8	26.4	26.4
Actuated g/C Ratio	0.18	0.42	0.23	0.47	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	520	1766	678	1997	674	694
v/s Ratio Prot	0.12	c0.37	c0.22	0.16	0.06	c0.23
v/s Ratio Perm						
v/c Ratio	0.65	0.89	0.95	0.35	0.27	0.94
Uniform Delay, d1	41.9	29.7	41.4	18.4	33.9	41.0
Progression Factor	1.00	1.00	0.99	0.87	1.00	1.00
Incremental Delay, d2	2.8	6.9	12.2	0.2	0.2	20.9
Delay (s)	44.6	36.6	53.2	16.2	34.1	61.9
Level of Service	D	D	D	B	C	E
Approach Delay (s)		38.0		34.0		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2835	4241	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2835	4241	2863	2920
Volume (vph)	370	1470	670	585	240	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	389	1547	705	616	253	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	389	1547	705	616	253	642
Heavy Vehicles (%)	2%	3%	4%	3%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	21.2	44.2	28.2	51.2	25.6	25.6
Effective Green, g (s)	21.2	44.2	28.2	51.2	25.6	25.6
Actuated g/C Ratio	0.19	0.40	0.26	0.47	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	557	1704	727	1974	666	680
v/s Ratio Prot	0.13	c0.36	c0.25	0.15	0.09	c0.22
v/s Ratio Perm						
v/c Ratio	0.70	0.91	0.97	0.31	0.38	0.94
Uniform Delay, d1	41.4	31.0	40.5	18.4	35.5	41.5
Progression Factor	1.00	1.00	1.06	0.83	1.00	1.00
Incremental Delay, d2	3.8	8.6	10.7	0.1	0.4	21.7
Delay (s)	45.2	39.6	53.6	15.4	35.9	63.2
Level of Service	D	D	D	B	D	E
Approach Delay (s)		40.7		35.8		
Approach LOS		D		D		

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2598			2432	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2598			2432	760	680
Volume (vph)	310	0	0	290	135	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	0	0	305	142	174
RTOR Reduction (vph)	0	0	0	0	0	80
Lane Group Flow (vph)	326	0	0	305	142	94
Heavy Vehicles (%)	17%	0%	0%	25%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	10.4			10.4	21.6	21.6
Effective Green, g (s)	10.4			10.4	21.6	21.6
Actuated g/C Ratio	0.26			0.26	0.54	0.54
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)	675			632	410	367
v/s Ratio Prot	c0.13			0.13	c0.19	
v/s Ratio Perm						0.14
v/c Ratio	0.48			0.48	0.35	0.26
Uniform Delay, d1	12.5			12.5	5.2	4.9
Progression Factor	0.55			1.00	1.00	1.00
Incremental Delay, d2	0.5			0.6	2.3	1.7
Delay (s)	7.5			13.1	7.5	6.6
Level of Service	A			B	A	A
Approach Delay (s)	7.5			13.1	7.0	
Approach LOS	A			B	A	

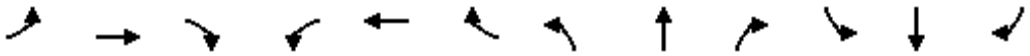
Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2598	680	760	2187		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2598	680	760	2187		
Volume (vph)	310	60	70	355	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	63	74	374	0	0
RTOR Reduction (vph)	0	25	0	0	0	0
Lane Group Flow (vph)	326	38	74	374	0	0
Heavy Vehicles (%)	17%	100%	100%	39%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	24.4	24.4	7.6	40.0		
Effective Green, g (s)	24.4	24.4	7.6	40.0		
Actuated g/C Ratio	0.61	0.61	0.19	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1585	415	144	2187		
v/s Ratio Prot	c0.13		c0.10	0.17		
v/s Ratio Perm		0.06				
v/c Ratio	0.21	0.09	0.51	0.17		
Uniform Delay, d1	3.5	3.2	14.5	0.0		
Progression Factor	1.00	1.00	0.86	1.00		
Incremental Delay, d2	0.1	0.1	2.8	0.0		
Delay (s)	3.5	3.3	15.3	0.0		
Level of Service	A	A	B	A		
Approach Delay (s)	3.5			2.6	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	3.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

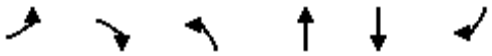
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1221	1295	1246	1014		1448	2681		1152	2893	
Flt Permitted	0.27	1.00	1.00	0.66	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	406	1221	1295	870	1014		1448	2681		1152	2893	
Volume (vph)	8	140	600	100	120	135	250	600	160	70	1050	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	147	632	105	126	142	263	632	168	74	1105	7
RTOR Reduction (vph)	0	0	43	0	38	0	0	23	0	0	1	0
Lane Group Flow (vph)	8	147	589	105	230	0	263	777	0	74	1111	0
Heavy Vehicles (%)	5%	31%	5%	22%	40%	50%	5%	5%	28%	32%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	15.8	15.8	38.8	26.4	26.4		23.0	47.0		9.8	33.8	
Effective Green, g (s)	15.8	15.8	38.8	26.4	26.4		23.0	47.0		9.8	33.8	
Actuated g/C Ratio	0.16	0.16	0.39	0.26	0.26		0.23	0.47		0.10	0.34	
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)	72	193	502	273	268		333	1260		113	978	
v/s Ratio Prot	0.00	0.12	c0.27	0.04	c0.23		0.18	0.29		0.06	c0.38	
v/s Ratio Perm	0.02		0.19	0.06								
v/c Ratio	0.11	0.76	1.17	0.38	0.86		0.79	0.62		0.65	1.14	
Uniform Delay, d1	36.5	40.3	30.6	30.8	35.0		36.2	19.8		43.5	33.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	16.2	97.1	0.9	23.0		11.8	2.3		12.8	74.1	
Delay (s)	37.2	56.5	127.7	31.7	58.0		48.0	22.0		56.3	107.2	
Level of Service	D	E	F	C	E		D	C		E	F	
Approach Delay (s)		113.4			50.6			28.5			104.0	
Approach LOS		F			D			C			F	

Intersection Summary			
HCM Average Control Delay	76.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

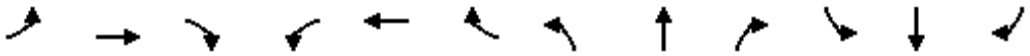
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	1966	1007	1216	5242	2815	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1007	1216	5242	2815	
Volume (vph)	340	135	190	1350	1100	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	142	200	1421	1158	105
RTOR Reduction (vph)	0	116	0	0	7	0
Lane Group Flow (vph)	358	26	200	1421	1256	0
Heavy Vehicles (%)	50%	35%	25%	5%	5%	25%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	18.0	18.0	16.0	54.0	54.0	
Effective Green, g (s)	18.0	18.0	16.0	54.0	54.0	
Actuated g/C Ratio	0.18	0.18	0.16	0.54	0.54	
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)	354	181	195	2831	1520	
v/s Ratio Prot	c0.18		c0.16	0.27	c0.45	
v/s Ratio Perm		0.03				
v/c Ratio	1.01	0.14	1.03	0.50	0.83	
Uniform Delay, d1	41.0	34.5	42.0	14.5	19.1	
Progression Factor	1.00	1.00	1.00	1.00	0.22	
Incremental Delay, d2	50.7	0.4	71.3	0.6	1.6	
Delay (s)	91.7	34.9	113.3	15.2	5.8	
Level of Service	F	C	F	B	A	
Approach Delay (s)	75.6			27.3	5.8	
Approach LOS	E			C	A	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

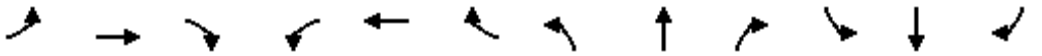
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2643	2137	1490	2840	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1341		2808	1318			2643	2137	1490	2840	
Volume (vph)	5	0	5	150	5	50	0	1060	630	40	1050	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	158	5	53	0	1116	663	42	1105	5
RTOR Reduction (vph)	0	4	0	0	37	0	0	0	305	0	1	0
Lane Group Flow (vph)	0	6	0	158	21	0	0	1116	358	42	1109	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	15%	12%	2%	7%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		18.0		8.0	30.0			54.0	54.0	4.0	42.0	
Effective Green, g (s)		18.0		8.0	30.0			54.0	54.0	4.0	42.0	
Actuated g/C Ratio		0.18		0.08	0.30			0.54	0.54	0.04	0.42	
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)		241		225	395			1427	1154	60	1193	
v/s Ratio Prot				c0.06	c0.02			c0.42	0.17	0.03	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.70	0.05			0.78	0.31	0.70	0.93	
Uniform Delay, d1		33.8		44.8	24.9			18.3	12.7	47.4	27.6	
Progression Factor		1.00		1.00	1.00			0.49	0.33	1.00	1.00	
Incremental Delay, d2		0.0		9.5	0.1			3.5	0.6	30.0	13.9	
Delay (s)		33.8		54.4	25.0			12.6	4.7	77.4	41.5	
Level of Service		C		D	C			B	A	E	D	
Approach Delay (s)		33.8			46.5			9.6			42.8	
Approach LOS		C			D			A			D	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

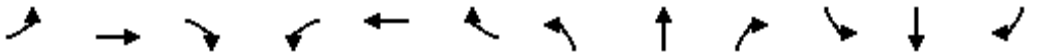
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1538	3987		2928	3933	1350	1538	4036	2422	2984	4036	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1538	3987		2928	3933	1350	1538	4036	2422	2984	4036	2422
Volume (vph)	100	740	50	410	320	335	100	800	710	215	1050	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	779	53	432	337	353	105	842	747	226	1105	253
RTOR Reduction (vph)	0	7	0	0	0	109	0	0	44	0	0	134
Lane Group Flow (vph)	105	825	0	432	337	244	105	842	703	226	1105	119
Heavy Vehicles (%)	5%	16%	5%	7%	18%	7%	5%	15%	5%	5%	15%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	26.6		16.9	27.5	40.0	9.5	28.0	44.9	12.5	31.0	47.0
Effective Green, g (s)	16.0	26.6		16.9	27.5	40.0	9.5	28.0	44.9	12.5	31.0	47.0
Actuated g/C Ratio	0.16	0.27		0.17	0.28	0.40	0.10	0.28	0.45	0.12	0.31	0.47
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)	246	1061		495	1082	594	146	1130	1087	373	1251	1235
v/s Ratio Prot	0.07	c0.21		c0.15	0.09	0.05	0.07	0.21	0.11	c0.08	c0.27	0.02
v/s Ratio Perm						0.13			0.18			0.03
v/c Ratio	0.43	0.78		0.87	0.31	0.41	0.72	0.75	0.65	0.61	0.88	0.10
Uniform Delay, d1	37.9	34.0		40.5	28.7	21.5	44.0	32.8	21.4	41.4	32.8	14.7
Progression Factor	0.64	0.61		0.77	0.72	0.95	0.59	0.50	0.49	0.79	0.76	4.06
Incremental Delay, d2	1.1	5.3		13.7	0.6	0.4	12.7	3.6	1.1	2.5	8.6	0.0
Delay (s)	25.2	25.9		44.7	21.4	20.7	38.8	19.9	11.6	35.4	33.5	59.8
Level of Service	C	C		D	C	C	D	B	B	D	C	E
Approach Delay (s)		25.8			30.2			17.4			37.9	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	27.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

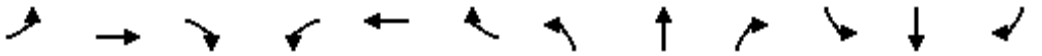
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4036	1302		4144					2928	1589	2377
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4036	1302		4144					2928	1589	2377
Volume (vph)	0	765	745	0	660	0	0	0	0	125	710	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	805	784	0	695	0	0	0	0	132	747	163
RTOR Reduction (vph)	0	0	65	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	805	719	0	695	0	0	0	0	132	747	77
Heavy Vehicles (%)	0%	15%	11%	7%	12%	0%	0%	0%	0%	7%	7%	7%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		47.0	47.0		47.0					45.0	45.0	45.0
Effective Green, g (s)		47.0	47.0		47.0					45.0	45.0	45.0
Actuated g/C Ratio		0.47	0.47		0.47					0.45	0.45	0.45
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)		1897	612		1948					1318	715	1070
v/s Ratio Prot		0.20			0.17					0.05	c0.47	
v/s Ratio Perm			c0.55									0.03
v/c Ratio		0.42	1.18		0.36					0.10	1.04	0.07
Uniform Delay, d1		17.5	26.5		16.9					15.8	27.5	15.6
Progression Factor		1.00	1.00		0.30					1.00	1.00	1.00
Incremental Delay, d2		0.7	95.3		0.5					0.0	45.9	0.0
Delay (s)		18.2	121.8		5.5					15.9	73.4	15.7
Level of Service		B	F		A					B	E	B
Approach Delay (s)		69.3			5.5			0.0			57.1	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	52.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

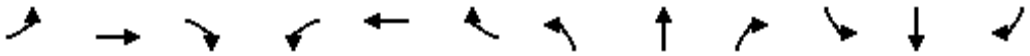
c Critical Lane Group



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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3167	2707	3335	3195	1583	3273	1590		1770	1652	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3167	2707	3335	3195	1583	3273	1590		1770	1652	1583
Volume (vph)	25	905	735	245	640	25	400	100	100	25	190	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	953	774	258	674	26	421	105	105	26	200	26
RTOR Reduction (vph)	0	0	148	0	0	11	0	33	0	0	0	22
Lane Group Flow (vph)	26	953	626	258	674	15	421	177	0	26	200	4
Heavy Vehicles (%)	2%	14%	5%	5%	13%	2%	7%	14%	7%	2%	15%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	40.4	57.4	10.9	49.3	56.3	17.0	25.7		7.0	15.7	15.7
Effective Green, g (s)	2.0	40.4	57.4	10.9	49.3	56.3	17.0	25.7		7.0	15.7	15.7
Actuated g/C Ratio	0.02	0.40	0.57	0.11	0.49	0.56	0.17	0.26		0.07	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	35	1279	1662	364	1575	955	556	409		124	259	249
v/s Ratio Prot	0.01	c0.30	0.06	c0.08	0.21	0.00	c0.13	0.11		0.01	c0.12	
v/s Ratio Perm			0.17			0.01						0.00
v/c Ratio	0.74	0.75	0.38	0.71	0.43	0.02	0.76	0.43		0.21	0.77	0.02
Uniform Delay, d1	48.7	25.4	11.6	43.0	16.3	9.6	39.5	31.1		43.9	40.4	35.6
Progression Factor	1.27	0.77	0.52	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	44.5	2.8	0.1	6.2	0.9	0.0	5.8	0.7		0.8	13.3	0.0
Delay (s)	106.3	22.5	6.1	49.2	17.1	9.6	45.4	31.8		44.7	53.7	35.7
Level of Service	F	C	A	D	B	A	D	C		D	D	D
Approach Delay (s)		16.5			25.6			40.9			50.9	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

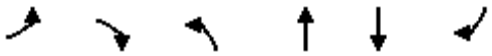
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2963	1350					5316	1326	2874	4107	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2963	1350					5316	1326	2874	4107	
Volume (vph)	0	480	975	0	0	0	0	1610	580	380	1130	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	505	1026	0	0	0	0	1695	611	400	1189	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	0	505	1026	0	0	0	0	1695	592	400	1189	0
Heavy Vehicles (%)	0%	9%	7%	0%	0%	0%	0%	10%	9%	9%	13%	0%
Turn Type			Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		19.2	100.0					52.6	52.6	16.2	72.8	
Effective Green, g (s)		19.2	100.0					52.6	52.6	16.2	72.8	
Actuated g/C Ratio		0.19	1.00					0.53	0.53	0.16	0.73	
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)		569	1350					2796	697	466	2990	
v/s Ratio Prot		0.17						0.32		0.14	0.29	
v/s Ratio Perm			c0.76						c0.45			
v/c Ratio		0.89	0.76					0.61	0.85	0.86	0.40	
Uniform Delay, d1		39.3	0.0					16.5	20.3	40.8	5.2	
Progression Factor		0.97	1.00					1.00	1.00	0.85	0.65	
Incremental Delay, d2		1.8	0.4					1.0	12.3	7.2	0.2	
Delay (s)		40.0	0.4					17.5	32.6	41.9	3.5	
Level of Service		D	A					B	C	D	A	
Approach Delay (s)		13.4			0.0			21.5			13.2	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

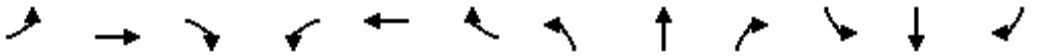
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		1.00		0.91	0.91	
Frt		0.86		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1374		4144	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1374		4144	4107	
Volume (vph)	0	270	0	1235	1235	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	284	0	1300	1300	0
RTOR Reduction (vph)	0	26	0	0	0	0
Lane Group Flow (vph)	0	258	0	1300	1300	0
Heavy Vehicles (%)	0%	7%	0%	12%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		22.2		69.8	69.8	
Effective Green, g (s)		22.2		69.8	69.8	
Actuated g/C Ratio		0.22		0.70	0.70	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		305		2893	2867	
v/s Ratio Prot				0.31	c0.32	
v/s Ratio Perm		c0.19				
v/c Ratio		0.85		0.45	0.45	
Uniform Delay, d1		37.3		6.6	6.7	
Progression Factor		1.00		0.36	1.00	
Incremental Delay, d2		19.0		0.4	0.5	
Delay (s)		56.3		2.8	7.2	
Level of Service		E		A	A	
Approach Delay (s)	56.3			2.8	7.2	
Approach LOS	E			A	A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.4%	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)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	2910	1184	3042	4595	1350	1615	4420	1376	1272	4297	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	2910	1184	3042	4595	1350	1615	4420	1376	1272	4297	1417
Volume (vph)	70	235	295	525	165	245	30	750	775	45	1210	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	247	311	553	174	258	32	789	816	47	1274	642
RTOR Reduction (vph)	0	0	12	0	0	171	0	0	0	0	0	314
Lane Group Flow (vph)	74	247	299	553	174	87	32	789	816	47	1274	328
Heavy Vehicles (%)	6%	11%	22%	3%	1%	7%	0%	5%	5%	27%	8%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	12.0	17.0	37.0	26.0	31.0	40.6	20.0	51.4	120.0	9.6	41.0	53.0
Effective Green, g (s)	12.0	17.0	37.0	26.0	31.0	40.6	20.0	51.4	120.0	9.6	41.0	53.0
Actuated g/C Ratio	0.10	0.14	0.31	0.22	0.26	0.34	0.17	0.43	1.00	0.08	0.34	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	152	412	405	659	1187	502	269	1893	1376	102	1468	626
v/s Ratio Prot	0.05	0.08	c0.12	c0.18	0.04	0.01	0.02	0.18		0.04	c0.30	0.05
v/s Ratio Perm			0.13			0.05			c0.59			0.18
v/c Ratio	0.49	0.60	0.74	0.84	0.15	0.17	0.12	0.42	0.59	0.46	0.87	0.52
Uniform Delay, d1	51.1	48.3	37.2	45.0	34.3	27.9	42.5	23.9	0.0	52.7	37.0	24.3
Progression Factor	0.41	0.45	0.30	0.48	0.36	1.40	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	5.1	5.7	7.9	0.2	0.1	0.2	0.7	1.9	3.3	7.2	0.8
Delay (s)	23.0	27.1	16.8	29.6	12.7	39.3	42.7	24.5	1.9	56.0	44.1	25.1
Level of Service	C	C	B	C	B	D	D	C	A	E	D	C
Approach Delay (s)		21.5			29.1			13.6			38.2	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3933	1350	1583	4550	2956	1326
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3933	1350	1583	4550	2956	1326
Volume (vph)	440	785	655	150	250	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	826	689	158	263	168
RTOR Reduction (vph)	0	0	0	0	0	147
Lane Group Flow (vph)	463	826	689	158	263	21
Heavy Vehicles (%)	18%	7%	2%	2%	6%	9%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	23.0	120.0	70.0	97.0	15.0	15.0
Effective Green, g (s)	23.0	120.0	70.0	97.0	15.0	15.0
Actuated g/C Ratio	0.19	1.00	0.58	0.81	0.12	0.12
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)	754	1350	923	3678	370	166
v/s Ratio Prot	0.12		c0.44	0.03	0.09	
v/s Ratio Perm		c0.61				0.02
v/c Ratio	0.61	0.61	0.75	0.04	0.71	0.13
Uniform Delay, d1	44.4	0.0	18.5	2.3	50.4	46.7
Progression Factor	1.00	1.00	0.78	0.92	1.00	1.00
Incremental Delay, d2	3.7	2.1	2.8	0.0	6.3	0.3
Delay (s)	48.2	2.1	17.3	2.1	56.7	47.0
Level of Service	D	A	B	A	E	D
Approach Delay (s)	18.6			14.4	52.9	
Approach LOS	B			B	D	

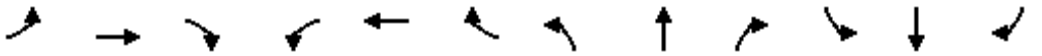
Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

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	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	
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)	1805	3343	1583	3502	3505	1615	3303	3008		1805	1758	
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)	1805	3343	1583	3502	3505	1615	3303	3008		1805	1758	
Volume (vph)	5	930	120	410	670	10	260	565	195	5	700	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	979	126	432	705	11	274	595	205	5	737	5
RTOR Reduction (vph)	0	0	0	0	0	6	0	25	0	0	0	0
Lane Group Flow (vph)	5	979	126	432	705	5	274	775	0	5	742	0
Heavy Vehicles (%)	0%	8%	2%	0%	3%	0%	6%	9%	34%	0%	8%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	0.8	32.0	120.0	14.7	45.9	51.8	14.3	51.4		5.9	43.0	
Effective Green, g (s)	0.8	32.0	120.0	14.7	45.9	51.8	14.3	51.4		5.9	43.0	
Actuated g/C Ratio	0.01	0.27	1.00	0.12	0.38	0.43	0.12	0.43		0.05	0.36	
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)	12	891	1583	429	1341	697	394	1288		89	630	
v/s Ratio Prot	0.00	c0.29		c0.12	0.20	0.00	0.08	c0.26		0.00	c0.42	
v/s Ratio Perm			0.08			0.00						
v/c Ratio	0.42	1.10	0.08	1.01	0.53	0.01	0.70	0.60		0.06	1.18	
Uniform Delay, d1	59.4	44.0	0.0	52.6	28.6	19.4	50.8	26.4		54.4	38.5	
Progression Factor	0.95	0.94	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.9	58.3	0.1	45.2	1.5	0.0	5.3	0.8		0.3	95.8	
Delay (s)	74.0	99.6	0.1	97.9	30.1	19.4	56.0	27.2		54.7	134.3	
Level of Service	E	F	A	F	C	B	E	C		D	F	
Approach Delay (s)		88.2			55.5			34.6			133.8	
Approach LOS		F			E			C			F	

Intersection Summary			
HCM Average Control Delay	73.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

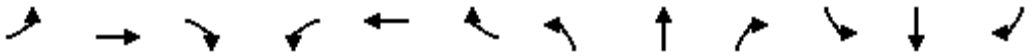
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1225
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1225
Volume (vph)	180	1485	50	125	1260	75	40	525	100	130	835	415
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)	196	1614	54	136	1370	82	43	571	109	141	908	451
RTOR Reduction (vph)	0	0	32	0	0	51	0	0	19	0	0	19
Lane Group Flow (vph)	196	1614	22	136	1370	31	43	571	90	141	908	432
Heavy Vehicles (%)	6%	18%	2%	4%	18%	6%	6%	7%	5%	8%	5%	18%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.0	41.2	41.2	9.0	37.2	37.2	3.2	23.8	32.8	10.0	30.6	43.6
Effective Green, g (s)	13.0	41.2	41.2	9.0	37.2	37.2	3.2	23.8	32.8	10.0	30.6	43.6
Actuated g/C Ratio	0.13	0.41	0.41	0.09	0.37	0.37	0.03	0.24	0.33	0.10	0.31	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	198	1620	584	140	1463	507	49	719	506	150	941	583
v/s Ratio Prot	c0.13	c0.41		0.09	0.35		0.03	0.19	0.02	c0.09	c0.30	0.10
v/s Ratio Perm			0.02			0.02			0.05			0.26
v/c Ratio	0.99	1.00	0.04	0.97	0.94	0.06	0.88	0.79	0.18	0.94	0.96	0.74
Uniform Delay, d1	43.4	29.3	17.6	45.4	30.3	20.2	48.2	35.8	24.0	44.7	34.2	23.5
Progression Factor	1.22	0.87	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.2	19.6	0.1	67.0	12.6	0.2	83.1	6.0	0.2	55.0	21.1	5.1
Delay (s)	108.3	45.2	15.6	112.4	42.8	20.4	131.3	41.8	24.2	99.7	55.3	28.6
Level of Service	F	D	B	F	D	C	F	D	C	F	E	C
Approach Delay (s)		51.0			47.6			44.5			51.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

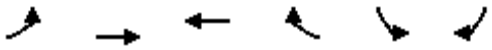
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2487	4590			4433	1257	2487		1147			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2487	4590			4433	1257	2487		1147			
Volume (vph)	240	1710	0	0	1285	550	80	0	150	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)	261	1859	0	0	1397	598	87	0	163	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	258	0	0	23	0	0	0
Lane Group Flow (vph)	261	1859	0	0	1397	340	87	0	140	0	0	0
Heavy Vehicles (%)	26%	13%	0%	0%	17%	15%	26%	0%	26%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	14.8	75.7			56.9	56.9	16.3		16.3			
Effective Green, g (s)	14.8	75.7			56.9	56.9	16.3		16.3			
Actuated g/C Ratio	0.15	0.76			0.57	0.57	0.16		0.16			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	368	3475			2522	715	405		187			
v/s Ratio Prot	c0.10	c0.40			0.32							
v/s Ratio Perm						0.27	0.03		c0.12			
v/c Ratio	0.71	0.53			0.55	0.48	0.21		0.75			
Uniform Delay, d1	40.6	5.0			13.6	12.7	36.3		39.9			
Progression Factor	1.02	0.54			0.45	0.50	1.00		1.00			
Incremental Delay, d2	5.6	0.5			0.5	1.3	0.3		14.9			
Delay (s)	47.2	3.2			6.6	7.6	36.6		54.8			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		8.7			6.9			48.5			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

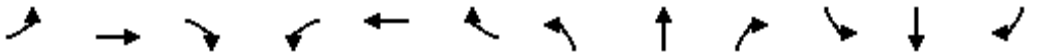
c Critical Lane Group



Movement	EBL	EBT	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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6634	4396		3019	2450
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6634	4396		3019	2450
Volume (vph)	0	1560	1365	0	390	250
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1696	1484	0	424	272
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	0	1696	1484	0	424	238
Heavy Vehicles (%)	0%	16%	18%	0%	16%	16%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		56.0	56.0		36.0	36.0
Effective Green, g (s)		56.0	56.0		36.0	36.0
Actuated g/C Ratio		0.56	0.56		0.36	0.36
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)		3715	2462		1087	882
v/s Ratio Prot		0.26	c0.34			
v/s Ratio Perm					c0.14	0.10
v/c Ratio		0.46	0.60		0.39	0.27
Uniform Delay, d1		13.0	14.6		23.8	22.7
Progression Factor		0.07	0.17		1.00	1.00
Incremental Delay, d2		0.1	0.9		1.1	0.8
Delay (s)		1.1	3.5		24.9	23.4
Level of Service		A	A		C	C
Approach Delay (s)		1.1	3.5		24.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	6.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

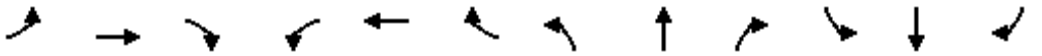
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1843	4219	1175	1170	5007	836	1292	1133	1257	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.55	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1843	4219	1175	1170	5007	836	754	1133	1257	506	1615	722
Volume (vph)	400	1430	75	230	1085	300	50	10	30	100	300	270
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)	435	1554	82	250	1179	326	54	11	33	109	326	293
RTOR Reduction (vph)	0	0	46	0	0	187	0	0	21	0	0	42
Lane Group Flow (vph)	435	1554	36	250	1179	139	54	11	12	109	326	251
Heavy Vehicles (%)	70%	10%	23%	38%	10%	40%	25%	50%	15%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	26.0	37.2	37.2	22.4	33.6	42.6	18.6	15.4	37.8	28.4	21.2	47.2
Effective Green, g (s)	26.0	37.2	37.2	22.4	33.6	42.6	18.6	15.4	37.8	28.4	21.2	47.2
Actuated g/C Ratio	0.26	0.37	0.37	0.22	0.34	0.43	0.19	0.15	0.38	0.28	0.21	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	479	1569	437	262	1682	390	157	174	525	171	342	370
v/s Ratio Prot	c0.24	c0.37		0.21	0.24	0.03	0.01	0.01	0.01	c0.06	c0.20	0.18
v/s Ratio Perm			0.03			0.13	0.05		0.00	0.12		0.17
v/c Ratio	0.91	0.99	0.08	0.95	0.70	0.36	0.34	0.06	0.02	0.64	0.95	0.68
Uniform Delay, d1	35.8	31.2	20.3	38.3	28.8	19.4	34.6	36.1	19.5	30.4	38.9	20.5
Progression Factor	1.00	1.00	1.00	0.91	1.18	3.17	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	20.6	0.4	38.7	2.1	0.4	1.3	0.2	0.0	7.6	36.2	4.9
Delay (s)	56.6	51.8	20.7	73.7	36.2	62.0	35.9	36.3	19.5	38.0	75.2	25.4
Level of Service	E	D	C	E	D	E	D	D	B	D	E	C
Approach Delay (s)		51.6			46.3			30.4			49.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	48.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1246
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1246
Volume (vph)	180	1485	50	125	1260	75	40	525	100	130	835	415
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)	196	1614	54	136	1370	82	43	571	109	141	908	451
RTOR Reduction (vph)	0	0	32	0	0	51	0	0	19	0	0	19
Lane Group Flow (vph)	196	1614	22	136	1370	31	43	571	90	141	908	432
Heavy Vehicles (%)	6%	18%	2%	4%	18%	6%	6%	7%	5%	8%	5%	16%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.0	41.2	41.2	9.0	37.2	37.2	3.2	23.8	32.8	10.0	30.6	43.6
Effective Green, g (s)	13.0	41.2	41.2	9.0	37.2	37.2	3.2	23.8	32.8	10.0	30.6	43.6
Actuated g/C Ratio	0.13	0.41	0.41	0.09	0.37	0.37	0.03	0.24	0.33	0.10	0.31	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	198	1620	584	140	1463	507	49	719	506	150	941	593
v/s Ratio Prot	c0.13	c0.41		0.09	0.35		0.03	0.19	0.02	c0.09	c0.30	0.09
v/s Ratio Perm			0.02			0.02			0.05			0.25
v/c Ratio	0.99	1.00	0.04	0.97	0.94	0.06	0.88	0.79	0.18	0.94	0.96	0.73
Uniform Delay, d1	43.4	29.3	17.6	45.4	30.3	20.2	48.2	35.8	24.0	44.7	34.2	23.3
Progression Factor	0.70	1.58	3.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	49.2	17.5	0.1	67.0	12.6	0.2	83.1	6.0	0.2	55.0	21.1	4.5
Delay (s)	79.6	63.9	53.9	112.4	42.8	20.4	131.3	41.8	24.2	99.7	55.3	27.8
Level of Service	E	E	D	F	D	C	F	D	C	F	E	C
Approach Delay (s)		65.3			47.6			44.5			51.2	
Approach LOS		E			D			D			D	

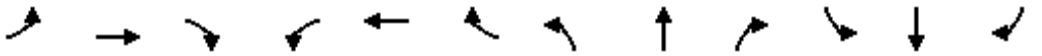
Intersection Summary			
HCM Average Control Delay	54.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2779	4715			6577	1404	1893		1062			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2779	4715			6577	1404	1893		1062			
Volume (vph)	240	1610	0	0	1285	550	350	0	250	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)	261	1750	0	0	1397	598	380	0	272	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	598	0	0	5	0	0	0
Lane Group Flow (vph)	261	1750	0	0	1397	0	380	0	267	0	0	0
Heavy Vehicles (%)	26%	10%	0%	0%	17%	15%	85%	0%	52%	0%	0%	0%
Turn Type	Prot					NA	custom		custom			
Protected Phases	7	4			8							
Permitted Phases							2		2			
Actuated Green, G (s)	14.1	50.0			31.9	0.0	42.0		42.0			
Effective Green, g (s)	14.1	50.0			31.9	0.0	42.0		42.0			
Actuated g/C Ratio	0.14	0.50			0.32	0.00	0.42		0.42			
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)	392	2358			2098	0	795		446			
v/s Ratio Prot	0.09	c0.37			0.21							
v/s Ratio Perm							0.20		c0.25			
v/c Ratio	0.67	0.74			0.67	0.00	0.48		0.60			
Uniform Delay, d1	40.7	19.9			29.4	50.0	21.0		22.5			
Progression Factor	1.15	0.72			0.62	1.00	1.00		1.00			
Incremental Delay, d2	3.9	2.0			0.9	0.0	2.1		5.8			
Delay (s)	50.9	16.4			19.2	50.0	23.1		28.3			
Level of Service	D	B			B	D	C		C			
Approach Delay (s)		20.9			28.4			25.3			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6810	1496	2321	4021					3183		2256
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6810	1496	2321	4021					3183		2256
Volume (vph)	0	1460	530	180	1555	0	0	0	0	390	0	250
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1587	576	196	1690	0	0	0	0	424	0	272
RTOR Reduction (vph)	0	0	299	0	0	0	0	0	0	0	0	45
Lane Group Flow (vph)	0	1587	277	196	1690	0	0	0	0	424	0	227
Heavy Vehicles (%)	0%	13%	70%	35%	29%	0%	0%	0%	0%	10%	0%	26%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		48.1	48.1	13.9	66.0					26.0		26.0
Effective Green, g (s)		48.1	48.1	13.9	66.0					26.0		26.0
Actuated g/C Ratio		0.48	0.48	0.14	0.66					0.26		0.26
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)		3276	720	323	2654					828		587
v/s Ratio Prot		0.23		0.08	c0.42							
v/s Ratio Perm			0.19							c0.13		0.10
v/c Ratio		0.48	0.38	0.61	0.64					0.51		0.39
Uniform Delay, d1		17.6	16.5	40.5	10.0					31.6		30.4
Progression Factor		1.00	1.00	1.49	0.63					1.00		1.00
Incremental Delay, d2		0.5	1.6	2.6	1.0					2.3		1.9
Delay (s)		18.1	18.1	63.0	7.2					33.8		32.4
Level of Service		B	B	E	A					C		C
Approach Delay (s)		18.1			13.0			0.0			33.3	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

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FUTURE (2035) ALTERNATIVE 6B

INTERSECTION QUEUING ANALYSIS

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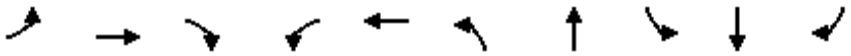
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	5	79	595	16	489	142	116	468	568	394
v/c Ratio	0.05	0.21	0.96	0.02	0.43	0.40	0.69	0.63	0.92	0.91
Control Delay	46.4	30.5	65.5	13.8	1.2	48.1	71.6	3.9	65.8	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.4	30.5	65.5	13.8	1.2	48.1	71.6	3.9	65.8	38.3
Queue Length 50th (ft)	3	16	228	6	0	47	45	0	218	74
Queue Length 95th (ft)	16	41	#346	17	0	#108	78	0	#330	197
Internal Link Dist (ft)		738		419			857			397
Turn Bay Length (ft)	120				150				220	
Base Capacity (vph)	101	369	639	874	1133	353	203	747	631	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.21	0.93	0.02	0.43	0.40	0.57	0.63	0.90	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

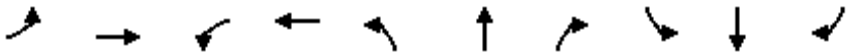


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	247	1016	174	63	1337	284	679	79	247	205
v/c Ratio	0.75	0.59	0.27	0.46	0.86	0.80	0.81	0.54	0.32	0.48
Control Delay	35.3	8.4	2.0	45.5	30.5	52.3	35.4	51.6	28.7	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	8.4	2.0	45.5	30.5	52.3	35.4	51.6	28.7	8.5
Queue Length 50th (ft)	64	90	0	30	219	72	165	20	38	0
Queue Length 95th (ft)	m#86	110	m6	69	#286	#132	#262	#46	61	54
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	329	1729	641	149	1550	358	843	146	780	431
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.59	0.27	0.42	0.86	0.79	0.81	0.54	0.32	0.48

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	495	1405	21	1048	589	642	47	58	268	326
v/c Ratio	1.06	0.64	0.34	1.03	1.06	0.73	0.11	0.68	0.74	0.73
Control Delay	89.9	11.7	75.1	84.3	104.2	47.2	10.0	98.1	68.5	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.9	11.7	75.1	84.3	104.2	47.2	10.0	98.1	68.5	15.8
Queue Length 50th (ft)	~462	175	17	~345	~280	261	0	25	116	0
Queue Length 95th (ft)	#684	201	47	#440	#397	334	30	#62	#174	100
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	466	2196	65	1017	556	881	412	85	360	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.64	0.32	1.03	1.06	0.73	0.11	0.68	0.74	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	274	2142	74	942	621	763	84	174	668	168
v/c Ratio	0.59	1.04	1.14	0.93	1.10	0.90	0.20	2.15	1.91	0.55
Control Delay	33.4	52.3	207.7	64.7	117.7	59.5	8.2	583.8	450.0	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	52.3	207.7	64.7	117.7	59.5	8.2	583.8	450.0	15.2
Queue Length 50th (ft)	167	~697	~72	285	~307	326	0	~120	~454	2
Queue Length 95th (ft)	249	#792	#176	#373	#426	#440	40	#197	#578	72
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	461	2062	65	1008	562	848	429	81	350	305
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	1.04	1.14	0.93	1.10	0.90	0.20	2.15	1.91	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1068	1332	274	63
v/c Ratio	0.62	0.68	0.79	0.39
Control Delay	9.0	10.9	41.0	17.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.0	10.9	41.0	17.0
Queue Length 50th (ft)	176	172	108	0
Queue Length 95th (ft)	262	270	#184	34
Internal Link Dist (ft)	2411	1592	569	
Turn Bay Length (ft)				
Base Capacity (vph)	1712	1949	418	161
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.68	0.66	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	847	379	305	1300
v/c Ratio	0.46	0.41	0.80	0.44
Control Delay	7.8	2.1	33.7	0.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	2.1	33.7	0.3
Queue Length 50th (ft)	86	0	128	0
Queue Length 95th (ft)	123	27	m#225	0
Internal Link Dist (ft)	208			2411
Turn Bay Length (ft)			490	
Base Capacity (vph)	1855	925	383	2980
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.41	0.80	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

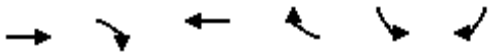
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	979	1842	63	105
v/c Ratio	0.41	0.77	0.41	0.46
Control Delay	3.3	7.8	40.2	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.3	7.8	40.2	14.1
Queue Length 50th (ft)	56	184	30	0
Queue Length 95th (ft)	101	350	65	42
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2394	2394	290	338
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.77	0.22	0.31

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	853	295	1174	600	274
v/c Ratio	0.50	0.33	0.48	0.73	0.22
Control Delay	7.3	0.9	7.6	24.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	0.9	7.6	24.7	0.4
Queue Length 50th (ft)	64	0	64	101	0
Queue Length 95th (ft)	91	1	119	130	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1721	901	2465	1156	1225
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.33	0.48	0.52	0.22

Intersection Summary

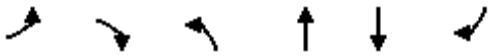


Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	920	828	1279	242	253	663
v/c Ratio	0.57	0.60	0.76	0.19	0.30	0.86
Control Delay	10.6	1.9	11.1	0.3	16.5	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	1.9	11.1	0.3	16.5	30.4
Queue Length 50th (ft)	112	0	183	0	34	107
Queue Length 95th (ft)	166	0	264	m0	58	#199
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1614	1379	1674	1288	919	833
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.60	0.76	0.19	0.28	0.80

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



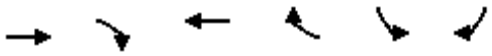
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	279	95	168	232	11
v/c Ratio	0.02	0.62	0.15	0.08	0.21	0.01
Control Delay	13.2	9.3	2.9	2.1	4.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	9.3	2.9	2.1	4.5	2.8
Queue Length 50th (ft)	1	0	6	5	14	0
Queue Length 95th (ft)	6	41	24	16	59	5
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	642	698	643	2104	1107	885
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.15	0.08	0.21	0.01

Intersection Summary

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1458	705	1458	1136	442	421
v/c Ratio	0.97	0.65	1.00	0.98	0.28	0.33
Control Delay	42.0	7.6	51.4	25.9	11.7	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	7.6	51.4	25.9	11.7	12.0
Queue Length 50th (ft)	265	98	310	0	65	69
Queue Length 95th (ft)	#421	298	#432	#250	94	102
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1499	1083	1465	1158	1559	1281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.65	1.00	0.98	0.28	0.33

Intersection Summary

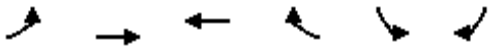
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1930	707	1168	563	389	632
v/c Ratio	0.67	0.70	0.41	0.50	0.73	0.68
Control Delay	8.7	4.7	1.9	7.5	42.3	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.7	4.7	1.9	7.5	42.3	7.4
Queue Length 50th (ft)	187	0	13	98	108	7
Queue Length 95th (ft)	284	39	m16	m94	148	54
Internal Link Dist (ft)	479		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2865	1016	2853	1136	655	1006
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.70	0.41	0.50	0.59	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

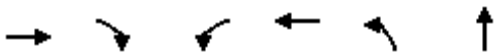


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	158	895	2763	358	437	179
v/c Ratio	0.83	0.34	1.26	0.44	0.60	0.38
Control Delay	86.2	8.5	149.5	8.7	46.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.2	8.5	149.5	8.7	46.8	7.9
Queue Length 50th (ft)	130	100	~1077	61	169	0
Queue Length 95th (ft)	#238	123	#1163	137	226	60
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	208	2676	2195	810	729	471
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.33	1.26	0.44	0.60	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



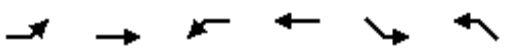
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	1453	442	11	2011	547	11
v/c Ratio	0.56	0.74	0.32	0.74	1.59	0.04
Control Delay	10.6	10.5	55.8	6.3	306.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	10.5	55.8	6.3	306.6	0.3
Queue Length 50th (ft)	132	0	6	99	~230	0
Queue Length 95th (ft)	223	#183	m17	94	#331	0
Internal Link Dist (ft)	564			369		492
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2597	595	34	2716	344	344
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.74	0.32	0.74	1.59	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

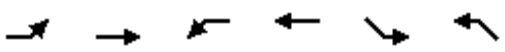
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	589	579	221	1032	516	168
v/c Ratio	0.74	0.29	0.65	0.67	0.82	0.31
Control Delay	25.4	5.2	46.2	27.4	44.1	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	5.2	46.2	27.4	44.1	29.9
Queue Length 50th (ft)	156	20	61	181	142	40
Queue Length 95th (ft)	217	16	98	238	194	67
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	795	1979	380	1529	718	618
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.29	0.58	0.67	0.72	0.27

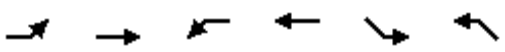
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	600	542	11	1753	453	253
v/c Ratio	0.98	0.22	0.12	0.97	0.99	0.52
Control Delay	63.1	4.7	39.3	39.4	75.4	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	4.7	39.3	39.4	75.4	34.3
Queue Length 50th (ft)	153	26	2	304	118	59
Queue Length 95th (ft)	#259	55	10	#422	#212	96
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	614	2503	92	1802	457	487
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.22	0.12	0.97	0.99	0.52

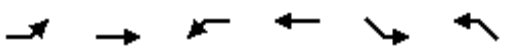
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	653	805	589	795	389	147
v/c Ratio	0.72	0.59	0.86	0.45	0.78	0.29
Control Delay	39.3	25.7	51.5	25.0	54.6	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	25.7	51.5	25.0	54.6	40.4
Queue Length 50th (ft)	210	217	204	147	136	46
Queue Length 95th (ft)	277	323	254	192	185	75
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	903	1376	829	1786	578	590
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.59	0.71	0.45	0.67	0.25

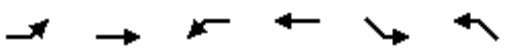
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	379	537	1074	442	705
v/c Ratio	0.73	0.34	0.83	0.76	0.50	0.87
Control Delay	37.3	17.9	35.5	21.2	19.3	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	17.9	35.5	21.2	19.3	33.7
Queue Length 50th (ft)	51	39	96	121	67	123
Queue Length 95th (ft)	#103	61	#172	165	105	#213
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	403	1212	671	1504	921	845
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.31	0.80	0.71	0.48	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	900	316	721	537	137
v/c Ratio	0.72	0.62	0.79	0.50	0.81	0.25
Control Delay	32.6	13.7	37.6	12.4	29.1	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	13.7	37.6	12.4	29.1	15.4
Queue Length 50th (ft)	36	63	40	48	65	14
Queue Length 95th (ft)	#86	94	#97	73	#139	32
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	392	1621	399	1605	671	597
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.56	0.79	0.45	0.80	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

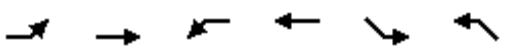
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	2032	1842	163	437	500	16
v/c Ratio	0.52	0.93	1.18	0.28	1.00	0.97	0.07
Control Delay	47.2	29.9	110.4	2.0	81.0	68.9	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	29.9	110.4	2.0	81.0	68.9	13.6
Queue Length 50th (ft)	51	374	~506	6	~137	147	1
Queue Length 95th (ft)	100	#507	#583	m10	#248	#240	m8
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	203	2183	1565	592	436	514	243
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.93	1.18	0.28	1.00	0.97	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

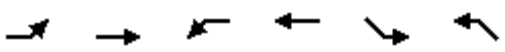
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	368	879	768	679	284	547
v/c Ratio	0.64	0.61	0.87	0.37	0.45	0.83
Control Delay	28.4	20.6	40.5	18.1	31.8	44.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	20.6	40.5	18.1	31.8	44.3
Queue Length 50th (ft)	97	146	207	94	70	150
Queue Length 95th (ft)	m98	m165	268	128	106	206
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	573	1436	996	1841	704	739
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.61	0.77	0.37	0.40	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

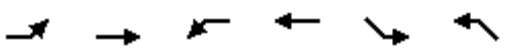


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	295	984	600	853	232	295
v/c Ratio	0.67	0.77	0.76	0.52	0.57	0.72
Control Delay	39.5	24.7	17.6	2.5	37.8	44.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	24.7	17.6	2.5	37.8	44.0
Queue Length 50th (ft)	71	215	129	13	56	73
Queue Length 95th (ft)	110	294	m155	m30	91	#122
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	496	1273	787	1625	425	425
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.77	0.76	0.52	0.55	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

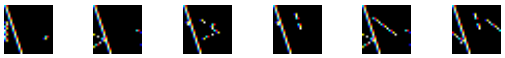


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	547	863	463	1374	326	768
v/c Ratio	0.89	0.54	0.70	0.78	0.40	0.92
Control Delay	66.4	33.4	21.0	11.3	38.5	61.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	33.4	21.0	11.3	38.5	61.1
Queue Length 50th (ft)	227	213	126	208	110	313
Queue Length 95th (ft)	#300	259	m135	m212	154	#401
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	667	1590	663	1760	864	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.54	0.70	0.78	0.38	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	579	874	432	1305	368	705
v/c Ratio	0.89	0.51	0.63	0.72	0.47	0.89
Control Delay	66.3	31.7	22.5	11.8	41.0	59.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.3	31.7	22.5	11.8	41.0	59.0
Queue Length 50th (ft)	239	205	123	197	131	290
Queue Length 95th (ft)	#331	260	m137	m225	173	355
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	687	1717	683	1816	881	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.51	0.63	0.72	0.42	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

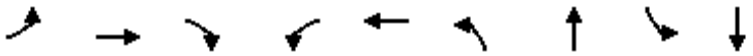
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	284	247	89	111
v/c Ratio	0.60	0.55	0.17	0.22
Control Delay	21.7	26.1	5.5	2.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.7	26.1	5.5	2.5
Queue Length 50th (ft)	50	43	9	0
Queue Length 95th (ft)	78	67	31	17
Internal Link Dist (ft)	228	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1038	982	514	496
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.25	0.17	0.22

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	284	100	121	216
v/c Ratio	0.17	0.20	0.68	0.08
Control Delay	6.0	3.1	29.1	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.0	3.1	29.1	0.1
Queue Length 50th (ft)	18	0	44	0
Queue Length 95th (ft)	46	20	m67	0
Internal Link Dist (ft)	3486			228
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1695	494	367	2555
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.33	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	147	611	79	137	263	842	79	586
v/c Ratio	0.09	0.80	0.93	0.35	0.49	0.63	0.57	0.61	0.56
Control Delay	35.5	70.0	38.0	38.2	33.2	36.7	18.3	61.0	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	70.0	38.0	38.2	33.2	36.7	18.3	61.0	31.2
Queue Length 50th (ft)	6	88	213	39	56	145	194	48	165
Queue Length 95th (ft)	22	#183	#329	89	128	208	273	95	247
Internal Link Dist (ft)		2169			3486		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	129	208	741	224	300	521	1467	169	1046
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.71	0.82	0.35	0.46	0.50	0.57	0.47	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	121	168	1295	1037
v/c Ratio	0.89	0.45	0.84	0.52	0.67
Control Delay	72.1	13.1	73.3	19.6	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.4
Total Delay	72.1	13.1	73.3	19.6	8.5
Queue Length 50th (ft)	89	0	102	166	0
Queue Length 95th (ft)	#161	52	#207	200	m82
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	315	269	222	2479	1542
Starvation Cap Reductn	0	0	0	0	143
Spillback Cap Reductn	0	0	0	132	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	0.45	0.76	0.55	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	495	58	1147	421	32	547
v/c Ratio	0.05	0.87	0.10	0.91	0.33	0.53	0.63
Control Delay	27.9	57.1	7.1	20.8	0.9	78.7	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	27.9	57.1	7.1	20.8	1.1	78.7	33.4
Queue Length 50th (ft)	3	163	2	371	3	20	156
Queue Length 95th (ft)	18	#269	27	m#504	m6	#66	214
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	217	569	558	1262	1261	60	878
Starvation Cap Reductn	0	0	0	0	286	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.87	0.10	0.91	0.43	0.53	0.62

Intersection Summary

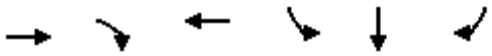
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	158	805	237	505	405	53	947	642	258	1153	837
v/c Ratio	0.56	0.77	0.51	0.53	0.64	0.58	0.76	0.56	0.64	0.71	0.55
Control Delay	37.9	36.9	30.0	25.1	20.1	24.2	3.7	3.8	55.1	17.2	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	36.9	30.0	25.1	20.1	24.2	3.7	3.8	55.1	17.2	15.5
Queue Length 50th (ft)	85	160	75	112	203	26	2	0	50	53	198
Queue Length 95th (ft)	147	223	86	93	83	m26	m7	m0	m113	m126	m298
Internal Link Dist (ft)		633		710			585			395	
Turn Bay Length (ft)	150		500		350	100		500	350		
Base Capacity (vph)	282	1050	468	945	657	92	1249	1155	473	1628	1515
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	3
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.77	0.51	0.53	0.62	0.58	0.76	0.56	0.55	0.71	0.55

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	684	305	1395	279	574	716
v/c Ratio	0.30	0.36	0.62	0.23	0.87	0.72
Control Delay	15.7	5.6	13.4	18.8	41.3	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	5.6	13.4	18.8	41.3	27.9
Queue Length 50th (ft)	89	19	217	58	325	204
Queue Length 95th (ft)	139	81	289	72	402	233
Internal Link Dist (ft)	1062		633		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2263	844	2263	1507	818	1233
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.36	0.62	0.19	0.70	0.58

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	1042	589	168	789	26	326	369	32	126	32
v/c Ratio	0.31	0.66	0.29	0.72	0.46	0.03	0.52	0.89	0.21	0.59	0.15
Control Delay	43.4	10.9	0.5	63.9	18.6	3.5	39.6	55.6	44.0	52.2	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	10.9	0.5	63.9	18.6	3.5	39.6	55.6	44.0	52.2	14.6
Queue Length 50th (ft)	22	150	1	55	178	0	96	187	20	77	0
Queue Length 95th (ft)	m32	237	7	#102	274	11	132	#337	45	130	26
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	106	1567	2047	233	1718	1017	637	453	283	434	404
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.29	0.72	0.46	0.03	0.51	0.81	0.11	0.29	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	158	721	1642	358	242	1189
v/c Ratio	0.10	1.06	0.97	0.52	1.00	0.66
Control Delay	9.8	61.5	50.8	5.8	78.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.8	61.5	50.8	5.8	78.9	6.8
Queue Length 50th (ft)	13	~494	298	0	81	64
Queue Length 95th (ft)	m29	m#659	#386	65	m#149	84
Internal Link Dist (ft)	808		504			585
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1505	681	1686	692	243	1791
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.10	1.06	0.97	0.52	1.00	0.66

Intersection Summary

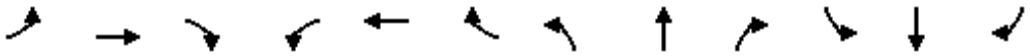
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	779	1511	1468
v/c Ratio	0.88	0.63	0.63
Control Delay	40.9	16.8	17.3
Queue Delay	0.0	0.0	0.0
Total Delay	40.9	16.8	17.3
Queue Length 50th (ft)	255	200	214
Queue Length 95th (ft)	288	223	333
Internal Link Dist (ft)		395	657
Turn Bay Length (ft)			
Base Capacity (vph)	1126	2401	2337
Starvation Cap Reductn	0	4	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.69	0.63	0.63

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	1141	130	82	1228	65	174	755	158	130	707	299
v/c Ratio	1.00	0.68	0.19	0.70	0.94	0.13	1.04	1.00	0.30	0.96	1.04	0.57
Control Delay	96.2	22.4	5.3	75.9	46.0	6.4	124.5	72.4	16.4	115.8	83.0	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	22.4	5.3	75.9	46.0	6.4	124.5	72.4	16.4	115.8	83.0	24.5
Queue Length 50th (ft)	161	191	11	52	274	0	~120	~255	45	84	~256	125
Queue Length 95th (ft)	#320	240	m48	#125	#372	28	#254	#383	95	#202	#372	214
Internal Link Dist (ft)		1962			822			1011			883	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	239	1687	674	121	1310	515	168	753	535	135	683	526
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.68	0.19	0.68	0.94	0.13	1.04	1.00	0.30	0.96	1.04	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

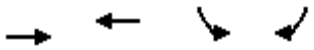
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	217	1522	1500	391	92	136
v/c Ratio	0.65	0.42	0.56	0.44	0.29	0.68
Control Delay	44.8	1.9	7.5	1.8	41.1	39.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	44.8	2.0	7.5	1.8	41.1	39.6
Queue Length 50th (ft)	75	24	55	0	28	45
Queue Length 95th (ft)	109	47	m349	m23	48	102
Internal Link Dist (ft)		405	1962			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	457	3629	2694	894	577	315
Starvation Cap Reductn	0	723	0	0	0	0
Spillback Cap Reductn	0	0	30	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.52	0.56	0.44	0.16	0.43

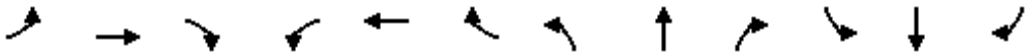
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1027	1592	690	408
v/c Ratio	0.31	0.68	0.55	0.44
Control Delay	1.5	11.3	26.3	22.7
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	1.5	11.5	26.3	22.7
Queue Length 50th (ft)	4	342	174	98
Queue Length 95th (ft)	11	26	230	145
Internal Link Dist (ft)	519	405	2412	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3351	2354	1255	937
Starvation Cap Reductn	0	157	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.72	0.55	0.44

Intersection Summary



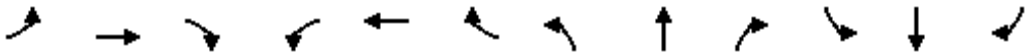
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	326	897	98	348	1435	217	54	22	33	98	337	239
v/c Ratio	0.88	0.82	0.25	0.93	0.73	0.42	0.56	0.18	0.06	0.48	0.95	0.63
Control Delay	63.0	42.6	8.1	65.5	36.1	7.4	56.7	40.5	3.7	39.3	76.7	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	42.6	8.1	65.5	36.1	7.4	56.7	40.5	3.7	39.3	76.7	21.5
Queue Length 50th (ft)	102	202	0	237	222	0	~39	14	0	50	113	73
Queue Length 95th (ft)	#174	#280	40	#393	270	m98	57	34	13	#106	#207	167
Internal Link Dist (ft)		647			519			697			611	
Turn Bay Length (ft)	400		200	200		300	200			400		400
Base Capacity (vph)	400	1089	391	392	1969	521	97	204	557	204	356	393
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.82	0.25	0.89	0.73	0.42	0.56	0.11	0.06	0.48	0.95	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	1141	130	82	1228	65	174	755	158	130	707	299
v/c Ratio	1.04	0.70	0.20	0.55	0.96	0.13	1.03	0.99	0.28	0.92	1.02	0.56
Control Delay	105.9	24.6	8.7	57.3	49.8	6.6	122.7	70.0	15.5	104.6	80.1	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.9	24.6	8.7	57.3	49.8	6.6	122.7	70.0	15.5	104.6	80.1	23.6
Queue Length 50th (ft)	~173	167	23	50	278	0	~119	253	44	84	~254	123
Queue Length 95th (ft)	#331	317	74	99	#379	29	#253	#381	92	#198	#370	210
Internal Link Dist (ft)		1062			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	229	1632	653	171	1283	515	169	760	589	141	690	537
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.70	0.20	0.48	0.96	0.13	1.03	0.99	0.27	0.92	1.02	0.56

Intersection Summary

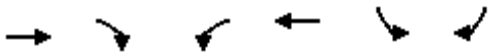
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	196	1424	1500	391	332	234
v/c Ratio	0.62	0.54	0.55	0.49	0.50	0.52
Control Delay	42.0	12.2	15.6	4.3	29.5	26.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	42.0	12.5	15.6	4.3	29.5	26.7
Queue Length 50th (ft)	53	171	171	35	86	98
Queue Length 95th (ft)	86	286	m233	m73	129	175
Internal Link Dist (ft)		410	388			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	464	2639	2704	790	661	449
Starvation Cap Reductn	0	478	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.66	0.55	0.49	0.50	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



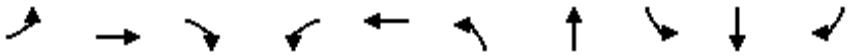
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	929	467	98	1734	690	408
v/c Ratio	0.31	0.53	0.53	0.73	0.64	0.48
Control Delay	17.4	4.3	67.5	8.8	31.9	26.5
Queue Delay	0.0	0.0	0.0	1.1	0.0	0.0
Total Delay	17.4	4.3	67.5	9.8	31.9	26.5
Queue Length 50th (ft)	90	0	28	109	191	106
Queue Length 95th (ft)	120	35	52	128	253	156
Internal Link Dist (ft)	394			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2977	882	274	2391	1070	853
Starvation Cap Reductn	0	0	0	382	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.53	0.36	0.86	0.64	0.48

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	5	158	584	32	263	126	358	316	111	163
v/c Ratio	0.02	0.35	0.81	0.03	0.19	0.64	0.76	0.44	0.65	0.84
Control Delay	44.8	20.7	40.4	9.5	0.3	67.5	55.5	2.0	72.9	72.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	20.7	40.4	9.5	0.3	67.5	55.5	2.0	72.9	72.8
Queue Length 50th (ft)	3	20	200	9	0	48	134	0	44	103
Queue Length 95th (ft)	16	55	282	23	0	#90	186	0	#82	#194
Internal Link Dist (ft)		738		419			857			397
Turn Bay Length (ft)	120				150				220	
Base Capacity (vph)	211	452	725	1020	1360	198	557	716	172	237
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.35	0.81	0.03	0.19	0.64	0.64	0.44	0.65	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

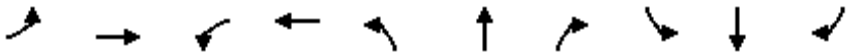


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	237	1205	584	111	1268	274	553	179	295	247
v/c Ratio	0.74	0.75	0.72	0.73	0.80	0.75	0.83	0.71	0.36	0.53
Control Delay	35.6	12.6	6.0	66.2	29.0	52.0	42.7	56.2	32.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	12.6	6.0	66.2	29.0	52.0	42.7	56.2	32.5	9.7
Queue Length 50th (ft)	61	114	17	62	225	78	147	52	53	4
Queue Length 95th (ft)	m75	m126	m20	#142	284	#135	#234	#97	80	70
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	321	1610	814	161	1579	364	665	254	816	462
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.75	0.72	0.69	0.80	0.75	0.83	0.70	0.36	0.53

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	416	1258	53	847	484	374	47	37	358	389
v/c Ratio	0.94	0.66	0.50	0.86	0.93	0.42	0.12	0.39	0.92	0.76
Control Delay	56.0	10.5	69.2	53.5	74.4	35.3	9.9	68.1	80.7	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.0	10.5	69.2	53.5	74.4	35.3	9.9	68.1	80.7	15.3
Queue Length 50th (ft)	322	137	40	229	192	125	0	14	146	0
Queue Length 95th (ft)	#497	163	83	#291	#294	174	30	33	#237	108
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	443	1911	127	982	518	890	382	95	390	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.66	0.42	0.86	0.93	0.42	0.12	0.39	0.92	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	432	1300	47	863	489	347	42	37	332	395
v/c Ratio	1.00	0.68	0.45	0.87	0.94	0.38	0.10	0.38	0.86	0.78
Control Delay	72.8	11.1	65.9	54.3	76.1	34.5	10.1	67.2	72.7	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	11.1	65.9	54.3	76.1	34.5	10.1	67.2	72.7	16.8
Queue Length 50th (ft)	~343	156	35	234	194	114	0	14	134	0
Queue Length 95th (ft)	#538	180	75	#306	#298	161	28	33	#214	#142
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	430	1915	130	989	518	924	442	98	386	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.68	0.36	0.87	0.94	0.38	0.10	0.38	0.86	0.78

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	995	626	84	53
v/c Ratio	0.48	0.27	0.43	0.31
Control Delay	8.7	3.1	33.8	14.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.7	3.1	33.8	14.1
Queue Length 50th (ft)	113	32	34	0
Queue Length 95th (ft)	212	62	69	29
Internal Link Dist (ft)	2132	1261	569	
Turn Bay Length (ft)				
Base Capacity (vph)	2066	2345	282	240
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.27	0.30	0.22

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	795	379	126	584
v/c Ratio	0.35	0.39	0.59	0.20
Control Delay	3.5	1.6	36.7	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.5	1.6	36.7	0.2
Queue Length 50th (ft)	44	0	43	0
Queue Length 95th (ft)	64	17	#100	0
Internal Link Dist (ft)	329			2132
Turn Bay Length (ft)			490	
Base Capacity (vph)	2261	970	228	2923
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.39	0.55	0.20

Intersection Summary

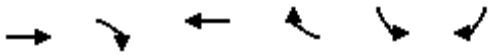
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	574	879	42	95
v/c Ratio	0.25	0.39	0.24	0.40
Control Delay	2.7	3.4	26.9	11.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.7	3.4	26.9	11.7
Queue Length 50th (ft)	19	34	14	0
Queue Length 95th (ft)	44	76	38	34
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2272	2249	557	559
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.39	0.08	0.17

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	663	263	648	516	284
v/c Ratio	0.39	0.30	0.26	0.69	0.25
Control Delay	6.3	0.9	5.1	23.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.3	0.9	5.1	23.0	0.6
Queue Length 50th (ft)	51	0	24	78	0
Queue Length 95th (ft)	71	1	49	105	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1713	881	2463	1134	1115
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.30	0.26	0.46	0.25

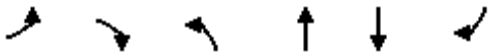
Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	716	326	984	42	211	474
v/c Ratio	0.41	0.24	0.55	0.04	0.33	0.71
Control Delay	7.3	0.4	4.8	0.1	17.4	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	0.4	4.8	0.1	17.4	19.2
Queue Length 50th (ft)	54	0	31	0	29	56
Queue Length 95th (ft)	119	0	150	m0	44	87
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1736	1319	1794	1075	975	938
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.25	0.55	0.04	0.22	0.51

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	111	137	179	268	5
v/c Ratio	0.05	0.41	0.22	0.08	0.22	0.00
Control Delay	15.7	9.3	3.7	2.3	3.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	9.3	3.7	2.3	3.5	2.4
Queue Length 50th (ft)	3	0	14	8	17	0
Queue Length 95th (ft)	11	29	50	25	54	2
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	608	544	637	2275	1197	1080
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.20	0.22	0.08	0.22	0.00

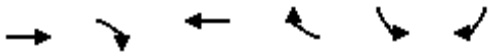
Intersection Summary

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1405	495	1442	1143	432	874
v/c Ratio	0.95	0.50	1.00	1.00	0.29	0.66
Control Delay	45.9	8.0	62.4	29.2	14.1	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	8.0	62.4	29.2	14.1	20.7
Queue Length 50th (ft)	314	129	~430	0	85	250
Queue Length 95th (ft)	#511	518	#554	#291	116	327
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1484	1000	1438	1147	1492	1334
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.50	1.00	1.00	0.29	0.66

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

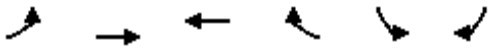
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1342	547	1171	634	558	789
v/c Ratio	0.57	0.63	0.51	0.59	0.62	0.92
Control Delay	16.8	5.0	7.0	15.3	36.3	44.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	5.0	7.0	15.3	36.3	44.3
Queue Length 50th (ft)	224	0	60	227	188	264
Queue Length 95th (ft)	356	87	m109	m225	205	303
Internal Link Dist (ft)	475		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2371	873	2308	1076	1206	1082
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.63	0.51	0.59	0.46	0.73

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



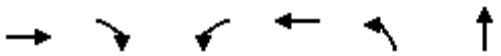
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	311	1337	1379	321	453	226
v/c Ratio	2.10	0.51	0.70	0.37	0.69	0.50
Control Delay	540.9	7.3	8.2	1.2	34.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	540.9	7.3	8.2	1.2	34.7	9.9
Queue Length 50th (ft)	~251	104	65	0	107	10
Queue Length 95th (ft)	#403	134	79	m0	157	69
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	148	2609	1977	860	657	456
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.10	0.51	0.70	0.37	0.69	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



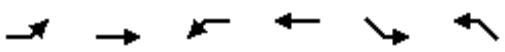
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	2037	621	32	2774	516	21
v/c Ratio	1.09	0.96	0.42	1.16	1.08	0.07
Control Delay	81.0	31.1	74.3	87.3	102.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	31.1	74.3	87.3	102.6	0.5
Queue Length 50th (ft)	~650	15	23	~954	~229	0
Queue Length 95th (ft)	#747	#185	m32	m#919	#340	0
Internal Link Dist (ft)	564			370		489
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	1869	649	76	2394	479	283
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.96	0.42	1.16	1.08	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



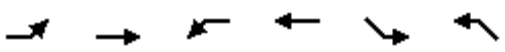
Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1053	574	147	1468	453	568
v/c Ratio	1.10	0.25	0.67	1.03	0.75	1.10
Control Delay	58.9	0.1	65.9	73.0	52.5	114.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	0.1	65.9	73.0	52.5	114.6
Queue Length 50th (ft)	~480	0	56	~447	170	~257
Queue Length 95th (ft)	m#339	m0	91	#544	230	#371
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	961	2290	262	1420	608	515
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.25	0.56	1.03	0.75	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1063	1121	21	732	547	221
v/c Ratio	1.07	0.38	0.24	1.00	1.09	0.41
Control Delay	76.7	8.4	52.1	74.6	104.5	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.7	8.4	52.1	74.6	104.5	36.8
Queue Length 50th (ft)	~390	88	6	172	~203	63
Queue Length 95th (ft)	#517	156	19	#259	#308	98
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	990	2926	88	735	503	543
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.38	0.24	1.00	1.09	0.41

Intersection Summary

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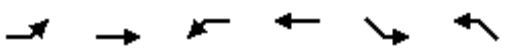
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	463	453	253	242	737	158
v/c Ratio	0.43	0.29	0.70	0.21	1.06	0.24
Control Delay	27.3	16.3	55.8	30.8	91.3	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	16.3	55.8	30.8	91.3	35.2
Queue Length 50th (ft)	124	92	89	47	~294	46
Queue Length 95th (ft)	170	138	126	71	#413	76
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	1078	1556	759	1129	697	651
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.29	0.33	0.21	1.06	0.24

Intersection Summary

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95th percentile volume exceeds capacity, queue may be longer.
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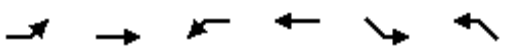
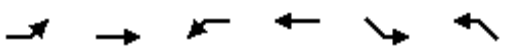


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	674	453	358	389	663	558
v/c Ratio	0.77	0.27	0.71	0.41	0.86	0.83
Control Delay	30.5	18.2	38.5	28.0	39.5	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	18.2	38.5	28.0	39.5	38.9
Queue Length 50th (ft)	165	67	86	62	155	129
Queue Length 95th (ft)	227	97	127	91	#222	#191
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	881	1665	591	949	842	731
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.27	0.61	0.41	0.79	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	326	532	368	395	800	189
v/c Ratio	0.52	0.55	0.70	0.50	0.83	0.23
Control Delay	22.4	21.2	30.4	22.5	25.6	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.4	21.2	30.4	22.5	25.6	13.9
Queue Length 50th (ft)	49	58	59	43	117	21
Queue Length 95th (ft)	87	87	#121	71	#225	44
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	636	1208	560	1216	1051	954
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.44	0.66	0.32	0.76	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

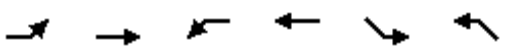
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	1600	1995	226	437	363	16
v/c Ratio	0.57	0.72	1.19	0.35	0.94	0.76	0.08
Control Delay	50.8	18.9	114.3	4.1	61.7	44.9	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	18.9	114.3	4.1	61.7	44.9	14.1
Queue Length 50th (ft)	52	248	~557	3	123	87	1
Queue Length 95th (ft)	100	306	m#652	m14	#226	126	m13
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	203	2219	1678	642	467	514	218
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.72	1.19	0.35	0.94	0.71	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

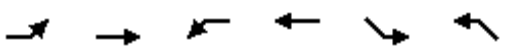


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	558	600	411	316	947
v/c Ratio	0.78	0.62	0.80	0.33	0.29	0.91
Control Delay	34.3	29.0	39.6	27.5	20.1	39.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	29.0	39.6	27.5	20.1	39.7
Queue Length 50th (ft)	128	115	162	70	60	246
Queue Length 95th (ft)	m160	m136	#242	102	91	#359
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	655	905	751	1259	1145	1113
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.62	0.80	0.33	0.28	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



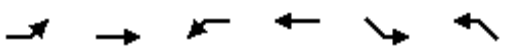
Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1163	789	389	337	642
v/c Ratio	0.68	1.04	1.04	0.26	0.56	1.03
Control Delay	45.0	68.4	62.3	4.6	35.3	79.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	68.4	62.3	4.6	35.3	79.7
Queue Length 50th (ft)	78	~381	~261	32	88	~203
Queue Length 95th (ft)	119	#508	#380	m45	131	#309
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	473	1115	758	1512	601	624
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.04	1.04	0.26	0.56	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

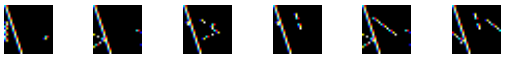
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	800	526	742	337	589
v/c Ratio	0.80	0.56	0.65	0.37	0.51	0.85
Control Delay	57.5	34.8	16.8	8.2	41.0	55.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	34.8	16.8	8.2	41.0	55.0
Queue Length 50th (ft)	170	182	108	32	117	226
Queue Length 95th (ft)	214	252	m143	m113	148	268
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	723	1416	812	2009	857	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.56	0.65	0.37	0.39	0.66

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	463	795	547	726	389	568
v/c Ratio	0.81	0.56	0.70	0.37	0.59	0.85
Control Delay	57.1	34.0	17.2	8.1	43.8	55.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.1	34.0	17.2	8.1	43.8	55.6
Queue Length 50th (ft)	177	179	111	30	139	218
Queue Length 95th (ft)	222	248	m145	m106	174	261
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	719	1423	784	1985	881	898
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.56	0.70	0.37	0.44	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

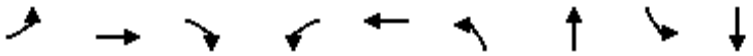
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	189	253	153	184
v/c Ratio	0.36	0.60	0.30	0.36
Control Delay	16.2	27.5	6.8	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.2	27.5	6.8	3.1
Queue Length 50th (ft)	31	44	18	0
Queue Length 95th (ft)	51	70	56	22
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1004	808	512	518
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.31	0.30	0.36

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	189	95	116	289
v/c Ratio	0.10	0.19	0.67	0.14
Control Delay	5.8	3.3	30.8	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.8	3.3	30.8	0.1
Queue Length 50th (ft)	11	0	40	0
Queue Length 95th (ft)	34	21	m69	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1877	496	367	2097
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.19	0.32	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	100	421	95	195	158	600	58	760
v/c Ratio	0.10	0.61	0.82	0.48	0.81	0.70	0.40	0.51	0.53
Control Delay	36.4	55.5	26.9	41.9	51.3	56.0	14.5	58.3	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	55.5	26.9	41.9	51.3	56.0	14.5	58.3	21.6
Queue Length 50th (ft)	6	61	120	51	86	96	102	36	167
Queue Length 95th (ft)	21	109	159	95	#181	158	191	76	300
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	112	249	562	224	289	290	1506	141	1447
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.40	0.75	0.42	0.67	0.54	0.40	0.41	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	100	89	1032	1163
v/c Ratio	0.83	0.38	0.75	0.35	0.69
Control Delay	61.6	11.8	79.5	13.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.3
Total Delay	61.6	11.8	79.5	13.2	3.2
Queue Length 50th (ft)	85	0	55	111	5
Queue Length 95th (ft)	#150	45	#132	137	19
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	353	274	130	2951	1701
Starvation Cap Reductn	0	0	0	0	142
Spillback Cap Reductn	0	0	0	249	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.36	0.68	0.38	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	105	37	1037	268	26	1058
v/c Ratio	0.04	0.43	0.09	0.71	0.21	0.37	0.79
Control Delay	25.8	48.3	10.0	12.5	0.9	62.2	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	48.3	10.0	12.5	0.9	62.2	29.1
Queue Length 50th (ft)	3	32	2	304	3	17	319
Queue Length 95th (ft)	17	59	24	390	m6	#51	#454
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	263	273	461	1463	1289	70	1338
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.08	0.71	0.21	0.37	0.79

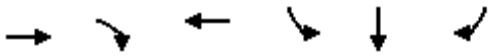
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	168	774	326	347	368	63	716	968	274	832	279
v/c Ratio	0.71	0.77	0.42	0.25	0.49	0.55	0.82	0.78	0.71	0.71	0.22
Control Delay	49.3	33.5	19.2	11.7	6.2	25.8	23.1	8.3	49.9	34.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.3	33.5	19.2	11.7	6.2	25.8	23.1	8.3	49.9	34.6	1.3
Queue Length 50th (ft)	90	91	78	20	0	30	182	84	81	167	0
Queue Length 95th (ft)	111	112	104	49	130	m36	m211	m106	m114	195	m34
Internal Link Dist (ft)		626		720			598			398	
Turn Bay Length (ft)	150		500		350	100			350		
Base Capacity (vph)	299	1003	769	1406	758	123	870	1243	388	1168	1368
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.77	0.42	0.25	0.49	0.51	0.82	0.78	0.71	0.71	0.20

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	774	432	689	168	400	458
v/c Ratio	0.30	0.43	0.26	0.20	0.86	0.53
Control Delay	10.2	3.6	8.2	25.0	50.8	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	3.6	8.2	25.0	50.8	15.1
Queue Length 50th (ft)	76	12	50	41	240	64
Queue Length 95th (ft)	132	71	83	55	302	97
Internal Link Dist (ft)	1068		626		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2613	994	2613	1421	771	1272
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.43	0.26	0.12	0.52	0.36

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	868	1074	211	800	32	216	105	37	263	26
v/c Ratio	0.33	0.72	0.66	0.66	0.54	0.04	0.35	0.20	0.29	0.80	0.09
Control Delay	52.5	25.5	4.7	54.1	23.7	4.4	37.0	19.0	48.7	56.6	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	25.5	4.7	54.1	23.7	4.4	37.0	19.0	48.7	56.6	12.5
Queue Length 50th (ft)	21	202	64	68	215	0	60	33	23	160	0
Queue Length 95th (ft)	m26	278	96	106	280	14	97	75	53	243	22
Internal Link Dist (ft)		720			1091			549		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	100	1213	1626	330	1483	974	625	523	267	391	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.72	0.66	0.64	0.54	0.03	0.35	0.20	0.14	0.67	0.07

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

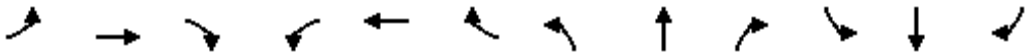
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	274	558	1747	484	284	916
v/c Ratio	0.23	0.96	0.86	0.66	0.81	0.41
Control Delay	13.0	38.7	34.7	11.8	45.7	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	38.7	34.7	11.8	45.7	15.1
Queue Length 50th (ft)	31	94	303	56	100	167
Queue Length 95th (ft)	m54	m#454	#360	177	m#158	200
Internal Link Dist (ft)	842		562			598
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1219	599	2028	738	355	2222
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.93	0.86	0.66	0.80	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	321	1253	1063
v/c Ratio	0.77	0.37	0.32
Control Delay	34.7	1.5	3.3
Queue Delay	0.0	0.1	0.0
Total Delay	34.7	1.6	3.3
Queue Length 50th (ft)	60	18	51
Queue Length 95th (ft)	107	44	90
Internal Link Dist (ft)		398	657
Turn Bay Length (ft)			
Base Capacity (vph)	972	3367	3307
Starvation Cap Reductn	0	635	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.33	0.46	0.32

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	120	136	103	1239	54	125	533	152	98	592	174
v/c Ratio	0.91	0.07	0.19	0.61	0.85	0.09	0.91	0.80	0.25	0.93	0.96	0.36
Control Delay	84.9	12.8	4.5	57.4	34.4	5.8	103.6	47.5	4.5	119.9	68.8	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.9	12.8	4.5	57.4	34.4	5.8	103.6	47.5	4.5	119.9	68.8	19.1
Queue Length 50th (ft)	139	12	8	63	258	0	80	170	0	63	198	58
Queue Length 95th (ft)	#274	m23	m35	117	323	24	#191	#247	39	#165	#310	115
Internal Link Dist (ft)		1936			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	229	1692	701	202	1453	579	137	664	629	105	615	479
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.07	0.19	0.51	0.85	0.09	0.91	0.80	0.24	0.93	0.96	0.36

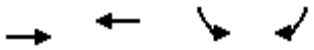
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	196	1375	1190	446	109	130
v/c Ratio	0.68	0.39	0.44	0.49	0.43	0.62
Control Delay	47.9	1.6	3.5	2.4	46.1	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	1.6	3.5	2.4	46.1	31.6
Queue Length 50th (ft)	57	18	21	0	34	31
Queue Length 95th (ft)	90	47	m141	m19	57	86
Internal Link Dist (ft)		402	1936			
Turn Bay Length (ft)				300		
Base Capacity (vph)	470	3554	2680	905	534	349
Starvation Cap Reductn	0	504	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.45	0.44	0.49	0.20	0.37

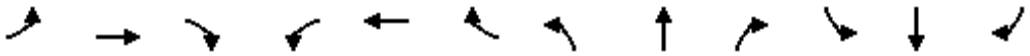
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1022	1299	549	277
v/c Ratio	0.33	0.62	0.47	0.28
Control Delay	2.7	11.2	23.2	15.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.7	11.2	23.2	15.9
Queue Length 50th (ft)	6	221	128	49
Queue Length 95th (ft)	15	36	176	82
Internal Link Dist (ft)	548	402	1312	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3140	2100	1177	992
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.62	0.47	0.28

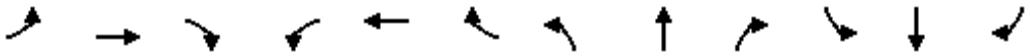
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	418	908	87	261	1060	255	33	22	54	82	266	185
v/c Ratio	0.89	0.67	0.21	0.91	0.61	0.52	0.25	0.17	0.11	0.51	0.79	0.44
Control Delay	56.6	32.8	7.3	72.1	34.6	9.5	31.4	40.1	4.6	40.5	54.4	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	32.8	7.3	72.1	34.6	9.5	31.4	40.1	4.6	40.5	54.4	9.5
Queue Length 50th (ft)	127	194	0	179	144	14	15	12	0	41	84	27
Queue Length 95th (ft)	#204	247	36	#335	188	119	38	35	20	83	#139	74
Internal Link Dist (ft)		735			548			648			512	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	522	1347	421	294	1732	494	134	181	508	163	371	440
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.67	0.21	0.89	0.61	0.52	0.25	0.12	0.11	0.50	0.72	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1207	136	103	1239	54	125	533	152	98	592	174
v/c Ratio	0.88	0.72	0.19	0.70	0.90	0.10	0.83	0.83	0.29	0.69	0.93	0.35
Control Delay	70.4	22.7	7.6	69.1	40.1	6.4	85.1	50.6	12.8	69.1	61.3	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.4	22.7	7.6	69.1	40.1	6.4	85.1	50.6	12.8	69.1	61.3	16.0
Queue Length 50th (ft)	141	172	21	64	273	0	80	172	30	61	195	49
Queue Length 95th (ft)	#265	249	71	#141	#369	25	#181	#258	78	#135	#298	103
Internal Link Dist (ft)		999			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	244	1683	698	155	1374	550	152	640	538	150	646	507
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.72	0.19	0.66	0.90	0.10	0.82	0.83	0.28	0.65	0.92	0.34

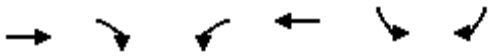
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	196	1293	1190	446	293	212
v/c Ratio	0.64	0.48	0.43	0.54	0.46	0.49
Control Delay	43.6	9.7	11.4	8.0	30.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	9.7	11.4	8.0	30.6	23.6
Queue Length 50th (ft)	52	99	115	125	76	75
Queue Length 95th (ft)	85	201	m177	m215	117	147
Internal Link Dist (ft)		410	451			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	450	2704	2750	824	639	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.48	0.43	0.54	0.46	0.49

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



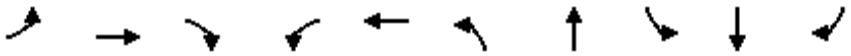
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	940	571	136	1348	549	277
v/c Ratio	0.30	0.56	0.66	0.57	0.58	0.39
Control Delay	15.9	4.0	65.4	6.2	31.9	18.7
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	15.9	4.0	65.4	6.5	31.9	18.7
Queue Length 50th (ft)	86	0	34	246	151	48
Queue Length 95th (ft)	117	34	61	78	205	88
Internal Link Dist (ft)	385			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	3121	1011	380	2361	952	717
Starvation Cap Reductn	0	0	0	391	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.56	0.36	0.68	0.58	0.39

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	5	437	595	53	421	121	200	205	337	143
v/c Ratio	0.02	0.91dr	0.85	0.05	0.32	0.64	0.84	0.29	0.87	0.86
Control Delay	40.8	14.4	47.6	10.5	0.6	68.2	78.7	1.0	73.0	86.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	14.4	47.6	10.5	0.6	68.2	78.7	1.0	73.0	86.7
Queue Length 50th (ft)	3	22	215	16	0	47	78	0	132	103
Queue Length 95th (ft)	15	84	#319	34	0	#97	#140	0	#209	#206
Internal Link Dist (ft)		738		419			857			397
Turn Bay Length (ft)	120				150				220	
Base Capacity (vph)	231	637	700	973	1320	189	257	712	399	195
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.69	0.85	0.05	0.32	0.64	0.78	0.29	0.84	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

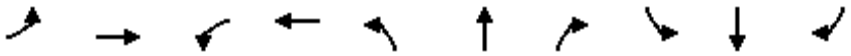


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	284	1221	421	132	1174	232	558	274	684	395
v/c Ratio	0.80	0.89	0.61	0.69	0.86	0.72	0.85	0.76	0.67	0.72
Control Delay	45.8	25.3	4.5	54.6	32.3	48.6	41.6	49.0	31.4	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	25.3	4.5	54.6	32.3	48.6	41.6	49.0	31.4	17.2
Queue Length 50th (ft)	65	168	12	64	194	58	132	69	113	44
Queue Length 95th (ft)	m81	m218	m15	#146	#261	#107	#219	#125	154	#161
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	361	1378	686	190	1373	325	660	361	1023	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.89	0.61	0.69	0.86	0.71	0.85	0.76	0.67	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	300	2105	74	932	595	800	79	184	695	174
v/c Ratio	0.96	1.15	1.35	0.84	1.20	0.88	0.19	0.88	1.12	0.42
Control Delay	80.5	90.3	279.9	46.1	149.0	48.3	7.4	89.6	112.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.5	90.3	279.9	46.1	149.0	48.3	7.4	89.6	112.9	8.9
Queue Length 50th (ft)	180	~628	~68	226	~263	281	0	67	~297	0
Queue Length 95th (ft)	m#302	#705	#166	281	#376	#390	35	#134	#416	57
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	312	1823	55	1109	495	912	427	208	623	414
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.15	1.35	0.84	1.20	0.88	0.19	0.88	1.12	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	274	2142	74	942	621	763	84	174	668	168
v/c Ratio	0.99	1.25	1.12	0.88	1.35	0.78	0.17	0.73	1.25	0.38
Control Delay	83.4	135.1	196.4	49.4	209.4	40.0	6.7	67.7	165.0	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	135.1	196.4	49.4	209.4	40.0	6.7	67.7	165.0	7.9
Queue Length 50th (ft)	171	~680	~61	232	~296	255	0	62	~311	0
Queue Length 95th (ft)	m#310	m#767	#158	#306	#410	331	34	#111	#428	54
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	276	1718	66	1076	459	978	481	241	533	439
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.25	1.12	0.88	1.35	0.78	0.17	0.72	1.25	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1468	789	116	126
v/c Ratio	0.71	0.33	0.64	0.56
Control Delay	4.9	2.9	46.3	16.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.9	2.9	46.3	16.7
Queue Length 50th (ft)	36	43	48	0
Queue Length 95th (ft)	44	61	#111	#46
Internal Link Dist (ft)	2144	1060	569	
Turn Bay Length (ft)				
Base Capacity (vph)	2069	2401	195	232
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.71	0.33	0.59	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	1216	389	126	779
v/c Ratio	0.62	0.39	0.70	0.32
Control Delay	9.5	1.9	52.0	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.5	1.9	52.0	1.6
Queue Length 50th (ft)	154	0	54	25
Queue Length 95th (ft)	215	28	m#125	18
Internal Link Dist (ft)	198			2144
Turn Bay Length (ft)			490	
Base Capacity (vph)	1963	994	188	2405
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.39	0.67	0.32

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1563	1037	42	263
v/c Ratio	0.82	0.55	0.17	0.78
Control Delay	14.1	8.0	20.5	35.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.1	8.0	20.5	35.9
Queue Length 50th (ft)	212	103	14	74
Queue Length 95th (ft)	#346	152	32	#170
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	1916	1897	405	386
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.55	0.10	0.68

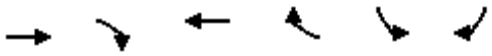
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	979	305	1058	800	368
v/c Ratio	0.70	0.38	0.51	0.82	0.29
Control Delay	10.5	4.4	7.6	22.3	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	4.4	7.6	22.3	0.6
Queue Length 50th (ft)	134	37	49	90	0
Queue Length 95th (ft)	125	52	77	#170	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1401	803	2080	1028	1248
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.70	0.38	0.51	0.78	0.29

Intersection Summary

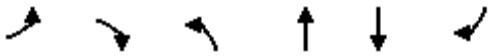
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	958	421	1553	84	326	768
v/c Ratio	0.60	0.29	0.90	0.06	0.34	0.96
Control Delay	14.1	0.5	22.9	0.1	23.9	53.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	0.5	22.9	0.1	23.9	53.3
Queue Length 50th (ft)	179	0	408	0	71	226
Queue Length 95th (ft)	242	0	#579	m0	106	#361
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1601	1464	1720	1355	983	808
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.29	0.90	0.06	0.33	0.95

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	211	226	253	311	5
v/c Ratio	0.04	0.55	0.39	0.12	0.28	0.01
Control Delay	14.4	9.0	5.1	1.3	4.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	9.0	5.1	1.3	4.6	2.8
Queue Length 50th (ft)	3	0	7	3	21	0
Queue Length 95th (ft)	11	37	m24	m10	74	3
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	540	584	575	2146	1130	981
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.39	0.12	0.28	0.01

Intersection Summary

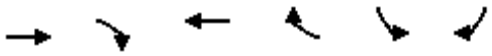
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1837	379	1519	871	842	968
v/c Ratio	0.90	0.35	0.76	0.76	0.71	0.96
Control Delay	27.4	1.1	24.5	4.7	29.7	50.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	1.1	24.5	4.7	29.7	50.5
Queue Length 50th (ft)	318	0	319	0	241	357
Queue Length 95th (ft)	#529	m16	387	0	313	#513
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	2037	1073	1995	1147	1225	1040
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.35	0.76	0.76	0.69	0.93

Intersection Summary

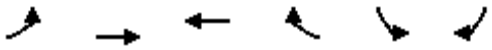
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1492	619	1442	632	863	695
v/c Ratio	0.68	0.68	0.66	0.57	0.81	0.76
Control Delay	19.8	5.6	13.2	10.4	37.8	33.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	5.6	13.2	10.4	37.8	33.9
Queue Length 50th (ft)	285	0	189	241	271	218
Queue Length 95th (ft)	344	75	218	267	351	299
Internal Link Dist (ft)	454		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2194	905	2194	1114	1108	948
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.68	0.66	0.57	0.78	0.73

Intersection Summary

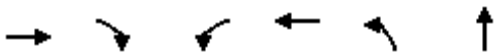


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	111	2400	1721	142	600	258
v/c Ratio	0.80	0.89	0.87	0.20	0.85	0.55
Control Delay	72.9	16.1	12.3	0.6	38.6	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	16.1	12.3	0.6	38.6	11.9
Queue Length 50th (ft)	48	271	102	0	127	22
Queue Length 95th (ft)	#131	358	#135	m0	#210	86
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	138	2700	1983	720	709	473
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.89	0.87	0.20	0.85	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



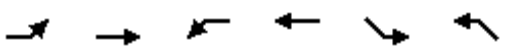
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	1732	432	42	2105	474	21
v/c Ratio	0.67	0.74	1.11	0.70	1.61	0.08
Control Delay	12.4	10.6	204.9	4.2	314.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	10.6	204.9	4.2	314.9	0.6
Queue Length 50th (ft)	192	0	~25	37	~177	0
Queue Length 95th (ft)	242	#156	m#59	43	#270	0
Internal Link Dist (ft)	564			370		494
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2569	581	38	2997	295	349
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.74	1.11	0.70	1.61	0.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

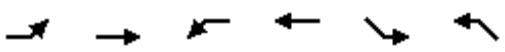
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	779	658	137	1232	495	211
v/c Ratio	0.85	0.30	0.56	0.84	0.83	0.40
Control Delay	23.8	3.4	42.0	31.9	44.0	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	3.4	42.0	31.9	44.0	29.9
Queue Length 50th (ft)	186	11	33	209	121	46
Queue Length 95th (ft)	#285	15	61	#277	#194	78
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	913	2205	278	1458	621	555
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.30	0.49	0.84	0.80	0.38

Intersection Summary

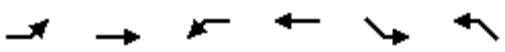
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	663	1142	11	863	526	84
v/c Ratio	0.90	0.45	0.08	0.70	0.85	0.22
Control Delay	39.8	7.5	27.8	22.7	37.9	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	7.5	27.8	22.7	37.9	20.8
Queue Length 50th (ft)	117	64	2	102	93	12
Queue Length 95th (ft)	#208	130	8	142	#168	28
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	746	2546	132	1233	631	510
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.45	0.08	0.70	0.83	0.16

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

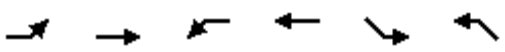


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	747	705	242	1705	842	189
v/c Ratio	0.84	0.36	0.70	0.83	2.65	0.59
Control Delay	44.6	9.2	56.8	29.8	770.1	55.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	9.2	56.8	29.8	770.1	55.6
Queue Length 50th (ft)	249	107	84	372	~526	67
Queue Length 95th (ft)	320	141	125	442	#661	#115
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	946	1951	397	2045	318	322
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.36	0.61	0.83	2.65	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

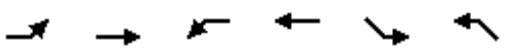
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	821	1474	158	684	432	453
v/c Ratio	0.82	0.69	0.51	0.64	0.69	0.83
Control Delay	21.1	10.6	35.6	26.7	31.5	40.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	10.6	35.6	26.7	31.5	40.8
Queue Length 50th (ft)	165	149	33	97	87	95
Queue Length 95th (ft)	m179	m168	61	135	132	#164
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	1003	2142	321	1072	654	571
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.69	0.49	0.64	0.66	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1468	295	1037	537	242
v/c Ratio	0.48	0.87	0.70	0.73	0.81	0.38
Control Delay	23.0	22.3	33.0	19.0	31.7	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	22.3	33.0	19.0	31.7	19.6
Queue Length 50th (ft)	43	154	48	102	85	34
Queue Length 95th (ft)	76	#242	#95	141	#154	61
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	589	1714	428	1520	683	657
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.86	0.69	0.68	0.79	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

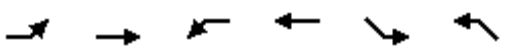
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	242	1926	1953	242	195	500	21
v/c Ratio	1.19	0.87	1.32	0.40	0.59	0.81	0.08
Control Delay	161.4	24.8	172.3	3.6	39.8	43.8	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	161.4	24.8	172.3	3.6	39.8	43.8	12.4
Queue Length 50th (ft)	~168	340	~531	16	53	130	1
Queue Length 95th (ft)	#314	419	#628	m23	86	#240	m12
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	203	2207	1476	606	439	619	276
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.87	1.32	0.40	0.44	0.81	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

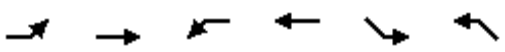


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	347	1132	505	816	158	758
v/c Ratio	0.64	0.74	0.84	0.52	0.19	0.88
Control Delay	28.7	20.0	47.7	23.5	23.4	42.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	20.0	47.7	23.5	23.4	42.5
Queue Length 50th (ft)	86	185	140	134	32	202
Queue Length 95th (ft)	m105	m238	#211	174	56	#278
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	546	1526	642	1578	905	932
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.74	0.79	0.52	0.17	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

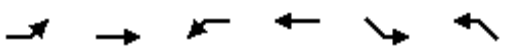


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	232	1442	389	953	316	389
v/c Ratio	0.55	0.91	0.85	0.58	0.74	0.89
Control Delay	37.1	26.8	40.3	6.5	44.2	57.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	26.8	40.3	6.5	44.2	57.7
Queue Length 50th (ft)	56	319	71	32	78	99
Queue Length 95th (ft)	91	#490	m#118	m112	#134	#177
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	421	1591	465	1639	429	438
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.91	0.84	0.58	0.74	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

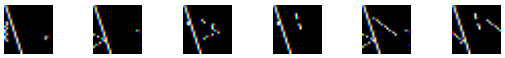
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	337	1563	642	695	179	653
v/c Ratio	0.65	0.89	0.95	0.35	0.27	0.94
Control Delay	48.3	37.4	54.7	16.5	34.9	63.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	37.4	54.7	16.5	34.9	63.8
Queue Length 50th (ft)	114	371	200	83	52	232
Queue Length 95th (ft)	163	#447	m#217	m84	84	#341
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	526	1764	683	1995	689	710
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.89	0.94	0.35	0.26	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	389	1547	705	616	253	642
v/c Ratio	0.66	0.79	0.73	0.24	1.01	2.51
Control Delay	45.7	28.5	27.4	11.3	111.2	712.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	28.5	27.4	11.3	111.2	712.2
Queue Length 50th (ft)	127	328	168	70	~123	~417
Queue Length 95th (ft)	178	391	m170	m69	#206	#530
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	657	1966	1031	2545	251	256
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.79	0.68	0.24	1.01	2.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

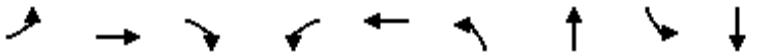
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	326	305	142	174
v/c Ratio	0.48	0.48	0.35	0.39
Control Delay	8.9	14.3	10.1	4.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.9	14.3	10.1	4.9
Queue Length 50th (ft)	32	31	14	0
Queue Length 95th (ft)	0	43	61	28
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1039	973	410	447
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.31	0.35	0.39

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	326	63	74	374
v/c Ratio	0.18	0.13	0.39	0.17
Control Delay	5.5	3.2	15.1	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	3.2	15.1	0.2
Queue Length 50th (ft)	18	0	5	0
Queue Length 95th (ft)	42	14	m38	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1794	489	285	2187
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.13	0.26	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	147	632	105	268	263	800	74	1112
v/c Ratio	0.05	0.82	1.12	0.60	0.91	0.73	0.56	0.59	1.06
Control Delay	36.8	74.8	94.3	47.8	66.1	47.6	18.6	60.3	76.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	74.8	94.3	47.8	66.1	47.6	18.6	60.3	76.9
Queue Length 50th (ft)	4	91	~278	53	132	154	177	45	~426
Queue Length 95th (ft)	18	#190	#495	#110	#329	#267	253	91	#558
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	164	195	566	174	293	362	1425	161	1051
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.75	1.12	0.60	0.91	0.73	0.56	0.46	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	358	142	200	1421	1263
v/c Ratio	0.96	0.47	1.03	0.52	0.91
Control Delay	81.0	11.8	114.6	17.2	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	81.0	11.8	114.6	17.2	10.8
Queue Length 50th (ft)	~121	0	~137	173	0
Queue Length 95th (ft)	#215	56	#278	207	m65
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	371	305	195	2715	1415
Starvation Cap Reductn	0	0	0	0	5
Spillback Cap Reductn	0	0	0	124	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.96	0.47	1.03	0.55	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	158	58	1116	663	42	1110
v/c Ratio	0.04	0.55	0.12	0.82	0.46	0.55	1.00
Control Delay	26.5	50.4	8.4	14.5	1.2	73.0	58.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	26.5	50.4	8.4	14.5	1.4	73.0	58.9
Queue Length 50th (ft)	3	50	2	340	3	27	~367
Queue Length 95th (ft)	17	82	30	m417	m10	#77	#522
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	257	309	470	1369	1427	77	1108
Starvation Cap Reductn	0	0	0	0	216	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.51	0.12	0.82	0.55	0.55	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

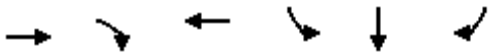
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	105	832	432	337	353	105	842	747	226	1105	253
v/c Ratio	0.43	0.78	0.87	0.31	0.51	0.71	0.75	0.66	0.60	0.88	0.19
Control Delay	29.6	26.6	48.5	21.7	11.2	49.3	20.1	7.4	39.5	33.8	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	26.6	48.5	21.7	11.2	49.3	20.1	7.4	39.5	33.8	7.0
Queue Length 50th (ft)	28	80	101	51	81	66	47	54	68	230	82
Queue Length 95th (ft)	57	#97	m#202	m71	m150	m#129	79	86	m100	m108	m29
Internal Link Dist (ft)		627		710			590			403	
Turn Bay Length (ft)	150		500		350	200		500	350		
Base Capacity (vph)	246	1068	527	1081	692	154	1130	1157	388	1251	1359
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.78	0.82	0.31	0.51	0.68	0.75	0.65	0.58	0.88	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	805	784	695	132	747	163
v/c Ratio	0.42	1.16	0.36	0.12	1.04	0.14
Control Delay	18.4	110.7	5.6	18.2	74.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	110.7	5.6	18.2	74.6	3.3
Queue Length 50th (ft)	120	~553	33	24	~520	1
Queue Length 95th (ft)	154	#784	45	41	#744	21
Internal Link Dist (ft)	1068		627		1916	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	1897	677	1948	1318	715	1156
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	1.16	0.36	0.10	1.04	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	953	774	258	674	26	421	210	26	200	26
v/c Ratio	0.27	0.75	0.43	0.71	0.41	0.03	0.76	0.48	0.21	0.77	0.10
Control Delay	63.3	23.3	3.4	54.4	17.0	3.8	49.4	28.3	47.4	60.1	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.3	23.3	3.4	54.4	17.0	3.8	49.4	28.3	47.4	60.1	13.9
Queue Length 50th (ft)	17	248	55	82	125	0	132	86	16	121	0
Queue Length 95th (ft)	m25	353	90	#131	207	11	#189	159	42	#210	23
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	96	1278	1796	376	1652	1142	556	442	283	297	306
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.75	0.43	0.69	0.41	0.02	0.76	0.48	0.09	0.67	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

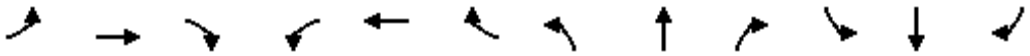
Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	505	1026	1695	611	400	1189
v/c Ratio	0.89	0.76	0.61	0.85	0.86	0.40
Control Delay	40.9	0.7	18.0	33.5	44.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	0.7	18.0	33.5	44.6	3.7
Queue Length 50th (ft)	160	0	215	313	129	18
Queue Length 95th (ft)	m142	m0	254	#551	m146	m77
Internal Link Dist (ft)	859		184			590
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	593	1350	2793	716	489	2988
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.76	0.61	0.85	0.82	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	284	1300	1300
v/c Ratio	0.86	0.45	0.45
Control Delay	55.9	3.2	8.2
Queue Delay	0.0	0.0	0.0
Total Delay	55.9	3.2	8.2
Queue Length 50th (ft)	157	46	116
Queue Length 95th (ft)	225	71	202
Internal Link Dist (ft)		403	657
Turn Bay Length (ft)			
Base Capacity (vph)	596	2892	2866
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.45	0.45

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1614	54	136	1370	82	43	571	109	141	908	451
v/c Ratio	0.99	0.98	0.09	0.97	0.92	0.14	0.70	0.82	0.21	0.94	0.96	0.75
Control Delay	109.8	41.4	4.7	116.4	40.5	5.4	100.6	47.9	17.6	105.9	57.7	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.8	41.4	4.7	116.4	40.5	5.4	100.6	47.9	17.6	105.9	57.7	30.0
Queue Length 50th (ft)	119	390	4	88	299	0	28	182	35	91	~313	218
Queue Length 95th (ft)	m#260	#494	m8	#208	#398	30	#89	#265	75	#210	#448	#394
Internal Link Dist (ft)		1975			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	198	1652	626	140	1495	569	61	694	513	150	941	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.98	0.09	0.97	0.92	0.14	0.70	0.82	0.21	0.94	0.96	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

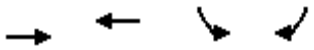
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	261	1859	1397	598	87	163
v/c Ratio	0.71	0.54	0.55	0.61	0.21	0.77
Control Delay	51.5	3.7	7.3	2.4	35.4	55.7
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	51.5	3.7	7.3	2.4	35.4	55.7
Queue Length 50th (ft)	79	65	89	0	24	83
Queue Length 95th (ft)	129	101	m109	m8	43	147
Internal Link Dist (ft)		362	1975			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	428	3473	2523	973	572	285
Starvation Cap Reductn	0	278	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.58	0.55	0.61	0.15	0.57

Intersection Summary

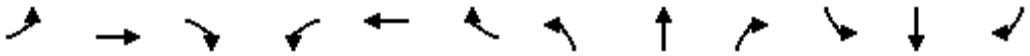
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1696	1484	424	272
v/c Ratio	0.46	0.60	0.39	0.30
Control Delay	1.1	3.5	25.2	19.3
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	1.1	3.7	25.2	19.3
Queue Length 50th (ft)	4	104	102	55
Queue Length 95th (ft)	m10	15	143	90
Internal Link Dist (ft)	548	362	1409	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3715	2462	1087	916
Starvation Cap Reductn	0	261	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.67	0.39	0.30

Intersection Summary

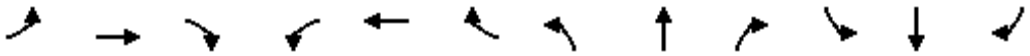
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	435	1554	82	250	1179	326	54	11	33	109	326	293
v/c Ratio	0.91	0.97	0.17	0.95	0.69	0.57	0.33	0.07	0.06	0.65	0.95	0.72
Control Delay	59.7	48.2	7.0	78.3	36.6	11.2	34.4	36.9	6.3	49.9	78.1	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	48.2	7.0	78.3	36.6	11.2	34.4	36.9	6.3	49.9	78.1	24.5
Queue Length 50th (ft)	134	356	3	166	171	37	25	6	0	57	108	97
Queue Length 95th (ft)	#219	#473	34	#323	217	367	56	22	18	#127	#199	219
Internal Link Dist (ft)		715			548			815			543	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	516	1600	491	262	1719	567	162	181	536	168	343	422
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.97	0.17	0.95	0.69	0.57	0.33	0.06	0.06	0.65	0.95	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	1614	54	136	1370	82	43	571	109	141	908	451
v/c Ratio	0.99	0.98	0.09	0.97	0.92	0.14	0.70	0.82	0.21	0.94	0.96	0.74
Control Delay	84.6	58.4	15.8	116.4	40.5	5.4	100.6	47.9	17.6	105.9	57.7	29.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	58.4	15.8	116.4	40.5	5.4	100.6	47.9	17.6	105.9	57.7	29.2
Queue Length 50th (ft)	126	406	11	88	299	0	28	182	35	91	~313	216
Queue Length 95th (ft)	m#231	#497	m19	#208	#398	30	#89	#265	75	#210	#448	#362
Internal Link Dist (ft)		1031			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	198	1652	626	140	1495	569	61	694	513	150	941	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.98	0.09	0.97	0.92	0.14	0.70	0.82	0.21	0.94	0.96	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

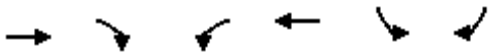
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	261	1750	1397	598	380	272
v/c Ratio	0.67	0.74	0.67	1.00	0.48	0.60
Control Delay	54.7	16.6	19.5	46.8	23.6	28.6
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	54.7	17.1	19.5	46.8	23.6	28.6
Queue Length 50th (ft)	84	219	97	272	88	127
Queue Length 95th (ft)	m122	253	m161	m#348	131	219
Internal Link Dist (ft)		407	419			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	472	2358	2099	598	795	451
Starvation Cap Reductn	0	215	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.82	0.67	1.00	0.48	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1587	576	196	1690	424	272
v/c Ratio	0.48	0.57	0.61	0.64	0.51	0.43
Control Delay	18.6	4.0	66.3	7.3	34.2	26.1
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	18.6	4.0	66.3	7.6	34.2	26.1
Queue Length 50th (ft)	162	0	69	81	119	62
Queue Length 95th (ft)	209	34	m104	134	167	105
Internal Link Dist (ft)	387			407		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	3278	1019	464	2654	828	632
Starvation Cap Reductn	0	0	0	335	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.57	0.42	0.73	0.51	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

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FUTURE (2035) ALTERNATIVE 6B

RAMP METERING ANALYSIS

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URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Pico to NB 710

AM Peak Hour Vol/PCE:	260	310
PM Peak Hour Vol/PCE:	500	550
MD Peak Hour Vol/PCE:	280	340

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	46	38	8	8	550	46	455	600	-	3000	238	-	46	0.7
5:10 PM	46	38	16	8	550	46	455	700	-	3000	475	-	46	1.3
5:15 PM	46	38	24	8	550	46	455	800	-	3000	713	-	46	2.0
5:20 PM	46	38	32	8	550	46	455	900	-	3000	950	-	46	2.6
5:25 PM	46	38	40	8	550	46	455	1000	-	3000	1188	-	46	3.3
5:30 PM	46	38	48	8	550	46	455	1100	-	3000	1425	-	46	4.0
5:35 PM	46	38	55	8	550	46	455	1200	-	3000	1663	-	46	4.6
5:40 PM	46	38	63	8	550	46	455	1300	-	3000	1900	-	46	5.3
5:45 PM	46	38	71	8	550	46	455	1400	-	3000	2138	-	46	5.9
5:50 PM	46	38	79	8	550	46	455	1500	-	3000	2375	-	46	6.6
5:55 PM	46	38	87	8	550	46	455	1550	-	3000	2613	-	46	7.3
6:00 PM	46	38	95	8	550	46	455	1650	-	3000	2850	-	46	7.9
	550	**455**		**95**		**550**							**550**	**51.46**
	MAX Q (VEH/LN)=		**95**	**MAX RATE (VPH)=**	**550**					**MAX Q (FT/LN)=**	**2,850**	**-**	**46**	

(Min=240, Max=900 vph/lane)

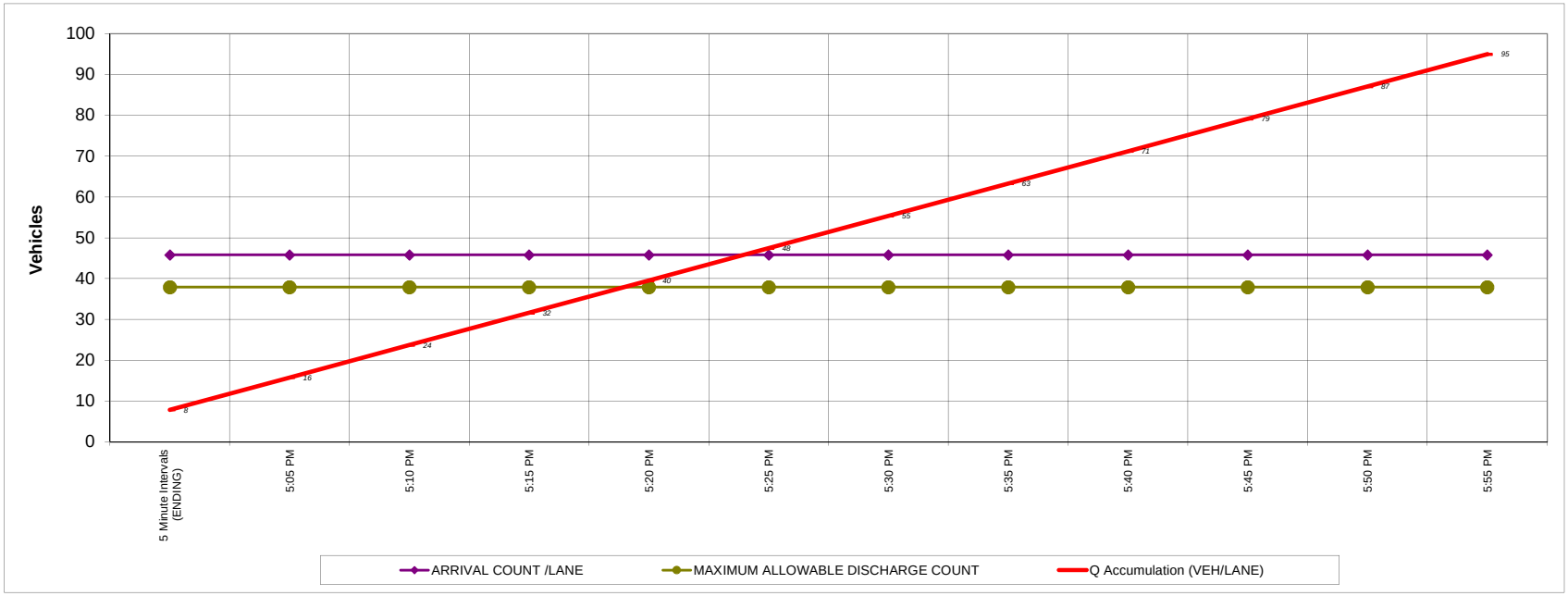
Meter Rate = **455**

Avg Delay/veh (hr)= 0.094

Avg Delay/veh (sec)= **337**

	INPUT
LANES=	**1**
Ramp Length=	3000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to NB 710

AM Peak Hour Vol/PCE:	1090	1120
PM Peak Hour Vol/PCE:	1160	1180
MD Peak Hour Vol/PCE:	1340	1430

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	60	54	5	5	715	119	650	750	-	2000	163	-	60	0.5
1:10 PM	60	54	11	5	715	119	650	800	-	2000	325	-	60	0.9
1:15 PM	60	54	16	5	715	119	650	900	-	2000	488	-	60	1.4
1:20 PM	60	54	22	5	715	119	650	950	-	2000	650	-	60	1.8
1:25 PM	60	54	27	5	715	119	650	1000	-	2000	812	-	60	2.3
1:30 PM	60	54	33	5	715	119	650	1100	-	2000	975	-	60	2.7
1:35 PM	60	54	38	5	715	119	650	1150	-	2000	1138	-	60	3.2
1:40 PM	60	54	43	5	715	119	650	1200	-	2000	1300	-	60	3.6
1:45 PM	60	54	49	5	715	119	650	1300	-	2000	1463	-	60	4.1
1:50 PM	60	54	54	5	715	119	650	1350	-	2000	1625	-	60	4.5
1:55 PM	60	54	60	5	715	119	650	1400	-	2000	1788	-	60	5.0
2:00 PM	60	54	65	5	715	119	650	1450	-	2000	1950	-	60	5.4
	715	**650**		**65**		**1,430**							**715**	**35.21**
		MAX Q (VEH/LN)=	**65**	**MAX RATE (VPH)=**	**715**					**MAX Q (FT/LN)=**	**1,950**	**-**	**60**	

(Min=240, Max=900 vph/lane)

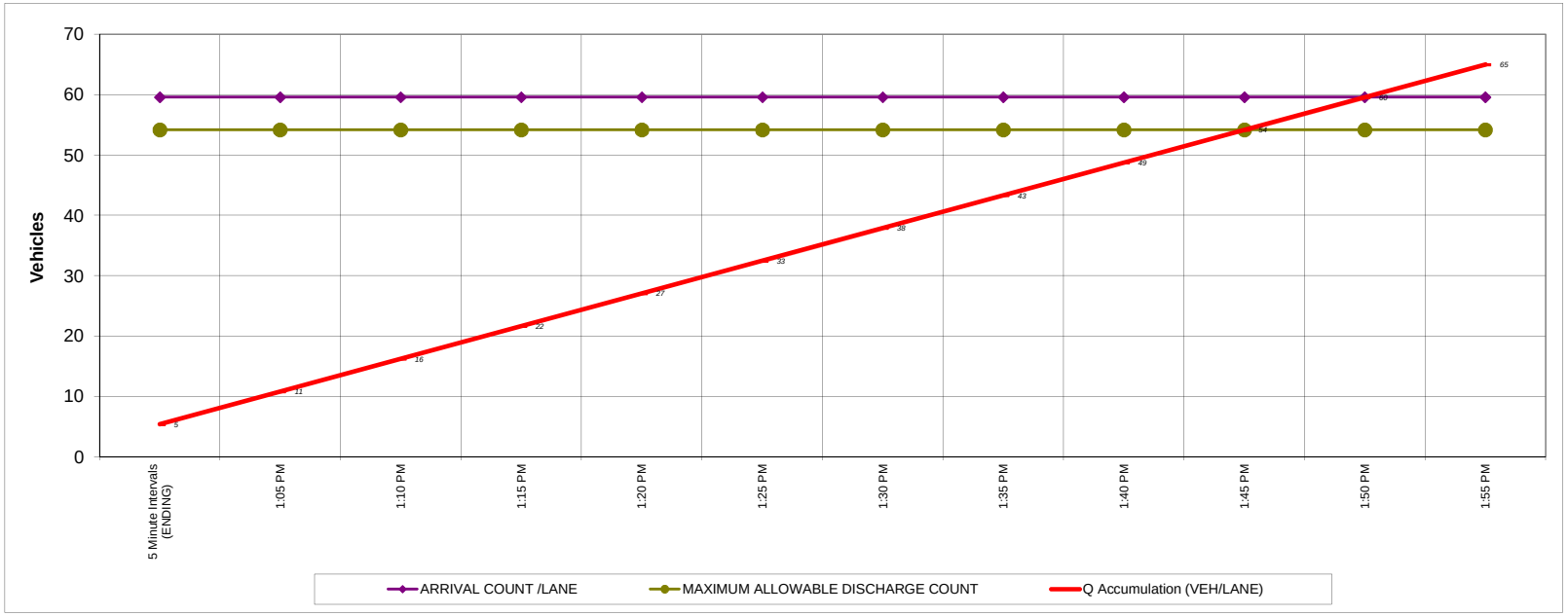
Meter Rate = **650**

Avg Delay/veh (hr)= 0.049

Avg Delay/veh (sec)= **177**

	INPUT
LANES=	**2**
Ramp Length=	2000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to SB 710

AM Peak Hour Vol/PCE:	490	540
PM Peak Hour Vol/PCE:	430	510
MD Peak Hour Vol/PCE:	550	700

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	29	27	2	2	350	58	325	350	-	870	63	-	29	0.2
1:10 PM	29	27	4	2	350	58	325	400	-	870	125	-	29	0.3
1:15 PM	29	27	6	2	350	58	325	400	-	870	188	-	29	0.5
1:20 PM	29	27	8	2	350	58	325	450	-	870	250	-	29	0.7
1:25 PM	29	27	10	2	350	58	325	450	-	870	312	-	29	0.9
1:30 PM	29	27	13	2	350	58	325	500	-	870	375	-	29	1.0
1:35 PM	29	27	15	2	350	58	325	500	-	870	437	-	29	1.2
1:40 PM	29	27	17	2	350	58	325	550	-	870	500	-	29	1.4
1:45 PM	29	27	19	2	350	58	325	550	-	870	562	-	29	1.6
1:50 PM	29	27	21	2	350	58	325	600	-	870	625	-	29	1.7
1:55 PM	29	27	23	2	350	58	325	600	-	870	687	-	29	1.9
2:00 PM	29	27	25	2	350	58	325	650	-	870	750	-	29	2.1
	350	**325**		**25**		**700**							**350**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**350**					**MAX Q (FT/LN)=**	**750**	**-**	**29**	

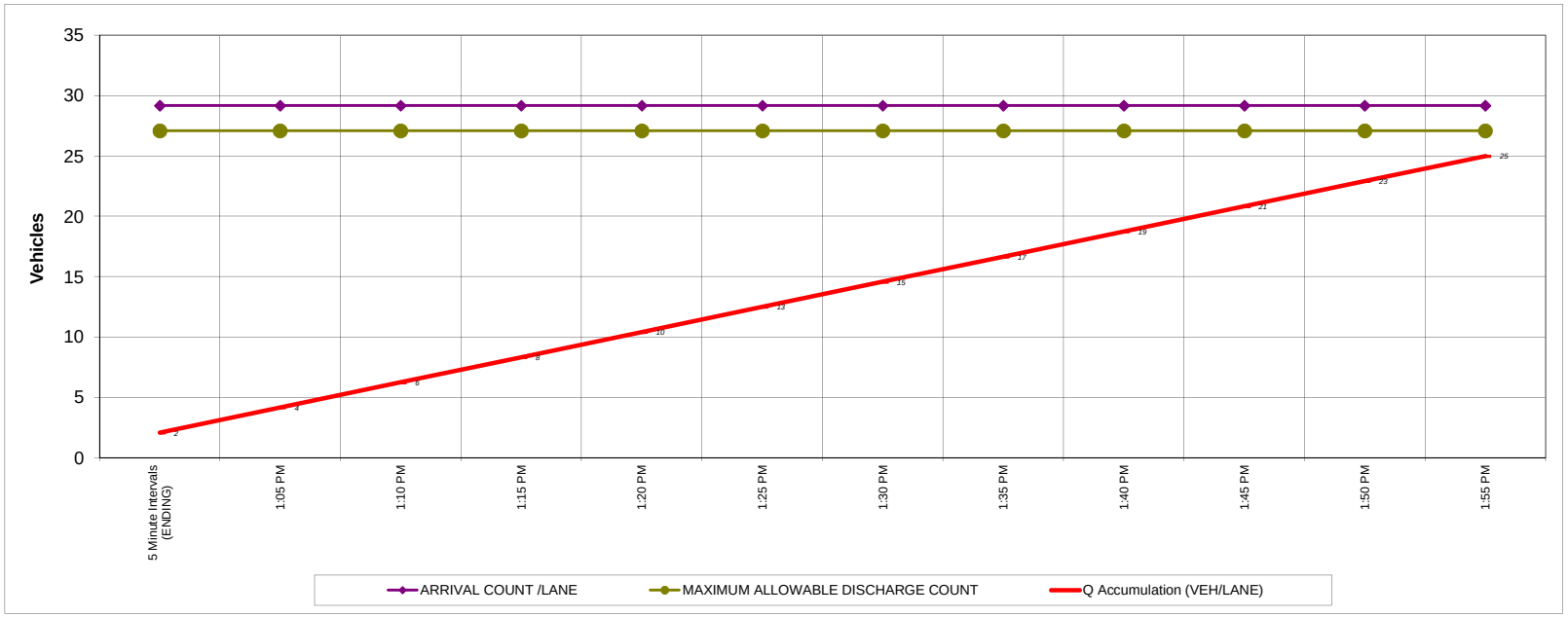
(Min=240, Max=900vph/lane)

Meter Rate = **325**

	INPUT
LANES=	**2**
Ramp Length=	870
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.039
Avg Delay/veh (sec)= **139**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to NB 710

AM Peak Hour Vol/PCE:	1050	1210
PM Peak Hour Vol/PCE:	1060	1180
MD Peak Hour Vol/PCE:	1490	2150

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	90	87	3	3	1075	179	1040	1100	-	1090	88	-	90	0.2
1:10 PM	90	87	6	3	1075	179	1040	1100	-	1090	175	-	90	0.5
1:15 PM	90	87	9	3	1075	179	1040	1150	-	1090	263	-	90	0.7
1:20 PM	90	87	12	3	1075	179	1040	1200	-	1090	350	-	90	1.0
1:25 PM	90	87	15	3	1075	179	1040	1250	-	1090	438	-	90	1.2
1:30 PM	90	87	18	3	1075	179	1040	1250	-	1090	525	-	90	1.5
1:35 PM	90	87	20	3	1075	179	1040	1300	-	1090	613	-	90	1.7
1:40 PM	90	87	23	3	1075	179	1040	1350	-	1090	700	-	90	1.9
1:45 PM	90	87	26	3	1075	179	1040	1350	-	1090	788	-	90	2.2
1:50 PM	90	87	29	3	1075	179	1040	1400	-	1090	875	-	90	2.4
1:55 PM	90	87	32	3	1075	179	1040	1450	-	1090	963	-	90	2.7
2:00 PM	90	87	35	3	1075	179	1040	1450	-	1090	1050	-	90	2.9
	1,075	**1,040**		**35**		**2,150**							**1,075**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,075**					**MAX Q (FT/LN)=**	**1,050**	**-**	**90**	

(Min=480, Max=1200 vph/lane)

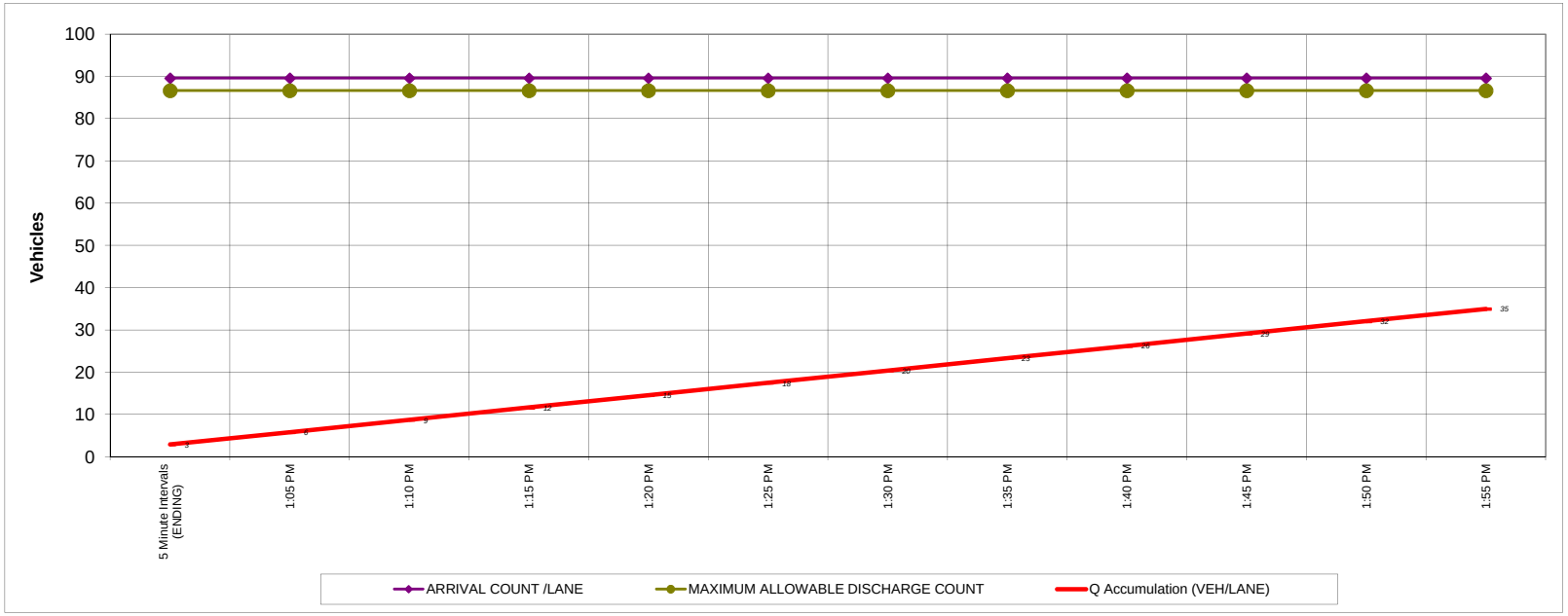
Meter Rate = **1040**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**2**
Ramp Length=	1090
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to SB 710

AM Peak Hour Vol/PCE:	180	210
PM Peak Hour Vol/PCE:	260	290
MD Peak Hour Vol/PCE:	440	530

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	22	20	2	2	265	44	240	250	-	1250	63	-	22	0.2
1:10 PM	22	20	4	2	265	44	240	300	-	1250	125	-	22	0.3
1:15 PM	22	20	6	2	265	44	240	300	-	1250	188	-	22	0.5
1:20 PM	22	20	8	2	265	44	240	350	-	1250	250	-	22	0.7
1:25 PM	22	20	10	2	265	44	240	350	-	1250	313	-	22	0.9
1:30 PM	22	20	13	2	265	44	240	400	-	1250	375	-	22	1.0
1:35 PM	22	20	15	2	265	44	240	400	-	1250	438	-	22	1.2
1:40 PM	22	20	17	2	265	44	240	450	-	1250	500	-	22	1.4
1:45 PM	22	20	19	2	265	44	240	450	-	1250	563	-	22	1.6
1:50 PM	22	20	21	2	265	44	240	500	-	1250	625	-	22	1.7
1:55 PM	22	20	23	2	265	44	240	500	-	1250	687	-	22	1.9
2:00 PM	22	20	25	2	265	44	240	550	-	1250	750	-	22	2.1
	265	**240**		**25**		**530**							**265**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**265**					**MAX Q (FT/LN)=**	**750**	**-**	**22**	

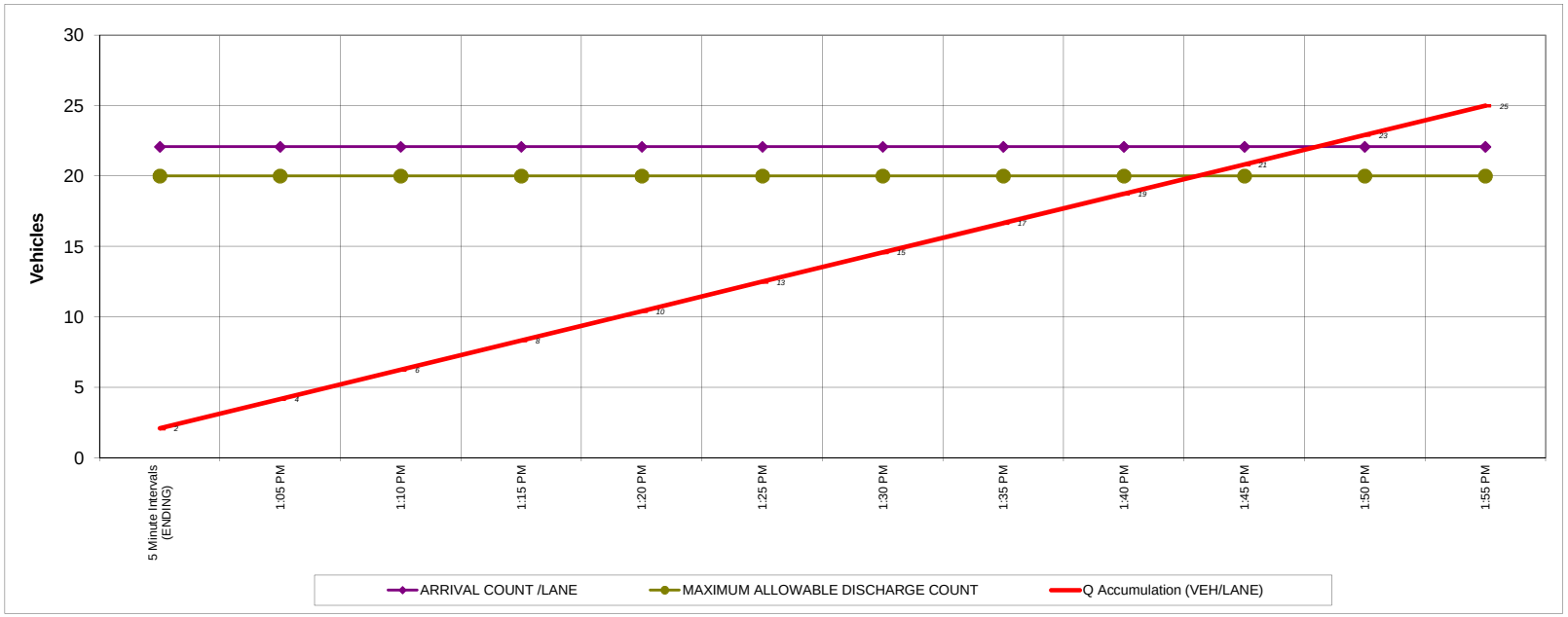
(Min=240, Max=900vph/lane)

Meter Rate = **240**

	INPUT
LANES=	**2**
Ramp Length=	1250
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.051
Avg Delay/veh (sec)= **184**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to NB 710

AM Peak Hour Vol/PCE:	1430	1440
PM Peak Hour Vol/PCE:	1310	1340
MD Peak Hour Vol/PCE:	1320	1350

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	60	58	3	3	720	120	690	750	-	950	75	-	60	0.2
7:10 AM	60	58	5	3	720	120	690	750	-	950	150	-	60	0.4
7:15 AM	60	58	8	3	720	120	690	800	-	950	225	-	60	0.6
7:20 AM	60	58	10	3	720	120	690	800	-	950	300	-	60	0.8
7:25 AM	60	58	13	3	720	120	690	850	-	950	375	-	60	1.0
7:30 AM	60	58	15	3	720	120	690	900	-	950	450	-	60	1.3
7:35 AM	60	58	18	3	720	120	690	900	-	950	525	-	60	1.5
7:40 AM	60	58	20	3	720	120	690	950	-	950	600	-	60	1.7
7:45 AM	60	58	23	3	720	120	690	950	-	950	675	-	60	1.9
7:50 AM	60	58	25	3	720	120	690	1000	-	950	750	-	60	2.1
7:55 AM	60	58	28	3	720	120	690	1050	-	950	825	-	60	2.3
8:00 AM	60	58	30	3	720	120	690	1050	-	950	900	-	60	2.5
	720	**690**		**30**		**1,440**							**720**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**720**					**MAX Q (FT/LN)=**	**900**	**-**	**60**	

(Min=240, Max=900vph/lane)

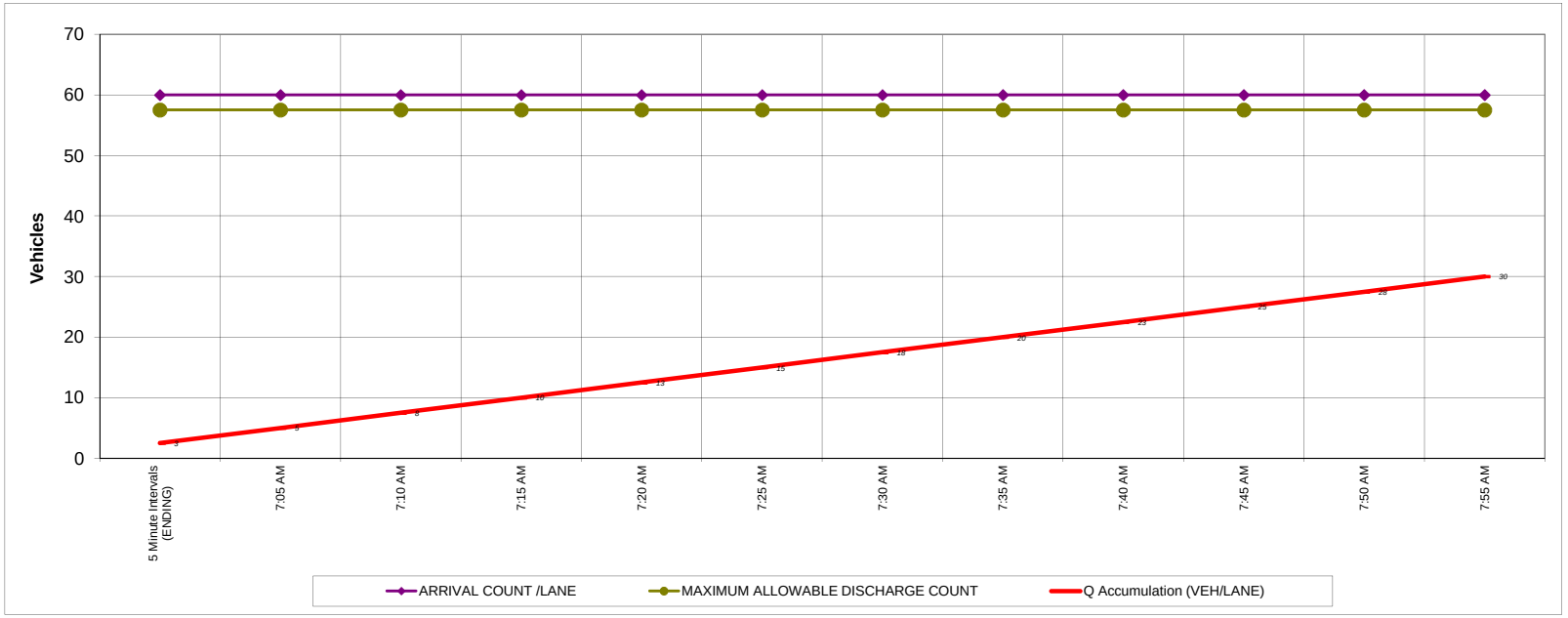
Meter Rate = **690**

Avg Delay/veh (hr)= 0.023

Avg Delay/veh (sec)= **81**

	INPUT
LANES=	**2**
Ramp Length=	950
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to SB 710

AM Peak Hour Vol/PCE:	1100	1160
PM Peak Hour Vol/PCE:	830	850
MD Peak Hour Vol/PCE:	620	650

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	48	47	2	2	580	97	560	600	-	700	50	-	48	0.1
7:10 AM	48	47	3	2	580	97	560	600	-	700	100	-	48	0.3
7:15 AM	48	47	5	2	580	97	560	600	-	700	150	-	48	0.4
7:20 AM	48	47	7	2	580	97	560	650	-	700	200	-	48	0.6
7:25 AM	48	47	8	2	580	97	560	650	-	700	250	-	48	0.7
7:30 AM	48	47	10	2	580	97	560	700	-	700	300	-	48	0.8
7:35 AM	48	47	12	2	580	97	560	700	-	700	350	-	48	1.0
7:40 AM	48	47	13	2	580	97	560	700	-	700	400	-	48	1.1
7:45 AM	48	47	15	2	580	97	560	750	-	700	450	-	48	1.3
7:50 AM	48	47	17	2	580	97	560	750	-	700	500	-	48	1.4
7:55 AM	48	47	18	2	580	97	560	800	-	700	550	-	48	1.5
8:00 AM	48	47	20	2	580	97	560	800	-	700	600	-	48	1.7
	580	**560**		**20**		**1,160**							**580**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**580**					**MAX Q (FT/LN)=**	**600**	**-**	**48**	

(Min=240, Max=900vph/lane)

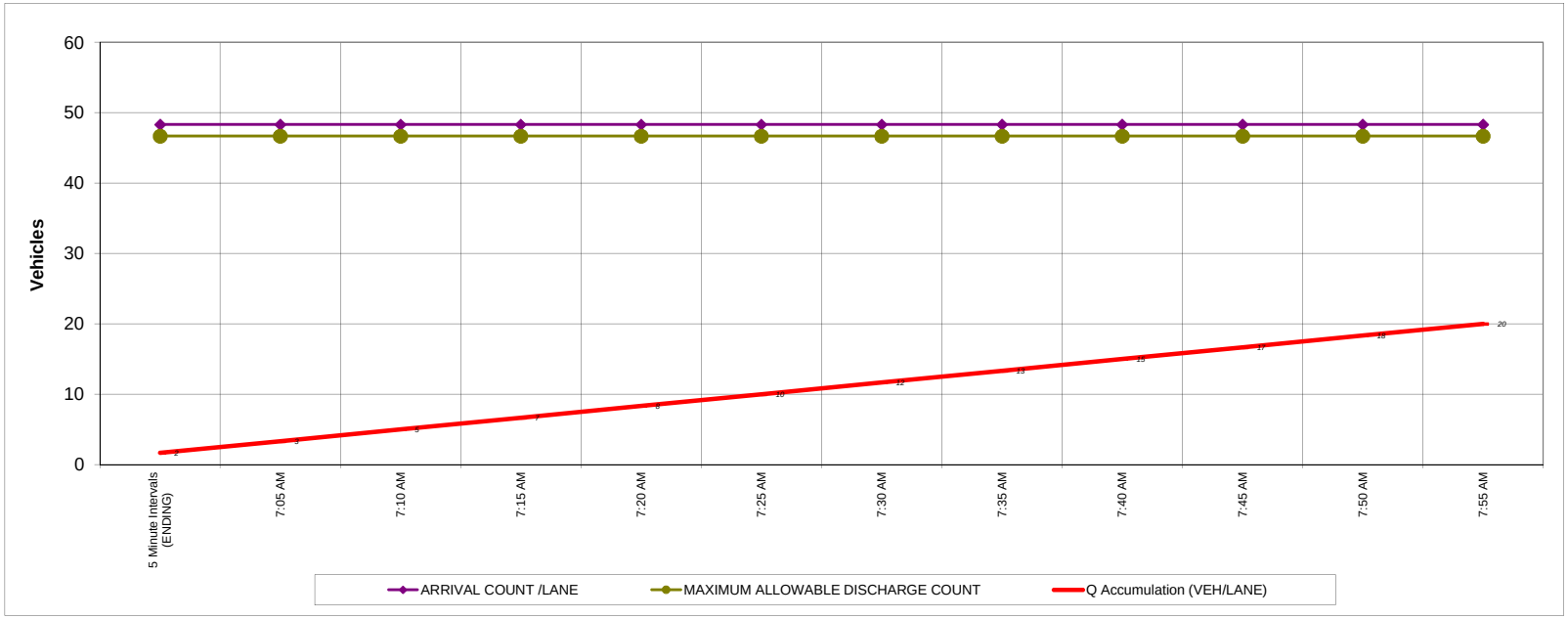
Meter Rate = **560**

Avg Delay/veh (hr)= 0.019

Avg Delay/veh (sec)= **67**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Del Amo On

AM Peak Hour Vol/PCE:	660	720
PM Peak Hour Vol/PCE:	1090	1140
MD Peak Hour Vol/PCE:	850	950

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	48	45	3	3	570	95	535	600	-	1065	88	-	48	0.2
5:10 PM	48	45	6	3	570	95	535	600	-	1065	175	-	48	0.5
5:15 PM	48	45	9	3	570	95	535	650	-	1065	263	-	48	0.7
5:20 PM	48	45	12	3	570	95	535	700	-	1065	350	-	48	1.0
5:25 PM	48	45	15	3	570	95	535	700	-	1065	438	-	48	1.2
5:30 PM	48	45	18	3	570	95	535	750	-	1065	525	-	48	1.5
5:35 PM	48	45	20	3	570	95	535	800	-	1065	613	-	48	1.7
5:40 PM	48	45	23	3	570	95	535	850	-	1065	700	-	48	1.9
5:45 PM	48	45	26	3	570	95	535	850	-	1065	788	-	48	2.2
5:50 PM	48	45	29	3	570	95	535	900	-	1065	875	-	48	2.4
5:55 PM	48	45	32	3	570	95	535	950	-	1065	963	-	48	2.7
6:00 PM	48	45	35	3	570	95	535	950	-	1065	1050	-	48	2.9
	570	**535**		**35**		**1,140**							**570**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**570**					**MAX Q (FT/LN)=**	**1,050**	**-**	**48**	

(Min=240, Max=900vph/lane)

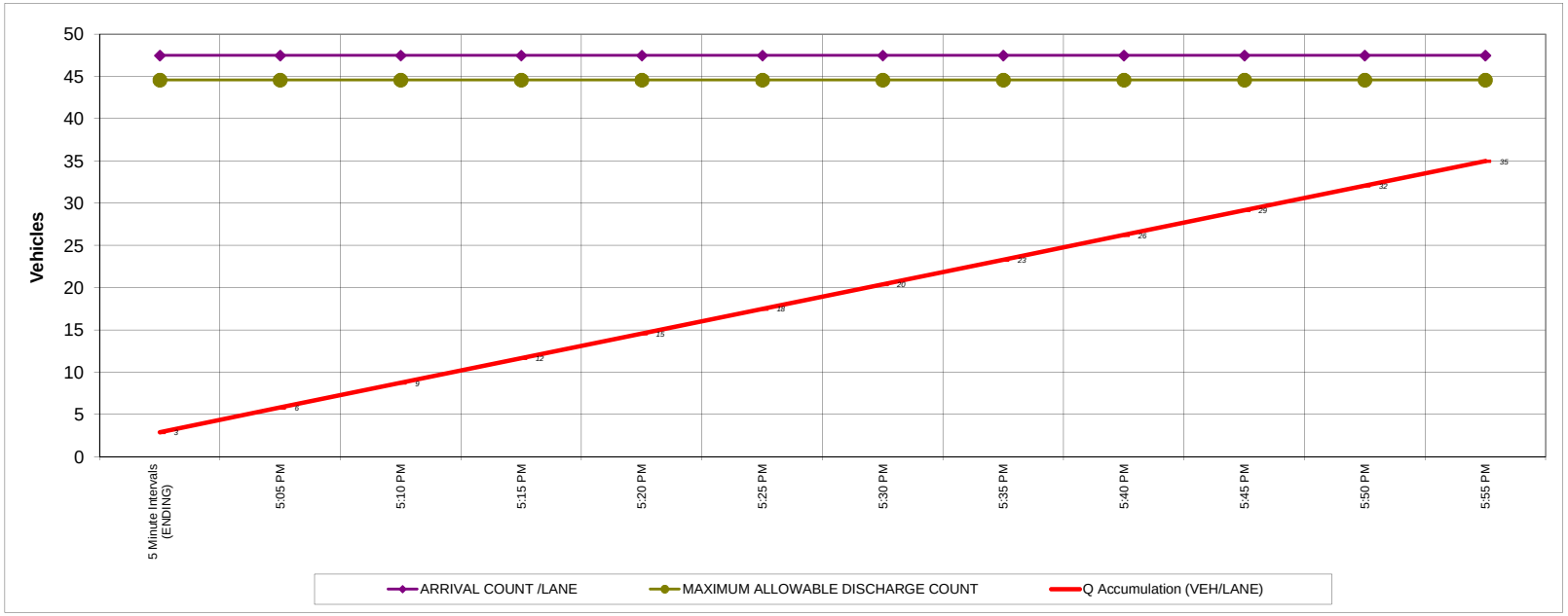
Meter Rate = **535**

Avg Delay/veh (hr)= 0.033

Avg Delay/veh (sec)= **120**

	INPUT
LANES=	**2**
Ramp Length=	1065
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Del Amo On

AM Peak Hour Vol/PCE:	1140	1220
PM Peak Hour Vol/PCE:	820	860
MD Peak Hour Vol/PCE:	970	1070

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	51	49	2	2	610	102	590	600	-	630	50	-	51	0.1
7:10 AM	51	49	3	2	610	102	590	650	-	630	100	-	51	0.3
7:15 AM	51	49	5	2	610	102	590	650	-	630	150	-	51	0.4
7:20 AM	51	49	7	2	610	102	590	650	-	630	200	-	51	0.6
7:25 AM	51	49	8	2	610	102	590	700	-	630	250	-	51	0.7
7:30 AM	51	49	10	2	610	102	590	700	-	630	300	-	51	0.8
7:35 AM	51	49	12	2	610	102	590	750	-	630	350	-	51	1.0
7:40 AM	51	49	13	2	610	102	590	750	-	630	400	-	51	1.1
7:45 AM	51	49	15	2	610	102	590	750	-	630	450	-	51	1.3
7:50 AM	51	49	17	2	610	102	590	800	-	630	500	-	51	1.4
7:55 AM	51	49	18	2	610	102	590	800	-	630	550	-	51	1.5
8:00 AM	51	49	20	2	610	102	590	850	-	630	600	-	51	1.7
	610	**590**		**20**		**1,220**							**610**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**610**					**MAX Q (FT/LN)=**	**600**	**-**	**51**	

(Min=240, Max=900vph/lane)

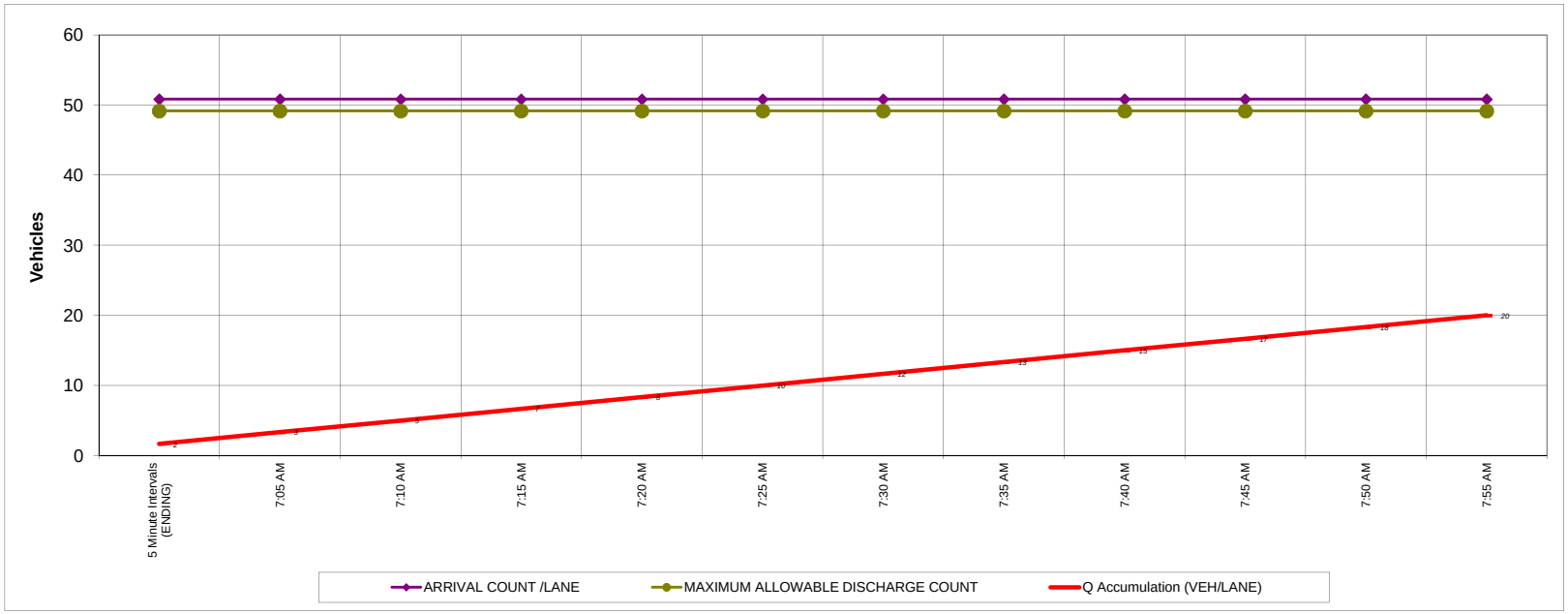
Meter Rate = **590**

Avg Delay/veh (hr)= 0.018

Avg Delay/veh (sec)= **64**

	INPUT
LANES=	**2**
Ramp Length=	630
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Long Beach On

AM Peak Hour Vol/PCE:	670	690
PM Peak Hour Vol/PCE:	720	740
MD Peak Hour Vol/PCE:	690	730

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	31	27	4	4	370	62	320	400	-	1520	125	-	31	0.3
5:10 PM	31	27	8	4	370	62	320	450	-	1520	250	-	31	0.7
5:15 PM	31	27	13	4	370	62	320	500	-	1520	375	-	31	1.0
5:20 PM	31	27	17	4	370	62	320	550	-	1520	500	-	31	1.4
5:25 PM	31	27	21	4	370	62	320	600	-	1520	625	-	31	1.7
5:30 PM	31	27	25	4	370	62	320	650	-	1520	750	-	31	2.1
5:35 PM	31	27	29	4	370	62	320	700	-	1520	875	-	31	2.4
5:40 PM	31	27	33	4	370	62	320	750	-	1520	1000	-	31	2.8
5:45 PM	31	27	38	4	370	62	320	800	-	1520	1125	-	31	3.1
5:50 PM	31	27	42	4	370	62	320	850	-	1520	1250	-	31	3.5
5:55 PM	31	27	46	4	370	62	320	900	-	1520	1375	-	31	3.8
6:00 PM	31	27	50	4	370	62	320	950	-	1520	1500	-	31	4.2
	370	**320**		**50**		**740**							**370**	**27.08**
		MAX Q (VEH/LN)=	**50**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**1,500**	**-**	**31**	

(Min=240, Max=900vph/lane)

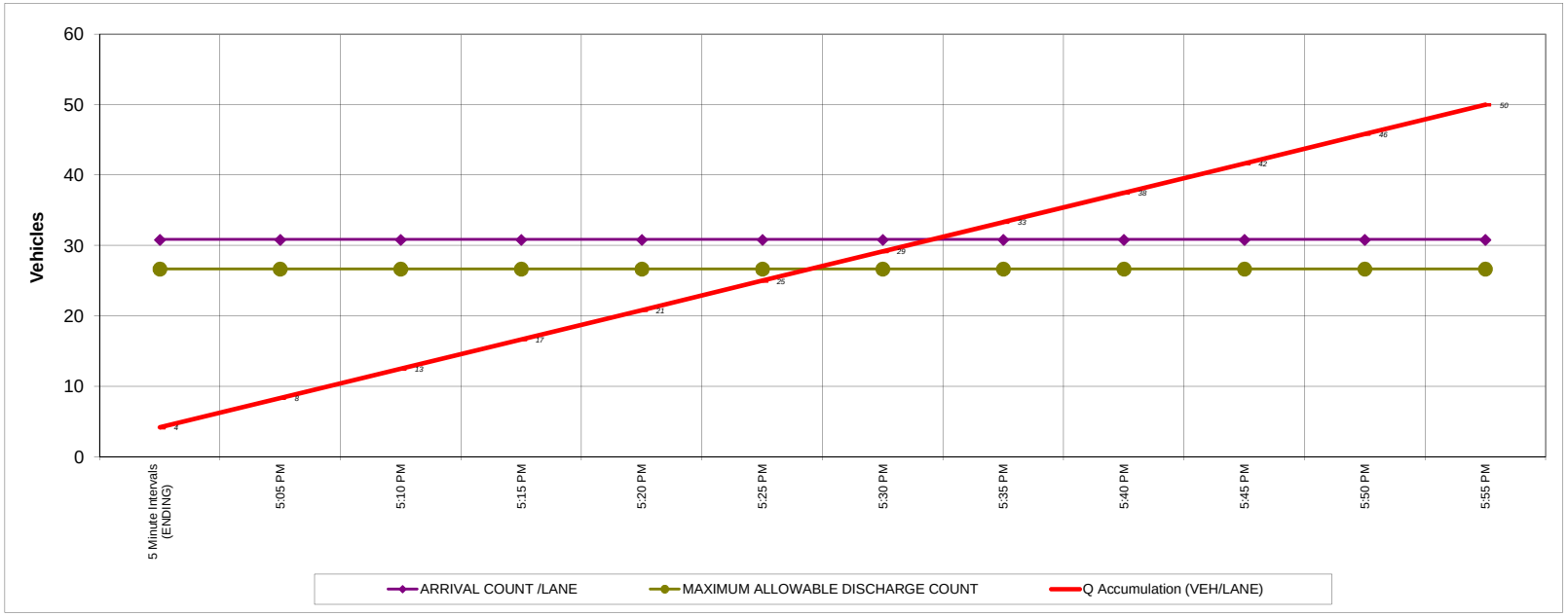
Meter Rate = **320**

Avg Delay/veh (hr)= 0.073

Avg Delay/veh (sec)= **264**

	INPUT
LANES=	**2**
Ramp Length=	1520
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Long Beach On

AM Peak Hour Vol/PCE:	650	690
PM Peak Hour Vol/PCE:	490	510
MD Peak Hour Vol/PCE:	480	550

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	29	27	2	2	345	58	325	350	-	700	50	-	29	0.1
7:10 AM	29	27	3	2	345	58	325	350	-	700	100	-	29	0.3
7:15 AM	29	27	5	2	345	58	325	400	-	700	150	-	29	0.4
7:20 AM	29	27	7	2	345	58	325	400	-	700	200	-	29	0.6
7:25 AM	29	27	8	2	345	58	325	400	-	700	250	-	29	0.7
7:30 AM	29	27	10	2	345	58	325	450	-	700	300	-	29	0.8
7:35 AM	29	27	12	2	345	58	325	450	-	700	350	-	29	1.0
7:40 AM	29	27	13	2	345	58	325	500	-	700	400	-	29	1.1
7:45 AM	29	27	15	2	345	58	325	500	-	700	450	-	29	1.3
7:50 AM	29	27	17	2	345	58	325	500	-	700	500	-	29	1.4
7:55 AM	29	27	18	2	345	58	325	550	-	700	550	-	29	1.5
8:00 AM	29	27	20	2	345	58	325	550	-	700	600	-	29	1.7
	345	**325**		**20**		**690**							**345**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**345**					**MAX Q (FT/LN)=**	**600**	**-**	**29**	

(Min=240, Max=900vph/lane)

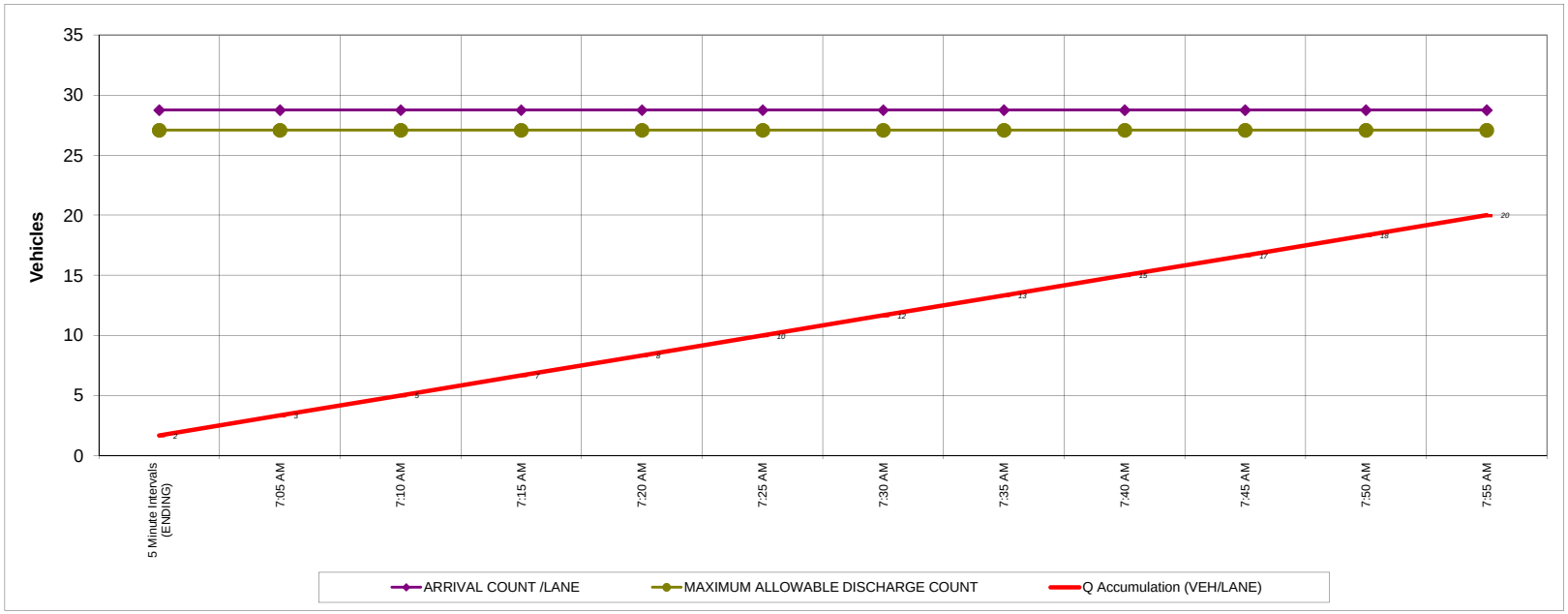
Meter Rate = **325**

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= **113**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Artesia On

AM Peak Hour Vol/PCE:	680	710
PM Peak Hour Vol/PCE:	180	180
MD Peak Hour Vol/PCE:	610	660

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	29	0	0	355	59	350	350	-	170	13	-	30	0.0
7:10 AM	30	29	1	0	355	59	350	350	-	170	25	-	30	0.1
7:15 AM	30	29	1	0	355	59	350	350	-	170	38	-	30	0.1
7:20 AM	30	29	2	0	355	59	350	350	-	170	50	-	30	0.1
7:25 AM	30	29	2	0	355	59	350	350	-	170	63	-	30	0.2
7:30 AM	30	29	3	0	355	59	350	350	-	170	75	-	30	0.2
7:35 AM	30	29	3	0	355	59	350	350	-	170	88	-	30	0.2
7:40 AM	30	29	3	0	355	59	350	350	-	170	100	-	30	0.3
7:45 AM	30	29	4	0	355	59	350	400	-	170	113	-	30	0.3
7:50 AM	30	29	4	0	355	59	350	400	-	170	125	-	30	0.3
7:55 AM	30	29	5	0	355	59	350	400	-	170	138	-	30	0.4
8:00 AM	30	29	5	0	355	59	350	400	-	170	150	-	30	0.4
	355	**350**		**5**		**710**							**355**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**355**					**MAX Q (FT/LN)=**	**150**	**-**	**30**	

(Min=240, Max=900vph/lane)

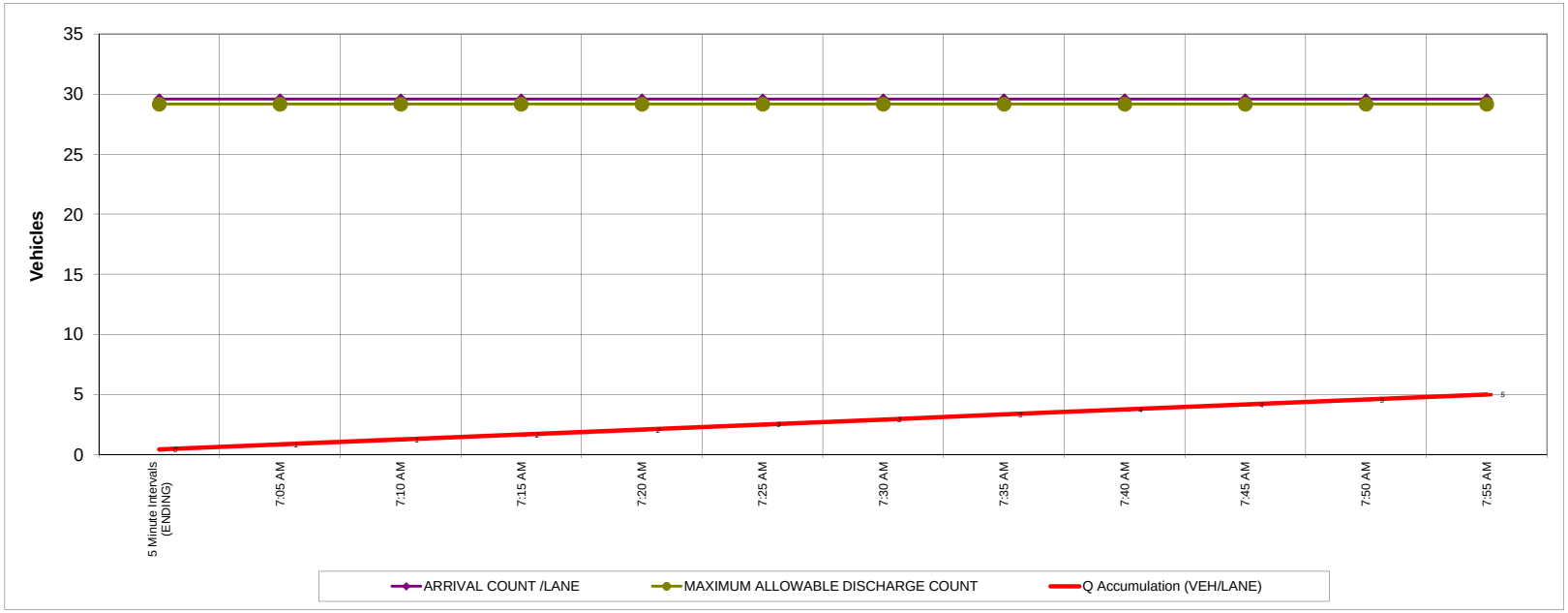
Meter Rate = **350**

Avg Delay/veh (hr)= 0.008

Avg Delay/veh (sec)= **27**

	INPUT
LANES=	**2**
Ramp Length=	170
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Alondra On

AM Peak Hour Vol/PCE:	770	800
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	700	750

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	32	2	2	400	67	380	400	-	680	50	-	33	0.1
7:10 AM	33	32	3	2	400	67	380	400	-	680	100	-	33	0.3
7:15 AM	33	32	5	2	400	67	380	450	-	680	150	-	33	0.4
7:20 AM	33	32	7	2	400	67	380	450	-	680	200	-	33	0.6
7:25 AM	33	32	8	2	400	67	380	500	-	680	250	-	33	0.7
7:30 AM	33	32	10	2	400	67	380	500	-	680	300	-	33	0.8
7:35 AM	33	32	12	2	400	67	380	500	-	680	350	-	33	1.0
7:40 AM	33	32	13	2	400	67	380	550	-	680	400	-	33	1.1
7:45 AM	33	32	15	2	400	67	380	550	-	680	450	-	33	1.3
7:50 AM	33	32	17	2	400	67	380	600	-	680	500	-	33	1.4
7:55 AM	33	32	18	2	400	67	380	600	-	680	550	-	33	1.5
8:00 AM	33	32	20	2	400	67	380	600	-	680	600	-	33	1.7
	400	**380**		**20**		**800**							**400**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**400**					**MAX Q (FT/LN)=**	**600**	**-**	**33**	

(Min=240, Max=900vph/lane)

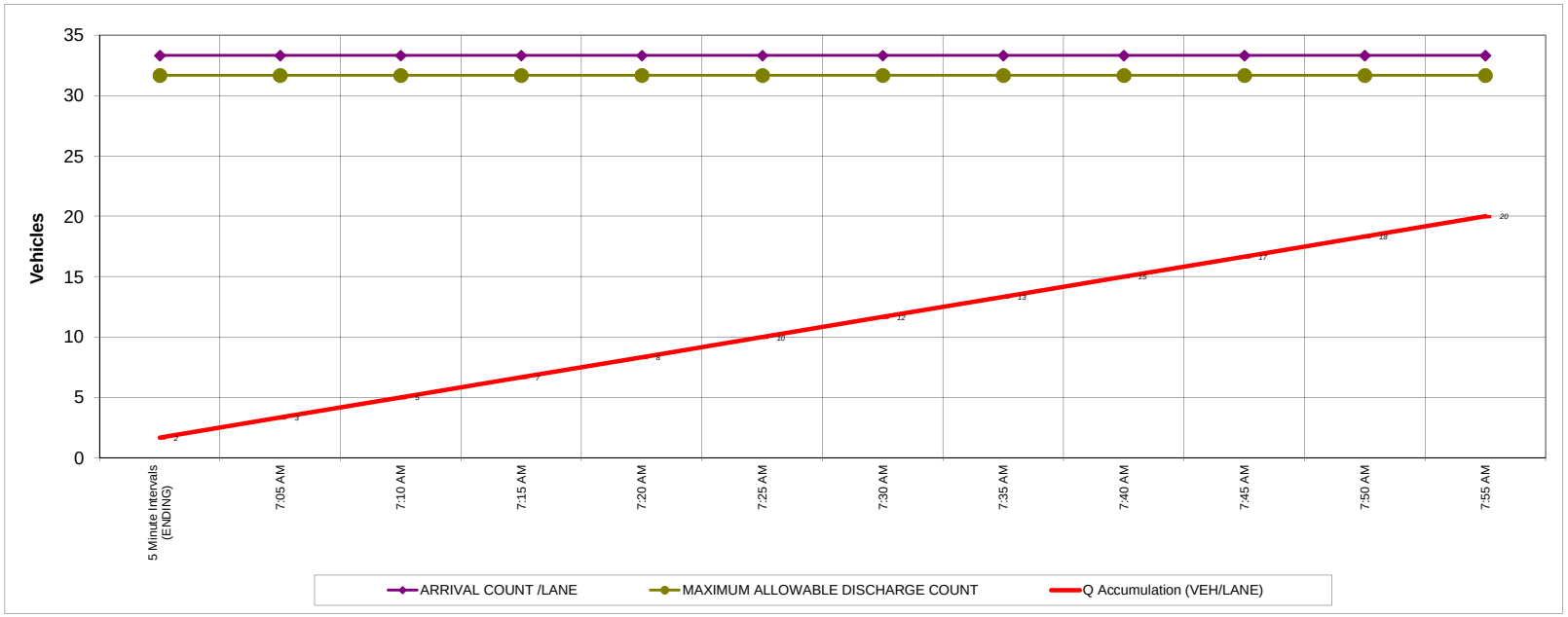
Meter Rate = **380**

Avg Delay/veh (hr)= 0.027

Avg Delay/veh (sec)= **98**

	INPUT
LANES=	**2**
Ramp Length=	680
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Alondra On

AM Peak Hour Vol/PCE:	650	710
PM Peak Hour Vol/PCE:	570	600
MD Peak Hour Vol/PCE:	680	770

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	32	29	3	3	385	64	345	400	-	1350	100	-	32	0.3
1:10 PM	32	29	7	3	385	64	345	450	-	1350	200	-	32	0.6
1:15 PM	32	29	10	3	385	64	345	500	-	1350	300	-	32	0.8
1:20 PM	32	29	13	3	385	64	345	500	-	1350	400	-	32	1.1
1:25 PM	32	29	17	3	385	64	345	550	-	1350	500	-	32	1.4
1:30 PM	32	29	20	3	385	64	345	600	-	1350	600	-	32	1.7
1:35 PM	32	29	23	3	385	64	345	650	-	1350	700	-	32	1.9
1:40 PM	32	29	27	3	385	64	345	700	-	1350	800	-	32	2.2
1:45 PM	32	29	30	3	385	64	345	700	-	1350	900	-	32	2.5
1:50 PM	32	29	33	3	385	64	345	750	-	1350	1000	-	32	2.8
1:55 PM	32	29	37	3	385	64	345	800	-	1350	1100	-	32	3.1
2:00 PM	32	29	40	3	385	64	345	850	-	1350	1200	-	32	3.3
	385	345		40		770							385	21.67
	MAX Q (VEH/LN)=		40	MAX RATE (VPH)=	385					MAX Q (FT/LN)=	1,200	-	32	

(Min=240, Max=900vph/lane)

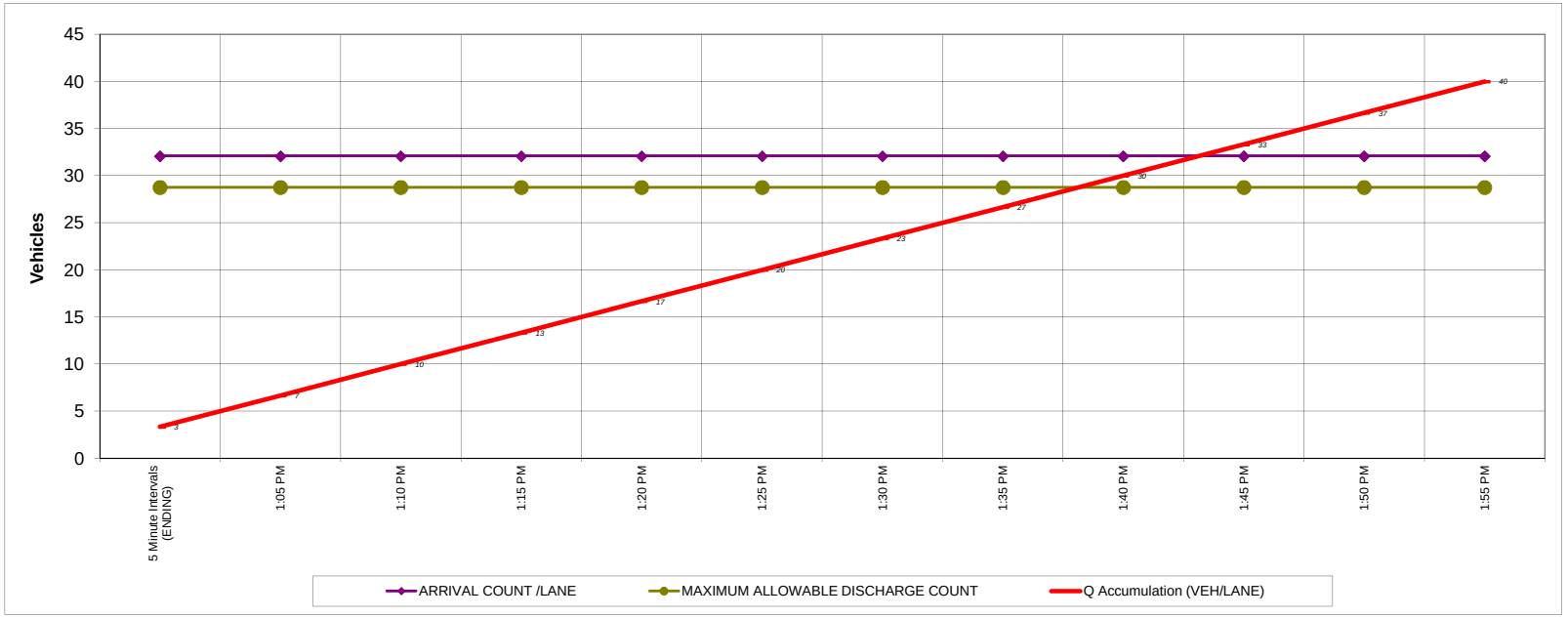
Meter Rate = 345

Avg Delay/veh (hr)= 0.056

Avg Delay/veh (sec)= 203

	INPUT
LANES=	2
Ramp Length=	1350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-FC Off

AM Peak Hour Vol/PCE:	400	800
PM Peak Hour Vol/PCE:	200	400
MD Peak Hour Vol/PCE:	190	380

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	29	5	5	400	67	345	450	-	3220	138	-	33	0.4
7:10 AM	33	29	9	5	400	67	345	500	-	3220	275	-	33	0.8
7:15 AM	33	29	14	5	400	67	345	550	-	3220	413	-	33	1.1
7:20 AM	33	29	18	5	400	67	345	600	-	3220	550	-	33	1.5
7:25 AM	33	29	23	5	400	67	345	650	-	3220	688	-	33	1.9
7:30 AM	33	29	28	5	400	67	345	700	-	3220	825	-	33	2.3
7:35 AM	33	29	32	5	400	67	345	750	-	3220	963	-	33	2.7
7:40 AM	33	29	37	5	400	67	345	800	-	3220	1100	-	33	3.1
7:45 AM	33	29	41	5	400	67	345	850	-	3220	1238	-	33	3.4
7:50 AM	33	29	46	5	400	67	345	950	-	3220	1375	-	33	3.8
7:55 AM	33	29	50	5	400	67	345	1000	-	3220	1513	-	33	4.2
8:00 AM	33	29	55	5	400	67	345	1050	-	3220	1650	-	33	4.6
	400	**345**		**55**		**800**							**400**	**29.79**
		MAX Q (VEH/LN)=	**55**	**MAX RATE (VPH)=**	**400**					**MAX Q (FT/LN)=**	**1,650**	**-**	**33**	

(Min=240, Max=900vph/lane)

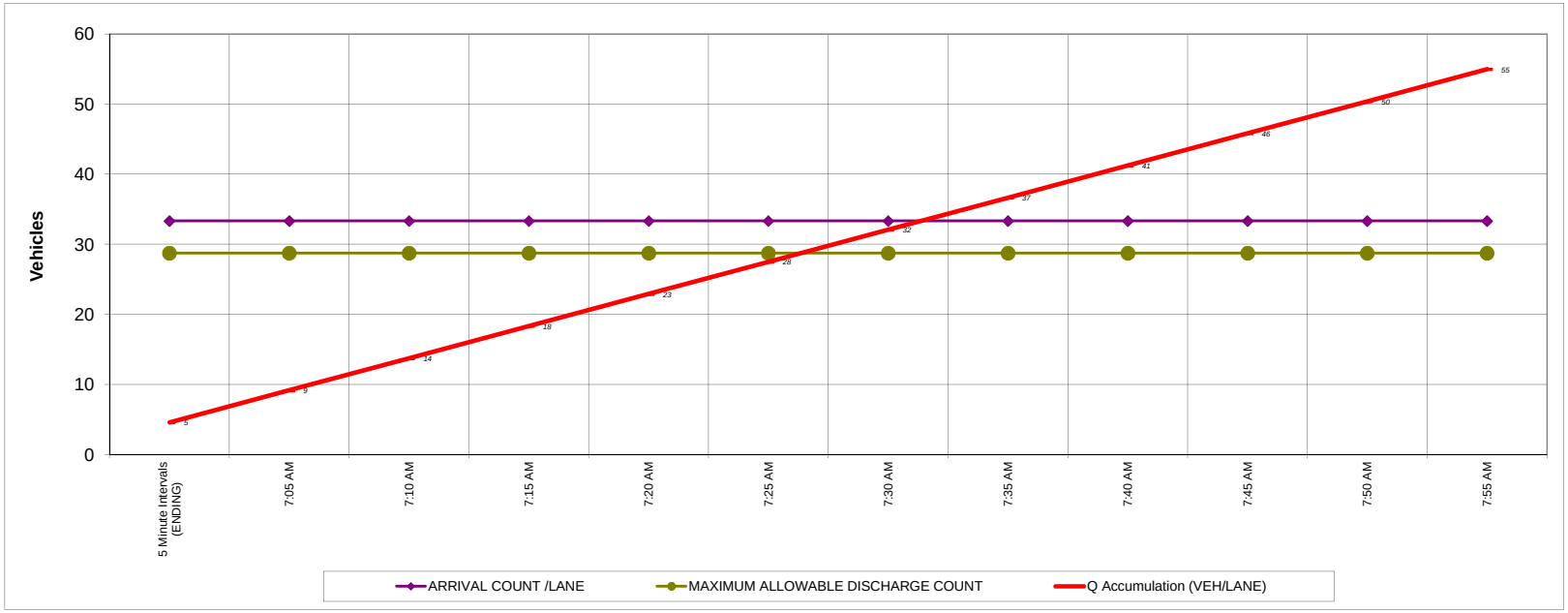
Meter Rate = **345**

Avg Delay/veh (hr)= 0.074

Avg Delay/veh (sec)= **268**

	INPUT
LANES=	**2**
Ramp Length=	3220
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	340	680
PM Peak Hour Vol/PCE:	560	1120
MD Peak Hour Vol/PCE:	430	860

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	93	75	19	19	1120	93	895	1300	-	2610	563	-	93	1.6
5:10 PM	93	75	38	19	1120	93	895	1550	-	2610	1125	-	93	3.1
5:15 PM	93	75	56	19	1120	93	895	1750	-	2610	1688	-	93	4.7
5:20 PM	93	75	75	19	1120	93	895	2000	-	2610	2250	-	93	6.3
5:25 PM	93	75	94	19	1120	93	895	2200	2300	2610	2813	203	93	7.8
5:30 PM	93	75	113	19	1120	93	895	2450	2750	2610	3375	765	93	9.4
5:35 PM	93	75	131	19	1120	93	895	2650	3200	2610	3938	1328	93	10.9
5:40 PM	93	75	150	19	1120	93	895	2900	3650	2610	4500	1890	93	12.5
5:45 PM	93	75	169	19	1120	93	895	3100	4100	2610	5063	2453	93	14.1
5:50 PM	93	75	188	19	1120	93	895	3350	4550	2610	5625	3015	93	15.6
5:55 PM	93	75	206	19	1120	93	895	3550	5000	2610	6188	3578	93	17.2
6:00 PM	93	75	225	19	1120	93	895	3800	5450	2610	6750	4140	93	18.8
	1,120	**895**		**225**		**1,120**							**1,120**	**121.88**
		MAX Q (VEH/LN)=	**225**	**MAX RATE (VPH)=**	**1,120**					**MAX Q (FT/LN)=**	**6,750**	**4,140**	**93**	

(Min=240, Max=900 vph/lane)

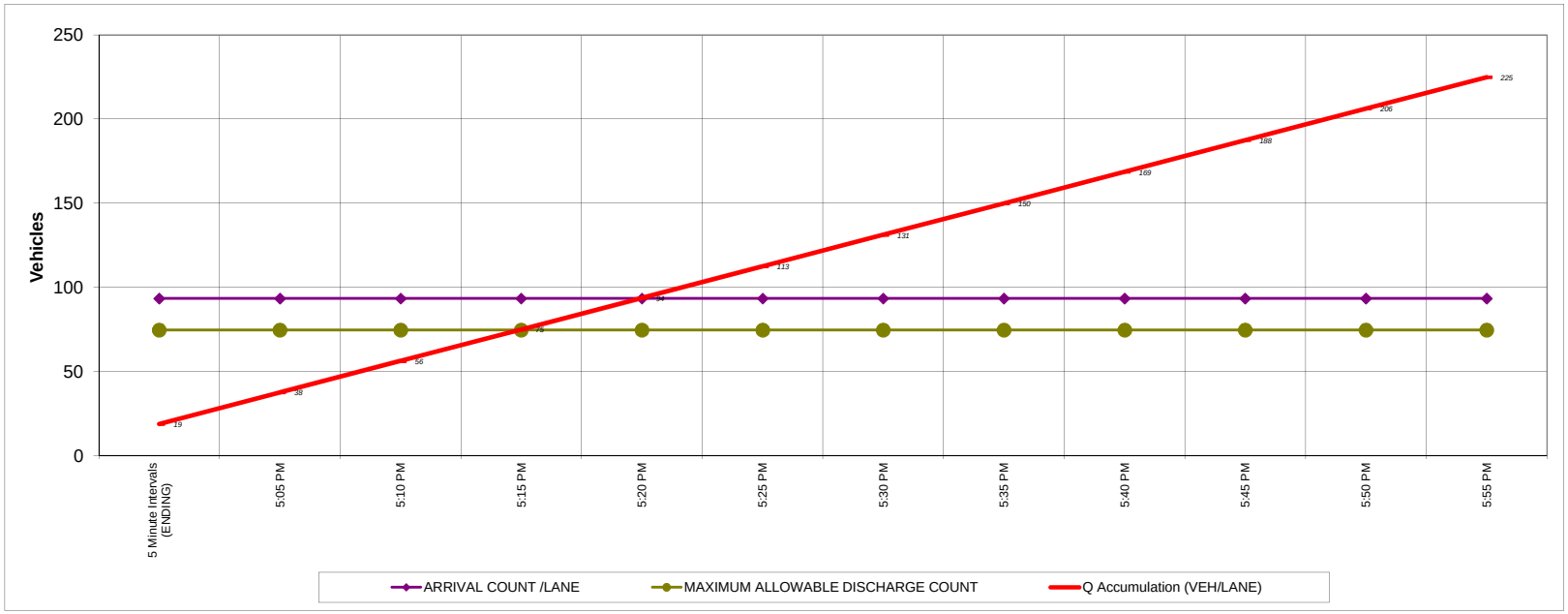
Meter Rate = **895**

Avg Delay/veh (hr)= 0.109

Avg Delay/veh (sec)= **392**

	INPUT
LANES=	**1**
Ramp Length=	2610
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Rosecrans On

AM Peak Hour Vol/PCE:	520	530
PM Peak Hour Vol/PCE:	500	510
MD Peak Hour Vol/PCE:	380	390

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	22	20	2	2	265	44	240	250	-	2710	63	-	22	0.2
7:10 AM	22	20	4	2	265	44	240	300	-	2710	125	-	22	0.3
7:15 AM	22	20	6	2	265	44	240	300	-	2710	188	-	22	0.5
7:20 AM	22	20	8	2	265	44	240	350	-	2710	250	-	22	0.7
7:25 AM	22	20	10	2	265	44	240	350	-	2710	313	-	22	0.9
7:30 AM	22	20	13	2	265	44	240	400	-	2710	375	-	22	1.0
7:35 AM	22	20	15	2	265	44	240	400	-	2710	438	-	22	1.2
7:40 AM	22	20	17	2	265	44	240	450	-	2710	500	-	22	1.4
7:45 AM	22	20	19	2	265	44	240	450	-	2710	563	-	22	1.6
7:50 AM	22	20	21	2	265	44	240	500	-	2710	625	-	22	1.7
7:55 AM	22	20	23	2	265	44	240	500	-	2710	687	-	22	1.9
8:00 AM	22	20	25	2	265	44	240	550	-	2710	750	-	22	2.1
	265	**240**		**25**		**530**							**265**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**265**					**MAX Q (FT/LN)=**	**750**	**-**	**22**	

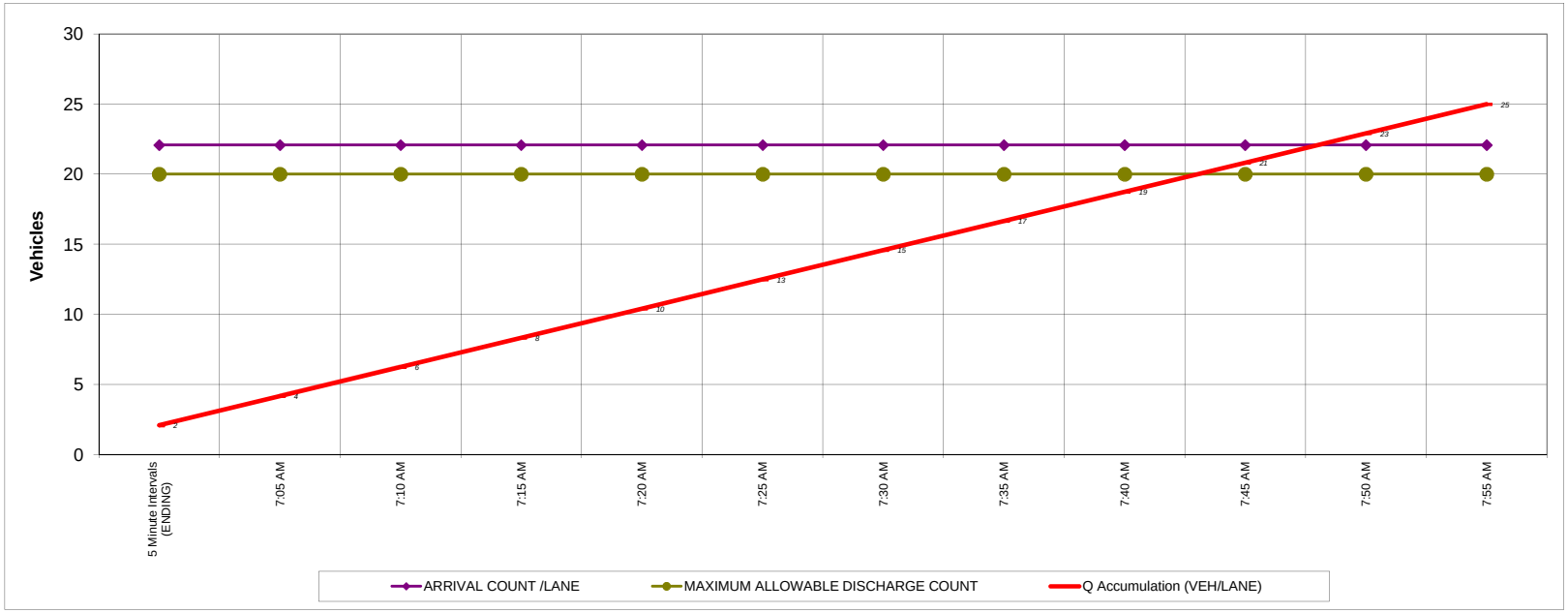
(Min=240, Max=900vph/lane)

Meter Rate = **240**

	INPUT
LANES=	**2**
Ramp Length=	2710
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.051
Avg Delay/veh (sec)= **184**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Rosecrans On

AM Peak Hour Vol/PCE:	680	730
PM Peak Hour Vol/PCE:	330	330
MD Peak Hour Vol/PCE:	240	270

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	28	3	3	365	61	330	400	-	1200	88	-	30	0.2
7:10 AM	30	28	6	3	365	61	330	400	-	1200	175	-	30	0.5
7:15 AM	30	28	9	3	365	61	330	450	-	1200	263	-	30	0.7
7:20 AM	30	28	12	3	365	61	330	500	-	1200	350	-	30	1.0
7:25 AM	30	28	15	3	365	61	330	500	-	1200	438	-	30	1.2
7:30 AM	30	28	18	3	365	61	330	550	-	1200	525	-	30	1.5
7:35 AM	30	28	20	3	365	61	330	600	-	1200	613	-	30	1.7
7:40 AM	30	28	23	3	365	61	330	600	-	1200	700	-	30	1.9
7:45 AM	30	28	26	3	365	61	330	650	-	1200	788	-	30	2.2
7:50 AM	30	28	29	3	365	61	330	700	-	1200	875	-	30	2.4
7:55 AM	30	28	32	3	365	61	330	750	-	1200	963	-	30	2.7
8:00 AM	30	28	35	3	365	61	330	750	-	1200	1050	-	30	2.9
	365	**330**		**35**		**730**							**365**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**365**					**MAX Q (FT/LN)=**	**1,050**	**-**	**30**	

(Min=240, Max=900vph/lane)

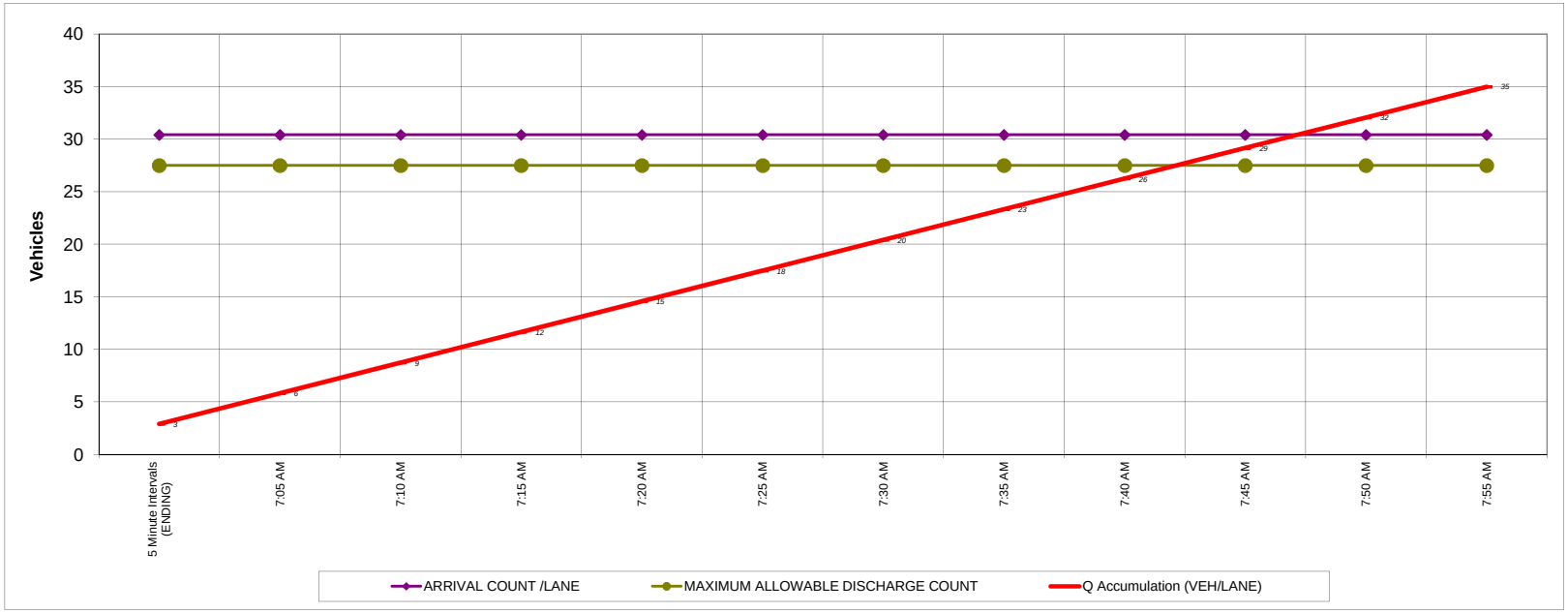
Meter Rate = **330**

Avg Delay/veh (hr)= 0.052

Avg Delay/veh (sec)= **187**

	INPUT
LANES=	**2**
Ramp Length=	1200
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Rosecrans On

AM Peak Hour Vol/PCE:	360	370
PM Peak Hour Vol/PCE:	150	150
MD Peak Hour Vol/PCE:	110	120

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:10 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:15 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:20 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:25 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:30 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:35 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:40 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:45 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:50 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:55 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
8:00 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
	185	**240**		**-**		**370**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**185**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

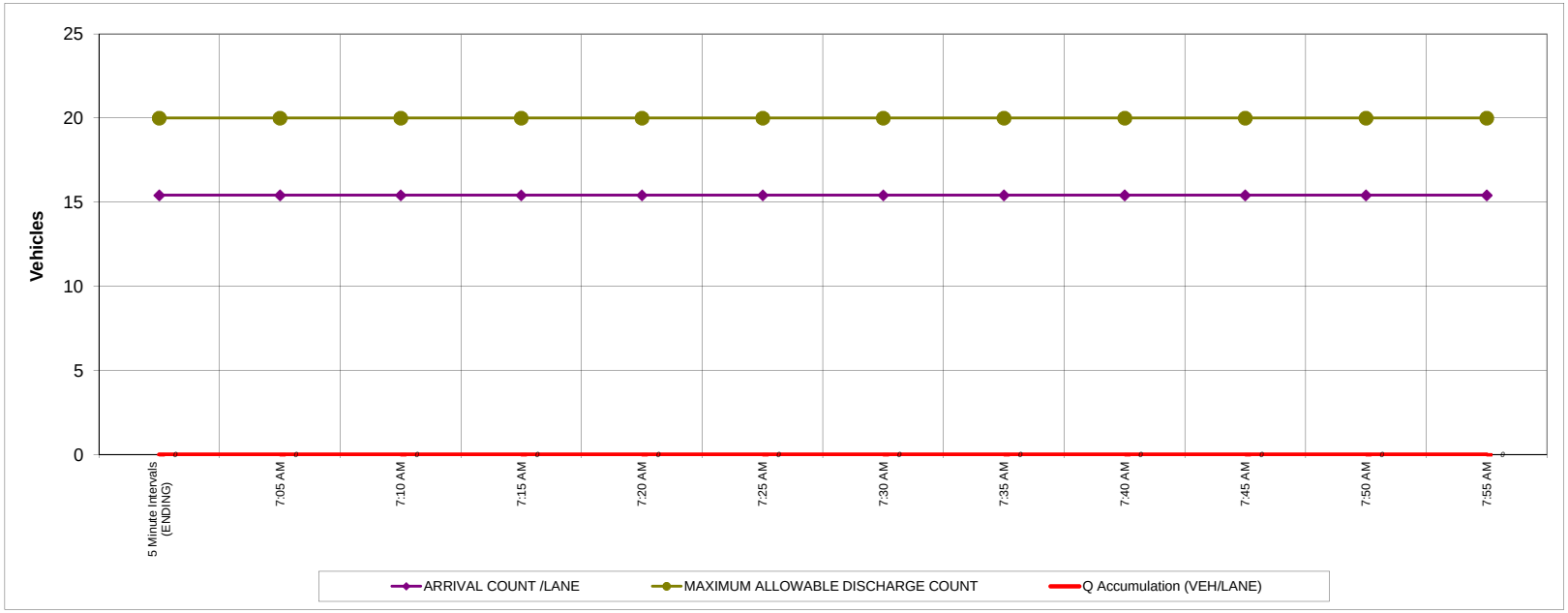
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**2**
Ramp Length=	1180
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Imperial On

AM Peak Hour Vol/PCE:	600	630
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	620	650

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	27	25	2	2	325	54	300	350	-	850	63	-	27	0.2
1:10 PM	27	25	4	2	325	54	300	350	-	850	125	-	27	0.3
1:15 PM	27	25	6	2	325	54	300	400	-	850	188	-	27	0.5
1:20 PM	27	25	8	2	325	54	300	400	-	850	250	-	27	0.7
1:25 PM	27	25	10	2	325	54	300	450	-	850	313	-	27	0.9
1:30 PM	27	25	13	2	325	54	300	450	-	850	375	-	27	1.0
1:35 PM	27	25	15	2	325	54	300	500	-	850	437	-	27	1.2
1:40 PM	27	25	17	2	325	54	300	500	-	850	500	-	27	1.4
1:45 PM	27	25	19	2	325	54	300	550	-	850	562	-	27	1.6
1:50 PM	27	25	21	2	325	54	300	550	-	850	625	-	27	1.7
1:55 PM	27	25	23	2	325	54	300	600	-	850	687	-	27	1.9
2:00 PM	27	25	25	2	325	54	300	600	-	850	750	-	27	2.1
	325	**300**		**25**		**650**							**325**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**325**					**MAX Q (FT/LN)=**	**750**	**-**	**27**	

(Min=240, Max=900vph/lane)

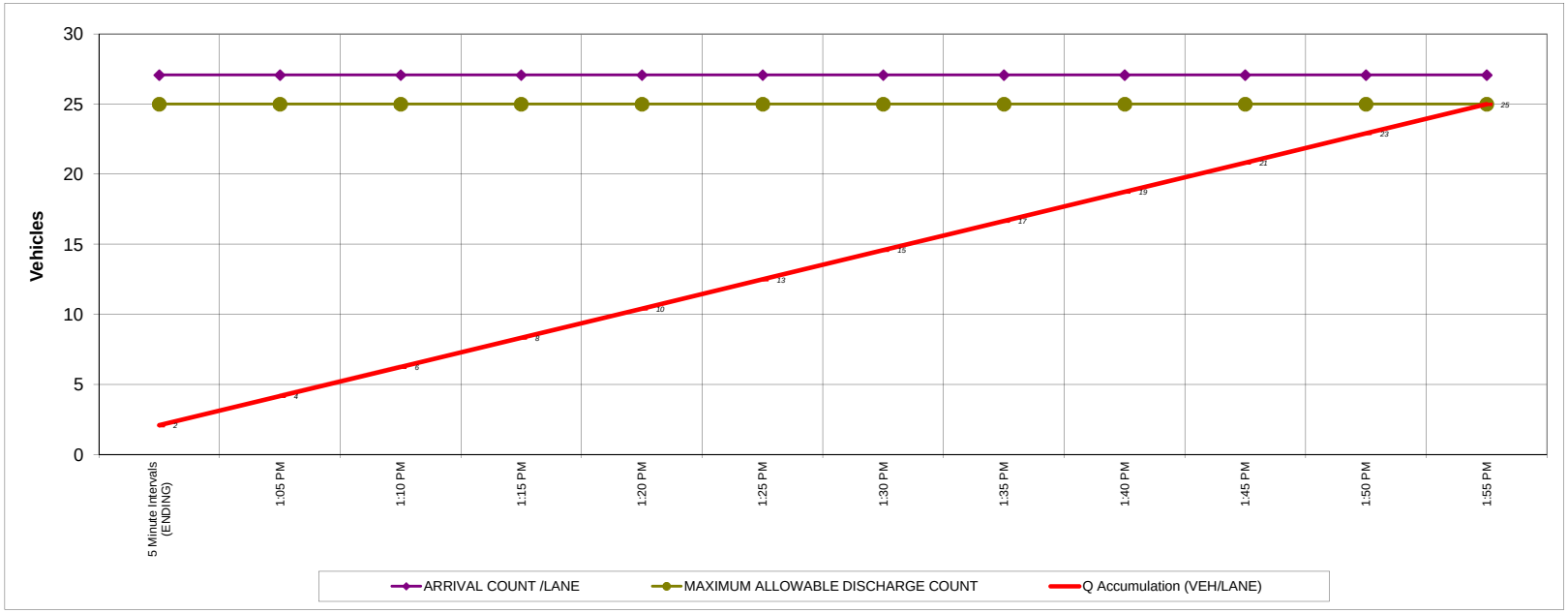
Meter Rate = **300**

Avg Delay/veh (hr)= 0.042

Avg Delay/veh (sec)= **150**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Imperial On

AM Peak Hour Vol/PCE:	2310	2380
PM Peak Hour Vol/PCE:	1450	1490
MD Peak Hour Vol/PCE:	1870	1980

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	99	96	3	3	1190	198	1155	1200	-	1110	88	-	99	0.2
7:10 AM	99	96	6	3	1190	198	1155	1250	-	1110	175	-	99	0.5
7:15 AM	99	96	9	3	1190	198	1155	1250	-	1110	263	-	99	0.7
7:20 AM	99	96	12	3	1190	198	1155	1300	-	1110	350	-	99	1.0
7:25 AM	99	96	15	3	1190	198	1155	1350	-	1110	438	-	99	1.2
7:30 AM	99	96	18	3	1190	198	1155	1400	-	1110	525	-	99	1.5
7:35 AM	99	96	20	3	1190	198	1155	1400	-	1110	613	-	99	1.7
7:40 AM	99	96	23	3	1190	198	1155	1450	-	1110	700	-	99	1.9
7:45 AM	99	96	26	3	1190	198	1155	1500	-	1110	788	-	99	2.2
7:50 AM	99	96	29	3	1190	198	1155	1500	-	1110	875	-	99	2.4
7:55 AM	99	96	32	3	1190	198	1155	1550	-	1110	963	-	99	2.7
8:00 AM	99	96	35	3	1190	198	1155	1600	-	1110	1050	-	99	2.9
	1,190	**1,155**		**35**		**2,380**							**1,190**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,190**					**MAX Q (FT/LN)=**	**1,050**	**-**	**99**	

(Min=480, Max=1200vph/lane)

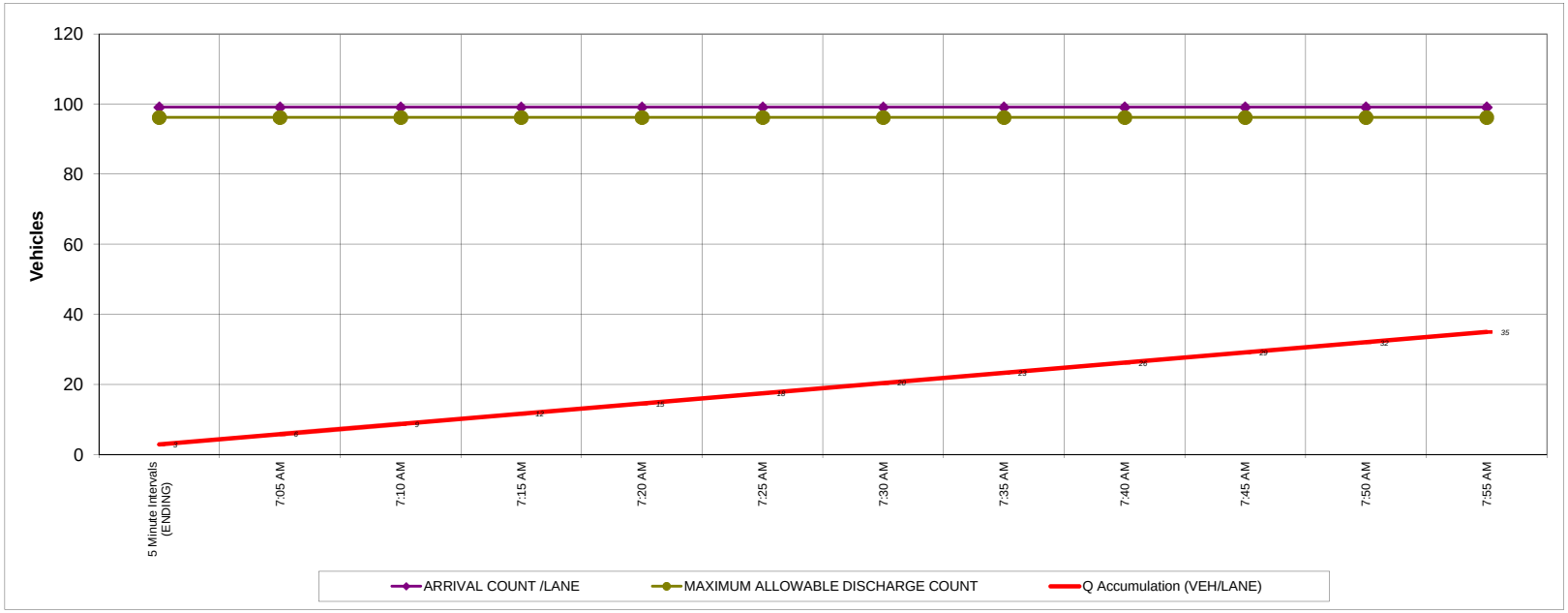
Meter Rate = **1155**

Avg Delay/veh (hr)= 0.016

Avg Delay/veh (sec)= **57**

	INPUT
LANES=	**2**
Ramp Length=	1110
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-WB Firestone On

AM Peak Hour Vol/PCE:	1060	1090
PM Peak Hour Vol/PCE:	980	1010
MD Peak Hour Vol/PCE:	970	1030

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	45	44	2	2	545	91	525	550	-	650	50	-	45	0.1
7:10 AM	45	44	3	2	545	91	525	550	-	650	100	-	45	0.3
7:15 AM	45	44	5	2	545	91	525	600	-	650	150	-	45	0.4
7:20 AM	45	44	7	2	545	91	525	600	-	650	200	-	45	0.6
7:25 AM	45	44	8	2	545	91	525	600	-	650	250	-	45	0.7
7:30 AM	45	44	10	2	545	91	525	650	-	650	300	-	45	0.8
7:35 AM	45	44	12	2	545	91	525	650	-	650	350	-	45	1.0
7:40 AM	45	44	13	2	545	91	525	700	-	650	400	-	45	1.1
7:45 AM	45	44	15	2	545	91	525	700	-	650	450	-	45	1.3
7:50 AM	45	44	17	2	545	91	525	700	-	650	500	-	45	1.4
7:55 AM	45	44	18	2	545	91	525	750	-	650	550	-	45	1.5
8:00 AM	45	44	20	2	545	91	525	750	-	650	600	-	45	1.7
	545	**525**		**20**		**1,090**							**545**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**545**					**MAX Q (FT/LN)=**	**600**	**-**	**45**	

(Min=240, Max=900vph/lane)

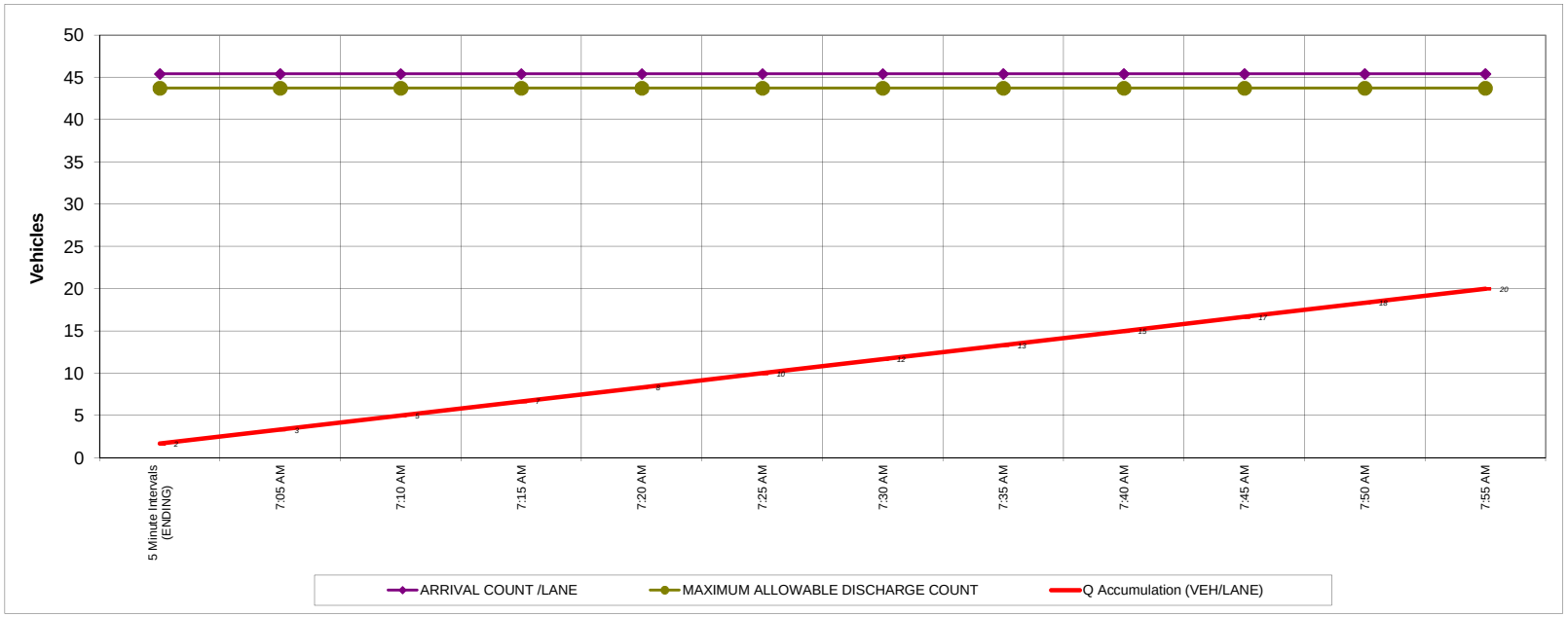
Meter Rate = **525**

Avg Delay/veh (hr)= 0.020

Avg Delay/veh (sec)= **72**

	INPUT
LANES=	**2**
Ramp Length=	650
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-EB Firestone On

AM Peak Hour Vol/PCE:	850	880
PM Peak Hour Vol/PCE:	480	500
MD Peak Hour Vol/PCE:	650	690

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	37	35	2	2	440	73	420	450	-	700	50	-	37	0.1
7:10 AM	37	35	3	2	440	73	420	450	-	700	100	-	37	0.3
7:15 AM	37	35	5	2	440	73	420	500	-	700	150	-	37	0.4
7:20 AM	37	35	7	2	440	73	420	500	-	700	200	-	37	0.6
7:25 AM	37	35	8	2	440	73	420	500	-	700	250	-	37	0.7
7:30 AM	37	35	10	2	440	73	420	550	-	700	300	-	37	0.8
7:35 AM	37	35	12	2	440	73	420	550	-	700	350	-	37	1.0
7:40 AM	37	35	13	2	440	73	420	600	-	700	400	-	37	1.1
7:45 AM	37	35	15	2	440	73	420	600	-	700	450	-	37	1.3
7:50 AM	37	35	17	2	440	73	420	600	-	700	500	-	37	1.4
7:55 AM	37	35	18	2	440	73	420	650	-	700	550	-	37	1.5
8:00 AM	37	35	20	2	440	73	420	650	-	700	600	-	37	1.7
	440	**420**		**20**		**880**							**440**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**440**					**MAX Q (FT/LN)=**	**600**	**-**	**37**	

(Min=240, Max=900vph/lane)

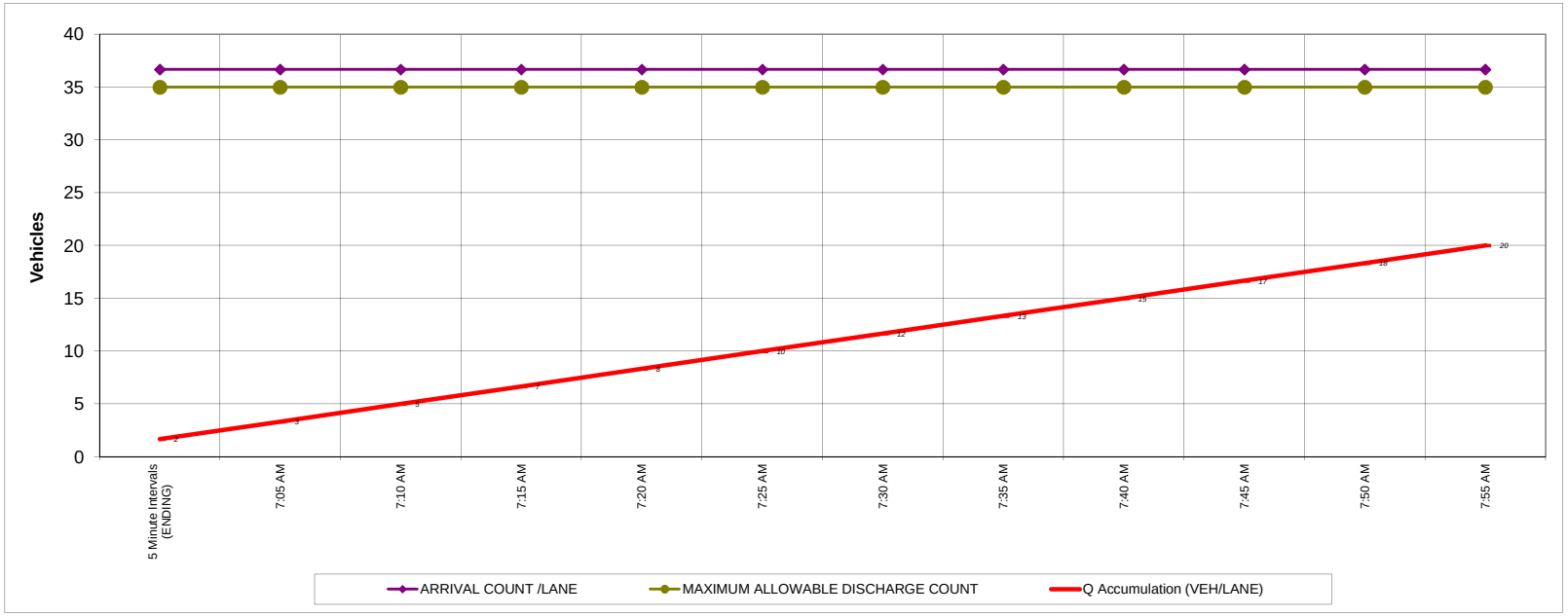
Meter Rate = **420**

Avg Delay/veh (hr)= 0.025

Avg Delay/veh (sec)= **89**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Firestone On

AM Peak Hour Vol/PCE:	760	790
PM Peak Hour Vol/PCE:	390	410
MD Peak Hour Vol/PCE:	560	620

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	31	2	2	395	66	375	400	-	700	50	-	33	0.1
7:10 AM	33	31	3	2	395	66	375	400	-	700	100	-	33	0.3
7:15 AM	33	31	5	2	395	66	375	450	-	700	150	-	33	0.4
7:20 AM	33	31	7	2	395	66	375	450	-	700	200	-	33	0.6
7:25 AM	33	31	8	2	395	66	375	450	-	700	250	-	33	0.7
7:30 AM	33	31	10	2	395	66	375	500	-	700	300	-	33	0.8
7:35 AM	33	31	12	2	395	66	375	500	-	700	350	-	33	1.0
7:40 AM	33	31	13	2	395	66	375	550	-	700	400	-	33	1.1
7:45 AM	33	31	15	2	395	66	375	550	-	700	450	-	33	1.3
7:50 AM	33	31	17	2	395	66	375	550	-	700	500	-	33	1.4
7:55 AM	33	31	18	2	395	66	375	600	-	700	550	-	33	1.5
8:00 AM	33	31	20	2	395	66	375	600	-	700	600	-	33	1.7
	395	**375**		**20**		**790**							**395**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**395**					**MAX Q (FT/LN)=**	**600**	**-**	**33**	

(Min=240, Max=900vph/lane)

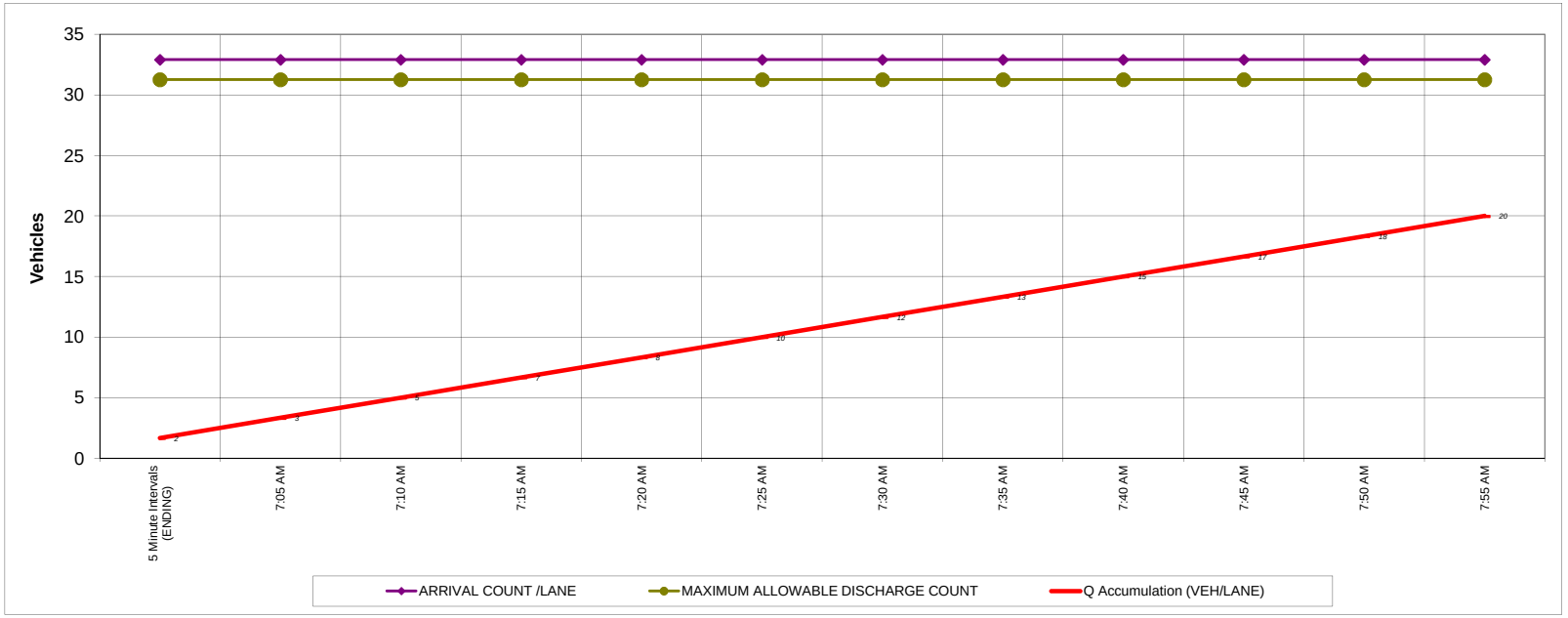
Meter Rate = **375**

Avg Delay/veh (hr)= 0.027

Avg Delay/veh (sec)= **99**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Firestone On

AM Peak Hour Vol/PCE:	1130	1160
PM Peak Hour Vol/PCE:	930	960
MD Peak Hour Vol/PCE:	860	910

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	48	45	3	3	580	97	545	600	-	1080	87	-	48	0.2
7:10 AM	48	45	6	3	580	97	545	650	-	1080	175	-	48	0.5
7:15 AM	48	45	9	3	580	97	545	650	-	1080	263	-	48	0.7
7:20 AM	48	45	12	3	580	97	545	700	-	1080	350	-	48	1.0
7:25 AM	48	45	15	3	580	97	545	750	-	1080	438	-	48	1.2
7:30 AM	48	45	18	3	580	97	545	750	-	1080	525	-	48	1.5
7:35 AM	48	45	20	3	580	97	545	800	-	1080	612	-	48	1.7
7:40 AM	48	45	23	3	580	97	545	850	-	1080	700	-	48	1.9
7:45 AM	48	45	26	3	580	97	545	850	-	1080	787	-	48	2.2
7:50 AM	48	45	29	3	580	97	545	900	-	1080	875	-	48	2.4
7:55 AM	48	45	32	3	580	97	545	950	-	1080	962	-	48	2.7
8:00 AM	48	45	35	3	580	97	545	1000	-	1080	1050	-	48	2.9
	580	**545**		**35**		**1,160**							**580**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**580**					**MAX Q (FT/LN)=**	**1,050**	**-**	**48**	

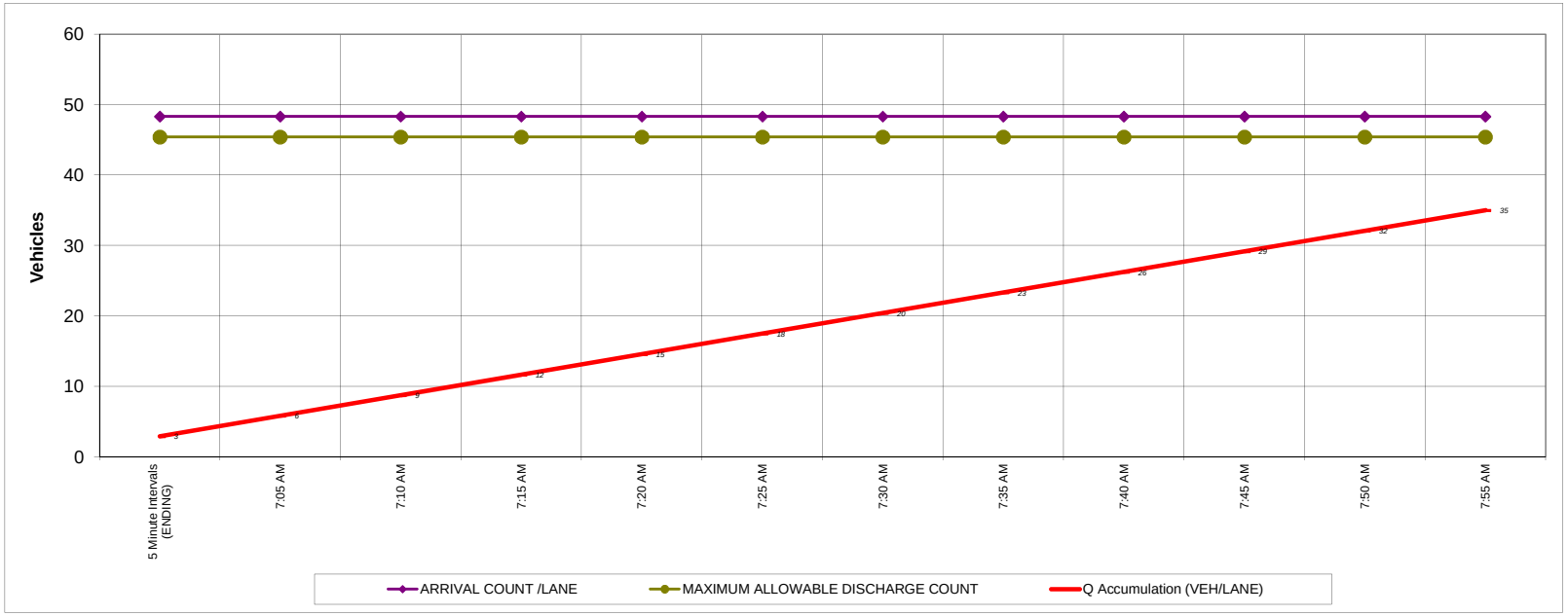
(Min=240, Max=900vph/lane)

Meter Rate = **545**

	INPUT
LANES=	**2**
Ramp Length=	1080
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.033
Avg Delay/veh (sec)= **118**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB Patata On FC

AM Peak Hour Vol/PCE:	680	730
PM Peak Hour Vol/PCE:	330	330
MD Peak Hour Vol/PCE:	240	270

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	28	3	3	365	61	335	350	-	1000	75	-	30	0.2
7:10 AM	30	28	5	3	365	61	335	400	-	1000	150	-	30	0.4
7:15 AM	30	28	8	3	365	61	335	450	-	1000	225	-	30	0.6
7:20 AM	30	28	10	3	365	61	335	450	-	1000	300	-	30	0.8
7:25 AM	30	28	13	3	365	61	335	500	-	1000	375	-	30	1.0
7:30 AM	30	28	15	3	365	61	335	500	-	1000	450	-	30	1.3
7:35 AM	30	28	18	3	365	61	335	550	-	1000	525	-	30	1.5
7:40 AM	30	28	20	3	365	61	335	600	-	1000	600	-	30	1.7
7:45 AM	30	28	23	3	365	61	335	600	-	1000	675	-	30	1.9
7:50 AM	30	28	25	3	365	61	335	650	-	1000	750	-	30	2.1
7:55 AM	30	28	28	3	365	61	335	650	-	1000	825	-	30	2.3
8:00 AM	30	28	30	3	365	61	335	700	-	1000	900	-	30	2.5
	365	**335**		**30**		**730**							**365**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**365**					**MAX Q (FT/LN)=**	**900**	**-**	**30**	

(Min=240, Max=900vph/lane)

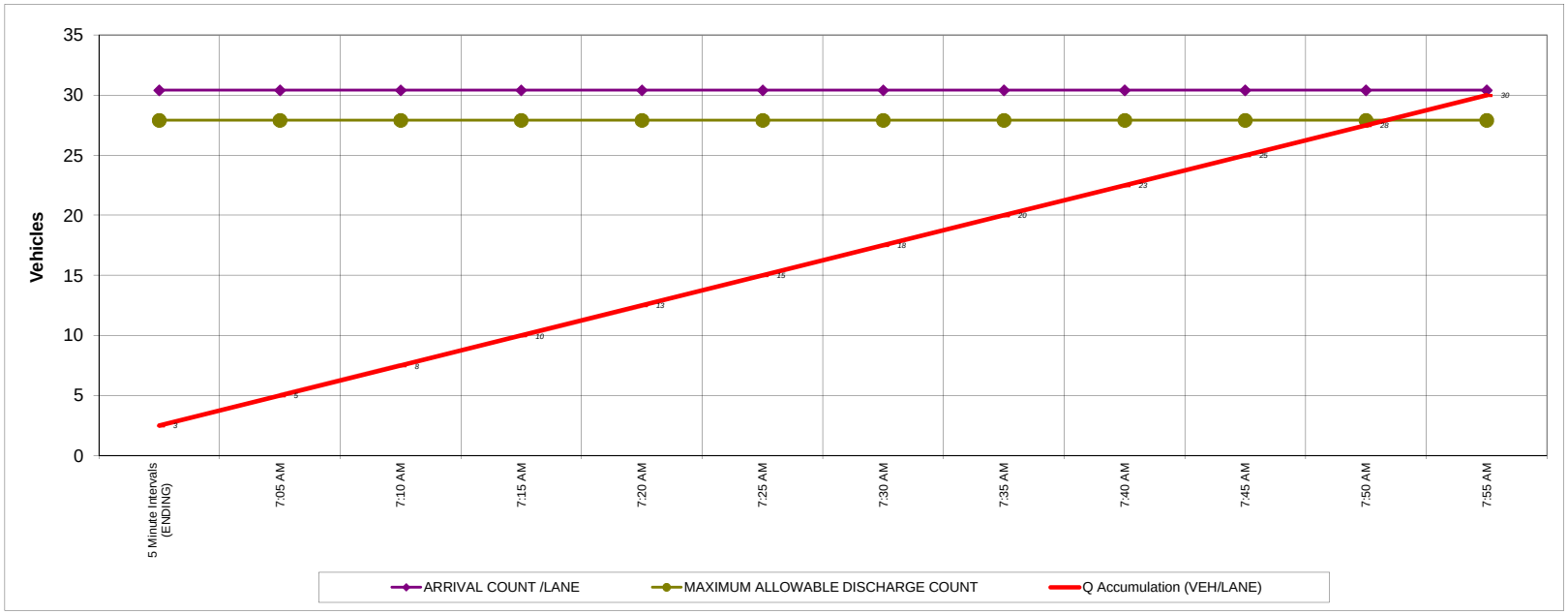
Meter Rate = **335**

Avg Delay/veh (hr)= 0.045

Avg Delay/veh (sec)= **160**

	INPUT
LANES=	**2**
Ramp Length=	1000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Florence On

AM Peak Hour Vol/PCE:	530	540
PM Peak Hour Vol/PCE:	540	560
MD Peak Hour Vol/PCE:	690	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	30	28	2	2	360	60	335	350	-	900	63	-	30	0.2
1:10 PM	30	28	4	2	360	60	335	400	-	900	125	-	30	0.3
1:15 PM	30	28	6	2	360	60	335	400	-	900	188	-	30	0.5
1:20 PM	30	28	8	2	360	60	335	450	-	900	250	-	30	0.7
1:25 PM	30	28	10	2	360	60	335	450	-	900	313	-	30	0.9
1:30 PM	30	28	13	2	360	60	335	500	-	900	375	-	30	1.0
1:35 PM	30	28	15	2	360	60	335	500	-	900	438	-	30	1.2
1:40 PM	30	28	17	2	360	60	335	550	-	900	500	-	30	1.4
1:45 PM	30	28	19	2	360	60	335	550	-	900	563	-	30	1.6
1:50 PM	30	28	21	2	360	60	335	600	-	900	625	-	30	1.7
1:55 PM	30	28	23	2	360	60	335	600	-	900	688	-	30	1.9
2:00 PM	30	28	25	2	360	60	335	650	-	900	750	-	30	2.1
	360	**335**		**25**		**720**							**360**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**750**	**-**	**30**	

(Min=240, Max=900vph/lane)

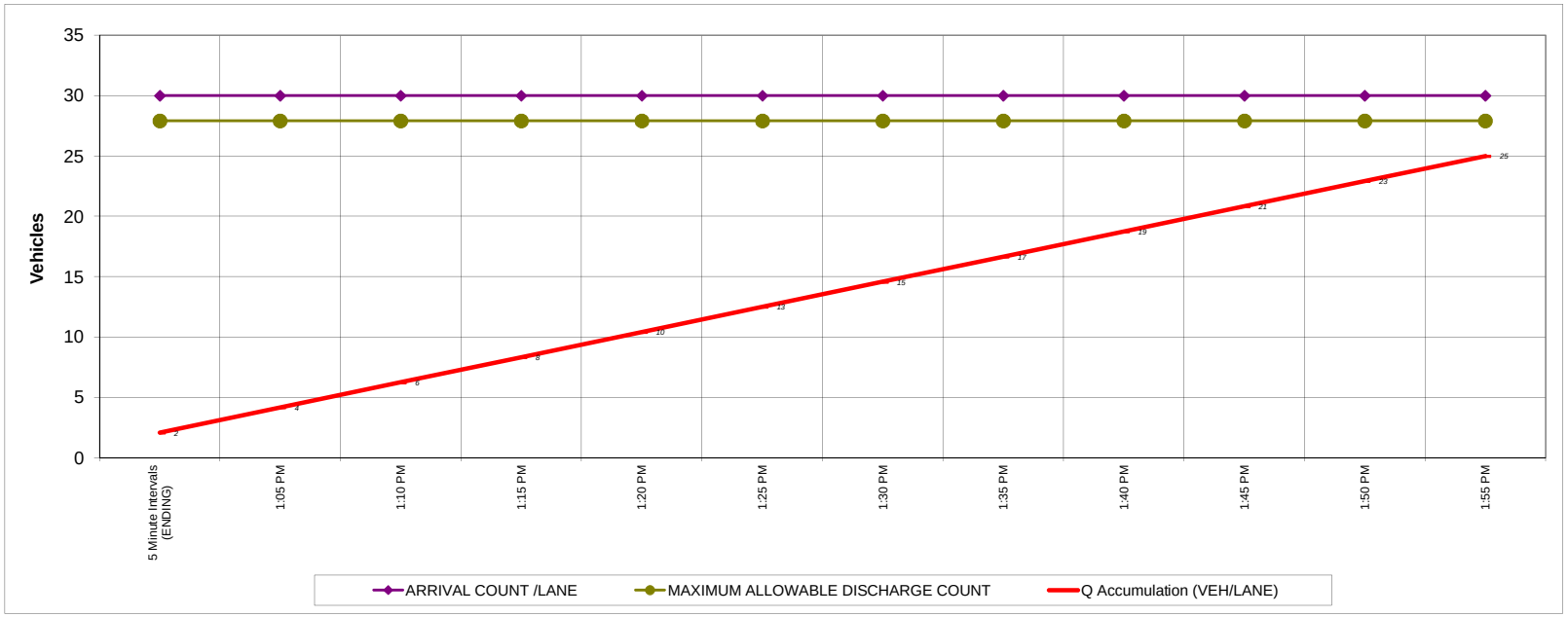
Meter Rate = **335**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **135**

	INPUT
LANES=	**2**
Ramp Length=	900
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Florence On

AM Peak Hour Vol/PCE:	980	1010
PM Peak Hour Vol/PCE:	1070	1100
MD Peak Hour Vol/PCE:	1090	1170

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	49	46	3	3	585	98	550	600	-	1150	88	-	49	0.2
1:10 PM	49	46	6	3	585	98	550	650	-	1150	175	-	49	0.5
1:15 PM	49	46	9	3	585	98	550	650	-	1150	263	-	49	0.7
1:20 PM	49	46	12	3	585	98	550	700	-	1150	350	-	49	1.0
1:25 PM	49	46	15	3	585	98	550	750	-	1150	438	-	49	1.2
1:30 PM	49	46	18	3	585	98	550	750	-	1150	525	-	49	1.5
1:35 PM	49	46	20	3	585	98	550	800	-	1150	613	-	49	1.7
1:40 PM	49	46	23	3	585	98	550	850	-	1150	700	-	49	1.9
1:45 PM	49	46	26	3	585	98	550	900	-	1150	788	-	49	2.2
1:50 PM	49	46	29	3	585	98	550	900	-	1150	875	-	49	2.4
1:55 PM	49	46	32	3	585	98	550	950	-	1150	963	-	49	2.7
2:00 PM	49	46	35	3	585	98	550	1000	-	1150	1050	-	49	2.9
	585	**550**		**35**		**1,170**							**585**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**1,050**	**-**	**49**	

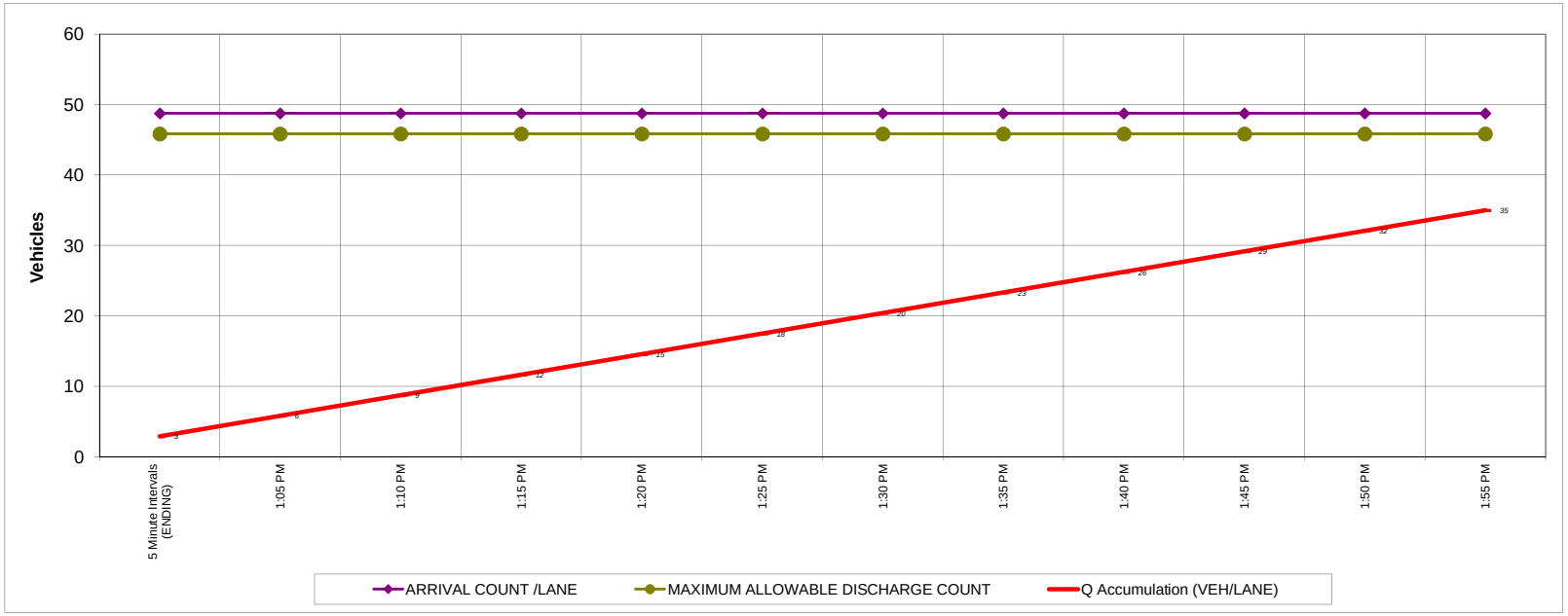
(Min=240, Max=900vph/lane)

Meter Rate = **550**

	INPUT
LANES=	**2**
Ramp Length=	1150
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.032
Avg Delay/veh (sec)= **117**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	740	770
PM Peak Hour Vol/PCE:	680	700
MD Peak Hour Vol/PCE:	850	900

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	34	3	3	450	75	410	450	-	1300	100	-	38	0.3
1:10 PM	38	34	7	3	450	75	410	500	-	1300	200	-	38	0.6
1:15 PM	38	34	10	3	450	75	410	550	-	1300	300	-	38	0.8
1:20 PM	38	34	13	3	450	75	410	600	-	1300	400	-	38	1.1
1:25 PM	38	34	17	3	450	75	410	650	-	1300	500	-	38	1.4
1:30 PM	38	34	20	3	450	75	410	650	-	1300	600	-	38	1.7
1:35 PM	38	34	23	3	450	75	410	700	-	1300	700	-	38	1.9
1:40 PM	38	34	27	3	450	75	410	750	-	1300	800	-	38	2.2
1:45 PM	38	34	30	3	450	75	410	800	-	1300	900	-	38	2.5
1:50 PM	38	34	33	3	450	75	410	850	-	1300	1000	-	38	2.8
1:55 PM	38	34	37	3	450	75	410	850	-	1300	1100	-	38	3.1
2:00 PM	38	34	40	3	450	75	410	900	-	1300	1200	-	38	3.3
	450	**410**		**40**		**900**							**450**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**450**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

(Min=240, Max=900vph/lane)

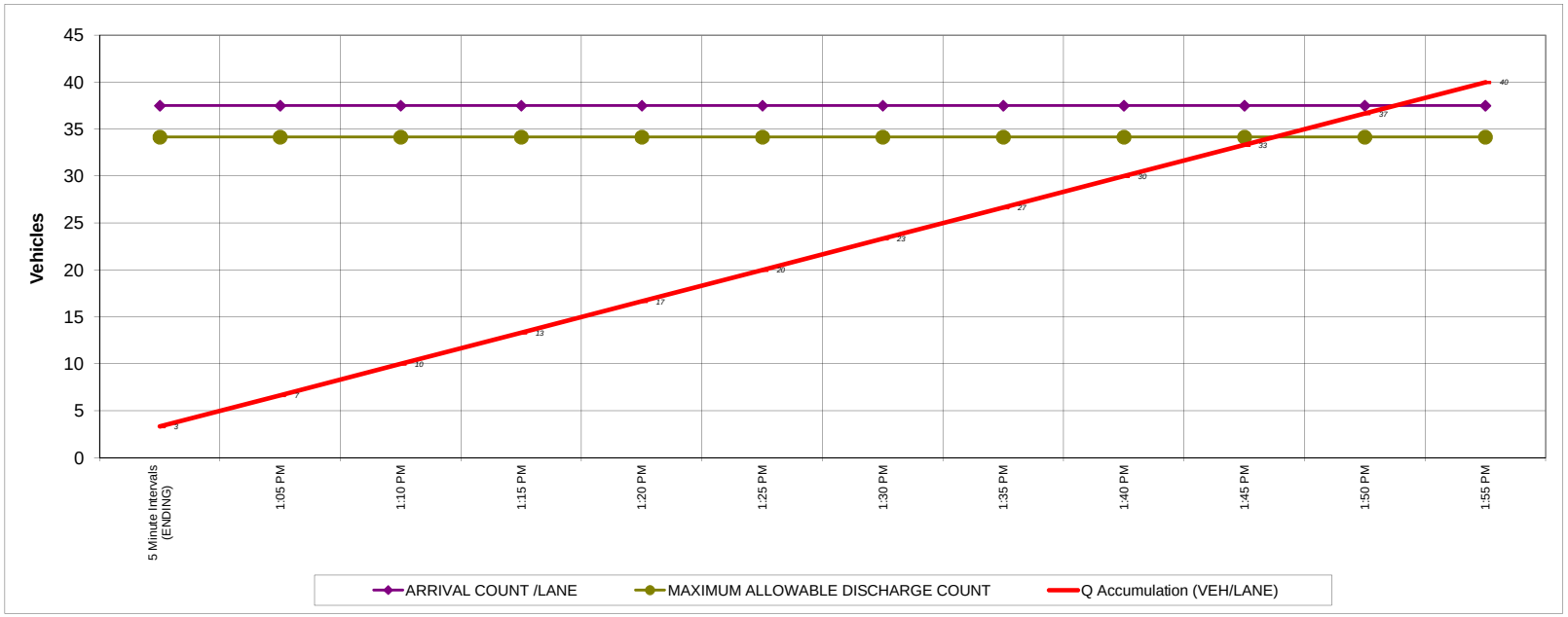
Meter Rate = **410**

Avg Delay/veh (hr)= 0.048

Avg Delay/veh (sec)= **173**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	820	860
PM Peak Hour Vol/PCE:	1030	1050
MD Peak Hour Vol/PCE:	870	970

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	44	41	3	3	525	88	490	550	-	1120	88	-	44	0.2
5:10 PM	44	41	6	3	525	88	490	550	-	1120	175	-	44	0.5
5:15 PM	44	41	9	3	525	88	490	600	-	1120	263	-	44	0.7
5:20 PM	44	41	12	3	525	88	490	650	-	1120	350	-	44	1.0
5:25 PM	44	41	15	3	525	88	490	700	-	1120	438	-	44	1.2
5:30 PM	44	41	18	3	525	88	490	700	-	1120	525	-	44	1.5
5:35 PM	44	41	20	3	525	88	490	750	-	1120	613	-	44	1.7
5:40 PM	44	41	23	3	525	88	490	800	-	1120	700	-	44	1.9
5:45 PM	44	41	26	3	525	88	490	800	-	1120	788	-	44	2.2
5:50 PM	44	41	29	3	525	88	490	850	-	1120	875	-	44	2.4
5:55 PM	44	41	32	3	525	88	490	900	-	1120	963	-	44	2.7
6:00 PM	44	41	35	3	525	88	490	900	-	1120	1050	-	44	2.9
	525	**490**		**35**		**1,050**							**525**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**525**					**MAX Q (FT/LN)=**	**1,050**	**-**	**44**	

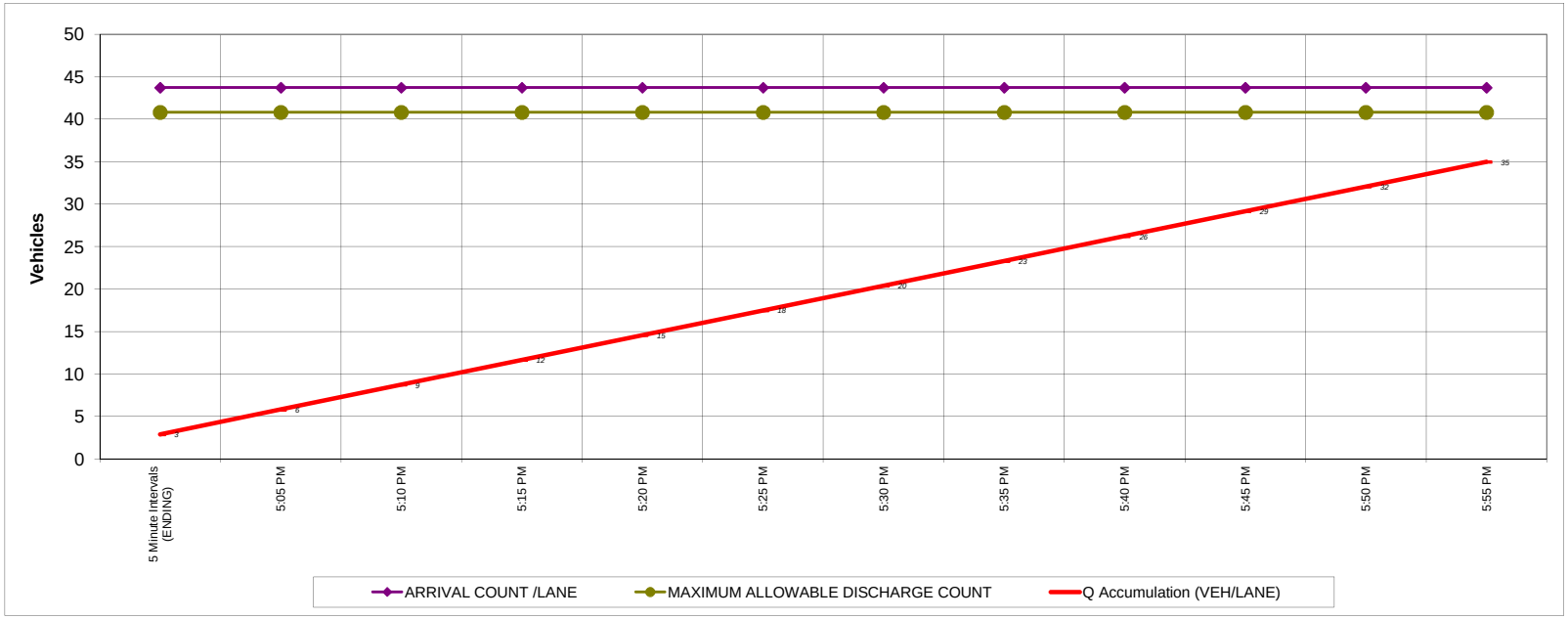
(Min=240, Max=900vph/lane)

Meter Rate = **490**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.036
Avg Delay/veh (sec)= **130**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	740	770
PM Peak Hour Vol/PCE:	680	700
MD Peak Hour Vol/PCE:	850	900

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	34	3	3	450	75	410	450	-	1300	100	-	38	0.3
1:10 PM	38	34	7	3	450	75	410	500	-	1300	200	-	38	0.6
1:15 PM	38	34	10	3	450	75	410	550	-	1300	300	-	38	0.8
1:20 PM	38	34	13	3	450	75	410	600	-	1300	400	-	38	1.1
1:25 PM	38	34	17	3	450	75	410	650	-	1300	500	-	38	1.4
1:30 PM	38	34	20	3	450	75	410	650	-	1300	600	-	38	1.7
1:35 PM	38	34	23	3	450	75	410	700	-	1300	700	-	38	1.9
1:40 PM	38	34	27	3	450	75	410	750	-	1300	800	-	38	2.2
1:45 PM	38	34	30	3	450	75	410	800	-	1300	900	-	38	2.5
1:50 PM	38	34	33	3	450	75	410	850	-	1300	1000	-	38	2.8
1:55 PM	38	34	37	3	450	75	410	850	-	1300	1100	-	38	3.1
2:00 PM	38	34	40	3	450	75	410	900	-	1300	1200	-	38	3.3
	450	**410**		**40**		**900**							**450**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**450**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

(Min=240, Max=900vph/lane)

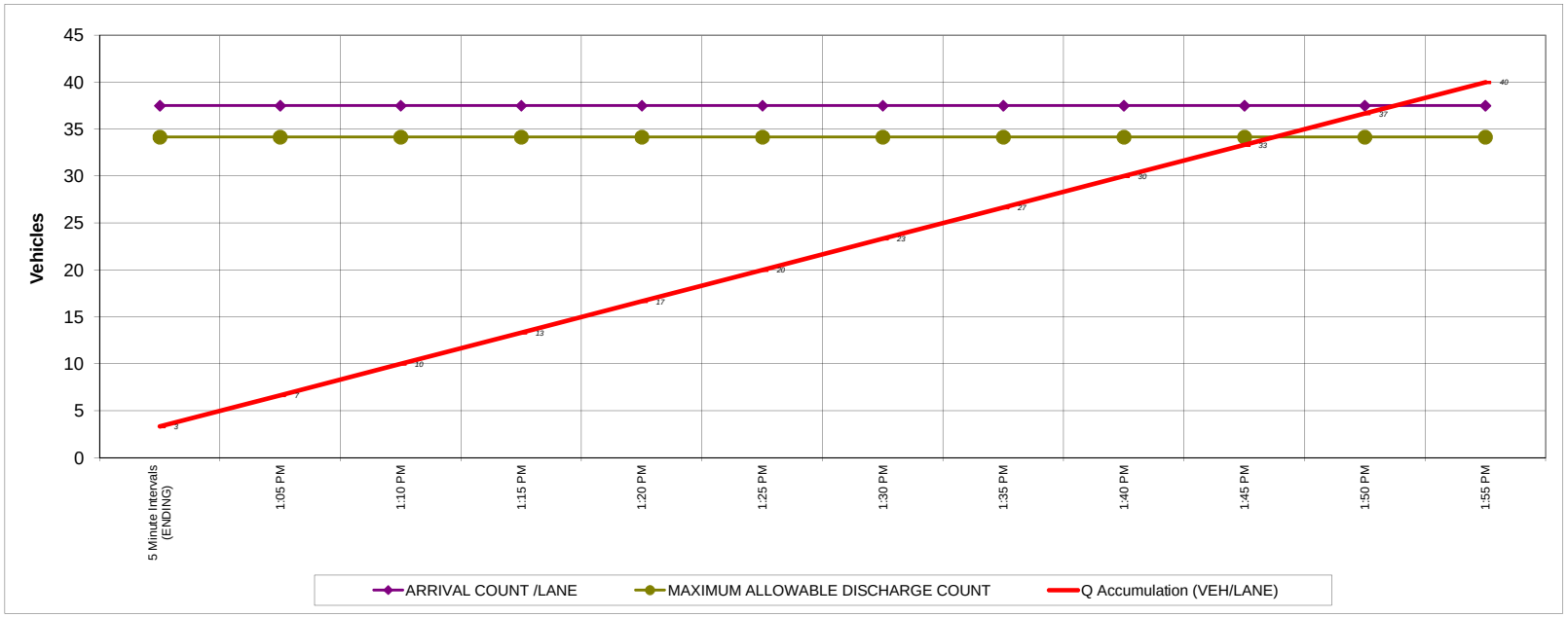
Meter Rate = **410**

Avg Delay/veh (hr)= 0.048

Avg Delay/veh (sec)= **173**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	820	860
PM Peak Hour Vol/PCE:	1030	1050
MD Peak Hour Vol/PCE:	870	970

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	44	41	3	3	525	88	490	550	-	1120	88	-	44	0.2
5:10 PM	44	41	6	3	525	88	490	550	-	1120	175	-	44	0.5
5:15 PM	44	41	9	3	525	88	490	600	-	1120	263	-	44	0.7
5:20 PM	44	41	12	3	525	88	490	650	-	1120	350	-	44	1.0
5:25 PM	44	41	15	3	525	88	490	700	-	1120	438	-	44	1.2
5:30 PM	44	41	18	3	525	88	490	700	-	1120	525	-	44	1.5
5:35 PM	44	41	20	3	525	88	490	750	-	1120	613	-	44	1.7
5:40 PM	44	41	23	3	525	88	490	800	-	1120	700	-	44	1.9
5:45 PM	44	41	26	3	525	88	490	800	-	1120	788	-	44	2.2
5:50 PM	44	41	29	3	525	88	490	850	-	1120	875	-	44	2.4
5:55 PM	44	41	32	3	525	88	490	900	-	1120	963	-	44	2.7
6:00 PM	44	41	35	3	525	88	490	900	-	1120	1050	-	44	2.9
	525	**490**		**35**		**1,050**							**525**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**525**					**MAX Q (FT/LN)=**	**1,050**	**-**	**44**	

(Min=240, Max=900vph/lane)

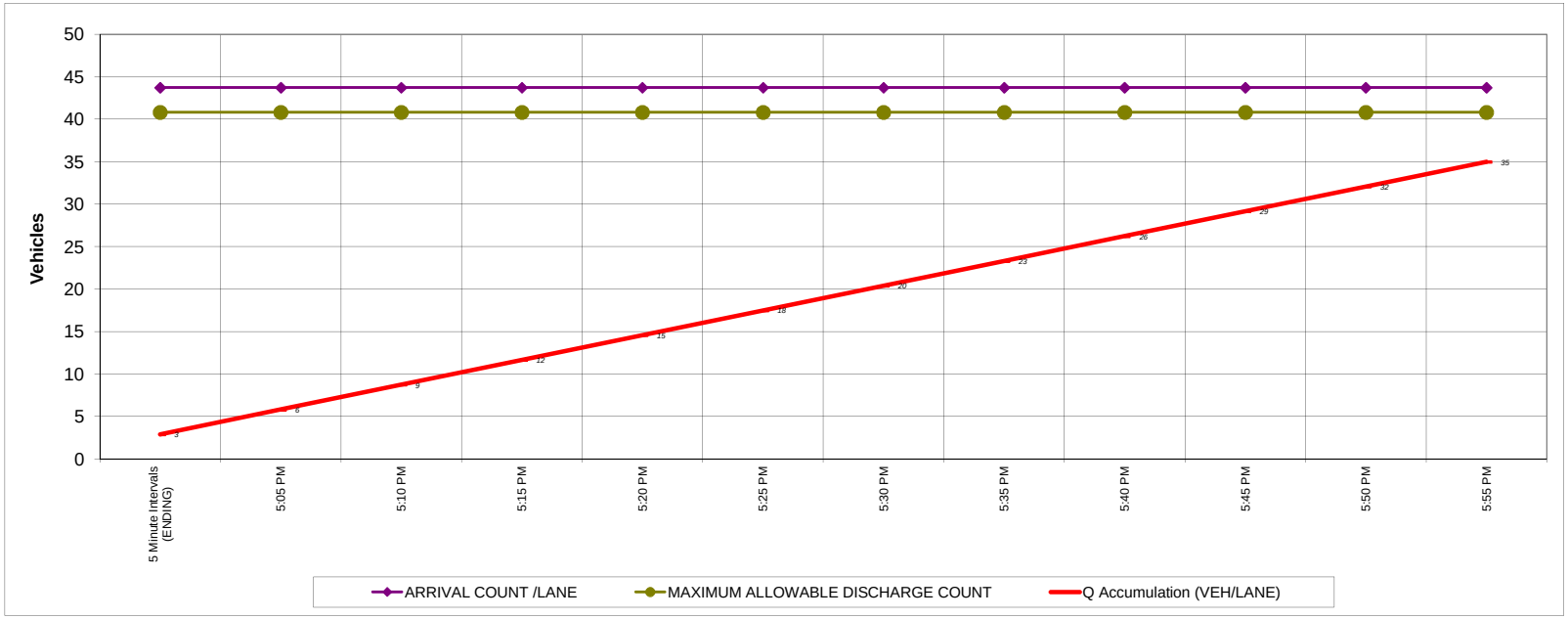
Meter Rate = **490**

Avg Delay/veh (hr)= 0.036

Avg Delay/veh (sec)= **130**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	800	830
PM Peak Hour Vol/PCE:	770	800
MD Peak Hour Vol/PCE:	900	960

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	40	37	3	3	480	80	440	500	-	1300	100	-	40	0.3
1:10 PM	40	37	7	3	480	80	440	550	-	1300	200	-	40	0.6
1:15 PM	40	37	10	3	480	80	440	600	-	1300	300	-	40	0.8
1:20 PM	40	37	13	3	480	80	440	600	-	1300	400	-	40	1.1
1:25 PM	40	37	17	3	480	80	440	650	-	1300	500	-	40	1.4
1:30 PM	40	37	20	3	480	80	440	700	-	1300	600	-	40	1.7
1:35 PM	40	37	23	3	480	80	440	750	-	1300	700	-	40	1.9
1:40 PM	40	37	27	3	480	80	440	800	-	1300	800	-	40	2.2
1:45 PM	40	37	30	3	480	80	440	800	-	1300	900	-	40	2.5
1:50 PM	40	37	33	3	480	80	440	850	-	1300	1000	-	40	2.8
1:55 PM	40	37	37	3	480	80	440	900	-	1300	1100	-	40	3.1
2:00 PM	40	37	40	3	480	80	440	950	-	1300	1200	-	40	3.3
	480	**440**		**40**		**960**							**480**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**480**					**MAX Q (FT/LN)=**	**1,200**	**-**	**40**	

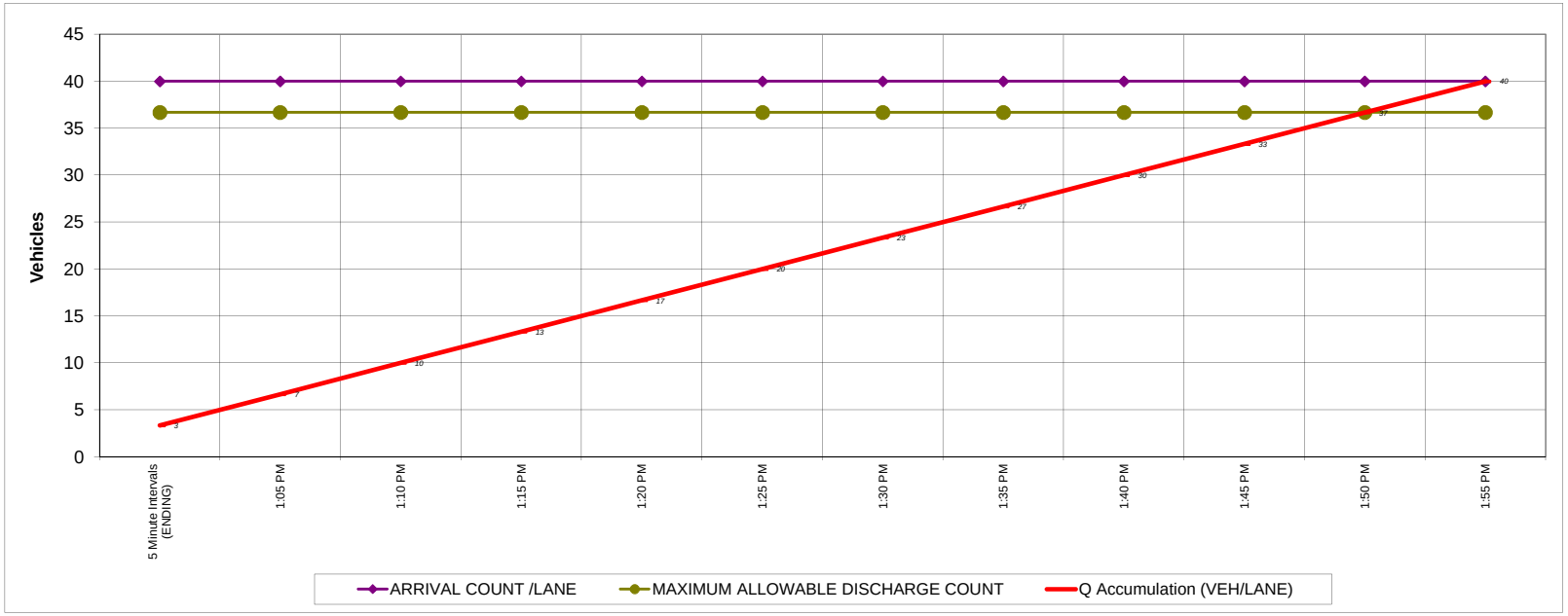
(Min=240, Max=900vph/lane)

Meter Rate = **440**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.045
Avg Delay/veh (sec)= **163**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	770	930
PM Peak Hour Vol/PCE:	1010	1080
MD Peak Hour Vol/PCE:	830	1040

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	45	42	3	3	540	90	505	550	-	1120	88	-	45	0.2
5:10 PM	45	42	6	3	540	90	505	600	-	1120	175	-	45	0.5
5:15 PM	45	42	9	3	540	90	505	600	-	1120	263	-	45	0.7
5:20 PM	45	42	12	3	540	90	505	650	-	1120	350	-	45	1.0
5:25 PM	45	42	15	3	540	90	505	700	-	1120	438	-	45	1.2
5:30 PM	45	42	18	3	540	90	505	750	-	1120	525	-	45	1.5
5:35 PM	45	42	20	3	540	90	505	750	-	1120	613	-	45	1.7
5:40 PM	45	42	23	3	540	90	505	800	-	1120	700	-	45	1.9
5:45 PM	45	42	26	3	540	90	505	850	-	1120	788	-	45	2.2
5:50 PM	45	42	29	3	540	90	505	850	-	1120	875	-	45	2.4
5:55 PM	45	42	32	3	540	90	505	900	-	1120	963	-	45	2.7
6:00 PM	45	42	35	3	540	90	505	950	-	1120	1050	-	45	2.9
	540	**505**		**35**		**1,080**							**540**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**540**					**MAX Q (FT/LN)=**	**1,050**	**-**	**45**	

(Min=240, Max=900vph/lane)

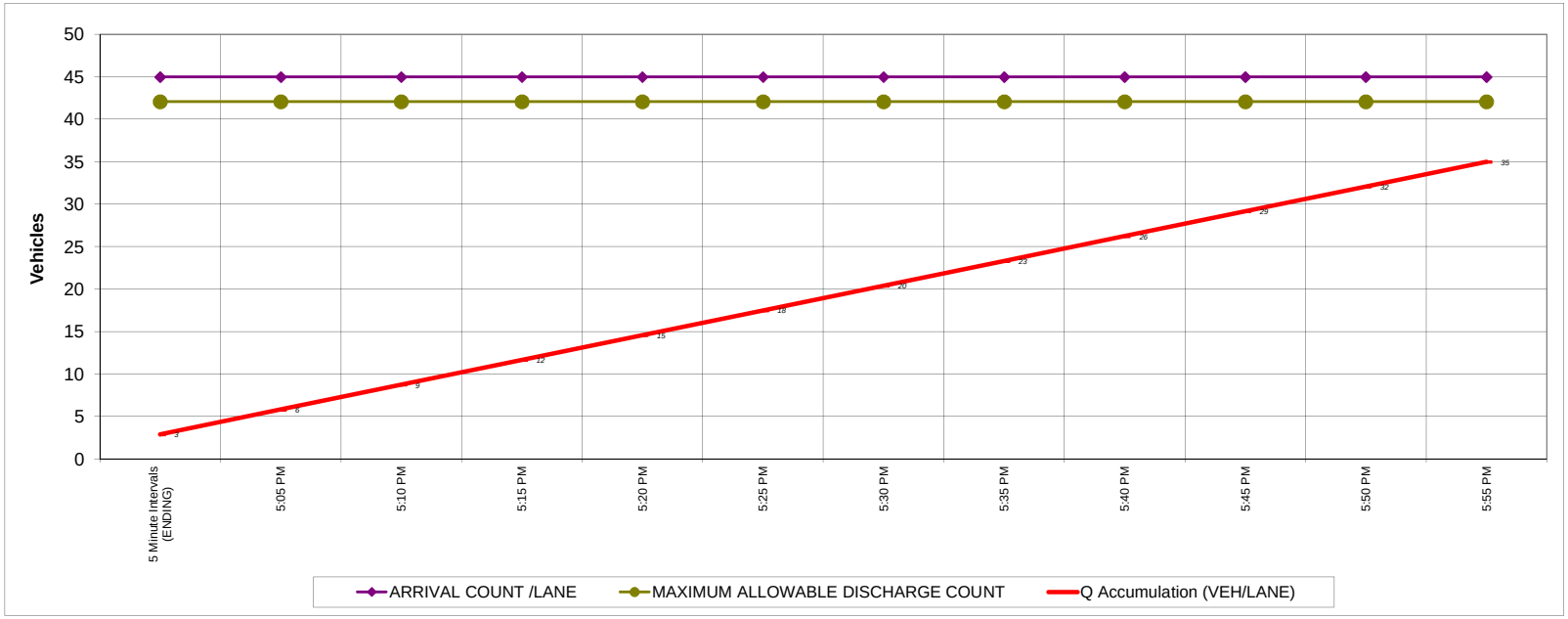
Meter Rate = **505**

Avg Delay/veh (hr)= 0.035

Avg Delay/veh (sec)= **126**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	950	1900
PM Peak Hour Vol/PCE:	1250	2500
MD Peak Hour Vol/PCE:	1290	2580

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	108	101	7	7	1290	215	1210	1350	-	2500	200	-	108	0.6
1:10 PM	108	101	13	7	1290	215	1210	1450	-	2500	400	-	108	1.1
1:15 PM	108	101	20	7	1290	215	1210	1500	-	2500	600	-	108	1.7
1:20 PM	108	101	27	7	1290	215	1210	1600	-	2500	800	-	108	2.2
1:25 PM	108	101	33	7	1290	215	1210	1650	-	2500	1000	-	108	2.8
1:30 PM	108	101	40	7	1290	215	1210	1750	-	2500	1200	-	108	3.3
1:35 PM	108	101	47	7	1290	215	1210	1850	-	2500	1400	-	108	3.9
1:40 PM	108	101	53	7	1290	215	1210	1900	-	2500	1600	-	108	4.4
1:45 PM	108	101	60	7	1290	215	1210	2000	-	2500	1800	-	108	5.0
1:50 PM	108	101	67	7	1290	215	1210	2050	-	2500	2000	-	108	5.6
1:55 PM	108	101	73	7	1290	215	1210	2150	-	2500	2200	-	108	6.1
2:00 PM	108	101	80	7	1290	215	1210	2250	-	2500	2400	-	108	6.7
	1,290	**1,210**		**80**		**2,580**							**1,290**	**43.33**
		MAX Q (VEH/LN)=	**80**	**MAX RATE (VPH)=**	**1,290**					**MAX Q (FT/LN)=**	**2,400**	**-**	**108**	

(Min=480, Max=1200 vph/lane)

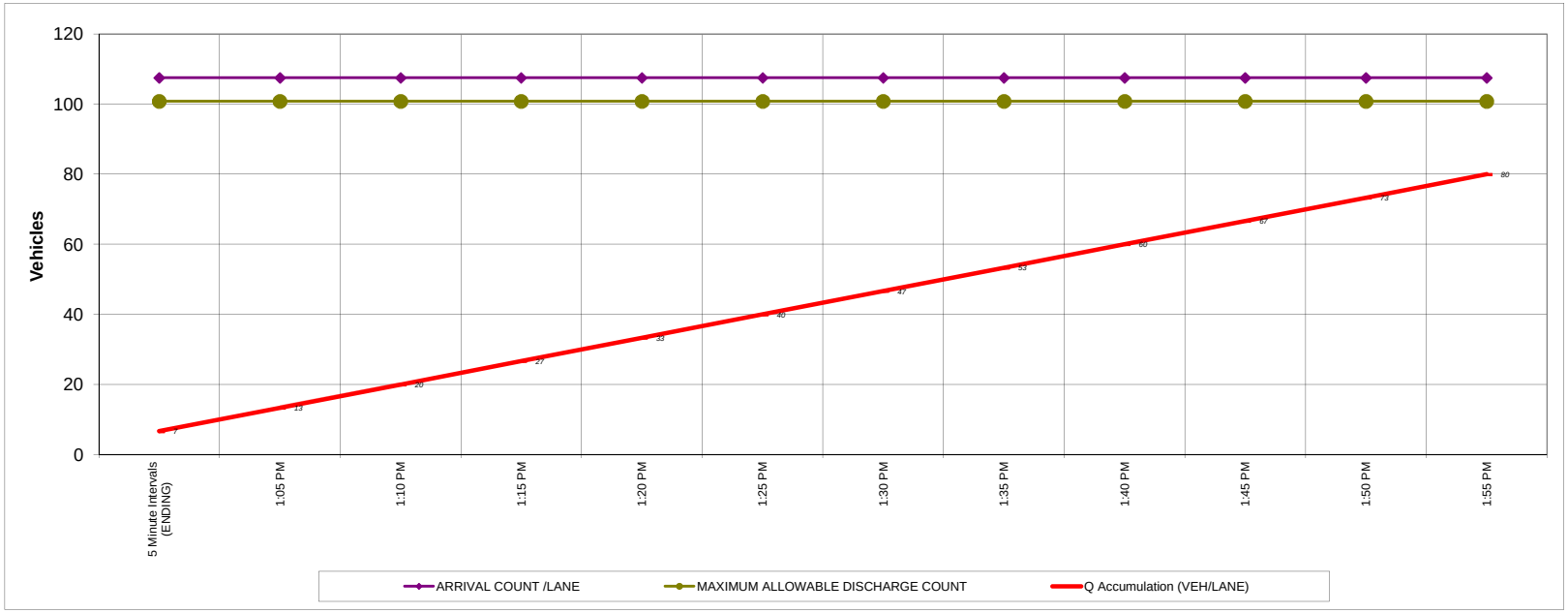
Meter Rate = **1210**

Avg Delay/veh (hr)= 0.034

Avg Delay/veh (sec)= **121**

	INPUT
LANES=	**2**
Ramp Length=	2500
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	840	880
PM Peak Hour Vol/PCE:	1170	1230
MD Peak Hour Vol/PCE:	1470	1570

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	65	62	3	3	785	131	745	800	-	1300	100	-	65	0.3
1:10 PM	65	62	7	3	785	131	745	850	-	1300	200	-	65	0.6
1:15 PM	65	62	10	3	785	131	745	900	-	1300	300	-	65	0.8
1:20 PM	65	62	13	3	785	131	745	900	-	1300	400	-	65	1.1
1:25 PM	65	62	17	3	785	131	745	950	-	1300	500	-	65	1.4
1:30 PM	65	62	20	3	785	131	745	1000	-	1300	600	-	65	1.7
1:35 PM	65	62	23	3	785	131	745	1050	-	1300	700	-	65	1.9
1:40 PM	65	62	27	3	785	131	745	1100	-	1300	800	-	65	2.2
1:45 PM	65	62	30	3	785	131	745	1100	-	1300	900	-	65	2.5
1:50 PM	65	62	33	3	785	131	745	1150	-	1300	1000	-	65	2.8
1:55 PM	65	62	37	3	785	131	745	1200	-	1300	1100	-	65	3.1
2:00 PM	65	62	40	3	785	131	745	1250	-	1300	1200	-	65	3.3
	785	**745**		**40**		**1,570**							**785**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**785**					**MAX Q (FT/LN)=**	**1,200**	**-**	**65**	

(Min=240, Max=900vph/lane)

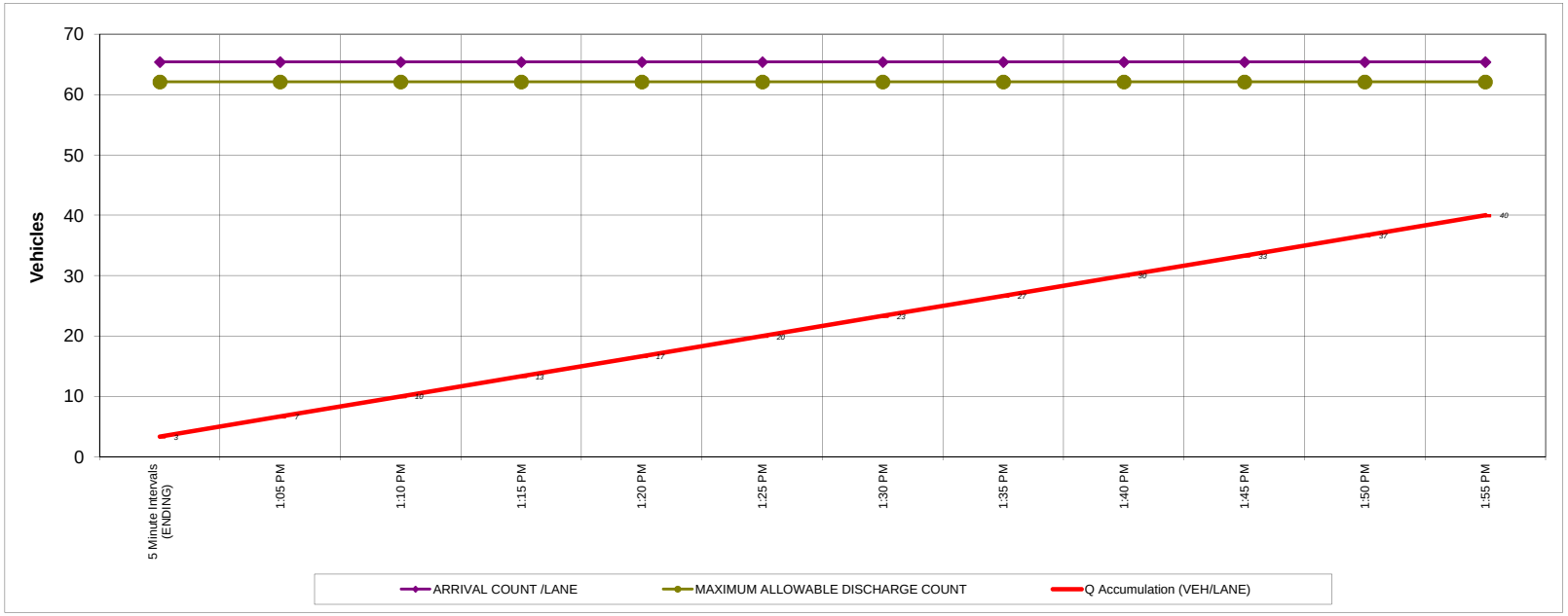
Meter Rate = **745**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **99**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	910	970
PM Peak Hour Vol/PCE:	1810	1990
MD Peak Hour Vol/PCE:	1250	1380

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	83	77	6	6	995	166	920	1050	-	2350	188	-	83	0.5
5:10 PM	83	77	13	6	995	166	920	1100	-	2350	375	-	83	1.0
5:15 PM	83	77	19	6	995	166	920	1200	-	2350	563	-	83	1.6
5:20 PM	83	77	25	6	995	166	920	1250	-	2350	750	-	83	2.1
5:25 PM	83	77	31	6	995	166	920	1350	-	2350	938	-	83	2.6
5:30 PM	83	77	38	6	995	166	920	1400	-	2350	1125	-	83	3.1
5:35 PM	83	77	44	6	995	166	920	1500	-	2350	1313	-	83	3.6
5:40 PM	83	77	50	6	995	166	920	1550	-	2350	1500	-	83	4.2
5:45 PM	83	77	56	6	995	166	920	1650	-	2350	1688	-	83	4.7
5:50 PM	83	77	63	6	995	166	920	1700	-	2350	1875	-	83	5.2
5:55 PM	83	77	69	6	995	166	920	1800	-	2350	2063	-	83	5.7
6:00 PM	83	77	75	6	995	166	920	1850	-	2350	2250	-	83	6.3
	995	**920**		**75**		**1,990**							**995**	**40.63**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**995**					**MAX Q (FT/LN)=**	**2,250**	**-**	**83**	

(Min=480, Max=1200vph/lane)

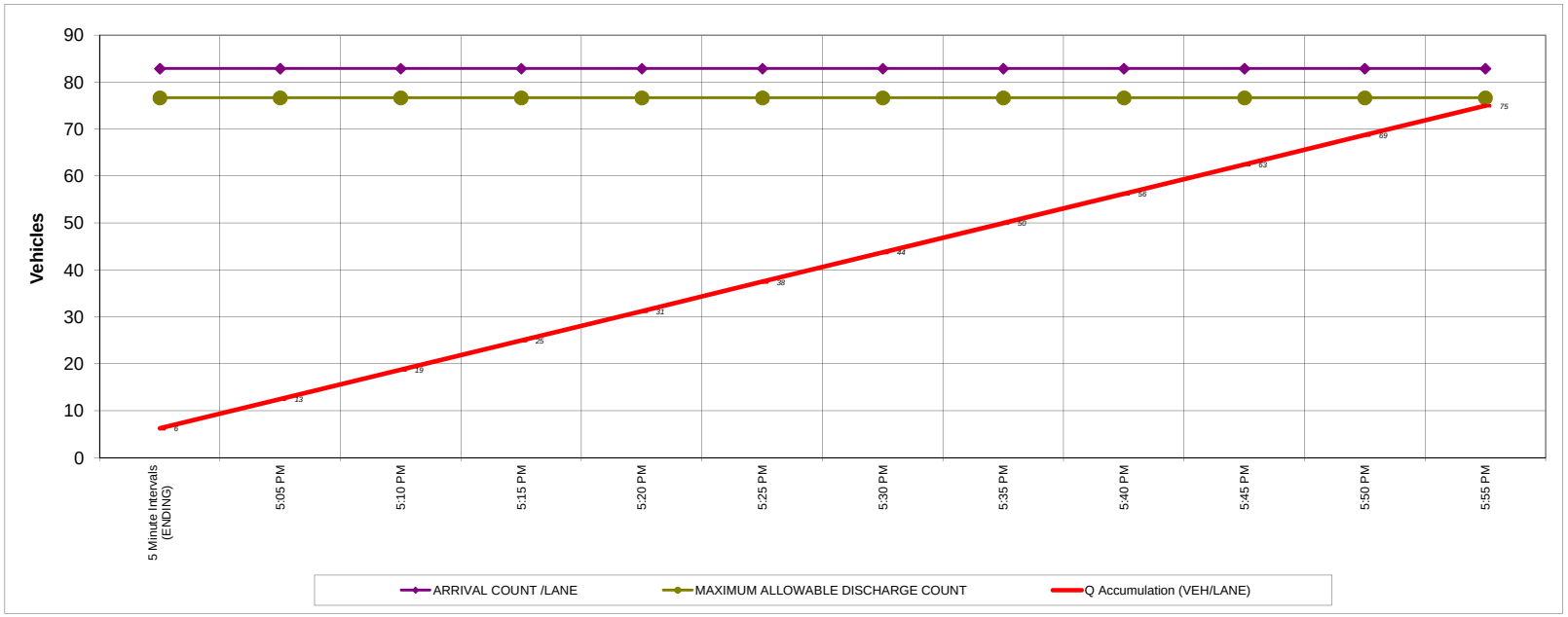
Meter Rate = **920**

Avg Delay/veh (hr)= 0.0408291

Avg Delay/veh (sec)= **147**

	INPUT
LANES=	**2**
Ramp Length=	2350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	560	710
PM Peak Hour Vol/PCE:	790	930
MD Peak Hour Vol/PCE:	590	770

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	39	37	2	2	465	78	440	450	-	850	63	-	39	0.2
5:10 PM	39	37	4	2	465	78	440	500	-	850	125	-	39	0.3
5:15 PM	39	37	6	2	465	78	440	500	-	850	188	-	39	0.5
5:20 PM	39	37	8	2	465	78	440	550	-	850	250	-	39	0.7
5:25 PM	39	37	10	2	465	78	440	550	-	850	313	-	39	0.9
5:30 PM	39	37	13	2	465	78	440	600	-	850	375	-	39	1.0
5:35 PM	39	37	15	2	465	78	440	600	-	850	438	-	39	1.2
5:40 PM	39	37	17	2	465	78	440	650	-	850	500	-	39	1.4
5:45 PM	39	37	19	2	465	78	440	650	-	850	563	-	39	1.6
5:50 PM	39	37	21	2	465	78	440	700	-	850	625	-	39	1.7
5:55 PM	39	37	23	2	465	78	440	700	-	850	688	-	39	1.9
6:00 PM	39	37	25	2	465	78	440	750	-	850	750	-	39	2.1
	465	**440**		**25**		**930**							**465**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**465**					**MAX Q (FT/LN)=**	**750**	**-**	**39**	

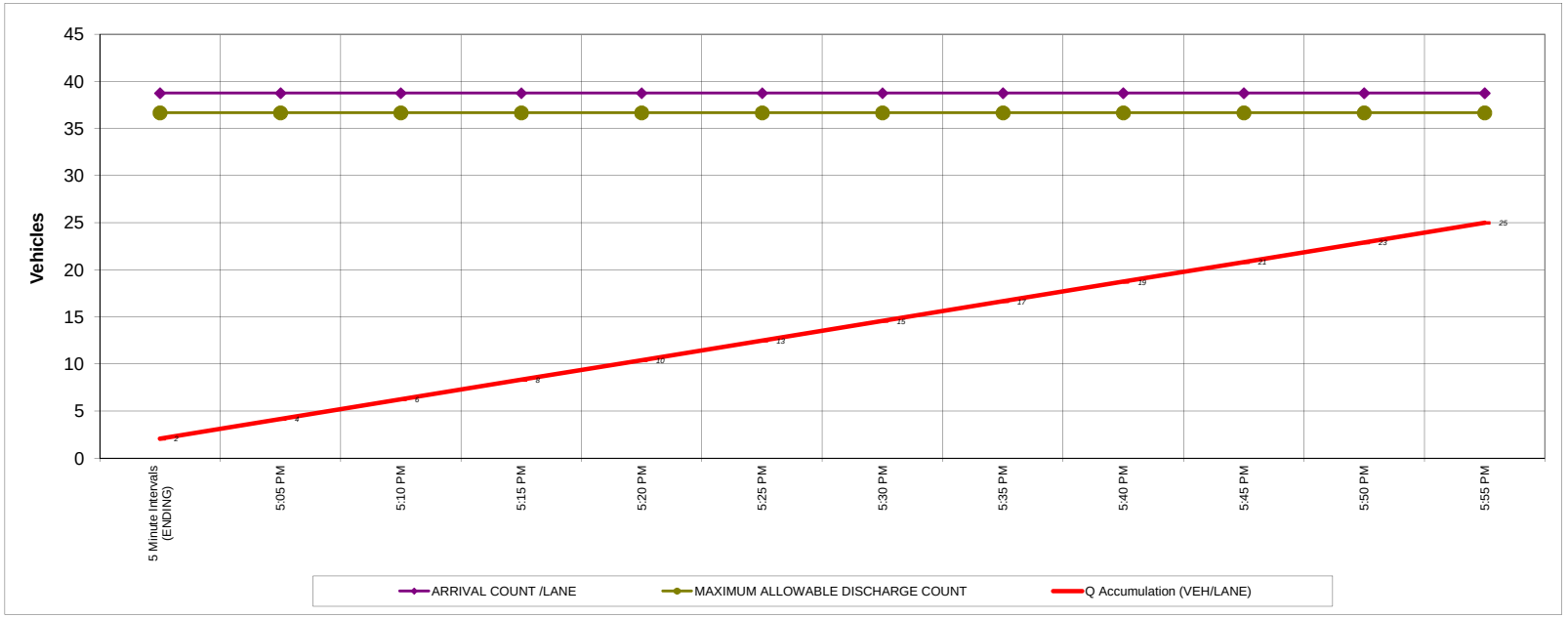
(Min=240, Max=900vph/lane)

Meter Rate = **440**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.029
Avg Delay/veh (sec)= **105**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	950	1900
PM Peak Hour Vol/PCE:	1250	2500
MD Peak Hour Vol/PCE:	1290	2580

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	108	101	6	6	1290	215	1215	1350	-	2300	188	-	108	0.5
1:10 PM	108	101	13	6	1290	215	1215	1400	-	2300	375	-	108	1.0
1:15 PM	108	101	19	6	1290	215	1215	1500	-	2300	563	-	108	1.6
1:20 PM	108	101	25	6	1290	215	1215	1550	-	2300	750	-	108	2.1
1:25 PM	108	101	31	6	1290	215	1215	1650	-	2300	938	-	108	2.6
1:30 PM	108	101	38	6	1290	215	1215	1700	-	2300	1125	-	108	3.1
1:35 PM	108	101	44	6	1290	215	1215	1800	-	2300	1313	-	108	3.6
1:40 PM	108	101	50	6	1290	215	1215	1850	-	2300	1500	-	108	4.2
1:45 PM	108	101	56	6	1290	215	1215	1950	-	2300	1688	-	108	4.7
1:50 PM	108	101	63	6	1290	215	1215	2000	-	2300	1875	-	108	5.2
1:55 PM	108	101	69	6	1290	215	1215	2100	-	2300	2063	-	108	5.7
2:00 PM	108	101	75	6	1290	215	1215	2150	-	2300	2250	-	108	6.3
	1,290	**1,215**		**75**		**2,580**							**1,290**	**40.63**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**1,290**					**MAX Q (FT/LN)=**	**2,250**	**-**	**108**	

(Min=480, Max=1200 vph/lane)

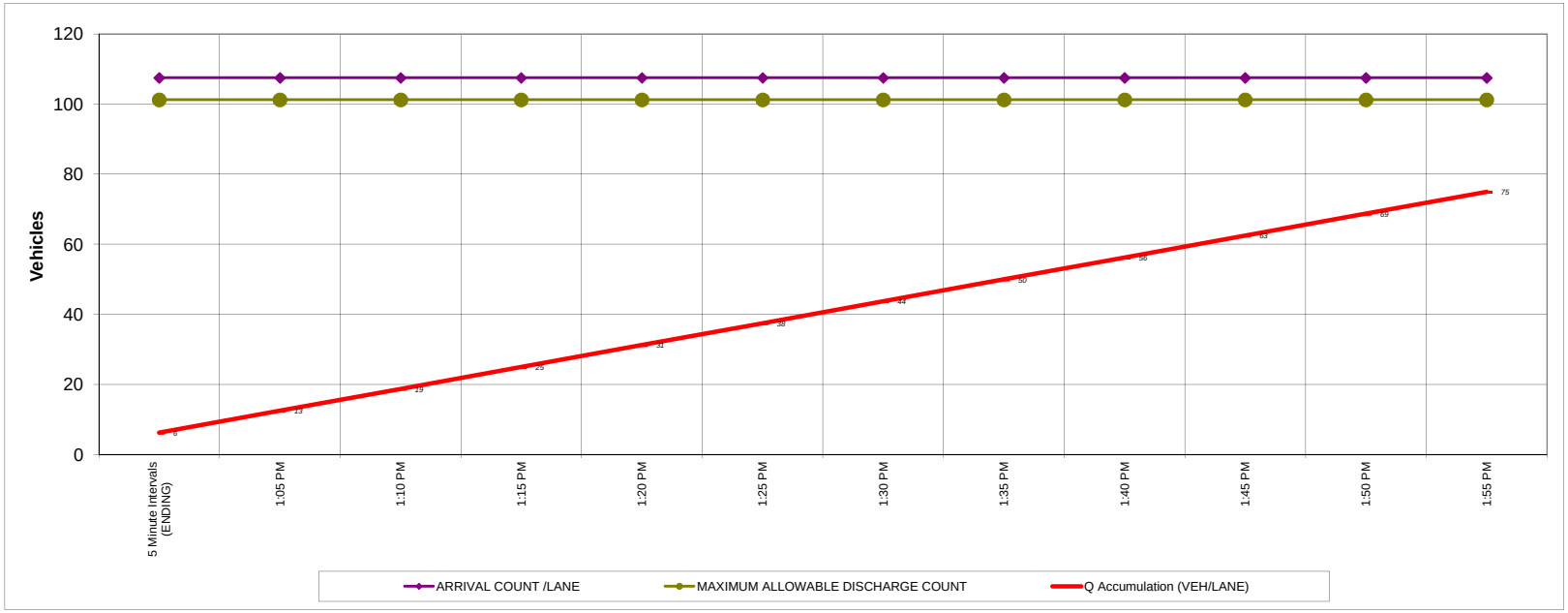
Meter Rate = **1215**

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= **113**

	INPUT
LANES=	**2**
Ramp Length=	2300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	330	660
PM Peak Hour Vol/PCE:	340	680
MD Peak Hour Vol/PCE:	390	780

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	33	21	11	11	390	65	255	500	-	4100	338	-	33	0.9
1:10 PM	33	21	23	11	390	65	255	650	-	4100	675	-	33	1.9
1:15 PM	33	21	34	11	390	65	255	750	-	4100	1013	-	33	2.8
1:20 PM	33	21	45	11	390	65	255	900	-	4100	1350	-	33	3.8
1:25 PM	33	21	56	11	390	65	255	1050	-	4100	1688	-	33	4.7
1:30 PM	33	21	68	11	390	65	255	1200	-	4100	2025	-	33	5.6
1:35 PM	33	21	79	11	390	65	255	1300	-	4100	2363	-	33	6.6
1:40 PM	33	21	90	11	390	65	255	1450	-	4100	2700	-	33	7.5
1:45 PM	33	21	101	11	390	65	255	1600	-	4100	3038	-	33	8.4
1:50 PM	33	21	113	11	390	65	255	1700	-	4100	3375	-	33	9.4
1:55 PM	33	21	124	11	390	65	255	1850	-	4100	3713	-	33	10.3
2:00 PM	33	21	135	11	390	65	255	2000	-	4100	4050	-	33	11.3
	390	**255**		**135**		**780**							**390**	**73.13**
		MAX Q (VEH/LN)=	**135**	**MAX RATE (VPH)=**	**390**					**MAX Q (FT/LN)=**	**4,050**	**-**	**33**	

(Min=240, Max=900vph/lane)

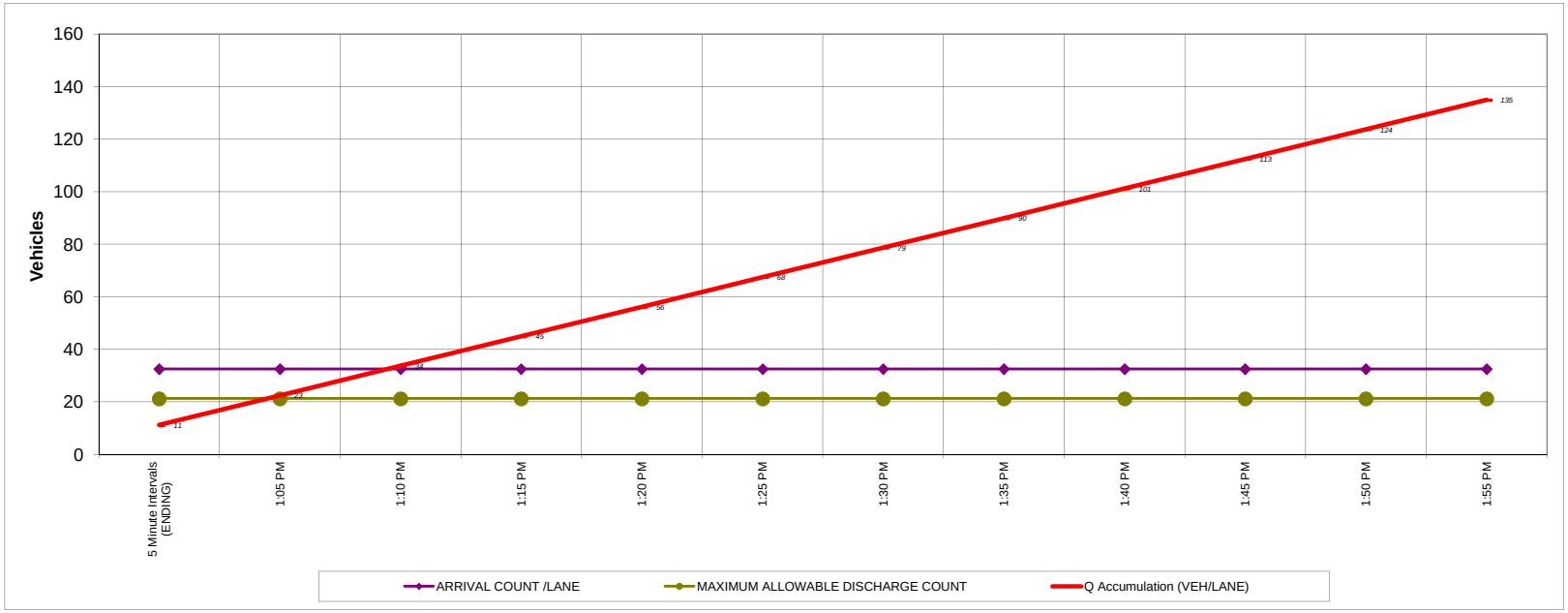
Meter Rate = **255**

Avg Delay/veh (hr)= 0.188

Avg Delay/veh (sec)= **675**

	INPUT
LANES=	**2**
Ramp Length=	4100
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	840	880
PM Peak Hour Vol/PCE:	1179	1240
MD Peak Hour Vol/PCE:	1470	1570

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	65	62	3	3	785	131	745	800	-	1300	100	-	65	0.3
1:10 PM	65	62	7	3	785	131	745	850	-	1300	200	-	65	0.6
1:15 PM	65	62	10	3	785	131	745	900	-	1300	300	-	65	0.8
1:20 PM	65	62	13	3	785	131	745	900	-	1300	400	-	65	1.1
1:25 PM	65	62	17	3	785	131	745	950	-	1300	500	-	65	1.4
1:30 PM	65	62	20	3	785	131	745	1000	-	1300	600	-	65	1.7
1:35 PM	65	62	23	3	785	131	745	1050	-	1300	700	-	65	1.9
1:40 PM	65	62	27	3	785	131	745	1100	-	1300	800	-	65	2.2
1:45 PM	65	62	30	3	785	131	745	1100	-	1300	900	-	65	2.5
1:50 PM	65	62	33	3	785	131	745	1150	-	1300	1000	-	65	2.8
1:55 PM	65	62	37	3	785	131	745	1200	-	1300	1100	-	65	3.1
2:00 PM	65	62	40	3	785	131	745	1250	-	1300	1200	-	65	3.3
	785	**745**		**40**		**1,570**							**785**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**785**					**MAX Q (FT/LN)=**	**1,200**	**-**	**65**	

(Min=240, Max=900vph/lane)

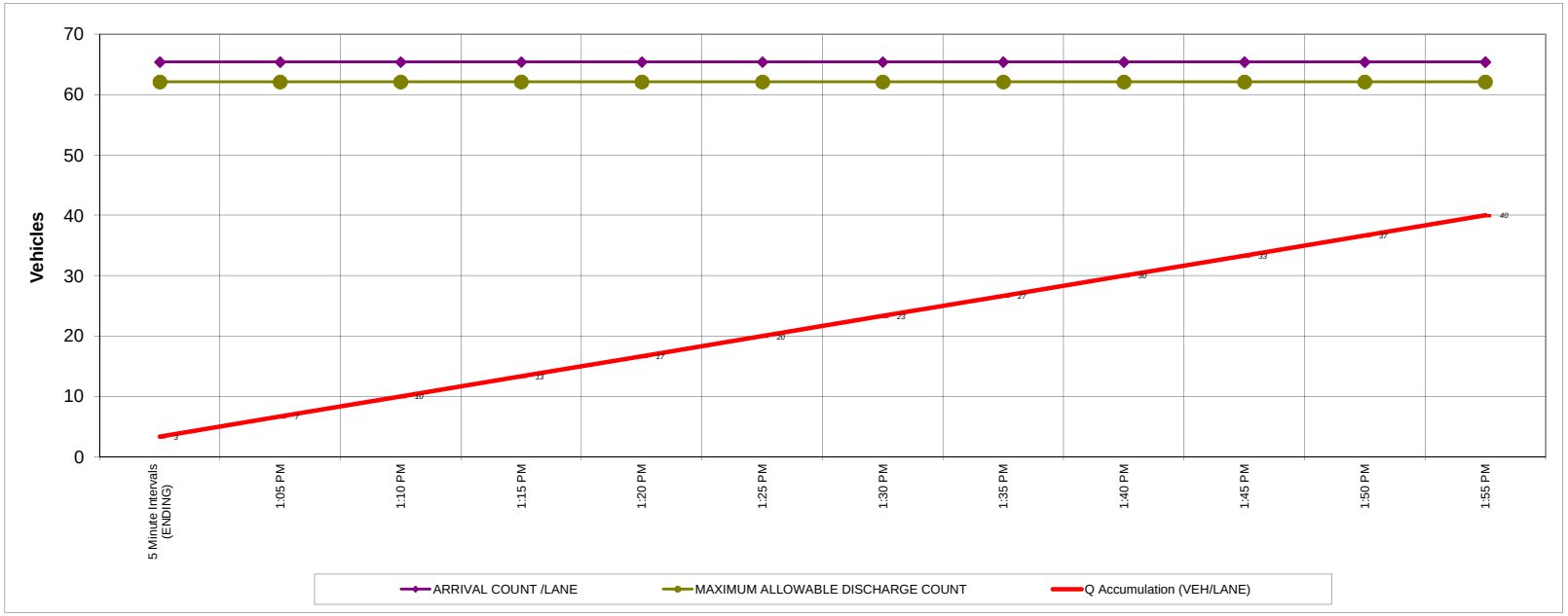
Meter Rate = **745**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **99**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	910	970
PM Peak Hour Vol/PCE:	1810	1990
MD Peak Hour Vol/PCE:	1250	1380

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	83	76	7	7	995	166	910	1050	-	2600	213	-	83	0.6
5:10 PM	83	76	14	7	995	166	910	1150	-	2600	425	-	83	1.2
5:15 PM	83	76	21	7	995	166	910	1250	-	2600	638	-	83	1.8
5:20 PM	83	76	28	7	995	166	910	1300	-	2600	850	-	83	2.4
5:25 PM	83	76	35	7	995	166	910	1400	-	2600	1063	-	83	3.0
5:30 PM	83	76	43	7	995	166	910	1500	-	2600	1275	-	83	3.5
5:35 PM	83	76	50	7	995	166	910	1550	-	2600	1488	-	83	4.1
5:40 PM	83	76	57	7	995	166	910	1650	-	2600	1700	-	83	4.7
5:45 PM	83	76	64	7	995	166	910	1750	-	2600	1913	-	83	5.3
5:50 PM	83	76	71	7	995	166	910	1800	-	2600	2125	-	83	5.9
5:55 PM	83	76	78	7	995	166	910	1900	-	2600	2338	-	83	6.5
6:00 PM	83	76	85	7	995	166	910	2000	-	2600	2550	-	83	7.1
	995	**910**		**85**		**1,990**							**995**	**46.04**
		MAX Q (VEH/LN)=	**85**	**MAX RATE (VPH)=**	**995**					**MAX Q (FT/LN)=**	**2,550**	**-**	**83**	

(Min=480, Max=1200vph/lane)

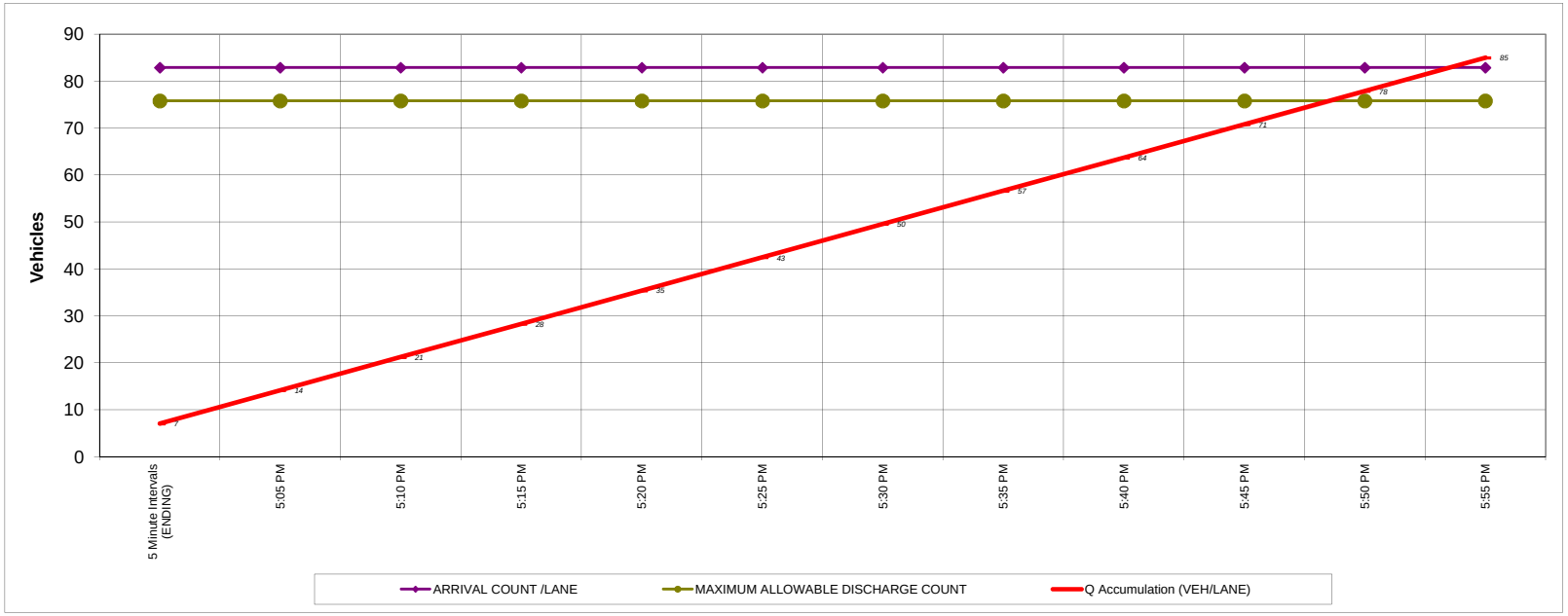
Meter Rate = **910**

Avg Delay/veh (hr)= 0.046273

Avg Delay/veh (sec)= **167**

	INPUT
LANES=	**2**
Ramp Length=	2600
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	560	710
PM Peak Hour Vol/PCE:	790	1150
MD Peak Hour Vol/PCE:	590	770

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	48	46	2	2	575	96	550	600	-	850	63	-	48	0.2
5:10 PM	48	46	4	2	575	96	550	600	-	850	125	-	48	0.3
5:15 PM	48	46	6	2	575	96	550	650	-	850	188	-	48	0.5
5:20 PM	48	46	8	2	575	96	550	650	-	850	250	-	48	0.7
5:25 PM	48	46	10	2	575	96	550	700	-	850	313	-	48	0.9
5:30 PM	48	46	13	2	575	96	550	700	-	850	375	-	48	1.0
5:35 PM	48	46	15	2	575	96	550	750	-	850	438	-	48	1.2
5:40 PM	48	46	17	2	575	96	550	750	-	850	500	-	48	1.4
5:45 PM	48	46	19	2	575	96	550	800	-	850	563	-	48	1.6
5:50 PM	48	46	21	2	575	96	550	800	-	850	625	-	48	1.7
5:55 PM	48	46	23	2	575	96	550	850	-	850	688	-	48	1.9
6:00 PM	48	46	25	2	575	96	550	850	-	850	750	-	48	2.1
	575	**550**		**25**		**1,150**							**575**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**575**					**MAX Q (FT/LN)=**	**750**	**-**	**48**	

(Min=240, Max=900vph/lane)

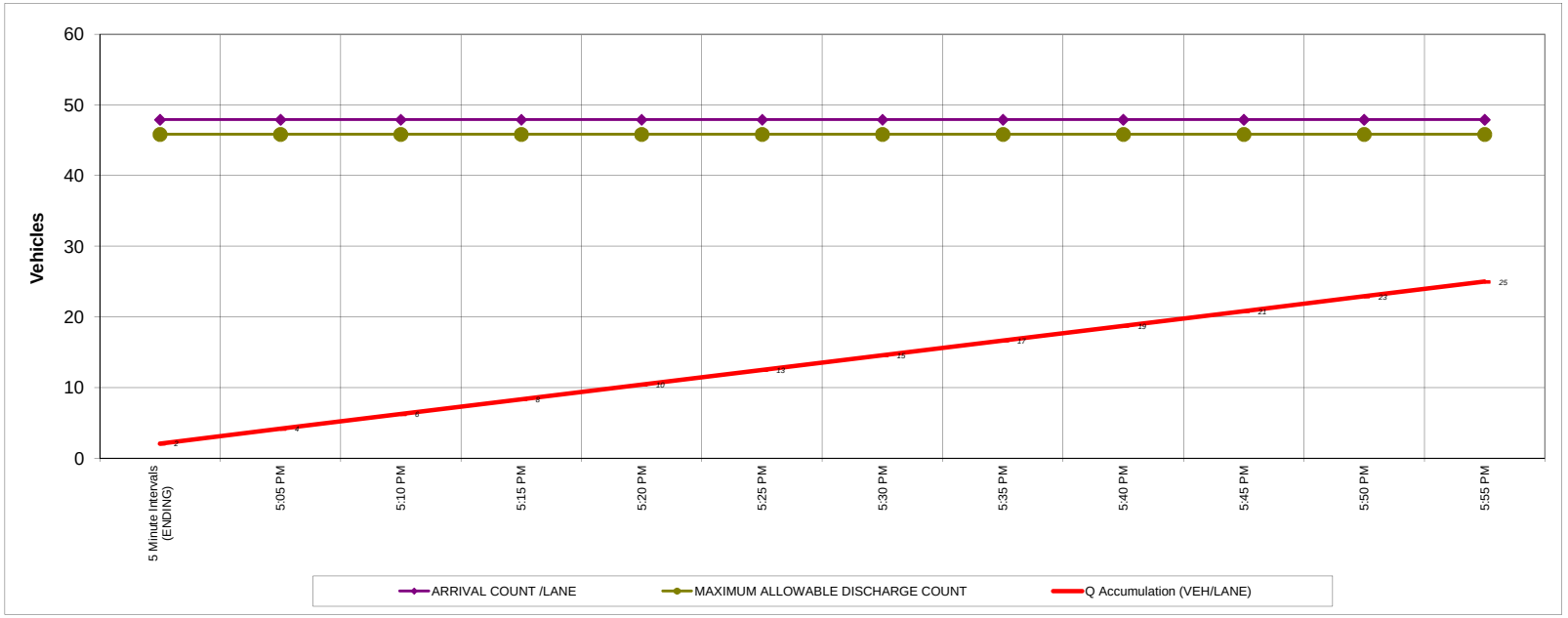
Meter Rate = **550**

Avg Delay/veh (hr)= 0.024

Avg Delay/veh (sec)= **85**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	190	200
PM Peak Hour Vol/PCE:	660	690
MD Peak Hour Vol/PCE:	280	300

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	58	56	2	2	690	58	670	700	-	700	50	-	58	0.1
5:10 PM	58	56	3	2	690	58	670	700	-	700	100	-	58	0.3
5:15 PM	58	56	5	2	690	58	670	750	-	700	150	-	58	0.4
5:20 PM	58	56	7	2	690	58	670	750	-	700	200	-	58	0.6
5:25 PM	58	56	8	2	690	58	670	750	-	700	250	-	58	0.7
5:30 PM	58	56	10	2	690	58	670	800	-	700	300	-	58	0.8
5:35 PM	58	56	12	2	690	58	670	800	-	700	350	-	58	1.0
5:40 PM	58	56	13	2	690	58	670	850	-	700	400	-	58	1.1
5:45 PM	58	56	15	2	690	58	670	850	-	700	450	-	58	1.3
5:50 PM	58	56	17	2	690	58	670	850	-	700	500	-	58	1.4
5:55 PM	58	56	18	2	690	58	670	900	-	700	550	-	58	1.5
6:00 PM	58	56	20	2	690	58	670	900	-	700	600	-	58	1.7
	690	**670**		**20**		**690**							**690**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**690**					**MAX Q (FT/LN)=**	**600**	**-**	**58**	

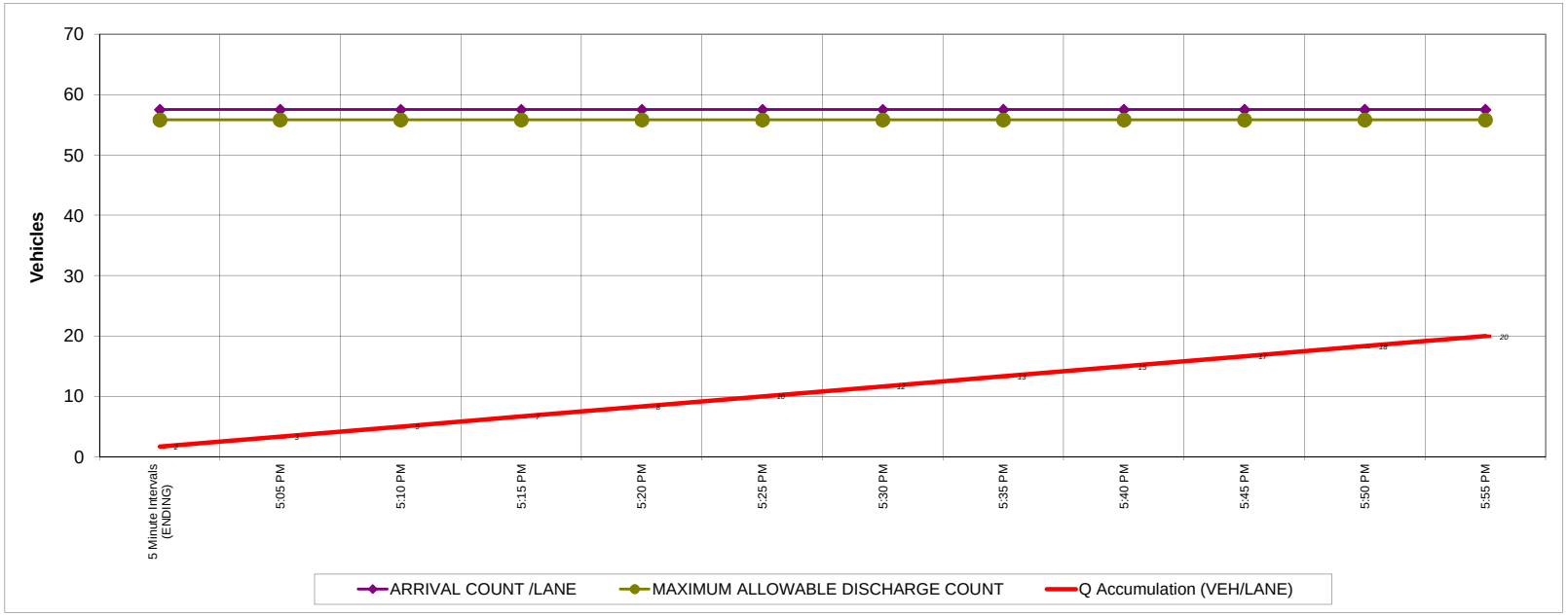
(Min=240, Max=900vph/lane)

Meter Rate = **670**

	INPUT
LANES=	**1**
Ramp Length=	700
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.016
Avg Delay/veh (sec)= **57**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	870	910
PM Peak Hour Vol/PCE:	1230	1290
MD Peak Hour Vol/PCE:	1470	1570

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	65	59	6	6	785	131	710	850	-	2300	188	-	65	0.5
1:10 PM	65	59	13	6	785	131	710	900	-	2300	375	-	65	1.0
1:15 PM	65	59	19	6	785	131	710	1000	-	2300	563	-	65	1.6
1:20 PM	65	59	25	6	785	131	710	1050	-	2300	750	-	65	2.1
1:25 PM	65	59	31	6	785	131	710	1150	-	2300	938	-	65	2.6
1:30 PM	65	59	38	6	785	131	710	1200	-	2300	1125	-	65	3.1
1:35 PM	65	59	44	6	785	131	710	1300	-	2300	1313	-	65	3.6
1:40 PM	65	59	50	6	785	131	710	1350	-	2300	1500	-	65	4.2
1:45 PM	65	59	56	6	785	131	710	1450	-	2300	1688	-	65	4.7
1:50 PM	65	59	63	6	785	131	710	1500	-	2300	1875	-	65	5.2
1:55 PM	65	59	69	6	785	131	710	1600	-	2300	2063	-	65	5.7
2:00 PM	65	59	75	6	785	131	710	1650	-	2300	2250	-	65	6.3
	785	**710**		**75**		**1,570**							**785**	**40.63**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**785**					**MAX Q (FT/LN)=**	**2,250**	**-**	**65**	

(Min=240, Max=900vph/lane)

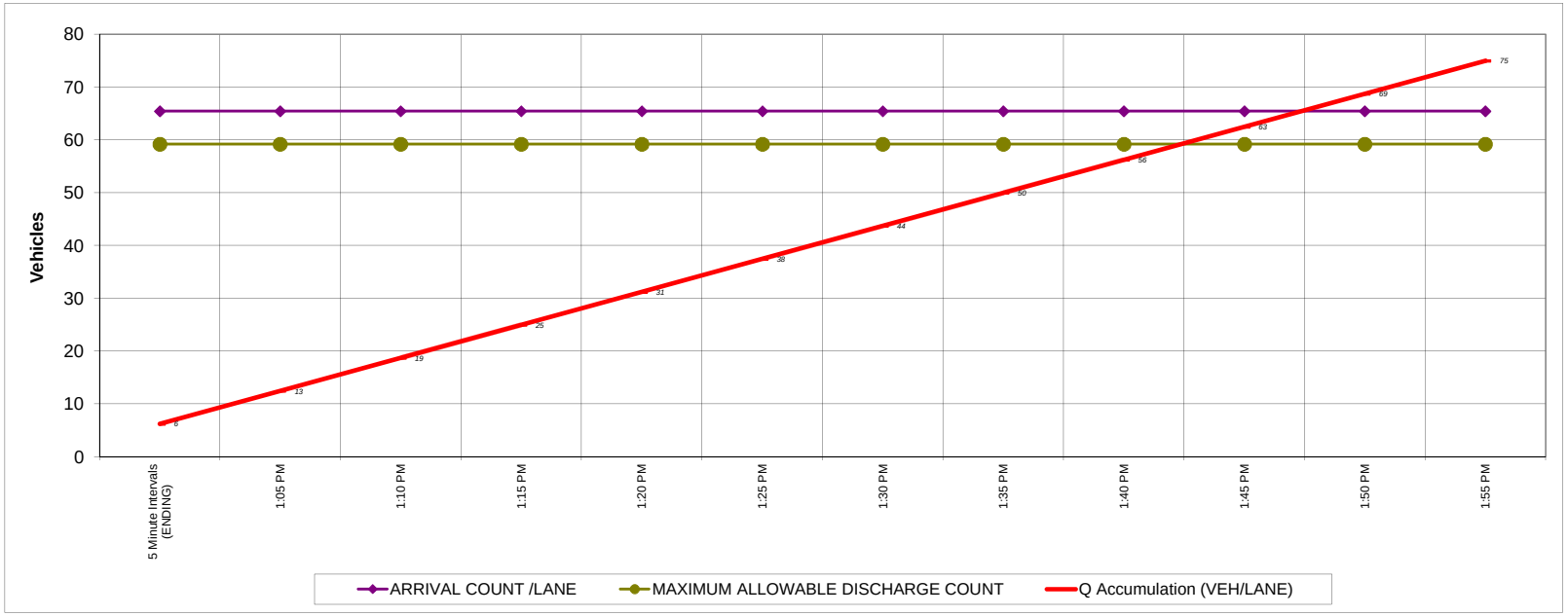
Meter Rate = **710**

Avg Delay/veh (hr)= 0.052

Avg Delay/veh (sec)= **186**

	INPUT
LANES=	**2**
Ramp Length=	2300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Bandini On

AM Peak Hour Vol/PCE:	870	920
PM Peak Hour Vol/PCE:	1440	1510
MD Peak Hour Vol/PCE:	1090	1170

Meter rate at 3 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	126	115	11	11	1510	126	1380	1600	-	700	325	-	126	0.9
5:10 PM	126	115	22	11	1510	126	1380	1750	-	700	650	-	126	1.8
5:15 PM	126	115	33	11	1510	126	1380	1900	2000	700	975	275	126	2.7
5:20 PM	126	115	43	11	1510	126	1380	2000	2250	700	1300	600	126	3.6
5:25 PM	126	115	54	11	1510	126	1380	2150	2500	700	1625	925	126	4.5
5:30 PM	126	115	65	11	1510	126	1380	2250	2750	700	1950	1250	126	5.4
5:35 PM	126	115	76	11	1510	126	1380	2400	3050	700	2275	1575	126	6.3
5:40 PM	126	115	87	11	1510	126	1380	2550	3300	700	2600	1900	126	7.2
5:45 PM	126	115	97	11	1510	126	1380	2650	3550	700	2925	2225	126	8.1
5:50 PM	126	115	108	11	1510	126	1380	2800	3800	700	3250	2550	126	9.0
5:55 PM	126	115	119	11	1510	126	1380	2900	4050	700	3575	2875	126	9.9
6:00 PM	126	115	130	11	1510	126	1380	3050	4350	700	3900	3200	126	10.8
	1,510	**1,380**		**130**		**1,510**							**1,510**	**70.42**
		MAX Q (VEH/LN)=	**130**	**MAX RATE (VPH)=**	**1,510**					**MAX Q (FT/LN)=**	**3,900**	**3,200**	**126**	

(Min=780, Max=1380 vph/lane)

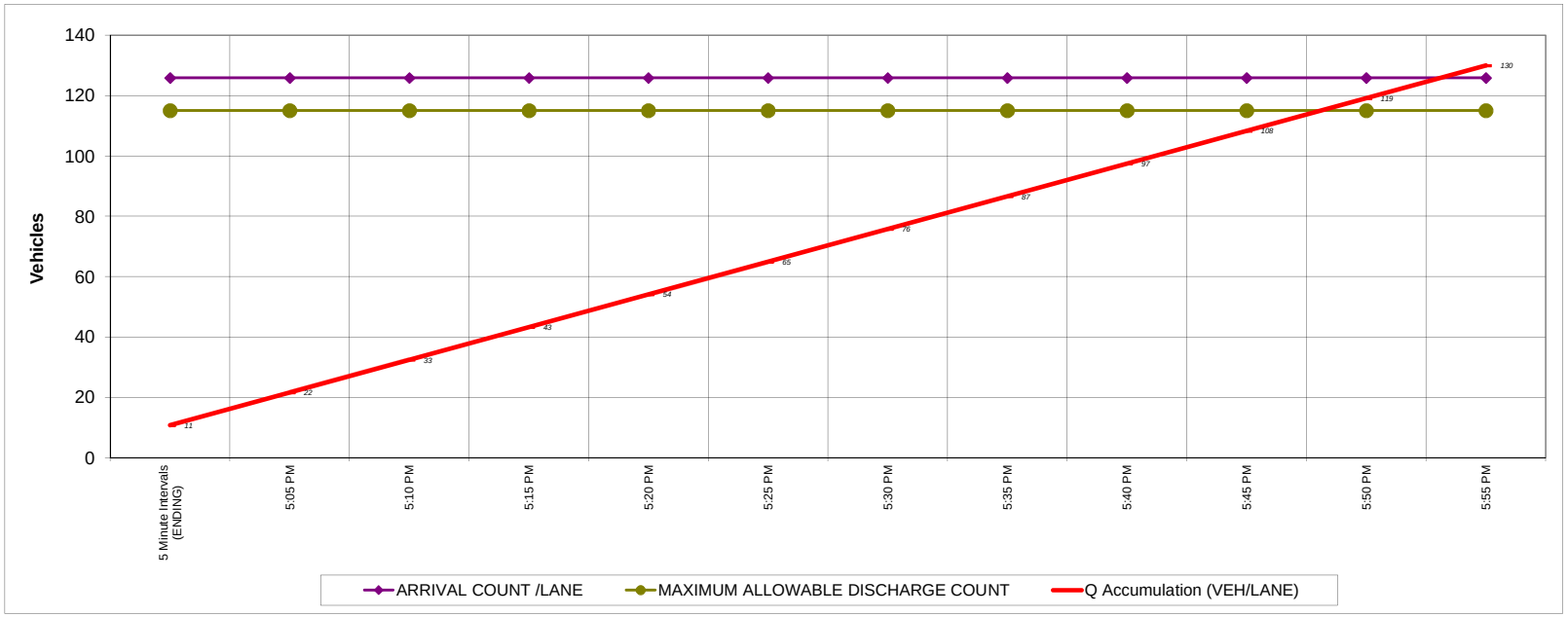
Meter Rate = **1380**

Avg Delay/veh (hr)= 0.047

Avg Delay/veh (sec)= **168**

	INPUT
LANES=	**1**
Ramp Length=	700
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	50	80
PM Peak Hour Vol/PCE:	100	200
MD Peak Hour Vol/PCE:	60	120

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:10 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:15 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:20 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:25 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:30 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:35 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:40 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:45 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:50 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
5:55 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
6:00 PM	17	20	0		200	17	240	-	-	4800	-	-	0	0.0
	200	**240**		**-**		**200**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**200**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

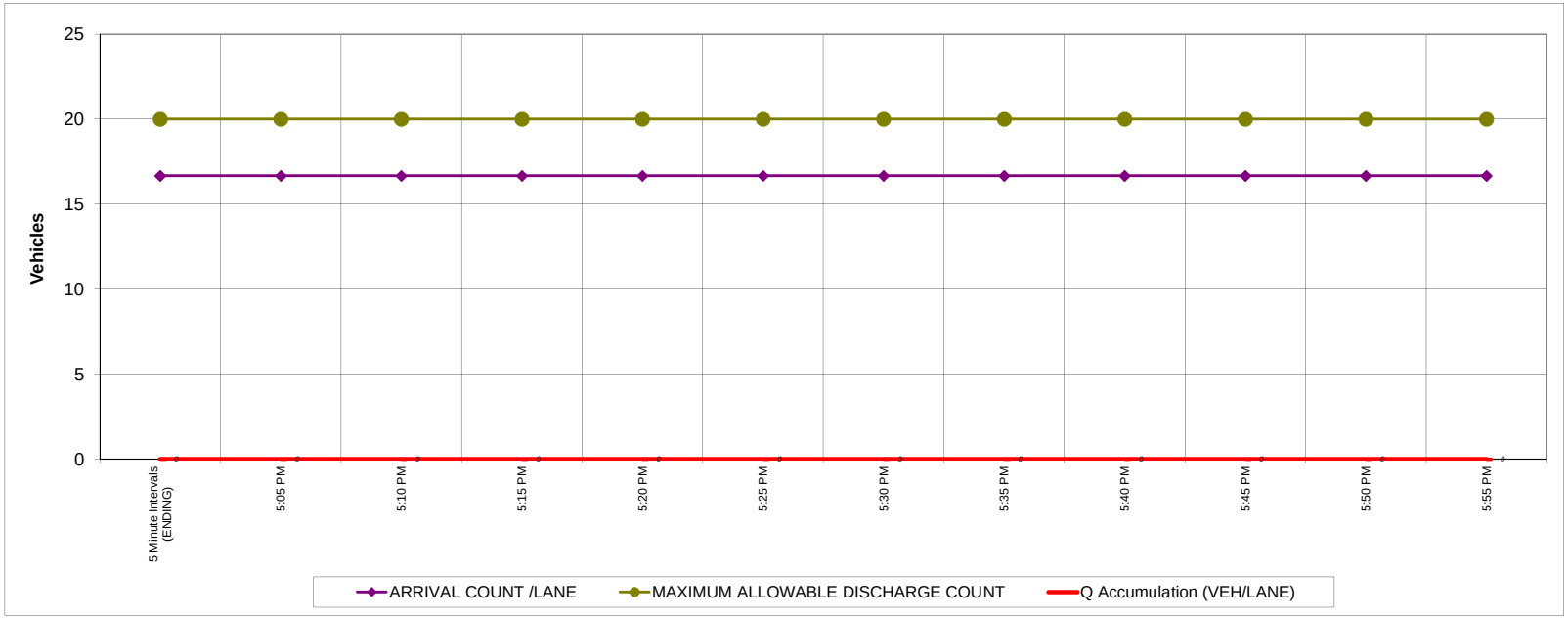
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**1**
Ramp Length=	4800
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	1290	2350
PM Peak Hour Vol/PCE:	1260	2220
MD Peak Hour Vol/PCE:	1270	2270

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	98	92	6	6	1175	196	1105	1200	-	2200	175	-	98	0.5
7:10 AM	98	92	12	6	1175	196	1105	1300	-	2200	350	-	98	1.0
7:15 AM	98	92	18	6	1175	196	1105	1350	-	2200	525	-	98	1.5
7:20 AM	98	92	23	6	1175	196	1105	1450	-	2200	700	-	98	1.9
7:25 AM	98	92	29	6	1175	196	1105	1500	-	2200	875	-	98	2.4
7:30 AM	98	92	35	6	1175	196	1105	1550	-	2200	1050	-	98	2.9
7:35 AM	98	92	41	6	1175	196	1105	1650	-	2200	1225	-	98	3.4
7:40 AM	98	92	47	6	1175	196	1105	1700	-	2200	1400	-	98	3.9
7:45 AM	98	92	52	6	1175	196	1105	1800	-	2200	1575	-	98	4.4
7:50 AM	98	92	58	6	1175	196	1105	1850	-	2200	1750	-	98	4.9
7:55 AM	98	92	64	6	1175	196	1105	1900	-	2200	1925	-	98	5.3
8:00 AM	98	92	70	6	1175	196	1105	2000	-	2200	2100	-	98	5.8
	1,175	**1,105**		**70**		**2,350**							**1,175**	**37.92**
		MAX Q (VEH/LN)=	**70**	**MAX RATE (VPH)=**	**1,175**					**MAX Q (FT/LN)=**	**2,100**	**-**	**98**	

(Min=480, Max=1200 vph/lane)

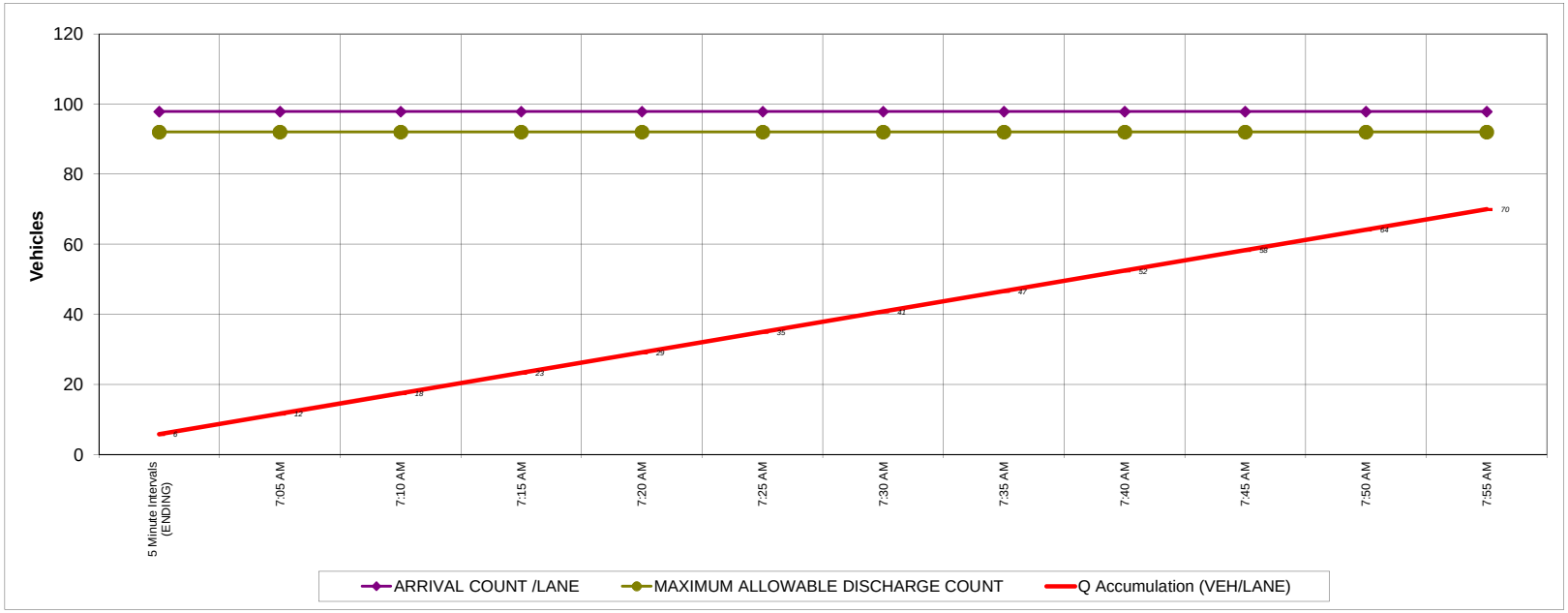
Meter Rate = **1105**

Avg Delay/veh (hr)= 0.032

Avg Delay/veh (sec)= **116**

	INPUT
LANES=	**2**
Ramp Length=	2200
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-SB FC On

AM Peak Hour Vol/PCE:	880	1760
PM Peak Hour Vol/PCE:	1280	2560
MD Peak Hour Vol/PCE:	1290	2580

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	215	115	100	100	2580	215	1380	3750	-	3000	3000	-	215	8.3
1:10 PM	215	115	200	100	2580	215	1380	4950	6150	3000	6000	3000	215	16.7
1:15 PM	215	115	300	100	2580	215	1380	6150	8550	3000	9000	6000	215	25.0
1:20 PM	215	115	400	100	2580	215	1380	7350	10950	3000	12000	9000	215	33.3
1:25 PM	215	115	500	100	2580	215	1380	8550	13350	3000	15000	12000	215	41.7
1:30 PM	215	115	600	100	2580	215	1380	9750	15750	3000	18000	15000	215	50.0
1:35 PM	215	115	700	100	2580	215	1380	10950	18150	3000	21000	18000	215	58.3
1:40 PM	215	115	800	100	2580	215	1380	12150	20550	3000	24000	21000	215	66.7
1:45 PM	215	115	900	100	2580	215	1380	13350	22950	3000	27000	24000	215	75.0
1:50 PM	215	115	1000	100	2580	215	1380	14550	25350	3000	30000	27000	215	83.3
1:55 PM	215	115	1100	100	2580	215	1380	15750	27750	3000	33000	30000	215	91.7
2:00 PM	215	115	1200	100	2580	215	1380	16950	30150	3000	36000	33000	215	100.0
	2,580	**1,380**		**1,200**		**2,580**							**2,580**	**650.00**
		MAX Q (VEH/LN)=	**1,200**	**MAX RATE (VPH)=**	**2,580**					**MAX Q (FT/LN)=**	**36,000**	**33,000**	**215**	

(Min=780, Max=1380 vph/lane)

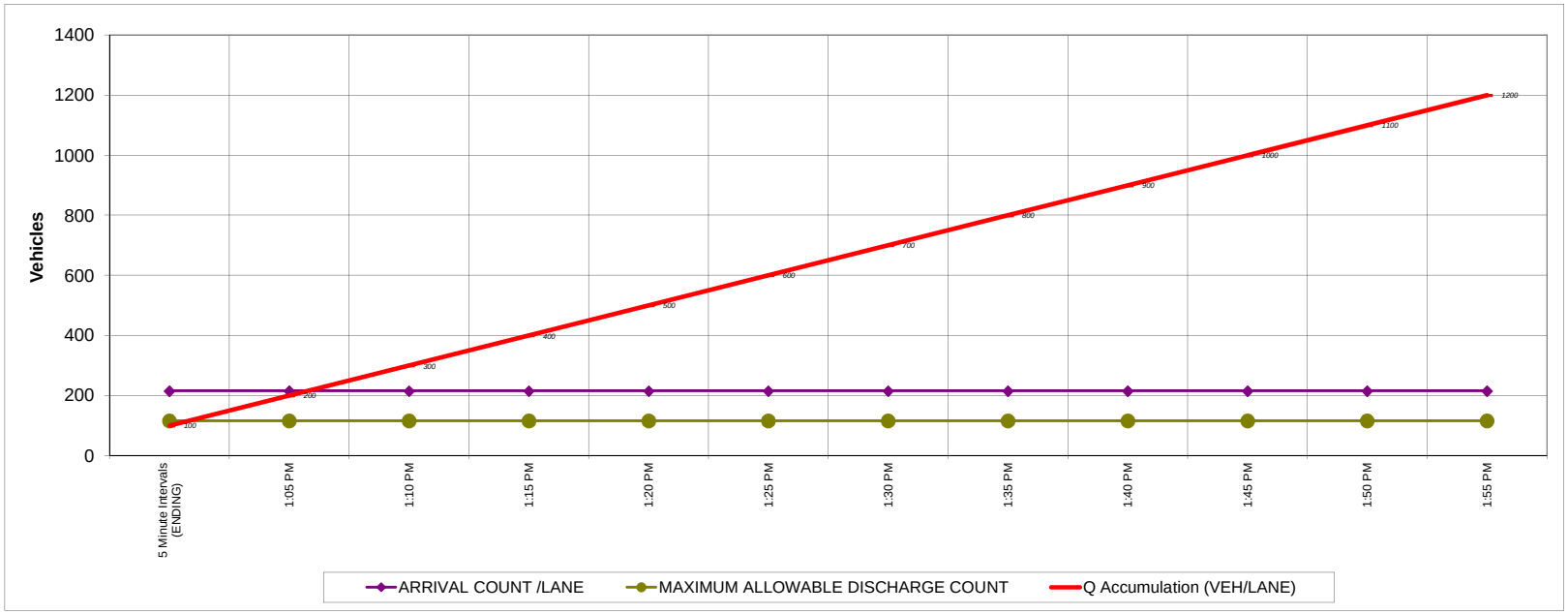
Meter Rate = **1380**

Avg Delay/veh (hr)= 0.252

Avg Delay/veh (sec)= **907**

	INPUT
LANES=	**1**
Ramp Length=	3000
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Olympic to NB 710

AM Peak Hour Vol/PCE:	300	310
PM Peak Hour Vol/PCE:	190	200
MD Peak Hour Vol/PCE:	260	270

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	26	25	1	1	310	26	300	300	-	450	25	-	26	0.1
7:10 AM	26	25	2	1	310	26	300	300	-	450	50	-	26	0.1
7:15 AM	26	25	3	1	310	26	300	300	-	450	75	-	26	0.2
7:20 AM	26	25	3	1	310	26	300	350	-	450	100	-	26	0.3
7:25 AM	26	25	4	1	310	26	300	350	-	450	125	-	26	0.3
7:30 AM	26	25	5	1	310	26	300	350	-	450	150	-	26	0.4
7:35 AM	26	25	6	1	310	26	300	350	-	450	175	-	26	0.5
7:40 AM	26	25	7	1	310	26	300	350	-	450	200	-	26	0.6
7:45 AM	26	25	7	1	310	26	300	400	-	450	225	-	26	0.6
7:50 AM	26	25	8	1	310	26	300	400	-	450	250	-	26	0.7
7:55 AM	26	25	9	1	310	26	300	400	-	450	275	-	26	0.8
8:00 AM	26	25	10	1	310	26	300	400	-	450	300	-	26	0.8
	310	**300**		**10**		**310**							**310**	**5.42**
		MAX Q (VEH/LN)=	**10**	**MAX RATE (VPH)=**	**310**					**MAX Q (FT/LN)=**	**300**	**-**	**26**	

(Min=240, Max=9\00 vph/lane)

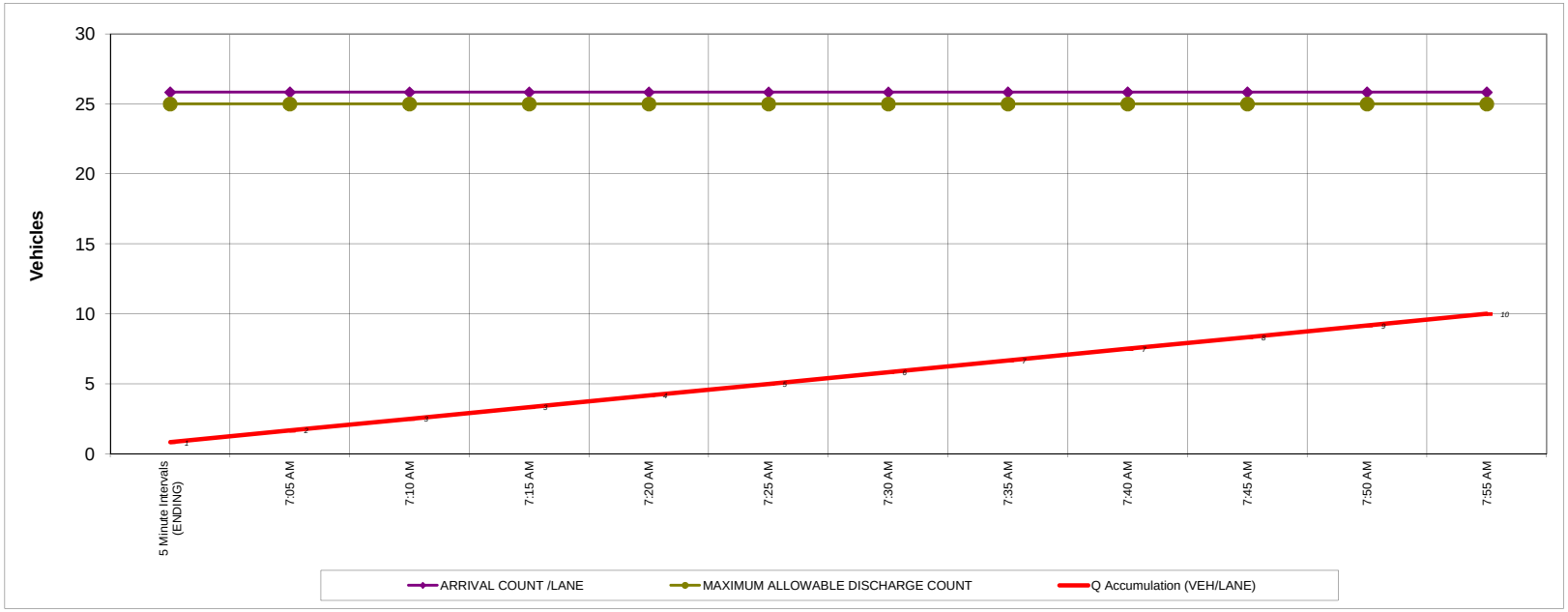
Meter Rate = **300**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**1**
Ramp Length=	450
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Eastern to SB 710

AM Peak Hour Vol/PCE:	750	820
PM Peak Hour Vol/PCE:	730	770
MD Peak Hour Vol/PCE:	820	890

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	37	37	0	0	445	74	440	450	-	260	13	-	37	0.0
1:10 PM	37	37	1	0	445	74	440	450	-	260	25	-	37	0.1
1:15 PM	37	37	1	0	445	74	440	450	-	260	38	-	37	0.1
1:20 PM	37	37	2	0	445	74	440	450	-	260	50	-	37	0.1
1:25 PM	37	37	2	0	445	74	440	450	-	260	63	-	37	0.2
1:30 PM	37	37	3	0	445	74	440	450	-	260	75	-	37	0.2
1:35 PM	37	37	3	0	445	74	440	450	-	260	88	-	37	0.2
1:40 PM	37	37	3	0	445	74	440	450	-	260	100	-	37	0.3
1:45 PM	37	37	4	0	445	74	440	450	-	260	113	-	37	0.3
1:50 PM	37	37	4	0	445	74	440	450	-	260	125	-	37	0.3
1:55 PM	37	37	5	0	445	74	440	500	-	260	138	-	37	0.4
2:00 PM	37	37	5	0	445	74	440	500	-	260	150	-	37	0.4
	445	**440**		**5**		**890**							**445**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**445**					**MAX Q (FT/LN)=**	**150**	**-**	**37**	

(Min=240, Max=900 vph/lane)

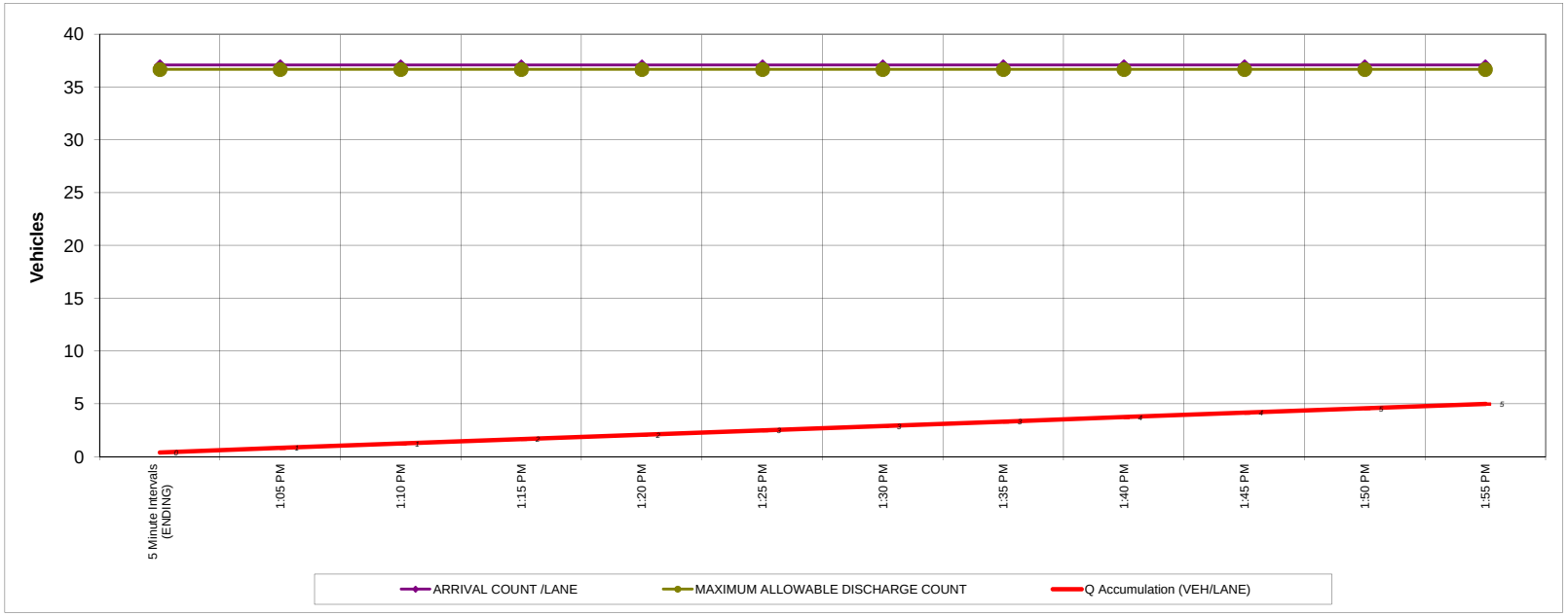
Meter Rate = **440**

Avg Delay/veh (hr)= 0.006

Avg Delay/veh (sec)= **22**

	INPUT
LANES=	**2**
Ramp Length=	260
Car Length (ft)=	30

Storage is Adequate



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FUTURE (2035) ALTERNATIVE 6C

INTERSECTION LEVEL OF SERVICE (LOS) ANALYSIS

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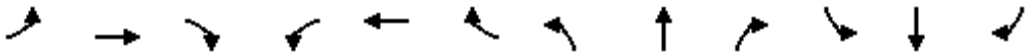
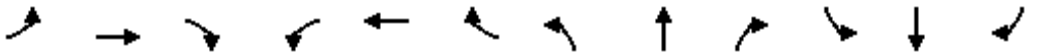


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor		0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt		0.99		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected		1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (prot)		2452		1577	1600	1124		1681	782		2415	
Flt Permitted		1.00		0.95	1.00	1.00		0.96	1.00		0.97	
Satd. Flow (perm)		2452		1577	1600	1124		1681	782		2415	
Volume (vph)	0	65	5	380	65	520	115	25	480	555	5	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	68	5	400	68	547	121	26	505	584	5	279
RTOR Reduction (vph)	0	4	0	0	0	296	0	0	0	0	56	0
Lane Group Flow (vph)	0	69	0	400	68	251	0	147	505	0	812	0
Heavy Vehicles (%)	0%	17%	100%	87%	0%	21%	68%	100%	74%	19%	100%	8%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)		17.0		24.8	45.8	45.8		13.2	100.0		29.0	
Effective Green, g (s)		17.0		24.8	45.8	45.8		13.2	100.0		29.0	
Actuated g/C Ratio		0.17		0.25	0.46	0.46		0.13	1.00		0.29	
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)		417		391	733	515		222	782		700	
v/s Ratio Prot		0.03		c0.25	0.04			0.09			c0.34	
v/s Ratio Perm						0.22			c0.65			
v/c Ratio		0.17		1.02	0.09	0.49		1.02dl	0.65		1.37dl	
Uniform Delay, d1		35.4		37.6	15.3	18.9		41.3	0.0		35.5	
Progression Factor		1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2		0.9		51.5	0.3	3.3		7.2	4.1		87.3	
Delay (s)		36.3		89.1	15.6	22.2		48.5	4.1		122.8	
Level of Service		D		F	B	C		D	A		F	
Approach Delay (s)		36.3			48.1			14.1			122.8	
Approach LOS		D			D			B			F	

Intersection Summary			
HCM Average Control Delay	64.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

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

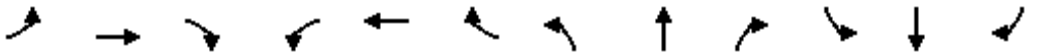
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		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)	2920	4241	1333	1490	4227		2863	2831		2920	4044	1333
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)	2920	4241	1333	1490	4227		2863	2831		2920	4044	1333
Volume (vph)	240	970	165	60	1160	110	265	590	70	75	235	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	1021	174	63	1221	116	279	621	74	79	247	211
RTOR Reduction (vph)	0	0	109	0	14	0	0	11	0	0	0	166
Lane Group Flow (vph)	253	1021	65	63	1323	0	279	684	0	79	247	45
Heavy Vehicles (%)	1%	3%	2%	2%	2%	2%	3%	6%	3%	1%	8%	2%
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)	9.8	29.9	29.9	6.4	26.5		10.7	24.5		3.2	17.0	17.0
Effective Green, g (s)	9.8	29.9	29.9	6.4	26.5		10.7	24.5		3.2	17.0	17.0
Actuated g/C Ratio	0.12	0.37	0.37	0.08	0.33		0.13	0.31		0.04	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
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)	358	1585	498	119	1400		383	867		117	859	283
v/s Ratio Prot	c0.09	0.24		0.04	c0.31		c0.10	c0.24		0.03	0.06	
v/s Ratio Perm			0.05									0.03
v/c Ratio	0.71	0.64	0.13	0.53	0.94		0.73	0.79		0.68	0.29	0.16
Uniform Delay, d1	33.7	20.7	16.5	35.4	26.0		33.3	25.4		37.9	26.4	25.7
Progression Factor	0.72	0.47	0.37	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	1.6	0.4	4.2	14.1		6.8	7.2		14.3	0.8	1.2
Delay (s)	29.2	11.4	6.5	39.6	40.1		40.0	32.6		52.2	27.3	26.9
Level of Service	C	B	A	D	D		D	C		D	C	C
Approach Delay (s)		13.9			40.1			34.7			30.8	
Approach LOS		B			D			C			C	

Intersection Summary					
HCM Average Control Delay	29.0	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.82				
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D		
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	1476	4012		1382	4211		2835	2951	1308	2217	2951	1308
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)	1476	4012		1382	4211		2835	2951	1308	2217	2951	1308
Volume (vph)	435	955	325	20	955	45	590	615	45	55	250	310
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	458	1005	342	21	1005	47	621	647	47	58	263	326
RTOR Reduction (vph)	0	46	0	0	4	0	0	0	32	0	0	286
Lane Group Flow (vph)	458	1302	0	21	1048	0	621	647	15	58	263	40
Heavy Vehicles (%)	3%	6%	1%	10%	3%	4%	4%	3%	4%	33%	3%	4%
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)	40.6	65.0		4.2	28.6		28.8	40.8	40.8	4.0	16.0	16.0
Effective Green, g (s)	40.6	65.0		4.2	28.6		28.8	40.8	40.8	4.0	16.0	16.0
Actuated g/C Ratio	0.31	0.50		0.03	0.22		0.22	0.31	0.31	0.03	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
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)	461	2006		45	926		628	926	411	68	363	161
v/s Ratio Prot	c0.31	0.32		0.02	c0.25		c0.22	0.22		0.03	c0.09	
v/s Ratio Perm									0.01			0.03
v/c Ratio	0.99	0.65		0.47	1.13		0.99	0.70	0.04	0.85	0.72	0.25
Uniform Delay, d1	44.6	24.1		61.8	50.7		50.4	39.2	31.0	62.7	54.9	51.6
Progression Factor	0.68	0.51		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.2	1.6		7.5	72.9		32.7	4.4	0.2	60.8	11.9	3.7
Delay (s)	69.7	13.8		69.3	123.6		83.2	43.6	31.1	123.5	66.8	55.2
Level of Service	E	B		E	F		F	D	C	F	E	E
Approach Delay (s)		28.0			122.6			61.8			66.0	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM Average Control Delay	63.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1248	1490	2980	1421	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1248	1490	2980	1421	1360
Volume (vph)	1010	110	580	1210	430	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1063	116	611	1274	453	105
RTOR Reduction (vph)	0	29	0	0	0	75
Lane Group Flow (vph)	1063	87	611	1274	453	30
Heavy Vehicles (%)	2%	9%	2%	2%	7%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	22.0	38.0	20.0	46.0	16.0	20.0
Effective Green, g (s)	22.0	38.0	20.0	46.0	16.0	20.0
Actuated g/C Ratio	0.31	0.54	0.29	0.66	0.23	0.29
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)	937	749	426	1958	325	389
v/s Ratio Prot	c0.36	0.03	c0.41	0.43	c0.32	0.02
v/s Ratio Perm		0.04				
v/c Ratio	1.13	0.12	1.43	0.65	1.39	0.08
Uniform Delay, d1	24.0	7.8	25.0	7.2	27.0	18.3
Progression Factor	0.36	0.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	70.7	0.1	208.5	1.7	195.0	0.1
Delay (s)	79.4	0.2	233.5	8.9	222.0	18.3
Level of Service	E	A	F	A	F	B
Approach Delay (s)	71.6			81.7	183.7	
Approach LOS	E			F	F	

Intersection Summary			
HCM Average Control Delay	94.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1259	1476	2951	2891	1320
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1259	1476	2951	2891	1320
Volume (vph)	810	370	310	1330	620	310
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	853	389	326	1400	653	326
RTOR Reduction (vph)	0	254	0	0	0	0
Lane Group Flow (vph)	853	135	326	1400	653	326
Heavy Vehicles (%)	3%	8%	3%	3%	2%	3%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.3	24.3	16.7	45.0	17.0	70.0
Effective Green, g (s)	24.3	24.3	16.7	45.0	17.0	70.0
Actuated g/C Ratio	0.35	0.35	0.24	0.64	0.24	1.00
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)	1024	437	352	1897	702	1320
v/s Ratio Prot	c0.29		c0.22	0.47		
v/s Ratio Perm		0.11			c0.23	0.25
v/c Ratio	0.83	0.31	0.93	0.74	0.93	0.25
Uniform Delay, d1	21.0	16.7	26.0	8.5	25.9	0.0
Progression Factor	1.00	1.00	1.10	0.68	1.00	1.00
Incremental Delay, d2	7.9	1.8	18.2	1.3	18.9	0.4
Delay (s)	28.9	18.5	46.8	7.1	44.9	0.4
Level of Service	C	B	D	A	D	A
Approach Delay (s)	25.7			14.6	30.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			3010	1013	1295
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			3010	1013	1295
Volume (vph)	875	0	0	1825	20	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	921	0	0	1921	21	200
RTOR Reduction (vph)	0	0	0	0	0	176
Lane Group Flow (vph)	921	0	0	1921	21	25
Heavy Vehicles (%)	1%	0%	0%	1%	50%	5%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	64.0			64.0	8.0	8.0
Effective Green, g (s)	64.0			64.0	8.0	8.0
Actuated g/C Ratio	0.80			0.80	0.10	0.10
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)	2408			2408	101	130
v/s Ratio Prot	0.31			c0.64	c0.02	0.02
v/s Ratio Perm						
v/c Ratio	0.38			0.80	0.21	0.19
Uniform Delay, d1	2.3			4.4	33.1	33.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			2.9	1.0	0.7
Delay (s)	2.8			7.3	34.1	33.7
Level of Service	A			A	C	C
Approach Delay (s)	2.8			7.3	33.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	875	370	340	1505	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	921	389	358	1584	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.70	
vC, conflicting volume			921		2624	655
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			921		2887	655
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			51		100	100
cM capacity (veh/h)			731		5	413

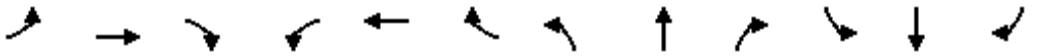
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	614	696	358	792	792
Volume Left	0	0	358	0	0
Volume Right	0	389	0	0	0
cSH	1700	1700	731	1700	1700
Volume to Capacity	0.36	0.41	0.49	0.47	0.47
Queue Length 95th (ft)	0	0	68	0	0
Control Delay (s)	0.0	0.0	14.6	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.7		
Approach LOS					

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2951	1308		4137		2835		1172			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2951	1308		4137		2835		1172			
Volume (vph)	0	815	280	0	875	220	570	0	250	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	858	295	0	921	232	600	0	263	0	0	0
RTOR Reduction (vph)	0	0	124	0	58	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	858	171	0	1095	0	600	0	263	0	0	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	16%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		34.8	34.8		34.8		17.2		60.0			
Effective Green, g (s)		34.8	34.8		34.8		17.2		60.0			
Actuated g/C Ratio		0.58	0.58		0.58		0.29		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1712	759		2399		813		1172			
v/s Ratio Prot		c0.29			0.26		c0.21					
v/s Ratio Perm			0.13						0.22			
v/c Ratio		0.50	0.23		0.46		0.74		0.22			
Uniform Delay, d1		7.5	6.1		7.2		19.4		0.0			
Progression Factor		0.77	0.08		1.00		1.00		1.00			
Incremental Delay, d2		0.9	0.6		0.6		3.5		0.4			
Delay (s)		6.7	1.1		7.8		22.9		0.4			
Level of Service		A	A		A		C		A			
Approach Delay (s)		5.2			7.8			16.0			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

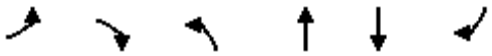
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2841	1386		2951	1308				2730		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2841	1386		2951	1308				2730		2347
Volume (vph)	0	845	810	0	1205	240	0	0	0	250	0	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	889	853	0	1268	253	0	0	0	263	0	663
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	910	829	0	1268	253	0	0	0	263	0	608
Heavy Vehicles (%)	0%	2%	6%	0%	3%	4%	0%	0%	0%	8%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.7	60.0		33.7	60.0				18.3		18.3
Effective Green, g (s)		33.7	60.0		33.7	60.0				18.3		18.3
Actuated g/C Ratio		0.56	1.00		0.56	1.00				0.31		0.31
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)		1596	1386		1657	1308				833		716
v/s Ratio Prot		0.32			c0.43					0.10		c0.26
v/s Ratio Perm			0.60			0.19						
v/c Ratio		0.57	0.60		0.77	0.19				0.32		0.85
Uniform Delay, d1		8.5	0.0		10.1	0.0				16.0		19.6
Progression Factor		1.00	1.00		0.73	1.00				1.00		1.00
Incremental Delay, d2		1.5	0.7		2.8	0.1				0.2		9.3
Delay (s)		10.0	0.7		10.2	0.1				16.3		28.8
Level of Service		A	A		B	A				B		C
Approach Delay (s)		5.6			8.5			0.0			25.3	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

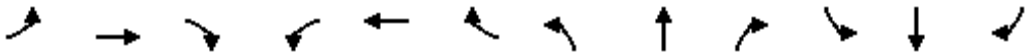
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1520	1271	1394	2951	1553	1236
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1520	1271	901	2951	1553	1236
Volume (vph)	5	265	90	160	220	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	279	95	168	232	11
RTOR Reduction (vph)	0	239	0	0	0	4
Lane Group Flow (vph)	5	40	95	168	232	7
Heavy Vehicles (%)	0%	7%	9%	3%	3%	10%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.5	6.5	30.5	30.5	30.5	30.5
Effective Green, g (s)	6.5	6.5	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
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)	220	184	611	2000	1053	838
v/s Ratio Prot	0.00			0.06	c0.15	
v/s Ratio Perm		c0.03	0.11			0.01
v/c Ratio	0.02	0.22	0.16	0.08	0.22	0.01
Uniform Delay, d1	16.5	17.0	2.6	2.5	2.7	2.4
Progression Factor	1.00	1.00	0.61	0.61	1.00	1.00
Incremental Delay, d2	0.0	0.6	0.5	0.1	0.5	0.0
Delay (s)	16.6	17.6	2.1	1.6	3.2	2.4
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			1.8	3.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

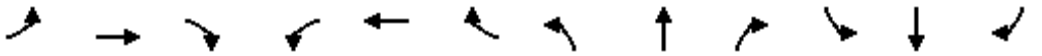
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1093		3935	1158	2891		2324			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1093		3935	1158	2891		2324			
Volume (vph)	0	1385	710	0	1195	1240	430	0	380	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1458	747	0	1258	1305	453	0	400	0	0	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1458	747	0	1440	1101	453	0	396	0	0	0
Heavy Vehicles (%)	0%	2%	7%	0%	3%	1%	2%	0%	3%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		34.0	90.0		34.0	90.0	48.0		48.0			
Effective Green, g (s)		34.0	90.0		34.0	90.0	48.0		48.0			
Actuated g/C Ratio		0.38	1.00		0.38	1.00	0.53		0.53			
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)		1529	1093		1487	1158	1542		1239			
v/s Ratio Prot		0.36			0.37		0.16		0.17			
v/s Ratio Perm			0.68			c0.95						
v/c Ratio		0.95	0.68		0.97	0.95	0.29		0.32			
Uniform Delay, d1		27.2	0.0		27.5	0.0	11.6		11.8			
Progression Factor		0.95	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		11.2	1.3		16.9	16.0	0.1		0.1			
Delay (s)		37.1	1.3		44.4	16.0	11.7		12.0			
Level of Service		D	A		D	B	B		B			
Approach Delay (s)		25.0			32.2			11.8			0.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

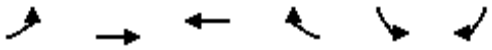
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		0.93	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3969	1136		3723	1125				2808		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3969	1136		3723	1125				2808		2324
Volume (vph)	0	1715	790	0	575	1050	0	0	0	380	0	600
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1805	832	0	605	1105	0	0	0	400	0	632
RTOR Reduction (vph)	0	7	199	0	155	0	0	0	0	0	0	488
Lane Group Flow (vph)	0	1923	508	0	1002	553	0	0	0	400	0	144
Heavy Vehicles (%)	0%	3%	3%	0%	2%	4%	0%	0%	0%	5%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		64.7	64.7		64.7	90.0				17.3		17.3
Effective Green, g (s)		64.7	64.7		64.7	90.0				17.3		17.3
Actuated g/C Ratio		0.72	0.72		0.72	1.00				0.19		0.19
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)		2853	817		2676	1125				540		447
v/s Ratio Prot		c0.48			0.27					c0.14		
v/s Ratio Perm			0.45			0.49						0.06
v/c Ratio		0.67	0.62		0.37	0.49				0.74		0.32
Uniform Delay, d1		6.9	6.4		4.9	0.0				34.2		31.3
Progression Factor		1.00	1.00		0.64	1.00				1.00		1.00
Incremental Delay, d2		1.3	3.6		0.4	0.1				5.4		0.4
Delay (s)		8.2	10.0		3.5	0.1				39.7		31.7
Level of Service		A	A		A	A				D		C
Approach Delay (s)		8.7			2.4			0.0			34.8	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

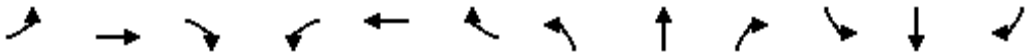
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1421	3865	4200	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1421	3865	4200	1347	2920	1347
Volume (vph)	150	860	2575	330	425	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	905	2711	347	447	179
RTOR Reduction (vph)	0	0	0	107	0	134
Lane Group Flow (vph)	158	905	2711	240	447	45
Heavy Vehicles (%)	7%	13%	4%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	103.0	85.0	85.0	19.0	19.0
Effective Green, g (s)	14.0	103.0	85.0	85.0	19.0	19.0
Actuated g/C Ratio	0.11	0.79	0.65	0.65	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	3062	2746	881	427	197
v/s Ratio Prot	c0.11	0.23	c0.65		c0.15	
v/s Ratio Perm				0.18		0.03
v/c Ratio	1.03	0.30	0.99	0.27	1.05	0.23
Uniform Delay, d1	58.0	3.7	22.0	9.5	55.5	49.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.7	0.1	14.2	0.2	56.3	2.7
Delay (s)	139.7	3.7	36.1	9.6	111.8	51.7
Level of Service	F	A	D	A	F	D
Approach Delay (s)		23.9	33.1		94.6	
Approach LOS		C	C		F	

Intersection Summary			
HCM Average Control Delay	39.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0					
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97					
Frt		1.00	0.85	1.00	1.00		1.00					
Flt Protected		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (prot)		4007	680	760	3971		1474					
Flt Permitted		1.00	1.00	0.95	1.00		0.95					
Satd. Flow (perm)		4007	680	760	3971		1474					
Volume (vph)	0	1430	360	10	1915	0	460	0	0	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1505	379	11	2016	0	484	0	0	0	0	0
RTOR Reduction (vph)	0	0	137	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1505	242	11	2016	0	484	0	0	0	0	0
Heavy Vehicles (%)	0%	9%	100%	100%	10%	0%	100%	0%	0%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		57.4	57.4	1.6	63.0		19.0					
Effective Green, g (s)		57.4	57.4	1.6	63.0		19.0					
Actuated g/C Ratio		0.64	0.64	0.02	0.70		0.21					
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)		2556	434	14	2780		311					
v/s Ratio Prot		0.38		0.01	c0.51		c0.33					
v/s Ratio Perm			0.36									
v/c Ratio		0.59	0.56	0.79	0.73		1.56					
Uniform Delay, d1		9.5	9.2	44.0	8.2		35.5					
Progression Factor		1.00	1.00	0.75	0.47		1.00					
Incremental Delay, d2		1.0	5.1	124.7	1.6		265.6					
Delay (s)		10.5	14.2	157.5	5.4		301.1					
Level of Service		B	B	F	A		F					
Approach Delay (s)		11.2			6.2			301.1			0.0	
Approach LOS		B			A			F			A	

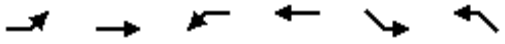
Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2756	3971	2681	4121	2835	2457
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2756	3971	2681	4121	2835	2457
Volume (vph)	580	560	200	1025	480	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	611	589	211	1079	505	158
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	611	589	211	1079	505	158
Heavy Vehicles (%)	7%	10%	10%	6%	4%	20%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	26.0	47.6	11.0	32.6	19.4	19.4
Effective Green, g (s)	26.0	47.6	11.0	32.6	19.4	19.4
Actuated g/C Ratio	0.29	0.53	0.12	0.36	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	796	2100	328	1493	611	530
v/s Ratio Prot	c0.22	0.15	0.08	c0.26	c0.18	0.06
v/s Ratio Perm						
v/c Ratio	0.77	0.28	0.64	0.72	0.83	0.30
Uniform Delay, d1	29.2	11.7	37.6	24.8	33.7	29.6
Progression Factor	0.70	0.37	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	0.3	4.3	3.1	9.0	0.3
Delay (s)	24.1	4.6	41.9	27.9	42.7	29.9
Level of Service	C	A	D	C	D	C
Approach Delay (s)		14.5		30.2		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

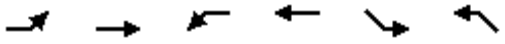
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2286	3494	2949	4241	2437	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2286	3494	2949	4241	2437	2835
Volume (vph)	550	535	10	1665	380	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	579	563	11	1753	400	253
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	579	563	11	1753	400	253
Heavy Vehicles (%)	29%	25%	0%	3%	21%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.0	54.2	0.8	35.0	13.0	13.0
Effective Green, g (s)	20.0	54.2	0.8	35.0	13.0	13.0
Actuated g/C Ratio	0.25	0.68	0.01	0.44	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	572	2367	29	1855	396	461
v/s Ratio Prot	c0.25	0.16	0.00	c0.41	c0.16	0.09
v/s Ratio Perm						
v/c Ratio	1.01	0.24	0.38	0.95	1.01	0.55
Uniform Delay, d1	30.0	5.0	39.4	21.6	33.5	30.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.7	0.2	8.1	11.4	47.8	1.3
Delay (s)	70.7	5.2	47.5	33.0	81.3	32.1
Level of Service	E	A	D	C	F	C
Approach Delay (s)		38.4		33.1		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

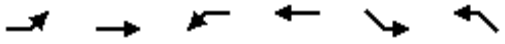
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	2951	2657	4325	2891	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	2951	2657	4325	2891	2949
Volume (vph)	680	700	530	660	470	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	716	737	558	695	495	179
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	716	737	558	695	495	179
Heavy Vehicles (%)	1%	3%	11%	1%	2%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	37.0	47.9	27.2	38.1	22.9	22.9
Effective Green, g (s)	37.0	47.9	27.2	38.1	22.9	22.9
Actuated g/C Ratio	0.34	0.44	0.25	0.35	0.21	0.21
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)	982	1285	657	1498	602	614
v/s Ratio Prot	c0.25	c0.25	c0.21	0.16	c0.17	0.06
v/s Ratio Perm						
v/c Ratio	0.73	0.57	0.85	0.46	0.82	0.29
Uniform Delay, d1	32.1	23.4	39.4	28.0	41.6	36.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	1.9	10.0	1.0	8.9	0.3
Delay (s)	34.8	25.2	49.5	29.0	50.5	37.0
Level of Service	C	C	D	C	D	D
Approach Delay (s)		30.0		38.1		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	36.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2564	4368	2835	4368	2808	2730
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2564	4368	2835	4368	2808	2730
Volume (vph)	270	365	530	1015	410	650
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	384	558	1068	432	684
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	384	558	1068	432	684
Heavy Vehicles (%)	15%	0%	4%	0%	5%	8%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	8.7	14.7	13.3	19.3	16.2	16.2
Effective Green, g (s)	8.7	14.7	13.3	19.3	16.2	16.2
Actuated g/C Ratio	0.15	0.26	0.24	0.34	0.29	0.29
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)	397	1143	671	1500	809	787
v/s Ratio Prot	c0.11	0.09	c0.20	c0.24	0.15	c0.25
v/s Ratio Perm						
v/c Ratio	0.72	0.34	0.83	0.71	0.53	0.87
Uniform Delay, d1	22.6	16.8	20.4	16.0	16.8	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	0.2	8.7	1.6	0.7	10.1
Delay (s)	28.6	17.0	29.0	17.7	17.5	29.1
Level of Service	C	B	C	B	B	C
Approach Delay (s)		21.9		21.6		
Approach LOS		C		C		

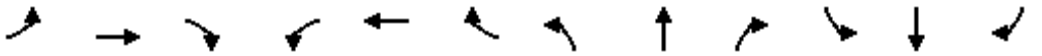
Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4241	2756	4241	2835	2730
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4241	2756	4241	2835	2730
Volume (vph)	260	870	300	685	510	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	916	316	721	537	126
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	274	916	316	721	537	126
Heavy Vehicles (%)	4%	3%	7%	3%	4%	8%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	6.0	14.5	6.0	14.5	10.0	10.0
Effective Green, g (s)	6.0	14.5	6.0	14.5	10.0	10.0
Actuated g/C Ratio	0.14	0.34	0.14	0.34	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	400	1447	389	1447	667	642
v/s Ratio Prot	0.10	c0.22	c0.11	0.17	c0.19	0.05
v/s Ratio Perm						
v/c Ratio	0.69	0.63	0.81	0.50	0.81	0.20
Uniform Delay, d1	17.4	11.8	17.7	11.1	15.3	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	0.9	12.2	0.3	7.0	0.2
Delay (s)	22.2	12.7	29.9	11.4	22.3	13.2
Level of Service	C	B	C	B	C	B
Approach Delay (s)		14.9		17.0		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4264			4241	1333			2370	2891		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4264			4241	1333			2370	2891		1295
Volume (vph)	90	1865	55	0	1755	160	0	0	415	475	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1963	58	0	1847	168	0	0	437	500	0	16
RTOR Reduction (vph)	0	3	0	0	0	101	0	0	15	0	0	13
Lane Group Flow (vph)	95	2018	0	0	1847	67	0	0	422	500	0	3
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	1%	2%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Effective Green, g (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Actuated g/C Ratio	0.07	0.51			0.40	0.40			0.18	0.18		0.18
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)	101	2179			1696	533			421	514		230
v/s Ratio Prot	0.06	c0.47			c0.44					c0.17		
v/s Ratio Perm						0.05			c0.18			0.00
v/c Ratio	0.94	0.93			1.09	0.13			1.00	0.97		0.01
Uniform Delay, d1	41.8	20.4			27.0	17.1			37.0	36.8		30.5
Progression Factor	1.00	1.00			0.70	0.25			1.00	0.96		0.90
Incremental Delay, d2	70.3	8.3			49.9	0.5			44.6	31.0		0.0
Delay (s)	112.1	28.7			68.8	4.7			81.6	66.2		27.5
Level of Service	F	C			E	A			F	E		C
Approach Delay (s)		32.4			63.5			81.6			65.0	
Approach LOS		C			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4325	2863	4160	2756	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4325	2863	4160	2756	2891
Volume (vph)	380	825	750	650	280	530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	400	868	789	684	295	558
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	400	868	789	684	295	558
Heavy Vehicles (%)	3%	1%	3%	5%	7%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.0	28.9	28.3	37.2	20.8	20.8
Effective Green, g (s)	20.0	28.9	28.3	37.2	20.8	20.8
Actuated g/C Ratio	0.22	0.32	0.31	0.41	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	636	1389	900	1719	637	668
v/s Ratio Prot	0.14	c0.20	c0.28	0.16	0.11	c0.19
v/s Ratio Perm						
v/c Ratio	0.63	0.62	0.88	0.40	0.46	0.84
Uniform Delay, d1	31.6	25.9	29.2	18.5	29.8	33.0
Progression Factor	0.79	0.75	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.7	9.6	0.7	0.5	8.9
Delay (s)	25.6	20.2	38.8	19.2	30.3	41.9
Level of Service	C	C	D	B	C	D
Approach Delay (s)		21.9		29.7		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	2951	2835	2980	2808	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	2951	2835	2980	2808	2835
Volume (vph)	280	945	560	805	220	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	995	589	847	232	284
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	295	995	589	847	232	284
Heavy Vehicles (%)	4%	3%	4%	2%	5%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.5	35.2	22.1	44.8	10.7	10.7
Effective Green, g (s)	12.5	35.2	22.1	44.8	10.7	10.7
Actuated g/C Ratio	0.16	0.44	0.28	0.56	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)	443	1298	783	1669	376	379
v/s Ratio Prot	0.10	c0.34	c0.21	0.28	0.08	c0.10
v/s Ratio Perm						
v/c Ratio	0.67	0.77	0.75	0.51	0.62	0.75
Uniform Delay, d1	31.8	18.9	26.4	10.8	32.7	33.4
Progression Factor	1.00	1.00	0.37	0.11	1.00	1.00
Incremental Delay, d2	3.8	4.4	2.2	0.6	3.0	7.9
Delay (s)	35.5	23.3	12.0	1.8	35.7	41.3
Level of Service	D	C	B	A	D	D
Approach Delay (s)		26.1		6.0		
Approach LOS		C		A		

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4160	2681	4368	2863	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4160	2681	4368	2863	2863
Volume (vph)	550	825	400	1280	320	700
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	579	868	421	1347	337	737
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	579	868	421	1347	337	737
Heavy Vehicles (%)	2%	5%	10%	0%	3%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	29.3	52.1	29.0	51.8	36.9	36.9
Effective Green, g (s)	29.3	52.1	29.0	51.8	36.9	36.9
Actuated g/C Ratio	0.23	0.40	0.22	0.40	0.28	0.28
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)	652	1667	598	1740	813	813
v/s Ratio Prot	c0.20	0.21	0.16	c0.31	0.12	c0.26
v/s Ratio Perm						
v/c Ratio	0.89	0.52	0.70	0.77	0.41	0.91
Uniform Delay, d1	48.8	29.5	46.5	34.0	37.8	44.9
Progression Factor	1.00	1.00	0.40	0.27	1.00	1.00
Incremental Delay, d2	13.9	1.2	1.2	1.1	0.3	13.6
Delay (s)	62.6	30.7	20.0	10.2	38.1	58.5
Level of Service	E	C	C	B	D	E
Approach Delay (s)		43.5		12.6		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2492			2357	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2492			2357	760	680
Volume (vph)	285	0	0	230	80	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	0	0	242	84	105
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	300	0	0	242	84	71
Heavy Vehicles (%)	22%	0%	0%	29%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.6			11.6	40.4	40.4
Effective Green, g (s)	11.6			11.6	40.4	40.4
Actuated g/C Ratio	0.19			0.19	0.67	0.67
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)	482			456	512	458
v/s Ratio Prot	c0.12			0.10	c0.11	
v/s Ratio Perm						0.10
v/c Ratio	0.62			0.53	0.16	0.15
Uniform Delay, d1	22.2			21.8	3.6	3.6
Progression Factor	0.79			1.00	1.00	1.00
Incremental Delay, d2	2.5			1.2	0.7	0.7
Delay (s)	20.0			22.9	4.3	4.3
Level of Service	C			C	A	A
Approach Delay (s)	20.0			22.9	4.3	
Approach LOS	C			C	A	

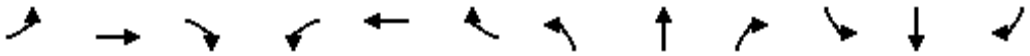
Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2492	680	760	2394		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2492	680	760	2394		
Volume (vph)	285	75	85	225	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	79	89	237	0	0
RTOR Reduction (vph)	0	24	0	0	0	0
Lane Group Flow (vph)	300	55	89	237	0	0
Heavy Vehicles (%)	22%	100%	100%	27%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	41.4	41.4	10.6	60.0		
Effective Green, g (s)	41.4	41.4	10.6	60.0		
Actuated g/C Ratio	0.69	0.69	0.18	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1719	469	134	2394		
v/s Ratio Prot	c0.12		c0.12	0.10		
v/s Ratio Perm		0.08				
v/c Ratio	0.17	0.12	0.66	0.10		
Uniform Delay, d1	3.3	3.1	23.0	0.0		
Progression Factor	1.00	1.00	0.59	1.00		
Incremental Delay, d2	0.0	0.1	10.8	0.0		
Delay (s)	3.3	3.2	24.4	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.3			6.7	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

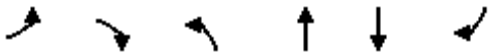
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1185	1295	1288	1157		1448	2634		1169	2891	
Flt Permitted	0.66	1.00	1.00	0.37	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1006	1185	1295	496	1157		1448	2634		1169	2891	
Volume (vph)	10	145	595	80	85	60	250	655	145	70	540	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	153	626	84	89	63	263	689	153	74	568	5
RTOR Reduction (vph)	0	0	59	0	24	0	0	18	0	0	1	0
Lane Group Flow (vph)	11	153	567	84	128	0	263	824	0	74	572	0
Heavy Vehicles (%)	5%	35%	5%	18%	28%	32%	5%	5%	45%	30%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	17.9	17.9	52.7	22.4	22.4		34.8	51.1		9.7	26.0	
Effective Green, g (s)	17.9	17.9	52.7	22.4	22.4		34.8	51.1		9.7	26.0	
Actuated g/C Ratio	0.18	0.18	0.53	0.22	0.22		0.35	0.51		0.10	0.26	
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)	184	212	682	153	259		504	1346		113	752	
v/s Ratio Prot	0.00	0.13	c0.29	0.03	c0.11		0.18	0.31		0.06	c0.20	
v/s Ratio Perm	0.01		0.15	0.09								
v/c Ratio	0.06	0.72	0.83	0.55	0.49		0.52	0.61		0.65	0.76	
Uniform Delay, d1	34.1	38.7	19.9	32.7	33.9		26.0	17.4		43.5	34.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	11.5	8.5	4.0	1.5		1.0	2.1		12.8	7.1	
Delay (s)	34.2	50.2	28.5	36.7	35.3		26.9	19.5		56.4	41.3	
Level of Service	C	D	C	D	D		C	B		E	D	
Approach Delay (s)		32.7			35.8			21.3			43.0	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

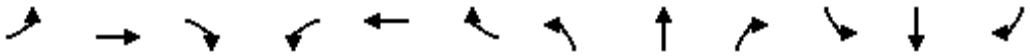
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	1966	1046	1169	5242	2813	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1046	1169	5242	2813	
Volume (vph)	270	115	155	1240	935	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	121	163	1305	984	79
RTOR Reduction (vph)	0	102	0	0	6	0
Lane Group Flow (vph)	284	19	163	1305	1057	0
Heavy Vehicles (%)	50%	30%	30%	5%	5%	30%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	15.9	15.9	19.5	44.7	48.6	
Effective Green, g (s)	15.9	15.9	19.5	44.7	48.6	
Actuated g/C Ratio	0.16	0.16	0.20	0.45	0.49	
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)	313	166	228	2343	1367	
v/s Ratio Prot	c0.14		c0.14	0.25	c0.38	
v/s Ratio Perm		0.02				
v/c Ratio	0.91	0.12	0.71	0.56	0.77	
Uniform Delay, d1	41.3	36.0	37.6	20.4	21.2	
Progression Factor	1.00	1.00	1.00	1.00	0.43	
Incremental Delay, d2	28.2	0.3	10.2	1.0	1.8	
Delay (s)	69.5	36.3	47.8	21.3	10.8	
Level of Service	E	D	D	C	B	
Approach Delay (s)	59.6			24.3	10.8	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

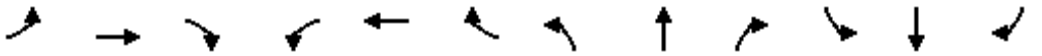
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2667	2196	1490	2812	
Flt Permitted		0.91		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1333		2808	1318			2667	2196	1490	2812	
Volume (vph)	5	0	5	490	5	50	0	1105	405	30	515	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	516	5	53	0	1163	426	32	542	5
RTOR Reduction (vph)	0	4	0	0	31	0	0	0	236	0	1	0
Lane Group Flow (vph)	0	6	0	516	27	0	0	1163	190	32	546	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	14%	9%	2%	8%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		15.9		21.0	40.9			44.7	44.7	2.4	27.6	
Effective Green, g (s)		15.9		21.0	40.9			44.7	44.7	2.4	27.6	
Actuated g/C Ratio		0.16		0.21	0.41			0.45	0.45	0.02	0.28	
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)		212		590	539			1192	982	36	776	
v/s Ratio Prot				c0.18	c0.02			c0.44	0.09	c0.02	0.19	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.87	0.05			0.98	0.19	0.89	0.70	
Uniform Delay, d1		35.5		38.2	17.8			27.1	16.7	48.7	32.5	
Progression Factor		1.00		1.00	1.00			0.39	0.19	1.00	1.00	
Incremental Delay, d2		0.1		13.6	0.0			18.2	0.4	104.6	5.3	
Delay (s)		35.6		51.8	17.9			28.6	3.5	153.2	37.8	
Level of Service		D		D	B			C	A	F	D	
Approach Delay (s)		35.6			48.4			21.9			44.2	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

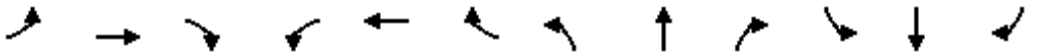
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1568	4346		2928	4297	1350	1538	4107	2355	2956	4071	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1568	4346		2928	4297	1350	1538	4107	2355	2956	4071	2422
Volume (vph)	145	690	45	230	475	390	50	905	615	250	1085	785
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	726	47	242	500	411	53	953	647	263	1142	826
RTOR Reduction (vph)	0	9	0	0	0	113	0	0	21	0	0	82
Lane Group Flow (vph)	153	764	0	242	500	298	53	953	626	263	1142	744
Heavy Vehicles (%)	3%	6%	3%	7%	8%	7%	5%	13%	8%	6%	14%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	13.4	20.2		13.0	19.8	29.6	3.2	21.0	34.0	9.8	27.6	41.0
Effective Green, g (s)	13.4	20.2		13.0	19.8	29.6	3.2	21.0	34.0	9.8	27.6	41.0
Actuated g/C Ratio	0.17	0.25		0.16	0.25	0.37	0.04	0.26	0.42	0.12	0.35	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	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)	263	1097		476	1064	500	62	1078	1001	362	1404	1241
v/s Ratio Prot	0.10	c0.18		0.08	0.12	0.07	0.03	c0.23	c0.10	c0.09	c0.28	0.10
v/s Ratio Perm						0.15			0.16			0.21
v/c Ratio	0.58	0.70		0.51	0.47	0.60	0.85	0.88	0.63	0.73	0.81	0.60
Uniform Delay, d1	30.7	27.1		30.6	25.6	20.4	38.2	28.3	18.0	33.8	23.9	13.7
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	3.3	3.7		0.9	1.5	1.9	65.1	10.6	1.2	7.1	5.3	0.8
Delay (s)	34.0	30.8		31.4	27.1	22.3	103.3	38.9	19.2	40.9	29.1	14.5
Level of Service	C	C		C	C	C	F	D	B	D	C	B
Approach Delay (s)		31.3			26.3			33.3			25.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4378	1376		4378					3013	1635	2445
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4378	1376		4378					3013	1635	2445
Volume (vph)	0	670	295	0	1310	0	0	0	0	210	470	555
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	705	311	0	1379	0	0	0	0	221	495	584
RTOR Reduction (vph)	0	0	132	0	0	0	0	0	0	0	0	11
Lane Group Flow (vph)	0	705	179	0	1379	0	0	0	0	221	495	573
Heavy Vehicles (%)	0%	6%	5%	5%	6%	0%	0%	0%	0%	4%	4%	4%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		19.9	19.9		19.9					17.1	17.1	17.1
Effective Green, g (s)		19.9	19.9		19.9					17.1	17.1	17.1
Actuated g/C Ratio		0.44	0.44		0.44					0.38	0.38	0.38
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)		1936	608		1936					1145	621	929
v/s Ratio Prot		0.16			c0.31					0.07	c0.30	
v/s Ratio Perm			0.13									0.23
v/c Ratio		0.36	0.30		0.71					0.19	0.80	0.62
Uniform Delay, d1		8.3	8.1		10.2					9.3	12.4	11.3
Progression Factor		1.00	1.00		1.00					1.00	1.00	1.00
Incremental Delay, d2		0.5	1.2		2.3					0.1	7.0	1.2
Delay (s)		8.9	9.3		12.5					9.4	19.4	12.5
Level of Service		A	A		B					A	B	B
Approach Delay (s)		9.0			12.5			0.0			14.6	
Approach LOS		A			B			A			B	

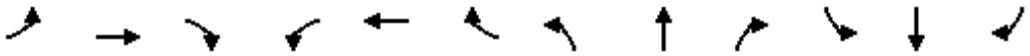
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	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	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3343	2707	3335	3312	1583	3400	1681		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3343	2707	3335	3312	1583	3400	1681		1770	1810	1583
Volume (vph)	30	950	575	170	760	25	305	145	210	30	125	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1000	605	179	800	26	321	153	221	32	132	32
RTOR Reduction (vph)	0	0	246	0	0	11	0	58	0	0	0	27
Lane Group Flow (vph)	32	1000	359	179	800	15	321	316	0	32	132	5
Heavy Vehicles (%)	2%	8%	5%	5%	9%	2%	3%	3%	3%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.0	39.4	53.4	7.6	44.0	52.0	14.0	19.0		8.0	13.0	13.0
Effective Green, g (s)	3.0	39.4	53.4	7.6	44.0	52.0	14.0	19.0		8.0	13.0	13.0
Actuated g/C Ratio	0.03	0.44	0.59	0.08	0.49	0.58	0.16	0.21		0.09	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	59	1463	1606	282	1619	985	529	355		157	261	229
v/s Ratio Prot	0.02	c0.30	0.03	c0.05	c0.24	0.00	0.09	c0.19		0.02	c0.07	
v/s Ratio Perm			0.10			0.01						0.00
v/c Ratio	0.54	0.68	0.22	0.63	0.49	0.02	0.61	0.89		0.20	0.51	0.02
Uniform Delay, d1	42.8	20.3	8.6	39.9	15.5	8.1	35.4	34.5		38.0	35.5	33.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	2.6	0.1	4.6	1.1	0.0	2.0	22.6		0.6	1.5	0.0
Delay (s)	52.6	22.9	8.7	44.5	16.6	8.1	37.4	57.1		38.7	37.1	33.1
Level of Service	D	C	A	D	B	A	D	E		D	D	C
Approach Delay (s)		18.2			21.3			48.0			36.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

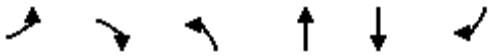
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3136	1389					5268	1403	3042	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3136	1389					5268	1403	3042	4071	
Volume (vph)	0	145	620	0	0	0	0	1570	330	225	1135	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	153	653	0	0	0	0	1653	347	237	1195	0
RTOR Reduction (vph)	0	0	18	0	0	0	0	0	238	0	0	0
Lane Group Flow (vph)	0	153	635	0	0	0	0	1653	109	237	1195	0
Heavy Vehicles (%)	0%	3%	4%	0%	0%	0%	0%	11%	3%	3%	14%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		30.0	30.0					22.0	22.0	6.0	32.0	
Effective Green, g (s)		30.0	30.0					22.0	22.0	6.0	32.0	
Actuated g/C Ratio		0.43	0.43					0.31	0.31	0.09	0.46	
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)		1344	595					1656	441	261	1861	
v/s Ratio Prot		0.05						c0.31		c0.08	0.29	
v/s Ratio Perm			c0.46						0.08			
v/c Ratio		0.11	1.07					1.00	0.25	0.91	0.64	
Uniform Delay, d1		12.0	20.0					24.0	17.8	31.7	14.6	
Progression Factor		1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0	56.0					21.7	1.3	32.2	1.7	
Delay (s)		12.1	76.0					45.7	19.2	63.9	16.3	
Level of Service		B	E					D	B	E	B	
Approach Delay (s)		63.8			0.0			41.1			24.2	
Approach LOS		E			A			D			C	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

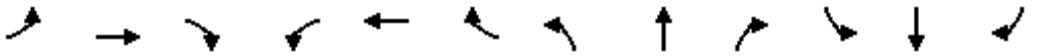
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2469		4219	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2469		4219	4107	
Volume (vph)	0	730	0	1440	1390	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	768	0	1516	1463	0
RTOR Reduction (vph)	0	15	0	0	0	0
Lane Group Flow (vph)	0	753	0	1516	1463	0
Heavy Vehicles (%)	0%	3%	0%	10%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		20.0		27.0	27.0	
Effective Green, g (s)		20.0		27.0	27.0	
Actuated g/C Ratio		0.36		0.49	0.49	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		898		2071	2016	
v/s Ratio Prot				c0.36	0.36	
v/s Ratio Perm		c0.31				
v/c Ratio		0.84		0.73	0.73	
Uniform Delay, d1		16.0		11.1	11.1	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		6.9		2.3	2.3	
Delay (s)		23.0		13.5	13.4	
Level of Service		C		B	B	
Approach Delay (s)	23.0			13.5	13.4	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

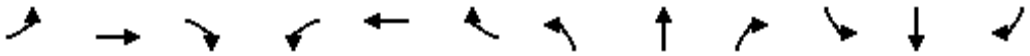
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1417	3967	1417	1553	3836	1431	1553	3136	1431	1599	3136	1175
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1417	3967	1417	1553	3836	1431	1553	3136	1431	1599	3136	1175
Volume (vph)	215	1075	120	75	1145	60	160	695	145	120	650	265
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)	234	1168	130	82	1245	65	174	755	158	130	707	288
RTOR Reduction (vph)	0	0	74	0	0	42	0	0	30	0	0	20
Lane Group Flow (vph)	234	1168	56	82	1245	23	174	755	128	130	707	268
Heavy Vehicles (%)	14%	17%	2%	4%	21%	1%	4%	3%	1%	1%	3%	23%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	25.0	32.7	8.0	22.0	38.0
Effective Green, g (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	25.0	32.7	8.0	22.0	38.0
Actuated g/C Ratio	0.16	0.43	0.43	0.08	0.35	0.35	0.11	0.25	0.33	0.08	0.22	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	1718	614	120	1343	501	171	784	525	128	690	494
v/s Ratio Prot	c0.17	0.29		0.05	c0.32		c0.11	c0.24	0.02	0.08	0.23	0.09
v/s Ratio Perm			0.04			0.02			0.07			0.14
v/c Ratio	1.03	0.68	0.09	0.68	0.93	0.05	1.02	0.96	0.24	1.02	1.02	0.54
Uniform Delay, d1	42.0	22.8	16.7	45.0	31.3	21.5	44.5	37.0	24.6	46.0	39.0	24.2
Progression Factor	1.07	1.00	2.54	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	65.5	2.0	0.3	14.9	12.4	0.2	73.5	23.3	0.2	83.8	40.7	1.2
Delay (s)	110.4	24.7	42.8	59.8	43.6	21.6	118.0	60.4	24.8	129.8	79.7	25.4
Level of Service	F	C	D	E	D	C	F	E	C	F	E	C
Approach Delay (s)		39.3			43.6			64.4			71.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	52.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

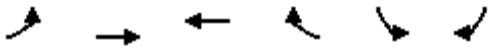
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2176	4550			4396	1279	2611		1290			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2176	4550			4396	1279	2611		1290			
Volume (vph)	190	1390	0	0	1370	360	80	0	120	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)	207	1511	0	0	1489	391	87	0	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	143	0	0	57	0	0	0
Lane Group Flow (vph)	207	1511	0	0	1489	248	87	0	73	0	0	0
Heavy Vehicles (%)	44%	14%	0%	0%	18%	13%	20%	0%	12%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.6	81.1			63.5	63.5	10.9		10.9			
Effective Green, g (s)	13.6	81.1			63.5	63.5	10.9		10.9			
Actuated g/C Ratio	0.14	0.81			0.64	0.64	0.11		0.11			
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)	296	3690			2791	812	285		141			
v/s Ratio Prot	c0.10	0.33			c0.34							
v/s Ratio Perm						0.19	0.03		c0.06			
v/c Ratio	0.70	0.41			0.53	0.31	0.31		0.52			
Uniform Delay, d1	41.2	2.7			10.1	8.3	41.1		42.1			
Progression Factor	0.88	1.31			0.40	0.00	1.00		1.00			
Incremental Delay, d2	6.6	0.3			0.4	0.6	0.6		3.2			
Delay (s)	43.1	3.8			4.5	0.6	41.7		45.3			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		8.5			3.7			43.8			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

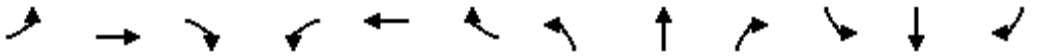
c Critical Lane Group



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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6156	4396		3303	2561
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6156	4396		3303	2561
Volume (vph)	0	945	1450	0	635	375
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1027	1576	0	690	408
RTOR Reduction (vph)	0	0	0	0	0	20
Lane Group Flow (vph)	0	1027	1576	0	690	388
Heavy Vehicles (%)	0%	25%	18%	0%	6%	11%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		53.0	53.0		39.0	39.0
Effective Green, g (s)		53.0	53.0		39.0	39.0
Actuated g/C Ratio		0.53	0.53		0.39	0.39
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)		3263	2330		1288	999
v/s Ratio Prot		0.17	c0.36			
v/s Ratio Perm					c0.21	0.15
v/c Ratio		0.31	0.68		0.54	0.39
Uniform Delay, d1		13.3	17.2		23.5	21.9
Progression Factor		0.10	0.30		1.00	1.00
Incremental Delay, d2		0.2	1.4		1.6	1.1
Delay (s)		1.5	6.5		25.1	23.1
Level of Service		A	A		C	C
Approach Delay (s)		1.5	6.5		24.4	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

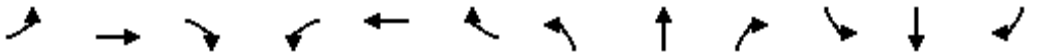
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1822	3967	1445	1179	5148	760	1615	850	1129	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.62	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	1822	3967	1445	1179	5148	760	1062	850	1129	389	1615	722
Volume (vph)	285	835	90	300	1340	185	50	20	30	80	205	180
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)	310	908	98	326	1457	201	54	22	33	87	223	196
RTOR Reduction (vph)	0	0	67	0	0	84	0	0	21	0	0	46
Lane Group Flow (vph)	310	908	31	326	1457	117	54	22	12	87	223	150
Heavy Vehicles (%)	72%	17%	0%	37%	7%	54%	0%	100%	28%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	19.6	31.8	31.8	30.3	42.5	58.0	9.6	6.4	36.7	25.9	18.7	38.3
Effective Green, g (s)	19.6	31.8	31.8	30.3	42.5	58.0	9.6	6.4	36.7	25.9	18.7	38.3
Actuated g/C Ratio	0.20	0.32	0.32	0.30	0.42	0.58	0.10	0.06	0.37	0.26	0.19	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	357	1262	460	357	2188	471	120	54	460	166	302	305
v/s Ratio Prot	0.17	c0.23		c0.28	0.28	0.04	0.01	0.03	0.01	c0.08	c0.14	0.10
v/s Ratio Perm			0.02			0.12	0.03		0.00	0.05		0.11
v/c Ratio	0.87	0.72	0.07	0.91	0.67	0.25	0.45	0.41	0.03	0.52	0.74	0.49
Uniform Delay, d1	38.9	30.2	23.8	33.6	23.1	10.3	42.3	45.0	20.2	30.9	38.3	23.5
Progression Factor	1.00	1.00	1.00	1.23	0.95	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.4	3.6	0.3	22.7	1.3	0.2	2.7	4.9	0.0	3.0	9.1	1.3
Delay (s)	58.4	33.7	24.1	64.0	23.1	5.5	44.9	49.9	20.3	33.8	47.4	24.7
Level of Service	E	C	C	E	C	A	D	D	C	C	D	C
Approach Delay (s)		38.8			28.0			38.5			36.3	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1417	3900	1417	1553	3836	1431	1553	3136	1431	1599	3136	1175
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1417	3900	1417	1553	3836	1431	1553	3136	1431	1599	3136	1175
Volume (vph)	215	1075	120	75	1145	60	160	695	145	120	650	265
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)	234	1168	130	82	1245	65	174	755	158	130	707	288
RTOR Reduction (vph)	0	0	74	0	0	42	0	0	30	0	0	20
Lane Group Flow (vph)	234	1168	56	82	1245	23	174	755	128	130	707	268
Heavy Vehicles (%)	14%	19%	2%	4%	21%	1%	4%	3%	1%	1%	3%	23%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	25.0	32.7	8.0	22.0	38.0
Effective Green, g (s)	16.0	43.3	43.3	7.7	35.0	35.0	11.0	25.0	32.7	8.0	22.0	38.0
Actuated g/C Ratio	0.16	0.43	0.43	0.08	0.35	0.35	0.11	0.25	0.33	0.08	0.22	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	1689	614	120	1343	501	171	784	525	128	690	494
v/s Ratio Prot	c0.17	0.30		0.05	c0.32		c0.11	c0.24	0.02	0.08	0.23	0.09
v/s Ratio Perm			0.04			0.02			0.07			0.14
v/c Ratio	1.03	0.69	0.09	0.68	0.93	0.05	1.02	0.96	0.24	1.02	1.02	0.54
Uniform Delay, d1	42.0	22.9	16.7	45.0	31.3	21.5	44.5	37.0	24.6	46.0	39.0	24.2
Progression Factor	1.10	1.06	2.68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	63.0	2.0	0.2	14.9	12.4	0.2	73.5	23.3	0.2	83.8	40.7	1.2
Delay (s)	109.4	26.4	45.1	59.8	43.6	21.6	118.0	60.4	24.8	129.8	79.7	25.4
Level of Service	F	C	D	E	D	C	F	E	C	F	E	C
Approach Delay (s)		40.7			43.6			64.4			71.6	
Approach LOS		D			D			E			E	

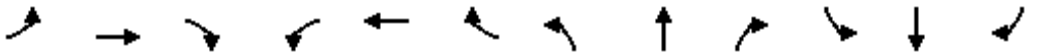
Intersection Summary			
HCM Average Control Delay	53.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

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			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2432	4550			6521	1429	1924		1292			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2432	4550			6521	1429	1924		1292			
Volume (vph)	190	1390	0	0	1370	360	260	0	200	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)	207	1511	0	0	1489	391	283	0	217	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	229	0	0	23	0	0	0
Lane Group Flow (vph)	207	1511	0	0	1489	162	283	0	194	0	0	0
Heavy Vehicles (%)	44%	14%	0%	0%	18%	13%	82%	0%	25%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	13.6	59.0			41.4	41.4	33.0		33.0			
Effective Green, g (s)	13.6	59.0			41.4	41.4	33.0		33.0			
Actuated g/C Ratio	0.14	0.59			0.41	0.41	0.33		0.33			
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)	331	2685			2700	592	635		426			
v/s Ratio Prot	c0.09	c0.33			0.23							
v/s Ratio Perm						0.11	0.15		c0.15			
v/c Ratio	0.63	0.56			0.55	0.27	0.45		0.46			
Uniform Delay, d1	40.8	12.6			22.2	19.4	26.3		26.4			
Progression Factor	0.82	1.02			0.52	0.53	1.00		1.00			
Incremental Delay, d2	3.3	0.8			0.5	0.7	2.3		3.5			
Delay (s)	36.9	13.6			12.0	11.0	28.6		29.9			
Level of Service	D	B			B	B	C		C			
Approach Delay (s)		16.4			11.8			29.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	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	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6156	1421	2270	4052					3303		2561
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6156	1421	2270	4052					3303		2561
Volume (vph)	0	945	315	175	1450	0	0	0	0	635	0	375
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1027	342	190	1576	0	0	0	0	690	0	408
RTOR Reduction (vph)	0	0	196	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	1027	146	190	1576	0	0	0	0	690	0	376
Heavy Vehicles (%)	0%	25%	79%	38%	28%	0%	0%	0%	0%	6%	0%	11%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		42.7	42.7	11.3	58.0					34.0		34.0
Effective Green, g (s)		42.7	42.7	11.3	58.0					34.0		34.0
Actuated g/C Ratio		0.43	0.43	0.11	0.58					0.34		0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		2629	607	257	2350					1123		871
v/s Ratio Prot		0.17		0.08	c0.39							
v/s Ratio Perm			0.10							c0.21		0.15
v/c Ratio		0.39	0.24	0.74	0.67					0.61		0.43
Uniform Delay, d1		19.7	18.3	42.9	14.4					27.5		25.5
Progression Factor		1.00	1.00	1.51	0.48					1.00		1.00
Incremental Delay, d2		0.4	0.9	9.2	1.3					2.5		1.6
Delay (s)		20.1	19.2	74.2	8.2					30.0		27.1
Level of Service		C	B	E	A					C		C
Approach Delay (s)		19.9			15.3			0.0			29.0	
Approach LOS		B			B			A			C	

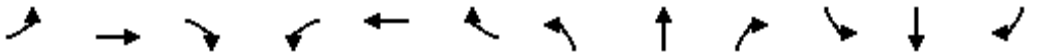
Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.91		1.00	1.00	0.85		1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1520	2110		1735	1600	1360		1823	716		2353	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (perm)	1520	2110		1735	1600	1360		1823	716		2353	
Volume (vph)	5	50	70	515	30	270	100	300	290	110	75	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	53	74	542	32	284	105	316	305	116	79	63
RTOR Reduction (vph)	0	65	0	0	0	156	0	0	0	0	32	0
Lane Group Flow (vph)	5	62	0	542	32	128	0	421	305	0	226	0
Heavy Vehicles (%)	0%	0%	54%	70%	0%	0%	100%	53%	90%	0%	71%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	12.8		33.2	45.2	45.2		24.3	100.0		13.7	
Effective Green, g (s)	0.8	12.8		33.2	45.2	45.2		24.3	100.0		13.7	
Actuated g/C Ratio	0.01	0.13		0.33	0.45	0.45		0.24	1.00		0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	12	270		576	723	615		443	716		322	
v/s Ratio Prot	0.00	0.03		c0.31	0.02			c0.23			c0.10	
v/s Ratio Perm						0.09			c0.43			
v/c Ratio	0.42	0.23		0.94	0.04	0.21		0.95	0.43		0.70	
Uniform Delay, d1	49.4	39.2		32.4	15.3	16.6		37.3	0.0		41.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.0		23.8	0.1	0.8		30.3	1.9		6.8	
Delay (s)	71.1	41.2		56.2	15.4	17.3		67.6	1.9		48.0	
Level of Service	E	D		E	B	B		E	A		D	
Approach Delay (s)		42.3			41.8			40.0			48.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
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		

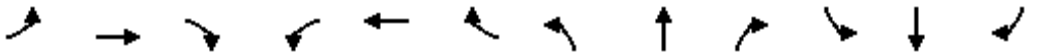
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2863	4200	1308	1490	4117		2681	2635		2863	4044	1347
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)	2863	4200	1308	1490	4117		2681	2635		2863	4044	1347
Volume (vph)	230	1155	565	105	1045	160	260	415	110	175	280	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	1216	595	111	1100	168	274	437	116	184	295	247
RTOR Reduction (vph)	0	0	320	0	23	0	0	26	0	0	0	166
Lane Group Flow (vph)	242	1216	275	111	1245	0	274	527	0	184	295	81
Heavy Vehicles (%)	3%	4%	4%	2%	4%	4%	10%	13%	7%	3%	8%	1%
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)	9.0	34.0	34.0	10.0	35.0		12.0	22.0		8.0	18.0	18.0
Effective Green, g (s)	9.0	34.0	34.0	10.0	35.0		12.0	22.0		8.0	18.0	18.0
Actuated g/C Ratio	0.10	0.38	0.38	0.11	0.39		0.13	0.24		0.09	0.20	0.20
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)	286	1587	494	166	1601		357	644		254	809	269
v/s Ratio Prot	c0.08	0.29		0.07	c0.30		0.10	c0.20		c0.06	0.07	
v/s Ratio Perm			0.21									0.06
v/c Ratio	0.85	0.77	0.56	0.67	0.78		0.77	0.82		0.72	0.36	0.30
Uniform Delay, d1	39.8	24.5	22.1	38.4	24.1		37.7	32.1		39.9	31.1	30.6
Progression Factor	0.87	0.43	0.52	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.0	2.6	3.2	9.8	3.8		9.5	11.0		9.8	1.3	2.8
Delay (s)	49.7	13.2	14.7	48.2	27.9		47.2	43.2		49.7	32.3	33.5
Level of Service	D	B	B	D	C		D	D		D	C	C
Approach Delay (s)		17.9			29.5			44.5			37.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1448	3866		1407	4102		2564	2868	1204	2201	2895	1271
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)	1448	3866		1407	4102		2564	2868	1204	2201	2895	1271
Volume (vph)	395	825	375	50	765	45	460	360	45	35	345	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	868	395	53	805	47	484	379	47	37	363	379
RTOR Reduction (vph)	0	67	0	0	6	0	0	0	32	0	0	328
Lane Group Flow (vph)	416	1196	0	53	846	0	484	379	15	37	363	51
Heavy Vehicles (%)	5%	8%	7%	8%	5%	16%	15%	6%	13%	34%	5%	7%
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)	36.8	54.4		8.0	25.6		25.6	38.6	38.6	3.0	16.0	16.0
Effective Green, g (s)	36.8	54.4		8.0	25.6		25.6	38.6	38.6	3.0	16.0	16.0
Actuated g/C Ratio	0.31	0.45		0.07	0.21		0.21	0.32	0.32	0.02	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)	444	1753		94	875		547	923	387	55	386	169
v/s Ratio Prot	c0.29	0.31		0.04	c0.21		c0.19	0.13		0.02	c0.13	
v/s Ratio Perm									0.01			0.04
v/c Ratio	0.94	0.68		0.56	0.97		0.88	0.41	0.04	0.67	0.94	0.30
Uniform Delay, d1	40.5	26.0		54.3	46.8		45.8	31.8	28.0	58.0	51.5	46.9
Progression Factor	0.61	0.39		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.2	2.0		7.5	23.5		15.7	1.4	0.2	27.8	33.0	4.5
Delay (s)	51.1	12.3		61.8	70.3		61.5	33.2	28.1	85.8	84.5	51.4
Level of Service	D	B		E	E		E	C	C	F	F	D
Approach Delay (s)		21.9			69.8			47.9			68.5	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1248	1476	2923	1357	1193
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1248	1476	2923	1357	1193
Volume (vph)	895	330	380	550	260	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	942	347	400	579	274	147
RTOR Reduction (vph)	0	80	0	0	0	105
Lane Group Flow (vph)	942	267	400	579	274	42
Heavy Vehicles (%)	3%	9%	3%	4%	12%	14%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	23.0	38.0	20.0	47.0	15.0	20.0
Effective Green, g (s)	23.0	38.0	20.0	47.0	15.0	20.0
Actuated g/C Ratio	0.33	0.54	0.29	0.67	0.21	0.29
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)	970	749	422	1963	291	341
v/s Ratio Prot	c0.32	0.08	c0.27	0.20	c0.20	0.04
v/s Ratio Perm		0.14				
v/c Ratio	0.97	0.36	0.95	0.29	0.94	0.12
Uniform Delay, d1	23.2	9.1	24.5	4.7	27.1	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.7	0.3	30.5	0.4	37.3	0.2
Delay (s)	45.9	9.4	55.0	5.1	64.3	18.7
Level of Service	D	A	D	A	E	B
Approach Delay (s)	36.1			25.5	48.4	
Approach LOS	D			C	D	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2895	1143	1421	2868	2782	1308
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2895	1143	1421	2868	2782	1308
Volume (vph)	775	370	140	670	670	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	816	389	147	705	705	474
RTOR Reduction (vph)	0	228	0	0	0	0
Lane Group Flow (vph)	816	161	147	705	705	474
Heavy Vehicles (%)	5%	19%	7%	6%	6%	4%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.8	24.8	7.2	36.0	16.0	60.0
Effective Green, g (s)	24.8	24.8	7.2	36.0	16.0	60.0
Actuated g/C Ratio	0.41	0.41	0.12	0.60	0.27	1.00
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)	1197	472	171	1721	742	1308
v/s Ratio Prot	c0.28		c0.10	0.25		
v/s Ratio Perm		0.14			c0.25	0.36
v/c Ratio	0.68	0.34	0.86	0.41	0.95	0.36
Uniform Delay, d1	14.4	12.0	25.9	6.4	21.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	2.0	32.4	0.7	21.6	0.8
Delay (s)	17.5	14.0	58.3	7.1	43.3	0.8
Level of Service	B	B	E	A	D	A
Approach Delay (s)	16.4			15.9	26.2	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3010			2951	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2951	1520	1360
Volume (vph)	535	0	0	790	50	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	563	0	0	832	53	126
RTOR Reduction (vph)	0	0	0	0	0	111
Lane Group Flow (vph)	563	0	0	832	53	15
Heavy Vehicles (%)	1%	0%	0%	3%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	45.0			45.0	7.0	7.0
Effective Green, g (s)	45.0			45.0	7.0	7.0
Actuated g/C Ratio	0.75			0.75	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)	2258			2213	177	159
v/s Ratio Prot	0.19			c0.28	c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.25			0.38	0.30	0.09
Uniform Delay, d1	2.3			2.6	24.3	23.7
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.5	1.0	0.3
Delay (s)	2.6			3.1	25.2	23.9
Level of Service	A			A	C	C
Approach Delay (s)	2.6			3.1	24.3	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	5.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	535	330	290	550	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	563	347	305	579	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked						
vC, conflicting volume			563		1637	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			563		1637	455
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			69		100	100
cM capacity (veh/h)			971		64	558

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	375	535	305	289	289
Volume Left	0	0	305	0	0
Volume Right	0	347	0	0	0
cSH	1700	1700	971	1700	1700
Volume to Capacity	0.22	0.31	0.31	0.17	0.17
Queue Length 95th (ft)	0	0	34	0	0
Control Delay (s)	0.0	0.0	10.4	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.6		
Approach LOS					

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1308		4006		2891		1124			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1308		4006		2891		1124			
Volume (vph)	0	625	260	0	495	140	470	0	280	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	658	274	0	521	147	495	0	295	0	0	0
RTOR Reduction (vph)	0	0	109	0	59	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	658	165	0	609	0	495	0	295	0	0	0
Heavy Vehicles (%)	0%	5%	4%	0%	5%	7%	2%	0%	21%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		33.1	33.1		33.1		13.9		55.0			
Effective Green, g (s)		33.1	33.1		33.1		13.9		55.0			
Actuated g/C Ratio		0.60	0.60		0.60		0.25		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1742	787		2411		731		1124			
v/s Ratio Prot		c0.23			0.15		c0.17					
v/s Ratio Perm			0.13						0.26			
v/c Ratio		0.38	0.21		0.25		0.68		0.26			
Uniform Delay, d1		5.6	5.0		5.1		18.5		0.0			
Progression Factor		0.86	0.08		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.6		0.3		2.5		0.6			
Delay (s)		5.5	1.0		5.4		21.0		0.6			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.1			5.4			13.4			0.0	
Approach LOS		A			A			B			A	

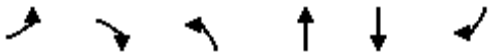
Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2827	1348		2951	1088				2681		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2827	1348		2951	1088				2681		2347
Volume (vph)	0	675	320	0	925	40	0	0	0	210	0	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	711	337	0	974	42	0	0	0	221	0	474
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	104
Lane Group Flow (vph)	0	711	337	0	974	42	0	0	0	221	0	370
Heavy Vehicles (%)	0%	3%	9%	0%	3%	25%	0%	0%	0%	10%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.8	55.0		33.8	55.0				13.2		13.2
Effective Green, g (s)		33.8	55.0		33.8	55.0				13.2		13.2
Actuated g/C Ratio		0.61	1.00		0.61	1.00				0.24		0.24
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)		1737	1348		1814	1088				643		563
v/s Ratio Prot		0.25			c0.33					0.08		c0.16
v/s Ratio Perm			0.25			0.04						
v/c Ratio		0.41	0.25		0.54	0.04				0.34		0.66
Uniform Delay, d1		5.5	0.0		6.1	0.0				17.3		18.9
Progression Factor		1.00	1.00		0.52	1.00				1.00		1.00
Incremental Delay, d2		0.7	0.1		1.0	0.0				0.3		2.8
Delay (s)		6.2	0.1		4.2	0.0				17.6		21.6
Level of Service		A	A		A	A				B		C
Approach Delay (s)		4.2			4.0			0.0			20.4	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

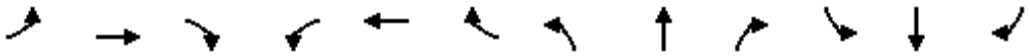
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1382	1204	1333	2895	1524	1133
Flt Permitted	0.95	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	1382	1204	834	2895	1524	1133
Volume (vph)	10	105	130	170	255	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	111	137	179	268	5
RTOR Reduction (vph)	0	100	0	0	0	1
Lane Group Flow (vph)	11	11	137	179	268	4
Heavy Vehicles (%)	10%	13%	14%	5%	5%	20%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	4.5	4.5	32.5	32.5	32.5	32.5
Effective Green, g (s)	4.5	4.5	32.5	32.5	32.5	32.5
Actuated g/C Ratio	0.10	0.10	0.72	0.72	0.72	0.72
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)	138	120	602	2091	1101	818
v/s Ratio Prot	0.01			0.06	c0.18	
v/s Ratio Perm		c0.01	0.16			0.00
v/c Ratio	0.08	0.09	0.23	0.09	0.24	0.00
Uniform Delay, d1	18.4	18.4	2.1	1.9	2.1	1.7
Progression Factor	1.00	1.00	0.78	0.71	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.8	0.1	0.5	0.0
Delay (s)	18.6	18.7	2.4	1.4	2.6	1.8
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.7			1.8	2.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

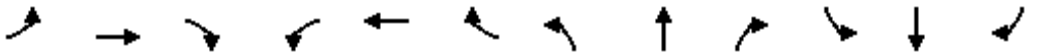
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.99	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4008	991		3855	1147	2610		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4008	991		3855	1147	2610		2347			
Volume (vph)	0	1345	490	0	1295	1190	400	0	840	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1416	516	0	1363	1253	421	0	884	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1416	516	0	1488	1119	421	0	878	0	0	0
Heavy Vehicles (%)	0%	3%	18%	0%	6%	2%	13%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		47.0	120.0		47.0	120.0	65.0		65.0			
Effective Green, g (s)		47.0	120.0		47.0	120.0	65.0		65.0			
Actuated g/C Ratio		0.39	1.00		0.39	1.00	0.54		0.54			
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)		1570	991		1510	1147	1414		1271			
v/s Ratio Prot		0.35			0.39		0.16		0.37			
v/s Ratio Perm			0.52			c0.98						
v/c Ratio		0.90	0.52		0.99	0.98	0.30		0.69			
Uniform Delay, d1		34.3	0.0		36.2	0.0	15.0		20.1			
Progression Factor		0.91	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		7.2	0.4		19.9	20.7	0.1		1.6			
Delay (s)		38.4	0.4		56.1	20.7	15.1		21.8			
Level of Service		D	A		E	C	B		C			
Approach Delay (s)		28.2			41.0			19.6			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

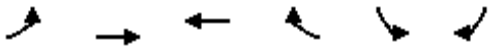
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		0.96	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3822	1083		3708	1073				2782		2237
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3822	1083		3708	1073				2782		2237
Volume (vph)	0	1305	520	0	805	890	0	0	0	530	0	740
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1374	547	0	847	937	0	0	0	558	0	779
RTOR Reduction (vph)	0	0	210	0	43	0	0	0	0	0	0	139
Lane Group Flow (vph)	0	1374	337	0	1119	622	0	0	0	558	0	640
Heavy Vehicles (%)	0%	8%	8%	0%	6%	9%	0%	0%	0%	6%	0%	7%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		74.0	74.0		74.0	120.0				38.0		38.0
Effective Green, g (s)		74.0	74.0		74.0	120.0				38.0		38.0
Actuated g/C Ratio		0.62	0.62		0.62	1.00				0.32		0.32
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)		2357	668		2287	1073				881		708
v/s Ratio Prot		0.36			0.30					0.20		
v/s Ratio Perm			0.31			c0.58						c0.29
v/c Ratio		0.58	0.50		0.49	0.58				0.63		0.90
Uniform Delay, d1		13.8	12.8		12.6	0.0				35.0		39.2
Progression Factor		1.00	1.00		0.50	1.00				1.00		1.00
Incremental Delay, d2		1.1	2.7		0.6	0.2				1.5		14.9
Delay (s)		14.8	15.5		6.9	0.2				36.5		54.1
Level of Service		B	B		A	A				D		D
Approach Delay (s)		15.0			4.6			0.0			46.8	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

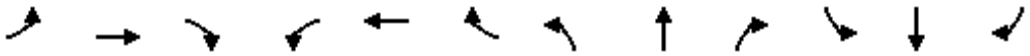
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1476	3865	3766	1347	2920	1333
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1476	3865	3766	1347	2920	1333
Volume (vph)	295	1295	1285	300	445	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	1363	1353	316	468	226
RTOR Reduction (vph)	0	0	0	186	0	181
Lane Group Flow (vph)	311	1363	1353	130	468	45
Heavy Vehicles (%)	3%	13%	16%	1%	1%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	19.0	56.0	33.0	33.0	16.0	16.0
Effective Green, g (s)	19.0	56.0	33.0	33.0	16.0	16.0
Actuated g/C Ratio	0.24	0.70	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	2706	1553	556	584	267
v/s Ratio Prot	c0.21	0.35	c0.36		c0.16	
v/s Ratio Perm				0.10		0.03
v/c Ratio	0.89	0.50	0.87	0.23	0.80	0.17
Uniform Delay, d1	29.5	5.6	21.6	15.3	30.5	26.5
Progression Factor	1.00	1.00	0.60	0.21	1.00	1.00
Incremental Delay, d2	22.4	0.7	6.7	0.9	11.1	1.4
Delay (s)	51.9	6.2	19.7	4.1	41.6	27.9
Level of Service	D	A	B	A	D	C
Approach Delay (s)		14.7	16.8		37.1	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.0%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		3865	680	760	3935		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		3865	680	760	3935		1474	680				
Volume (vph)	0	1945	500	40	2615	0	440	0	30	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2047	526	42	2753	0	463	0	32	0	0	0
RTOR Reduction (vph)	0	0	157	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	2047	369	42	2753	0	463	7	0	0	0	0
Heavy Vehicles (%)	0%	13%	100%	100%	11%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		78.0	78.0	4.0	86.0		26.0	26.0				
Effective Green, g (s)		78.0	78.0	4.0	86.0		26.0	26.0				
Actuated g/C Ratio		0.65	0.65	0.03	0.72		0.22	0.22				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2512	442	25	2820		319	147				
v/s Ratio Prot		0.53		c0.06	c0.70		c0.31	0.01				
v/s Ratio Perm			0.54									
v/c Ratio		0.81	0.84	1.68	0.98		1.45	0.05				
Uniform Delay, d1		15.6	16.1	58.0	16.0		47.0	37.2				
Progression Factor		1.00	1.00	0.84	0.45		1.00	1.00				
Incremental Delay, d2		3.0	16.8	385.6	8.3		219.9	0.1				
Delay (s)		18.7	32.9	434.4	15.5		266.9	37.3				
Level of Service		B	C	F	B		F	D				
Approach Delay (s)		21.6			21.8			252.1			0.0	
Approach LOS		C			C			F			A	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2542	4082	1966	4282	2808	2417
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2542	4082	1966	4282	2808	2417
Volume (vph)	1010	545	140	1405	400	550
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1063	574	147	1479	421	579
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1063	574	147	1479	421	579
Heavy Vehicles (%)	16%	7%	50%	2%	5%	22%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	44.0	68.6	13.4	38.0	26.0	26.0
Effective Green, g (s)	44.0	68.6	13.4	38.0	26.0	26.0
Actuated g/C Ratio	0.37	0.57	0.11	0.32	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	932	2334	220	1356	608	524
v/s Ratio Prot	c0.42	0.14	0.07	c0.35	0.15	c0.24
v/s Ratio Perm						
v/c Ratio	1.14	0.25	0.67	1.09	0.69	1.10
Uniform Delay, d1	38.0	12.8	51.2	41.0	43.3	47.0
Progression Factor	0.59	0.10	1.00	1.00	1.00	1.00
Incremental Delay, d2	71.1	0.1	7.5	53.1	3.4	71.2
Delay (s)	93.7	1.4	58.6	94.1	46.7	118.2
Level of Service	F	A	E	F	D	F
Approach Delay (s)		61.4		90.9		
Approach LOS		E		F		

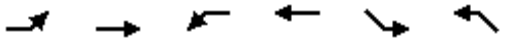
Intersection Summary			
HCM Average Control Delay	78.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2006	4368	1766	4325	2217	2564
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2006	4368	1766	4325	2217	2564
Volume (vph)	1010	1000	30	680	450	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1063	1053	32	716	474	211
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1063	1053	32	716	474	211
Heavy Vehicles (%)	47%	0%	67%	1%	33%	15%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	49.0	63.0	3.0	17.0	22.0	22.0
Effective Green, g (s)	49.0	63.0	3.0	17.0	22.0	22.0
Actuated g/C Ratio	0.49	0.63	0.03	0.17	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	983	2752	53	735	488	564
v/s Ratio Prot	c0.53	0.24	0.02	c0.17	c0.21	0.08
v/s Ratio Perm						
v/c Ratio	1.08	0.38	0.60	0.97	0.97	0.37
Uniform Delay, d1	25.5	9.0	47.9	41.3	38.7	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	53.3	0.4	17.9	27.5	33.3	0.4
Delay (s)	78.8	9.4	65.8	68.7	71.9	33.6
Level of Service	E	A	E	E	E	C
Approach Delay (s)		44.3		68.6		
Approach LOS		D		E		

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

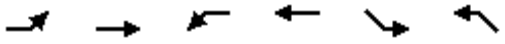
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	2815	2587	4368	2949	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	2815	2587	4368	2949	2949
Volume (vph)	540	260	220	105	960	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	568	274	232	111	1011	253
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	568	274	232	111	1011	253
Heavy Vehicles (%)	2%	8%	14%	0%	0%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	31.0	41.6	14.4	25.0	42.0	42.0
Effective Green, g (s)	31.0	41.6	14.4	25.0	42.0	42.0
Actuated g/C Ratio	0.28	0.38	0.13	0.23	0.38	0.38
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)	815	1065	339	993	1126	1126
v/s Ratio Prot	c0.20	c0.10	c0.09	0.03	c0.34	0.09
v/s Ratio Perm						
v/c Ratio	0.70	0.26	0.68	0.11	0.90	0.22
Uniform Delay, d1	35.3	23.6	45.6	33.7	32.0	23.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	0.6	5.6	0.2	9.6	0.1
Delay (s)	37.9	24.1	51.3	33.9	41.6	23.1
Level of Service	D	C	D	C	D	C
Approach Delay (s)		33.4		45.6		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2610	4241	2782	3971	2808	2499
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2610	4241	2782	3971	2808	2499
Volume (vph)	630	460	340	395	620	490
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	663	484	358	416	653	516
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	663	484	358	416	653	516
Heavy Vehicles (%)	13%	3%	6%	10%	5%	18%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.6	31.4	14.6	21.4	22.0	22.0
Effective Green, g (s)	24.6	31.4	14.6	21.4	22.0	22.0
Actuated g/C Ratio	0.31	0.39	0.18	0.27	0.28	0.28
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)	803	1665	508	1062	772	687
v/s Ratio Prot	c0.25	0.11	0.13	c0.10	c0.23	0.21
v/s Ratio Perm						
v/c Ratio	0.83	0.29	0.70	0.39	0.85	0.75
Uniform Delay, d1	25.7	16.7	30.7	24.0	27.4	26.5
Progression Factor	0.94	0.74	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.8	0.4	4.4	1.1	8.5	4.6
Delay (s)	30.0	12.6	35.1	25.1	35.9	31.1
Level of Service	C	B	D	C	D	C
Approach Delay (s)		22.6		29.7		
Approach LOS		C		C		

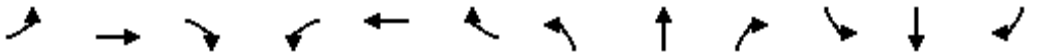
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2782	4241	2730	4160	2808	2520
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2782	4241	2730	4160	2808	2520
Volume (vph)	310	505	370	370	770	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	532	389	389	811	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	326	532	389	389	811	189
Heavy Vehicles (%)	6%	3%	8%	5%	5%	17%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.8	12.0	9.8	10.0	18.7	18.7
Effective Green, g (s)	11.8	12.0	9.8	10.0	18.7	18.7
Actuated g/C Ratio	0.22	0.23	0.19	0.19	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	625	969	510	792	1000	898
v/s Ratio Prot	0.12	c0.13	c0.14	0.09	c0.29	0.07
v/s Ratio Perm						
v/c Ratio	0.52	0.55	0.76	0.49	0.81	0.21
Uniform Delay, d1	17.9	17.9	20.2	19.0	15.3	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.6	6.7	0.5	5.1	0.1
Delay (s)	18.7	18.5	26.9	19.5	20.4	11.9
Level of Service	B	B	C	B	C	B
Approach Delay (s)		18.6		23.2		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.2%	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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4225			4282	1320			2370	2891		1153
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4225			4282	1320			2370	2891		1153
Volume (vph)	90	1475	30	0	1860	205	0	0	410	340	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1553	32	0	1958	216	0	0	432	358	0	16
RTOR Reduction (vph)	0	2	0	0	0	127	0	0	48	0	0	13
Lane Group Flow (vph)	95	1583	0	0	1958	89	0	0	384	358	0	3
Heavy Vehicles (%)	0%	3%	6%	0%	2%	3%	0%	0%	1%	2%	0%	18%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.4	47.4			37.0	37.0			15.9	14.7		14.7
Effective Green, g (s)	6.4	47.4			37.0	37.0			15.9	14.7		14.7
Actuated g/C Ratio	0.07	0.53			0.41	0.41			0.18	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)	108	2225			1760	543			419	472		188
v/s Ratio Prot	c0.06	0.37			c0.46					c0.12		
v/s Ratio Perm						0.07			c0.16			0.00
v/c Ratio	0.88	0.71			1.11	0.16			0.92	0.76		0.01
Uniform Delay, d1	41.4	16.1			26.5	16.7			36.4	36.0		31.6
Progression Factor	1.00	1.00			0.67	0.23			1.00	0.95		0.96
Incremental Delay, d2	50.1	2.0			58.6	0.6			24.5	6.7		0.0
Delay (s)	91.5	18.1			76.3	4.5			60.9	40.9		30.2
Level of Service	F	B			E	A			E	D		C
Approach Delay (s)		22.2			69.2			60.9			40.5	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM Average Control Delay	49.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2756	4200	2730	4368	2863	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2756	4200	2730	4368	2863	2835
Volume (vph)	420	515	600	355	320	900
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	542	632	374	337	947
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	542	632	374	337	947
Heavy Vehicles (%)	7%	4%	8%	0%	3%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.5	21.0	23.5	25.0	33.5	33.5
Effective Green, g (s)	19.5	21.0	23.5	25.0	33.5	33.5
Actuated g/C Ratio	0.22	0.23	0.26	0.28	0.37	0.37
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)	597	980	713	1213	1066	1055
v/s Ratio Prot	0.16	c0.13	c0.23	0.09	0.12	c0.33
v/s Ratio Perm						
v/c Ratio	0.74	0.55	0.89	0.31	0.32	0.90
Uniform Delay, d1	32.9	30.4	32.0	25.7	20.1	26.6
Progression Factor	1.01	0.78	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.1	1.4	12.7	0.7	0.2	10.1
Delay (s)	36.2	25.2	44.7	26.3	20.3	36.7
Level of Service	D	C	D	C	C	D
Approach Delay (s)		30.1		37.9		
Approach LOS		C		D		

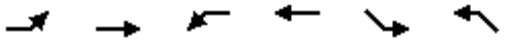
Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	3040	2730	3040	2705	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	3040	2730	3040	2705	2808
Volume (vph)	270	1110	740	380	330	600
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1168	779	400	347	632
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1168	779	400	347	632
Heavy Vehicles (%)	4%	0%	8%	0%	9%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	13.2	33.0	25.0	44.8	20.0	20.0
Effective Green, g (s)	13.2	33.0	25.0	44.8	20.0	20.0
Actuated g/C Ratio	0.15	0.37	0.28	0.50	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	1115	758	1513	601	624
v/s Ratio Prot	0.10	c0.38	c0.29	0.13	0.13	c0.23
v/s Ratio Perm						
v/c Ratio	0.68	1.05	1.03	0.26	0.58	1.01
Uniform Delay, d1	36.4	28.5	32.5	13.1	31.2	35.0
Progression Factor	1.00	1.00	0.52	0.38	1.00	1.00
Incremental Delay, d2	4.6	40.3	33.6	0.3	1.3	39.3
Delay (s)	41.0	68.8	50.3	5.3	32.6	74.3
Level of Service	D	E	D	A	C	E
Approach Delay (s)		63.3		35.0		
Approach LOS		E		D		

Intersection Summary			
HCM Average Control Delay	53.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4044	2564	4241	2782	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4044	2564	4241	2782	2835
Volume (vph)	420	770	490	715	320	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	811	516	753	337	568
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	811	516	753	337	568
Heavy Vehicles (%)	2%	8%	15%	3%	6%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	22.9	42.5	37.0	56.6	28.5	28.5
Effective Green, g (s)	22.9	42.5	37.0	56.6	28.5	28.5
Actuated g/C Ratio	0.19	0.35	0.31	0.47	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	1432	791	2000	661	673
v/s Ratio Prot	c0.15	c0.20	c0.20	0.18	0.12	c0.20
v/s Ratio Perm						
v/c Ratio	0.80	0.57	0.65	0.38	0.51	0.84
Uniform Delay, d1	46.4	31.3	35.9	20.4	39.7	43.6
Progression Factor	1.00	1.00	0.41	0.36	1.00	1.00
Incremental Delay, d2	8.2	1.6	1.0	0.3	0.6	9.5
Delay (s)	54.5	32.9	15.7	7.6	40.3	53.1
Level of Service	D	C	B	A	D	D
Approach Delay (s)		40.6		10.9		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2739			2171	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2739			2171	760	680
Volume (vph)	185	0	0	240	135	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	0	0	253	142	174
RTOR Reduction (vph)	0	0	0	0	0	57
Lane Group Flow (vph)	195	0	0	253	142	117
Heavy Vehicles (%)	11%	0%	0%	40%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.6			11.6	40.4	40.4
Effective Green, g (s)	11.6			11.6	40.4	40.4
Actuated g/C Ratio	0.19			0.19	0.67	0.67
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)	530			420	512	458
v/s Ratio Prot	0.07			c0.12	c0.19	
v/s Ratio Perm						0.17
v/c Ratio	0.37			0.60	0.28	0.26
Uniform Delay, d1	21.0			22.1	3.9	3.9
Progression Factor	0.75			1.00	1.00	1.00
Incremental Delay, d2	0.4			2.4	1.3	1.3
Delay (s)	16.2			24.5	5.3	5.2
Level of Service	B			C	A	A
Approach Delay (s)	16.2			24.5	5.2	
Approach LOS	B			C	A	

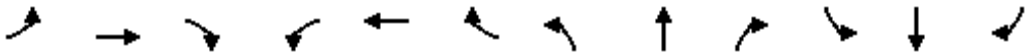
Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2739	680	760	2040		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2739	680	760	2040		
Volume (vph)	185	75	95	280	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	79	100	295	0	0
RTOR Reduction (vph)	0	26	0	0	0	0
Lane Group Flow (vph)	195	53	100	295	0	0
Heavy Vehicles (%)	11%	100%	100%	49%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	40.6	40.6	11.4	60.0		
Effective Green, g (s)	40.6	40.6	11.4	60.0		
Actuated g/C Ratio	0.68	0.68	0.19	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1853	460	144	2040		
v/s Ratio Prot	0.07		c0.13	c0.14		
v/s Ratio Perm		0.08				
v/c Ratio	0.11	0.12	0.69	0.14		
Uniform Delay, d1	3.4	3.4	22.7	0.0		
Progression Factor	1.00	1.00	0.67	1.00		
Incremental Delay, d2	0.0	0.1	12.2	0.0		
Delay (s)	3.4	3.5	27.4	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.4			7.0	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

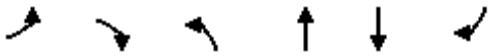
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.93		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1260	1295	1126	949		1448	2596		1206	2892	
Flt Permitted	0.31	1.00	1.00	0.69	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	480	1260	1295	821	949		1448	2596		1206	2892	
Volume (vph)	10	95	400	90	95	95	150	450	110	55	725	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	100	421	95	100	100	158	474	116	58	763	5
RTOR Reduction (vph)	0	0	131	0	39	0	0	17	0	0	1	0
Lane Group Flow (vph)	11	100	290	95	161	0	158	573	0	58	767	0
Heavy Vehicles (%)	5%	27%	5%	35%	47%	65%	5%	5%	49%	26%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.5	13.5	29.0	21.3	21.3		15.5	53.5		8.4	46.4	
Effective Green, g (s)	13.5	13.5	29.0	21.3	21.3		15.5	53.5		8.4	46.4	
Actuated g/C Ratio	0.14	0.14	0.29	0.21	0.21		0.16	0.54		0.08	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)	73	170	376	201	202		224	1389		101	1342	
v/s Ratio Prot	0.00	0.08	c0.12	0.04	c0.17		0.11	0.22		0.05	c0.27	
v/s Ratio Perm	0.02		0.10	0.06								
v/c Ratio	0.15	0.59	0.77	0.47	0.80		0.71	0.41		0.57	0.57	
Uniform Delay, d1	38.2	40.6	32.5	35.0	37.3		40.1	13.9		44.1	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	5.1	9.4	1.8	19.4		9.7	0.9		7.7	1.8	
Delay (s)	39.1	45.8	41.8	36.8	56.8		49.8	14.8		51.8	21.3	
Level of Service	D	D	D	D	E		D	B		D	C	
Approach Delay (s)		42.5			50.3			22.2			23.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

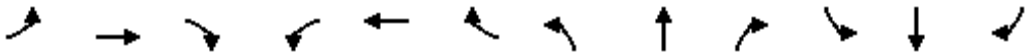
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1843	993	1086	5242	2710	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1843	993	1086	5242	2710	
Volume (vph)	255	95	85	985	960	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	268	100	89	1037	1011	163
RTOR Reduction (vph)	0	83	0	0	12	0
Lane Group Flow (vph)	268	17	89	1037	1162	0
Heavy Vehicles (%)	60%	37%	40%	5%	5%	40%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	17.2	17.2	9.5	55.3	61.3	
Effective Green, g (s)	17.2	17.2	9.5	55.3	61.3	
Actuated g/C Ratio	0.17	0.17	0.10	0.55	0.61	
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)	317	171	103	2899	1661	
v/s Ratio Prot	c0.15		c0.08	0.20	c0.43	
v/s Ratio Perm		0.02				
v/c Ratio	0.85	0.10	0.86	0.36	0.70	
Uniform Delay, d1	40.1	34.9	44.6	12.5	13.1	
Progression Factor	1.00	1.00	1.00	1.00	0.08	
Incremental Delay, d2	18.3	0.3	48.2	0.3	0.8	
Delay (s)	58.4	35.1	92.8	12.8	1.8	
Level of Service	E	D	F	B	A	
Approach Delay (s)	52.1			19.1	1.8	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

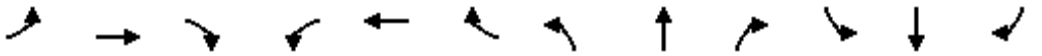
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.87			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2730	1331			2598	2081	1490	2763	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1345		2730	1331			2598	2081	1490	2763	
Volume (vph)	5	0	5	100	5	30	0	980	255	25	1025	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	105	5	32	0	1032	268	26	1079	5
RTOR Reduction (vph)	0	4	0	0	22	0	0	0	120	0	1	0
Lane Group Flow (vph)	0	6	0	105	15	0	0	1032	148	26	1083	0
Heavy Vehicles (%)	2%	2%	2%	8%	2%	5%	2%	17%	15%	2%	10%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		17.2		9.1	30.3			55.3	55.3	2.4	48.2	
Effective Green, g (s)		17.2		9.1	30.3			55.3	55.3	2.4	48.2	
Actuated g/C Ratio		0.17		0.09	0.30			0.55	0.55	0.02	0.48	
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)		231		248	403			1437	1151	36	1332	
v/s Ratio Prot				c0.04	c0.01			c0.40	0.07	0.02	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.42	0.04			0.72	0.13	0.72	0.81	
Uniform Delay, d1		34.4		43.0	24.6			16.6	10.8	48.5	22.1	
Progression Factor		1.00		1.00	1.00			0.55	0.33	1.00	1.00	
Incremental Delay, d2		0.0		1.2	0.0			2.8	0.2	52.1	5.5	
Delay (s)		34.5		44.1	24.6			12.0	3.8	100.6	27.6	
Level of Service		C		D	C			B	A	F	C	
Approach Delay (s)		34.5			39.0			10.3			29.3	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

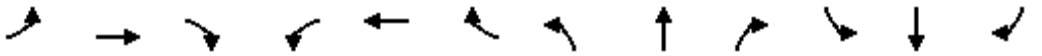
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	4148		2956	4219	1376	1538	4107	2377	2984	4071	2355
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	4148		2956	4219	1376	1538	4107	2377	2984	4071	2355
Volume (vph)	155	640	45	305	345	345	55	675	930	265	765	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	674	47	321	363	363	58	711	979	279	805	279
RTOR Reduction (vph)	0	8	0	0	0	109	0	0	24	0	0	145
Lane Group Flow (vph)	163	713	0	321	363	254	58	711	955	279	805	134
Heavy Vehicles (%)	8%	11%	8%	6%	10%	5%	5%	13%	7%	5%	14%	8%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	17.7	22.2		25.7	30.2	43.0	5.6	23.3	49.0	12.8	30.5	48.2
Effective Green, g (s)	17.7	22.2		25.7	30.2	43.0	5.6	23.3	49.0	12.8	30.5	48.2
Actuated g/C Ratio	0.18	0.22		0.26	0.30	0.43	0.06	0.23	0.49	0.13	0.30	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	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)	265	921		760	1274	647	86	957	1260	382	1242	1229
v/s Ratio Prot	0.11	c0.17		0.11	0.09	0.05	0.04	0.17	c0.19	c0.09	c0.20	0.02
v/s Ratio Perm						0.13			0.21			0.04
v/c Ratio	0.62	0.77		0.42	0.28	0.39	0.67	0.74	0.76	0.73	0.65	0.11
Uniform Delay, d1	38.0	36.5		31.0	26.7	19.5	46.3	35.6	20.7	41.9	30.1	14.2
Progression Factor	0.87	0.88		0.86	0.42	0.15	0.61	0.30	0.69	0.92	0.89	1.26
Incremental Delay, d2	4.1	6.2		0.3	0.5	0.4	11.5	3.1	1.6	6.8	2.5	0.0
Delay (s)	37.2	38.2		27.1	11.7	3.2	40.0	13.8	15.8	45.6	29.3	17.9
Level of Service	D	D		C	B	A	D	B	B	D	C	B
Approach Delay (s)		38.0			13.4			15.8			30.3	
Approach LOS		D			B			B			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

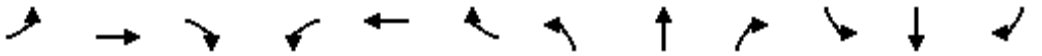
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4181	1302		4258					2984	1619	2422
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4181	1302		4258					2984	1619	2422
Volume (vph)	0	745	410	0	665	0	0	0	0	95	340	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	784	432	0	700	0	0	0	0	100	358	242
RTOR Reduction (vph)	0	0	134	0	0	0	0	0	0	0	0	180
Lane Group Flow (vph)	0	784	298	0	700	0	0	0	0	100	358	62
Heavy Vehicles (%)	0%	11%	11%	11%	9%	0%	0%	0%	0%	5%	5%	5%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		66.4	66.4		66.4					25.6	25.6	25.6
Effective Green, g (s)		66.4	66.4		66.4					25.6	25.6	25.6
Actuated g/C Ratio		0.66	0.66		0.66					0.26	0.26	0.26
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)		2776	865		2827					764	414	620
v/s Ratio Prot		0.19			0.16					0.03	c0.22	
v/s Ratio Perm			c0.23									0.03
v/c Ratio		0.28	0.34		0.25					0.13	0.86	0.10
Uniform Delay, d1		6.9	7.3		6.8					28.6	35.5	28.4
Progression Factor		1.00	1.00		0.41					1.00	1.00	1.00
Incremental Delay, d2		0.3	1.1		0.2					0.1	16.9	0.1
Delay (s)		7.2	8.4		3.0					28.7	52.4	28.5
Level of Service		A	A		A					C	D	C
Approach Delay (s)		7.6			3.0			0.0			40.8	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

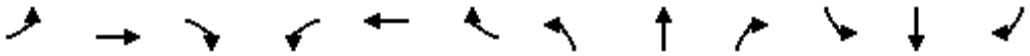
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	3312	2656	3273	3374	1495	3273	1656		1671	1776	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	3312	2656	3273	3374	1495	3273	1656		1671	1776	1495
Volume (vph)	30	770	1035	210	770	30	200	55	45	35	255	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	811	1089	221	811	32	211	58	47	37	268	26
RTOR Reduction (vph)	0	0	129	0	0	14	0	28	0	0	0	21
Lane Group Flow (vph)	32	811	960	221	811	18	211	77	0	37	268	5
Heavy Vehicles (%)	9%	9%	7%	7%	7%	8%	7%	7%	7%	8%	7%	8%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	37.4	55.0	10.3	44.1	51.7	17.6	28.7		7.6	18.7	18.7
Effective Green, g (s)	3.6	37.4	55.0	10.3	44.1	51.7	17.6	28.7		7.6	18.7	18.7
Actuated g/C Ratio	0.04	0.37	0.55	0.10	0.44	0.52	0.18	0.29		0.08	0.19	0.19
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)	60	1239	1461	337	1488	773	576	475		127	332	280
v/s Ratio Prot	0.02	0.24	c0.12	c0.07	0.24	0.00	0.06	0.05		0.02	c0.15	
v/s Ratio Perm			0.25			0.01						0.00
v/c Ratio	0.53	0.65	0.66	0.66	0.55	0.02	0.37	0.16		0.29	0.81	0.02
Uniform Delay, d1	47.4	25.9	15.9	43.1	20.6	11.8	36.3	26.7		43.7	38.9	33.2
Progression Factor	0.84	0.74	0.63	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.7	0.7	4.5	1.4	0.0	0.4	0.2		1.3	13.4	0.0
Delay (s)	45.3	20.9	10.6	47.7	22.0	11.8	36.7	26.8		44.9	52.3	33.2
Level of Service	D	C	B	D	C	B	D	C		D	D	C
Approach Delay (s)		15.5			27.0			33.4			50.0	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	23.6	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	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

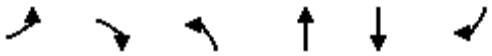
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3047	1338					5365	1363	2956	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3047	1338					5365	1363	2956	4071	
Volume (vph)	0	255	495	0	0	0	0	1660	450	265	850	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	268	521	0	0	0	0	1747	474	279	895	0
RTOR Reduction (vph)	0	0	79	0	0	0	0	0	204	0	0	0
Lane Group Flow (vph)	0	268	442	0	0	0	0	1747	270	279	895	0
Heavy Vehicles (%)	0%	6%	8%	0%	0%	0%	0%	9%	6%	6%	14%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		35.1	35.1					41.0	41.0	11.9	56.9	
Effective Green, g (s)		35.1	35.1					41.0	41.0	11.9	56.9	
Actuated g/C Ratio		0.35	0.35					0.41	0.41	0.12	0.57	
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)		1069	470					2200	559	352	2316	
v/s Ratio Prot		0.09						c0.33		c0.09	0.22	
v/s Ratio Perm			c0.33						0.20			
v/c Ratio		0.25	0.94					0.79	0.48	0.79	0.39	
Uniform Delay, d1		23.1	31.4					25.8	21.7	42.8	11.9	
Progression Factor		0.66	0.71					1.00	1.00	0.63	0.56	
Incremental Delay, d2		0.1	22.8					3.1	3.0	9.6	0.4	
Delay (s)		15.3	45.2					28.9	24.7	36.6	7.1	
Level of Service		B	D					C	C	D	A	
Approach Delay (s)		35.0			0.0			28.0			14.1	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

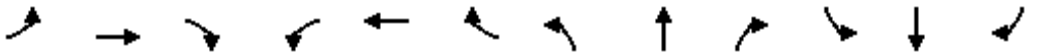
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2377		4219	4144	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2377		4219	4144	
Volume (vph)	0	300	0	1175	995	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	316	0	1237	1047	0
RTOR Reduction (vph)	0	135	0	0	0	0
Lane Group Flow (vph)	0	181	0	1237	1047	0
Heavy Vehicles (%)	0%	7%	0%	10%	12%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		11.8		80.2	80.2	
Effective Green, g (s)		11.8		80.2	80.2	
Actuated g/C Ratio		0.12		0.80	0.80	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		280		3384	3323	
v/s Ratio Prot				c0.29	0.25	
v/s Ratio Perm		c0.08				
v/c Ratio		0.65		0.37	0.32	
Uniform Delay, d1		42.1		2.8	2.6	
Progression Factor		1.00		0.60	1.00	
Incremental Delay, d2		5.1		0.2	0.2	
Delay (s)		47.2		1.9	2.9	
Level of Service		D		A	A	
Approach Delay (s)	47.2			1.9	2.9	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

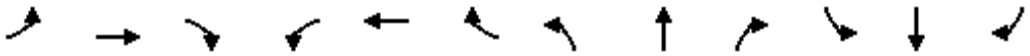
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3967	1363	1553	3967	1431	1509	3076	1363	1599	3106	1156
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3967	1363	1553	3967	1431	1509	3076	1363	1599	3106	1156
Volume (vph)	195	1075	130	100	1135	55	115	485	140	90	545	160
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)	212	1168	141	109	1234	60	125	527	152	98	592	174
RTOR Reduction (vph)	0	0	79	0	0	38	0	0	49	0	0	31
Lane Group Flow (vph)	212	1168	62	109	1234	22	125	527	103	98	592	143
Heavy Vehicles (%)	20%	17%	6%	4%	17%	1%	7%	5%	6%	1%	4%	25%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.4	43.8	43.8	9.6	36.0	36.0	9.9	22.0	31.6	8.6	20.7	38.1
Effective Green, g (s)	17.4	43.8	43.8	9.6	36.0	36.0	9.9	22.0	31.6	8.6	20.7	38.1
Actuated g/C Ratio	0.17	0.44	0.44	0.10	0.36	0.36	0.10	0.22	0.32	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	234	1738	597	149	1428	515	149	677	485	138	643	487
v/s Ratio Prot	c0.16	0.29		0.07	c0.31		c0.08	0.17	0.02	0.06	c0.19	0.05
v/s Ratio Perm			0.05			0.02			0.06			0.07
v/c Ratio	0.91	0.67	0.10	0.73	0.86	0.04	0.84	0.78	0.21	0.71	0.92	0.29
Uniform Delay, d1	40.5	22.4	16.5	43.9	29.7	20.8	44.3	36.7	25.1	44.5	38.8	21.6
Progression Factor	1.07	1.04	2.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.8	2.0	0.3	16.8	7.2	0.2	31.8	5.6	0.2	15.8	18.6	0.3
Delay (s)	76.1	25.3	46.2	60.8	36.9	20.9	76.1	42.3	25.3	60.3	57.5	21.9
Level of Service	E	C	D	E	D	C	E	D	C	E	E	C
Approach Delay (s)		34.3			38.1			44.4			50.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

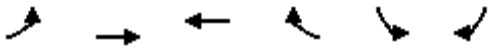
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2338	4433			4510	1246	2527		1290			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2338	4433			4510	1246	2527		1290			
Volume (vph)	185	1265	0	0	1085	415	105	0	115	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)	201	1375	0	0	1179	451	114	0	125	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	157	0	0	69	0	0	0
Lane Group Flow (vph)	201	1375	0	0	1179	294	114	0	56	0	0	0
Heavy Vehicles (%)	34%	17%	0%	0%	15%	16%	24%	0%	12%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	12.4	81.6			65.2	65.2	10.4		10.4			
Effective Green, g (s)	12.4	81.6			65.2	65.2	10.4		10.4			
Actuated g/C Ratio	0.12	0.82			0.65	0.65	0.10		0.10			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	290	3617			2941	812	263		134			
v/s Ratio Prot	c0.09	0.31			c0.26							
v/s Ratio Perm						0.24	c0.05		0.04			
v/c Ratio	0.69	0.38			0.40	0.36	0.43		0.42			
Uniform Delay, d1	42.0	2.5			8.2	7.9	42.0		42.0			
Progression Factor	0.86	1.78			0.26	0.34	1.00		1.00			
Incremental Delay, d2	6.7	0.3			0.3	0.8	1.1		2.1			
Delay (s)	42.9	4.6			2.4	3.5	43.2		44.1			
Level of Service	D	A			A	A	D		D			
Approach Delay (s)		9.5			2.7			43.6			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6206	4510		3183	2330
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6206	4510		3183	2330
Volume (vph)	0	940	1190	0	510	295
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1022	1293	0	554	321
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	0	1022	1293	0	554	284
Heavy Vehicles (%)	0%	24%	15%	0%	10%	22%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		51.0	51.0		41.0	41.0
Effective Green, g (s)		51.0	51.0		41.0	41.0
Actuated g/C Ratio		0.51	0.51		0.41	0.41
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)		3165	2300		1305	955
v/s Ratio Prot		0.16	c0.29			
v/s Ratio Perm					c0.17	0.12
v/c Ratio		0.32	0.56		0.42	0.30
Uniform Delay, d1		14.4	16.8		21.1	19.8
Progression Factor		0.31	0.46		1.00	1.00
Incremental Delay, d2		0.2	0.9		1.0	0.8
Delay (s)		4.7	8.7		22.1	20.6
Level of Service		A	A		C	C
Approach Delay (s)		4.7	8.7		21.5	
Approach LOS		A	A		C	

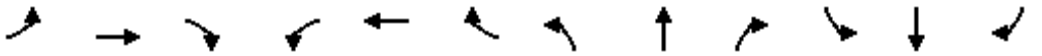
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1590	3967	1445	1062	5007	1027	1615	850	1204	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.59	1.00	1.00	0.59	1.00	1.00
Satd. Flow (perm)	1590	3967	1445	1062	5007	1027	1010	850	1204	498	1615	722
Volume (vph)	375	820	80	225	1035	225	30	20	50	70	235	165
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)	408	891	87	245	1125	245	33	22	54	76	255	179
RTOR Reduction (vph)	0	0	56	0	0	146	0	0	32	0	0	50
Lane Group Flow (vph)	408	891	31	245	1125	99	33	22	22	76	255	129
Heavy Vehicles (%)	97%	17%	0%	52%	10%	14%	0%	100%	20%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	28.5	35.6	35.6	26.6	33.7	40.6	17.3	14.9	41.5	25.8	19.4	47.9
Effective Green, g (s)	28.5	35.6	35.6	26.6	33.7	40.6	17.3	14.9	41.5	25.8	19.4	47.9
Actuated g/C Ratio	0.28	0.36	0.36	0.27	0.34	0.41	0.17	0.15	0.42	0.26	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	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	453	1412	514	282	1687	458	189	127	548	150	313	375
v/s Ratio Prot	c0.26	0.22		0.23	c0.22	0.01	0.00	0.03	0.01	c0.04	c0.16	0.10
v/s Ratio Perm			0.02			0.08	0.03		0.01	0.10		0.08
v/c Ratio	0.90	0.63	0.06	0.87	0.67	0.22	0.17	0.17	0.04	0.51	0.81	0.34
Uniform Delay, d1	34.4	26.7	21.2	35.0	28.3	19.3	34.9	37.2	17.4	30.8	38.6	16.2
Progression Factor	1.00	1.00	1.00	1.29	0.69	0.03	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.7	2.2	0.2	21.1	1.8	0.2	0.4	0.7	0.0	2.7	14.9	0.6
Delay (s)	55.1	28.9	21.4	66.4	21.5	0.7	35.4	37.8	17.4	33.5	53.5	16.8
Level of Service	E	C	C	E	C	A	D	D	B	C	D	B
Approach Delay (s)		36.1			25.2			27.0			37.6	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3967	1363	1553	3967	1431	1509	3076	1363	1599	3106	1156
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3967	1363	1553	3967	1431	1509	3076	1363	1599	3106	1156
Volume (vph)	195	1075	130	100	1135	55	115	485	140	90	545	160
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)	212	1168	141	109	1234	60	125	527	152	98	592	174
RTOR Reduction (vph)	0	0	79	0	0	38	0	0	49	0	0	31
Lane Group Flow (vph)	212	1168	62	109	1234	22	125	527	103	98	592	143
Heavy Vehicles (%)	20%	17%	6%	4%	17%	1%	7%	5%	6%	1%	4%	25%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.5	43.8	43.8	9.6	35.9	35.9	9.9	22.0	31.6	8.6	20.7	38.2
Effective Green, g (s)	17.5	43.8	43.8	9.6	35.9	35.9	9.9	22.0	31.6	8.6	20.7	38.2
Actuated g/C Ratio	0.18	0.44	0.44	0.10	0.36	0.36	0.10	0.22	0.32	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	1738	597	149	1424	514	149	677	485	138	643	488
v/s Ratio Prot	c0.16	0.29		0.07	c0.31		c0.08	0.17	0.02	0.06	c0.19	0.05
v/s Ratio Perm			0.05			0.02			0.06			0.07
v/c Ratio	0.90	0.67	0.10	0.73	0.87	0.04	0.84	0.78	0.21	0.71	0.92	0.29
Uniform Delay, d1	40.4	22.4	16.5	43.9	29.8	20.9	44.3	36.7	25.1	44.5	38.8	21.5
Progression Factor	1.17	1.18	3.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.3	1.9	0.3	16.8	7.3	0.2	31.8	5.6	0.2	15.8	18.6	0.3
Delay (s)	77.6	28.4	55.3	60.8	37.1	21.0	76.1	42.3	25.3	60.3	57.5	21.8
Level of Service	E	C	E	E	D	C	E	D	C	E	E	C
Approach Delay (s)		37.7			38.3			44.4			50.6	
Approach LOS		D			D			D			D	

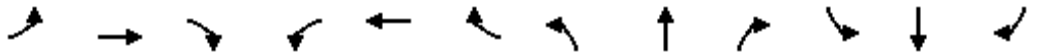
Intersection Summary			
HCM Average Control Delay	41.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2613	4433			6691	1392	2824		1442			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2613	4433			6691	1392	2824		1442			
Volume (vph)	185	1195	0	0	1085	415	270	0	185	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)	201	1299	0	0	1179	451	293	0	201	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	236	0	0	53	0	0	0
Lane Group Flow (vph)	201	1299	0	0	1179	215	293	0	148	0	0	0
Heavy Vehicles (%)	34%	17%	0%	0%	15%	16%	24%	0%	12%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	12.4	64.0			47.6	47.6	28.0		28.0			
Effective Green, g (s)	12.4	64.0			47.6	47.6	28.0		28.0			
Actuated g/C Ratio	0.12	0.64			0.48	0.48	0.28		0.28			
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)	324	2837			3185	663	791		404			
v/s Ratio Prot	c0.08	c0.29			0.18							
v/s Ratio Perm						0.15	c0.10		0.10			
v/c Ratio	0.62	0.46			0.37	0.32	0.37		0.37			
Uniform Delay, d1	41.6	9.2			16.7	16.2	28.9		28.9			
Progression Factor	0.76	1.18			0.29	0.52	1.00		1.00			
Incremental Delay, d2	3.4	0.5			0.2	0.8	1.3		2.6			
Delay (s)	34.8	11.3			5.0	9.2	30.3		31.5			
Level of Service	C	B			A	A	C		C			
Approach Delay (s)		14.5			6.2			30.7			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

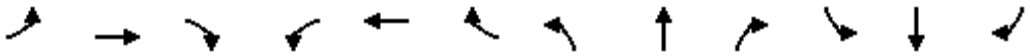
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6206	2543	3133	4510					3183		2330
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6206	2543	3133	4510					3183		2330
Volume (vph)	0	870	405	215	1140	0	0	0	0	510	0	295
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	946	440	234	1239	0	0	0	0	554	0	321
RTOR Reduction (vph)	0	0	260	0	0	0	0	0	0	0	0	68
Lane Group Flow (vph)	0	946	180	234	1239	0	0	0	0	554	0	253
Heavy Vehicles (%)	0%	24%	0%	0%	15%	0%	0%	0%	0%	10%	0%	22%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		41.0	41.0	12.0	57.0					35.0		35.0
Effective Green, g (s)		41.0	41.0	12.0	57.0					35.0		35.0
Actuated g/C Ratio		0.41	0.41	0.12	0.57					0.35		0.35
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)		2544	1043	376	2571					1114		816
v/s Ratio Prot		0.15		c0.07	c0.27							
v/s Ratio Perm			0.07							c0.17		0.11
v/c Ratio		0.37	0.17	0.62	0.48					0.50		0.31
Uniform Delay, d1		20.5	18.7	41.8	12.7					25.6		23.7
Progression Factor		1.00	1.00	0.96	0.38					1.00		1.00
Incremental Delay, d2		0.4	0.4	3.0	0.6					1.6		1.0
Delay (s)		21.0	19.1	43.4	5.4					27.2		24.7
Level of Service		C	B	D	A					C		C
Approach Delay (s)		20.4			11.4			0.0			26.3	
Approach LOS		C			B			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)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

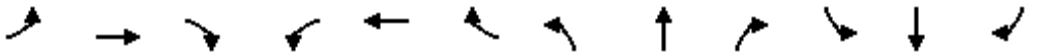


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.85		1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (prot)	760	2106		1714	1495	1347		1883	701		2295	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (perm)	760	2106		1714	1495	1347		1883	701		2295	
Volume (vph)	5	5	385	555	55	390	95	145	170	325	115	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	405	584	58	411	100	153	179	342	121	11
RTOR Reduction (vph)	0	336	0	0	0	212	0	0	0	0	2	0
Lane Group Flow (vph)	5	74	0	584	58	199	0	253	179	0	472	0
Heavy Vehicles (%)	100%	20%	23%	72%	7%	1%	42%	69%	94%	4%	96%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	1.0	17.0		32.5	48.5	48.5		15.5	100.0		19.0	
Effective Green, g (s)	1.0	17.0		32.5	48.5	48.5		15.5	100.0		19.0	
Actuated g/C Ratio	0.01	0.17		0.32	0.48	0.48		0.16	1.00		0.19	
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)	8	358		557	725	653		292	701		436	
v/s Ratio Prot	0.01	0.04		c0.34	0.04			c0.13			c0.21	
v/s Ratio Perm						c0.15			0.26			
v/c Ratio	0.62	0.21		1.05	0.08	0.31		0.87	0.26		1.23dl	
Uniform Delay, d1	49.3	35.7		33.8	13.8	15.6		41.2	0.0		40.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	97.8	1.3		51.4	0.2	1.2		22.6	0.9		67.4	
Delay (s)	147.1	37.0		85.2	14.0	16.8		63.8	0.9		107.9	
Level of Service	F	D		F	B	B		E	A		F	
Approach Delay (s)		38.3			54.6			37.7			107.9	
Approach LOS		D			D			D			F	

Intersection Summary			
HCM Average Control Delay	59.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

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

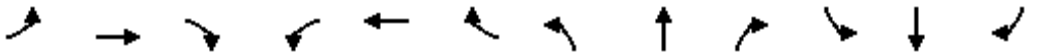
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	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)	2920	4325	1347	1505	4147		2891	2857		2920	4325	1360
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)	2920	4325	1347	1505	4147		2891	2857		2920	4325	1360
Volume (vph)	265	1155	400	130	1000	115	220	440	110	265	665	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	1216	421	137	1053	121	232	463	116	279	700	389
RTOR Reduction (vph)	0	0	246	0	17	0	0	28	0	0	0	219
Lane Group Flow (vph)	279	1216	175	137	1157	0	232	551	0	279	700	170
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	2%	4%	0%	1%	1%	0%
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)	9.8	29.0	29.0	9.0	28.2		8.9	18.0		8.0	17.1	17.1
Effective Green, g (s)	9.8	29.0	29.0	9.0	28.2		8.9	18.0		8.0	17.1	17.1
Actuated g/C Ratio	0.12	0.36	0.36	0.11	0.35		0.11	0.22		0.10	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
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)	358	1568	488	169	1462		322	643		292	924	291
v/s Ratio Prot	0.10	c0.28		0.09	c0.28		0.08	c0.19		0.10	c0.16	
v/s Ratio Perm			0.13									0.13
v/c Ratio	0.78	0.78	0.36	0.81	0.79		0.72	0.86		0.96	0.76	0.59
Uniform Delay, d1	34.1	22.6	18.7	34.7	23.3		34.3	29.8		35.8	29.5	28.3
Progression Factor	0.97	0.67	0.55	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	2.3	1.2	24.6	4.5		7.7	13.8		40.4	5.8	8.4
Delay (s)	39.3	17.3	11.5	59.3	27.7		42.1	43.6		76.2	35.3	36.6
Level of Service	D	B	B	E	C		D	D		E	D	D
Approach Delay (s)		19.2			31.0			43.1			44.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
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)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	0.99		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)	1505	4030		1520	4159		2891	2980	1283	2808	3010	1308
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)	1505	4030		1520	4159		2891	2980	1283	2808	3010	1308
Volume (vph)	275	1390	600	75	825	50	575	775	80	170	670	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	289	1463	632	79	868	53	605	816	84	179	705	168
RTOR Reduction (vph)	0	71	0	0	6	0	0	0	60	0	0	136
Lane Group Flow (vph)	289	2024	0	79	915	0	605	816	24	179	705	32
Heavy Vehicles (%)	1%	5%	0%	0%	4%	6%	2%	2%	6%	5%	1%	4%
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)	21.0	49.0		4.0	32.0		20.0	32.0	32.0	9.0	21.0	21.0
Effective Green, g (s)	21.0	49.0		4.0	32.0		20.0	32.0	32.0	9.0	21.0	21.0
Actuated g/C Ratio	0.19	0.45		0.04	0.29		0.18	0.29	0.29	0.08	0.19	0.19
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)	287	1795		55	1210		526	867	373	230	575	250
v/s Ratio Prot	0.19	c0.50		c0.05	0.22		c0.21	0.27		0.06	c0.23	
v/s Ratio Perm									0.02			0.02
v/c Ratio	1.01	1.13		1.44	0.76		1.15	0.94	0.07	0.78	1.23	0.13
Uniform Delay, d1	44.5	30.5		53.0	35.4		45.0	38.1	28.2	49.5	44.5	36.9
Progression Factor	1.05	0.36		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	49.8	63.9		273.7	4.4		87.8	19.2	0.3	15.2	116.6	1.1
Delay (s)	96.7	74.9		326.7	39.9		132.8	57.3	28.5	64.7	161.1	38.0
Level of Service	F	E		F	D		F	E	C	E	F	D
Approach Delay (s)		77.6			62.5			86.0			125.0	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM Average Control Delay	85.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3010	1360	1520	3010	1448	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3010	1360	1520	3010	1448	1360
Volume (vph)	1375	360	370	725	190	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1447	379	389	763	200	200
RTOR Reduction (vph)	0	55	0	0	0	151
Lane Group Flow (vph)	1447	324	389	763	200	49
Heavy Vehicles (%)	1%	0%	0%	1%	5%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	32.0	41.0	17.0	53.0	9.0	17.0
Effective Green, g (s)	32.0	41.0	17.0	53.0	9.0	17.0
Actuated g/C Ratio	0.46	0.59	0.24	0.76	0.13	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1376	874	369	2279	186	330
v/s Ratio Prot	c0.48	0.05	c0.26	0.25	c0.14	0.04
v/s Ratio Perm		0.19				
v/c Ratio	1.05	0.37	1.05	0.33	1.08	0.15
Uniform Delay, d1	19.0	7.7	26.5	2.8	30.5	20.8
Progression Factor	0.49	0.12	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.8	0.2	61.8	0.4	87.4	0.2
Delay (s)	45.0	1.1	88.3	3.2	117.9	21.0
Level of Service	D	A	F	A	F	C
Approach Delay (s)	35.9			31.9	69.5	
Approach LOS	D			C	E	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3010	1320	1421	3010	2863	1320
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3010	1320	1421	3010	2863	1320
Volume (vph)	1145	380	140	775	290	590
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1205	400	147	816	305	621
RTOR Reduction (vph)	0	196	0	0	0	0
Lane Group Flow (vph)	1205	204	147	816	305	621
Heavy Vehicles (%)	1%	3%	7%	1%	3%	3%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	35.7	35.7	10.0	49.7	12.3	70.0
Effective Green, g (s)	35.7	35.7	10.0	49.7	12.3	70.0
Actuated g/C Ratio	0.51	0.51	0.14	0.71	0.18	1.00
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)	1535	673	203	2137	503	1320
v/s Ratio Prot	c0.40		c0.10	0.27		
v/s Ratio Perm		0.15			0.11	c0.47
v/c Ratio	0.79	0.30	0.72	0.38	0.61	0.47
Uniform Delay, d1	14.0	9.9	28.7	4.0	26.6	0.0
Progression Factor	1.00	1.00	1.05	0.87	1.00	1.00
Incremental Delay, d2	4.1	1.2	11.0	0.5	2.1	1.2
Delay (s)	18.1	11.1	41.2	4.0	28.7	1.2
Level of Service	B	B	D	A	C	A
Approach Delay (s)	16.4			9.7	10.3	
Approach LOS	B			A	B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	3040			2980	1520	1320
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3040			2980	1520	1320
Volume (vph)	1450	0	0	1000	10	300
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1526	0	0	1053	11	316
RTOR Reduction (vph)	0	0	0	0	0	21
Lane Group Flow (vph)	1526	0	0	1053	11	295
Heavy Vehicles (%)	0%	0%	0%	2%	0%	3%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	35.9			35.9	16.1	16.1
Effective Green, g (s)	35.9			35.9	16.1	16.1
Actuated g/C Ratio	0.60			0.60	0.27	0.27
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)	1819			1783	408	354
v/s Ratio Prot	c0.50			0.35	0.01	c0.22
v/s Ratio Perm						
v/c Ratio	0.84			0.59	0.03	0.83
Uniform Delay, d1	9.7			7.5	16.2	20.7
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	4.8			1.4	0.0	15.3
Delay (s)	14.5			8.9	16.2	36.0
Level of Service	B			A	B	D
Approach Delay (s)	14.5			8.9	35.3	
Approach LOS	B			A	D	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1450	10	160	850	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1526	11	168	895	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.88	
vC, conflicting volume			1526		2316	768
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1526		2358	768
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			62		100	100
cM capacity (veh/h)			442		17	348

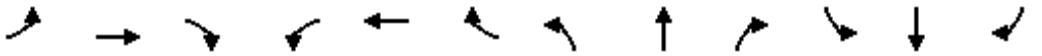
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	1018	519	168	447	447
Volume Left	0	0	168	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	442	1700	1700
Volume to Capacity	0.60	0.31	0.38	0.26	0.26
Queue Length 95th (ft)	0	0	44	0	0
Control Delay (s)	0.0	0.0	18.1	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		2.9		
Approach LOS					

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2980	1308		4170		2863		1214			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2980	1308		4170		2863		1214			
Volume (vph)	0	935	280	0	800	200	750	0	340	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	984	295	0	842	211	789	0	358	0	0	0
RTOR Reduction (vph)	0	0	156	0	92	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	984	139	0	961	0	789	0	358	0	0	0
Heavy Vehicles (%)	0%	2%	4%	0%	2%	0%	3%	0%	12%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		21.2	21.2		21.2		15.8		45.0			
Effective Green, g (s)		21.2	21.2		21.2		15.8		45.0			
Actuated g/C Ratio		0.47	0.47		0.47		0.35		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1404	616		1965		1005		1214			
v/s Ratio Prot		c0.33			0.23		c0.28					
v/s Ratio Perm			0.11						0.29			
v/c Ratio		0.70	0.23		0.49		0.79		0.29			
Uniform Delay, d1		9.4	7.0		8.2		13.1		0.0			
Progression Factor		0.66	2.85		1.00		1.00		1.00			
Incremental Delay, d2		2.6	0.7		0.9		4.1		0.6			
Delay (s)		8.8	20.8		9.1		17.2		0.6			
Level of Service		A	C		A		B		A			
Approach Delay (s)		11.6			9.1			12.0			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

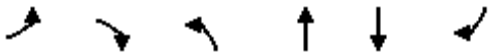
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0					4.0		4.0
Lane Util. Factor		0.91	0.91		0.95					0.97		0.88
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		2827	1441		2976					2949		2324
Flt Permitted		1.00	1.00		0.81					0.95		1.00
Satd. Flow (perm)		2827	1441		2429					2949		2324
Volume (vph)	0	895	410	80	1470	0	0	0	0	320	0	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	942	432	84	1547	0	0	0	0	337	0	768
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	52
Lane Group Flow (vph)	0	942	432	0	1631	0	0	0	0	337	0	716
Heavy Vehicles (%)	0%	3%	2%	0%	2%	0%	0%	0%	0%	0%	0%	3%
Turn Type			custom	Perm		custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4	8		1 8						
Actuated Green, G (s)		57.0	90.0		57.0					25.0		25.0
Effective Green, g (s)		57.0	90.0		57.0					25.0		25.0
Actuated g/C Ratio		0.63	1.00		0.63					0.28		0.28
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)		1790	1441		1538					819		646
v/s Ratio Prot		0.33								0.11		c0.31
v/s Ratio Perm			0.30		c0.67							
v/c Ratio		0.53	0.30		1.06					0.41		1.11
Uniform Delay, d1		9.1	0.0		16.5					26.5		32.5
Progression Factor		1.00	1.00		1.12					1.00		1.00
Incremental Delay, d2		1.1	0.1		38.3					0.3		68.9
Delay (s)		10.2	0.1		56.7					26.8		101.4
Level of Service		B	A		E					C		F
Approach Delay (s)		7.0			56.7			0.0			78.7	
Approach LOS		A			E			A			E	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

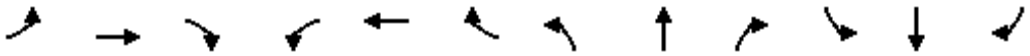
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
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)	1382	1248	1407	2980	1569	1360
Flt Permitted	0.95	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1382	1248	846	2980	1569	1360
Volume (vph)	10	200	215	240	295	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	211	226	253	311	5
RTOR Reduction (vph)	0	182	0	0	0	2
Lane Group Flow (vph)	11	29	226	253	311	3
Heavy Vehicles (%)	10%	9%	8%	2%	2%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	30.8	30.8	30.8	30.8
Effective Green, g (s)	6.2	6.2	30.8	30.8	30.8	30.8
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	172	579	2040	1074	931
v/s Ratio Prot	0.01			0.08	0.20	
v/s Ratio Perm		c0.02	c0.27			0.00
v/c Ratio	0.06	0.17	0.39	0.12	0.29	0.00
Uniform Delay, d1	16.9	17.1	3.1	2.4	2.8	2.2
Progression Factor	1.00	1.00	0.87	0.39	1.00	1.00
Incremental Delay, d2	0.1	0.5	1.1	0.1	0.7	0.0
Delay (s)	17.0	17.6	3.8	1.0	3.5	2.3
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			2.3	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

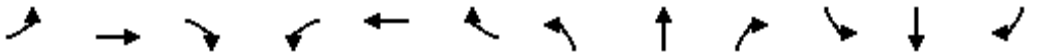
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.97	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1083		3905	1147	2808		2370			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1083		3905	1147	2808		2370			
Volume (vph)	0	1760	360	0	1165	1080	790	0	910	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1853	379	0	1226	1137	832	0	958	0	0	0
RTOR Reduction (vph)	0	0	0	0	29	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1853	379	0	1472	862	832	0	952	0	0	0
Heavy Vehicles (%)	0%	2%	8%	0%	3%	2%	5%	0%	1%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		55.5	110.0		55.5	110.0	46.5		46.5			
Effective Green, g (s)		55.5	110.0		55.5	110.0	46.5		46.5			
Actuated g/C Ratio		0.50	1.00		0.50	1.00	0.42		0.42			
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)		2042	1083		1970	1147	1187		1002			
v/s Ratio Prot		c0.46			0.38		0.30		c0.40			
v/s Ratio Perm			0.35			0.75						
v/c Ratio		0.91	0.35		0.75	0.75	0.70		0.95			
Uniform Delay, d1		24.9	0.0		21.7	0.0	26.0		30.6			
Progression Factor		0.88	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		5.0	0.1		2.6	2.8	1.9		17.7			
Delay (s)		26.9	0.1		24.3	2.8	27.9		48.3			
Level of Service		C	A		C	A	C		D			
Approach Delay (s)		22.3			16.5			38.8			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

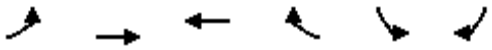
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3985	1136		4008	1114				2835		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3985	1136		4008	1114				2835		2324
Volume (vph)	0	1300	730	0	1365	590	0	0	0	820	0	660
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1368	768	0	1437	621	0	0	0	863	0	695
RTOR Reduction (vph)	0	10	278	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	1503	345	0	1437	621	0	0	0	863	0	663
Heavy Vehicles (%)	0%	2%	3%	0%	3%	5%	0%	0%	0%	4%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		61.0	61.0		61.0	110.0				41.0		41.0
Effective Green, g (s)		61.0	61.0		61.0	110.0				41.0		41.0
Actuated g/C Ratio		0.55	0.55		0.55	1.00				0.37		0.37
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)		2210	630		2223	1114				1057		866
v/s Ratio Prot		c0.38			0.36					c0.30		
v/s Ratio Perm			0.30			0.56						0.29
v/c Ratio		0.68	0.55		0.65	0.56				0.82		0.77
Uniform Delay, d1		17.5	15.7		17.0	0.0				31.1		30.3
Progression Factor		1.00	1.00		0.69	1.00				1.00		1.00
Incremental Delay, d2		1.7	3.4		1.0	0.4				5.0		4.1
Delay (s)		19.2	19.1		12.8	0.4				36.1		34.4
Level of Service		B	B		B	A				D		C
Approach Delay (s)		19.2			9.0			0.0			35.3	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

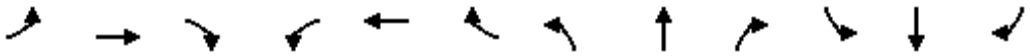
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	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)	1382	4200	4082	1333	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1382	4200	4082	1333	2920	1347
Volume (vph)	105	2280	1620	130	575	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	2400	1705	137	605	258
RTOR Reduction (vph)	0	0	0	70	0	146
Lane Group Flow (vph)	111	2400	1705	67	605	112
Heavy Vehicles (%)	10%	4%	7%	2%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	45.0	34.0	34.0	17.0	17.0
Effective Green, g (s)	7.0	45.0	34.0	34.0	17.0	17.0
Actuated g/C Ratio	0.10	0.64	0.49	0.49	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	138	2700	1983	647	709	327
v/s Ratio Prot	0.08	c0.57	0.42		c0.21	
v/s Ratio Perm				0.05		0.08
v/c Ratio	0.80	0.89	0.86	0.10	0.85	0.34
Uniform Delay, d1	30.8	10.4	15.9	9.7	25.3	21.9
Progression Factor	1.00	1.00	0.40	0.01	1.00	1.00
Incremental Delay, d2	27.7	4.9	4.8	0.3	12.4	2.8
Delay (s)	58.6	15.3	11.2	0.4	37.7	24.7
Level of Service	E	B	B	A	D	C
Approach Delay (s)		17.2	10.4		33.8	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4325	680	760	4241		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4325	680	760	4241		1474	680				
Volume (vph)	0	1630	400	20	2020	0	380	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1716	421	21	2126	0	400	0	21	0	0	0
RTOR Reduction (vph)	0	0	149	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1716	272	21	2126	0	400	4	0	0	0	0
Heavy Vehicles (%)	0%	1%	100%	100%	3%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		51.6	51.6	2.4	58.0		14.0	14.0				
Effective Green, g (s)		51.6	51.6	2.4	58.0		14.0	14.0				
Actuated g/C Ratio		0.65	0.65	0.03	0.72		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)		2790	439	23	3075		258	119				
v/s Ratio Prot		0.40		0.03	c0.50		c0.27	0.01				
v/s Ratio Perm			0.40									
v/c Ratio		0.62	0.62	0.91	0.69		1.55	0.03				
Uniform Delay, d1		8.4	8.4	38.7	6.1		33.0	27.4				
Progression Factor		1.00	1.00	0.73	0.41		1.00	1.00				
Incremental Delay, d2		1.0	6.4	137.2	1.1		266.0	0.1				
Delay (s)		9.4	14.8	165.6	3.6		299.0	27.5				
Level of Service		A	B	F	A		F	C				
Approach Delay (s)		10.4			5.2			285.4			0.0	
Approach LOS		B			A			F			A	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	4368	1966	4368	2891	2564
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	4368	1966	4368	2891	2564
Volume (vph)	700	655	120	1175	460	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	737	689	126	1237	484	211
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	737	689	126	1237	484	211
Heavy Vehicles (%)	1%	0%	50%	0%	2%	15%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.8	44.2	8.2	27.6	15.6	15.6
Effective Green, g (s)	24.8	44.2	8.2	27.6	15.6	15.6
Actuated g/C Ratio	0.31	0.55	0.10	0.35	0.19	0.19
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	905	2413	202	1507	564	500
v/s Ratio Prot	c0.25	0.16	0.06	c0.28	c0.17	0.08
v/s Ratio Perm						
v/c Ratio	0.81	0.29	0.62	0.82	0.86	0.42
Uniform Delay, d1	25.5	9.5	34.4	23.9	31.1	28.2
Progression Factor	0.69	0.37	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.7	0.2	5.9	5.1	12.3	0.6
Delay (s)	22.2	3.7	40.3	29.1	43.4	28.8
Level of Service	C	A	D	C	D	C
Approach Delay (s)		13.3		30.1		
Approach LOS		B		C		

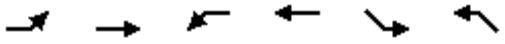
Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2520	4121	2949	4282	2782	2137
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2520	4121	2949	4282	2782	2137
Volume (vph)	640	1080	10	825	470	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	1137	11	868	495	84
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	674	1137	11	868	495	84
Heavy Vehicles (%)	17%	6%	0%	2%	6%	38%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.2	34.5	0.8	17.1	12.7	12.7
Effective Green, g (s)	18.2	34.5	0.8	17.1	12.7	12.7
Actuated g/C Ratio	0.30	0.58	0.01	0.29	0.21	0.21
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)	764	2370	39	1220	589	452
v/s Ratio Prot	c0.27	0.28	0.00	c0.20	c0.18	0.04
v/s Ratio Perm						
v/c Ratio	0.88	0.48	0.28	0.71	0.84	0.19
Uniform Delay, d1	19.9	7.5	29.3	19.2	22.7	19.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.7	0.7	3.9	3.5	10.5	0.2
Delay (s)	31.6	8.2	33.3	22.8	33.1	19.6
Level of Service	C	A	C	C	C	B
Approach Delay (s)		16.9		22.9		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	3010	2705	4282	2920	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	3010	2705	4282	2920	2949
Volume (vph)	760	610	230	1450	920	340
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	642	242	1526	968	358
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	800	642	242	1526	968	358
Heavy Vehicles (%)	1%	1%	9%	2%	1%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	28.0	51.0	14.0	37.0	33.0	33.0
Effective Green, g (s)	28.0	51.0	14.0	37.0	33.0	33.0
Actuated g/C Ratio	0.25	0.46	0.13	0.34	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	743	1396	344	1440	876	885
v/s Ratio Prot	c0.27	0.21	0.09	c0.36	c0.33	0.12
v/s Ratio Perm						
v/c Ratio	1.08	0.46	0.70	1.06	1.11	0.40
Uniform Delay, d1	41.0	20.1	46.0	36.5	38.5	30.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.6	1.1	6.4	41.3	63.4	0.3
Delay (s)	96.6	21.2	52.4	77.8	101.9	31.0
Level of Service	F	C	D	E	F	C
Approach Delay (s)		63.0		74.3		
Approach LOS		E		E		

Intersection Summary			
HCM Average Control Delay	73.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4368	2756	4368	2863	2520
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4368	2756	4368	2863	2520
Volume (vph)	770	1400	150	660	390	410
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	811	1474	158	695	411	432
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	811	1474	158	695	411	432
Heavy Vehicles (%)	4%	0%	7%	0%	3%	17%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	35.3	7.7	18.0	15.0	15.0
Effective Green, g (s)	25.0	35.3	7.7	18.0	15.0	15.0
Actuated g/C Ratio	0.36	0.50	0.11	0.26	0.21	0.21
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)	1013	2203	303	1123	614	540
v/s Ratio Prot	c0.29	0.34	0.06	c0.16	0.14	c0.17
v/s Ratio Perm						
v/c Ratio	0.80	0.67	0.52	0.62	0.67	0.80
Uniform Delay, d1	20.3	13.0	29.4	23.0	25.2	26.1
Progression Factor	0.81	0.70	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.7	1.6	2.6	2.8	8.3
Delay (s)	18.5	9.8	31.0	25.5	28.0	34.4
Level of Service	B	A	C	C	C	C
Approach Delay (s)		12.9		26.6		
Approach LOS		B		C		

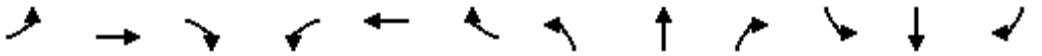
Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	4325	2863	4241	2891	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	4325	2863	4241	2891	2808
Volume (vph)	270	1405	290	970	510	220
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1479	305	1021	537	232
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1479	305	1021	537	232
Heavy Vehicles (%)	4%	1%	3%	3%	2%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.5	21.6	7.9	18.0	12.5	12.5
Effective Green, g (s)	11.5	21.6	7.9	18.0	12.5	12.5
Actuated g/C Ratio	0.21	0.40	0.15	0.33	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	604	1730	419	1414	669	650
v/s Ratio Prot	0.10	c0.34	0.11	c0.24	c0.19	0.08
v/s Ratio Perm						
v/c Ratio	0.47	0.85	0.73	0.72	0.80	0.36
Uniform Delay, d1	18.6	14.8	22.0	15.8	19.6	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	4.4	6.2	1.9	6.9	0.3
Delay (s)	19.2	19.1	28.2	17.7	26.5	17.7
Level of Service	B	B	C	B	C	B
Approach Delay (s)		19.1		20.1		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4206			4282	1333			2370	2891		1214
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4206			4282	1333			2370	2891		1214
Volume (vph)	230	1740	115	0	1870	230	0	0	190	480	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	1832	121	0	1968	242	0	0	200	505	0	21
RTOR Reduction (vph)	0	8	0	0	0	146	0	0	18	0	0	16
Lane Group Flow (vph)	242	1945	0	0	1968	96	0	0	182	505	0	5
Heavy Vehicles (%)	0%	3%	1%	0%	2%	2%	0%	0%	1%	2%	0%	12%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	12.0	46.8			30.8	30.8			11.9	19.3		19.3
Effective Green, g (s)	12.0	46.8			30.8	30.8			11.9	19.3		19.3
Actuated g/C Ratio	0.13	0.52			0.34	0.34			0.13	0.21		0.21
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)	203	2187			1465	456			313	620		260
v/s Ratio Prot	c0.16	0.46			c0.46					c0.17		
v/s Ratio Perm						0.07			c0.08			0.00
v/c Ratio	1.19	0.89			1.34	0.21			0.58	0.81		0.02
Uniform Delay, d1	39.0	19.3			29.6	21.0			36.7	33.6		27.9
Progression Factor	1.00	1.00			0.67	0.44			1.00	0.94		0.89
Incremental Delay, d2	124.6	5.9			158.6	0.9			2.7	7.6		0.0
Delay (s)	163.6	25.2			178.3	10.1			39.4	39.4		24.8
Level of Service	F	C			F	B			D	D		C
Approach Delay (s)		40.5			159.9			39.4			38.8	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM Average Control Delay	91.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4325	2891	4241	2949	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4325	2891	4241	2949	2920
Volume (vph)	340	1080	470	780	140	720
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	1137	495	821	147	758
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	358	1137	495	821	147	758
Heavy Vehicles (%)	3%	1%	2%	3%	0%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.0	32.7	18.6	33.3	26.7	26.7
Effective Green, g (s)	18.0	32.7	18.6	33.3	26.7	26.7
Actuated g/C Ratio	0.20	0.36	0.21	0.37	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	573	1571	597	1569	875	866
v/s Ratio Prot	0.13	c0.26	c0.17	0.19	0.05	c0.26
v/s Ratio Perm						
v/c Ratio	0.62	0.72	0.83	0.52	0.17	0.88
Uniform Delay, d1	32.9	24.7	34.2	22.1	23.4	30.1
Progression Factor	0.75	0.68	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	1.5	9.3	1.3	0.1	9.8
Delay (s)	25.8	18.4	43.5	23.4	23.5	39.9
Level of Service	C	B	D	C	C	D
Approach Delay (s)		20.2		31.0		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	2951	2782	2980	2756	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	2951	2782	2980	2756	2863
Volume (vph)	220	1350	360	900	300	380
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1421	379	947	316	400
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	232	1421	379	947	316	400
Heavy Vehicles (%)	5%	3%	6%	2%	7%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.0	42.3	12.8	43.1	12.9	12.9
Effective Green, g (s)	12.0	42.3	12.8	43.1	12.9	12.9
Actuated g/C Ratio	0.15	0.53	0.16	0.54	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	421	1560	445	1605	444	462
v/s Ratio Prot	0.08	c0.48	c0.14	0.32	0.11	c0.14
v/s Ratio Perm						
v/c Ratio	0.55	0.91	0.85	0.59	0.71	0.87
Uniform Delay, d1	31.5	17.1	32.7	12.5	31.8	32.7
Progression Factor	1.00	1.00	0.94	0.44	1.00	1.00
Incremental Delay, d2	1.6	9.5	9.4	1.0	5.3	15.5
Delay (s)	33.1	26.7	40.0	6.4	37.1	48.2
Level of Service	C	C	D	A	D	D
Approach Delay (s)		27.6		16.0		
Approach LOS		C		B		

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4282	2863	4282	2782	2863
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4282	2863	4282	2782	2863
Volume (vph)	350	1455	610	640	180	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	1532	642	674	189	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	368	1532	642	674	189	642
Heavy Vehicles (%)	3%	2%	3%	2%	6%	3%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.5	45.1	26.5	51.1	26.4	26.4
Effective Green, g (s)	20.5	45.1	26.5	51.1	26.4	26.4
Actuated g/C Ratio	0.19	0.41	0.24	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	534	1756	690	1989	668	687
v/s Ratio Prot	0.13	c0.36	c0.22	0.16	0.07	c0.22
v/s Ratio Perm						
v/c Ratio	0.69	0.87	0.93	0.34	0.28	0.93
Uniform Delay, d1	41.8	29.8	40.8	18.7	34.1	41.0
Progression Factor	1.00	1.00	0.83	0.49	1.00	1.00
Incremental Delay, d2	3.7	6.3	11.8	0.2	0.2	19.8
Delay (s)	45.5	36.1	45.8	9.4	34.3	60.8
Level of Service	D	D	D	A	C	E
Approach Delay (s)		37.9		27.2		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	37.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			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)	2555			2432	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2555			2432	760	680
Volume (vph)	320	0	0	290	125	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	0	0	305	132	163
RTOR Reduction (vph)	0	0	0	0	0	75
Lane Group Flow (vph)	337	0	0	305	132	88
Heavy Vehicles (%)	19%	0%	0%	25%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	10.5			10.5	21.5	21.5
Effective Green, g (s)	10.5			10.5	21.5	21.5
Actuated g/C Ratio	0.26			0.26	0.54	0.54
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)	671			638	409	366
v/s Ratio Prot	c0.13			0.13	c0.17	
v/s Ratio Perm						0.13
v/c Ratio	0.50			0.48	0.32	0.24
Uniform Delay, d1	12.5			12.4	5.2	4.9
Progression Factor	0.67			1.00	1.00	1.00
Incremental Delay, d2	0.6			0.6	2.1	1.5
Delay (s)	9.0			13.0	7.3	6.5
Level of Service	A			B	A	A
Approach Delay (s)	9.0			13.0	6.8	
Approach LOS	A			B	A	

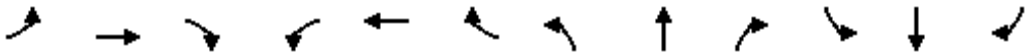
Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2555	680	760	2187		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2555	680	760	2187		
Volume (vph)	320	50	60	355	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	53	63	374	0	0
RTOR Reduction (vph)	0	17	0	0	0	0
Lane Group Flow (vph)	337	36	63	374	0	0
Heavy Vehicles (%)	19%	100%	100%	39%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	27.1	27.1	4.9	40.0		
Effective Green, g (s)	27.1	27.1	4.9	40.0		
Actuated g/C Ratio	0.68	0.68	0.12	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1731	461	93	2187		
v/s Ratio Prot	0.13		c0.08	c0.17		
v/s Ratio Perm		0.05				
v/c Ratio	0.19	0.08	0.68	0.17		
Uniform Delay, d1	2.4	2.2	16.8	0.0		
Progression Factor	1.00	1.00	0.88	1.00		
Incremental Delay, d2	0.1	0.1	16.5	0.0		
Delay (s)	2.5	2.3	31.3	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	2.4			4.5	0.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	3.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

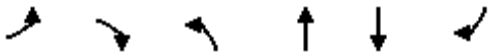
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1231	1295	1246	1018		1448	2686		1143	2893	
Flt Permitted	0.59	1.00	1.00	0.39	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	905	1231	1295	509	1018		1448	2686		1143	2893	
Volume (vph)	10	140	595	100	125	130	250	600	160	70	1060	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	147	626	105	132	137	263	632	168	74	1116	5
RTOR Reduction (vph)	0	0	48	0	35	0	0	22	0	0	0	0
Lane Group Flow (vph)	11	147	578	105	234	0	263	778	0	74	1121	0
Heavy Vehicles (%)	5%	30%	5%	22%	40%	50%	5%	5%	27%	33%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	18.3	18.3	43.1	25.5	25.5		24.8	47.9		9.8	32.9	
Effective Green, g (s)	18.3	18.3	43.1	25.5	25.5		24.8	47.9		9.8	32.9	
Actuated g/C Ratio	0.18	0.18	0.43	0.26	0.26		0.25	0.48		0.10	0.33	
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)	170	225	558	189	260		359	1287		112	952	
v/s Ratio Prot	0.00	0.12	c0.26	0.04	c0.23		0.18	0.29		0.06	c0.39	
v/s Ratio Perm	0.01		0.19	0.10								
v/c Ratio	0.06	0.65	1.04	0.56	0.90		0.73	0.60		0.66	1.18	
Uniform Delay, d1	33.8	37.9	28.4	30.6	36.0		34.6	19.1		43.5	33.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	6.7	47.8	3.5	30.6		7.5	2.1		13.7	90.9	
Delay (s)	33.9	44.6	76.2	34.1	66.6		42.1	21.2		57.2	124.5	
Level of Service	C	D	E	C	E		D	C		E	F	
Approach Delay (s)		69.7			57.5			26.4			120.3	
Approach LOS		E			E			C			F	

Intersection Summary			
HCM Average Control Delay	72.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

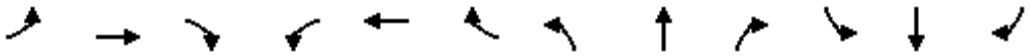
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	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)	1966	1007	1216	5242	2815	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1007	1216	5242	2815	
Volume (vph)	340	135	190	1355	1105	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	142	200	1426	1163	105
RTOR Reduction (vph)	0	115	0	0	7	0
Lane Group Flow (vph)	358	27	200	1426	1261	0
Heavy Vehicles (%)	50%	35%	25%	5%	5%	25%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	18.9	18.9	16.8	51.0	48.3	
Effective Green, g (s)	18.9	18.9	16.8	51.0	48.3	
Actuated g/C Ratio	0.19	0.19	0.17	0.51	0.48	
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)	372	190	204	2673	1360	
v/s Ratio Prot	c0.18		c0.16	0.27	c0.45	
v/s Ratio Perm		0.03				
v/c Ratio	0.96	0.14	0.98	0.53	0.93	
Uniform Delay, d1	40.2	33.8	41.4	16.5	24.2	
Progression Factor	1.00	1.00	1.00	1.00	0.35	
Incremental Delay, d2	36.6	0.3	57.1	0.8	4.4	
Delay (s)	76.8	34.1	98.6	17.3	12.8	
Level of Service	E	C	F	B	B	
Approach Delay (s)	64.7			27.3	12.8	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

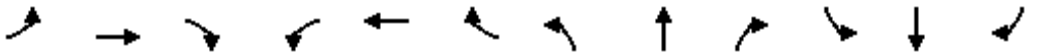
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
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			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2643	2118	1490	2840	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1344		2808	1318			2643	2118	1490	2840	
Volume (vph)	5	0	5	150	5	50	0	1060	630	40	1050	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	158	5	53	0	1116	663	42	1105	5
RTOR Reduction (vph)	0	4	0	0	36	0	0	0	325	0	1	0
Lane Group Flow (vph)	0	6	0	158	22	0	0	1116	338	42	1109	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	15%	13%	2%	7%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		18.9		10.1	33.0			51.0	51.0	4.0	38.2	
Effective Green, g (s)		18.9		10.1	33.0			51.0	51.0	4.0	38.2	
Actuated g/C Ratio		0.19		0.10	0.33			0.51	0.51	0.04	0.38	
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)		254		284	435			1348	1080	60	1085	
v/s Ratio Prot				c0.06	c0.02			c0.42	0.16	c0.03	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.56	0.05			0.83	0.31	0.70	1.02	
Uniform Delay, d1		33.0		42.8	22.8			20.8	14.3	47.4	30.9	
Progression Factor		1.00		1.00	1.00			0.46	0.28	1.00	1.00	
Incremental Delay, d2		0.0		2.4	0.0			4.8	0.6	30.0	33.1	
Delay (s)		33.1		45.2	22.9			14.3	4.6	77.4	64.0	
Level of Service		C		D	C			B	A	E	E	
Approach Delay (s)		33.1			39.2			10.7			64.5	
Approach LOS		C			D			B			E	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

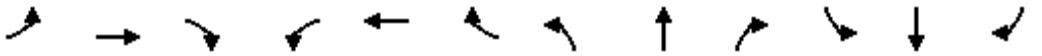
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1538	4055		2928	3900	1350	1538	4036	2422	2984	4036	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1538	4055		2928	3900	1350	1538	4036	2422	2984	4036	2422
Volume (vph)	105	750	45	405	320	340	105	795	720	220	1075	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	789	47	426	337	358	111	837	758	232	1132	247
RTOR Reduction (vph)	0	7	0	0	0	109	0	0	21	0	0	128
Lane Group Flow (vph)	111	829	0	426	337	249	111	837	737	232	1132	119
Heavy Vehicles (%)	5%	14%	5%	7%	19%	7%	5%	15%	5%	5%	15%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	24.7		17.3	26.0	36.0	10.0	32.0	49.3	10.0	32.0	48.0
Effective Green, g (s)	16.0	24.7		17.3	26.0	36.0	10.0	32.0	49.3	10.0	32.0	48.0
Actuated g/C Ratio	0.16	0.25		0.17	0.26	0.36	0.10	0.32	0.49	0.10	0.32	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	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)	246	1002		507	1014	540	154	1292	1194	298	1292	1259
v/s Ratio Prot	0.07	c0.20		c0.15	0.09	0.05	0.07	0.21	0.11	c0.08	c0.28	0.02
v/s Ratio Perm						0.14			0.20			0.03
v/c Ratio	0.45	0.83		0.84	0.33	0.46	0.72	0.65	0.62	0.78	0.88	0.09
Uniform Delay, d1	38.0	35.6		40.0	30.0	24.6	43.6	29.2	18.5	43.9	32.1	14.2
Progression Factor	0.66	0.64		0.72	0.72	0.57	0.78	0.41	1.35	0.81	0.74	4.41
Incremental Delay, d2	1.2	7.4		10.4	0.8	0.5	12.3	2.0	0.8	11.1	7.9	0.0
Delay (s)	26.3	30.2		39.3	22.2	14.6	46.1	13.8	25.7	46.6	31.8	62.4
Level of Service	C	C		D	C	B	D	B	C	D	C	E
Approach Delay (s)		29.7			26.3			21.2			38.6	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

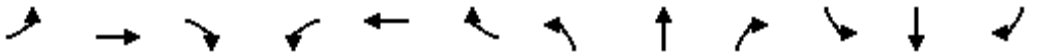
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4107	1246		4144					2901	1574	2355
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4107	1246		4144					2901	1574	2355
Volume (vph)	0	785	745	0	660	0	0	0	0	115	685	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	826	784	0	695	0	0	0	0	121	721	147
RTOR Reduction (vph)	0	0	61	0	0	0	0	0	0	0	0	81
Lane Group Flow (vph)	0	826	723	0	695	0	0	0	0	121	721	66
Heavy Vehicles (%)	0%	13%	16%	16%	12%	0%	0%	0%	0%	8%	8%	8%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		49.0	49.0		49.0					43.0	43.0	43.0
Effective Green, g (s)		49.0	49.0		49.0					43.0	43.0	43.0
Actuated g/C Ratio		0.49	0.49		0.49					0.43	0.43	0.43
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2012	611		2031					1247	677	1013
v/s Ratio Prot		0.20			0.17					0.04	c0.46	
v/s Ratio Perm			c0.58									0.03
v/c Ratio		0.41	1.18		0.34					0.10	1.06	0.07
Uniform Delay, d1		16.3	25.5		15.6					17.0	28.5	16.7
Progression Factor		1.00	1.00		0.18					1.00	1.00	1.00
Incremental Delay, d2		0.6	98.6		0.4					0.0	53.2	0.0
Delay (s)		16.9	124.1		3.2					17.0	81.7	16.7
Level of Service		B	F		A					B	F	B
Approach Delay (s)		69.1			3.2			0.0			64.1	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

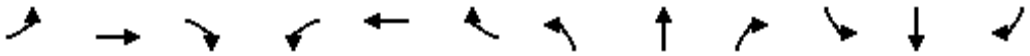
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3195	2707	3335	3195	1583	3273	1646		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3195	2707	3335	3195	1583	3273	1646		1770	1810	1583
Volume (vph)	25	890	775	255	645	25	395	100	95	25	200	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	937	816	268	679	26	416	105	100	26	211	26
RTOR Reduction (vph)	0	0	124	0	0	11	0	32	0	0	0	22
Lane Group Flow (vph)	26	937	692	268	679	15	416	174	0	26	211	4
Heavy Vehicles (%)	2%	13%	5%	5%	13%	2%	7%	7%	7%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	2.0	38.6	55.1	13.4	50.0	57.0	16.5	25.0		7.0	15.5	15.5
Effective Green, g (s)	2.0	38.6	55.1	13.4	50.0	57.0	16.5	25.0		7.0	15.5	15.5
Actuated g/C Ratio	0.02	0.39	0.55	0.13	0.50	0.57	0.16	0.25		0.07	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
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)	35	1233	1600	447	1598	966	540	412		124	281	245
v/s Ratio Prot	0.01	c0.29	0.07	c0.08	0.21	0.00	c0.13	0.11		0.01	c0.12	
v/s Ratio Perm			0.18			0.01						0.00
v/c Ratio	0.74	0.76	0.43	0.60	0.42	0.02	0.77	0.42		0.21	0.75	0.02
Uniform Delay, d1	48.7	26.7	13.2	40.8	15.9	9.3	39.9	31.4		43.9	40.4	35.8
Progression Factor	0.93	0.77	0.51	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	42.7	3.0	0.1	2.2	0.8	0.0	6.7	0.7		0.8	10.7	0.0
Delay (s)	87.8	23.4	6.9	42.9	16.7	9.3	46.6	32.1		44.7	51.2	35.8
Level of Service	F	C	A	D	B	A	D	C		D	D	D
Approach Delay (s)		16.8			23.7			41.8			49.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

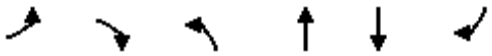
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2884	1350					5316	1290	2797	4107	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2884	1350					5316	1290	2797	4107	
Volume (vph)	0	490	940	0	0	0	0	1620	585	385	1140	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	989	0	0	0	0	1705	616	405	1200	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	18	0	0	0
Lane Group Flow (vph)	0	516	989	0	0	0	0	1705	598	405	1200	0
Heavy Vehicles (%)	0%	12%	7%	0%	0%	0%	0%	10%	12%	12%	13%	0%
Turn Type			Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		19.6	100.0					51.8	51.8	16.6	72.4	
Effective Green, g (s)		19.6	100.0					51.8	51.8	16.6	72.4	
Actuated g/C Ratio		0.20	1.00					0.52	0.52	0.17	0.72	
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)		565	1350					2754	668	464	2973	
v/s Ratio Prot		c0.18						0.32		0.14	0.29	
v/s Ratio Perm			c0.73						c0.46			
v/c Ratio		0.91	0.73					0.62	0.89	0.87	0.40	
Uniform Delay, d1		39.4	0.0					17.1	21.7	40.7	5.4	
Progression Factor		0.89	1.00					1.00	1.00	0.62	0.33	
Incremental Delay, d2		2.4	0.3					1.1	16.9	8.7	0.2	
Delay (s)		37.3	0.3					18.2	38.5	33.8	2.0	
Level of Service		D	A					B	D	C	A	
Approach Delay (s)		13.0			0.0			23.6			10.0	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		

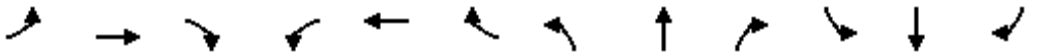
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		1.00		0.91	0.91	
Frt		0.86		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1374		4144	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1374		4144	4107	
Volume (vph)	0	270	0	1240	1260	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	284	0	1305	1326	0
RTOR Reduction (vph)	0	23	0	0	0	0
Lane Group Flow (vph)	0	261	0	1305	1326	0
Heavy Vehicles (%)	0%	7%	0%	12%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		22.4		69.6	69.6	
Effective Green, g (s)		22.4		69.6	69.6	
Actuated g/C Ratio		0.22		0.70	0.70	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		308		2884	2858	
v/s Ratio Prot				0.31	c0.32	
v/s Ratio Perm		c0.19				
v/c Ratio		0.85		0.45	0.46	
Uniform Delay, d1		37.2		6.7	6.8	
Progression Factor		1.00		0.54	1.00	
Incremental Delay, d2		18.8		0.4	0.5	
Delay (s)		56.0		4.0	7.4	
Level of Service		E		A	A	
Approach Delay (s)	56.0			4.0	7.4	
Approach LOS	E			A	A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

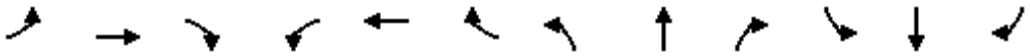
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1302	4071	1268	1568	4036	1431	1524	3167	1403	1599	3167	1290
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1302	4071	1268	1568	4036	1431	1524	3167	1403	1599	3167	1290
Volume (vph)	170	1520	50	130	1250	80	40	515	100	130	835	400
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)	185	1652	54	141	1359	87	43	560	109	141	908	435
RTOR Reduction (vph)	0	0	32	0	0	56	0	0	31	0	0	18
Lane Group Flow (vph)	185	1652	22	141	1359	31	43	560	78	141	908	417
Heavy Vehicles (%)	24%	14%	14%	3%	15%	1%	6%	2%	3%	1%	2%	12%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.3	40.6	40.6	10.2	35.5	35.5	3.2	21.8	32.0	11.4	30.0	45.3
Effective Green, g (s)	15.3	40.6	40.6	10.2	35.5	35.5	3.2	21.8	32.0	11.4	30.0	45.3
Actuated g/C Ratio	0.15	0.41	0.41	0.10	0.36	0.36	0.03	0.22	0.32	0.11	0.30	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	1653	515	160	1433	508	49	690	505	182	950	636
v/s Ratio Prot	c0.14	c0.41		0.09	0.34		0.03	0.18	0.02	c0.09	c0.29	0.10
v/s Ratio Perm			0.02			0.02			0.04			0.22
v/c Ratio	0.93	1.00	0.04	0.88	0.95	0.06	0.88	0.81	0.16	0.77	0.96	0.66
Uniform Delay, d1	41.8	29.7	18.0	44.3	31.4	21.3	48.2	37.1	24.3	43.1	34.3	21.3
Progression Factor	1.27	0.72	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.1	20.1	0.1	39.0	14.3	0.2	83.1	7.2	0.1	18.4	19.2	2.4
Delay (s)	92.4	41.4	15.2	83.3	45.6	21.5	131.3	44.4	24.5	61.4	53.5	23.7
Level of Service	F	D	B	F	D	C	F	D	C	E	D	C
Approach Delay (s)		45.7			47.7			46.6			45.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

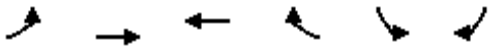
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91	1.00	0.97		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)	2410	4590			4550	1279	2338		1204			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2410	4590			4550	1279	2338		1204			
Volume (vph)	235	1715	0	0	1220	545	75	0	155	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)	255	1864	0	0	1326	592	82	0	168	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	258	0	0	23	0	0	0
Lane Group Flow (vph)	255	1864	0	0	1326	334	82	0	145	0	0	0
Heavy Vehicles (%)	30%	13%	0%	0%	14%	13%	34%	0%	20%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	14.9	75.4			56.5	56.5	16.6		16.6			
Effective Green, g (s)	14.9	75.4			56.5	56.5	16.6		16.6			
Actuated g/C Ratio	0.15	0.75			0.56	0.56	0.17		0.17			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	359	3461			2571	723	388		200			
v/s Ratio Prot	c0.11	c0.41			0.29							
v/s Ratio Perm						0.26	0.04		c0.12			
v/c Ratio	0.71	0.54			0.52	0.46	0.21		0.73			
Uniform Delay, d1	40.5	5.1			13.4	12.8	36.0		39.6			
Progression Factor	1.00	0.78			0.53	0.89	1.00		1.00			
Incremental Delay, d2	5.9	0.6			0.4	1.1	0.3		12.4			
Delay (s)	46.4	4.5			7.5	12.5	36.3		51.9			
Level of Service	D	A			A	B	D		D			
Approach Delay (s)		9.6			9.0			46.8			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

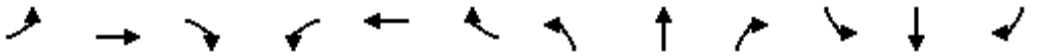
c Critical Lane Group



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		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6634	4510		3183	2311
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6634	4510		3183	2311
Volume (vph)	0	1550	1295	0	400	250
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1685	1408	0	435	272
RTOR Reduction (vph)	0	0	0	0	0	38
Lane Group Flow (vph)	0	1685	1408	0	435	234
Heavy Vehicles (%)	0%	16%	15%	0%	10%	23%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		55.0	55.0		37.0	37.0
Effective Green, g (s)		55.0	55.0		37.0	37.0
Actuated g/C Ratio		0.55	0.55		0.37	0.37
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)		3649	2481		1178	855
v/s Ratio Prot		0.25	c0.31			
v/s Ratio Perm					c0.14	0.10
v/c Ratio		0.46	0.57		0.37	0.27
Uniform Delay, d1		13.6	14.7		23.0	22.1
Progression Factor		0.13	0.23		1.00	1.00
Incremental Delay, d2		0.2	0.8		0.9	0.8
Delay (s)		1.9	4.3		23.9	22.9
Level of Service		A	A		C	C
Approach Delay (s)		1.9	4.3		23.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

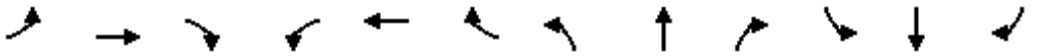
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1910	4219	1445	1179	4962	952	1615	850	963	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.58	1.00	1.00	0.60	1.00	1.00
Satd. Flow (perm)	1910	4219	1445	1179	4962	952	983	850	963	509	1615	722
Volume (vph)	430	1430	75	220	1005	320	50	10	30	90	260	240
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)	467	1554	82	239	1092	348	54	11	33	98	283	261
RTOR Reduction (vph)	0	0	46	0	0	201	0	0	21	0	0	45
Lane Group Flow (vph)	467	1554	36	239	1092	147	54	11	12	98	283	216
Heavy Vehicles (%)	64%	10%	0%	37%	11%	23%	0%	100%	50%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	26.9	40.4	40.4	21.6	35.1	42.1	18.2	15.0	36.6	25.8	18.8	45.7
Effective Green, g (s)	26.9	40.4	40.4	21.6	35.1	42.1	18.2	15.0	36.6	25.8	18.8	45.7
Actuated g/C Ratio	0.27	0.40	0.40	0.22	0.35	0.42	0.18	0.15	0.37	0.26	0.19	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	514	1704	584	255	1742	439	199	128	391	152	304	359
v/s Ratio Prot	c0.24	c0.37		0.20	0.22	0.02	0.01	0.01	0.01	c0.05	c0.18	0.16
v/s Ratio Perm			0.02			0.13	0.04		0.01	0.12		0.14
v/c Ratio	0.91	0.91	0.06	0.94	0.63	0.33	0.27	0.09	0.03	0.64	0.93	0.60
Uniform Delay, d1	35.4	28.1	18.2	38.5	27.0	19.5	34.6	36.6	20.3	32.6	40.0	20.4
Progression Factor	1.00	1.00	1.00	0.97	1.07	3.21	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.7	8.9	0.2	35.8	1.5	0.4	0.7	0.3	0.0	9.0	33.9	2.8
Delay (s)	55.1	37.1	18.4	73.1	30.5	63.0	35.4	36.9	20.4	41.6	73.9	23.2
Level of Service	E	D	B	E	C	E	D	D	C	D	E	C
Approach Delay (s)		40.3			43.3			30.5			48.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	42.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1302	4071	1268	1568	4036	1431	1524	3167	1403	1599	3167	1290
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1302	4071	1268	1568	4036	1431	1524	3167	1403	1599	3167	1290
Volume (vph)	170	1520	50	130	1250	80	40	515	100	130	835	400
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)	185	1652	54	141	1359	87	43	560	109	141	908	435
RTOR Reduction (vph)	0	0	32	0	0	56	0	0	31	0	0	18
Lane Group Flow (vph)	185	1652	22	141	1359	31	43	560	78	141	908	417
Heavy Vehicles (%)	24%	14%	14%	3%	15%	1%	6%	2%	3%	1%	2%	12%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.3	40.6	40.6	10.2	35.5	35.5	3.2	21.8	32.0	11.4	30.0	45.3
Effective Green, g (s)	15.3	40.6	40.6	10.2	35.5	35.5	3.2	21.8	32.0	11.4	30.0	45.3
Actuated g/C Ratio	0.15	0.41	0.41	0.10	0.36	0.36	0.03	0.22	0.32	0.11	0.30	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	1653	515	160	1433	508	49	690	505	182	950	636
v/s Ratio Prot	c0.14	c0.41		0.09	0.34		0.03	0.18	0.02	c0.09	c0.29	0.10
v/s Ratio Perm			0.02			0.02			0.04			0.22
v/c Ratio	0.93	1.00	0.04	0.88	0.95	0.06	0.88	0.81	0.16	0.77	0.96	0.66
Uniform Delay, d1	41.8	29.7	18.0	44.3	31.4	21.3	48.2	37.1	24.3	43.1	34.3	21.3
Progression Factor	0.98	0.62	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	36.3	19.0	0.1	39.0	14.3	0.2	83.1	7.2	0.1	18.4	19.2	2.4
Delay (s)	77.3	37.5	6.9	83.3	45.6	21.5	131.3	44.4	24.5	61.4	53.5	23.7
Level of Service	E	D	A	F	D	C	F	D	C	E	D	C
Approach Delay (s)		40.5			47.7			46.6			45.6	
Approach LOS		D			D			D			D	

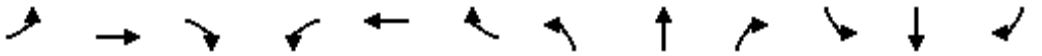
Intersection Summary			
HCM Average Control Delay	44.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		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)	2694	4590			6750	1429	1924		1242			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2694	4590			6750	1429	1924		1242			
Volume (vph)	235	1625	0	0	1220	545	315	0	245	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)	255	1766	0	0	1326	592	342	0	266	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	356	0	0	11	0	0	0
Lane Group Flow (vph)	255	1766	0	0	1326	236	342	0	255	0	0	0
Heavy Vehicles (%)	30%	13%	0%	0%	14%	13%	82%	0%	30%	0%	0%	0%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	14.1	58.0			39.9	39.9	34.0		34.0			
Effective Green, g (s)	14.1	58.0			39.9	39.9	34.0		34.0			
Actuated g/C Ratio	0.14	0.58			0.40	0.40	0.34		0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	380	2662			2693	570	654		422			
v/s Ratio Prot	0.09	c0.38			0.20							
v/s Ratio Perm						0.17	0.18		c0.21			
v/c Ratio	0.67	0.66			0.49	0.41	0.52		0.60			
Uniform Delay, d1	40.7	14.3			22.5	21.6	26.5		27.4			
Progression Factor	1.16	0.70			1.03	5.16	1.00		1.00			
Incremental Delay, d2	4.2	1.2			0.3	1.2	3.0		6.3			
Delay (s)	51.3	11.3			23.5	112.9	29.5		33.7			
Level of Service	D	B			C	F	C		C			
Approach Delay (s)		16.4			51.1			31.3			0.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6634	1590	2611	3990					3183		2311
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6634	1590	2611	3990					3183		2311
Volume (vph)	0	1460	490	300	1235	0	0	0	0	400	0	250
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1587	533	326	1342	0	0	0	0	435	0	272
RTOR Reduction (vph)	0	0	298	0	0	0	0	0	0	0	0	95
Lane Group Flow (vph)	0	1587	235	326	1342	0	0	0	0	435	0	177
Heavy Vehicles (%)	0%	16%	60%	20%	30%	0%	0%	0%	0%	10%	0%	23%
Turn Type			Perm	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			4							6		6
Actuated Green, G (s)		44.1	44.1	17.9	66.0					26.0		26.0
Effective Green, g (s)		44.1	44.1	17.9	66.0					26.0		26.0
Actuated g/C Ratio		0.44	0.44	0.18	0.66					0.26		0.26
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)		2926	701	467	2633					828		601
v/s Ratio Prot		c0.24		c0.12	0.34							
v/s Ratio Perm			0.15							c0.14		0.08
v/c Ratio		0.54	0.34	0.70	0.51					0.53		0.29
Uniform Delay, d1		20.5	18.3	38.5	8.7					31.7		29.7
Progression Factor		1.00	1.00	1.53	0.78					1.00		1.00
Incremental Delay, d2		0.7	1.3	4.0	0.6					2.4		1.2
Delay (s)		21.3	19.6	62.9	7.4					34.1		30.9
Level of Service		C	B	E	A					C		C
Approach Delay (s)		20.9			18.3			0.0			32.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

FUTURE (2035) ALTERNATIVE 6C

INTERSECTION QUEUING ANALYSIS

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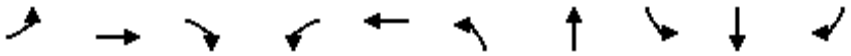
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	68	5	400	68	547	121	26	505	584	5	279
v/c Ratio	0.20	0.01	0.82	0.09	0.66	0.24	0.38	0.65	0.95	0.10	0.75
Control Delay	35.8	5.4	47.2	17.9	6.7	27.7	57.6	4.1	63.8	48.0	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	5.4	47.2	17.9	6.7	27.7	57.6	4.1	63.8	48.0	16.7
Queue Length 50th (ft)	34	0	111	18	0	31	16	0	188	3	0
Queue Length 95th (ft)	85	4	#207	60	106	53	42	0	#296	15	34
Internal Link Dist (ft)	738			419			857			397	
Turn Bay Length (ft)					150				220		220
Base Capacity (vph)	338	376	495	788	831	504	128	782	620	200	384
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.01	0.81	0.09	0.66	0.24	0.20	0.65	0.94	0.03	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

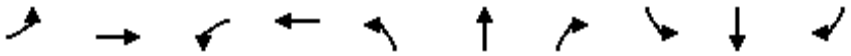


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	253	1021	174	63	1337	279	695	79	247	211
v/c Ratio	0.77	0.61	0.28	0.45	0.89	0.79	0.79	0.54	0.29	0.47
Control Delay	39.3	11.0	2.0	44.8	33.5	51.4	33.7	51.6	27.5	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	11.0	2.0	44.8	33.5	51.4	33.7	51.6	27.5	8.1
Queue Length 50th (ft)	68	69	0	30	224	71	167	20	38	0
Queue Length 95th (ft)	m#103	120	m6	69	#315	#129	#261	#46	60	54
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	329	1670	630	149	1498	358	878	146	859	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.61	0.28	0.42	0.89	0.78	0.79	0.54	0.29	0.47

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	458	1347	21	1052	621	647	47	58	263	326
v/c Ratio	1.03	0.63	0.30	1.04	1.02	0.70	0.11	0.68	0.72	0.73
Control Delay	83.4	12.4	71.0	88.2	90.8	44.6	9.6	98.1	67.2	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	12.4	71.0	88.2	90.8	44.6	9.6	98.1	67.2	15.9
Queue Length 50th (ft)	~417	173	17	~350	~285	257	0	25	114	0
Queue Length 95th (ft)	#631	198	47	#447	#404	329	29	#62	163	101
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	443	2124	74	1007	611	926	443	85	363	447
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.63	0.28	1.04	1.02	0.70	0.11	0.68	0.72	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1063	116	611	1274	453	105
v/c Ratio	1.13	0.15	1.43	0.65	1.39	0.23
Control Delay	95.3	7.1	233.6	9.2	221.7	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.3	7.1	233.6	9.2	221.7	6.0
Queue Length 50th (ft)	~288	22	~365	146	~267	0
Queue Length 95th (ft)	#407	52	#551	206	#433	32
Internal Link Dist (ft)	2411			1592	569	
Turn Bay Length (ft)			800			
Base Capacity (vph)	937	774	426	1958	325	464
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.15	1.43	0.65	1.39	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	853	389	326	1400
v/c Ratio	0.46	0.42	0.86	0.47
Control Delay	7.8	2.1	39.0	0.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.8	2.1	39.0	0.3
Queue Length 50th (ft)	87	0	142	0
Queue Length 95th (ft)	124	28	m#214	m0
Internal Link Dist (ft)	208			2411
Turn Bay Length (ft)			490	
Base Capacity (vph)	1855	936	380	2951
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.42	0.86	0.47

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

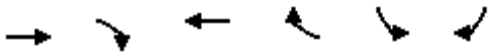
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	921	1921	21	200
v/c Ratio	0.38	0.80	0.21	0.66
Control Delay	3.2	8.9	36.6	16.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.2	8.9	36.6	16.4
Queue Length 50th (ft)	37	152	10	2
Queue Length 95th (ft)	106	456	29	58
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2408	2408	203	415
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.80	0.10	0.48

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	858	295	1153	600	263
v/c Ratio	0.50	0.33	0.47	0.74	0.22
Control Delay	7.6	1.0	7.8	24.6	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	1.0	7.8	24.6	0.4
Queue Length 50th (ft)	68	0	64	101	0
Queue Length 95th (ft)	96	2	120	129	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1710	882	2455	1134	1172
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.33	0.47	0.53	0.22

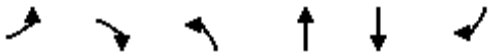
Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	913	829	1268	253	263	663
v/c Ratio	0.57	0.60	0.76	0.19	0.32	0.86
Control Delay	10.7	1.9	11.3	0.3	16.7	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.7	1.9	11.3	0.3	16.7	30.1
Queue Length 50th (ft)	112	0	181	0	35	106
Queue Length 95th (ft)	165	0	256	m0	60	#198
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1599	1379	1659	1301	910	835
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.60	0.76	0.19	0.29	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



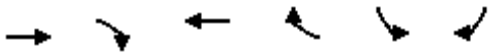
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	5	279	95	168	232	11
v/c Ratio	0.02	0.62	0.15	0.08	0.21	0.01
Control Delay	13.2	9.3	2.9	2.1	4.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	9.3	2.9	2.1	4.5	2.8
Queue Length 50th (ft)	1	0	5	4	14	0
Queue Length 95th (ft)	6	41	24	16	59	5
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	642	698	643	2104	1107	885
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.15	0.08	0.21	0.01

Intersection Summary

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1458	747	1462	1101	453	400
v/c Ratio	0.95	0.68	0.97	0.95	0.29	0.32
Control Delay	38.1	9.0	44.7	19.9	12.3	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	9.0	44.7	19.9	12.3	12.4
Queue Length 50th (ft)	261	153	305	0	69	67
Queue Length 95th (ft)	#414	329	#422	#198	98	100
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1529	1093	1509	1158	1542	1244
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.68	0.97	0.95	0.29	0.32

Intersection Summary

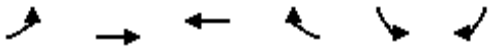
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1930	707	1157	553	400	632
v/c Ratio	0.68	0.70	0.41	0.49	0.74	0.68
Control Delay	8.9	4.7	2.1	7.0	42.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	4.7	2.1	7.0	42.7	7.4
Queue Length 50th (ft)	192	0	17	96	111	7
Queue Length 95th (ft)	285	39	m19	m87	153	55
Internal Link Dist (ft)	479		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2859	1015	2830	1124	655	1005
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.70	0.41	0.49	0.61	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	158	905	2711	347	447	179
v/c Ratio	0.83	0.34	1.24	0.43	0.61	0.38
Control Delay	86.2	8.5	139.3	8.3	47.2	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.2	8.5	139.3	8.3	47.2	7.9
Queue Length 50th (ft)	130	102	~1044	56	173	0
Queue Length 95th (ft)	#238	124	#1131	128	231	60
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	208	2676	2195	809	729	471
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.34	1.24	0.43	0.61	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL
Lane Group Flow (vph)	1505	379	11	2016	484
v/c Ratio	0.57	0.65	0.32	0.73	1.56
Control Delay	9.7	7.2	55.3	5.5	294.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	7.2	55.3	5.5	294.0
Queue Length 50th (ft)	128	0	6	52	~202
Queue Length 95th (ft)	222	60	m17	59	#299
Internal Link Dist (ft)	564			369	
Turn Bay Length (ft)			150		300
Base Capacity (vph)	2663	579	34	2780	311
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.65	0.32	0.73	1.56

Intersection Summary

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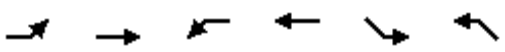
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

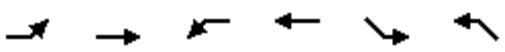
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	611	589	211	1079	505	158
v/c Ratio	0.77	0.28	0.65	0.72	0.83	0.30
Control Delay	26.7	4.8	47.1	28.5	46.1	30.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	4.8	47.1	28.5	46.1	30.7
Queue Length 50th (ft)	162	23	59	197	138	38
Queue Length 95th (ft)	226	10	95	250	#197	65
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	796	2102	357	1494	662	573
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.28	0.59	0.72	0.76	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	579	563	11	1753	400	253
v/c Ratio	1.01	0.22	0.07	0.95	1.01	0.55
Control Delay	72.9	4.4	37.4	34.0	83.8	35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	4.4	37.4	34.0	83.8	35.9
Queue Length 50th (ft)	~152	25	2	296	~105	60
Queue Length 95th (ft)	#258	55	10	#412	#196	97
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	572	2507	147	1855	396	461
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.22	0.07	0.95	1.01	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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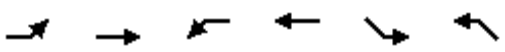
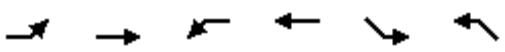
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	716	737	558	695	495	179
v/c Ratio	0.73	0.57	0.85	0.46	0.82	0.29
Control Delay	37.3	27.4	51.9	29.9	53.5	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	27.4	51.9	29.9	53.5	37.2
Queue Length 50th (ft)	227	203	193	139	173	55
Queue Length 95th (ft)	297	308	242	188	223	83
Internal Link Dist (ft)		175		222		
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	982	1286	797	1500	710	724
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.57	0.70	0.46	0.70	0.25

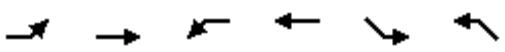
Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	384	558	1068	432	684
v/c Ratio	0.72	0.34	0.83	0.71	0.54	0.87
Control Delay	36.1	18.0	34.3	19.3	20.4	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	18.0	34.3	19.3	20.4	34.5
Queue Length 50th (ft)	51	39	98	115	67	119
Queue Length 95th (ft)	#103	61	#177	156	107	#211
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	411	1273	702	1636	841	818
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.30	0.79	0.65	0.51	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	274	916	316	721	537	126
v/c Ratio	0.68	0.63	0.81	0.50	0.81	0.25
Control Delay	30.0	13.9	39.7	12.3	29.4	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	13.9	39.7	12.3	29.4	16.5
Queue Length 50th (ft)	34	65	40	48	66	13
Queue Length 95th (ft)	#81	96	#98	73	#139	30
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	402	1605	390	1605	668	572
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.57	0.81	0.45	0.80	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	2021	1847	168	437	500	16
v/c Ratio	0.52	0.93	1.18	0.28	1.00	0.97	0.07
Control Delay	47.2	29.3	111.3	2.0	81.0	68.9	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	29.3	111.3	2.0	81.0	68.9	13.6
Queue Length 50th (ft)	51	370	~508	7	~137	147	1
Queue Length 95th (ft)	100	#502	#580	m10	#248	#240	m8
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	203	2183	1565	595	436	514	243
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.93	1.18	0.28	1.00	0.97	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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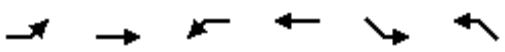
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

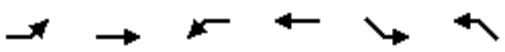
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	400	868	789	684	295	558
v/c Ratio	0.63	0.62	0.88	0.40	0.46	0.84
Control Delay	26.8	21.4	40.9	19.8	32.0	44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	21.4	40.9	19.8	32.0	44.9
Queue Length 50th (ft)	103	153	209	100	73	153
Queue Length 95th (ft)	m104	m163	279	135	110	210
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	636	1391	986	1721	704	739
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.62	0.80	0.40	0.42	0.76

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

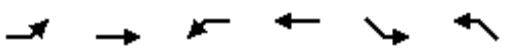


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	295	995	589	847	232	284
v/c Ratio	0.67	0.76	0.76	0.51	0.62	0.75
Control Delay	39.5	23.7	14.0	1.9	40.5	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	23.7	14.0	1.9	40.5	47.0
Queue Length 50th (ft)	71	214	88	13	57	71
Queue Length 95th (ft)	110	292	m111	m23	93	#124
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	496	1303	780	1671	386	390
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.76	0.76	0.51	0.60	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	579	868	421	1347	337	737
v/c Ratio	0.89	0.52	0.70	0.77	0.42	0.91
Control Delay	65.2	31.4	21.2	11.0	39.0	60.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	31.4	21.2	11.0	39.0	60.6
Queue Length 50th (ft)	240	206	120	196	115	301
Queue Length 95th (ft)	308	254	m127	m206	158	379
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	712	1669	598	1742	881	881
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.52	0.70	0.77	0.38	0.84

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

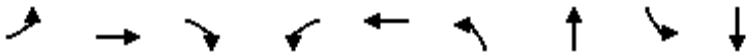
Lane Group	EBT	WBT	NBR
Lane Group Flow (vph)	284	247	111
v/c Ratio	0.59	0.54	0.18
Control Delay	23.2	25.5	0.6
Queue Delay	0.0	0.0	0.0
Total Delay	23.2	25.5	0.6
Queue Length 50th (ft)	49	42	0
Queue Length 95th (ft)	96	66	0
Internal Link Dist (ft)	228	2155	
Turn Bay Length (ft)			
Base Capacity (vph)	1121	1061	616
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.23	0.18

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	284	100	121	216
v/c Ratio	0.17	0.21	0.62	0.08
Control Delay	6.6	3.3	21.3	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.6	3.3	21.3	0.1
Queue Length 50th (ft)	18	0	35	0
Queue Length 95th (ft)	49	21	m15	0
Internal Link Dist (ft)	3486			228
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1638	481	367	2555
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.21	0.33	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	147	611	79	137	263	842	79	586
v/c Ratio	0.06	0.83	0.87	0.53	0.47	0.54	0.58	0.61	0.66
Control Delay	36.0	75.8	26.4	46.7	32.2	31.4	18.9	61.0	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	75.8	26.4	46.7	32.2	31.4	18.9	61.0	36.1
Queue Length 50th (ft)	6	90	169	38	54	134	203	48	184
Queue Length 95th (ft)	22	#191	#346	#110	128	208	273	95	247
Internal Link Dist (ft)		2169			3486		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	191	194	716	150	309	521	1446	169	896
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.76	0.85	0.53	0.44	0.50	0.58	0.47	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	121	168	1295	1037
v/c Ratio	0.89	0.45	0.79	0.52	0.73
Control Delay	72.1	13.1	64.9	19.4	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	13.1	64.9	19.5	6.9
Queue Length 50th (ft)	89	0	102	166	0
Queue Length 95th (ft)	#161	52	#207	200	m81
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	315	269	222	2492	1441
Starvation Cap Reductn	0	0	0	0	13
Spillback Cap Reductn	0	0	0	132	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	0.45	0.76	0.55	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	495	58	1147	421	32	547
v/c Ratio	0.05	0.88	0.10	0.90	0.33	0.53	0.65
Control Delay	27.9	58.5	7.1	20.4	0.9	78.7	34.3
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	27.9	58.5	7.1	20.4	1.1	78.7	34.3
Queue Length 50th (ft)	3	163	2	371	3	20	156
Queue Length 95th (ft)	18	#269	27	m#504	m6	#66	214
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	217	562	555	1268	1265	60	873
Starvation Cap Reductn	0	0	0	0	286	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.88	0.10	0.90	0.43	0.53	0.63

Intersection Summary

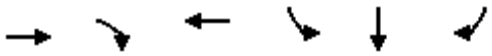
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	153	773	242	500	411	53	953	647	263	1142	826
v/c Ratio	0.58	0.67	0.51	0.45	0.67	0.69	0.88	0.63	0.79	0.81	0.61
Control Delay	39.5	30.1	34.0	27.2	13.6	81.2	39.8	12.0	53.2	30.4	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	30.1	34.0	27.2	13.6	81.2	39.8	12.0	53.2	30.4	8.7
Queue Length 50th (ft)	70	125	57	78	45	27	167	73	67	193	78
Queue Length 95th (ft)	126	176	88	113	125	#86	#242	96	#126	#271	111
Internal Link Dist (ft)		633		710			585			395	
Turn Bay Length (ft)	150		500		350	100		500	350		
Base Capacity (vph)	314	1152	586	1109	613	77	1078	1109	333	1404	1419
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.67	0.41	0.45	0.67	0.69	0.88	0.58	0.79	0.81	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	705	311	1379	221	495	584
v/c Ratio	0.36	0.42	0.71	0.21	0.80	0.62
Control Delay	9.7	5.0	13.8	9.3	23.5	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	5.0	13.8	9.3	23.5	13.8
Queue Length 50th (ft)	45	12	108	17	98	58
Queue Length 95th (ft)	68	51	153	32	#225	99
Internal Link Dist (ft)	1062		633		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	1936	740	1936	1272	690	1042
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.42	0.71	0.17	0.72	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	1000	605	179	800	26	321	374	32	132	32
v/c Ratio	0.33	0.66	0.32	0.81	0.48	0.03	0.61	0.91	0.20	0.51	0.13
Control Delay	50.1	22.4	0.9	68.8	17.3	3.2	40.2	54.7	39.7	42.3	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.1	22.4	0.9	68.8	17.3	3.2	40.2	54.7	39.7	42.3	12.9
Queue Length 50th (ft)	18	223	0	53	161	0	87	168	17	72	0
Queue Length 95th (ft)	47	327	13	#107	241	10	128	#328	43	122	24
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	98	1523	1937	222	1679	1022	604	431	315	402	377
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.66	0.31	0.81	0.48	0.03	0.53	0.87	0.10	0.33	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	153	653	1653	347	237	1195
v/c Ratio	0.11	1.06	1.00	0.51	0.91	0.64
Control Delay	12.3	76.8	47.4	5.4	71.5	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	76.8	47.4	5.4	71.5	16.6
Queue Length 50th (ft)	20	~310	204	0	53	137
Queue Length 95th (ft)	36	#504	#291	54	#116	182
Internal Link Dist (ft)	808		504			585
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1344	614	1656	679	261	1861
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	1.06	1.00	0.51	0.91	0.64

Intersection Summary

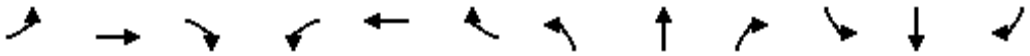
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	768	1516	1463
v/c Ratio	0.84	0.73	0.73
Control Delay	25.2	14.4	14.3
Queue Delay	0.0	0.0	0.0
Total Delay	25.2	14.4	14.3
Queue Length 50th (ft)	114	144	138
Queue Length 95th (ft)	#189	197	191
Internal Link Dist (ft)		395	657
Turn Bay Length (ft)			
Base Capacity (vph)	1001	2071	2016
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.77	0.73	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	1168	130	82	1245	65	174	755	158	130	707	288
v/c Ratio	1.03	0.68	0.19	0.68	0.93	0.12	1.02	0.96	0.29	1.02	1.02	0.56
Control Delay	110.8	25.1	8.9	73.7	44.3	6.3	119.5	62.3	17.3	131.5	80.1	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.8	25.1	8.9	73.7	44.3	6.3	119.5	62.3	17.3	131.5	80.1	24.6
Queue Length 50th (ft)	~166	171	18	52	276	0	~115	250	49	~86	~254	121
Queue Length 95th (ft)	#321	228	m61	#123	#372	28	#252	#372	98	#207	#370	208
Internal Link Dist (ft)		1962			822			1011			883	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	227	1717	687	124	1343	543	171	784	558	128	690	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.68	0.19	0.66	0.93	0.12	1.02	0.96	0.28	1.02	1.02	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

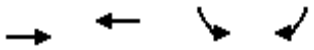
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	207	1511	1489	391	87	130
v/c Ratio	0.70	0.41	0.53	0.41	0.31	0.66
Control Delay	47.8	4.3	5.1	0.8	42.2	37.9
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	47.8	4.4	5.1	0.8	42.2	37.9
Queue Length 50th (ft)	62	69	65	0	26	40
Queue Length 95th (ft)	89	173	m85	m0	47	96
Internal Link Dist (ft)		405	1962			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	435	3690	2790	955	548	321
Starvation Cap Reductn	0	632	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.49	0.53	0.41	0.16	0.40

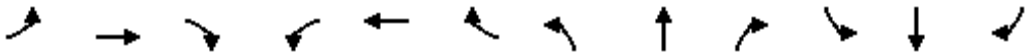
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1027	1576	690	408
v/c Ratio	0.31	0.68	0.54	0.40
Control Delay	1.5	6.6	25.4	21.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	1.5	6.6	25.4	21.6
Queue Length 50th (ft)	2	100	171	96
Queue Length 95th (ft)	3	24	226	140
Internal Link Dist (ft)	519	405	2412	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3263	2330	1288	1019
Starvation Cap Reductn	0	27	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.68	0.54	0.40

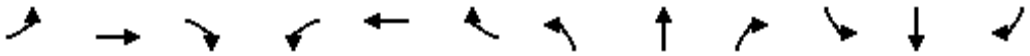
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	310	908	98	326	1457	201	54	22	33	87	223	196
v/c Ratio	0.87	0.67	0.18	0.91	0.63	0.36	0.41	0.26	0.07	0.52	0.81	0.58
Control Delay	63.0	33.5	6.8	66.4	22.5	2.4	44.3	46.1	4.2	44.4	62.1	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	33.5	6.8	66.4	22.5	2.4	44.3	46.1	4.2	44.4	62.1	20.7
Queue Length 50th (ft)	97	200	0	220	163	0	35	14	0	45	71	54
Queue Length 95th (ft)	#168	#259	38	#349	216	m18	57	36	14	#96	#126	130
Internal Link Dist (ft)		647			519			697			611	
Turn Bay Length (ft)	400		200	200		300	200			400		400
Base Capacity (vph)	383	1358	559	401	2311	561	131	136	494	166	307	347
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.67	0.18	0.81	0.63	0.36	0.41	0.16	0.07	0.52	0.73	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	1168	130	82	1245	65	174	755	158	130	707	288
v/c Ratio	1.03	0.69	0.19	0.68	0.93	0.12	1.02	0.96	0.29	1.02	1.02	0.56
Control Delay	109.5	26.8	9.3	73.7	44.3	6.3	119.5	62.3	17.3	131.5	80.1	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.5	26.8	9.3	73.7	44.3	6.3	119.5	62.3	17.3	131.5	80.1	24.6
Queue Length 50th (ft)	~168	268	21	52	276	0	~115	250	49	~86	~254	121
Queue Length 95th (ft)	#324	315	73	#123	#372	28	#252	#372	98	#207	#370	208
Internal Link Dist (ft)		1119			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	227	1688	687	124	1343	543	171	784	558	128	690	512
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.69	0.19	0.66	0.93	0.12	1.02	0.96	0.28	1.02	1.02	0.56

Intersection Summary

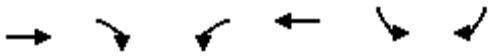
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	207	1511	1489	391	283	217
v/c Ratio	0.63	0.56	0.55	0.48	0.45	0.48
Control Delay	41.1	13.7	12.3	2.4	29.1	26.6
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	41.1	13.9	12.3	2.4	29.1	26.6
Queue Length 50th (ft)	62	197	121	10	72	92
Queue Length 95th (ft)	94	310	m177	m34	111	164
Internal Link Dist (ft)		410	331			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	511	2685	2702	821	635	449
Starvation Cap Reductn	0	366	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.65	0.55	0.48	0.45	0.48

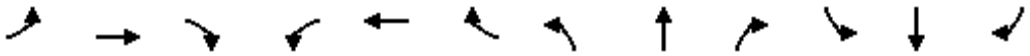
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1027	342	190	1576	690	408
v/c Ratio	0.39	0.43	0.74	0.67	0.61	0.45
Control Delay	20.7	4.1	79.4	8.3	30.4	24.4
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	20.7	4.1	79.4	8.7	30.4	24.4
Queue Length 50th (ft)	107	0	60	103	187	100
Queue Length 95th (ft)	145	32	91	90	247	148
Internal Link Dist (ft)	347			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2630	803	454	2350	1123	902
Starvation Cap Reductn	0	0	0	280	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.43	0.42	0.76	0.61	0.45

Intersection Summary

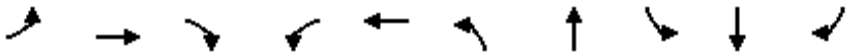


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	53	74	542	32	284	105	316	305	116	79	63
v/c Ratio	0.08	0.15	0.19	1.12	0.04	0.30	0.41	1.26	0.43	0.42	0.47	0.19
Control Delay	49.2	33.7	3.9	111.4	15.7	2.0	44.8	178.9	1.9	47.0	45.1	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	33.7	3.9	111.4	15.7	2.0	44.8	178.9	1.9	47.0	45.1	5.9
Queue Length 50th (ft)	3	28	0	~205	11	0	32	~254	0	36	44	0
Queue Length 95th (ft)	15	66	16	#310	29	31	59	#422	0	62	91	21
Internal Link Dist (ft)		738			419			857			397	
Turn Bay Length (ft)	120					150				220		220
Base Capacity (vph)	61	345	405	486	773	946	291	251	716	472	225	331
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.15	0.18	1.12	0.04	0.30	0.36	1.26	0.43	0.25	0.35	0.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

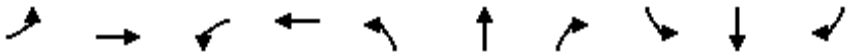


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	242	1216	595	111	1268	274	553	184	295	247
v/c Ratio	0.85	0.77	0.73	0.67	0.78	0.77	0.82	0.72	0.36	0.57
Control Delay	55.7	13.4	6.3	59.4	27.5	53.3	42.0	57.5	32.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.7	13.4	6.3	59.4	27.5	53.3	42.0	57.5	32.6	13.0
Queue Length 50th (ft)	76	113	19	62	221	78	147	53	53	18
Queue Length 95th (ft)	m#91	m126	m22	#139	278	#137	#232	#102	80	90
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	286	1587	814	166	1623	357	671	254	809	436
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.77	0.73	0.67	0.78	0.77	0.82	0.72	0.36	0.57

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	416	1263	53	852	484	379	47	37	363	379
v/c Ratio	0.96	0.67	0.50	0.88	0.94	0.41	0.11	0.40	0.94	0.76
Control Delay	60.4	10.7	68.5	56.1	75.7	34.4	9.5	69.1	84.9	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.4	10.7	68.5	56.1	75.7	34.4	9.5	69.1	84.9	15.7
Queue Length 50th (ft)	324	138	40	233	192	126	0	14	148	0
Queue Length 95th (ft)	#504	161	83	#307	#296	174	29	33	#245	#110
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	434	1896	129	963	513	923	419	92	386	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.67	0.41	0.88	0.94	0.41	0.11	0.40	0.94	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	942	347	400	579	274	147
v/c Ratio	0.73	0.42	0.89	0.25	2.36	0.32
Control Delay	20.8	4.9	47.2	2.0	659.1	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	4.9	47.2	2.0	659.1	5.5
Queue Length 50th (ft)	177	24	156	21	~198	0
Queue Length 95th (ft)	249	69	#302	31	#334	36
Internal Link Dist (ft)	2132			1261	569	
Turn Bay Length (ft)		350	350			
Base Capacity (vph)	1295	819	485	2338	116	491
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.42	0.82	0.25	2.36	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	816	389	147	705
v/c Ratio	0.36	0.40	0.73	0.25
Control Delay	3.5	1.7	48.0	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.5	1.7	48.0	0.2
Queue Length 50th (ft)	45	0	51	0
Queue Length 95th (ft)	67	17	#128	0
Internal Link Dist (ft)	329			2132
Turn Bay Length (ft)			490	
Base Capacity (vph)	2239	972	213	2868
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.40	0.69	0.25

Intersection Summary

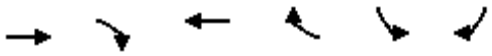
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	563	832	53	126
v/c Ratio	0.25	0.38	0.29	0.47
Control Delay	2.8	3.4	27.5	11.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.8	3.4	27.5	11.5
Queue Length 50th (ft)	18	32	18	0
Queue Length 95th (ft)	46	75	44	39
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	2260	2215	557	578
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.38	0.10	0.22

Intersection Summary

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	658	274	668	495	295
v/c Ratio	0.38	0.31	0.27	0.68	0.26
Control Delay	6.2	0.9	4.8	23.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	0.9	4.8	23.0	0.6
Queue Length 50th (ft)	52	0	23	75	0
Queue Length 95th (ft)	72	1	50	102	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1741	896	2468	1209	1124
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.31	0.27	0.41	0.26

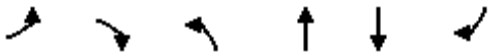
Intersection Summary



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	711	337	974	42	221	474
v/c Ratio	0.41	0.25	0.54	0.04	0.34	0.71
Control Delay	7.3	0.4	4.8	0.1	17.6	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	0.4	4.8	0.1	17.6	19.0
Queue Length 50th (ft)	54	0	31	0	30	56
Queue Length 95th (ft)	118	0	152	m0	46	86
Internal Link Dist (ft)	204		616			
Turn Bay Length (ft)						
Base Capacity (vph)	1739	1332	1815	1075	975	941
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.25	0.54	0.04	0.23	0.50

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	111	137	179	268	5
v/c Ratio	0.05	0.41	0.21	0.08	0.22	0.01
Control Delay	15.8	9.2	3.0	1.7	3.5	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	9.2	3.0	1.7	3.5	2.4
Queue Length 50th (ft)	3	0	11	6	17	0
Queue Length 95th (ft)	11	29	m24	m12	53	2
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	553	548	642	2297	1209	900
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.20	0.21	0.08	0.22	0.01

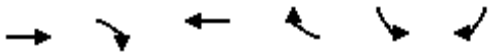
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1416	516	1497	1119	421	884
v/c Ratio	0.90	0.52	0.98	0.98	0.30	0.69
Control Delay	38.9	8.7	55.9	24.3	15.7	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	8.7	55.9	24.3	15.7	23.4
Queue Length 50th (ft)	298	146	436	0	88	269
Queue Length 95th (ft)	#444	531	#561	#245	120	353
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	1570	991	1520	1147	1414	1277
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.52	0.98	0.98	0.30	0.69

Intersection Summary

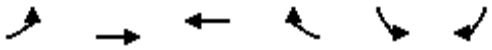
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1374	547	1162	622	558	779
v/c Ratio	0.58	0.62	0.50	0.58	0.63	0.92
Control Delay	16.6	4.9	7.0	13.9	37.5	44.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.6	4.9	7.0	13.9	37.5	44.7
Queue Length 50th (ft)	230	0	57	203	190	257
Queue Length 95th (ft)	363	83	m106	m202	210	301
Internal Link Dist (ft)	475		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2358	878	2330	1069	1206	1085
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.62	0.50	0.58	0.46	0.72

Intersection Summary

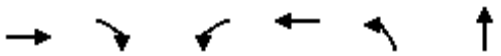
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	311	1363	1353	316	468	226
v/c Ratio	0.89	0.50	0.87	0.43	0.80	0.51
Control Delay	58.3	6.3	20.6	2.2	42.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	6.3	20.6	2.2	42.6	8.6
Queue Length 50th (ft)	150	96	175	4	115	0
Queue Length 95th (ft)	#296	124	#230	m0	#187	57
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	351	2706	1553	741	584	447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.50	0.87	0.43	0.80	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



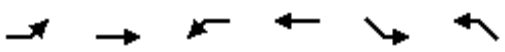
Lane Group	EBT	EBR	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	2047	526	42	2753	463	32
v/c Ratio	0.81	0.88	1.68	0.98	1.45	0.15
Control Delay	19.1	21.3	418.3	16.7	255.0	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	21.3	418.3	16.7	255.0	1.5
Queue Length 50th (ft)	398	22	~48	151	~252	0
Queue Length 95th (ft)	472	#452	m#66	m119	#358	0
Internal Link Dist (ft)	564			370		489
Turn Bay Length (ft)			150		300	
Base Capacity (vph)	2512	599	25	2820	319	273
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.88	1.68	0.98	1.45	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



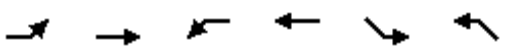
Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1063	574	147	1479	421	579
v/c Ratio	1.14	0.25	0.67	1.09	0.69	1.10
Control Delay	95.4	1.5	65.9	92.2	50.1	115.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	95.4	1.5	65.9	92.2	50.1	115.0
Queue Length 50th (ft)	~498	17	56	~472	156	~263
Queue Length 95th (ft)	#632	m27	91	#569	213	#377
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	932	2333	262	1356	608	524
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.14	0.25	0.56	1.09	0.69	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	1063	1053	32	716	474	211
v/c Ratio	1.08	0.37	0.36	0.97	0.97	0.37
Control Delay	79.9	9.2	57.8	69.6	74.2	35.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	9.2	57.8	69.6	74.2	35.4
Queue Length 50th (ft)	~392	116	10	168	155	59
Queue Length 95th (ft)	#519	144	26	#251	#258	93
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	983	2822	88	735	488	564
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.37	0.36	0.97	0.97	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

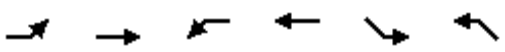
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SBL2	NWL
Lane Group Flow (vph)	568	274	232	111	1011	253
v/c Ratio	0.50	0.19	0.69	0.10	1.45	0.36
Control Delay	27.3	14.8	56.0	30.9	243.5	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	14.8	56.0	30.9	243.5	36.9
Queue Length 50th (ft)	154	51	81	21	~503	77
Queue Length 95th (ft)	206	83	118	37	#630	115
Internal Link Dist (ft)		175		222		205
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	1130	1475	753	1152	697	697
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.19	0.31	0.10	1.45	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

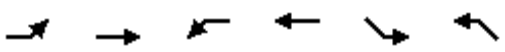
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	663	484	358	416	653	516
v/c Ratio	0.83	0.29	0.71	0.39	0.85	0.75
Control Delay	32.2	13.5	38.5	26.7	38.6	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	13.5	38.5	26.7	38.6	33.8
Queue Length 50th (ft)	165	52	86	65	151	115
Queue Length 95th (ft)	m221	m70	127	97	215	170
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	881	1667	591	1064	846	753
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.29	0.61	0.39	0.77	0.69

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	326	532	389	389	811	189
v/c Ratio	0.52	0.55	0.76	0.49	0.82	0.24
Control Delay	22.5	20.6	34.7	22.1	24.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	20.6	34.7	22.1	24.4	13.8
Queue Length 50th (ft)	49	57	63	42	114	20
Queue Length 95th (ft)	87	84	#138	69	#223	43
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	624	1260	523	1244	1078	914
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.42	0.74	0.31	0.75	0.21

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	95	1585	1958	216	432	358	16
v/c Ratio	0.89	0.71	1.11	0.32	0.93	0.76	0.08
Control Delay	107.4	18.7	78.8	1.8	59.6	44.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.4	18.7	78.8	1.8	59.6	44.8	14.7
Queue Length 50th (ft)	~63	244	~450	5	121	88	1
Queue Length 95th (ft)	#160	302	#553	m7	#221	130	m14
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	107	2226	1760	670	469	514	218
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.71	1.11	0.32	0.92	0.70	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
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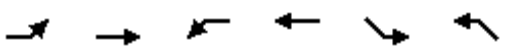
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

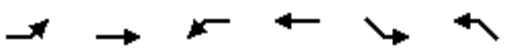


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	542	632	374	337	947
v/c Ratio	0.74	0.55	0.89	0.31	0.32	0.90
Control Delay	38.2	26.4	47.7	27.9	20.5	38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	26.4	47.7	27.9	20.5	38.7
Queue Length 50th (ft)	127	90	173	65	65	244
Queue Length 95th (ft)	m170	m128	#262	94	97	#330
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	643	980	758	1213	1145	1134
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.55	0.83	0.31	0.29	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



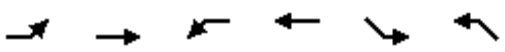
Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1168	779	400	347	632
v/c Ratio	0.68	1.05	1.03	0.26	0.58	1.01
Control Delay	45.0	69.7	53.7	5.5	35.7	75.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	69.7	53.7	5.5	35.7	75.7
Queue Length 50th (ft)	78	~384	~248	18	91	~190
Queue Length 95th (ft)	119	#512	#351	m36	136	#303
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	473	1115	758	1512	601	624
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.05	1.03	0.26	0.58	1.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	442	811	516	753	337	568
v/c Ratio	0.80	0.57	0.65	0.38	0.51	0.84
Control Delay	57.5	34.3	17.1	8.3	41.6	55.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	34.3	17.1	8.3	41.6	55.2
Queue Length 50th (ft)	170	183	101	32	118	218
Queue Length 95th (ft)	214	254	m139	m108	150	260
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	723	1431	791	1999	858	874
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.57	0.65	0.38	0.39	0.65

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

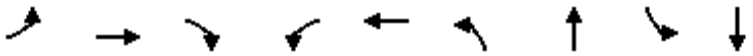
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	189	253	153	184
v/c Ratio	0.36	0.60	0.30	0.36
Control Delay	16.6	27.5	6.8	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.6	27.5	6.8	3.1
Queue Length 50th (ft)	31	44	18	0
Queue Length 95th (ft)	52	70	56	22
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1050	844	512	518
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.30	0.30	0.36

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	189	95	116	289
v/c Ratio	0.10	0.19	0.68	0.14
Control Delay	5.8	3.2	31.1	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.8	3.2	31.1	0.1
Queue Length 50th (ft)	11	0	40	0
Queue Length 95th (ft)	34	21	m69	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1882	497	355	2097
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.19	0.33	0.14

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	11	100	421	95	195	158	600	58	760
v/c Ratio	0.10	0.61	0.81	0.47	0.80	0.71	0.40	0.50	0.52
Control Delay	36.4	55.7	24.8	41.6	50.2	57.1	14.9	57.2	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.4	55.7	24.8	41.6	50.2	57.1	14.9	57.2	21.5
Queue Length 50th (ft)	6	61	112	51	86	96	102	36	167
Queue Length 95th (ft)	21	109	152	94	#165	160	199	75	300
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	113	249	561	235	299	277	1500	152	1450
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.40	0.75	0.40	0.65	0.57	0.40	0.38	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	274	100	89	1032	1163
v/c Ratio	0.85	0.39	0.77	0.35	0.71
Control Delay	64.8	12.2	83.5	12.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.4
Total Delay	64.8	12.2	83.5	12.8	3.1
Queue Length 50th (ft)	86	0	56	109	4
Queue Length 95th (ft)	#156	46	#139	134	1
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	336	265	121	2974	1661
Starvation Cap Reductn	0	0	0	0	142
Spillback Cap Reductn	0	0	0	252	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.38	0.74	0.38	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	105	37	1037	268	26	1058
v/c Ratio	0.04	0.43	0.09	0.70	0.21	0.37	0.82
Control Delay	26.4	48.4	10.3	12.3	0.9	62.2	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	48.4	10.3	12.3	0.9	62.2	30.0
Queue Length 50th (ft)	3	32	2	299	3	17	306
Queue Length 95th (ft)	17	59	25	m383	m7	#51	403
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	250	273	448	1474	1297	70	1295
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.38	0.08	0.70	0.21	0.37	0.82

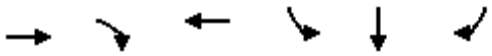
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	163	721	321	363	363	58	711	979	279	805	279
v/c Ratio	0.62	0.75	0.42	0.28	0.49	0.56	0.74	0.76	0.78	0.65	0.20
Control Delay	43.5	36.4	28.4	11.4	3.2	41.2	14.7	15.0	55.0	30.5	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	36.4	28.4	11.4	3.2	41.2	14.7	15.0	55.0	30.5	2.3
Queue Length 50th (ft)	101	94	108	24	0	40	46	86	85	150	57
Queue Length 95th (ft)	164	145	155	34	7	m51	#156	139	m118	190	m10
Internal Link Dist (ft)		626		720			598			398	
Turn Bay Length (ft)	150		500		350	100			350		
Base Capacity (vph)	299	962	828	1308	748	108	956	1282	358	1241	1363
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.75	0.39	0.28	0.49	0.54	0.74	0.76	0.78	0.65	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	784	432	700	100	358	242
v/c Ratio	0.28	0.43	0.25	0.14	0.86	0.30
Control Delay	8.2	2.9	3.4	27.2	54.9	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	2.9	3.4	27.2	54.9	4.2
Queue Length 50th (ft)	66	6	11	25	220	0
Queue Length 95th (ft)	119	53	40	39	285	27
Internal Link Dist (ft)	1068		626		2147	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2775	999	2826	1373	745	1245
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.43	0.25	0.07	0.48	0.19

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	811	1089	221	811	32	211	105	37	268	26
v/c Ratio	0.33	0.66	0.69	0.66	0.53	0.04	0.37	0.21	0.29	0.80	0.09
Control Delay	43.8	22.2	5.8	53.1	23.2	4.1	37.8	17.4	48.7	57.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	22.2	5.8	53.1	23.2	4.1	37.8	17.4	48.7	57.0	12.5
Queue Length 50th (ft)	17	190	78	69	206	1	62	31	23	163	0
Queue Length 95th (ft)	m25	271	105	#112	294	12	93	69	53	247	22
Internal Link Dist (ft)		720			1091			549		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	99	1236	1645	346	1539	956	655	515	267	391	349
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.66	0.66	0.64	0.53	0.03	0.32	0.20	0.14	0.69	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	268	521	1747	474	279	895
v/c Ratio	0.25	0.95	0.79	0.62	0.79	0.39
Control Delay	15.2	41.9	29.9	10.8	42.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	41.9	29.9	10.8	42.4	7.5
Queue Length 50th (ft)	56	282	293	55	65	26
Queue Length 95th (ft)	m64	m#411	344	169	m#141	80
Internal Link Dist (ft)	842		562			598
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	1158	584	2203	763	355	2317
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.89	0.79	0.62	0.79	0.39

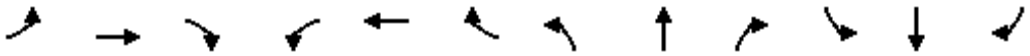
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	316	1237	1047
v/c Ratio	0.76	0.37	0.31
Control Delay	33.7	2.1	3.2
Queue Delay	0.0	0.0	0.0
Total Delay	33.7	2.1	3.2
Queue Length 50th (ft)	56	37	48
Queue Length 95th (ft)	103	55	85
Internal Link Dist (ft)		398	657
Turn Bay Length (ft)			
Base Capacity (vph)	976	3385	3325
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.37	0.31

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	212	1168	141	109	1234	60	125	527	152	98	592	174
v/c Ratio	0.90	0.67	0.21	0.74	0.86	0.11	0.84	0.78	0.29	0.71	0.92	0.34
Control Delay	80.9	25.8	9.4	72.5	37.8	6.5	86.0	46.0	13.8	72.0	60.4	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.9	25.8	9.4	72.5	37.8	6.5	86.0	46.0	13.8	72.0	60.4	15.4
Queue Length 50th (ft)	143	185	15	68	268	0	80	167	34	62	195	49
Queue Length 95th (ft)	#272	265	m71	#151	#356	27	#182	#230	82	#139	#296	101
Internal Link Dist (ft)		1936			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	242	1740	677	155	1427	553	151	677	536	144	652	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.67	0.21	0.70	0.86	0.11	0.83	0.78	0.28	0.68	0.91	0.33

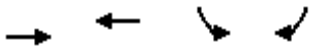
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1375	1179	451	114	125
v/c Ratio	0.69	0.38	0.40	0.47	0.43	0.62
Control Delay	47.8	5.2	2.7	1.4	46.1	31.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	47.8	5.2	2.7	1.4	46.1	31.3
Queue Length 50th (ft)	64	83	27	0	36	29
Queue Length 95th (ft)	88	209	m41	m0	59	84
Internal Link Dist (ft)		402	1936			
Turn Bay Length (ft)				300		
Base Capacity (vph)	514	3616	2938	969	581	356
Starvation Cap Reductn	0	614	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.46	0.40	0.47	0.20	0.35

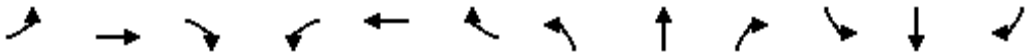
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1022	1293	554	321
v/c Ratio	0.32	0.56	0.42	0.32
Control Delay	4.7	8.8	22.3	16.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.7	8.8	22.3	16.9
Queue Length 50th (ft)	17	87	127	60
Queue Length 95th (ft)	22	124	172	97
Internal Link Dist (ft)	548	402	1312	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3165	2300	1305	992
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.56	0.42	0.32

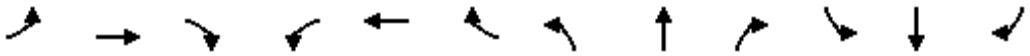
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	408	891	87	245	1125	245	33	22	54	76	255	179
v/c Ratio	0.90	0.60	0.15	0.87	0.64	0.40	0.17	0.19	0.10	0.52	0.81	0.43
Control Delay	57.8	30.1	6.8	70.0	22.0	1.8	28.9	39.8	3.7	43.8	59.4	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	30.1	6.8	70.0	22.0	1.8	28.9	39.8	3.7	43.8	59.4	9.1
Queue Length 50th (ft)	124	187	0	166	99	0	15	12	0	38	81	25
Queue Length 95th (ft)	#200	245	36	#271	177	1	39	35	18	81	#142	71
Internal Link Dist (ft)		735			548			648			512	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	509	1476	592	330	1767	607	199	153	610	146	339	443
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.60	0.15	0.74	0.64	0.40	0.17	0.14	0.09	0.52	0.75	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	212	1168	141	109	1234	60	125	527	152	98	592	174
v/c Ratio	0.90	0.67	0.21	0.74	0.87	0.11	0.84	0.78	0.29	0.71	0.92	0.34
Control Delay	83.8	28.9	11.1	72.5	37.9	6.5	86.0	46.0	13.8	72.0	60.4	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.8	28.9	11.1	72.5	37.9	6.5	86.0	46.0	13.8	72.0	60.4	15.4
Queue Length 50th (ft)	146	270	23	68	268	0	80	167	34	62	195	49
Queue Length 95th (ft)	#274	311	76	#151	#356	27	#182	#230	82	#139	#296	101
Internal Link Dist (ft)		999			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	242	1740	677	155	1426	553	151	677	536	144	652	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.67	0.21	0.70	0.87	0.11	0.83	0.78	0.28	0.68	0.91	0.33

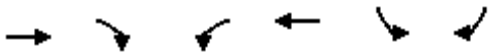
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	201	1299	1179	451	293	201
v/c Ratio	0.62	0.46	0.37	0.50	0.37	0.44
Control Delay	39.1	11.4	5.1	2.2	30.6	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	11.4	5.1	2.2	30.6	22.0
Queue Length 50th (ft)	55	145	24	0	77	65
Queue Length 95th (ft)	87	249	m54	m0	115	133
Internal Link Dist (ft)		410	451			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	549	2837	3185	899	791	456
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.46	0.37	0.50	0.37	0.44

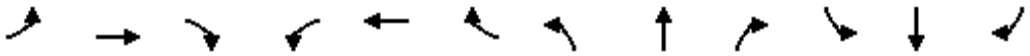
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	946	440	234	1239	554	321
v/c Ratio	0.37	0.34	0.62	0.48	0.50	0.36
Control Delay	21.4	2.8	47.2	5.5	27.5	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	2.8	47.2	5.5	27.5	17.2
Queue Length 50th (ft)	102	0	51	29	141	55
Queue Length 95th (ft)	131	32	73	45	191	96
Internal Link Dist (ft)	461			410		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2547	1303	721	2571	1114	884
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.34	0.32	0.48	0.50	0.36

Intersection Summary

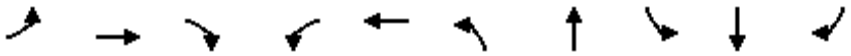


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	167	243	584	58	411	100	153	179	342	121	11
v/c Ratio	0.12	0.53	0.48	1.06	0.08	0.47	0.30	0.82	0.26	0.80	0.80	0.03
Control Delay	52.0	13.4	5.0	89.8	17.5	4.1	39.6	70.5	0.9	55.4	72.0	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	13.4	5.0	89.8	17.5	4.1	39.6	70.5	0.9	55.4	72.0	7.5
Queue Length 50th (ft)	3	3	0	~225	18	0	28	92	0	108	73	0
Queue Length 95th (ft)	15	68	27	#350	50	61	54	#179	0	#169	#146	8
Internal Link Dist (ft)		738			419			857			397	
Turn Bay Length (ft)	120					150				220		220
Base Capacity (vph)	41	314	513	553	742	876	342	227	701	454	196	335
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.53	0.47	1.06	0.08	0.47	0.29	0.67	0.26	0.75	0.62	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

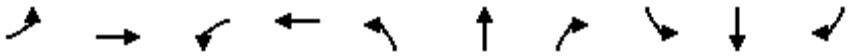


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	279	1216	421	137	1174	232	579	279	700	389
v/c Ratio	0.78	0.78	0.57	0.81	0.79	0.72	0.86	0.96	0.76	0.76
Control Delay	43.6	17.5	3.7	70.6	27.6	48.6	43.0	81.1	35.6	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	17.5	3.7	70.6	27.6	48.6	43.0	81.1	35.6	20.6
Queue Length 50th (ft)	63	159	17	68	186	58	138	73	120	48
Queue Length 95th (ft)	m79	m179	m22	#163	241	#107	#230	#147	163	#188
Internal Link Dist (ft)		323			384		452		448	
Turn Bay Length (ft)	150		200	200		150		200		
Base Capacity (vph)	365	1568	734	169	1478	325	671	292	926	510
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.78	0.57	0.81	0.79	0.71	0.86	0.96	0.76	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	289	2095	79	921	605	816	84	179	705	168
v/c Ratio	1.01	1.12	1.44	0.76	1.15	0.94	0.19	0.78	1.23	0.44
Control Delay	97.2	75.8	312.5	39.9	128.8	58.0	7.5	72.6	155.3	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	75.8	312.5	39.9	128.8	58.0	7.5	72.6	155.3	9.7
Queue Length 50th (ft)	~182	~610	~76	214	~259	295	0	64	~323	0
Queue Length 95th (ft)	m#307	#686	#176	267	#371	#421	36	#121	#444	58
Internal Link Dist (ft)		1765		385		452			448	
Turn Bay Length (ft)	300		300		300		300	300		
Base Capacity (vph)	287	1867	55	1216	526	867	433	230	575	386
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.12	1.44	0.76	1.15	0.94	0.19	0.78	1.23	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1447	763	200	200
v/c Ratio	0.85	0.36	0.79	0.66
Control Delay	9.1	4.6	51.3	16.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.1	4.6	51.3	16.9
Queue Length 50th (ft)	54	56	82	0
Queue Length 95th (ft)	#94	80	#179	#71
Internal Link Dist (ft)	2144	1060	569	
Turn Bay Length (ft)				
Base Capacity (vph)	1701	2140	269	316
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.85	0.36	0.74	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1205	400	147	816	305	621
v/c Ratio	0.79	0.46	0.72	0.38	0.61	0.47
Control Delay	19.9	3.3	51.2	4.4	31.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	3.3	51.2	4.4	31.5	1.2
Queue Length 50th (ft)	207	0	64	48	63	0
Queue Length 95th (ft)	#370	44	m#134	m78	94	0
Internal Link Dist (ft)	198			2144	319	
Turn Bay Length (ft)			490		300	
Base Capacity (vph)	1535	869	203	2137	654	1320
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.46	0.72	0.38	0.47	0.47

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1526	1053	11	316
v/c Ratio	0.84	0.59	0.05	0.84
Control Delay	16.5	9.7	19.9	40.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.5	9.7	19.9	40.5
Queue Length 50th (ft)	224	119	4	93
Queue Length 95th (ft)	#393	173	12	#212
Internal Link Dist (ft)	550	618	915	
Turn Bay Length (ft)				800
Base Capacity (vph)	1821	1785	456	416
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.59	0.02	0.76

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	984	295	1053	789	358
v/c Ratio	0.55	0.33	0.41	1.24	0.29
Control Delay	9.4	5.3	4.2	143.4	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	5.3	4.2	143.4	0.6
Queue Length 50th (ft)	111	45	32	~138	0
Queue Length 95th (ft)	150	114	49	#224	0
Internal Link Dist (ft)	616		618		
Turn Bay Length (ft)					300
Base Capacity (vph)	1788	903	2586	636	1214
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.33	0.41	1.24	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

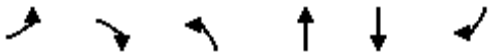
Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Group Flow (vph)	942	432	1631	337	768
v/c Ratio	0.53	0.30	1.06	0.41	1.10
Control Delay	10.4	0.5	51.2	28.4	94.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	0.5	51.2	28.4	94.6
Queue Length 50th (ft)	145	0	~542	80	~267
Queue Length 95th (ft)	195	0	m#473	119	#393
Internal Link Dist (ft)	204		616		
Turn Bay Length (ft)					
Base Capacity (vph)	1790	1441	1538	819	698
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.30	1.06	0.41	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	11	211	226	253	311	5
v/c Ratio	0.05	0.56	0.39	0.12	0.28	0.01
Control Delay	14.5	9.1	5.0	1.3	4.6	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	9.1	5.0	1.3	4.6	2.8
Queue Length 50th (ft)	3	0	7	3	21	0
Queue Length 95th (ft)	11	38	m24	m10	74	3
Internal Link Dist (ft)	390			109	452	
Turn Bay Length (ft)			100			
Base Capacity (vph)	491	580	580	2144	1129	980
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.36	0.39	0.12	0.28	0.01

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

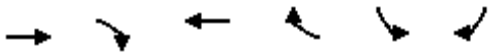
Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1853	379	1634	729	832	958
v/c Ratio	0.73	0.35	0.66	0.64	0.99	1.30
Control Delay	7.9	0.8	13.2	2.7	67.3	178.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	0.8	13.2	2.7	67.3	178.7
Queue Length 50th (ft)	128	0	238	0	300	~487
Queue Length 95th (ft)	m158	m0	291	0	#434	#628
Internal Link Dist (ft)	819		610			
Turn Bay Length (ft)		550		250	650	650
Base Capacity (vph)	2539	1083	2481	1147	842	735
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.35	0.66	0.64	0.99	1.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



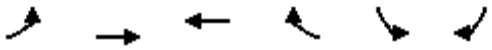
Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1582	554	1445	613	863	695
v/c Ratio	0.61	0.59	0.55	0.55	1.12	0.98
Control Delay	11.7	3.5	19.5	5.9	107.2	64.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	3.5	19.5	5.9	107.2	64.3
Queue Length 50th (ft)	218	0	292	100	~361	243
Queue Length 95th (ft)	263	43	m303	m280	#484	#384
Internal Link Dist (ft)	454		819			
Turn Bay Length (ft)		500		600	570	570
Base Capacity (vph)	2610	935	2620	1114	773	708
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.59	0.55	0.55	1.12	0.98

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

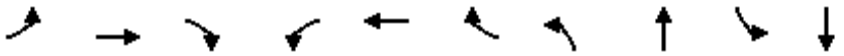


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	111	2400	1705	137	605	258
v/c Ratio	0.80	0.89	0.86	0.19	0.85	0.55
Control Delay	72.9	16.1	11.9	0.6	39.2	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.9	16.1	11.9	0.6	39.2	11.9
Queue Length 50th (ft)	48	271	100	0	128	22
Queue Length 95th (ft)	#131	358	121	m0	#213	86
Internal Link Dist (ft)		323	215		652	
Turn Bay Length (ft)	250					300
Base Capacity (vph)	138	2700	1983	718	709	473
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.89	0.86	0.19	0.85	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



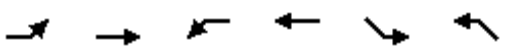
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	5	1716	421	21	2126	5	400	21	5	5
v/c Ratio	0.05	0.62	0.72	0.55	0.74	0.01	1.55	0.08	0.05	0.02
Control Delay	35.2	11.1	10.1	73.2	7.8	1.2	293.6	0.7	29.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	11.1	10.1	73.2	7.8	1.2	293.6	0.7	29.0	0.2
Queue Length 50th (ft)	2	173	0	11	34	0	~147	0	3	0
Queue Length 95th (ft)	13	304	#209	m#21	#514	m1	#234	0	10	0
Internal Link Dist (ft)		564			370			494		329
Turn Bay Length (ft)	150			150			300			
Base Capacity (vph)	111	2774	587	38	2861	919	258	330	92	370
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.62	0.72	0.55	0.74	0.01	1.55	0.06	0.05	0.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

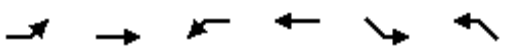
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	737	689	126	1237	484	211
v/c Ratio	0.84	0.28	0.55	0.80	0.86	0.42
Control Delay	25.2	2.6	42.0	28.0	48.0	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	2.6	42.0	28.0	48.0	31.1
Queue Length 50th (ft)	176	11	30	202	120	47
Queue Length 95th (ft)	#265	5	57	257	#198	79
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	876	2459	270	1553	578	513
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.28	0.47	0.80	0.84	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	674	1137	11	868	495	84
v/c Ratio	0.88	0.44	0.05	0.71	0.84	0.23
Control Delay	35.0	7.0	26.9	23.7	37.8	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	7.0	26.9	23.7	37.8	21.8
Queue Length 50th (ft)	115	60	2	105	88	12
Queue Length 95th (ft)	#203	125	8	146	#159	28
Internal Link Dist (ft)		170		169		
Turn Bay Length (ft)						
Base Capacity (vph)	798	2588	211	1216	603	463
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.44	0.05	0.71	0.82	0.18

Intersection Summary

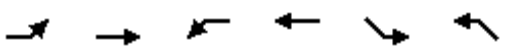
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	SBL2	NWL
Lane Group Flow (vph)	800	642	242	1526	968	358
v/c Ratio	0.91	0.35	0.70	0.82	2.15	0.79
Control Delay	52.8	11.6	57.1	32.1	548.2	58.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	11.6	57.1	32.1	548.2	58.1
Queue Length 50th (ft)	272	113	84	349	~563	126
Queue Length 95th (ft)	#375	153	126	418	#690	#192
Internal Link Dist (ft)		175		222		205
Turn Bay Length (ft)	125		300			
Base Capacity (vph)	929	1832	393	1869	451	456
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.35	0.62	0.82	2.15	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

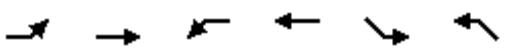
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	811	1474	158	695	411	432
v/c Ratio	0.80	0.67	0.52	0.62	0.67	0.80
Control Delay	20.3	10.3	35.8	26.2	31.0	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	10.3	35.8	26.2	31.0	38.5
Queue Length 50th (ft)	161	147	33	98	82	89
Queue Length 95th (ft)	m173	m165	61	136	126	#152
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	1013	2200	317	1122	654	576
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.67	0.50	0.62	0.63	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	284	1479	305	1021	537	232
v/c Ratio	0.47	0.86	0.72	0.72	0.80	0.36
Control Delay	22.7	21.6	34.7	19.0	31.1	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	21.6	34.7	19.0	31.1	19.3
Queue Length 50th (ft)	43	154	50	101	85	32
Queue Length 95th (ft)	76	#223	#100	138	#153	58
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	603	1748	424	1516	689	670
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.85	0.72	0.67	0.78	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

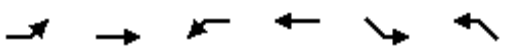
Lane Group	EBL	EBT	WBT	WBR	NBR	SBL	SBR
Lane Group Flow (vph)	242	1953	1968	242	200	505	21
v/c Ratio	1.19	0.89	1.34	0.40	0.60	0.81	0.08
Control Delay	161.4	25.9	180.6	3.7	40.2	44.3	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	161.4	25.9	180.6	3.7	40.2	44.3	12.2
Queue Length 50th (ft)	~168	349	~536	16	55	137	0
Queue Length 95th (ft)	#314	#436	#635	m23	89	#243	m11
Internal Link Dist (ft)		523	135				
Turn Bay Length (ft)	200				240	400	200
Base Capacity (vph)	203	2197	1466	602	439	620	277
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.89	1.34	0.40	0.46	0.81	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

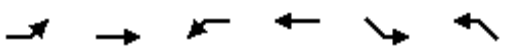


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	358	1137	495	821	147	758
v/c Ratio	0.62	0.72	0.83	0.52	0.17	0.87
Control Delay	27.6	19.4	47.0	24.2	23.2	42.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	19.4	47.0	24.2	23.2	42.0
Queue Length 50th (ft)	86	182	137	137	30	201
Queue Length 95th (ft)	m105	m232	#197	178	53	273
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	573	1570	642	1567	950	941
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.72	0.77	0.52	0.15	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

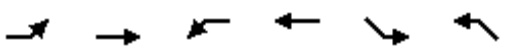


Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	232	1421	379	947	316	400
v/c Ratio	0.55	0.91	0.85	0.59	0.71	0.87
Control Delay	37.1	28.1	43.7	6.5	41.7	53.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	28.1	43.7	6.5	41.7	53.2
Queue Length 50th (ft)	56	320	69	40	77	101
Queue Length 95th (ft)	91	#488	m#137	75	#128	#177
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	421	1558	452	1605	448	465
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.91	0.84	0.59	0.71	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	SEL	NWL
Lane Group Flow (vph)	368	1532	642	674	189	642
v/c Ratio	0.69	0.87	0.93	0.34	0.28	0.94
Control Delay	49.1	36.9	47.6	9.6	35.2	63.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	36.9	47.6	9.6	35.2	63.2
Queue Length 50th (ft)	125	364	250	36	55	227
Queue Length 95th (ft)	177	434	m#281	m43	88	#334
Internal Link Dist (ft)		170		172		
Turn Bay Length (ft)						
Base Capacity (vph)	547	1756	703	1989	683	703
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.87	0.91	0.34	0.28	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

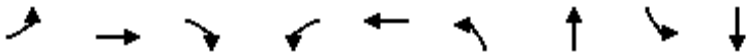
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	326	305	142	174
v/c Ratio	0.48	0.48	0.35	0.39
Control Delay	8.9	14.3	10.1	4.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.9	14.3	10.1	4.9
Queue Length 50th (ft)	32	31	14	0
Queue Length 95th (ft)	0	43	61	28
Internal Link Dist (ft)	221	2155	662	
Turn Bay Length (ft)			400	
Base Capacity (vph)	1039	973	410	447
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.31	0.35	0.39

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT
Lane Group Flow (vph)	326	63	74	374
v/c Ratio	0.18	0.13	0.39	0.17
Control Delay	5.5	3.2	15.1	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	3.2	15.1	0.2
Queue Length 50th (ft)	18	0	5	0
Queue Length 95th (ft)	42	14	m38	0
Internal Link Dist (ft)	3492			221
Turn Bay Length (ft)		400	250	
Base Capacity (vph)	1794	489	285	2187
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.13	0.26	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	8	147	632	105	268	263	800	74	1112
v/c Ratio	0.05	0.82	1.12	0.60	0.91	0.73	0.56	0.59	1.06
Control Delay	36.8	74.8	94.3	47.8	66.1	47.6	18.6	60.3	76.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.8	74.8	94.3	47.8	66.1	47.6	18.6	60.3	76.9
Queue Length 50th (ft)	4	91	~278	53	132	154	177	45	~426
Queue Length 95th (ft)	18	#190	#495	#110	#329	#267	253	91	#558
Internal Link Dist (ft)		2169			3492		1427		2539
Turn Bay Length (ft)	100		100	400		500		500	
Base Capacity (vph)	164	195	566	174	293	362	1425	161	1051
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.75	1.12	0.60	0.91	0.73	0.56	0.46	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	358	142	200	1421	1263
v/c Ratio	0.96	0.47	1.03	0.52	0.91
Control Delay	81.0	11.8	114.6	17.2	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	81.0	11.8	114.6	17.2	10.8
Queue Length 50th (ft)	~121	0	~137	173	0
Queue Length 95th (ft)	#215	56	#278	207	m65
Internal Link Dist (ft)	2155			735	205
Turn Bay Length (ft)	200		150		
Base Capacity (vph)	371	305	195	2715	1415
Starvation Cap Reductn	0	0	0	0	5
Spillback Cap Reductn	0	0	0	124	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.96	0.47	1.03	0.55	0.90

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	10	158	58	1116	663	42	1110
v/c Ratio	0.04	0.55	0.12	0.82	0.46	0.55	1.00
Control Delay	26.5	50.4	8.4	14.5	1.2	73.0	58.9
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	26.5	50.4	8.4	14.5	1.4	73.0	58.9
Queue Length 50th (ft)	3	50	2	340	3	27	~367
Queue Length 95th (ft)	17	82	30	m417	m10	#77	#522
Internal Link Dist (ft)	495		806	205			1218
Turn Bay Length (ft)		400				100	
Base Capacity (vph)	257	309	470	1369	1427	77	1108
Starvation Cap Reductn	0	0	0	0	216	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.51	0.12	0.82	0.55	0.55	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

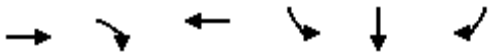
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	111	836	426	337	358	111	837	758	232	1132	247
v/c Ratio	0.45	0.83	0.84	0.33	0.56	0.72	0.65	0.62	0.78	0.88	0.18
Control Delay	31.2	30.9	43.1	22.4	9.8	56.3	13.9	14.8	53.0	32.1	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	30.9	43.1	22.4	9.8	56.3	13.9	14.8	53.0	32.1	7.4
Queue Length 50th (ft)	46	73	142	72	75	76	167	239	72	232	83
Queue Length 95th (ft)	94	#96	m#196	m66	m104	m#142	183	327	m#113	102	m38
Internal Link Dist (ft)		627		710			590			403	
Turn Bay Length (ft)	150		500		350	200		500	350		
Base Capacity (vph)	246	1007	527	1014	642	154	1292	1232	298	1292	1378
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.83	0.81	0.33	0.56	0.72	0.65	0.62	0.78	0.88	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	826	784	695	121	721	147
v/c Ratio	0.41	1.17	0.34	0.12	1.06	0.13
Control Delay	17.1	114.4	3.3	19.0	82.6	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	114.4	3.3	19.0	82.6	3.6
Queue Length 50th (ft)	118	~559	29	23	~510	1
Queue Length 95th (ft)	150	#791	41	40	#732	20
Internal Link Dist (ft)	1068		627		1916	
Turn Bay Length (ft)		700		550		450
Base Capacity (vph)	2012	671	2031	1247	677	1094
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	1.17	0.34	0.10	1.06	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	26	937	816	268	679	26	416	205	26	211	26
v/c Ratio	0.27	0.71	0.46	0.73	0.40	0.03	0.77	0.46	0.21	0.75	0.10
Control Delay	47.4	22.0	4.1	55.7	16.8	3.8	50.5	28.3	47.4	57.3	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	22.0	4.1	55.7	16.8	3.8	50.5	28.3	47.4	57.3	13.9
Queue Length 50th (ft)	16	269	85	86	127	0	129	84	16	128	0
Queue Length 95th (ft)	m23	356	m148	#140	208	11	184	154	42	204	23
Internal Link Dist (ft)		710			1091			512		816	
Turn Bay Length (ft)	100			500		100	600		250		200
Base Capacity (vph)	95	1313	1751	367	1677	1154	563	444	283	326	306
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.71	0.47	0.73	0.40	0.02	0.74	0.46	0.09	0.65	0.08

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	516	989	1705	616	405	1200
v/c Ratio	0.91	0.73	0.62	0.90	0.87	0.40
Control Delay	38.7	0.6	18.5	39.0	37.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	0.6	18.5	39.0	37.1	2.0
Queue Length 50th (ft)	165	0	218	328	129	58
Queue Length 95th (ft)	m143	m0	256	#572	m136	m49
Internal Link Dist (ft)	859		184			590
Turn Bay Length (ft)				300	500	
Base Capacity (vph)	577	1350	2754	687	475	2973
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.73	0.62	0.90	0.85	0.40

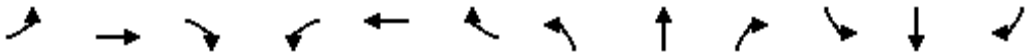
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	NBT	SBT
Lane Group Flow (vph)	284	1305	1326
v/c Ratio	0.86	0.45	0.46
Control Delay	56.3	4.6	8.4
Queue Delay	0.0	0.0	0.0
Total Delay	56.3	4.6	8.4
Queue Length 50th (ft)	158	59	120
Queue Length 95th (ft)	227	83	208
Internal Link Dist (ft)		403	657
Turn Bay Length (ft)			
Base Capacity (vph)	594	2885	2859
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.45	0.46

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1652	54	141	1359	87	43	560	109	141	908	435
v/c Ratio	0.93	0.98	0.10	0.88	0.93	0.15	0.70	0.84	0.21	0.77	0.96	0.67
Control Delay	96.3	38.3	4.7	91.2	43.1	5.5	100.6	50.8	15.0	70.7	55.9	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.3	38.3	4.7	91.2	43.1	5.5	100.6	50.8	15.0	70.7	55.9	24.3
Queue Length 50th (ft)	127	387	4	90	302	0	28	181	28	88	302	193
Queue Length 95th (ft)	m#256	#511	m12	#205	#402	31	#89	#268	67	#182	#439	313
Internal Link Dist (ft)		1975			822			613			777	
Turn Bay Length (ft)	400		300	300		400	300		400	300		400
Base Capacity (vph)	199	1684	556	160	1463	574	61	666	523	192	950	653
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.98	0.10	0.88	0.93	0.15	0.70	0.84	0.21	0.73	0.96	0.67

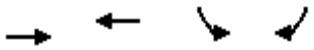
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	255	1864	1326	592	82	168
v/c Ratio	0.71	0.54	0.52	0.60	0.21	0.76
Control Delay	50.4	5.1	8.3	2.9	35.1	53.3
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	50.4	5.2	8.3	2.9	35.1	53.3
Queue Length 50th (ft)	77	81	74	1	23	87
Queue Length 95th (ft)	128	168	m200	m0	41	148
Internal Link Dist (ft)		362	1975			
Turn Bay Length (ft)				300		500
Base Capacity (vph)	434	3463	2572	980	561	309
Starvation Cap Reductn	0	324	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.59	0.52	0.60	0.15	0.54

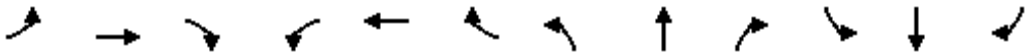
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1685	1408	435	272
v/c Ratio	0.46	0.57	0.37	0.30
Control Delay	1.9	4.3	24.1	18.2
Queue Delay	0.0	0.2	0.0	0.0
Total Delay	1.9	4.5	24.1	18.2
Queue Length 50th (ft)	5	146	103	52
Queue Length 95th (ft)	13	10	143	88
Internal Link Dist (ft)	548	362	1409	
Turn Bay Length (ft)			400	400
Base Capacity (vph)	3649	2481	1178	894
Starvation Cap Reductn	0	307	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.65	0.37	0.30

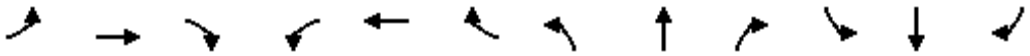
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	1554	82	239	1092	348	54	11	33	98	283	261
v/c Ratio	0.91	0.89	0.13	0.94	0.61	0.55	0.27	0.09	0.08	0.65	0.93	0.65
Control Delay	58.4	36.2	5.8	78.8	31.1	10.4	32.2	37.9	6.6	53.6	78.2	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.4	36.2	5.8	78.8	31.1	10.4	32.2	37.9	6.6	53.6	78.2	20.8
Queue Length 50th (ft)	143	343	2	157	140	28	26	6	0	52	94	77
Queue Length 95th (ft)	#230	#452	31	#306	187	158	57	23	18	#119	#175	174
Internal Link Dist (ft)		715			548			815			543	
Turn Bay Length (ft)	400		200	400		300	200			400		400
Base Capacity (vph)	554	1740	642	259	1782	632	202	136	407	150	307	414
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.89	0.13	0.92	0.61	0.55	0.27	0.08	0.08	0.65	0.92	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1652	54	141	1359	87	43	560	109	141	908	435
v/c Ratio	0.93	0.98	0.10	0.88	0.93	0.15	0.70	0.84	0.21	0.77	0.96	0.67
Control Delay	83.6	34.7	2.3	91.2	42.9	5.5	100.6	50.8	15.0	70.7	55.9	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.6	34.7	2.3	91.2	42.9	5.5	100.6	50.8	15.0	70.7	55.9	24.3
Queue Length 50th (ft)	102	389	5	90	302	0	28	181	28	88	302	193
Queue Length 95th (ft)	m#239	#502	m8	#205	#402	31	#89	#268	67	#182	#439	313
Internal Link Dist (ft)		1075			822			578			777	
Turn Bay Length (ft)	300		300	300		400	300		400	300		400
Base Capacity (vph)	198	1684	556	160	1466	575	61	666	523	192	950	652
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.98	0.10	0.88	0.93	0.15	0.70	0.84	0.21	0.73	0.96	0.67

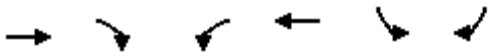
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	255	1766	1326	592	342	266
v/c Ratio	0.67	0.66	0.49	0.64	0.52	0.61
Control Delay	55.1	11.5	24.0	13.1	30.0	32.9
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	55.1	11.6	24.0	13.1	30.0	32.9
Queue Length 50th (ft)	82	182	186	178	89	131
Queue Length 95th (ft)	m119	213	m217	m214	135	220
Internal Link Dist (ft)		407	375			
Turn Bay Length (ft)	170			300		
Base Capacity (vph)	458	2662	2692	926	654	434
Starvation Cap Reductn	0	227	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.73	0.49	0.64	0.52	0.61

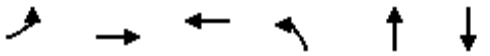
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1587	533	326	1342	435	272
v/c Ratio	0.54	0.53	0.70	0.51	0.53	0.39
Control Delay	22.0	4.0	65.5	7.5	34.5	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	4.0	65.5	7.5	34.5	17.6
Queue Length 50th (ft)	178	0	116	68	122	41
Queue Length 95th (ft)	231	36	162	79	171	81
Internal Link Dist (ft)	425			407		
Turn Bay Length (ft)		500	200			400
Base Capacity (vph)	2924	999	653	2633	828	696
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.53	0.50	0.51	0.53	0.39

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	143	502	778	406	390	176
v/c Ratio	0.92	0.40	0.62	0.76	0.72	0.69
Control Delay	82.8	20.3	24.0	40.4	34.0	34.2
Queue Delay	0.0	14.6	0.0	0.0	0.0	0.0
Total Delay	82.8	34.9	24.0	40.4	34.0	34.2
Queue Length 50th (ft)	67	94	162	234	195	50
Queue Length 95th (ft)	#192	146	241	#421	#368	113
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	165	1336	1336	532	542	329
Starvation Cap Reductn	0	816	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.97	0.58	0.76	0.72	0.53

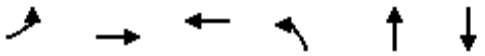
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	712	503	42	134	43
v/c Ratio	0.92	0.85	0.11	0.57	0.17
Control Delay	39.0	34.9	10.6	40.6	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	34.9	10.6	40.6	16.9
Queue Length 50th (ft)	291	195	1	63	7
Queue Length 95th (ft)	#560	#408	27	112	33
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	790	603	381	320	326
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.90	0.83	0.11	0.42	0.13

Intersection Summary

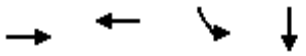
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	59	611	781	385	365	60
v/c Ratio	0.46	0.55	0.70	0.69	0.62	0.31
Control Delay	29.0	18.9	22.0	27.8	19.3	13.8
Queue Delay	0.0	11.0	0.0	0.0	0.0	0.0
Total Delay	29.0	29.9	22.0	27.8	19.3	13.8
Queue Length 50th (ft)	18	98	135	131	86	2
Queue Length 95th (ft)	#54	141	188	#293	#223	31
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	128	1108	1108	559	593	403
Starvation Cap Reductn	0	469	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.96	0.70	0.69	0.62	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

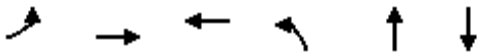


Lane Group	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	739	634	178	12
v/c Ratio	0.82	1.08	0.72	0.05
Control Delay	27.8	83.3	53.0	22.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.8	83.3	53.0	22.8
Queue Length 50th (ft)	341	~415	96	2
Queue Length 95th (ft)	#588	#627	#165	17
Internal Link Dist (ft)	744	76		527
Turn Bay Length (ft)			200	
Base Capacity (vph)	899	589	284	278
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	1.08	0.63	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	89	1003	863	362	618	129
v/c Ratio	0.91	0.86	0.74	0.51	0.87	0.73
Control Delay	112.6	50.0	43.3	30.8	44.5	55.7
Queue Delay	0.0	353.1	5.9	0.0	0.0	0.0
Total Delay	112.6	403.1	49.2	30.8	44.5	55.7
Queue Length 50th (ft)	74	425	343	253	500	69
Queue Length 95th (ft)	#193	537	439	362	#767	m138
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	101	1201	1201	707	714	220
Starvation Cap Reductn	0	639	280	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	1.78	0.94	0.51	0.87	0.59

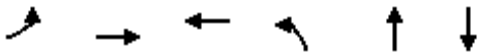
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	708	653	56	186	67
v/c Ratio	0.75	0.93	0.16	0.79	0.26
Control Delay	28.6	49.4	15.9	80.2	31.5
Queue Delay	0.0	5.6	0.0	0.0	0.0
Total Delay	28.6	55.0	15.9	80.2	31.5
Queue Length 50th (ft)	442	494	2	165	28
Queue Length 95th (ft)	556	#717	44	246	73
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	1032	769	346	285	304
Starvation Cap Reductn	0	76	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.94	0.16	0.65	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



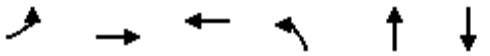
Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	63	519	754	417	385	112
v/c Ratio	0.67	0.53	0.77	0.57	0.52	0.52
Control Delay	52.5	23.0	22.8	23.1	16.1	17.5
Queue Delay	0.0	3.0	0.5	0.0	0.0	0.0
Total Delay	52.5	26.0	23.3	23.1	16.1	17.5
Queue Length 50th (ft)	20	82	88	167	104	9
Queue Length 95th (ft)	#91	116	250	#346	242	m56
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	103	1071	1071	727	740	344
Starvation Cap Reductn	0	430	0	0	0	0
Spillback Cap Reductn	0	0	79	0	2	2
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.81	0.76	0.57	0.52	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	711	454	54	84	42
v/c Ratio	0.88	0.66	0.11	0.47	0.22
Control Delay	34.2	18.0	11.5	45.3	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	18.0	11.5	45.3	20.6
Queue Length 50th (ft)	331	98	2	46	7
Queue Length 95th (ft)	474	223	34	87	36
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	870	742	470	284	292
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.61	0.11	0.30	0.14

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	28	569	755	340	416	34
v/c Ratio	0.29	0.58	0.77	0.46	0.52	0.26
Control Delay	21.8	23.7	18.9	19.4	10.5	20.5
Queue Delay	0.0	3.3	0.3	0.0	0.0	0.0
Total Delay	21.8	27.1	19.2	19.4	10.5	20.5
Queue Length 50th (ft)	9	99	75	127	63	3
Queue Length 95th (ft)	24	115	258	248	183	m29
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	106	1097	1097	740	801	287
Starvation Cap Reductn	0	417	0	0	0	0
Spillback Cap Reductn	0	0	62	0	4	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.84	0.73	0.46	0.52	0.12

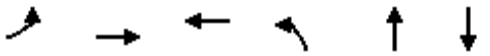
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	714	613	39	134	13
v/c Ratio	0.78	0.86	0.13	0.61	0.06
Control Delay	24.6	26.4	12.2	47.9	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	26.4	12.2	47.9	22.3
Queue Length 50th (ft)	300	136	1	72	2
Queue Length 95th (ft)	#555	#529	28	126	18
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	914	711	301	284	278
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.86	0.13	0.47	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	82	905	874	248	715	173
v/c Ratio	0.92	0.82	0.79	0.42	1.13	0.69
Control Delay	102.6	26.1	24.9	22.9	102.1	45.6
Queue Delay	0.0	47.9	0.0	0.0	0.0	0.0
Total Delay	102.6	74.0	24.9	22.9	102.1	45.6
Queue Length 50th (ft)	47	265	175	106	~456	49
Queue Length 95th (ft)	#142	#380	#368	175	#687	m139
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	89	1100	1100	590	632	314
Starvation Cap Reductn	0	275	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	1.10	0.79	0.42	1.13	0.55

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

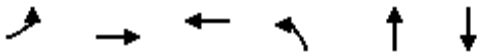
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	700	582	58	93	44
v/c Ratio	0.86	0.96	0.13	0.50	0.22
Control Delay	32.1	42.1	10.5	45.6	22.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	42.1	10.5	45.6	22.9
Queue Length 50th (ft)	320	142	1	50	11
Queue Length 95th (ft)	470	#495	33	94	40
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	876	653	461	284	295
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.80	0.89	0.13	0.33	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



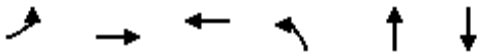
Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	61	511	758	416	384	113
v/c Ratio	0.66	0.52	0.78	0.57	0.52	0.53
Control Delay	51.5	23.2	22.8	23.1	15.7	17.3
Queue Delay	0.0	2.9	0.5	0.0	0.0	0.0
Total Delay	51.5	26.1	23.3	23.1	15.7	17.3
Queue Length 50th (ft)	19	80	88	167	100	10
Queue Length 95th (ft)	#88	118	252	#344	236	m57
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	102	1072	1072	726	741	345
Starvation Cap Reductn	0	436	0	0	0	0
Spillback Cap Reductn	0	0	79	0	3	2
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.80	0.76	0.57	0.52	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	704	454	56	84	42
v/c Ratio	0.88	0.66	0.12	0.47	0.22
Control Delay	34.4	18.4	11.3	45.3	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	18.4	11.3	45.3	20.6
Queue Length 50th (ft)	327	99	2	46	7
Queue Length 95th (ft)	466	222	35	87	36
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	866	749	477	284	292
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.61	0.12	0.30	0.14

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	28	553	748	343	413	38
v/c Ratio	0.30	0.57	0.77	0.46	0.51	0.28
Control Delay	23.0	24.4	19.7	19.2	10.4	20.7
Queue Delay	0.0	3.0	0.3	0.0	0.0	0.0
Total Delay	23.0	27.5	20.0	19.2	10.4	20.7
Queue Length 50th (ft)	9	96	88	127	64	4
Queue Length 95th (ft)	24	114	262	248	182	m30
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	105	1088	1088	747	804	289
Starvation Cap Reductn	0	415	0	0	0	0
Spillback Cap Reductn	0	0	59	0	4	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.82	0.73	0.46	0.52	0.13

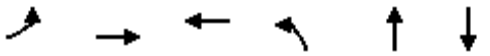
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	712	610	41	124	13
v/c Ratio	0.78	0.86	0.13	0.58	0.06
Control Delay	24.6	26.0	11.9	47.1	22.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	26.0	11.9	47.1	22.5
Queue Length 50th (ft)	294	134	1	67	3
Queue Length 95th (ft)	#552	#524	28	118	18
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	910	708	313	284	278
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.86	0.13	0.44	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	81	909	834	258	709	123
v/c Ratio	0.68	0.77	0.71	0.44	1.12	0.57
Control Delay	48.0	21.9	20.1	23.2	97.9	40.8
Queue Delay	0.0	28.8	0.0	0.0	0.0	0.0
Total Delay	48.0	50.7	20.1	23.2	97.9	40.8
Queue Length 50th (ft)	36	258	161	111	~448	34
Queue Length 95th (ft)	#127	#370	#323	183	#677	m97
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	119	1180	1180	590	633	317
Starvation Cap Reductn	0	311	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	1.05	0.71	0.44	1.12	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

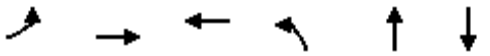
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	684	573	56	95	43
v/c Ratio	0.87	0.99	0.12	0.50	0.21
Control Delay	34.1	51.6	10.4	45.7	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	51.6	10.4	45.7	22.6
Queue Length 50th (ft)	319	143	1	52	10
Queue Length 95th (ft)	452	#490	33	95	39
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	863	634	482	284	294
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.90	0.12	0.33	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



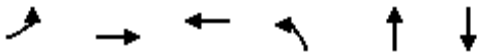
Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	71	503	744	408	384	145
v/c Ratio	0.67	0.50	0.74	0.62	0.55	0.58
Control Delay	55.5	23.8	29.4	25.3	15.8	20.1
Queue Delay	0.0	10.3	0.0	0.0	0.0	0.0
Total Delay	55.5	34.2	29.4	25.3	15.8	20.1
Queue Length 50th (ft)	29	102	165	166	91	16
Queue Length 95th (ft)	#96	147	230	#335	208	65
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	112	1056	1056	658	694	383
Starvation Cap Reductn	0	519	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.94	0.70	0.62	0.55	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	706	453	57	89	48
v/c Ratio	0.88	0.65	0.12	0.49	0.24
Control Delay	34.4	18.1	11.2	45.5	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	18.1	11.2	45.5	19.7
Queue Length 50th (ft)	328	98	2	48	8
Queue Length 95th (ft)	473	224	35	91	38
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	867	750	473	284	295
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.60	0.12	0.31	0.16

Intersection Summary



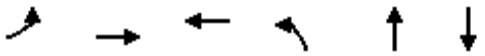
Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	29	568	740	355	407	28
v/c Ratio	0.24	0.55	0.72	0.56	0.55	0.18
Control Delay	21.6	21.2	24.8	21.4	9.4	17.1
Queue Delay	0.0	18.8	0.0	0.0	0.0	0.0
Total Delay	21.6	40.0	24.8	21.4	9.4	17.1
Queue Length 50th (ft)	9	102	143	117	38	2
Queue Length 95th (ft)	29	138	188	230	135	23
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	121	1041	1041	632	742	356
Starvation Cap Reductn	0	470	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.99	0.71	0.56	0.55	0.08

Intersection Summary

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	685	622	73	119	17
v/c Ratio	0.79	0.92	0.20	0.57	0.08
Control Delay	25.7	32.8	9.9	46.7	21.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	32.8	9.9	46.7	21.3
Queue Length 50th (ft)	273	136	1	64	3
Queue Length 95th (ft)	#470	#539	37	114	21
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	886	691	374	284	279
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.90	0.20	0.42	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	80	900	865	239	736	86
v/c Ratio	0.72	0.75	0.72	0.36	1.07	0.55
Control Delay	71.0	37.7	36.6	24.1	82.0	45.5
Queue Delay	0.0	224.1	1.1	0.0	0.0	0.0
Total Delay	71.0	261.8	37.7	24.1	82.0	45.5
Queue Length 50th (ft)	52	314	296	126	~614	38
Queue Length 95th (ft)	#154	422	401	195	#867	89
Internal Link Dist (ft)		137	414		312	156
Turn Bay Length (ft)	50					
Base Capacity (vph)	111	1207	1207	670	691	234
Starvation Cap Reductn	0	605	147	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	1.50	0.82	0.36	1.07	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	693	603	52	104	33
v/c Ratio	0.80	0.90	0.13	0.53	0.16
Control Delay	26.3	31.4	10.7	45.8	23.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	31.4	10.7	45.8	23.2
Queue Length 50th (ft)	271	128	1	56	9
Queue Length 95th (ft)	#478	#514	31	102	34
Internal Link Dist (ft)	744	76	169		527
Turn Bay Length (ft)				200	
Base Capacity (vph)	890	685	404	284	290
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.88	0.13	0.37	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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FUTURE (2035) ALTERNATIVE 6C

RAMP METERING ANALYSIS

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URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Pico to NB 710

AM Peak Hour Vol/PCE:	120	190
PM Peak Hour Vol/PCE:	520	590
MD Peak Hour Vol/PCE:	280	350

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	49	41	8	8	590	49	495	650	-	3000	238	-	49	0.7
5:10 PM	49	41	16	8	590	49	495	750	-	3000	475	-	49	1.3
5:15 PM	49	41	24	8	590	49	495	850	-	3000	713	-	49	2.0
5:20 PM	49	41	32	8	590	49	495	950	-	3000	950	-	49	2.6
5:25 PM	49	41	40	8	590	49	495	1050	-	3000	1188	-	49	3.3
5:30 PM	49	41	48	8	590	49	495	1150	-	3000	1425	-	49	4.0
5:35 PM	49	41	55	8	590	49	495	1250	-	3000	1663	-	49	4.6
5:40 PM	49	41	63	8	590	49	495	1350	-	3000	1900	-	49	5.3
5:45 PM	49	41	71	8	590	49	495	1400	-	3000	2138	-	49	5.9
5:50 PM	49	41	79	8	590	49	495	1500	-	3000	2375	-	49	6.6
5:55 PM	49	41	87	8	590	49	495	1600	-	3000	2613	-	49	7.3
6:00 PM	49	41	95	8	590	49	495	1700	-	3000	2850	-	49	7.9
	590	**495**		**95**		**590**							**590**	**51.46**
	MAX Q (VEH/LN)=		**95**	**MAX RATE (VPH)=**	**590**					**MAX Q (FT/LN)=**	**2,850**	**-**	**49**	

(Min=240, Max=900 vph/lane)

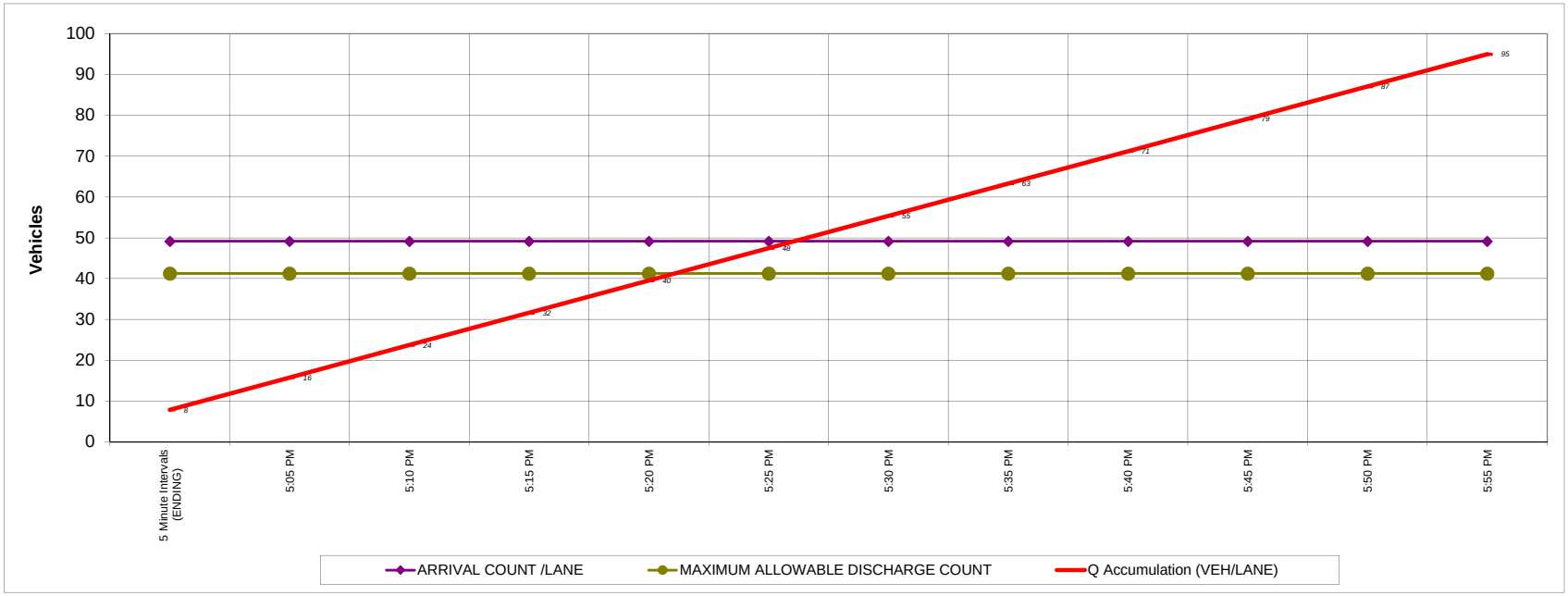
Meter Rate = **495**

Avg Delay/veh (hr)= 0.087

Avg Delay/veh (sec)= **314**

	INPUT
LANES=	**1**
Ramp Length=	3000
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to NB 710

AM Peak Hour Vol/PCE:	1070	1130
PM Peak Hour Vol/PCE:	1140	1170
MD Peak Hour Vol/PCE:	1330	1490

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	62	57	5	5	745	124	680	800	-	2000	163	-	62	0.5
1:10 PM	62	57	11	5	745	124	680	850	-	2000	325	-	62	0.9
1:15 PM	62	57	16	5	745	124	680	900	-	2000	488	-	62	1.4
1:20 PM	62	57	22	5	745	124	680	1000	-	2000	650	-	62	1.8
1:25 PM	62	57	27	5	745	124	680	1050	-	2000	812	-	62	2.3
1:30 PM	62	57	33	5	745	124	680	1100	-	2000	975	-	62	2.7
1:35 PM	62	57	38	5	745	124	680	1200	-	2000	1138	-	62	3.2
1:40 PM	62	57	43	5	745	124	680	1250	-	2000	1300	-	62	3.6
1:45 PM	62	57	49	5	745	124	680	1300	-	2000	1463	-	62	4.1
1:50 PM	62	57	54	5	745	124	680	1350	-	2000	1625	-	62	4.5
1:55 PM	62	57	60	5	745	124	680	1450	-	2000	1788	-	62	5.0
2:00 PM	62	57	65	5	745	124	680	1500	-	2000	1950	-	62	5.4
	745	**680**		**65**		**1,490**							**745**	**35.21**
		MAX Q (VEH/LN)=	**65**	**MAX RATE (VPH)=**	**745**					**MAX Q (FT/LN)=**	**1,950**	**-**	**62**	

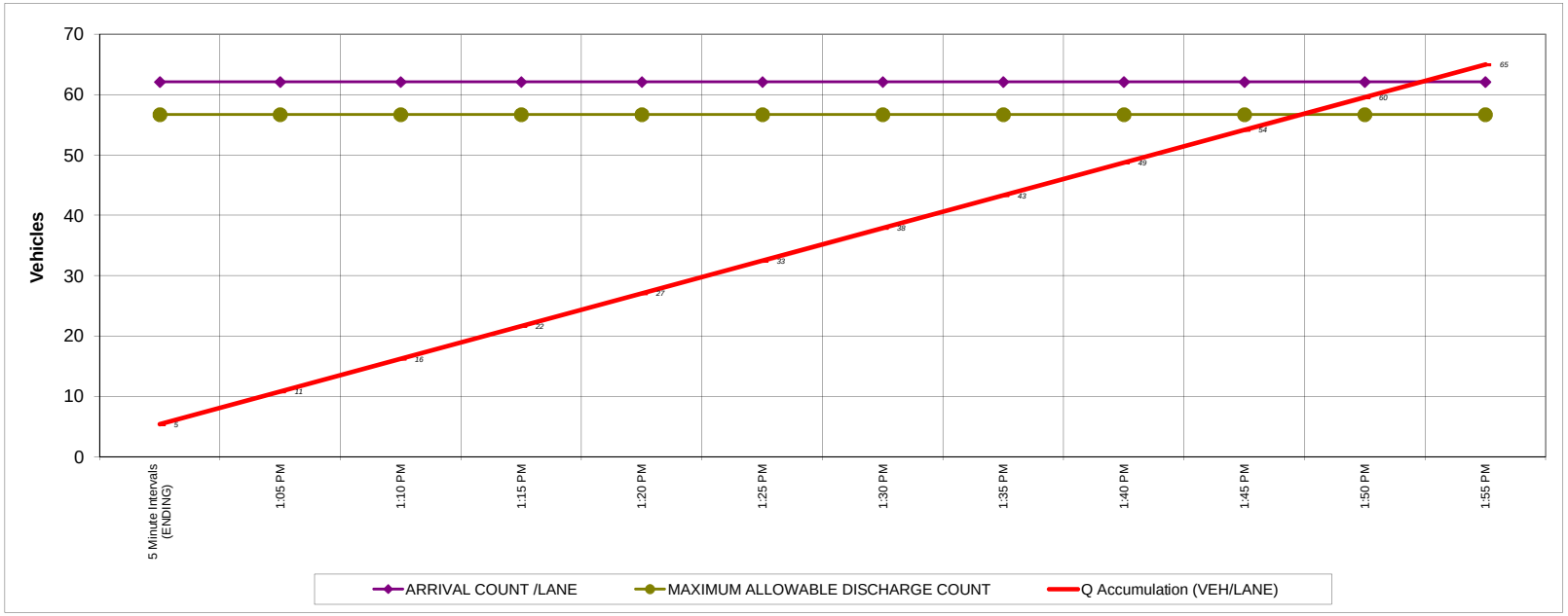
(Min=240, Max=900 vph/lane)

Meter Rate = **680**

	INPUT
LANES=	**2**
Ramp Length=	2000
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.047
Avg Delay/veh (sec)= **170**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Anaheim to SB 710

AM Peak Hour Vol/PCE:	490	540
PM Peak Hour Vol/PCE:	420	500
MD Peak Hour Vol/PCE:	560	710

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	30	28	2	2	355	59	330	350	-	870	63	-	30	0.2
1:10 PM	30	28	4	2	355	59	330	400	-	870	125	-	30	0.3
1:15 PM	30	28	6	2	355	59	330	400	-	870	188	-	30	0.5
1:20 PM	30	28	8	2	355	59	330	450	-	870	250	-	30	0.7
1:25 PM	30	28	10	2	355	59	330	450	-	870	313	-	30	0.9
1:30 PM	30	28	13	2	355	59	330	500	-	870	375	-	30	1.0
1:35 PM	30	28	15	2	355	59	330	500	-	870	437	-	30	1.2
1:40 PM	30	28	17	2	355	59	330	550	-	870	500	-	30	1.4
1:45 PM	30	28	19	2	355	59	330	550	-	870	562	-	30	1.6
1:50 PM	30	28	21	2	355	59	330	600	-	870	625	-	30	1.7
1:55 PM	30	28	23	2	355	59	330	600	-	870	687	-	30	1.9
2:00 PM	30	28	25	2	355	59	330	650	-	870	750	-	30	2.1
	355	**330**		**25**		**710**							**355**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**355**					**MAX Q (FT/LN)=**	**750**	**-**	**30**	

(Min=240, Max=900vph/lane)

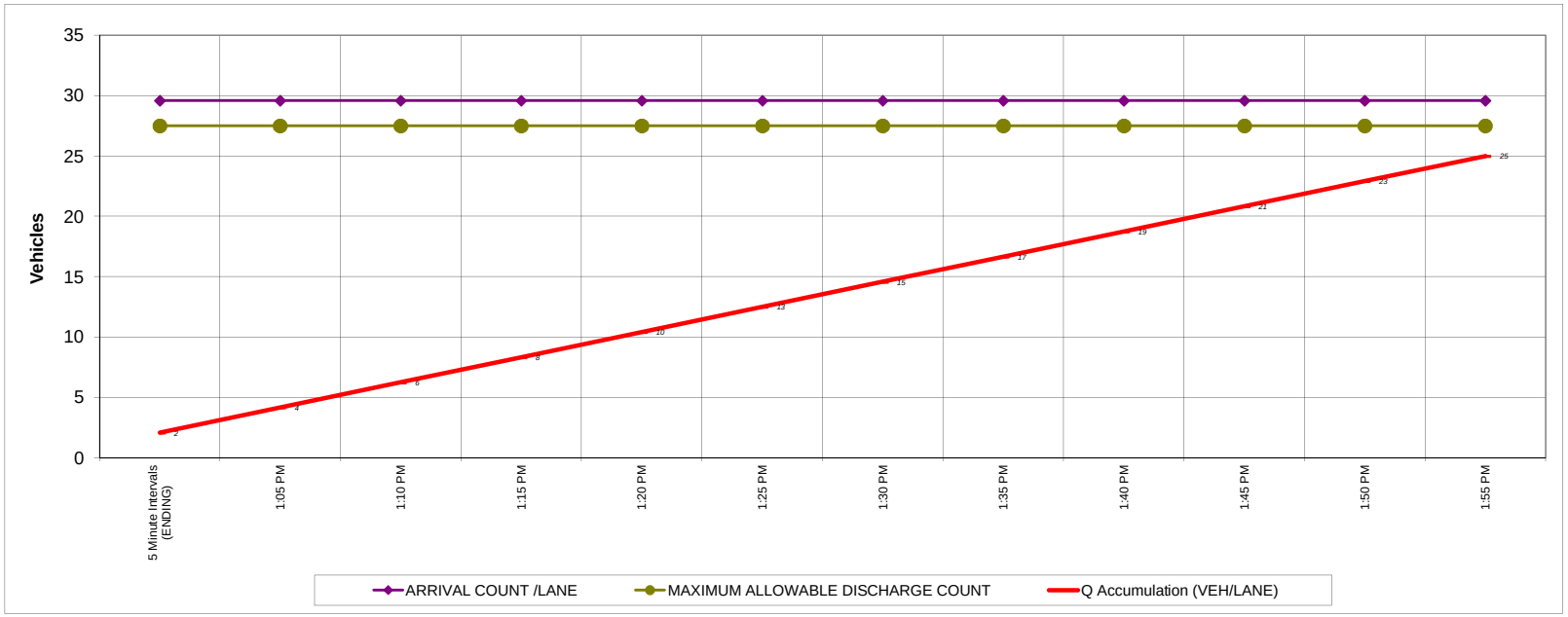
Meter Rate = **330**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **137**

	INPUT
LANES=	**2**
Ramp Length=	870
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to NB 710

AM Peak Hour Vol/PCE:	1030	1220
PM Peak Hour Vol/PCE:	1050	1180
MD Peak Hour Vol/PCE:	1560	2180

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	91	88	3	3	1090	182	1055	1100	-	1090	88	-	91	0.2
1:10 PM	91	88	6	3	1090	182	1055	1150	-	1090	175	-	91	0.5
1:15 PM	91	88	9	3	1090	182	1055	1150	-	1090	263	-	91	0.7
1:20 PM	91	88	12	3	1090	182	1055	1200	-	1090	350	-	91	1.0
1:25 PM	91	88	15	3	1090	182	1055	1250	-	1090	438	-	91	1.2
1:30 PM	91	88	18	3	1090	182	1055	1300	-	1090	525	-	91	1.5
1:35 PM	91	88	20	3	1090	182	1055	1300	-	1090	613	-	91	1.7
1:40 PM	91	88	23	3	1090	182	1055	1350	-	1090	700	-	91	1.9
1:45 PM	91	88	26	3	1090	182	1055	1400	-	1090	788	-	91	2.2
1:50 PM	91	88	29	3	1090	182	1055	1400	-	1090	875	-	91	2.4
1:55 PM	91	88	32	3	1090	182	1055	1450	-	1090	963	-	91	2.7
2:00 PM	91	88	35	3	1090	182	1055	1500	-	1090	1050	-	91	2.9
	1,090	**1,055**		**35**		**2,180**							**1,090**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,090**					**MAX Q (FT/LN)=**	**1,050**	**-**	**91**	

(Min=480, Max=1200 vph/lane)

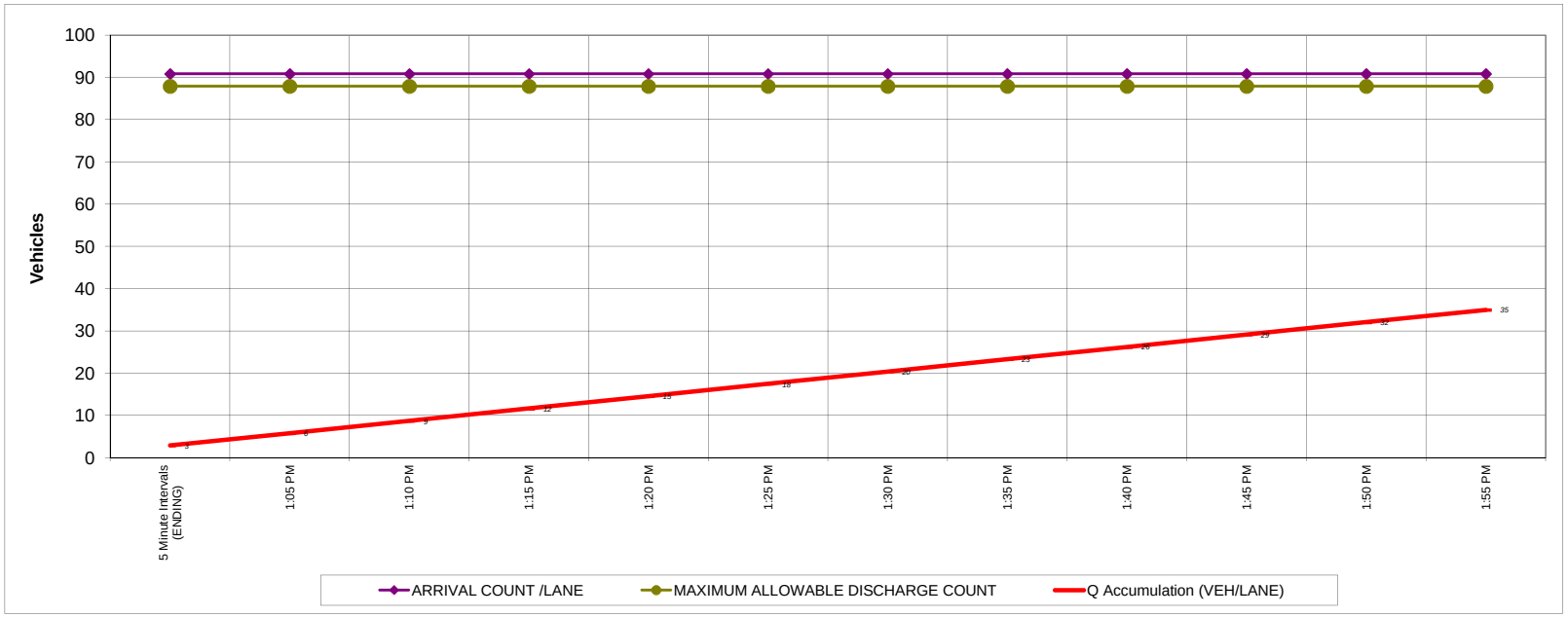
Meter Rate = **1055**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **63**

	INPUT
LANES=	**2**
Ramp Length=	1090
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
PCH to SB 710

AM Peak Hour Vol/PCE:	190	220
PM Peak Hour Vol/PCE:	260	290
MD Peak Hour Vol/PCE:	480	580

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	24	21	3	3	290	48	250	300	-	1250	100	-	24	0.3
1:10 PM	24	21	7	3	290	48	250	350	-	1250	200	-	24	0.6
1:15 PM	24	21	10	3	290	48	250	400	-	1250	300	-	24	0.8
1:20 PM	24	21	13	3	290	48	250	450	-	1250	400	-	24	1.1
1:25 PM	24	21	17	3	290	48	250	450	-	1250	500	-	24	1.4
1:30 PM	24	21	20	3	290	48	250	500	-	1250	600	-	24	1.7
1:35 PM	24	21	23	3	290	48	250	550	-	1250	700	-	24	1.9
1:40 PM	24	21	27	3	290	48	250	600	-	1250	800	-	24	2.2
1:45 PM	24	21	30	3	290	48	250	650	-	1250	900	-	24	2.5
1:50 PM	24	21	33	3	290	48	250	650	-	1250	1000	-	24	2.8
1:55 PM	24	21	37	3	290	48	250	700	-	1250	1100	-	24	3.1
2:00 PM	24	21	40	3	290	48	250	750	-	1250	1200	-	24	3.3
	290	250		40		580							290	21.67
		MAX Q (VEH/LN)=	40	MAX RATE (VPH)=	290					MAX Q (FT/LN)=	1,200	-	24	

(Min=240, Max=900vph/lane)

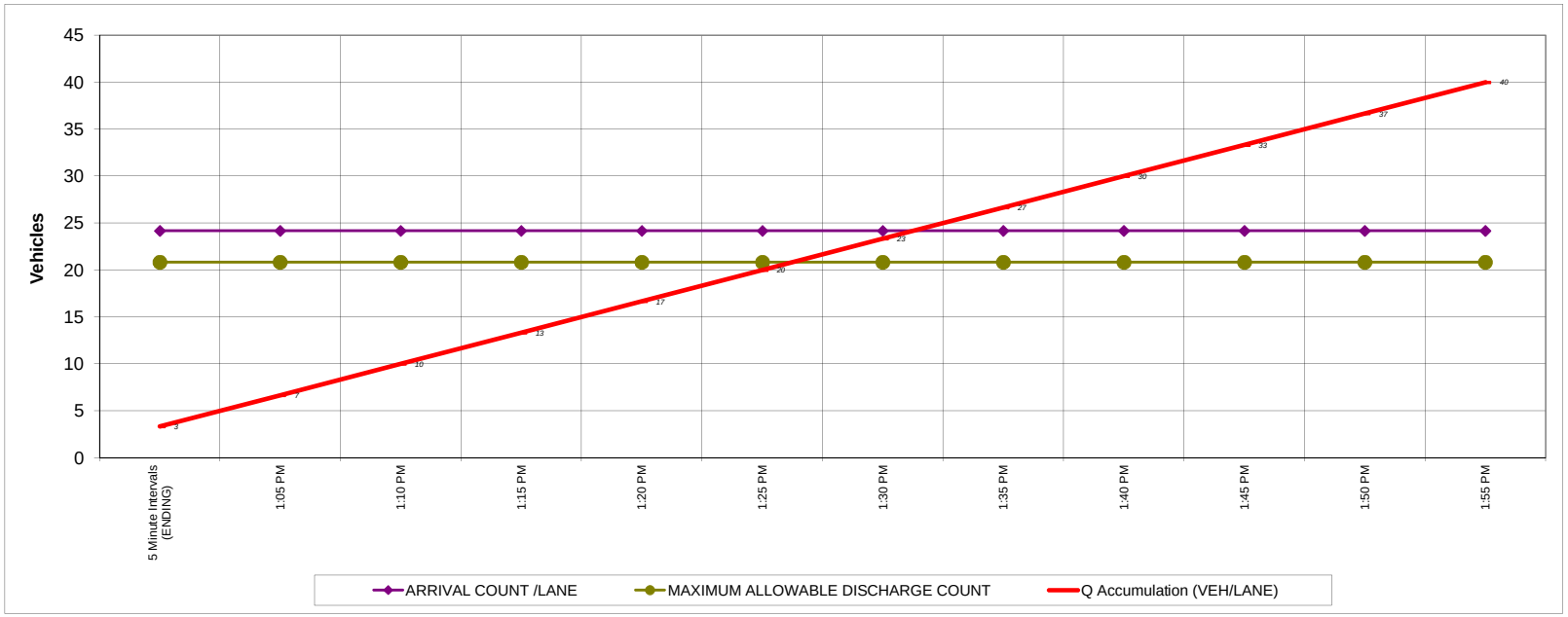
Meter Rate = 250

Avg Delay/veh (hr)= 0.075

Avg Delay/veh (sec)= 269

	INPUT
LANES=	2
Ramp Length=	1250
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to NB 710

AM Peak Hour Vol/PCE:	1440	1450
PM Peak Hour Vol/PCE:	1310	1320
MD Peak Hour Vol/PCE:	1390	1400

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	60	58	2	2	725	121	695	750	-	950	75	-	60	0.2
7:10 AM	60	58	5	2	725	121	695	750	-	950	150	-	60	0.4
7:15 AM	60	58	7	2	725	121	695	800	-	950	225	-	60	0.6
7:20 AM	60	58	10	2	725	121	695	800	-	950	300	-	60	0.8
7:25 AM	60	58	13	2	725	121	695	850	-	950	375	-	60	1.0
7:30 AM	60	58	15	2	725	121	695	900	-	950	450	-	60	1.3
7:35 AM	60	58	18	2	725	121	695	900	-	950	525	-	60	1.5
7:40 AM	60	58	20	2	725	121	695	950	-	950	600	-	60	1.7
7:45 AM	60	58	23	2	725	121	695	950	-	950	675	-	60	1.9
7:50 AM	60	58	25	2	725	121	695	1000	-	950	750	-	60	2.1
7:55 AM	60	58	28	2	725	121	695	1050	-	950	825	-	60	2.3
8:00 AM	60	58	30	2	725	121	695	1050	-	950	900	-	60	2.5
	725	**695**		**30**		**1,450**							**725**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**725**					**MAX Q (FT/LN)=**	**900**	**-**	**60**	

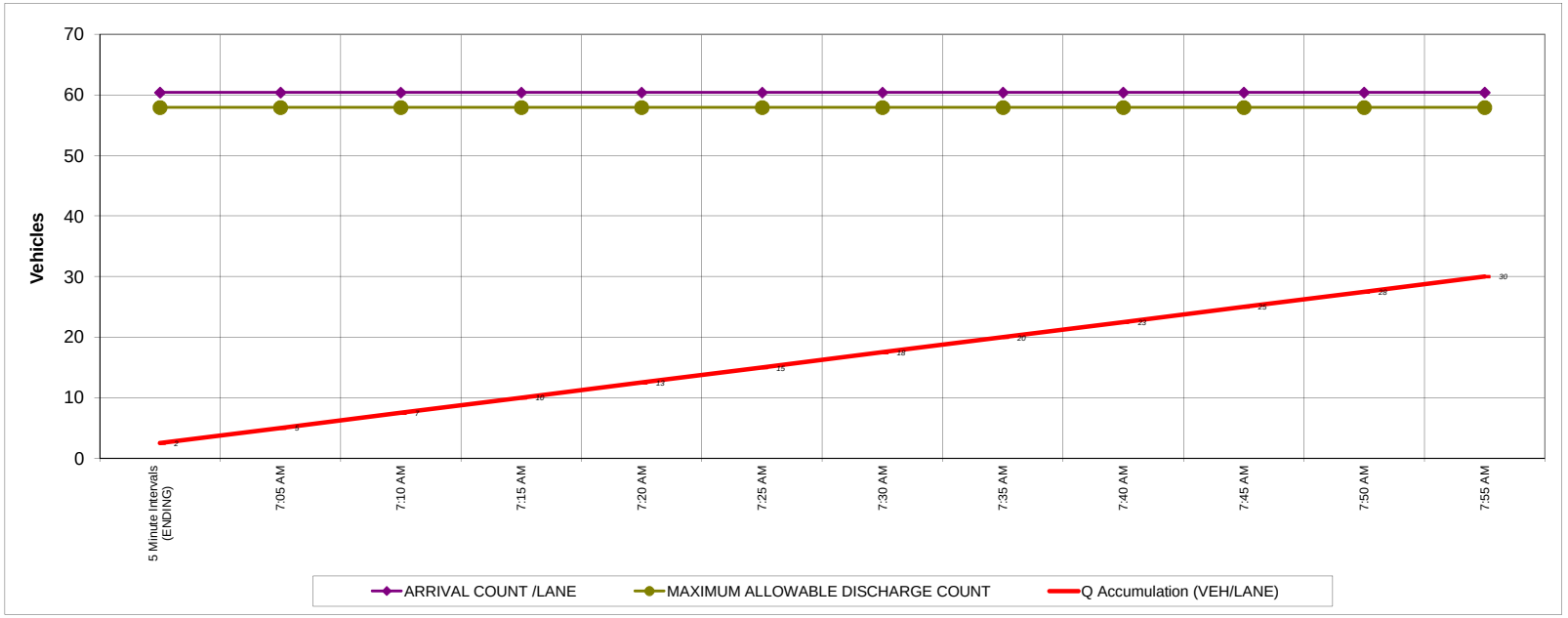
(Min=240, Max=900vph/lane)

Meter Rate = **695**

	INPUT
LANES=	**2**
Ramp Length=	950
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.022
Avg Delay/veh (sec)= **81**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Willow to SB 710

AM Peak Hour Vol/PCE:	1110	1170
PM Peak Hour Vol/PCE:	850	870
MD Peak Hour Vol/PCE:	640	670

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	49	47	2	2	585	98	565	600	-	700	50	-	49	0.1
7:10 AM	49	47	3	2	585	98	565	600	-	700	100	-	49	0.3
7:15 AM	49	47	5	2	585	98	565	600	-	700	150	-	49	0.4
7:20 AM	49	47	7	2	585	98	565	650	-	700	200	-	49	0.6
7:25 AM	49	47	8	2	585	98	565	650	-	700	250	-	49	0.7
7:30 AM	49	47	10	2	585	98	565	700	-	700	300	-	49	0.8
7:35 AM	49	47	12	2	585	98	565	700	-	700	350	-	49	1.0
7:40 AM	49	47	13	2	585	98	565	700	-	700	400	-	49	1.1
7:45 AM	49	47	15	2	585	98	565	750	-	700	450	-	49	1.3
7:50 AM	49	47	17	2	585	98	565	750	-	700	500	-	49	1.4
7:55 AM	49	47	18	2	585	98	565	800	-	700	550	-	49	1.5
8:00 AM	49	47	20	2	585	98	565	800	-	700	600	-	49	1.7
	585	**565**		**20**		**1,170**							**585**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**600**	**-**	**49**	

(Min=240, Max=900vph/lane)

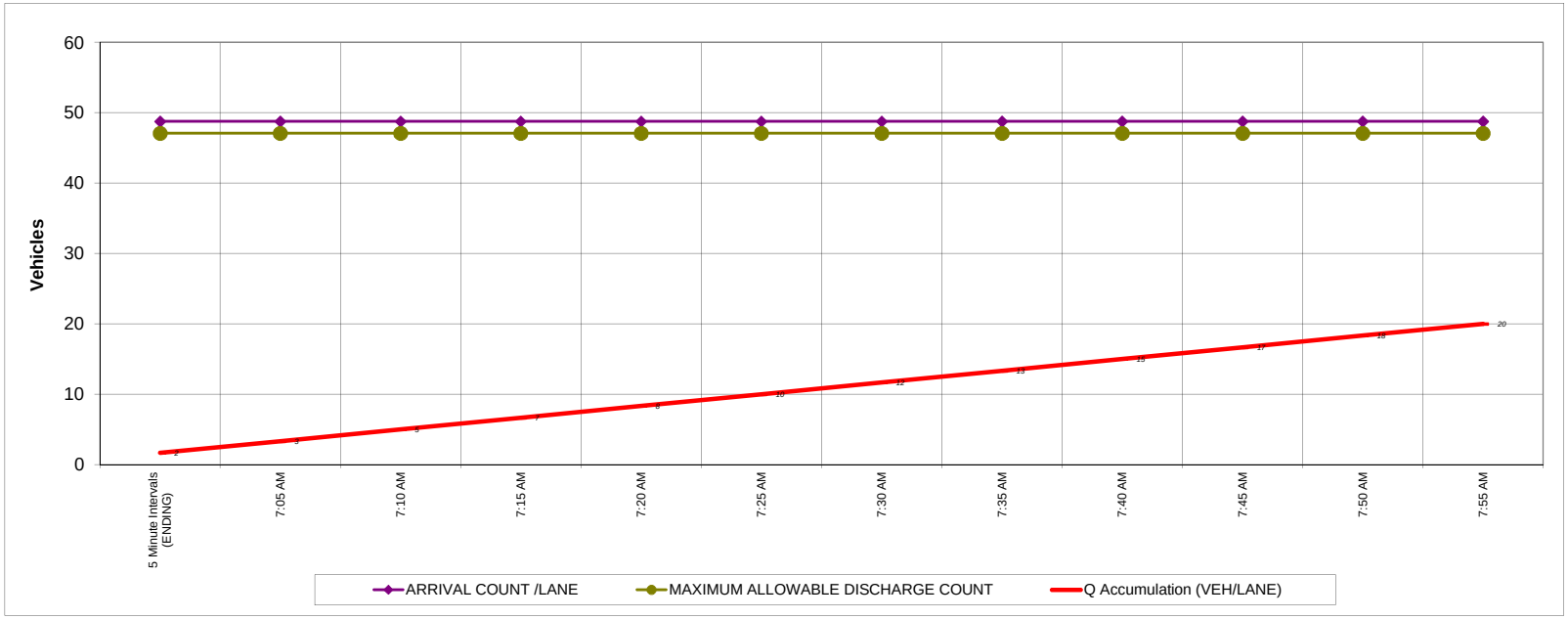
Meter Rate = **565**

Avg Delay/veh (hr)= 0.019

Avg Delay/veh (sec)= **67**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Del Amo On

AM Peak Hour Vol/PCE:	650	710
PM Peak Hour Vol/PCE:	1090	1140
MD Peak Hour Vol/PCE:	850	950

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	48	45	3	3	570	95	535	600	-	1065	88	-	48	0.2
5:10 PM	48	45	6	3	570	95	535	600	-	1065	175	-	48	0.5
5:15 PM	48	45	9	3	570	95	535	650	-	1065	263	-	48	0.7
5:20 PM	48	45	12	3	570	95	535	700	-	1065	350	-	48	1.0
5:25 PM	48	45	15	3	570	95	535	700	-	1065	438	-	48	1.2
5:30 PM	48	45	18	3	570	95	535	750	-	1065	525	-	48	1.5
5:35 PM	48	45	20	3	570	95	535	800	-	1065	613	-	48	1.7
5:40 PM	48	45	23	3	570	95	535	850	-	1065	700	-	48	1.9
5:45 PM	48	45	26	3	570	95	535	850	-	1065	788	-	48	2.2
5:50 PM	48	45	29	3	570	95	535	900	-	1065	875	-	48	2.4
5:55 PM	48	45	32	3	570	95	535	950	-	1065	963	-	48	2.7
6:00 PM	48	45	35	3	570	95	535	950	-	1065	1050	-	48	2.9
	570	**535**		**35**		**1,140**							**570**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**570**					**MAX Q (FT/LN)=**	**1,050**	**-**	**48**	

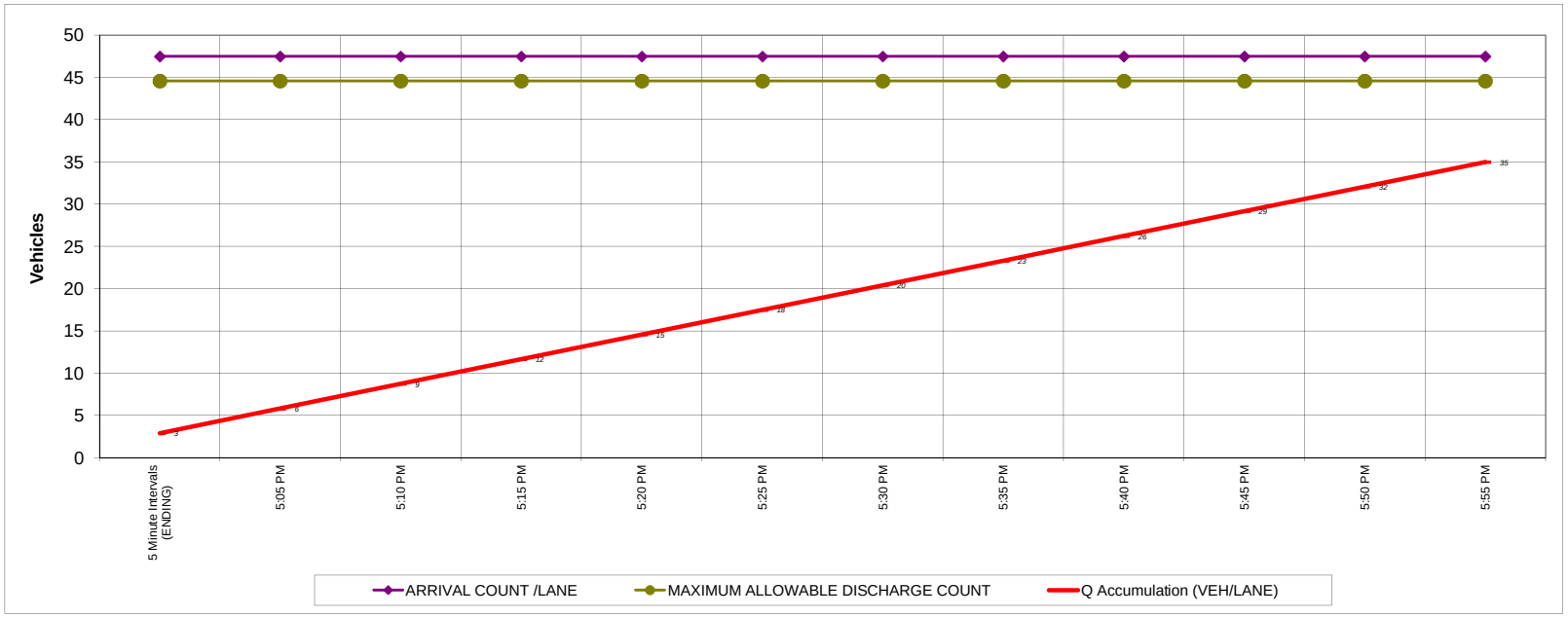
(Min=240, Max=900vph/lane)

Meter Rate = **535**

	INPUT
LANES=	**2**
Ramp Length=	1065
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.033
Avg Delay/veh (sec)= **120**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Del Amo On

AM Peak Hour Vol/PCE:	1180	1270
PM Peak Hour Vol/PCE:	830	870
MD Peak Hour Vol/PCE:	990	1090

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	53	51	2	2	635	106	615	650	-	630	50	-	53	0.1
7:10 AM	53	51	3	2	635	106	615	650	-	630	100	-	53	0.3
7:15 AM	53	51	5	2	635	106	615	650	-	630	150	-	53	0.4
7:20 AM	53	51	7	2	635	106	615	700	-	630	200	-	53	0.6
7:25 AM	53	51	8	2	635	106	615	700	-	630	250	-	53	0.7
7:30 AM	53	51	10	2	635	106	615	750	-	630	300	-	53	0.8
7:35 AM	53	51	12	2	635	106	615	750	-	630	350	-	53	1.0
7:40 AM	53	51	13	2	635	106	615	750	-	630	400	-	53	1.1
7:45 AM	53	51	15	2	635	106	615	800	-	630	450	-	53	1.3
7:50 AM	53	51	17	2	635	106	615	800	-	630	500	-	53	1.4
7:55 AM	53	51	18	2	635	106	615	850	-	630	550	-	53	1.5
8:00 AM	53	51	20	2	635	106	615	850	-	630	600	-	53	1.7
	635	**615**		**20**		**1,270**							**635**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**635**					**MAX Q (FT/LN)=**	**600**	**-**	**53**	

(Min=240, Max=900vph/lane)

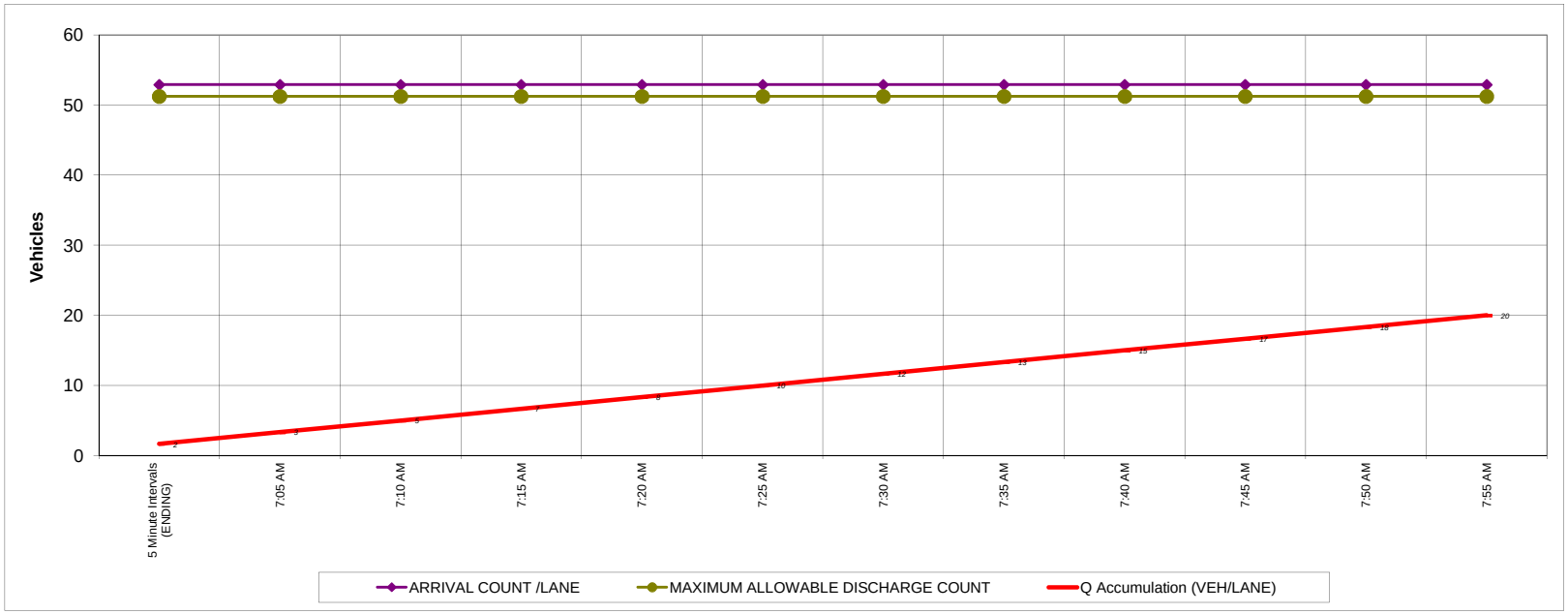
Meter Rate = **615**

Avg Delay/veh (hr)= 0.017

Avg Delay/veh (sec)= **61**

	INPUT
LANES=	**2**
Ramp Length=	630
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Long Beach On

AM Peak Hour Vol/PCE:	690	710
PM Peak Hour Vol/PCE:	730	750
MD Peak Hour Vol/PCE:	710	750

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	31	27	4	4	375	63	325	400	-	1520	125	-	31	0.3
5:10 PM	31	27	8	4	375	63	325	450	-	1520	250	-	31	0.7
5:15 PM	31	27	13	4	375	63	325	500	-	1520	375	-	31	1.0
5:20 PM	31	27	17	4	375	63	325	550	-	1520	500	-	31	1.4
5:25 PM	31	27	21	4	375	63	325	600	-	1520	625	-	31	1.7
5:30 PM	31	27	25	4	375	63	325	650	-	1520	750	-	31	2.1
5:35 PM	31	27	29	4	375	63	325	700	-	1520	875	-	31	2.4
5:40 PM	31	27	33	4	375	63	325	750	-	1520	1000	-	31	2.8
5:45 PM	31	27	38	4	375	63	325	800	-	1520	1125	-	31	3.1
5:50 PM	31	27	42	4	375	63	325	850	-	1520	1250	-	31	3.5
5:55 PM	31	27	46	4	375	63	325	900	-	1520	1375	-	31	3.8
6:00 PM	31	27	50	4	375	63	325	950	-	1520	1500	-	31	4.2
	375	**325**		**50**		**750**							**375**	**27.08**
		MAX Q (VEH/LN)=	**50**	**MAX RATE (VPH)=**	**375**					**MAX Q (FT/LN)=**	**1,500**	**-**	**31**	

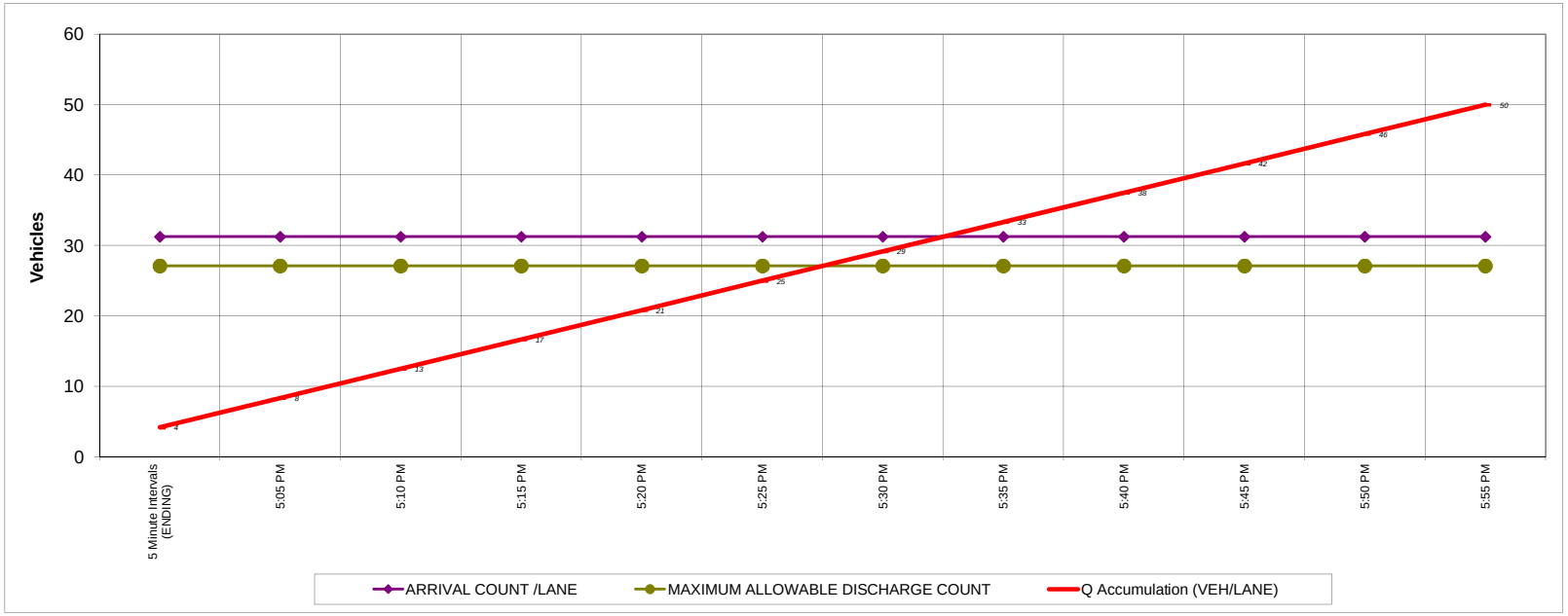
(Min=240, Max=900vph/lane)

Meter Rate = **325**

	INPUT
LANES=	**2**
Ramp Length=	1520
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.072
Avg Delay/veh (sec)= **260**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Long Beach On

AM Peak Hour Vol/PCE:	680	720
PM Peak Hour Vol/PCE:	520	540
MD Peak Hour Vol/PCE:	510	590

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	28	2	2	360	60	340	350	-	700	50	-	30	0.1
7:10 AM	30	28	3	2	360	60	340	400	-	700	100	-	30	0.3
7:15 AM	30	28	5	2	360	60	340	400	-	700	150	-	30	0.4
7:20 AM	30	28	7	2	360	60	340	400	-	700	200	-	30	0.6
7:25 AM	30	28	8	2	360	60	340	450	-	700	250	-	30	0.7
7:30 AM	30	28	10	2	360	60	340	450	-	700	300	-	30	0.8
7:35 AM	30	28	12	2	360	60	340	500	-	700	350	-	30	1.0
7:40 AM	30	28	13	2	360	60	340	500	-	700	400	-	30	1.1
7:45 AM	30	28	15	2	360	60	340	500	-	700	450	-	30	1.3
7:50 AM	30	28	17	2	360	60	340	550	-	700	500	-	30	1.4
7:55 AM	30	28	18	2	360	60	340	550	-	700	550	-	30	1.5
8:00 AM	30	28	20	2	360	60	340	600	-	700	600	-	30	1.7
	360	**340**		**20**		**720**							**360**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**600**	**-**	**30**	

(Min=240, Max=900vph/lane)

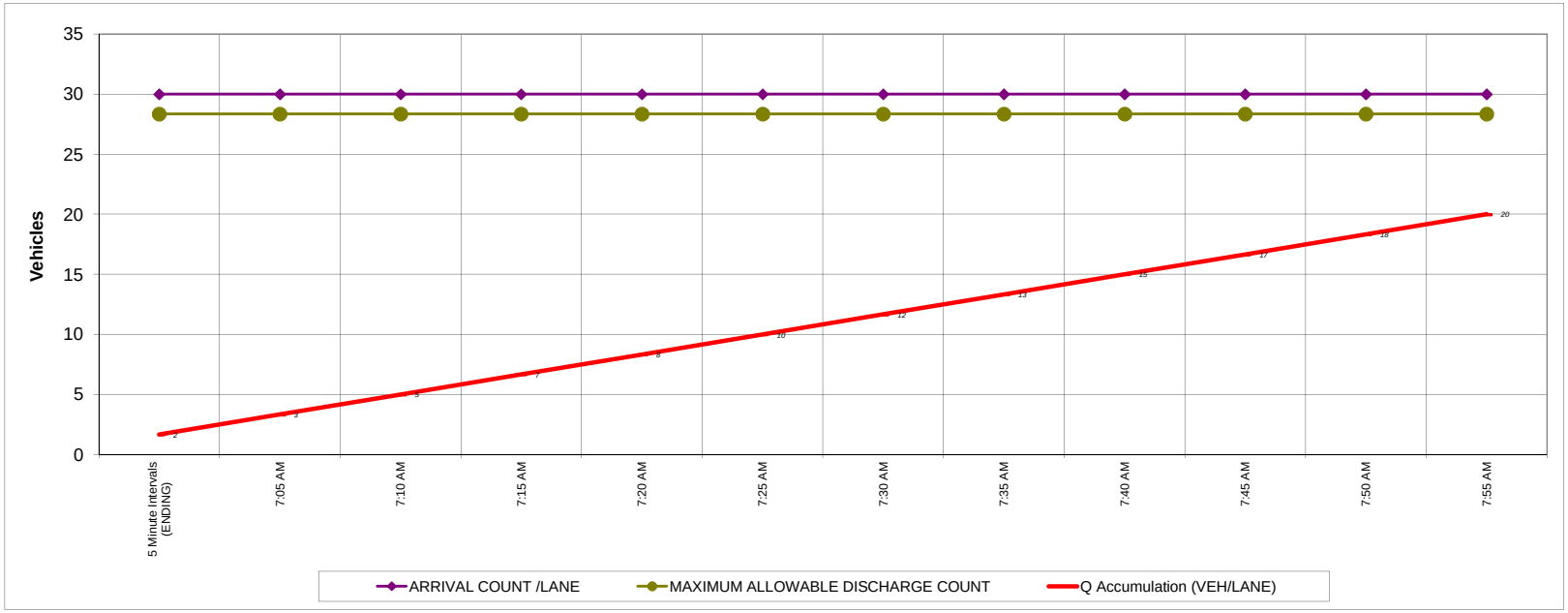
Meter Rate = **340**

Avg Delay/veh (hr)= 0.030

Avg Delay/veh (sec)= **108**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Artesia On

AM Peak Hour Vol/PCE:	710	740
PM Peak Hour Vol/PCE:	170	170
MD Peak Hour Vol/PCE:	620	670

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	31	30	0	0	370	62	365	350	-	170	13	-	31	0.0
7:10 AM	31	30	1	0	370	62	365	350	-	170	25	-	31	0.1
7:15 AM	31	30	1	0	370	62	365	350	-	170	38	-	31	0.1
7:20 AM	31	30	2	0	370	62	365	350	-	170	50	-	31	0.1
7:25 AM	31	30	2	0	370	62	365	350	-	170	63	-	31	0.2
7:30 AM	31	30	3	0	370	62	365	400	-	170	75	-	31	0.2
7:35 AM	31	30	3	0	370	62	365	400	-	170	88	-	31	0.2
7:40 AM	31	30	3	0	370	62	365	400	-	170	100	-	31	0.3
7:45 AM	31	30	4	0	370	62	365	400	-	170	113	-	31	0.3
7:50 AM	31	30	4	0	370	62	365	400	-	170	125	-	31	0.3
7:55 AM	31	30	5	0	370	62	365	400	-	170	138	-	31	0.4
8:00 AM	31	30	5	0	370	62	365	400	-	170	150	-	31	0.4
	370	**365**		**5**		**740**							**370**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**150**	**-**	**31**	

(Min=240, Max=900vph/lane)

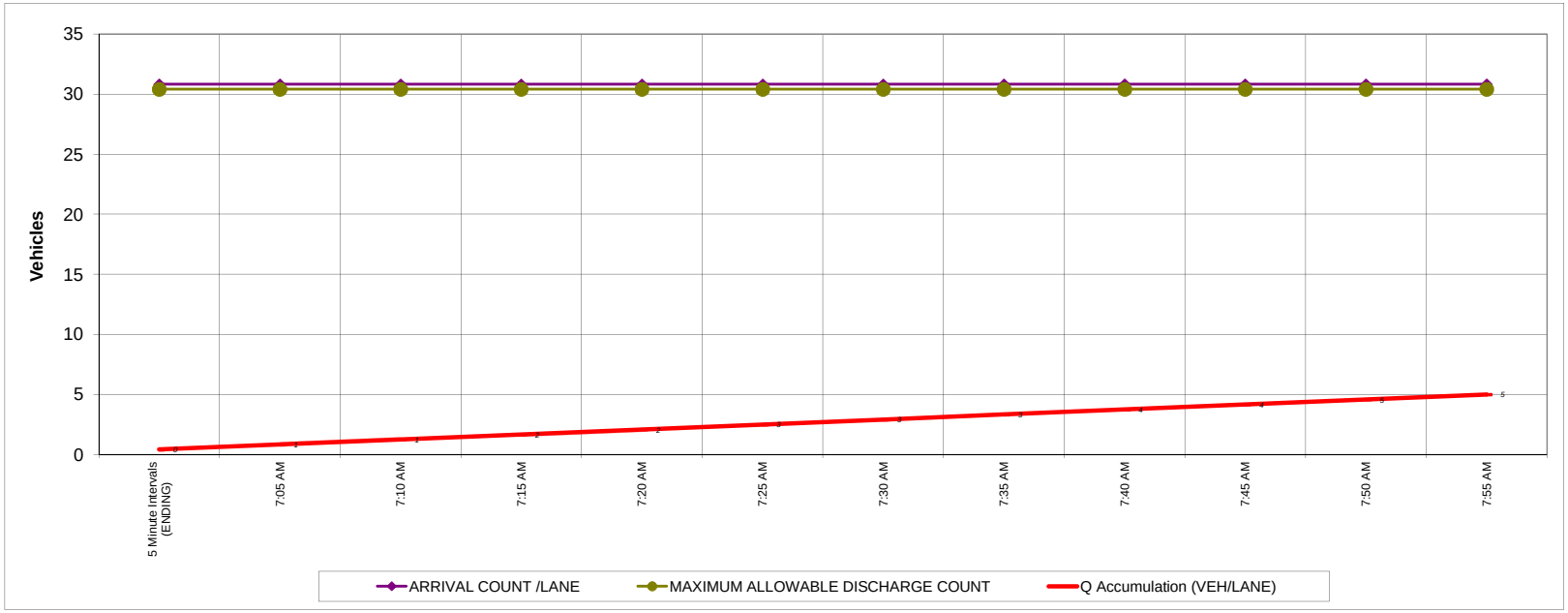
Meter Rate = **365**

Avg Delay/veh (hr)= 0.007

Avg Delay/veh (sec)= **26**

	INPUT
LANES=	**2**
Ramp Length=	170
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Alondra On

AM Peak Hour Vol/PCE:	760	780
PM Peak Hour Vol/PCE:	620	640
MD Peak Hour Vol/PCE:	690	740

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	31	2	2	390	65	370	400	-	680	50	-	33	0.1
7:10 AM	33	31	3	2	390	65	370	400	-	680	100	-	33	0.3
7:15 AM	33	31	5	2	390	65	370	450	-	680	150	-	33	0.4
7:20 AM	33	31	7	2	390	65	370	450	-	680	200	-	33	0.6
7:25 AM	33	31	8	2	390	65	370	450	-	680	250	-	33	0.7
7:30 AM	33	31	10	2	390	65	370	500	-	680	300	-	33	0.8
7:35 AM	33	31	12	2	390	65	370	500	-	680	350	-	33	1.0
7:40 AM	33	31	13	2	390	65	370	550	-	680	400	-	33	1.1
7:45 AM	33	31	15	2	390	65	370	550	-	680	450	-	33	1.3
7:50 AM	33	31	17	2	390	65	370	550	-	680	500	-	33	1.4
7:55 AM	33	31	18	2	390	65	370	600	-	680	550	-	33	1.5
8:00 AM	33	31	20	2	390	65	370	600	-	680	600	-	33	1.7
	390	**370**		**20**		**780**							**390**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**390**					**MAX Q (FT/LN)=**	**600**	**-**	**33**	

(Min=240, Max=900vph/lane)

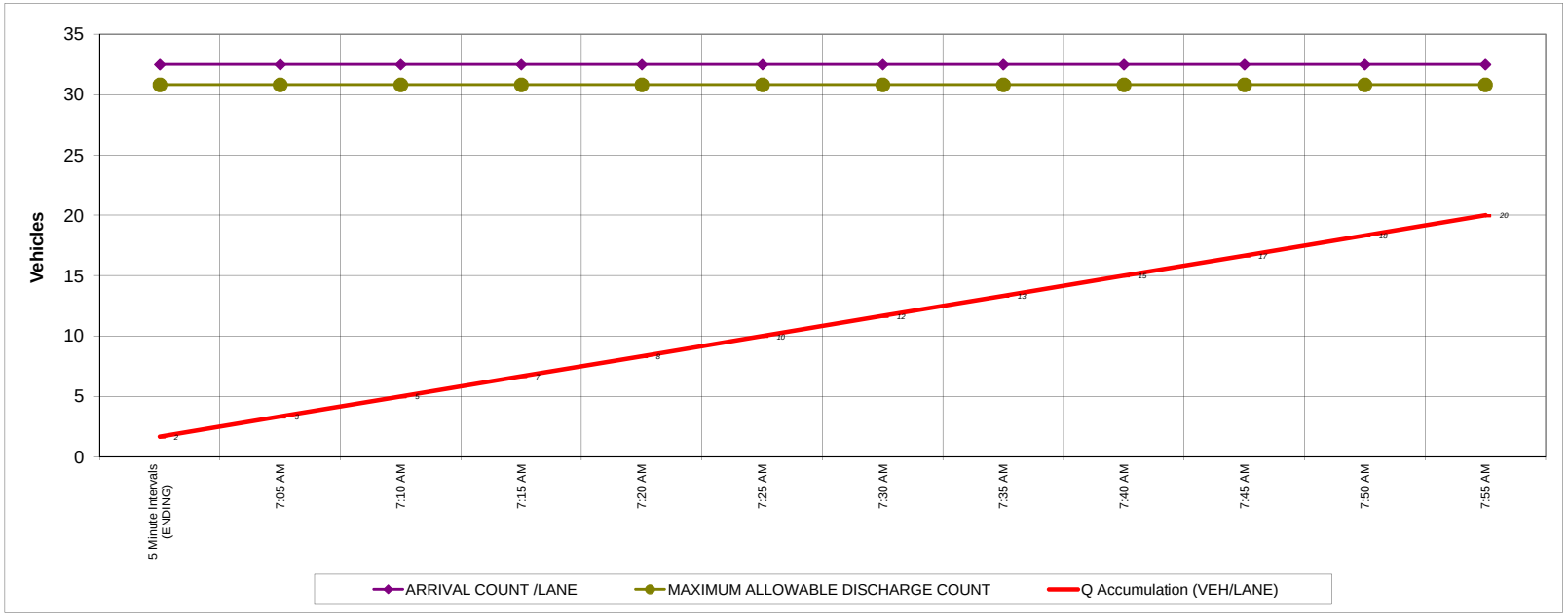
Meter Rate = **370**

Avg Delay/veh (hr)= 0.028

Avg Delay/veh (sec)= **100**

	INPUT
LANES=	**2**
Ramp Length=	680
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Alondra On

AM Peak Hour Vol/PCE:	670	730
PM Peak Hour Vol/PCE:	580	610
MD Peak Hour Vol/PCE:	700	790

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	33	30	3	3	395	66	355	400	-	1350	100	-	33	0.3
1:10 PM	33	30	7	3	395	66	355	450	-	1350	200	-	33	0.6
1:15 PM	33	30	10	3	395	66	355	500	-	1350	300	-	33	0.8
1:20 PM	33	30	13	3	395	66	355	550	-	1350	400	-	33	1.1
1:25 PM	33	30	17	3	395	66	355	550	-	1350	500	-	33	1.4
1:30 PM	33	30	20	3	395	66	355	600	-	1350	600	-	33	1.7
1:35 PM	33	30	23	3	395	66	355	650	-	1350	700	-	33	1.9
1:40 PM	33	30	27	3	395	66	355	700	-	1350	800	-	33	2.2
1:45 PM	33	30	30	3	395	66	355	750	-	1350	900	-	33	2.5
1:50 PM	33	30	33	3	395	66	355	750	-	1350	1000	-	33	2.8
1:55 PM	33	30	37	3	395	66	355	800	-	1350	1100	-	33	3.1
2:00 PM	33	30	40	3	395	66	355	850	-	1350	1200	-	33	3.3
	395	355		40		790							395	21.67
		MAX Q (VEH/LN)=	40	MAX RATE (VPH)=	395					MAX Q (FT/LN)=	1,200	-	33	

(Min=240, Max=900vph/lane)

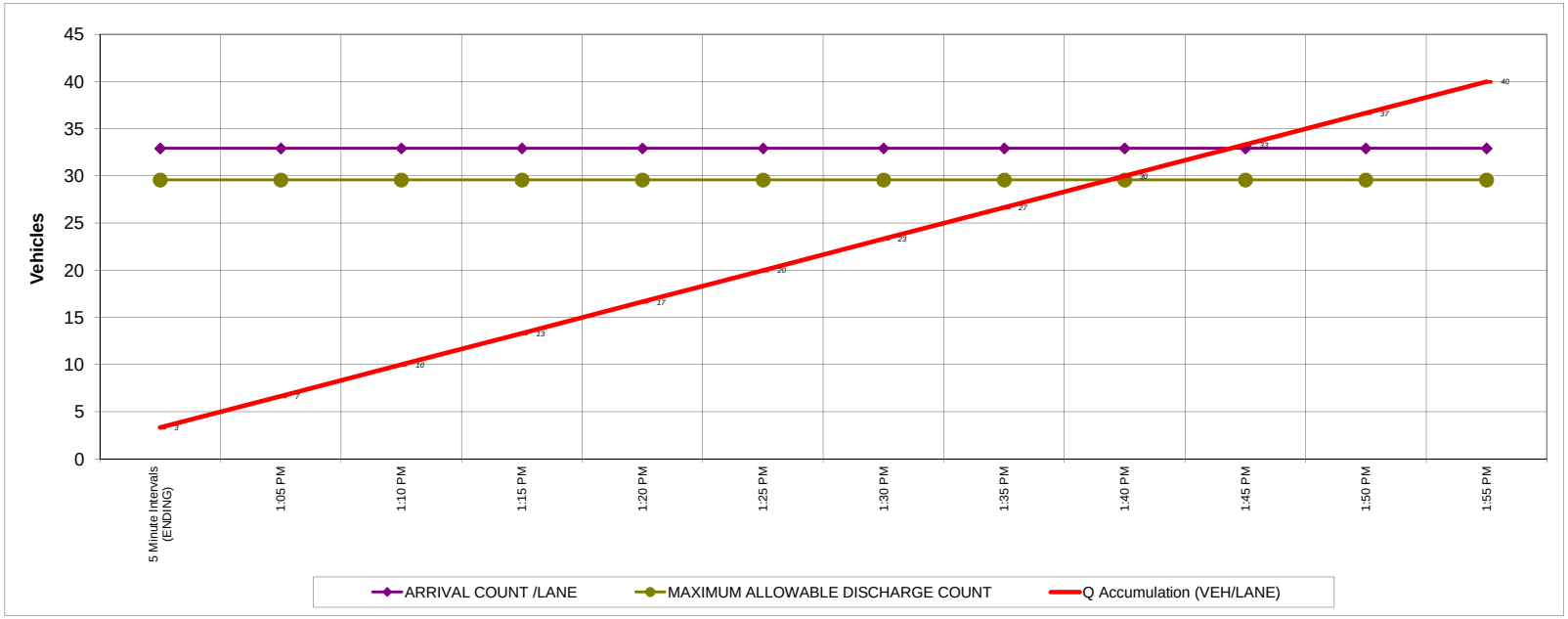
Meter Rate = 355

Avg Delay/veh (hr)= 0.055

Avg Delay/veh (sec)= 197

	INPUT
LANES=	2
Ramp Length=	1350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	340	680
PM Peak Hour Vol/PCE:	560	1120
MD Peak Hour Vol/PCE:	430	860

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	93	75	19	19	1120	93	895	1300	-	2610	563	-	93	1.6
5:10 PM	93	75	38	19	1120	93	895	1550	-	2610	1125	-	93	3.1
5:15 PM	93	75	56	19	1120	93	895	1750	-	2610	1688	-	93	4.7
5:20 PM	93	75	75	19	1120	93	895	2000	-	2610	2250	-	93	6.3
5:25 PM	93	75	94	19	1120	93	895	2200	2300	2610	2813	203	93	7.8
5:30 PM	93	75	113	19	1120	93	895	2450	2750	2610	3375	765	93	9.4
5:35 PM	93	75	131	19	1120	93	895	2650	3200	2610	3938	1328	93	10.9
5:40 PM	93	75	150	19	1120	93	895	2900	3650	2610	4500	1890	93	12.5
5:45 PM	93	75	169	19	1120	93	895	3100	4100	2610	5063	2453	93	14.1
5:50 PM	93	75	188	19	1120	93	895	3350	4550	2610	5625	3015	93	15.6
5:55 PM	93	75	206	19	1120	93	895	3550	5000	2610	6188	3578	93	17.2
6:00 PM	93	75	225	19	1120	93	895	3800	5450	2610	6750	4140	93	18.8
	1,120	**895**		**225**		**1,120**							**1,120**	**121.88**
		MAX Q (VEH/LN)=	**225**	**MAX RATE (VPH)=**	**1,120**					**MAX Q (FT/LN)=**	**6,750**	**4,140**	**93**	

(Min=240, Max=900 vph/lane)

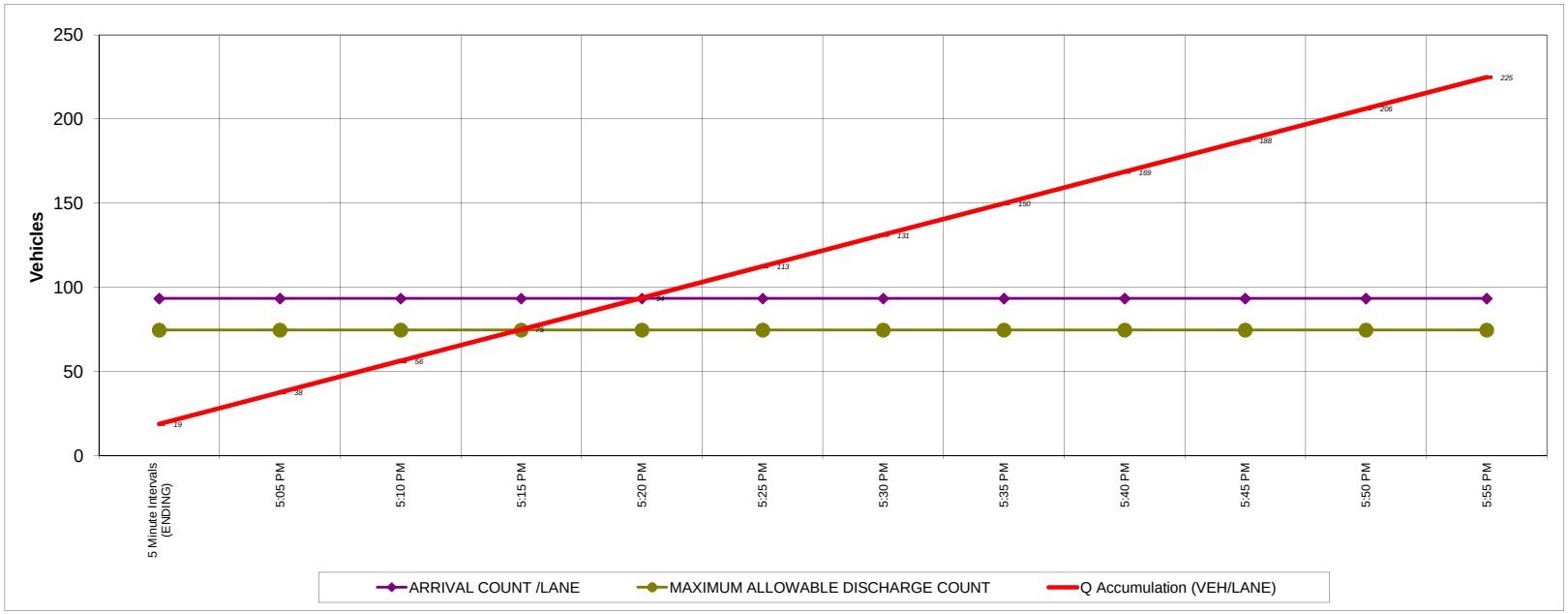
Meter Rate = **895**

Avg Delay/veh (hr)= 0.109

Avg Delay/veh (sec)= **392**

	INPUT
LANES=	**1**
Ramp Length=	2610
Car Length (ft)=	30

Storage is NOT Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-FC Off

AM Peak Hour Vol/PCE:	400	800
PM Peak Hour Vol/PCE:	200	400
MD Peak Hour Vol/PCE:	190	380

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	33	29	5	5	400	67	345	450	-	3220	138	-	33	0.4
7:10 AM	33	29	9	5	400	67	345	500	-	3220	275	-	33	0.8
7:15 AM	33	29	14	5	400	67	345	550	-	3220	413	-	33	1.1
7:20 AM	33	29	18	5	400	67	345	600	-	3220	550	-	33	1.5
7:25 AM	33	29	23	5	400	67	345	650	-	3220	688	-	33	1.9
7:30 AM	33	29	28	5	400	67	345	700	-	3220	825	-	33	2.3
7:35 AM	33	29	32	5	400	67	345	750	-	3220	963	-	33	2.7
7:40 AM	33	29	37	5	400	67	345	800	-	3220	1100	-	33	3.1
7:45 AM	33	29	41	5	400	67	345	850	-	3220	1238	-	33	3.4
7:50 AM	33	29	46	5	400	67	345	950	-	3220	1375	-	33	3.8
7:55 AM	33	29	50	5	400	67	345	1000	-	3220	1513	-	33	4.2
8:00 AM	33	29	55	5	400	67	345	1050	-	3220	1650	-	33	4.6
	400	345		55		800							400	29.79
		MAX Q (VEH/LN)=	55	MAX RATE (VPH)=	400					MAX Q (FT/LN)=	1,650	-	33	

(Min=240, Max=900vph/lane)

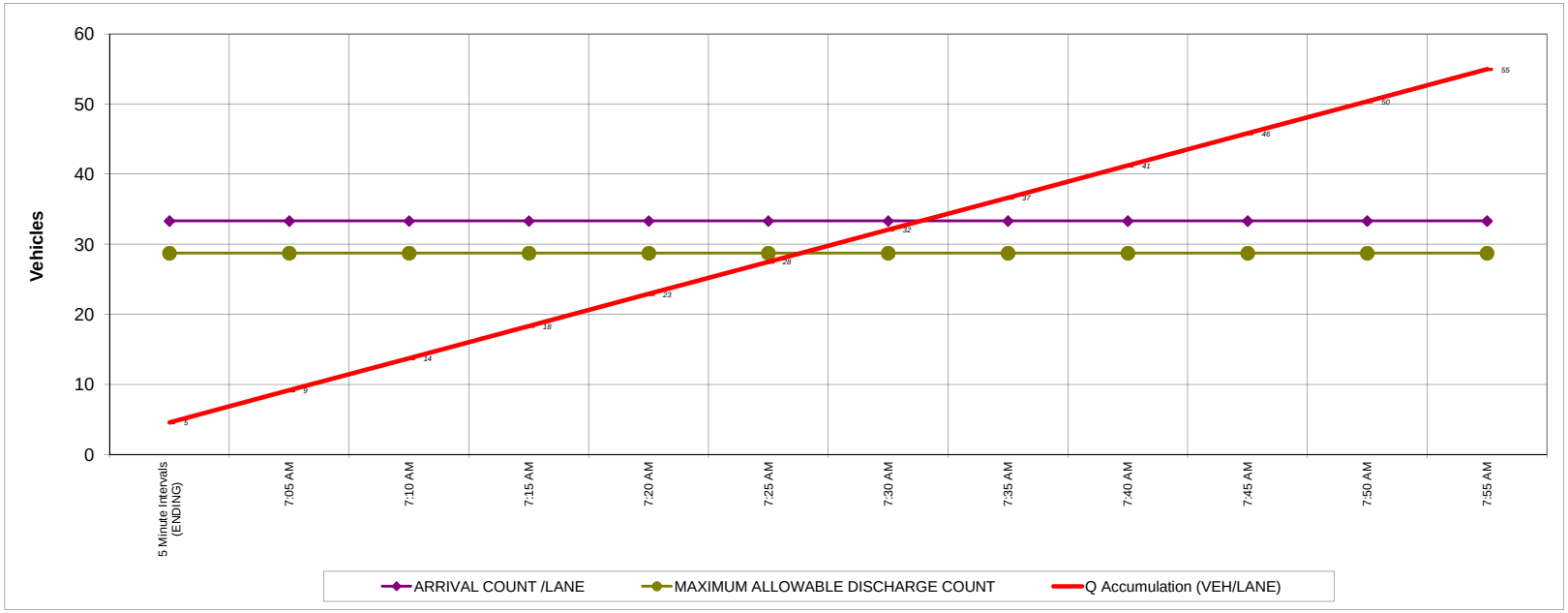
Meter Rate = 345

Avg Delay/veh (hr)= 0.074

Avg Delay/veh (sec)= 268

	INPUT
LANES=	2
Ramp Length=	3220
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Rosecrans On

AM Peak Hour Vol/PCE:	500	510
PM Peak Hour Vol/PCE:	480	490
MD Peak Hour Vol/PCE:	400	420

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	21	20	1	1	255	43	240	250	-	2710	38	-	21	0.1
7:10 AM	21	20	3	1	255	43	240	250	-	2710	75	-	21	0.2
7:15 AM	21	20	4	1	255	43	240	300	-	2710	113	-	21	0.3
7:20 AM	21	20	5	1	255	43	240	300	-	2710	150	-	21	0.4
7:25 AM	21	20	6	1	255	43	240	300	-	2710	188	-	21	0.5
7:30 AM	21	20	8	1	255	43	240	300	-	2710	225	-	21	0.6
7:35 AM	21	20	9	1	255	43	240	350	-	2710	263	-	21	0.7
7:40 AM	21	20	10	1	255	43	240	350	-	2710	300	-	21	0.8
7:45 AM	21	20	11	1	255	43	240	350	-	2710	338	-	21	0.9
7:50 AM	21	20	13	1	255	43	240	400	-	2710	375	-	21	1.0
7:55 AM	21	20	14	1	255	43	240	400	-	2710	413	-	21	1.1
8:00 AM	21	20	15	1	255	43	240	400	-	2710	450	-	21	1.3
	255	**240**		**15**		**510**							**255**	**8.13**
		MAX Q (VEH/LN)=	**15**	**MAX RATE (VPH)=**	**255**					**MAX Q (FT/LN)=**	**450**	**-**	**21**	

(Min=240, Max=900vph/lane)

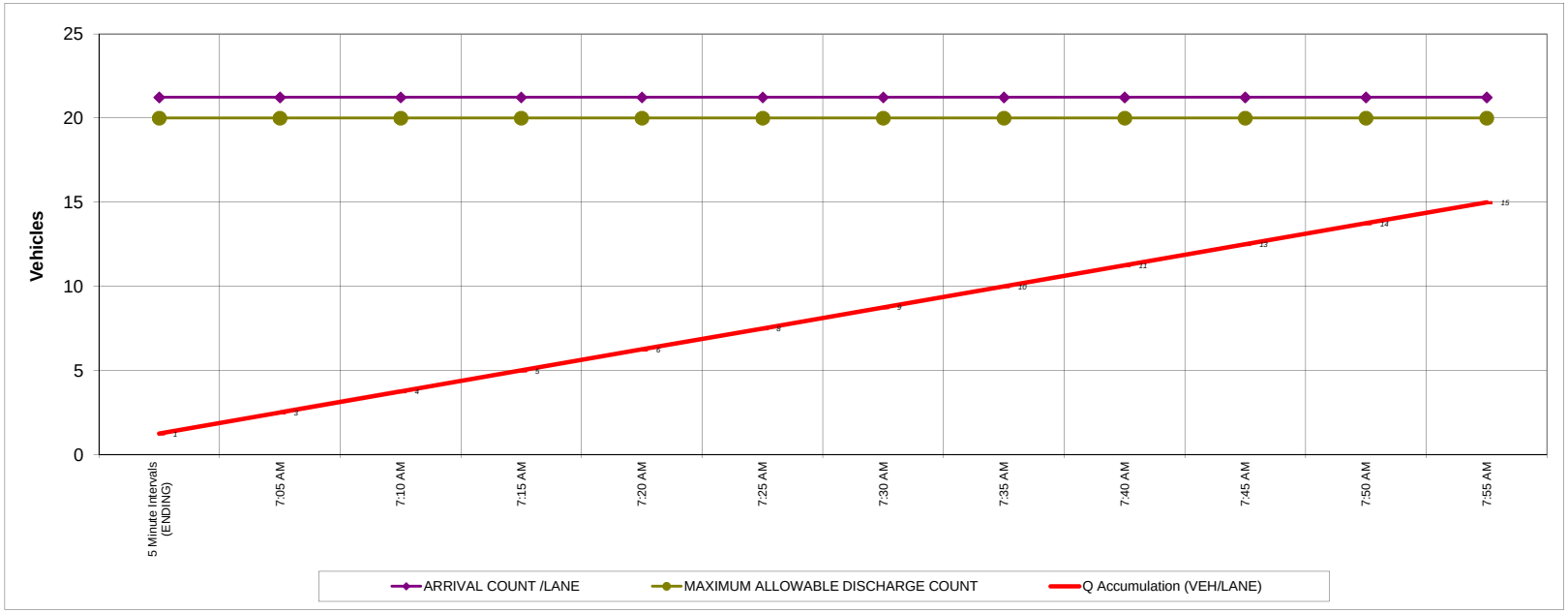
Meter Rate = **240**

Avg Delay/veh (hr)= 0.032

Avg Delay/veh (sec)= **115**

	INPUT
LANES=	**2**
Ramp Length=	2710
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Rosecrans On

AM Peak Hour Vol/PCE:	690	740
PM Peak Hour Vol/PCE:	340	350
MD Peak Hour Vol/PCE:	250	280

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	31	28	3	3	370	62	335	400	-	1200	88	-	31	0.2
7:10 AM	31	28	6	3	370	62	335	400	-	1200	175	-	31	0.5
7:15 AM	31	28	9	3	370	62	335	450	-	1200	263	-	31	0.7
7:20 AM	31	28	12	3	370	62	335	500	-	1200	350	-	31	1.0
7:25 AM	31	28	15	3	370	62	335	500	-	1200	438	-	31	1.2
7:30 AM	31	28	18	3	370	62	335	550	-	1200	525	-	31	1.5
7:35 AM	31	28	20	3	370	62	335	600	-	1200	613	-	31	1.7
7:40 AM	31	28	23	3	370	62	335	650	-	1200	700	-	31	1.9
7:45 AM	31	28	26	3	370	62	335	650	-	1200	788	-	31	2.2
7:50 AM	31	28	29	3	370	62	335	700	-	1200	875	-	31	2.4
7:55 AM	31	28	32	3	370	62	335	750	-	1200	963	-	31	2.7
8:00 AM	31	28	35	3	370	62	335	750	-	1200	1050	-	31	2.9
	370	**335**		**35**		**740**							**370**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**1,050**	**-**	**31**	

(Min=240, Max=900vph/lane)

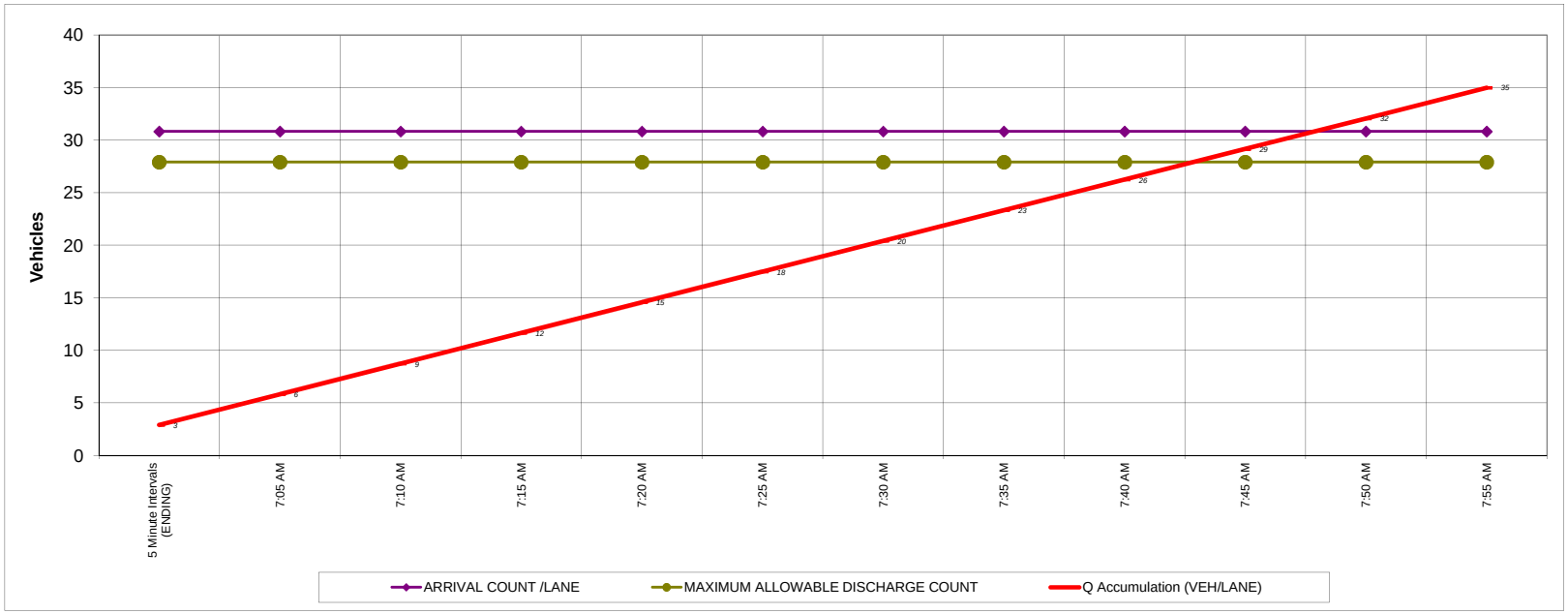
Meter Rate = **335**

Avg Delay/veh (hr)= 0.051

Avg Delay/veh (sec)= **184**

	INPUT
LANES=	**2**
Ramp Length=	1200
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Rosecrans On

AM Peak Hour Vol/PCE:	360	370
PM Peak Hour Vol/PCE:	150	150
MD Peak Hour Vol/PCE:	110	120

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:10 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:15 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:20 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:25 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:30 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:35 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:40 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:45 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:50 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
7:55 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
8:00 AM	15	20	0		185	31	240	-	-	1180	-	-	0	0.0
	185	**240**		**-**		**370**							**-**	**0.00**
		MAX Q (VEH/LN)=	**-**	**MAX RATE (VPH)=**	**185**					**MAX Q (FT/LN)=**	**-**	**-**	**-**	

(Min=240, Max=900vph/lane)

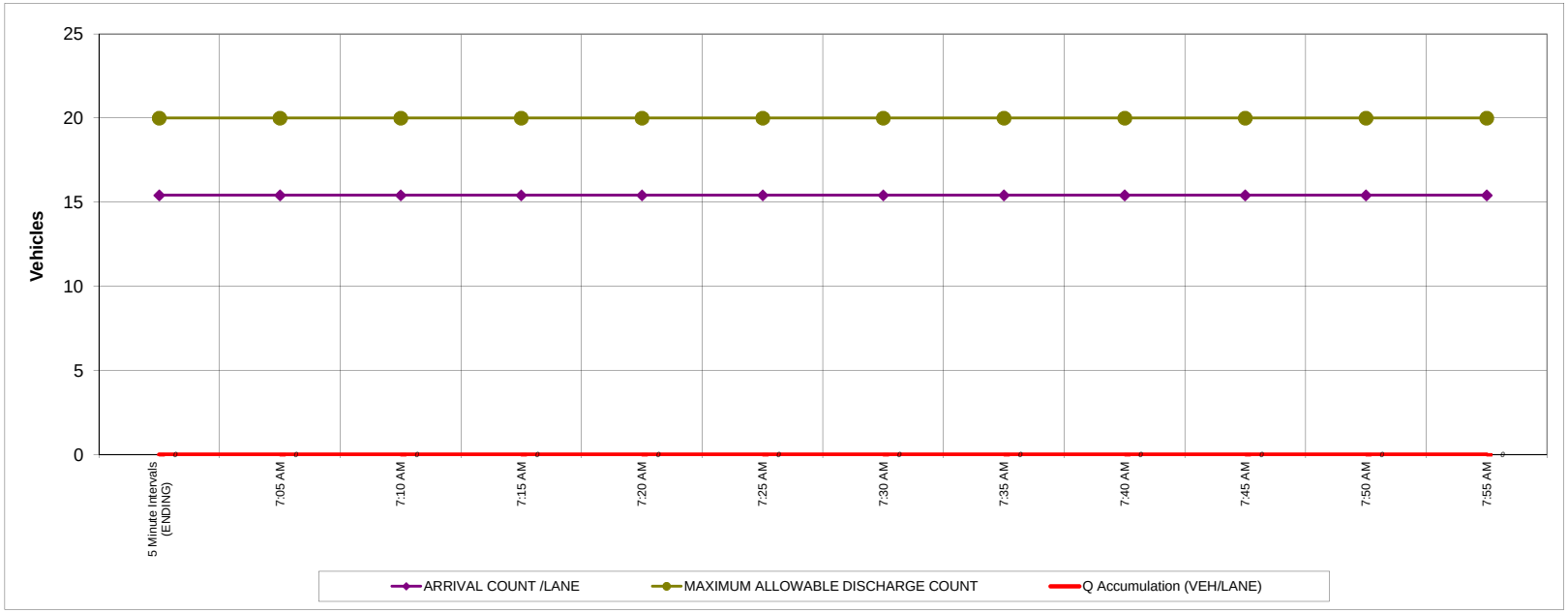
Meter Rate = **240**

Avg Delay/veh (hr)= #DIV/0!

Avg Delay/veh (sec)= **#DIV/0!**

	INPUT
LANES=	**2**
Ramp Length=	1180
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Imperial On

AM Peak Hour Vol/PCE:	630	670
PM Peak Hour Vol/PCE:	630	650
MD Peak Hour Vol/PCE:	610	670

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	28	26	2	2	335	56	310	350	-	850	63	-	28	0.2
7:10 AM	28	26	4	2	335	56	310	350	-	850	125	-	28	0.3
7:15 AM	28	26	6	2	335	56	310	400	-	850	188	-	28	0.5
7:20 AM	28	26	8	2	335	56	310	400	-	850	250	-	28	0.7
7:25 AM	28	26	10	2	335	56	310	450	-	850	312	-	28	0.9
7:30 AM	28	26	13	2	335	56	310	450	-	850	375	-	28	1.0
7:35 AM	28	26	15	2	335	56	310	500	-	850	437	-	28	1.2
7:40 AM	28	26	17	2	335	56	310	500	-	850	500	-	28	1.4
7:45 AM	28	26	19	2	335	56	310	550	-	850	562	-	28	1.6
7:50 AM	28	26	21	2	335	56	310	550	-	850	625	-	28	1.7
7:55 AM	28	26	23	2	335	56	310	600	-	850	687	-	28	1.9
8:00 AM	28	26	25	2	335	56	310	600	-	850	750	-	28	2.1
	335	**310**		**25**		**670**							**335**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**335**					**MAX Q (FT/LN)=**	**750**	**-**	**28**	

(Min=240, Max=900vph/lane)

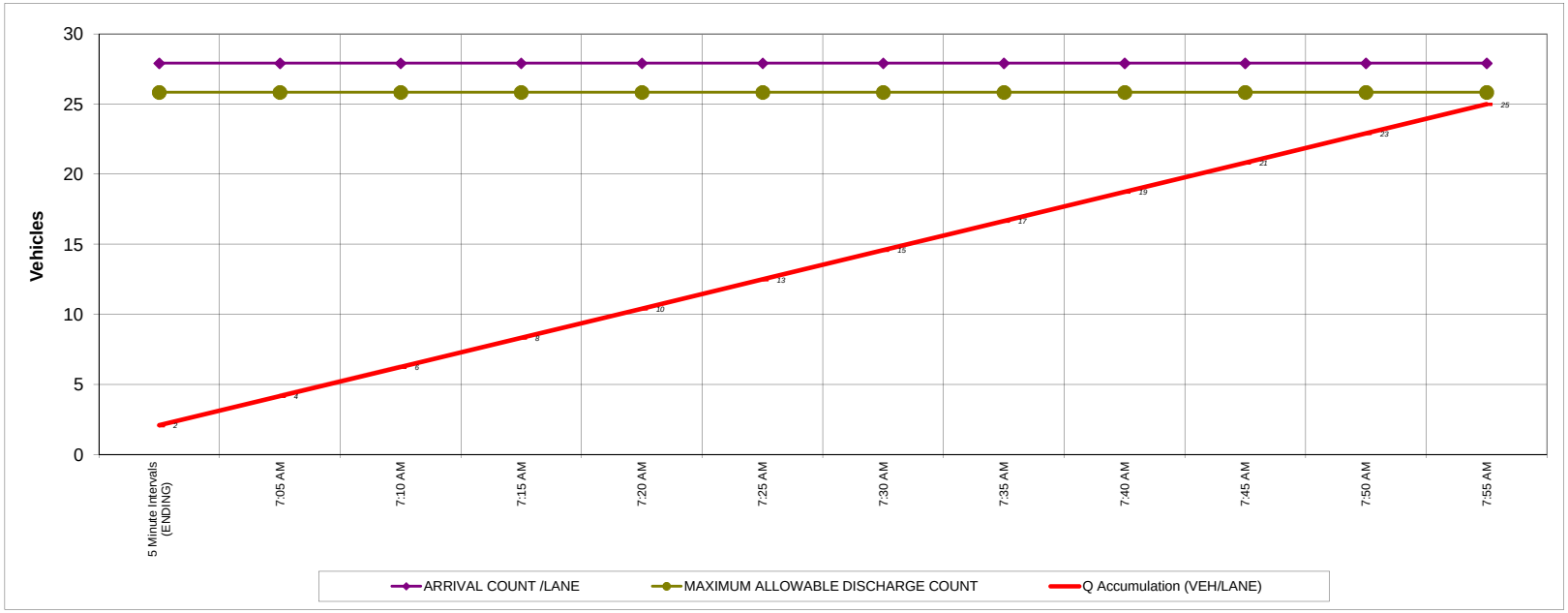
Meter Rate = **310**

Avg Delay/veh (hr)= 0.040

Avg Delay/veh (sec)= **146**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Imperial On

AM Peak Hour Vol/PCE:	2300	2370
PM Peak Hour Vol/PCE:	1460	1500
MD Peak Hour Vol/PCE:	1880	1990

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	99	96	3	3	1185	198	1150	1200	-	1110	87	-	99	0.2
7:10 AM	99	96	6	3	1185	198	1150	1250	-	1110	175	-	99	0.5
7:15 AM	99	96	9	3	1185	198	1150	1250	-	1110	262	-	99	0.7
7:20 AM	99	96	12	3	1185	198	1150	1300	-	1110	350	-	99	1.0
7:25 AM	99	96	15	3	1185	198	1150	1350	-	1110	437	-	99	1.2
7:30 AM	99	96	17	3	1185	198	1150	1350	-	1110	525	-	99	1.5
7:35 AM	99	96	20	3	1185	198	1150	1400	-	1110	612	-	99	1.7
7:40 AM	99	96	23	3	1185	198	1150	1450	-	1110	700	-	99	1.9
7:45 AM	99	96	26	3	1185	198	1150	1500	-	1110	787	-	99	2.2
7:50 AM	99	96	29	3	1185	198	1150	1500	-	1110	875	-	99	2.4
7:55 AM	99	96	32	3	1185	198	1150	1550	-	1110	962	-	99	2.7
8:00 AM	99	96	35	3	1185	198	1150	1600	-	1110	1050	-	99	2.9
	1,185	**1,150**		**35**		**2,370**							**1,185**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**1,185**					**MAX Q (FT/LN)=**	**1,050**	**-**	**99**	

(Min=480, Max=1200vph/lane)

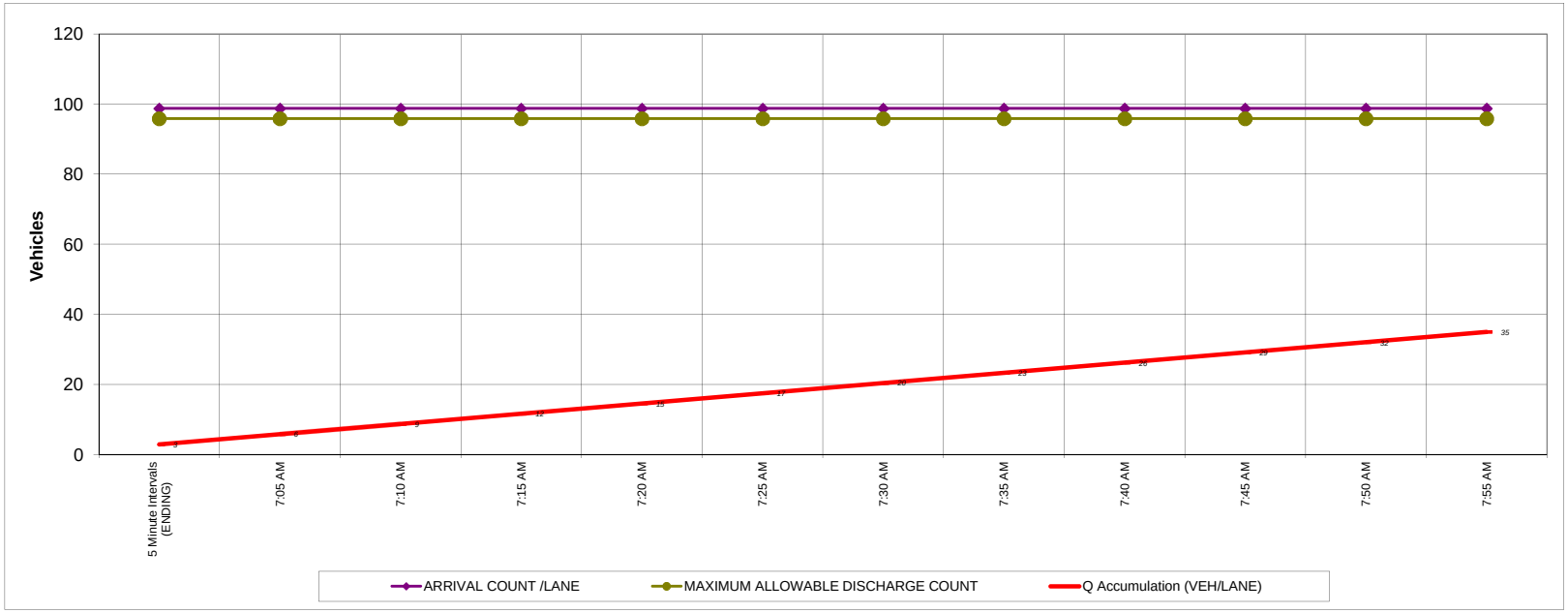
Meter Rate = **1150**

Avg Delay/veh (hr)= 0.016

Avg Delay/veh (sec)= **58**

	INPUT
LANES=	**2**
Ramp Length=	1110
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-WB Firestone On

AM Peak Hour Vol/PCE:	1080	1110
PM Peak Hour Vol/PCE:	940	970
MD Peak Hour Vol/PCE:	990	1050

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	46	45	2	2	555	93	535	550	-	650	50	-	46	0.1
7:10 AM	46	45	3	2	555	93	535	550	-	650	100	-	46	0.3
7:15 AM	46	45	5	2	555	93	535	600	-	650	150	-	46	0.4
7:20 AM	46	45	7	2	555	93	535	600	-	650	200	-	46	0.6
7:25 AM	46	45	8	2	555	93	535	650	-	650	250	-	46	0.7
7:30 AM	46	45	10	2	555	93	535	650	-	650	300	-	46	0.8
7:35 AM	46	45	12	2	555	93	535	650	-	650	350	-	46	1.0
7:40 AM	46	45	13	2	555	93	535	700	-	650	400	-	46	1.1
7:45 AM	46	45	15	2	555	93	535	700	-	650	450	-	46	1.3
7:50 AM	46	45	17	2	555	93	535	750	-	650	500	-	46	1.4
7:55 AM	46	45	18	2	555	93	535	750	-	650	550	-	46	1.5
8:00 AM	46	45	20	2	555	93	535	750	-	650	600	-	46	1.7
	555	**535**		**20**		**1,110**							**555**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**555**					**MAX Q (FT/LN)=**	**600**	**-**	**46**	

(Min=240, Max=900vph/lane)

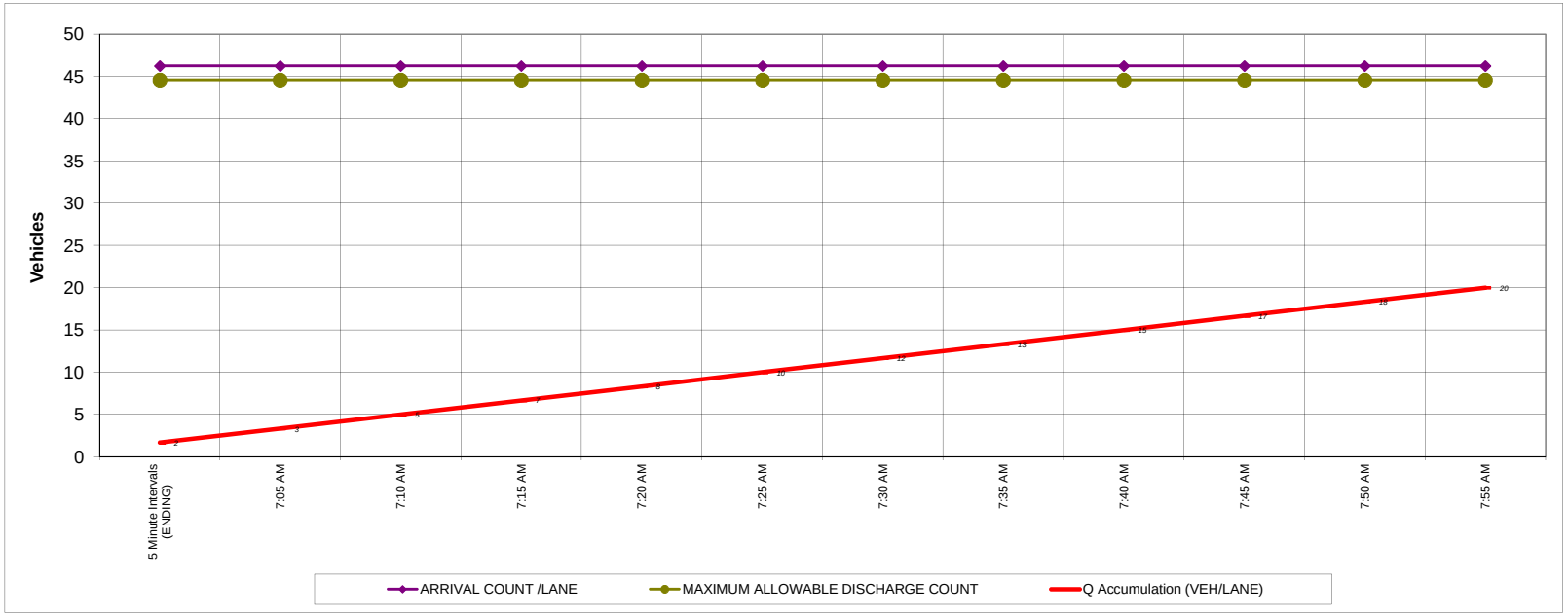
Meter Rate = **535**

Avg Delay/veh (hr)= 0.020

Avg Delay/veh (sec)= **70**

	INPUT
LANES=	**2**
Ramp Length=	650
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-EB Firestone On

AM Peak Hour Vol/PCE:	870	900
PM Peak Hour Vol/PCE:	500	520
MD Peak Hour Vol/PCE:	690	740

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	38	36	2	2	450	75	430	450	-	700	50	-	38	0.1
7:10 AM	38	36	3	2	450	75	430	450	-	700	100	-	38	0.3
7:15 AM	38	36	5	2	450	75	430	500	-	700	150	-	38	0.4
7:20 AM	38	36	7	2	450	75	430	500	-	700	200	-	38	0.6
7:25 AM	38	36	8	2	450	75	430	550	-	700	250	-	38	0.7
7:30 AM	38	36	10	2	450	75	430	550	-	700	300	-	38	0.8
7:35 AM	38	36	12	2	450	75	430	550	-	700	350	-	38	1.0
7:40 AM	38	36	13	2	450	75	430	600	-	700	400	-	38	1.1
7:45 AM	38	36	15	2	450	75	430	600	-	700	450	-	38	1.3
7:50 AM	38	36	17	2	450	75	430	650	-	700	500	-	38	1.4
7:55 AM	38	36	18	2	450	75	430	650	-	700	550	-	38	1.5
8:00 AM	38	36	20	2	450	75	430	650	-	700	600	-	38	1.7
	450	**430**		**20**		**900**							**450**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**450**					**MAX Q (FT/LN)=**	**600**	**-**	**38**	

(Min=240, Max=900vph/lane)

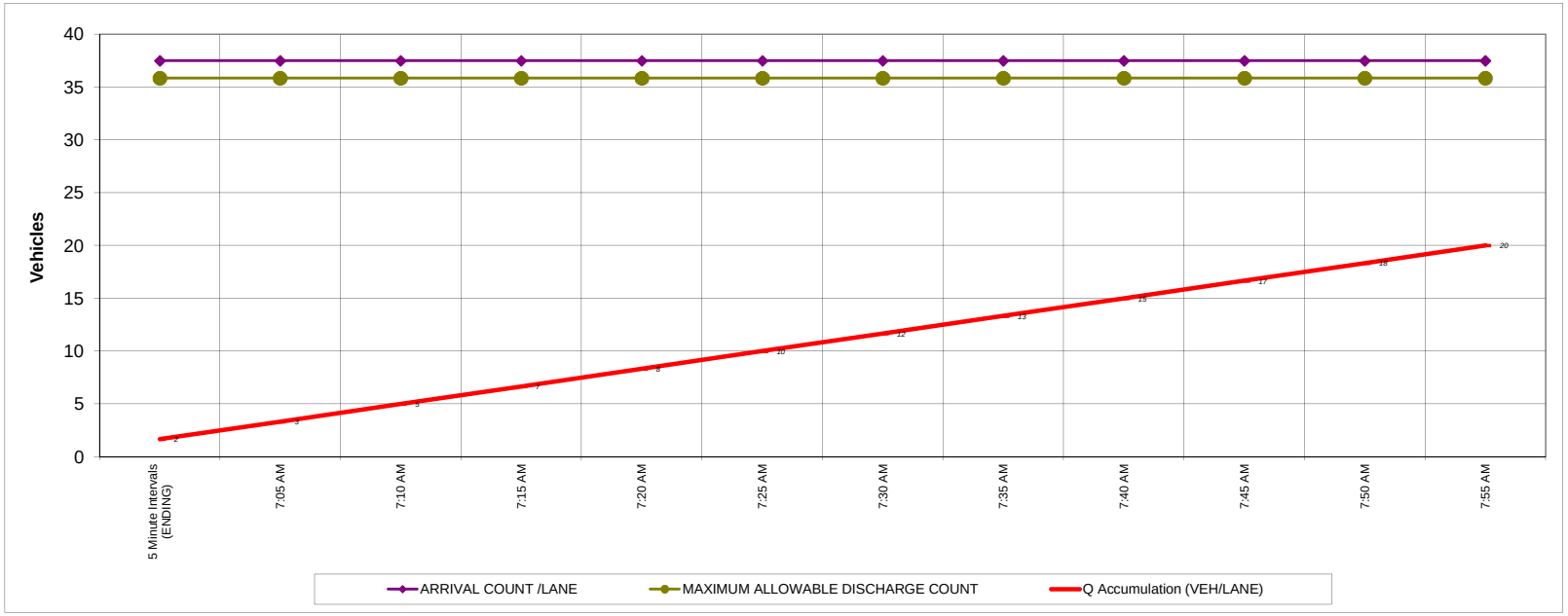
Meter Rate = **430**

Avg Delay/veh (hr)= 0.024

Avg Delay/veh (sec)= **87**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Firestone On

AM Peak Hour Vol/PCE:	680	710
PM Peak Hour Vol/PCE:	390	410
MD Peak Hour Vol/PCE:	480	540

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	28	2	2	355	59	335	350	-	700	50	-	30	0.1
7:10 AM	30	28	3	2	355	59	335	350	-	700	100	-	30	0.3
7:15 AM	30	28	5	2	355	59	335	400	-	700	150	-	30	0.4
7:20 AM	30	28	7	2	355	59	335	400	-	700	200	-	30	0.6
7:25 AM	30	28	8	2	355	59	335	450	-	700	250	-	30	0.7
7:30 AM	30	28	10	2	355	59	335	450	-	700	300	-	30	0.8
7:35 AM	30	28	12	2	355	59	335	450	-	700	350	-	30	1.0
7:40 AM	30	28	13	2	355	59	335	500	-	700	400	-	30	1.1
7:45 AM	30	28	15	2	355	59	335	500	-	700	450	-	30	1.3
7:50 AM	30	28	17	2	355	59	335	550	-	700	500	-	30	1.4
7:55 AM	30	28	18	2	355	59	335	550	-	700	550	-	30	1.5
8:00 AM	30	28	20	2	355	59	335	550	-	700	600	-	30	1.7
	355	**335**		**20**		**710**							**355**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**355**					**MAX Q (FT/LN)=**	**600**	**-**	**30**	

(Min=240, Max=900vph/lane)

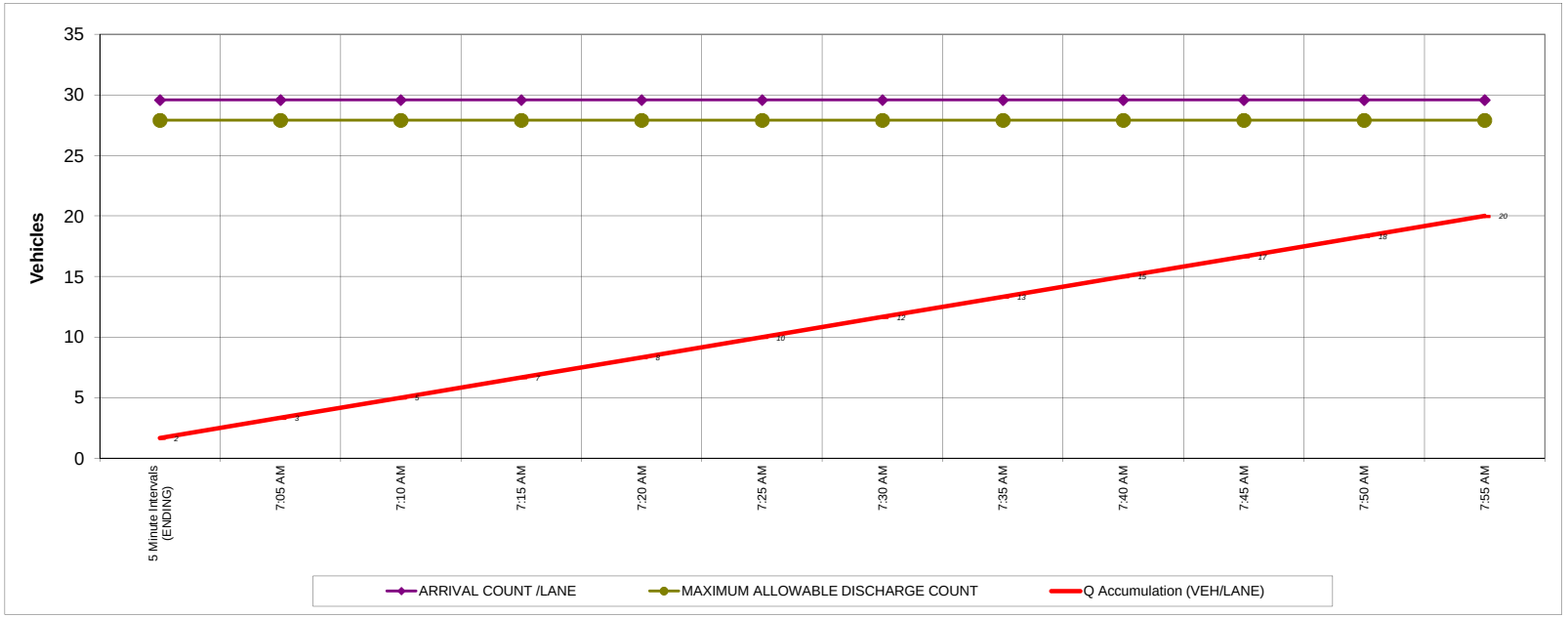
Meter Rate = **335**

Avg Delay/veh (hr)= 0.031

Avg Delay/veh (sec)= **110**

	INPUT
LANES=	**2**
Ramp Length=	700
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Firestone On

AM Peak Hour Vol/PCE:	1160	1190
PM Peak Hour Vol/PCE:	930	960
MD Peak Hour Vol/PCE:	930	990

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	50	47	3	3	595	99	560	600	-	1080	87	-	50	0.2
7:10 AM	50	47	6	3	595	99	560	650	-	1080	175	-	50	0.5
7:15 AM	50	47	9	3	595	99	560	700	-	1080	263	-	50	0.7
7:20 AM	50	47	12	3	595	99	560	700	-	1080	350	-	50	1.0
7:25 AM	50	47	15	3	595	99	560	750	-	1080	438	-	50	1.2
7:30 AM	50	47	18	3	595	99	560	800	-	1080	525	-	50	1.5
7:35 AM	50	47	20	3	595	99	560	800	-	1080	612	-	50	1.7
7:40 AM	50	47	23	3	595	99	560	850	-	1080	700	-	50	1.9
7:45 AM	50	47	26	3	595	99	560	900	-	1080	787	-	50	2.2
7:50 AM	50	47	29	3	595	99	560	900	-	1080	875	-	50	2.4
7:55 AM	50	47	32	3	595	99	560	950	-	1080	962	-	50	2.7
8:00 AM	50	47	35	3	595	99	560	1000	-	1080	1050	-	50	2.9
	595	**560**		**35**		**1,190**							**595**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**595**					**MAX Q (FT/LN)=**	**1,050**	**-**	**50**	

(Min=240, Max=900vph/lane)

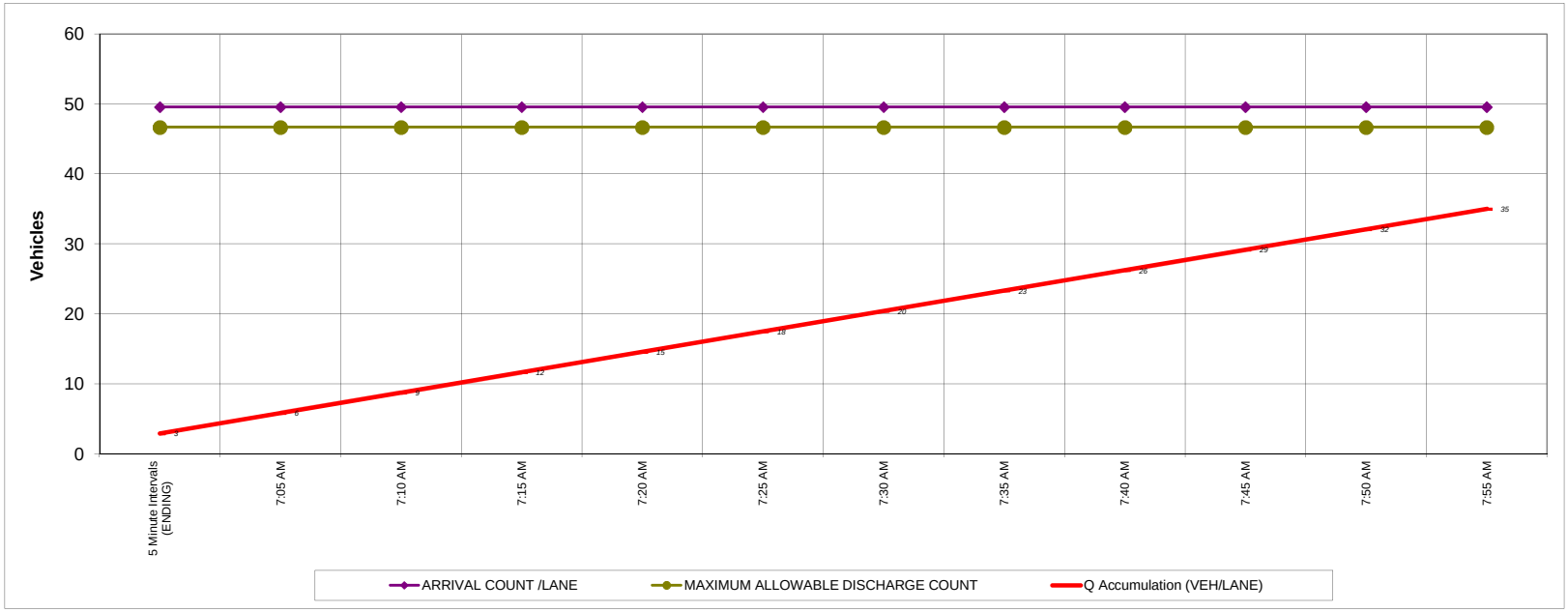
Meter Rate = **560**

Avg Delay/veh (hr)= 0.032

Avg Delay/veh (sec)= **115**

	INPUT
LANES=	**2**
Ramp Length=	1080
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB Patata On FC

AM Peak Hour Vol/PCE:	690	740
PM Peak Hour Vol/PCE:	340	350
MD Peak Hour Vol/PCE:	250	280

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	31	28	3	3	370	62	340	400	-	1000	75	-	31	0.2
7:10 AM	31	28	5	3	370	62	340	400	-	1000	150	-	31	0.4
7:15 AM	31	28	7	3	370	62	340	450	-	1000	225	-	31	0.6
7:20 AM	31	28	10	3	370	62	340	450	-	1000	300	-	31	0.8
7:25 AM	31	28	13	3	370	62	340	500	-	1000	375	-	31	1.0
7:30 AM	31	28	15	3	370	62	340	550	-	1000	450	-	31	1.3
7:35 AM	31	28	18	3	370	62	340	550	-	1000	525	-	31	1.5
7:40 AM	31	28	20	3	370	62	340	600	-	1000	600	-	31	1.7
7:45 AM	31	28	23	3	370	62	340	600	-	1000	675	-	31	1.9
7:50 AM	31	28	25	3	370	62	340	650	-	1000	750	-	31	2.1
7:55 AM	31	28	28	3	370	62	340	700	-	1000	825	-	31	2.3
8:00 AM	31	28	30	3	370	62	340	700	-	1000	900	-	31	2.5
	370	**340**		**30**		**740**							**370**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**370**					**MAX Q (FT/LN)=**	**900**	**-**	**31**	

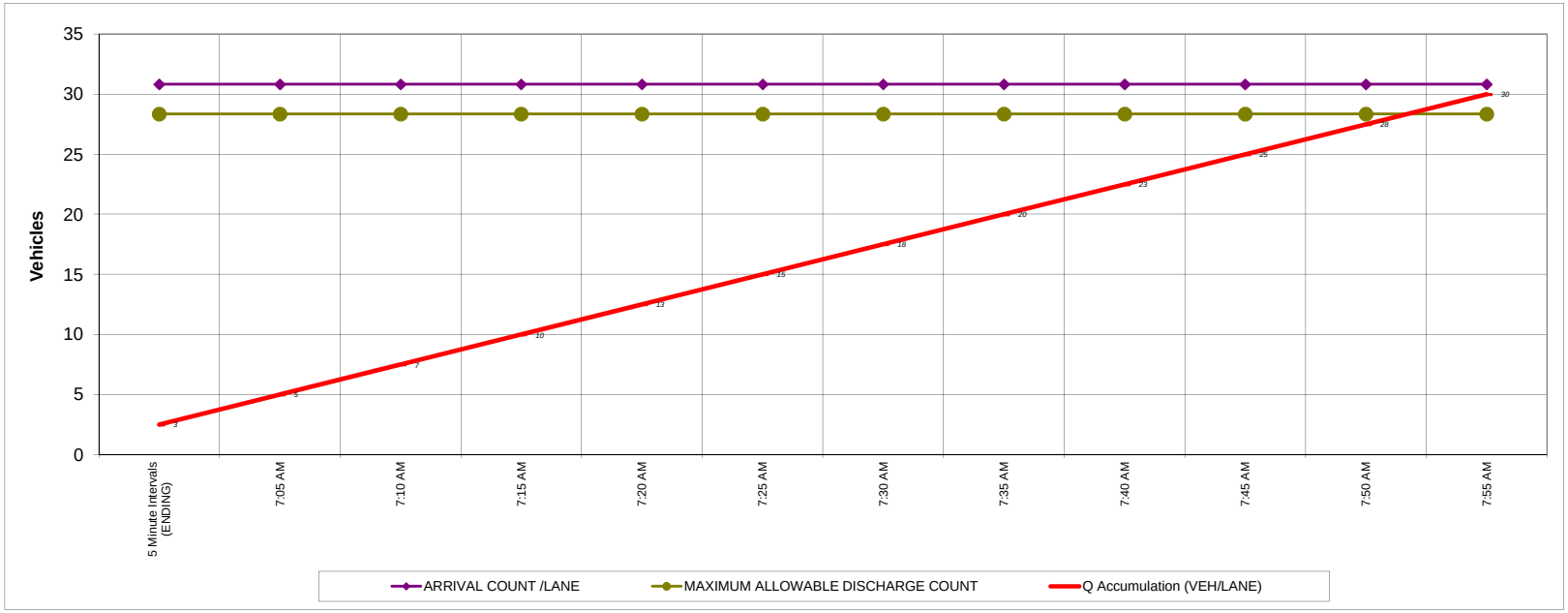
(Min=240, Max=900vph/lane)

Meter Rate = **340**

	INPUT
LANES=	**2**
Ramp Length=	1000
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.044
Avg Delay/veh (sec)= **158**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-EB Imperial On

AM Peak Hour Vol/PCE:	770	790
PM Peak Hour Vol/PCE:	610	630
MD Peak Hour Vol/PCE:	820	860

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	36	34	2	2	430	72	410	450	-	625	50	-	36	0.1
1:10 PM	36	34	3	2	430	72	410	450	-	625	100	-	36	0.3
1:15 PM	36	34	5	2	430	72	410	450	-	625	150	-	36	0.4
1:20 PM	36	34	7	2	430	72	410	500	-	625	200	-	36	0.6
1:25 PM	36	34	8	2	430	72	410	500	-	625	250	-	36	0.7
1:30 PM	36	34	10	2	430	72	410	550	-	625	300	-	36	0.8
1:35 PM	36	34	12	2	430	72	410	550	-	625	350	-	36	1.0
1:40 PM	36	34	13	2	430	72	410	550	-	625	400	-	36	1.1
1:45 PM	36	34	15	2	430	72	410	600	-	625	450	-	36	1.3
1:50 PM	36	34	17	2	430	72	410	600	-	625	500	-	36	1.4
1:55 PM	36	34	18	2	430	72	410	650	-	625	550	-	36	1.5
2:00 PM	36	34	20	2	430	72	410	650	-	625	600	-	36	1.7
	430	**410**		**20**		**860**							**430**	**10.83**
		MAX Q (VEH/LN)=	**20**	**MAX RATE (VPH)=**	**430**					**MAX Q (FT/LN)=**	**600**	**-**	**36**	

(Min=240, Max=900vph/lane)

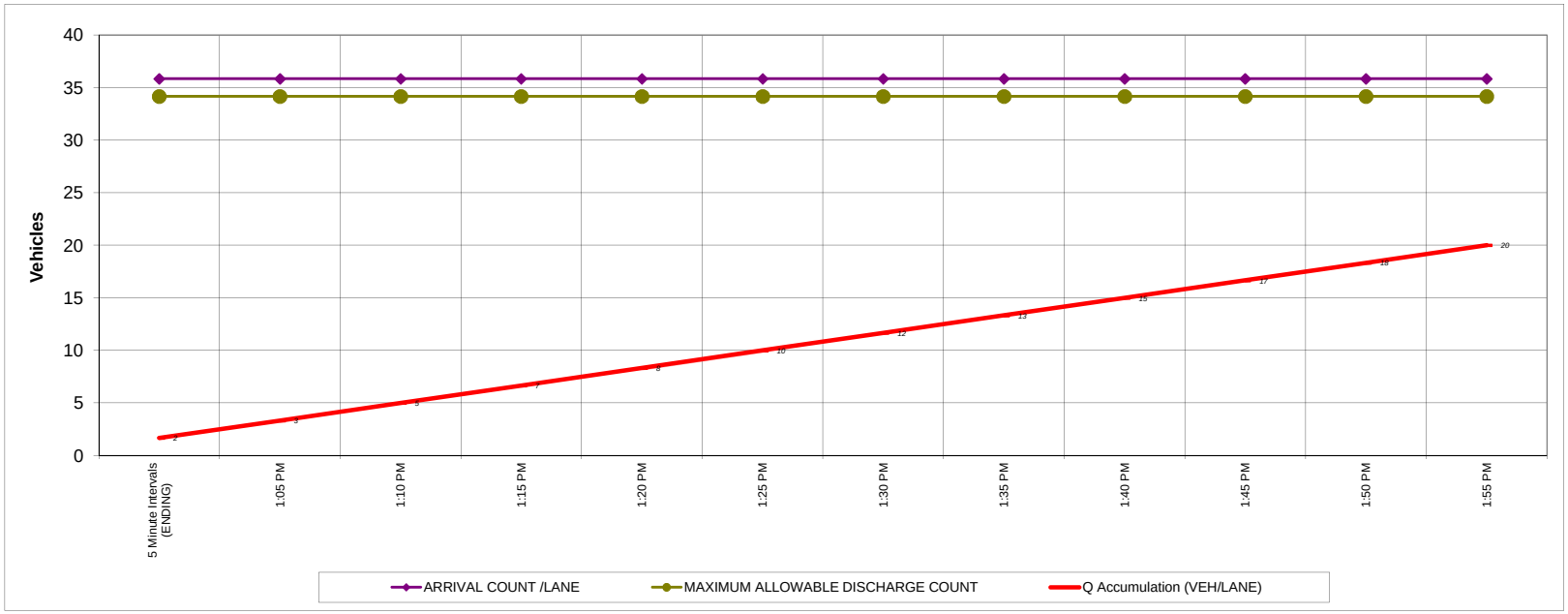
Meter Rate = **410**

Avg Delay/veh (hr)= 0.025

Avg Delay/veh (sec)= **91**

	INPUT
LANES=	**2**
Ramp Length=	625
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-WB Imperial On

AM Peak Hour Vol/PCE:	570	590
PM Peak Hour Vol/PCE:	500	520
MD Peak Hour Vol/PCE:	480	500

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	25	22	3	3	295	49	265	300	-	920	75	-	25	0.2
7:10 AM	25	22	5	3	295	49	265	350	-	920	150	-	25	0.4
7:15 AM	25	22	7	3	295	49	265	350	-	920	225	-	25	0.6
7:20 AM	25	22	10	3	295	49	265	400	-	920	300	-	25	0.8
7:25 AM	25	22	13	3	295	49	265	400	-	920	375	-	25	1.0
7:30 AM	25	22	15	3	295	49	265	450	-	920	450	-	25	1.3
7:35 AM	25	22	18	3	295	49	265	500	-	920	525	-	25	1.5
7:40 AM	25	22	20	3	295	49	265	500	-	920	600	-	25	1.7
7:45 AM	25	22	23	3	295	49	265	550	-	920	675	-	25	1.9
7:50 AM	25	22	25	3	295	49	265	550	-	920	750	-	25	2.1
7:55 AM	25	22	28	3	295	49	265	600	-	920	825	-	25	2.3
8:00 AM	25	22	30	3	295	49	265	650	-	920	900	-	25	2.5
	295	**265**		**30**		**590**							**295**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**295**					**MAX Q (FT/LN)=**	**900**	**-**	**25**	

(Min=240, Max=900vph/lane)

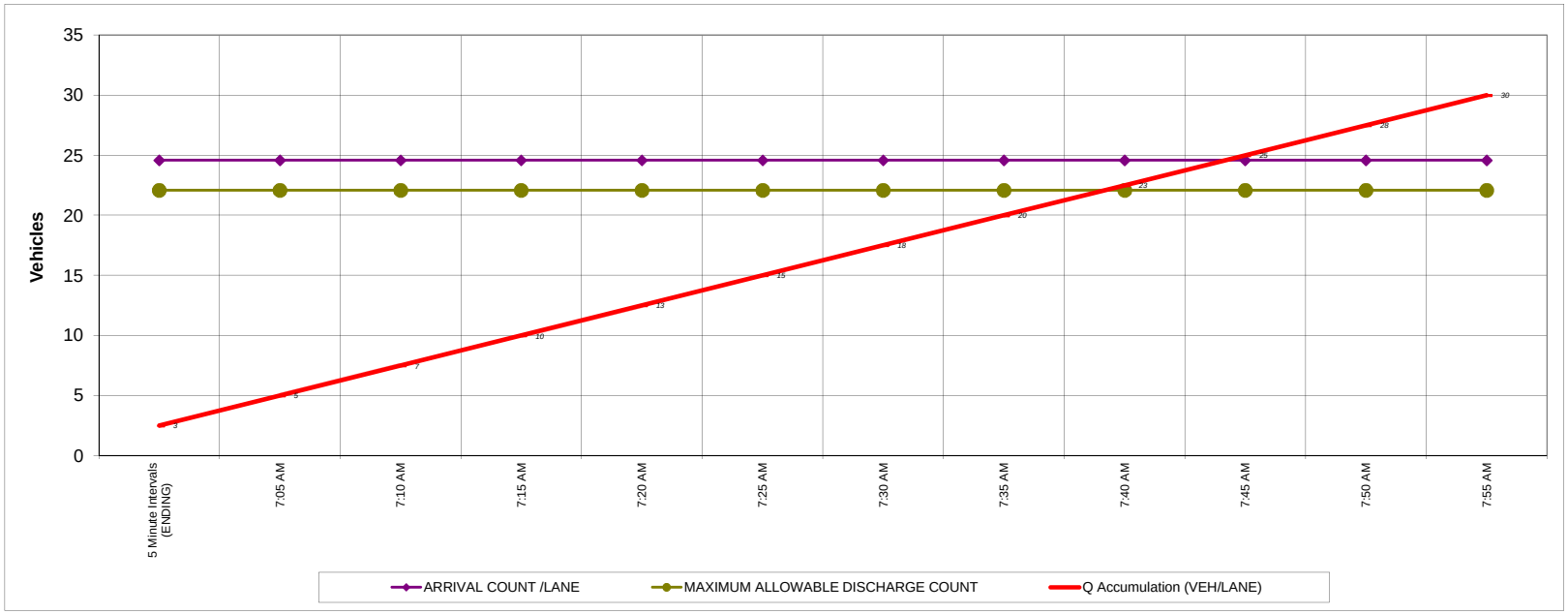
Meter Rate = **265**

Avg Delay/veh (hr)= 0.055

Avg Delay/veh (sec)= **198**

	INPUT
LANES=	**2**
Ramp Length=	920
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-EB Imperial On

AM Peak Hour Vol/PCE:	930	990
PM Peak Hour Vol/PCE:	440	480
MD Peak Hour Vol/PCE:	690	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	41	39	3	3	495	83	465	500	-	1030	75	-	41	0.2
7:10 AM	41	39	5	3	495	83	465	550	-	1030	150	-	41	0.4
7:15 AM	41	39	8	3	495	83	465	550	-	1030	225	-	41	0.6
7:20 AM	41	39	10	3	495	83	465	600	-	1030	300	-	41	0.8
7:25 AM	41	39	13	3	495	83	465	600	-	1030	375	-	41	1.0
7:30 AM	41	39	15	3	495	83	465	650	-	1030	450	-	41	1.3
7:35 AM	41	39	18	3	495	83	465	700	-	1030	525	-	41	1.5
7:40 AM	41	39	20	3	495	83	465	700	-	1030	600	-	41	1.7
7:45 AM	41	39	23	3	495	83	465	750	-	1030	675	-	41	1.9
7:50 AM	41	39	25	3	495	83	465	750	-	1030	750	-	41	2.1
7:55 AM	41	39	28	3	495	83	465	800	-	1030	825	-	41	2.3
8:00 AM	41	39	30	3	495	83	465	850	-	1030	900	-	41	2.5
	495	**465**		**30**		**990**							**495**	**16.25**
		MAX Q (VEH/LN)=	**30**	**MAX RATE (VPH)=**	**495**					**MAX Q (FT/LN)=**	**900**	**-**	**41**	

(Min=240, Max=900vph/lane)

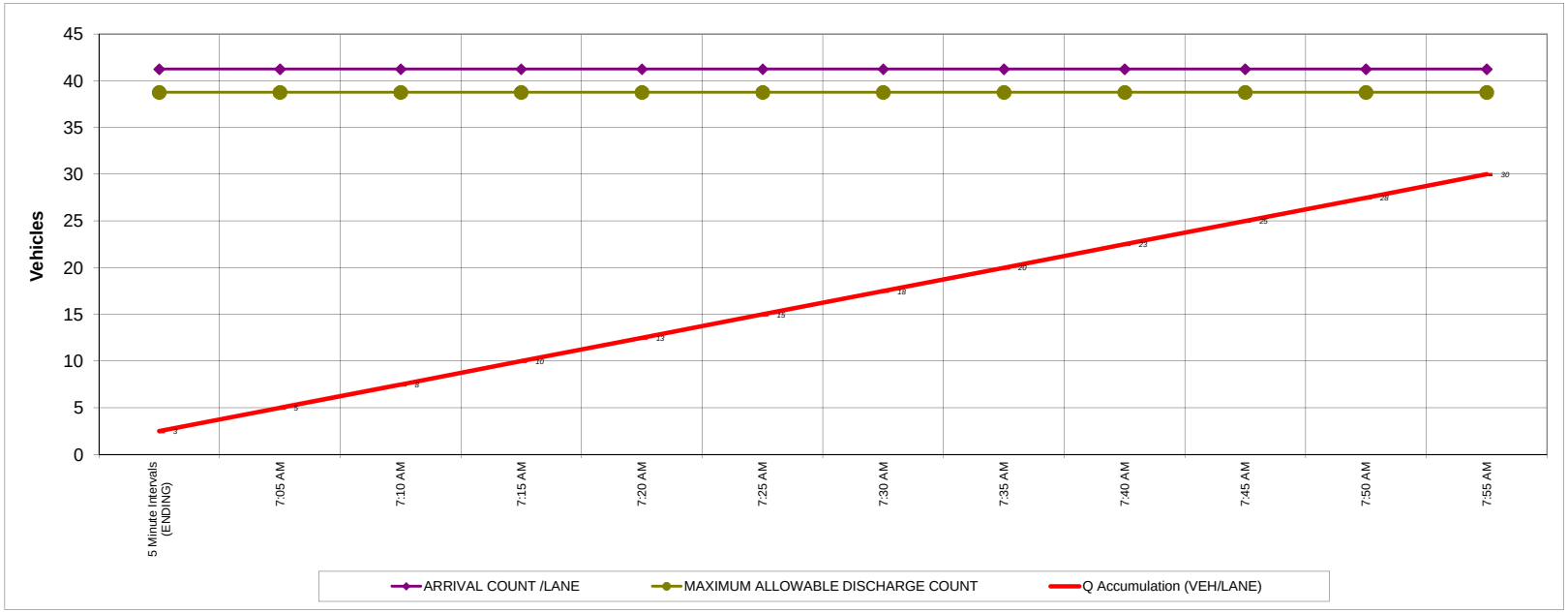
Meter Rate = **465**

Avg Delay/veh (hr)= 0.033

Avg Delay/veh (sec)= **118**

	INPUT
LANES=	**2**
Ramp Length=	1030
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-WB Imperial On

AM Peak Hour Vol/PCE:	700	710
PM Peak Hour Vol/PCE:	550	560
MD Peak Hour Vol/PCE:	500	550

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	30	26	3	3	355	59	315	350	-	1220	100	-	30	0.3
7:10 AM	30	26	7	3	355	59	315	400	-	1220	200	-	30	0.6
7:15 AM	30	26	10	3	355	59	315	450	-	1220	300	-	30	0.8
7:20 AM	30	26	13	3	355	59	315	500	-	1220	400	-	30	1.1
7:25 AM	30	26	17	3	355	59	315	550	-	1220	500	-	30	1.4
7:30 AM	30	26	20	3	355	59	315	550	-	1220	600	-	30	1.7
7:35 AM	30	26	23	3	355	59	315	600	-	1220	700	-	30	1.9
7:40 AM	30	26	27	3	355	59	315	650	-	1220	800	-	30	2.2
7:45 AM	30	26	30	3	355	59	315	700	-	1220	900	-	30	2.5
7:50 AM	30	26	33	3	355	59	315	750	-	1220	1000	-	30	2.8
7:55 AM	30	26	37	3	355	59	315	750	-	1220	1100	-	30	3.1
8:00 AM	30	26	40	3	355	59	315	800	-	1220	1200	-	30	3.3
	355	**315**		**40**		**710**							**355**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**355**					**MAX Q (FT/LN)=**	**1,200**	**-**	**30**	

(Min=240, Max=900vph/lane)

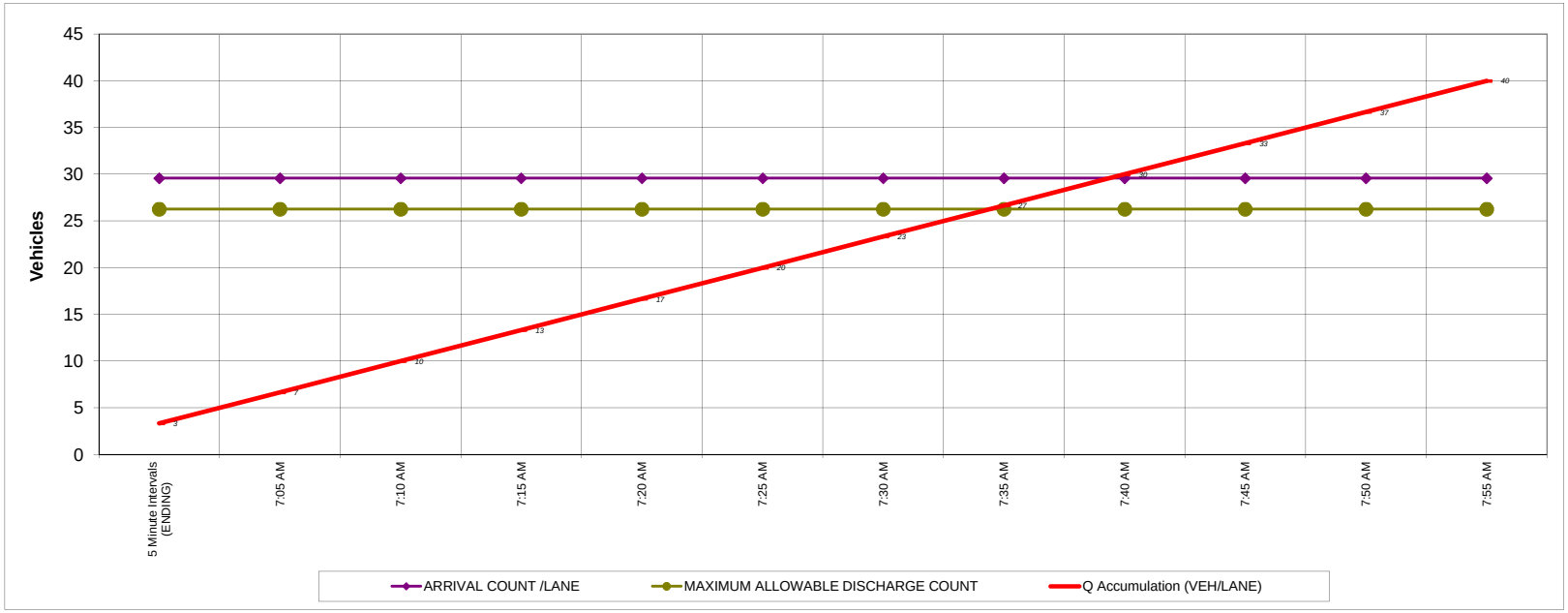
Meter Rate = **315**

Avg Delay/veh (hr)= 0.061

Avg Delay/veh (sec)= **220**

	INPUT
LANES=	**2**
Ramp Length=	1220
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Florence On

AM Peak Hour Vol/PCE:	540	550
PM Peak Hour Vol/PCE:	550	570
MD Peak Hour Vol/PCE:	690	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	30	28	2	2	360	60	335	350	-	900	63	-	30	0.2
1:10 PM	30	28	4	2	360	60	335	400	-	900	125	-	30	0.3
1:15 PM	30	28	6	2	360	60	335	400	-	900	188	-	30	0.5
1:20 PM	30	28	8	2	360	60	335	450	-	900	250	-	30	0.7
1:25 PM	30	28	10	2	360	60	335	450	-	900	313	-	30	0.9
1:30 PM	30	28	13	2	360	60	335	500	-	900	375	-	30	1.0
1:35 PM	30	28	15	2	360	60	335	500	-	900	438	-	30	1.2
1:40 PM	30	28	17	2	360	60	335	550	-	900	500	-	30	1.4
1:45 PM	30	28	19	2	360	60	335	550	-	900	563	-	30	1.6
1:50 PM	30	28	21	2	360	60	335	600	-	900	625	-	30	1.7
1:55 PM	30	28	23	2	360	60	335	600	-	900	688	-	30	1.9
2:00 PM	30	28	25	2	360	60	335	650	-	900	750	-	30	2.1
	360	**335**		**25**		**720**							**360**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**750**	**-**	**30**	

(Min=240, Max=900vph/lane)

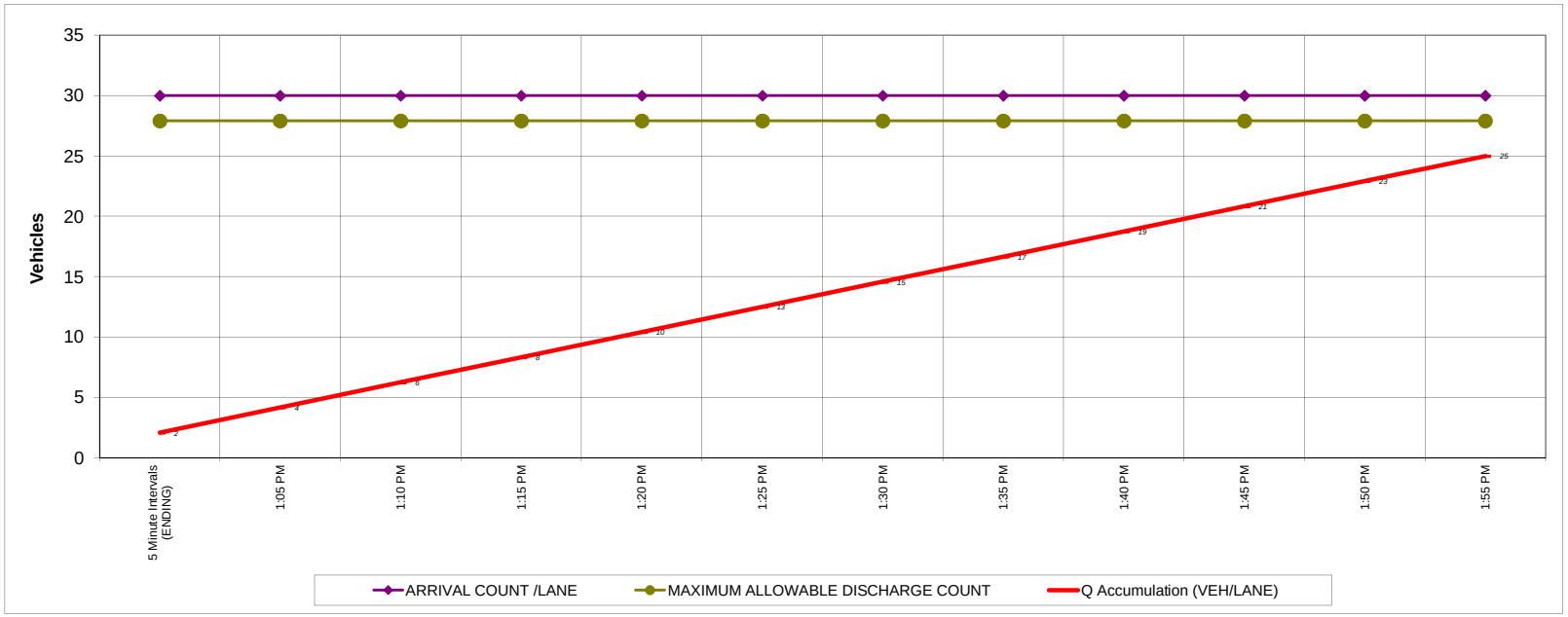
Meter Rate = **335**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **135**

	INPUT
LANES=	**2**
Ramp Length=	900
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Florence On

AM Peak Hour Vol/PCE:	970	1000
PM Peak Hour Vol/PCE:	1090	1130
MD Peak Hour Vol/PCE:	1080	1160

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	48	45	3	3	580	97	545	600	-	1150	87	-	48	0.2
1:10 PM	48	45	6	3	580	97	545	650	-	1150	175	-	48	0.5
1:15 PM	48	45	9	3	580	97	545	650	-	1150	263	-	48	0.7
1:20 PM	48	45	12	3	580	97	545	700	-	1150	350	-	48	1.0
1:25 PM	48	45	15	3	580	97	545	750	-	1150	438	-	48	1.2
1:30 PM	48	45	18	3	580	97	545	750	-	1150	525	-	48	1.5
1:35 PM	48	45	20	3	580	97	545	800	-	1150	612	-	48	1.7
1:40 PM	48	45	23	3	580	97	545	850	-	1150	700	-	48	1.9
1:45 PM	48	45	26	3	580	97	545	850	-	1150	787	-	48	2.2
1:50 PM	48	45	29	3	580	97	545	900	-	1150	875	-	48	2.4
1:55 PM	48	45	32	3	580	97	545	950	-	1150	962	-	48	2.7
2:00 PM	48	45	35	3	580	97	545	1000	-	1150	1050	-	48	2.9
	580	**545**		**35**		**1,160**							**580**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**580**					**MAX Q (FT/LN)=**	**1,050**	**-**	**48**	

(Min=240, Max=900vph/lane)

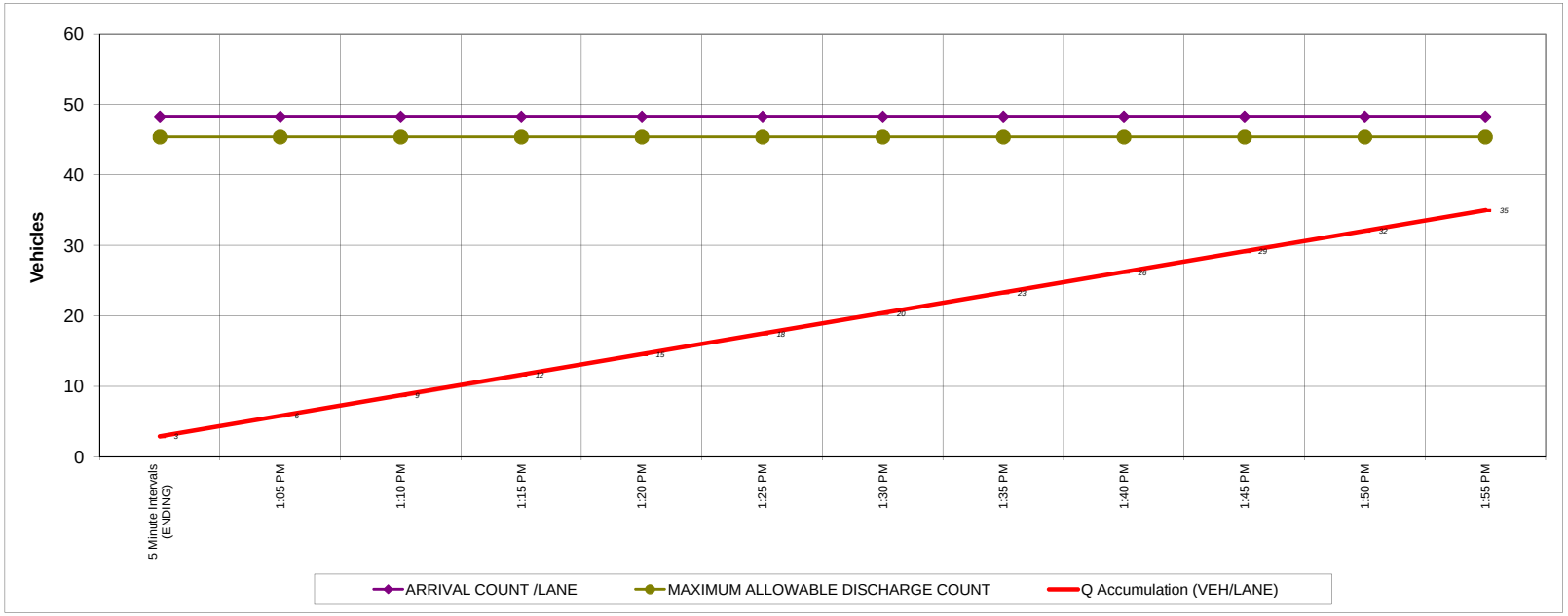
Meter Rate = **545**

	INPUT
LANES=	**2**
Ramp Length=	1150
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.033

Avg Delay/veh (sec)= **118**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	790	820
PM Peak Hour Vol/PCE:	730	760
MD Peak Hour Vol/PCE:	860	910

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	35	3	3	455	76	415	450	-	1300	100	-	38	0.3
1:10 PM	38	35	7	3	455	76	415	500	-	1300	200	-	38	0.6
1:15 PM	38	35	10	3	455	76	415	550	-	1300	300	-	38	0.8
1:20 PM	38	35	13	3	455	76	415	600	-	1300	400	-	38	1.1
1:25 PM	38	35	17	3	455	76	415	650	-	1300	500	-	38	1.4
1:30 PM	38	35	20	3	455	76	415	650	-	1300	600	-	38	1.7
1:35 PM	38	35	23	3	455	76	415	700	-	1300	700	-	38	1.9
1:40 PM	38	35	27	3	455	76	415	750	-	1300	800	-	38	2.2
1:45 PM	38	35	30	3	455	76	415	800	-	1300	900	-	38	2.5
1:50 PM	38	35	33	3	455	76	415	850	-	1300	1000	-	38	2.8
1:55 PM	38	35	37	3	455	76	415	850	-	1300	1100	-	38	3.1
2:00 PM	38	35	40	3	455	76	415	900	-	1300	1200	-	38	3.3
	455	**415**		**40**		**910**							**455**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**455**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

(Min=240, Max=900vph/lane)

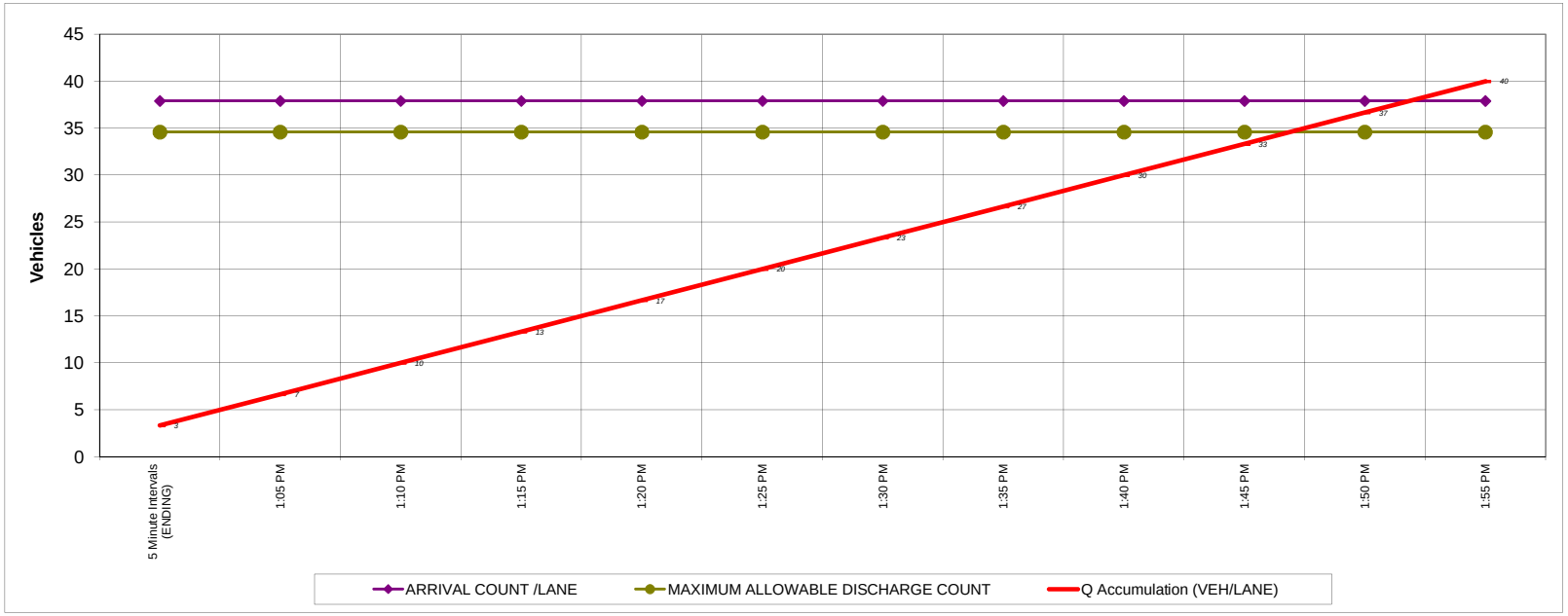
Meter Rate = **415**

Avg Delay/veh (hr)= 0.048

Avg Delay/veh (sec)= **171**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	780	860
PM Peak Hour Vol/PCE:	1010	1030
MD Peak Hour Vol/PCE:	870	1020

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	43	40	3	3	515	86	480	550	-	1120	87	-	43	0.2
5:10 PM	43	40	6	3	515	86	480	550	-	1120	175	-	43	0.5
5:15 PM	43	40	9	3	515	86	480	600	-	1120	263	-	43	0.7
5:20 PM	43	40	12	3	515	86	480	650	-	1120	350	-	43	1.0
5:25 PM	43	40	15	3	515	86	480	650	-	1120	438	-	43	1.2
5:30 PM	43	40	18	3	515	86	480	700	-	1120	525	-	43	1.5
5:35 PM	43	40	20	3	515	86	480	750	-	1120	613	-	43	1.7
5:40 PM	43	40	23	3	515	86	480	750	-	1120	700	-	43	1.9
5:45 PM	43	40	26	3	515	86	480	800	-	1120	787	-	43	2.2
5:50 PM	43	40	29	3	515	86	480	850	-	1120	875	-	43	2.4
5:55 PM	43	40	32	3	515	86	480	900	-	1120	962	-	43	2.7
6:00 PM	43	40	35	3	515	86	480	900	-	1120	1050	-	43	2.9
	515	**480**		**35**		**1,030**							**515**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**515**					**MAX Q (FT/LN)=**	**1,050**	**-**	**43**	

(Min=240, Max=900vph/lane)

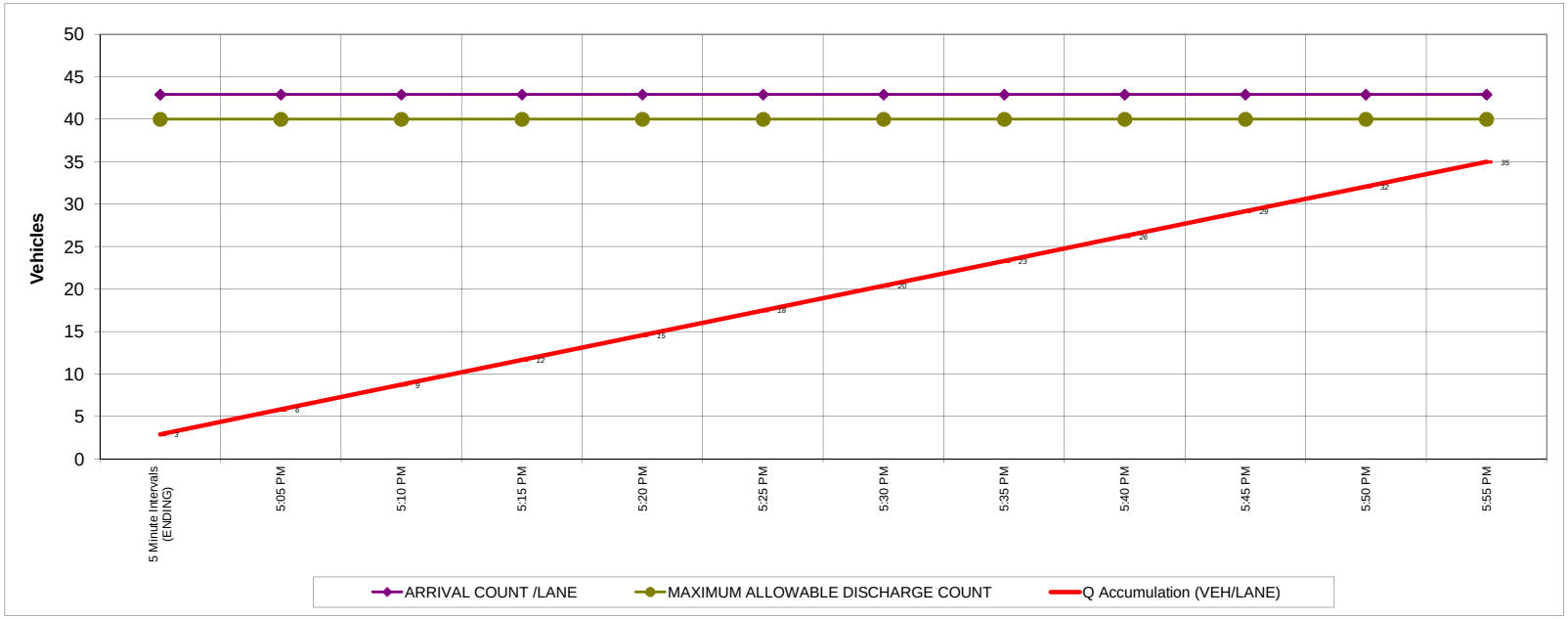
Meter Rate = **480**

Avg Delay/veh (hr)= 0.037

Avg Delay/veh (sec)= **133**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Slauson On

AM Peak Hour Vol/PCE:	790	820
PM Peak Hour Vol/PCE:	730	760
MD Peak Hour Vol/PCE:	860	910

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	38	35	3	3	455	76	415	450	-	1300	100	-	38	0.3
1:10 PM	38	35	7	3	455	76	415	500	-	1300	200	-	38	0.6
1:15 PM	38	35	10	3	455	76	415	550	-	1300	300	-	38	0.8
1:20 PM	38	35	13	3	455	76	415	600	-	1300	400	-	38	1.1
1:25 PM	38	35	17	3	455	76	415	650	-	1300	500	-	38	1.4
1:30 PM	38	35	20	3	455	76	415	650	-	1300	600	-	38	1.7
1:35 PM	38	35	23	3	455	76	415	700	-	1300	700	-	38	1.9
1:40 PM	38	35	27	3	455	76	415	750	-	1300	800	-	38	2.2
1:45 PM	38	35	30	3	455	76	415	800	-	1300	900	-	38	2.5
1:50 PM	38	35	33	3	455	76	415	850	-	1300	1000	-	38	2.8
1:55 PM	38	35	37	3	455	76	415	850	-	1300	1100	-	38	3.1
2:00 PM	38	35	40	3	455	76	415	900	-	1300	1200	-	38	3.3
	455	**415**		**40**		**910**							**455**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**455**					**MAX Q (FT/LN)=**	**1,200**	**-**	**38**	

(Min=240, Max=900vph/lane)

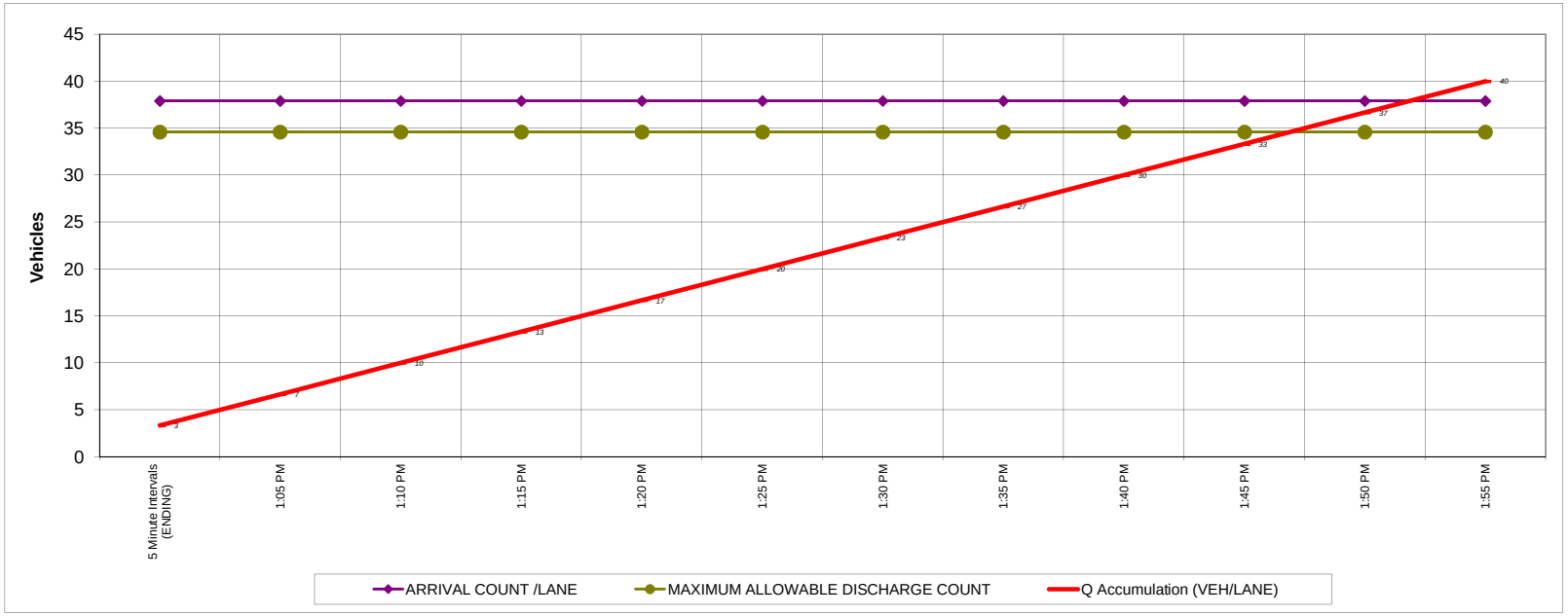
Meter Rate = **415**

Avg Delay/veh (hr)= 0.048

Avg Delay/veh (sec)= **171**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Slauson On

AM Peak Hour Vol/PCE:	780	860
PM Peak Hour Vol/PCE:	1010	1030
MD Peak Hour Vol/PCE:	870	1020

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	43	40	3	3	515	86	480	550	-	1120	87	-	43	0.2
5:10 PM	43	40	6	3	515	86	480	550	-	1120	175	-	43	0.5
5:15 PM	43	40	9	3	515	86	480	600	-	1120	263	-	43	0.7
5:20 PM	43	40	12	3	515	86	480	650	-	1120	350	-	43	1.0
5:25 PM	43	40	15	3	515	86	480	650	-	1120	438	-	43	1.2
5:30 PM	43	40	18	3	515	86	480	700	-	1120	525	-	43	1.5
5:35 PM	43	40	20	3	515	86	480	750	-	1120	613	-	43	1.7
5:40 PM	43	40	23	3	515	86	480	750	-	1120	700	-	43	1.9
5:45 PM	43	40	26	3	515	86	480	800	-	1120	787	-	43	2.2
5:50 PM	43	40	29	3	515	86	480	850	-	1120	875	-	43	2.4
5:55 PM	43	40	32	3	515	86	480	900	-	1120	962	-	43	2.7
6:00 PM	43	40	35	3	515	86	480	900	-	1120	1050	-	43	2.9
	515	**480**		**35**		**1,030**							**515**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**515**					**MAX Q (FT/LN)=**	**1,050**	**-**	**43**	

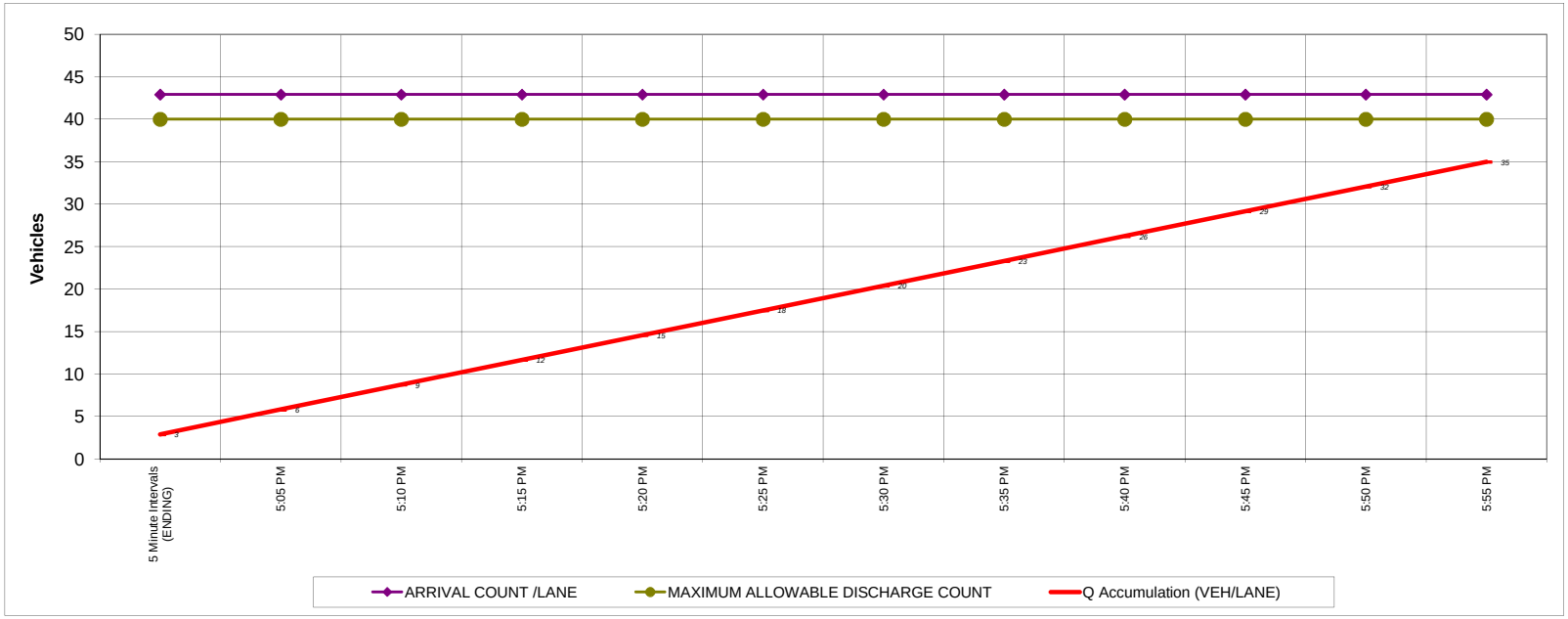
(Min=240, Max=900vph/lane)

Meter Rate = **480**

	INPUT
LANES=	**2**
Ramp Length=	1120
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.037
Avg Delay/veh (sec)= **133**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Florence On

AM Peak Hour Vol/PCE:	530	540
PM Peak Hour Vol/PCE:	540	550
MD Peak Hour Vol/PCE:	690	720

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	30	28	2	2	360	60	335	350	-	900	63	-	30	0.2
1:10 PM	30	28	4	2	360	60	335	400	-	900	125	-	30	0.3
1:15 PM	30	28	6	2	360	60	335	400	-	900	188	-	30	0.5
1:20 PM	30	28	8	2	360	60	335	450	-	900	250	-	30	0.7
1:25 PM	30	28	10	2	360	60	335	450	-	900	313	-	30	0.9
1:30 PM	30	28	13	2	360	60	335	500	-	900	375	-	30	1.0
1:35 PM	30	28	15	2	360	60	335	500	-	900	438	-	30	1.2
1:40 PM	30	28	17	2	360	60	335	550	-	900	500	-	30	1.4
1:45 PM	30	28	19	2	360	60	335	550	-	900	563	-	30	1.6
1:50 PM	30	28	21	2	360	60	335	600	-	900	625	-	30	1.7
1:55 PM	30	28	23	2	360	60	335	600	-	900	688	-	30	1.9
2:00 PM	30	28	25	2	360	60	335	650	-	900	750	-	30	2.1
	360	**335**		**25**		**720**							**360**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**360**					**MAX Q (FT/LN)=**	**750**	**-**	**30**	

(Min=240, Max=900vph/lane)

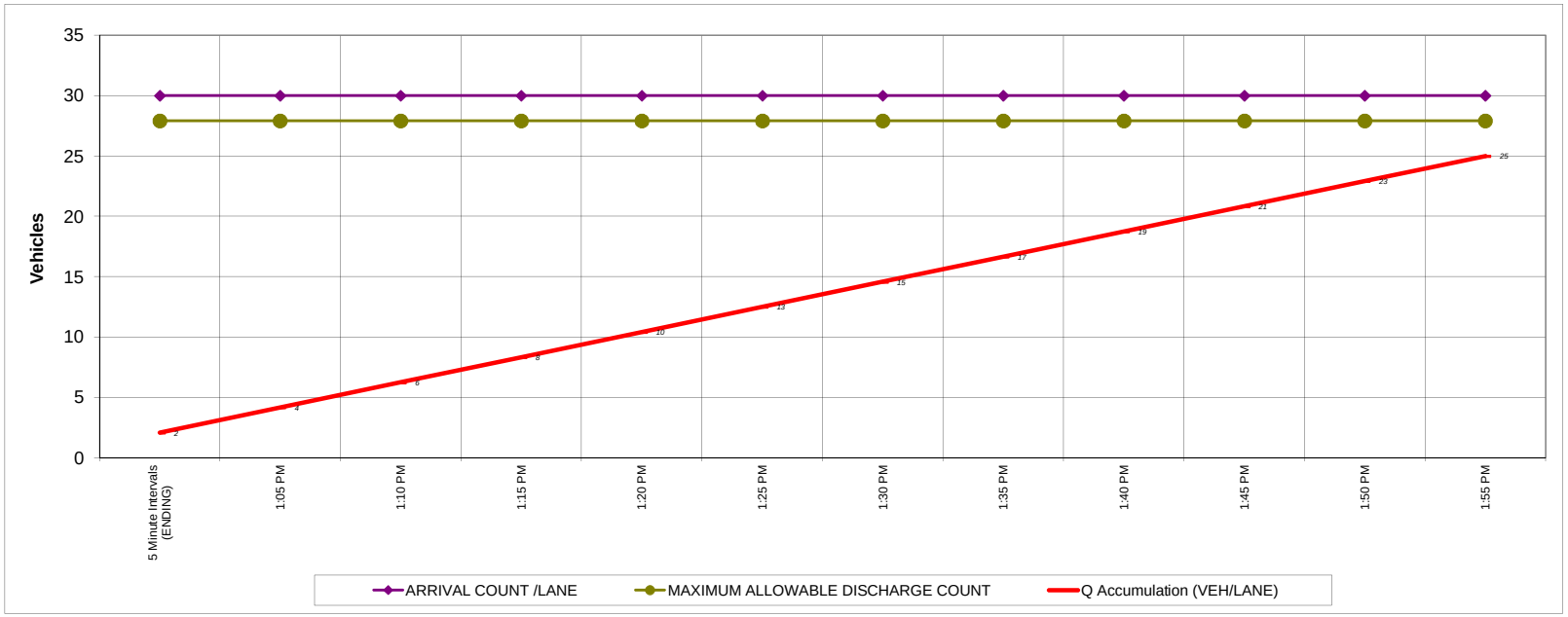
Meter Rate = **335**

Avg Delay/veh (hr)= 0.038

Avg Delay/veh (sec)= **135**

	INPUT
LANES=	**2**
Ramp Length=	900
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Florence On

AM Peak Hour Vol/PCE:	980	1010
PM Peak Hour Vol/PCE:	1070	1100
MD Peak Hour Vol/PCE:	1090	1170

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	49	46	3	3	585	98	550	600	-	1150	88	-	49	0.2
1:10 PM	49	46	6	3	585	98	550	650	-	1150	175	-	49	0.5
1:15 PM	49	46	9	3	585	98	550	650	-	1150	263	-	49	0.7
1:20 PM	49	46	12	3	585	98	550	700	-	1150	350	-	49	1.0
1:25 PM	49	46	15	3	585	98	550	750	-	1150	438	-	49	1.2
1:30 PM	49	46	18	3	585	98	550	750	-	1150	525	-	49	1.5
1:35 PM	49	46	20	3	585	98	550	800	-	1150	613	-	49	1.7
1:40 PM	49	46	23	3	585	98	550	850	-	1150	700	-	49	1.9
1:45 PM	49	46	26	3	585	98	550	900	-	1150	788	-	49	2.2
1:50 PM	49	46	29	3	585	98	550	900	-	1150	875	-	49	2.4
1:55 PM	49	46	32	3	585	98	550	950	-	1150	963	-	49	2.7
2:00 PM	49	46	35	3	585	98	550	1000	-	1150	1050	-	49	2.9
	585	**550**		**35**		**1,170**							**585**	**18.96**
		MAX Q (VEH/LN)=	**35**	**MAX RATE (VPH)=**	**585**					**MAX Q (FT/LN)=**	**1,050**	**-**	**49**	

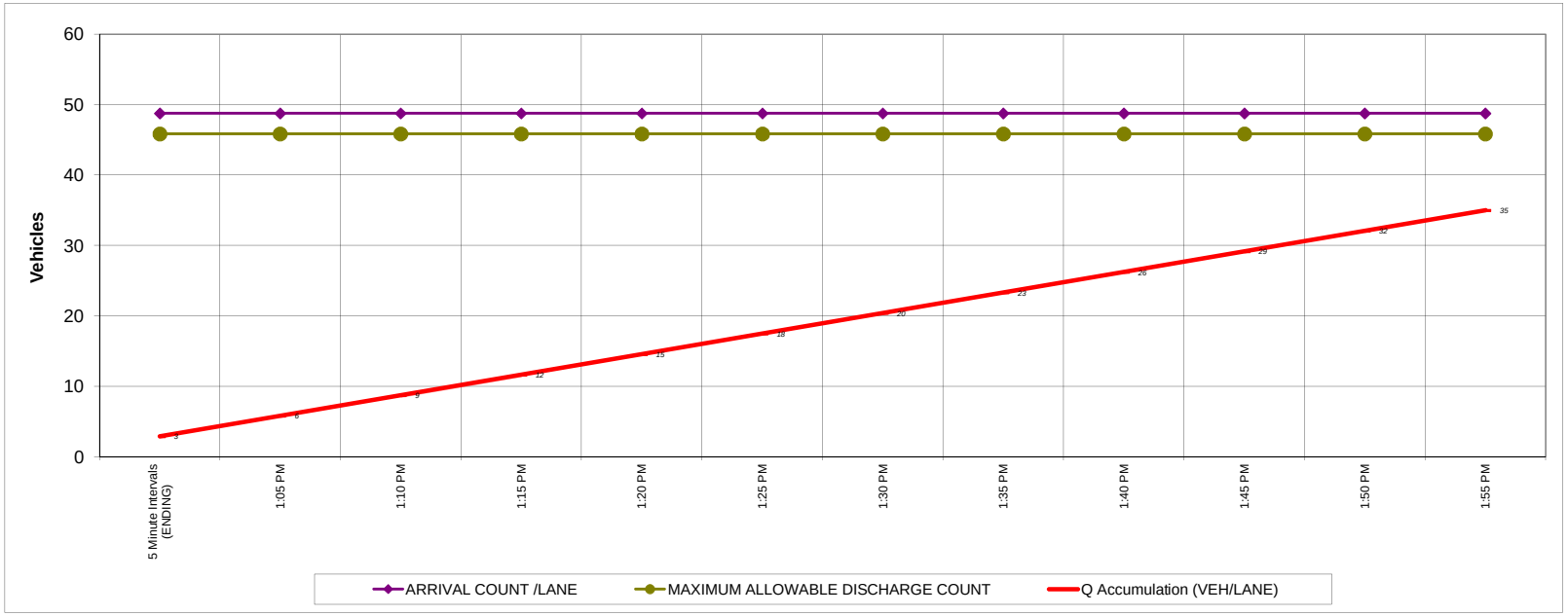
(Min=240, Max=900vph/lane)

Meter Rate = **550**

	INPUT
LANES=	**2**
Ramp Length=	1150
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.032
Avg Delay/veh (sec)= **117**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	810	1620
PM Peak Hour Vol/PCE:	1120	2240
MD Peak Hour Vol/PCE:	1040	2080

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	93	87	7	7	1120	187	1040	1200	-	2500	200	-	93	0.6
5:10 PM	93	87	13	7	1120	187	1040	1250	-	2500	400	-	93	1.1
5:15 PM	93	87	20	7	1120	187	1040	1350	-	2500	600	-	93	1.7
5:20 PM	93	87	27	7	1120	187	1040	1400	-	2500	800	-	93	2.2
5:25 PM	93	87	33	7	1120	187	1040	1500	-	2500	1000	-	93	2.8
5:30 PM	93	87	40	7	1120	187	1040	1600	-	2500	1200	-	93	3.3
5:35 PM	93	87	47	7	1120	187	1040	1650	-	2500	1400	-	93	3.9
5:40 PM	93	87	53	7	1120	187	1040	1750	-	2500	1600	-	93	4.4
5:45 PM	93	87	60	7	1120	187	1040	1800	-	2500	1800	-	93	5.0
5:50 PM	93	87	67	7	1120	187	1040	1900	-	2500	2000	-	93	5.6
5:55 PM	93	87	73	7	1120	187	1040	2000	-	2500	2200	-	93	6.1
6:00 PM	93	87	80	7	1120	187	1040	2050	-	2500	2400	-	93	6.7
	1,120	**1,040**		**80**		**2,240**							**1,120**	**43.33**
		MAX Q (VEH/LN)=	**80**	**MAX RATE (VPH)=**	**1,120**					**MAX Q (FT/LN)=**	**2,400**	**-**	**93**	

(Min=480, Max=1200 vph/lane)

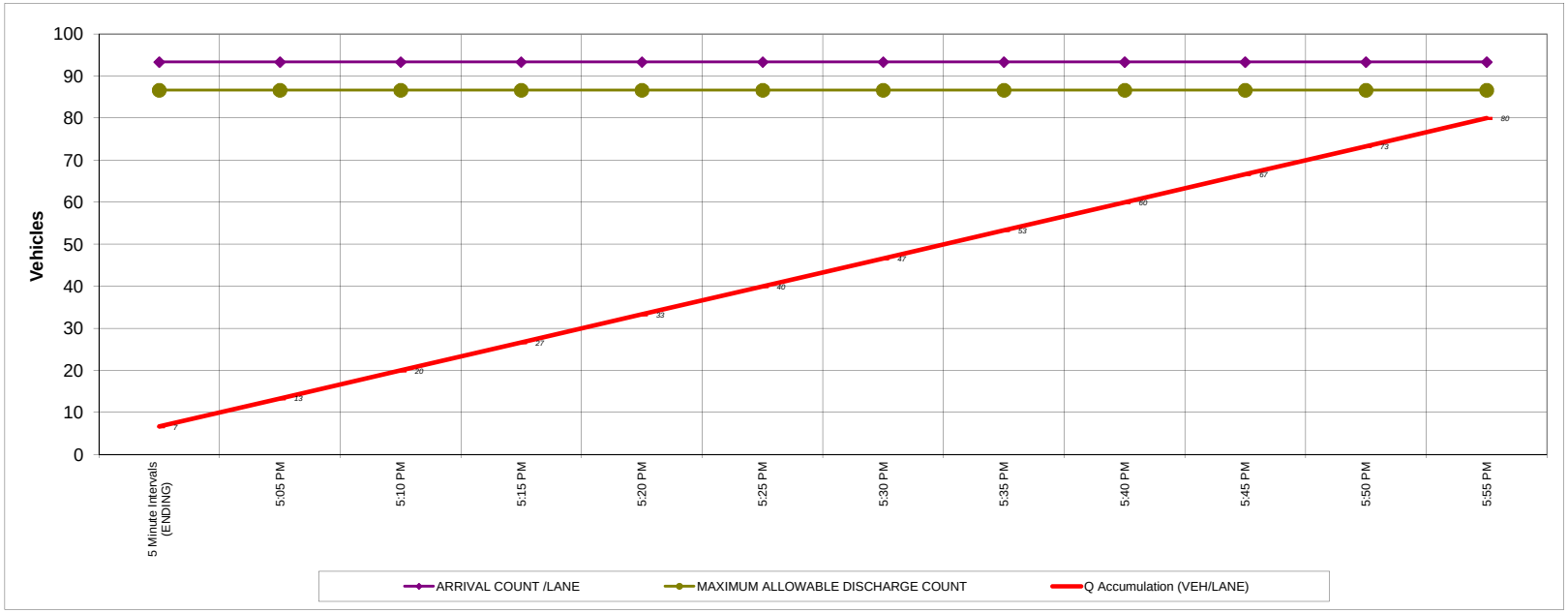
Meter Rate = **1040**

Avg Delay/veh (hr)= 0.039

Avg Delay/veh (sec)= **139**

	INPUT
LANES=	**2**
Ramp Length=	2500
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	870	910
PM Peak Hour Vol/PCE:	1230	1290
MD Peak Hour Vol/PCE:	1500	1610

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	67	64	3	3	805	134	765	800	-	1300	100	-	67	0.3
1:10 PM	67	64	7	3	805	134	765	850	-	1300	200	-	67	0.6
1:15 PM	67	64	10	3	805	134	765	900	-	1300	300	-	67	0.8
1:20 PM	67	64	13	3	805	134	765	950	-	1300	400	-	67	1.1
1:25 PM	67	64	17	3	805	134	765	1000	-	1300	500	-	67	1.4
1:30 PM	67	64	20	3	805	134	765	1000	-	1300	600	-	67	1.7
1:35 PM	67	64	23	3	805	134	765	1050	-	1300	700	-	67	1.9
1:40 PM	67	64	27	3	805	134	765	1100	-	1300	800	-	67	2.2
1:45 PM	67	64	30	3	805	134	765	1150	-	1300	900	-	67	2.5
1:50 PM	67	64	33	3	805	134	765	1200	-	1300	1000	-	67	2.8
1:55 PM	67	64	37	3	805	134	765	1200	-	1300	1100	-	67	3.1
2:00 PM	67	64	40	3	805	134	765	1250	-	1300	1200	-	67	3.3
	805	**765**		**40**		**1,610**							**805**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**805**					**MAX Q (FT/LN)=**	**1,200**	**-**	**67**	

(Min=240, Max=900vph/lane)

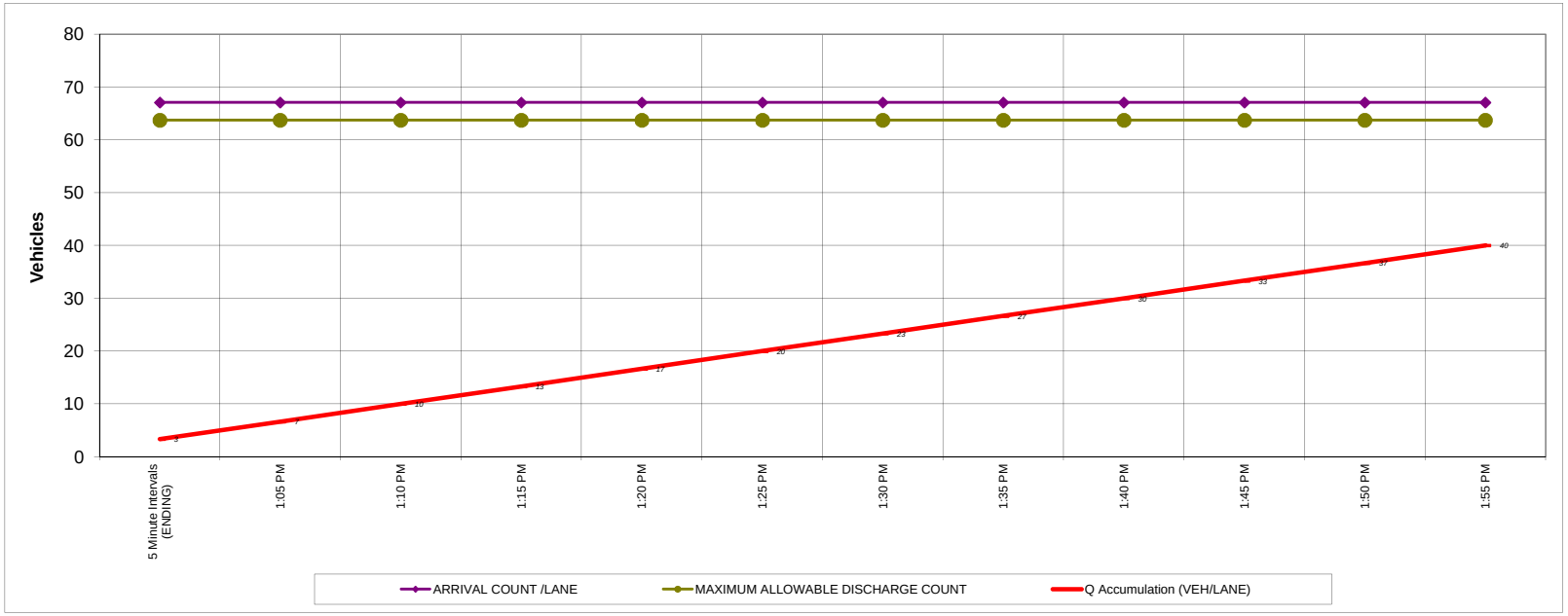
Meter Rate = **765**

Avg Delay/veh (hr)= 0.027

Avg Delay/veh (sec)= **97**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	900	970
PM Peak Hour Vol/PCE:	1870	2110
MD Peak Hour Vol/PCE:	1240	1380

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	88	82	6	6	1055	176	980	1100	-	2350	188	-	88	0.5
5:10 PM	88	82	13	6	1055	176	980	1200	-	2350	375	-	88	1.0
5:15 PM	88	82	19	6	1055	176	980	1250	-	2350	563	-	88	1.6
5:20 PM	88	82	25	6	1055	176	980	1350	-	2350	750	-	88	2.1
5:25 PM	88	82	31	6	1055	176	980	1400	-	2350	938	-	88	2.6
5:30 PM	88	82	38	6	1055	176	980	1500	-	2350	1125	-	88	3.1
5:35 PM	88	82	44	6	1055	176	980	1550	-	2350	1313	-	88	3.6
5:40 PM	88	82	50	6	1055	176	980	1650	-	2350	1500	-	88	4.2
5:45 PM	88	82	56	6	1055	176	980	1700	-	2350	1688	-	88	4.7
5:50 PM	88	82	63	6	1055	176	980	1800	-	2350	1875	-	88	5.2
5:55 PM	88	82	69	6	1055	176	980	1850	-	2350	2063	-	88	5.7
6:00 PM	88	82	75	6	1055	176	980	1950	-	2350	2250	-	88	6.3
	1,055	**980**		**75**		**2,110**							**1,055**	**40.63**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**1,055**					**MAX Q (FT/LN)=**	**2,250**	**-**	**88**	

(Min=480, Max=1200vph/lane)

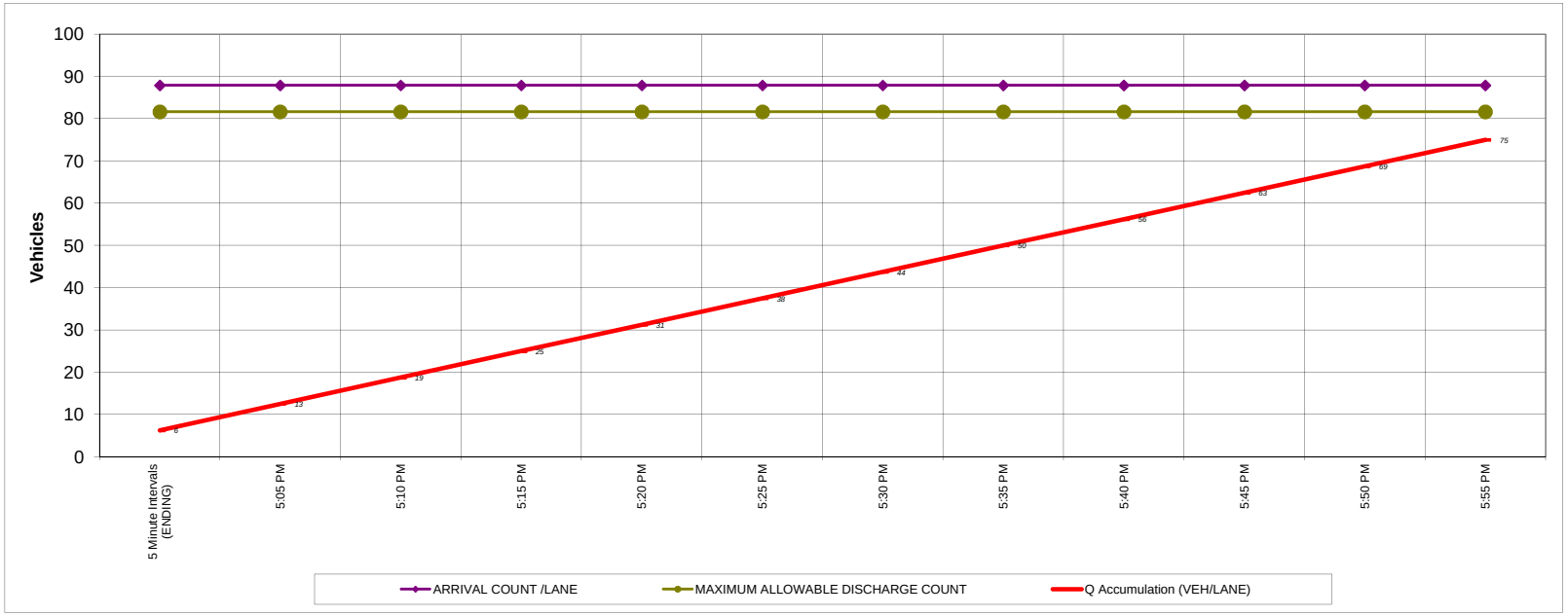
Meter Rate = **980**

Avg Delay/veh (hr)= 0.0385071

Avg Delay/veh (sec)= **139**

	INPUT
LANES=	**2**
Ramp Length=	2350
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	550	680
PM Peak Hour Vol/PCE:	780	920
MD Peak Hour Vol/PCE:	600	730

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	38	36	2	2	460	77	435	450	-	850	63	-	38	0.2
5:10 PM	38	36	4	2	460	77	435	500	-	850	125	-	38	0.3
5:15 PM	38	36	6	2	460	77	435	500	-	850	188	-	38	0.5
5:20 PM	38	36	8	2	460	77	435	550	-	850	250	-	38	0.7
5:25 PM	38	36	10	2	460	77	435	550	-	850	313	-	38	0.9
5:30 PM	38	36	13	2	460	77	435	600	-	850	375	-	38	1.0
5:35 PM	38	36	15	2	460	77	435	600	-	850	438	-	38	1.2
5:40 PM	38	36	17	2	460	77	435	650	-	850	500	-	38	1.4
5:45 PM	38	36	19	2	460	77	435	650	-	850	563	-	38	1.6
5:50 PM	38	36	21	2	460	77	435	700	-	850	625	-	38	1.7
5:55 PM	38	36	23	2	460	77	435	700	-	850	688	-	38	1.9
6:00 PM	38	36	25	2	460	77	435	750	-	850	750	-	38	2.1
	460	**435**		**25**		**920**							**460**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**460**					**MAX Q (FT/LN)=**	**750**	**-**	**38**	

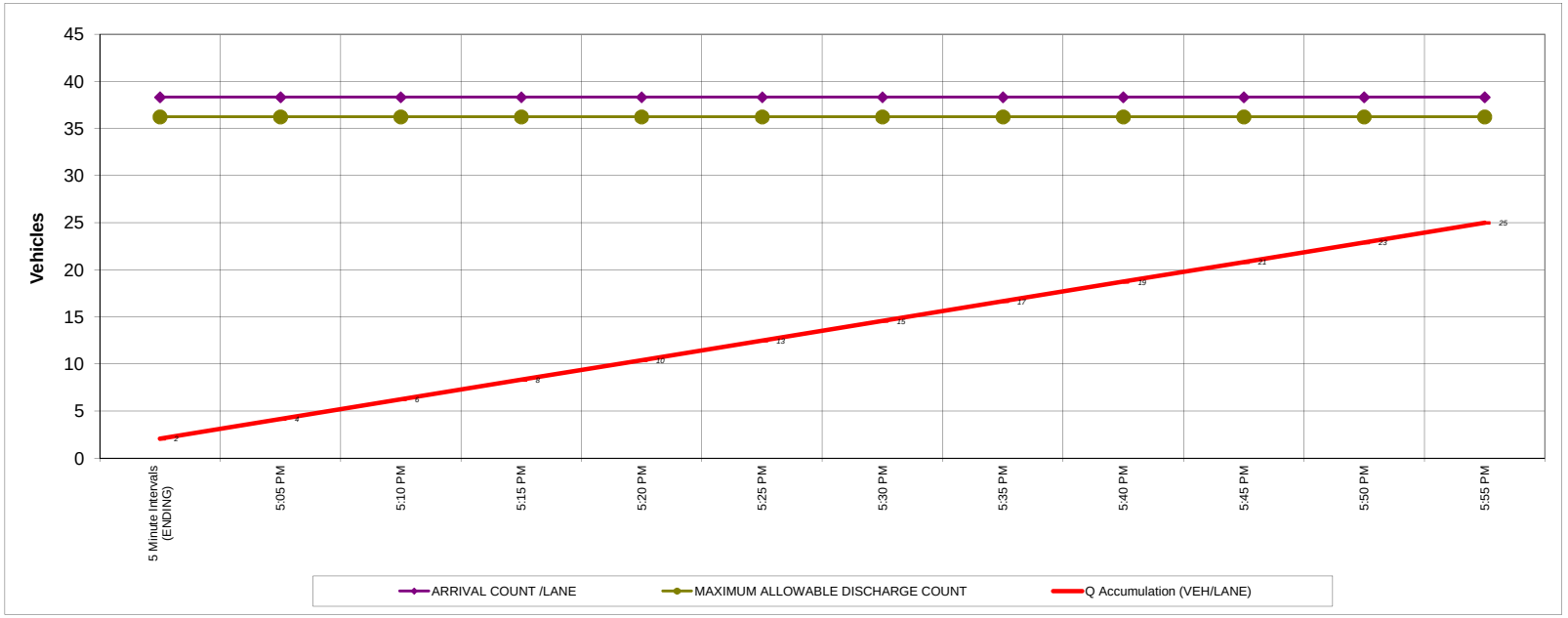
(Min=240, Max=900vph/lane)

Meter Rate = **435**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Avg Delay/veh (hr)= 0.029
Avg Delay/veh (sec)= **106**

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-NB FC On

AM Peak Hour Vol/PCE:	810	1620
PM Peak Hour Vol/PCE:	1120	2240
MD Peak Hour Vol/PCE:	1040	2080

Meter rate at 2 cars per green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	93	87	6	6	1120	187	1045	1150	-	2300	188	-	93	0.5
5:10 PM	93	87	13	6	1120	187	1045	1250	-	2300	375	-	93	1.0
5:15 PM	93	87	19	6	1120	187	1045	1300	-	2300	562	-	93	1.6
5:20 PM	93	87	25	6	1120	187	1045	1400	-	2300	750	-	93	2.1
5:25 PM	93	87	31	6	1120	187	1045	1450	-	2300	937	-	93	2.6
5:30 PM	93	87	37	6	1120	187	1045	1550	-	2300	1125	-	93	3.1
5:35 PM	93	87	44	6	1120	187	1045	1600	-	2300	1313	-	93	3.6
5:40 PM	93	87	50	6	1120	187	1045	1700	-	2300	1500	-	93	4.2
5:45 PM	93	87	56	6	1120	187	1045	1750	-	2300	1688	-	93	4.7
5:50 PM	93	87	62	6	1120	187	1045	1850	-	2300	1875	-	93	5.2
5:55 PM	93	87	69	6	1120	187	1045	1900	-	2300	2063	-	93	5.7
6:00 PM	93	87	75	6	1120	187	1045	2000	-	2300	2250	-	93	6.2
	1,120	**1,045**		**75**		**2,240**							**1,120**	**40.62**
		MAX Q (VEH/LN)=	**75**	**MAX RATE (VPH)=**	**1,120**					**MAX Q (FT/LN)=**	**2,250**	**-**	**93**	

(Min=480, Max=1200 vph/lane)

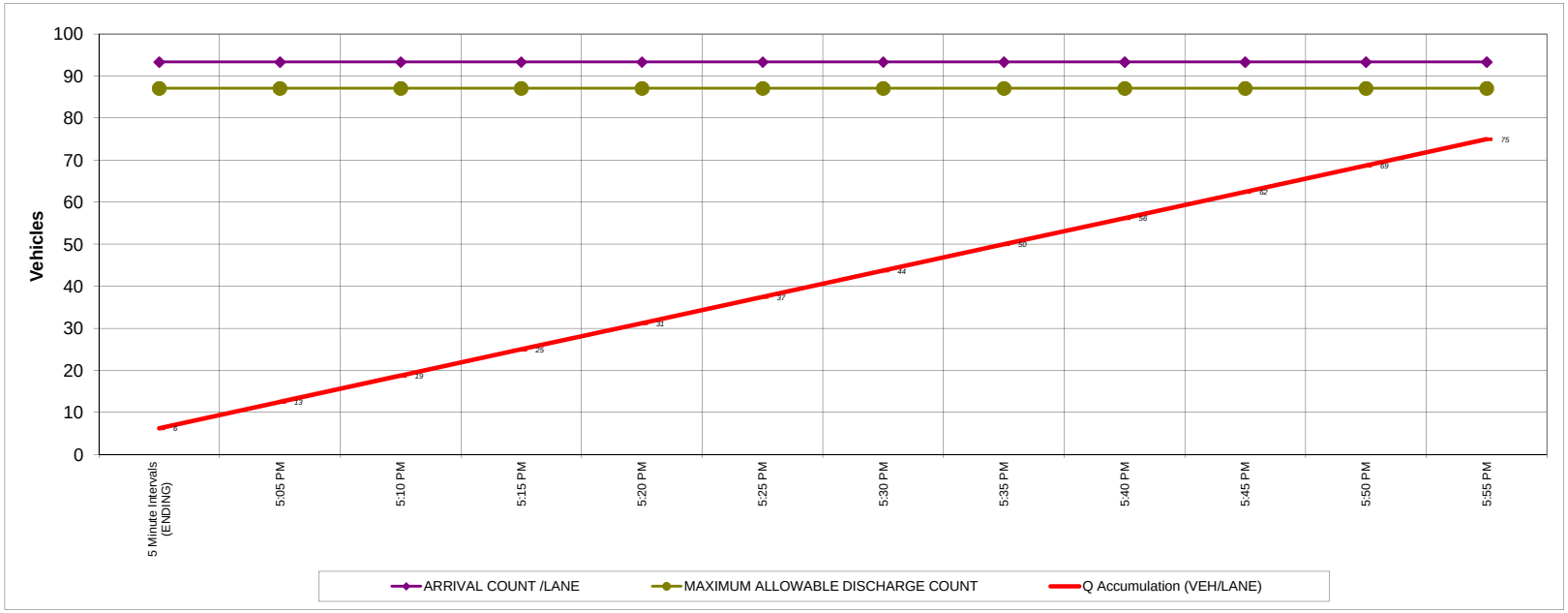
Meter Rate = **1045**

Avg Delay/veh (hr)= 0.036

Avg Delay/veh (sec)= **131**

	INPUT
LANES=	**2**
Ramp Length=	2300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-FC On

AM Peak Hour Vol/PCE:	290	580
PM Peak Hour Vol/PCE:	310	620
MD Peak Hour Vol/PCE:	350	700

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	29	20	9	9	350	58	240	450	-	4100	275	-	29	0.8
1:10 PM	29	20	18	9	350	58	240	550	-	4100	550	-	29	1.5
1:15 PM	29	20	28	9	350	58	240	650	-	4100	825	-	29	2.3
1:20 PM	29	20	37	9	350	58	240	750	-	4100	1100	-	29	3.1
1:25 PM	29	20	46	9	350	58	240	900	-	4100	1375	-	29	3.8
1:30 PM	29	20	55	9	350	58	240	1000	-	4100	1650	-	29	4.6
1:35 PM	29	20	64	9	350	58	240	1100	-	4100	1925	-	29	5.3
1:40 PM	29	20	73	9	350	58	240	1200	-	4100	2200	-	29	6.1
1:45 PM	29	20	83	9	350	58	240	1300	-	4100	2475	-	29	6.9
1:50 PM	29	20	92	9	350	58	240	1450	-	4100	2750	-	29	7.6
1:55 PM	29	20	101	9	350	58	240	1550	-	4100	3025	-	29	8.4
2:00 PM	29	20	110	9	350	58	240	1650	-	4100	3300	-	29	9.2
	350	**240**		**110**		**700**							**350**	**59.58**
		MAX Q (VEH/LN)=	**110**	**MAX RATE (VPH)=**	**350**					**MAX Q (FT/LN)=**	**3,300**	**-**	**29**	

(Min=240, Max=900vph/lane)

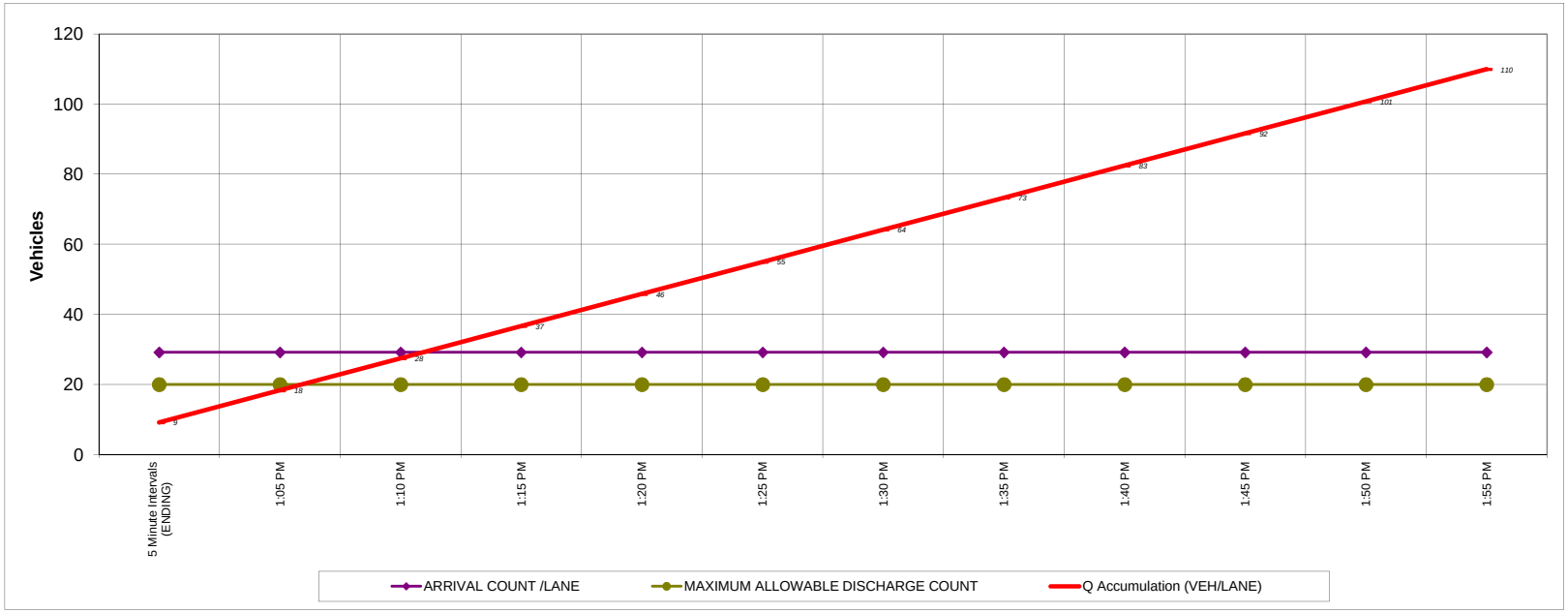
Meter Rate = **240**

Avg Delay/veh (hr)= 0.170

Avg Delay/veh (sec)= **613**

	INPUT
LANES=	**2**
Ramp Length=	4100
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Bandini On

AM Peak Hour Vol/PCE:	870	910
PM Peak Hour Vol/PCE:	1230	1290
MD Peak Hour Vol/PCE:	1500	1610

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	67	64	3	3	805	134	765	800	-	1300	100	-	67	0.3
1:10 PM	67	64	7	3	805	134	765	850	-	1300	200	-	67	0.6
1:15 PM	67	64	10	3	805	134	765	900	-	1300	300	-	67	0.8
1:20 PM	67	64	13	3	805	134	765	950	-	1300	400	-	67	1.1
1:25 PM	67	64	17	3	805	134	765	1000	-	1300	500	-	67	1.4
1:30 PM	67	64	20	3	805	134	765	1000	-	1300	600	-	67	1.7
1:35 PM	67	64	23	3	805	134	765	1050	-	1300	700	-	67	1.9
1:40 PM	67	64	27	3	805	134	765	1100	-	1300	800	-	67	2.2
1:45 PM	67	64	30	3	805	134	765	1150	-	1300	900	-	67	2.5
1:50 PM	67	64	33	3	805	134	765	1200	-	1300	1000	-	67	2.8
1:55 PM	67	64	37	3	805	134	765	1200	-	1300	1100	-	67	3.1
2:00 PM	67	64	40	3	805	134	765	1250	-	1300	1200	-	67	3.3
	805	**765**		**40**		**1,610**							**805**	**21.67**
		MAX Q (VEH/LN)=	**40**	**MAX RATE (VPH)=**	**805**					**MAX Q (FT/LN)=**	**1,200**	**-**	**67**	

(Min=240, Max=900vph/lane)

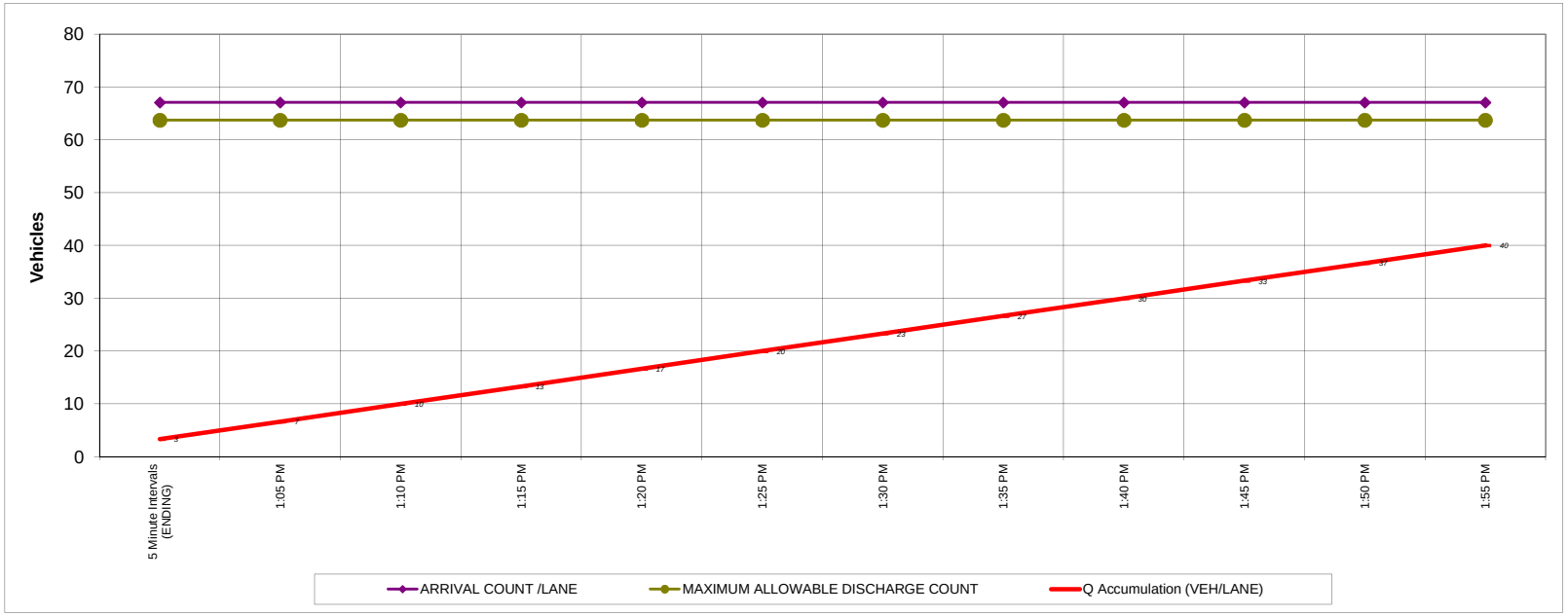
Meter Rate = **765**

Avg Delay/veh (hr)= 0.027

Avg Delay/veh (sec)= **97**

	INPUT
LANES=	**2**
Ramp Length=	1300
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
SB-Atlantic On

AM Peak Hour Vol/PCE:	900	970
PM Peak Hour Vol/PCE:	1870	2110
MD Peak Hour Vol/PCE:	1240	1380

2 Cars Per Green

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	88	81	7	7	1055	176	970	1100	-	2600	213	-	88	0.6
5:10 PM	88	81	14	7	1055	176	970	1200	-	2600	425	-	88	1.2
5:15 PM	88	81	21	7	1055	176	970	1300	-	2600	638	-	88	1.8
5:20 PM	88	81	28	7	1055	176	970	1350	-	2600	850	-	88	2.4
5:25 PM	88	81	35	7	1055	176	970	1450	-	2600	1063	-	88	3.0
5:30 PM	88	81	43	7	1055	176	970	1550	-	2600	1275	-	88	3.5
5:35 PM	88	81	50	7	1055	176	970	1650	-	2600	1488	-	88	4.1
5:40 PM	88	81	57	7	1055	176	970	1700	-	2600	1700	-	88	4.7
5:45 PM	88	81	64	7	1055	176	970	1800	-	2600	1913	-	88	5.3
5:50 PM	88	81	71	7	1055	176	970	1900	-	2600	2125	-	88	5.9
5:55 PM	88	81	78	7	1055	176	970	1950	-	2600	2338	-	88	6.5
6:00 PM	88	81	85	7	1055	176	970	2050	-	2600	2550	-	88	7.1
	1,055	**970**		**85**		**2,110**							**1,055**	**46.04**
		MAX Q (VEH/LN)=	**85**	**MAX RATE (VPH)=**	**1,055**					**MAX Q (FT/LN)=**	**2,550**	**-**	**88**	

(Min=480, Max=1200vph/lane)

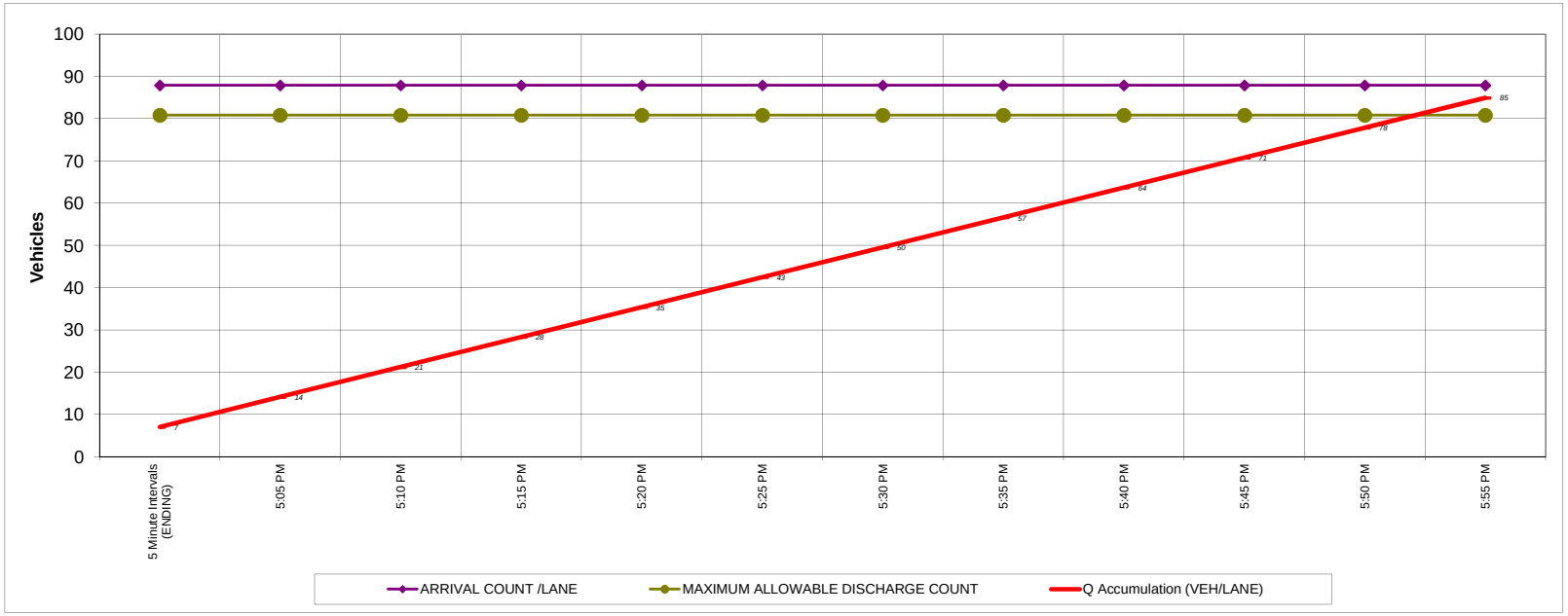
Meter Rate = **970**

Avg Delay/veh (hr)= 0.0436414

Avg Delay/veh (sec)= **157**

	INPUT
LANES=	**2**
Ramp Length=	2600
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
NB-Washington On

AM Peak Hour Vol/PCE:	550	680
PM Peak Hour Vol/PCE:	780	920
MD Peak Hour Vol/PCE:	600	730

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
5:05 PM	38	36	2	2	460	77	435	450	-	850	63	-	38	0.2
5:10 PM	38	36	4	2	460	77	435	500	-	850	125	-	38	0.3
5:15 PM	38	36	6	2	460	77	435	500	-	850	188	-	38	0.5
5:20 PM	38	36	8	2	460	77	435	550	-	850	250	-	38	0.7
5:25 PM	38	36	10	2	460	77	435	550	-	850	313	-	38	0.9
5:30 PM	38	36	13	2	460	77	435	600	-	850	375	-	38	1.0
5:35 PM	38	36	15	2	460	77	435	600	-	850	438	-	38	1.2
5:40 PM	38	36	17	2	460	77	435	650	-	850	500	-	38	1.4
5:45 PM	38	36	19	2	460	77	435	650	-	850	563	-	38	1.6
5:50 PM	38	36	21	2	460	77	435	700	-	850	625	-	38	1.7
5:55 PM	38	36	23	2	460	77	435	700	-	850	688	-	38	1.9
6:00 PM	38	36	25	2	460	77	435	750	-	850	750	-	38	2.1
	460	**435**		**25**		**920**							**460**	**13.54**
		MAX Q (VEH/LN)=	**25**	**MAX RATE (VPH)=**	**460**					**MAX Q (FT/LN)=**	**750**	**-**	**38**	

(Min=240, Max=900vph/lane)

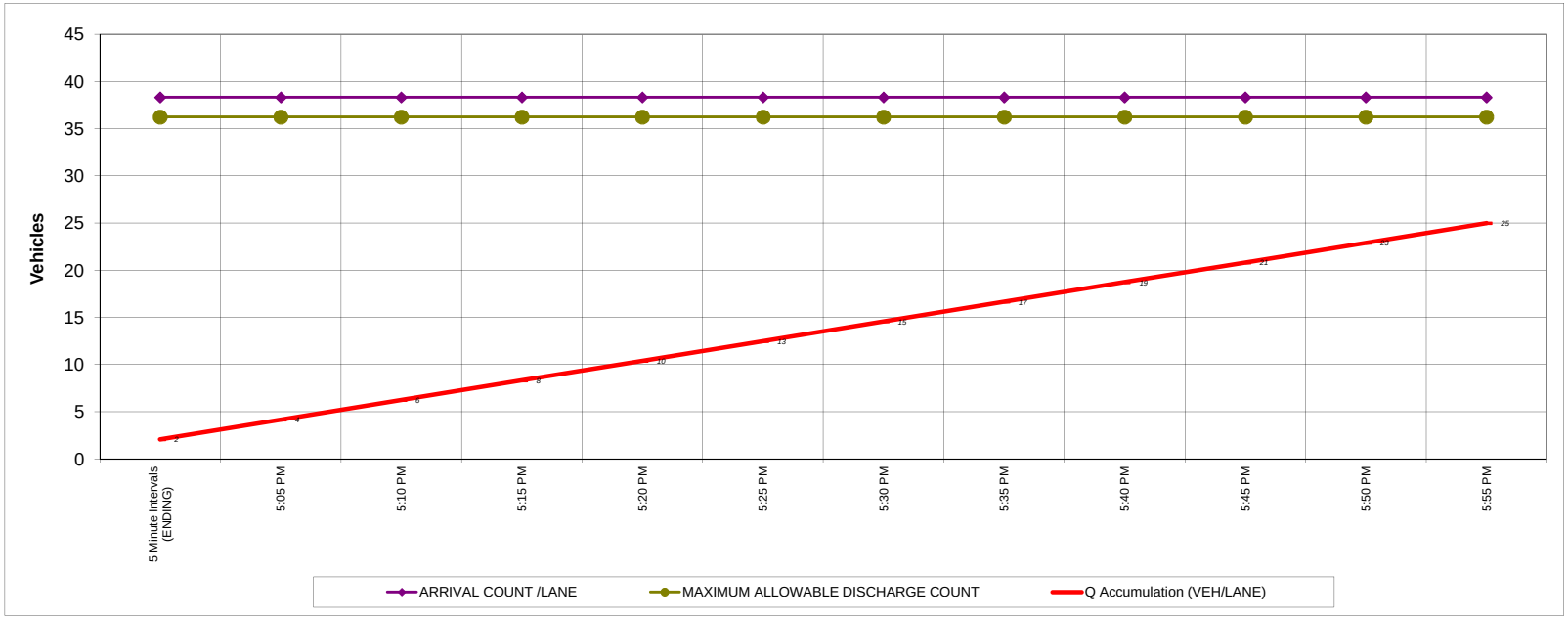
Meter Rate = **435**

Avg Delay/veh (hr)= 0.029

Avg Delay/veh (sec)= **106**

	INPUT
LANES=	**2**
Ramp Length=	850
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Olympic to NB 710

AM Peak Hour Vol/PCE:	320	330
PM Peak Hour Vol/PCE:	200	210
MD Peak Hour Vol/PCE:	270	280

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
7:05 AM	28	27	1	1	330	28	320	300	-	450	25	-	28	0.1
7:10 AM	28	27	2	1	330	28	320	350	-	450	50	-	28	0.1
7:15 AM	28	27	3	1	330	28	320	350	-	450	75	-	28	0.2
7:20 AM	28	27	3	1	330	28	320	350	-	450	100	-	28	0.3
7:25 AM	28	27	4	1	330	28	320	350	-	450	125	-	28	0.3
7:30 AM	28	27	5	1	330	28	320	350	-	450	150	-	28	0.4
7:35 AM	28	27	6	1	330	28	320	400	-	450	175	-	28	0.5
7:40 AM	28	27	7	1	330	28	320	400	-	450	200	-	28	0.6
7:45 AM	28	27	8	1	330	28	320	400	-	450	225	-	28	0.6
7:50 AM	28	27	8	1	330	28	320	400	-	450	250	-	28	0.7
7:55 AM	28	27	9	1	330	28	320	400	-	450	275	-	28	0.8
8:00 AM	28	27	10	1	330	28	320	450	-	450	300	-	28	0.8
	330	**320**		**10**		**330**							**330**	**5.42**
		MAX Q (VEH/LN)=	**10**	**MAX RATE (VPH)=**	**330**					**MAX Q (FT/LN)=**	**300**	**-**	**28**	

(Min=240, Max=9\00 vph/lane)

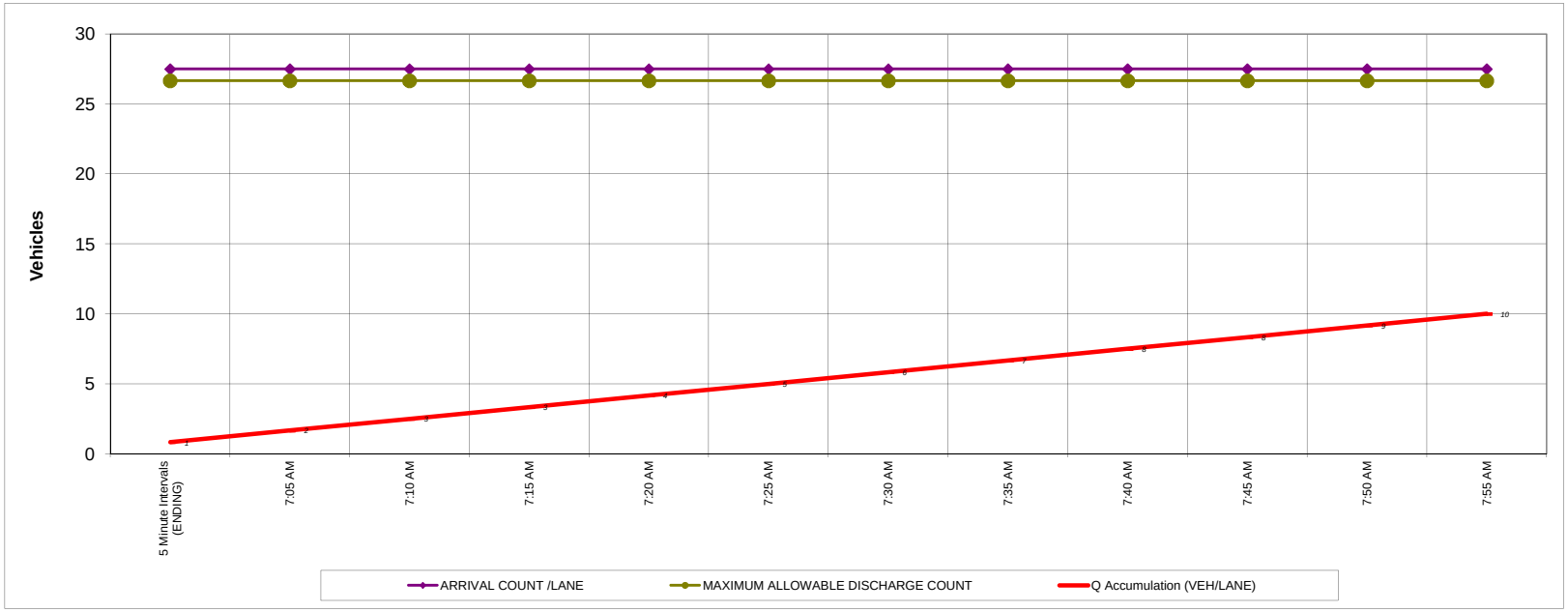
Meter Rate = **320**

Avg Delay/veh (hr)= 0.016

Avg Delay/veh (sec)= **59**

	INPUT
LANES=	**1**
Ramp Length=	450
Car Length (ft)=	30

Storage is Adequate



URS Corporation

I-710 Corridor Project
Ramp Metering Analysis
Eastern to SB 710

AM Peak Hour Vol/PCE:	740	800
PM Peak Hour Vol/PCE:	740	780
MD Peak Hour Vol/PCE:	810	870

5 Minute Intervals (ENDING)	ARRIVAL COUNT /LANE	MAXIMUM ALLOWABLE DISCHARGE COUNT	Q Accumulation (VEH/LANE)	INSTANTANEOUS ADDITIONAL Q	ARRIVAL RATE/LANE	TOTAL ARRIVAL COUNT	MAXIMUM ALLOWABLE DISCHARGE RATE/LANE	SUGGESTED METER RATE (to prevent Qs)	SUGGESTED METER RATE (to prevent Storage Overflow)	Ramp Storage Provided (ft/Lane)	Queue/Lane (FT/Lane)	Storage Overflow (ft)	Total Vehicles Delayed	Delay (veh-hr)
1:05 PM	36	36	0	0	435	73	430	400	-	260	12	-	36	0.0
1:10 PM	36	36	1	0	435	73	430	400	-	260	25	-	36	0.1
1:15 PM	36	36	1	0	435	73	430	450	-	260	37	-	36	0.1
1:20 PM	36	36	2	0	435	73	430	450	-	260	50	-	36	0.1
1:25 PM	36	36	2	0	435	73	430	450	-	260	62	-	36	0.2
1:30 PM	36	36	2	0	435	73	430	450	-	260	75	-	36	0.2
1:35 PM	36	36	3	0	435	73	430	450	-	260	87	-	36	0.2
1:40 PM	36	36	3	0	435	73	430	450	-	260	100	-	36	0.3
1:45 PM	36	36	4	0	435	73	430	450	-	260	112	-	36	0.3
1:50 PM	36	36	4	0	435	73	430	450	-	260	125	-	36	0.3
1:55 PM	36	36	5	0	435	73	430	450	-	260	137	-	36	0.4
2:00 PM	36	36	5	0	435	73	430	450	-	260	150	-	36	0.4
	435	**430**		**5**		**870**							**435**	**2.71**
		MAX Q (VEH/LN)=	**5**	**MAX RATE (VPH)=**	**435**					**MAX Q (FT/LN)=**	**150**	**-**	**36**	

(Min=240, Max=900 vph/lane)

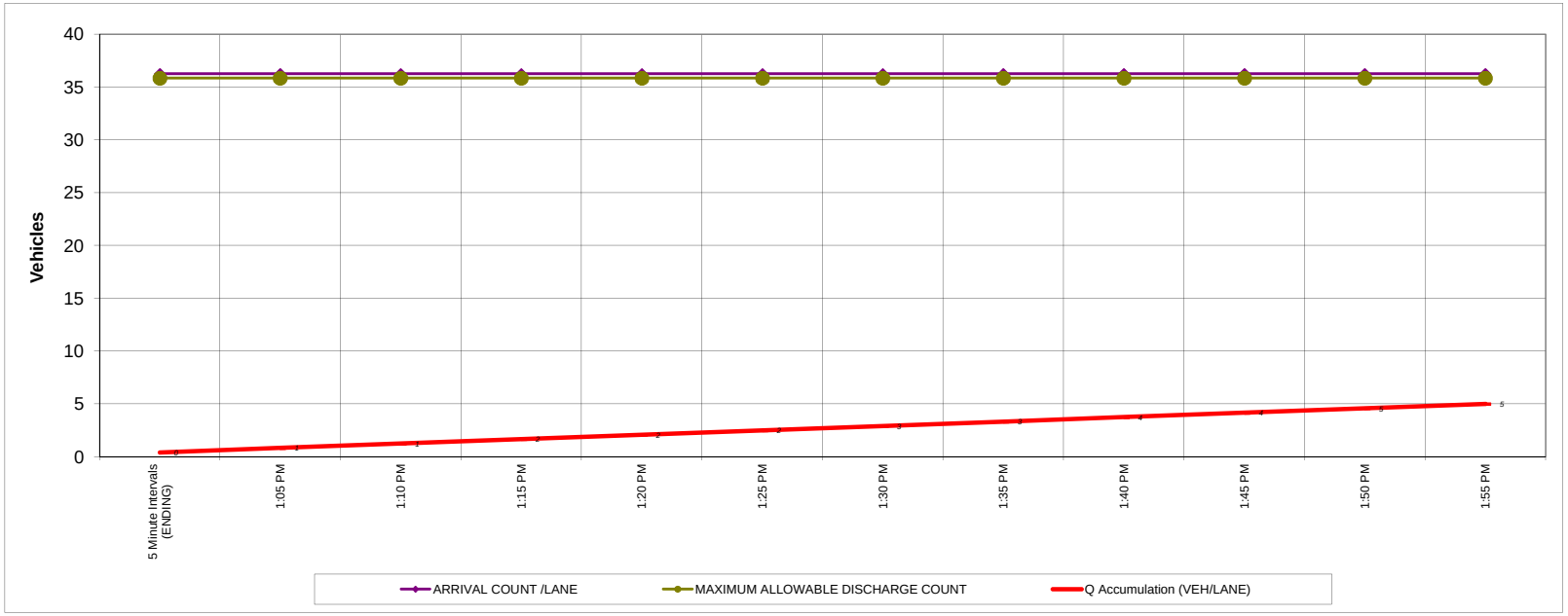
Meter Rate = **430**

Avg Delay/veh (hr)= 0.006

Avg Delay/veh (sec)= **22**

	INPUT
LANES=	**2**
Ramp Length=	260
Car Length (ft)=	30

Storage is Adequate



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