Appendix J
2035 No-Action Level of Service (LOS)
Roadway Laneage

MEMORANDUM

TO: **File**

FROM: **Anna Smith, P.E.**

DATE: **October 31, 2008**

SUBJECT: **Roadway Improvements for US 50 ACP Model**

Introduction

The US 50 Access Control Plan (ACP) 2035 No-Build traffic models in Synchro operate at an extremely poor Level of Service for the future No-Build peak hour conditions at many of the intersections. Many of the intersecting roadways currently carry very minimal traffic volumes and are anticipated to carry high volumes in the future. For this reason, assumptions for roadway improvements were made at several of the intersections that are anticipated to carry much higher traffic volumes in the future. The roadway improvements that were added to the model were minor and were only included if they could be accommodated within the existing right-of-way. The improvements included adding left or right turn lanes where it will be warranted and there currently are none, converting single left turn lanes to dual left turn lanes where warranted, and converting several right turn movements to free-right turns where projected high volumes require it.

Traffic signals were added to the No-Build model at the locations where they are expected to be warranted and are within spacing guidelines. The number of through lanes on US 50 was not modified.

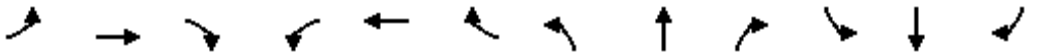
Summary of Improvements

The following is a summary of the roadway improvements assumed in the 2035 No-Build scenario along US 50. These changes were also assumed for the "With ACP Implemented" scenario.

- Unaweep Avenue (Existing Signalized Intersection)
  - Eastbound: converted existing left turn lane to dual left turn lane
  - Southbound: added southbound right lane storage on Unaweep Avenue
  - North leg: added a northbound through lane to accommodate eastbound dual left
- Palmer Avenue approaches (per Alpine Bank TIS) (Proposed Signal)
  - Eastbound: added continuous eastbound deceleration/acceleration lane from Aspen Street
  - Westbound: added a left turn lane
  - Northbound: added a left turn lane
- 27 Road (Existing Signalized Intersection)
  - Northbound: converted existing shared left/through and right turn lane to separate left turn lane and shared through/right
  - Southbound: converted existing shared left/through and right turn lane to separate left turn lane and shared through/right
  - Added northbound and southbound permitted/protected phasing
- 29 Road (Existing Signalized Intersection)
  - Eastbound: converted existing left turn lane to dual left turn lane
  - Westbound: added a channelizing island and overlapped phasing

  - North leg: added a northbound through lane to accommodate eastbound dual left
- Sundance Road (Existing Signalized Intersection)
  - Northbound: converted existing left turn lane to dual left turn lane
- 29 ½ Road (Future Signal)
  - Northbound: converted existing shared left/through/right approach to a separate left turn lane with a shared through/right lane
  - Southbound: converted existing shared left/through/right approach to a separate left turn lane with a shared through/right lane
- 30 Road (Future Signal)
  - Southbound: converted shared left/right lane to separate right and left turn lanes and added storage
- 31 Road (Future Signal)
  - Southbound: converted shared left/through/right lane to separate left turn lane and a shared through/right turn lane and added storage
- SH 141B (Existing Signalized Intersection)
  - Eastbound: converted existing left turn lane to dual left turn lane
  - Southbound: added a southbound right turn lane and added storage
  - North leg: added a northbound through lane to accommodate eastbound dual left from US 50
- Reeder Mesa (Future Signal)
  - Eastbound: converted existing left turn lane to dual left turn lane
  - Southbound: converted existing shared left/through/right lane to separate channelized right turn lane and a shared left/through lane and added storage to right turn lane
  - North leg: added a northbound through lane to accommodate eastbound dual left from US 50

Intersection LOS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	746	0	44	1492	10	2	0	3	2	0	34
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1711	0	101	3422	23	5	0	7	5	0	78
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3445			1711			3672	5367	855	4507	5355	1722
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3445			1711			3672	5367	855	4507	5355	1722
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	93			71			0	100	98	0	100	0
cM capacity (veh/h)	70			354			0	0	295	0	0	76

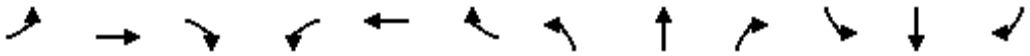
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	5	1141	570	101	2281	1164	11	83
Volume Left	5	0	0	101	0	0	5	5
Volume Right	0	0	0	0	0	23	7	78
cSH	70	1700	1700	354	1700	1700	0	4
Volume to Capacity	0.07	0.67	0.34	0.29	1.34	0.68	Err	19.67
Queue Length 95th (ft)	5	0	0	29	0	0	Err	Err
Control Delay (s)	60.0	0.0	0.0	19.2	0.0	0.0	Err	Err
Lane LOS	F			C			F	F
Approach Delay (s)	0.2			0.5			Err	Err
Approach LOS							F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	747	11	0	1543	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1677	25	0	3464	0	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1069		
pX, platoon unblocked					0.32	
vC, conflicting volume			1701		3421	851
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1701		4302	851
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	96
cM capacity (veh/h)			357		0	297

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1
Volume Total	1118	584	1732	1732	11
Volume Left	0	0	0	0	0
Volume Right	0	25	0	0	11
cSH	1700	1700	1700	1700	297
Volume to Capacity	0.66	0.34	1.02	1.02	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	17.6
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.6
Approach LOS					C

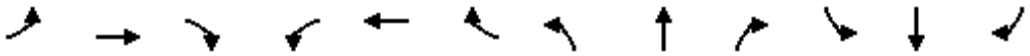
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	721	0	1	1484	2	0	0	1	0	0	41
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	69	1654	0	2	3404	5	0	0	2	0	0	94
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					634							
pX, platoon unblocked	0.32						0.32	0.32		0.32	0.32	0.32
vC, conflicting volume	3408			1654			3592	5204	827	4377	5202	1704
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	4284			1654			4861	9932	827	7331	9924	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	0			99			0	0	99	0	0	72
cM capacity (veh/h)	10			373			0	0	309	0	0	342

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	69	1102	551	2	2269	1139	2	94
Volume Left	69	0	0	2	0	0	0	0
Volume Right	0	0	0	0	0	5	2	94
cSH	10	1700	1700	373	1700	1700	309	342
Volume to Capacity	6.96	0.65	0.32	0.01	1.33	0.67	0.01	0.28
Queue Length 95th (ft)	Err	0	0	0	0	0	1	28
Control Delay (s)	3427.0	0.0	0.0	14.7	0.0	0.0	16.8	19.5
Lane LOS	F			B			C	C
Approach Delay (s)	136.9			0.0			16.8	19.5
Approach LOS							C	C

Intersection Summary				
Average Delay	45.5			
Intersection Capacity Utilization	98.7%	ICU Level of Service		F
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	532	0	0	1253	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	1245	0	0	2933	0	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		513										
pX, platoon unblocked				0.91			0.91	0.91	0.91	0.91	0.91	
vC, conflicting volume	2933			1245			2712	4178	623	3555	4178	1466
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2933			1073			2683	4294	389	3610	4294	1466
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	114			572			9	2	547	2	2	114

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	830	415	0	1955	978	0	0
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.49	0.24	0.00	1.15	0.58	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							A	A
Approach Delay (s)	0.0			0.0			0.0	0.0
Approach LOS							A	A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	530	0	0	1252	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1254	0	0	2963	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023			1090		
pX, platoon unblocked			0.92		0.32	0.92
vC, conflicting volume			1254		2736	627
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1093		965	407
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	100
cM capacity (veh/h)			565		78	535

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	836	418	1482	1482	0
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1700	1700	1700
Volume to Capacity	0.49	0.25	0.87	0.87	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0
Lane LOS					A
Approach Delay (s)	0.0		0.0		0.0
Approach LOS					A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	522	4	5	1263	6	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1235	9	12	2989	14	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1190			923		
pX, platoon unblocked			0.92		0.31	0.92
vC, conflicting volume			1245		2758	622
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1093		1080	416
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			98		78	97
cM capacity (veh/h)			568		64	531

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	824	421	12	1495	1495	28
Volume Left	0	0	12	0	0	14
Volume Right	0	9	0	0	0	14
cSH	1700	1700	568	1700	1700	114
Volume to Capacity	0.48	0.25	0.02	0.88	0.88	0.25
Queue Length 95th (ft)	0	0	2	0	0	23
Control Delay (s)	0.0	0.0	11.5	0.0	0.0	46.9
Lane LOS			B			E
Approach Delay (s)	0.0		0.0			46.9
Approach LOS						E

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	519	1	0	1264	0	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1242	2	0	3025	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				596		
pX, platoon unblocked					0.27	
vC, conflicting volume			1244		2756	622
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1244		2092	622
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	95
cM capacity (veh/h)			539		12	422

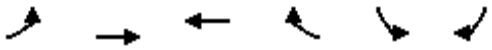
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	828	416	1513	1513	22
Volume Left	0	0	0	0	0
Volume Right	0	2	0	0	22
cSH	1700	1700	1700	1700	422
Volume to Capacity	0.49	0.24	0.89	0.89	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	14.0
Lane LOS					B
Approach Delay (s)	0.0		0.0		14.0
Approach LOS					B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	512	7	6	1261	2	1	0	5	2	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	31	1225	10	8	3018	5	2	0	6	5	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					381							
pX, platoon unblocked	0.27						0.27	0.27		0.27	0.27	0.27
vC, conflicting volume	3023			1235			2818	4332	618	3718	4335	1511
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3085			1235			2318	8001	618	5694	8010	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	0			98			0	0	99	0	0	100
cM capacity (veh/h)	26			543			0	0	425	0	0	286

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	31	817	418	8	2012	1011	8	5
Volume Left	31	0	0	8	0	0	2	5
Volume Right	0	0	10	0	0	5	6	0
cSH	26	1700	1700	543	1700	1700	0	0
Volume to Capacity	1.18	0.48	0.25	0.02	1.18	0.59	Err	Err
Queue Length 95th (ft)	93	0	0	1	0	0	Err	Err
Control Delay (s)	456.3	0.0	0.0	11.7	0.0	0.0	Err	Err
Lane LOS	F			B			F	F
Approach Delay (s)	11.2			0.0			Err	Err
Approach LOS							F	F

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	84.4%	ICU Level of Service		E
Analysis Period (min)	15			

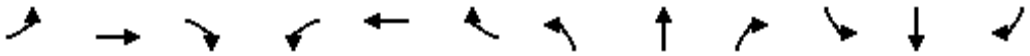


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	12	514	1302	8	0	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	29	1230	3116	19	0	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		420				
pX, platoon unblocked					0.85	
vC, conflicting volume	3135				3798	1568
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3135				3943	1568
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	69				100	88
cM capacity (veh/h)	94				1	97

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	29	615	615	2077	1058	12
Volume Left	29	0	0	0	0	0
Volume Right	0	0	0	0	19	12
cSH	94	1700	1700	1700	1700	97
Volume to Capacity	0.31	0.36	0.36	1.22	0.62	0.12
Queue Length 95th (ft)	29	0	0	0	0	10
Control Delay (s)	59.2	0.0	0.0	0.0	0.0	47.3
Lane LOS	F					E
Approach Delay (s)	1.4			0.0		47.3
Approach LOS						E

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		

Intersection has too many legs for HCM analysis.

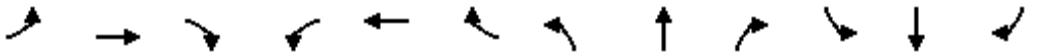


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	417	66	0	1070	10	33	0	3	13	0	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	5	1068	169	0	2741	26	85	0	8	33	0	51
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		807										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	2767			1068			2500	3845	534	3306	3832	1383
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2767			756			2420	3982	135	3355	3967	1383
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	96			100			0	100	99	0	100	61
cM capacity (veh/h)	133			715			8	2	757	2	2	130

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	5	534	534	169	0	1827	939	92	85
Volume Left	5	0	0	0	0	0	0	85	33
Volume Right	0	0	0	169	0	0	26	8	51
cSH	133	1700	1700	1700	1700	1700	1700	9	6
Volume to Capacity	0.04	0.31	0.31	0.10	0.00	1.07	0.55	10.39	14.18
Queue Length 95th (ft)	3	0	0	0	0	0	0	Err	Err
Control Delay (s)	33.1	0.0	0.0	0.0	0.0	0.0	0.0	Err	Err
Lane LOS	D							F	F
Approach Delay (s)	0.1				0.0			Err	Err
Approach LOS								F	F

Intersection Summary				
Average Delay	422.3			
Intersection Capacity Utilization	84.2%	ICU Level of Service		E
Analysis Period (min)	15			

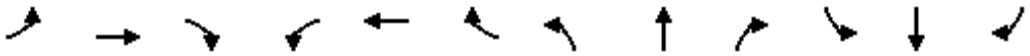
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	366	0	0	790	0	0	0	3	0	0	360
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	907	0	0	2353	0	0	0	5	0	0	571
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2353			907			2655	3260	454	2811	3260	1176
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2353			907			2655	3260	454	2811	3260	1176
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			0	100	99	100	100	0
cM capacity (veh/h)	196			728			0	8	545	8	8	179

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	454	454	1176	1176	5	571
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	5	571
cSH	1700	1700	1700	1700	545	179
Volume to Capacity	0.27	0.27	0.69	0.69	0.01	3.18
Queue Length 95th (ft)	0	0	0	0	1	Err
Control Delay (s)	0.0	0.0	0.0	0.0	11.7	Err
Lane LOS					B	F
Approach Delay (s)	0.0		0.0		11.7	Err
Approach LOS					B	F

Intersection Summary				
Average Delay	1489.2			
Intersection Capacity Utilization	99.0%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	306	15	15	741	9	4	4	3	0	5	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	127	975	48	48	2361	29	13	13	10	0	16	143
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2390			1023			2657	3715	487	3215	3734	1180
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2390			1023			2657	3715	487	3215	3734	1180
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	33			93			0	0	98	0	0	20
cM capacity (veh/h)	190			657			0	1	518	0	1	178

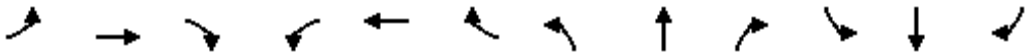
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	127	487	487	48	48	1180	1180	29	35	159
Volume Left	127	0	0	0	48	0	0	0	13	0
Volume Right	0	0	0	48	0	0	0	29	10	143
cSH	190	1700	1700	1700	657	1700	1700	1700	0	12
Volume to Capacity	0.67	0.29	0.29	0.03	0.07	0.69	0.69	0.02	Err	13.78
Queue Length 95th (ft)	101	0	0	0	6	0	0	0	Err	Err
Control Delay (s)	55.9	0.0	0.0	0.0	10.9	0.0	0.0	0.0	Err	Err
Lane LOS	F				B				F	F
Approach Delay (s)	6.2				0.2				Err	Err
Approach LOS									F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	8	739	6	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	24	2201	18	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1235					
pX, platoon unblocked						
vC, conflicting volume			0		1148	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		1148	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			99		90	100
cM capacity (veh/h)			1600		185	1075

Direction, Lane #	WB 1	WB 2	WB 3	NB 1
Volume Total	24	1100	1100	18
Volume Left	24	0	0	18
Volume Right	0	0	0	0
cSH	1600	1700	1700	185
Volume to Capacity	0.01	0.65	0.65	0.10
Queue Length 95th (ft)	1	0	0	8
Control Delay (s)	7.3	0.0	0.0	26.6
Lane LOS	A			D
Approach Delay (s)	0.1			26.6
Approach LOS				D

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	302	6	0	0	0	0	6	0	0	8	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	899	18	0	0	0	0	18	0	0	24	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1250										
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	0			917			911	899	450	459	917	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			625			618	604	91	102	625	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	95	100	100	93	100
cM capacity (veh/h)	1600			818			305	355	823	725	345	1075

Direction, Lane #	EB 1	EB 2	EB 3	NB 1	SB 1
Volume Total	450	450	18	18	24
Volume Left	0	0	0	0	0
Volume Right	0	0	18	0	0
cSH	1700	1700	1700	355	345
Volume to Capacity	0.26	0.26	0.01	0.05	0.07
Queue Length 95th (ft)	0	0	0	4	6
Control Delay (s)	0.0	0.0	0.0	15.7	16.2
Lane LOS				C	C
Approach Delay (s)	0.0			15.7	16.2
Approach LOS				C	C

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	300	3	0	0	0	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	956	10	0	0	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			965		961	483
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			965		961	483
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	92
cM capacity (veh/h)			691		249	522

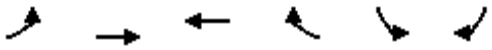
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total	637	328	41
Volume Left	0	0	0
Volume Right	0	10	41
cSH	1700	1700	522
Volume to Capacity	0.37	0.19	0.08
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	12.5
Lane LOS			B
Approach Delay (s)	0.0		12.5
Approach LOS			B

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		33.0%	ICU Level of Service
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1021	9	0	0	0	38
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	1215	11	0	0	0	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	831					
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			1226		1215	608
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			932		919	211
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	93
cM capacity (veh/h)			610		227	674

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	608	608	11	45
Volume Left	0	0	0	0
Volume Right	0	0	11	45
cSH	1700	1700	1700	674
Volume to Capacity	0.36	0.36	0.01	0.07
Queue Length 95th (ft)	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	10.7
Lane LOS				B
Approach Delay (s)	0.0			10.7
Approach LOS				B

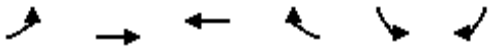
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	2180	0	0	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	0	0	2725	0	0	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1096				
pX, platoon unblocked						
vC, conflicting volume	2725				2725	1362
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2725				2725	1362
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	92
cM capacity (veh/h)	139				16	134

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1817	908	11
Volume Left	0	0	0
Volume Right	0	0	11
cSH	1700	1700	134
Volume to Capacity	1.07	0.53	0.08
Queue Length 95th (ft)	0	0	7
Control Delay (s)	0.0	0.0	34.3
Lane LOS			D
Approach Delay (s)	0.0		34.3
Approach LOS			D

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	680	1	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	0	0	840	1	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	841				840	420
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	841				840	420
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	100
cM capacity (veh/h)	771				298	573

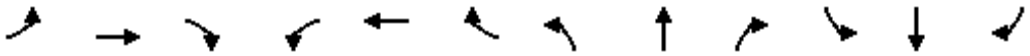
Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	560	281	0
Volume Left	0	0	0
Volume Right	0	1	0
cSH	1700	1700	1700
Volume to Capacity	0.33	0.17	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0		0.0
Approach LOS			A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	2108	3	0
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	0	0	2423	3	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0		1211	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		1211	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		98	100
cM capacity (veh/h)			1600		170	1075

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	808	1615	3
Volume Left	0	0	3
Volume Right	0	0	0
cSH	1600	1700	170
Volume to Capacity	0.00	0.95	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	26.6
Lane LOS			D
Approach Delay (s)	0.0		26.6
Approach LOS			D

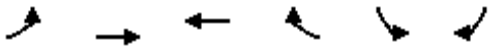
Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		68.3%	ICU Level of Service C
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	1065	0	0	0	0	0	0	0	3	0	0
Sign Control		Free			Free			Stop			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	3	1224	0	0	0	0	0	0	0	3	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			1224			1231	1231	612	619	1231	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			1224			1231	1231	612	619	1231	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	100	100	99	100	100
cM capacity (veh/h)	1600			549			130	172	429	366	172	1075

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	616	612	0	3
Volume Left	3	0	0	3
Volume Right	0	0	0	0
cSH	1600	1700	1700	366
Volume to Capacity	0.00	0.36	0.00	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	14.9
Lane LOS	A		A	B
Approach Delay (s)	0.0		0.0	14.9
Approach LOS			A	B

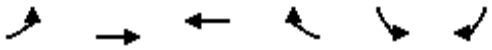
Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	39.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	2108	0	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	2510	0	0	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2510				2510	1255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2510				2510	1255
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	97
cM capacity (veh/h)	170				22	159

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1673	837	5
Volume Left	0	0	0
Volume Right	0	0	5
cSH	1700	1700	159
Volume to Capacity	0.98	0.49	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	28.4
Lane LOS			D
Approach Delay (s)	0.0		28.4
Approach LOS			D

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	2110	0	0	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	2293	0	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			389			
pX, platoon unblocked	0.46				0.46	0.46
vC, conflicting volume	2293				2293	1147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1474				1474	0
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	100
cM capacity (veh/h)	203				53	497

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1529	764	2
Volume Left	0	0	0
Volume Right	0	0	2
cSH	1700	1700	497
Volume to Capacity	0.90	0.45	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	12.3
Lane LOS			B
Approach Delay (s)	0.0		12.3
Approach LOS			B

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		68.3%	ICU Level of Service C
Analysis Period (min)		15	

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1313	18	0	0	0	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1475	20	0	0	0	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	595					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1496		1485	748
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1165		1152	253
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	92
cM capacity (veh/h)			474		153	605

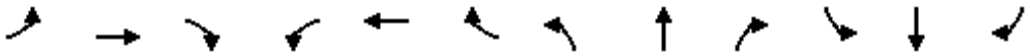
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total	984	512	46
Volume Left	0	0	0
Volume Right	0	20	46
cSH	1700	1700	605
Volume to Capacity	0.58	0.30	0.08
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	11.4
Lane LOS			B
Approach Delay (s)	0.0		11.4
Approach LOS			B

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		46.9%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	2978	82	0
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	3384	93	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1002					
pX, platoon unblocked						
vC, conflicting volume			0		1692	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		1692	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		0	100
cM capacity (veh/h)			1600		81	1075

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	1128	2256	93
Volume Left	0	0	93
Volume Right	0	0	0
cSH	1600	1700	81
Volume to Capacity	0.00	1.33	1.14
Queue Length 95th (ft)	0	0	167
Control Delay (s)	0.0	0.0	236.1
Lane LOS			F
Approach Delay (s)	0.0		236.1
Approach LOS			F

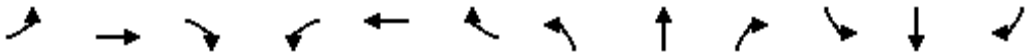
Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	135.0%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1332	32	0	0	0	0	82	9	0	0	0
Sign Control		Free			Free			Stop			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	1514	36	0	0	0	0	93	10	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		969										
pX, platoon unblocked				0.82			0.82	0.82	0.82	0.82	0.82	
vC, conflicting volume	0			1550			1532	1532	775	814	1550	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			1228			1205	1205	280	328	1228	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	36	98	100	100	100
cM capacity (veh/h)	1600			448			111	146	579	233	141	1075

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	757	793	103	0
Volume Left	0	0	0	0
Volume Right	0	36	10	0
cSH	1600	1700	157	1700
Volume to Capacity	0.00	0.47	0.66	0.00
Queue Length 95th (ft)	0	0	93	0
Control Delay (s)	0.0	0.0	63.5	0.0
Lane LOS			F	A
Approach Delay (s)	0.0		63.5	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	93.5%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1200	100	100	2300	14	100	0	100	9	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.89	0.92	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	39	1348	112	112	2584	15	112	0	112	10	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2599			1461			2943	4251	674	3674	4348	1292
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2599			1461			2943	4251	674	3674	4348	1292
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	75			75			0	100	71	0	100	100
cM capacity (veh/h)	156			444			4	1	390	1	1	150

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	39	674	674	112	112	1292	1292	15	225	10
Volume Left	39	0	0	0	112	0	0	0	112	10
Volume Right	0	0	0	112	0	0	0	15	112	0
cSH	156	1700	1700	1700	444	1700	1700	1700	8	1
Volume to Capacity	0.25	0.40	0.40	0.07	0.25	0.76	0.76	0.01	27.80	12.97
Queue Length 95th (ft)	24	0	0	0	25	0	0	0	Err	Err
Control Delay (s)	35.6	0.0	0.0	0.0	15.8	0.0	0.0	0.0	Err	Err
Lane LOS	E				C				F	F
Approach Delay (s)	0.9				0.7				Err	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	528.1			
Intersection Capacity Utilization	87.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1246	0	9	2418	19	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	1400	0	10	2717	21	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1400		2779	700
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1400		2779	700
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			98		0	92
cM capacity (veh/h)			469		14	375

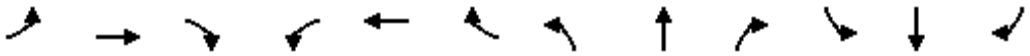
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	933	467	10	1358	1358	53
Volume Left	0	0	10	0	0	21
Volume Right	0	0	0	0	0	31
cSH	1700	1700	469	1700	1700	33
Volume to Capacity	0.55	0.27	0.02	0.80	0.80	1.59
Queue Length 95th (ft)	0	0	2	0	0	146
Control Delay (s)	0.0	0.0	12.8	0.0	0.0	556.8
Lane LOS			B			F
Approach Delay (s)	0.0		0.0			556.8
Approach LOS						F

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1602	55	0	2667	0	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1669	57	0	2778	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1726		2595	834
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1726		2595	834
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	93
cM capacity (veh/h)			349		19	305

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1
Volume Total	834	834	57	0	926	926	926	22
Volume Left	0	0	0	0	0	0	0	0
Volume Right	0	0	57	0	0	0	0	22
cSH	1700	1700	1700	1700	1700	1700	1700	305
Volume to Capacity	0.49	0.49	0.03	0.00	0.54	0.54	0.54	0.07
Queue Length 95th (ft)	0	0	0	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.7
Lane LOS								C
Approach Delay (s)	0.0			0.0				17.7
Approach LOS								C

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	1550	0	0	2675	0	4	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	15	1824	0	0	3147	0	5	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3147			1824			3428	5001	912	4089	5001	1574
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3147			1824			3428	5001	912	4089	5001	1574
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	84			100			0	100	100	100	100	100
cM capacity (veh/h)	93			319			2	0	271	1	0	96

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	15	1216	608	0	2098	1049	5	0
Volume Left	15	0	0	0	0	0	5	0
Volume Right	0	0	0	0	0	0	0	0
cSH	93	1700	1700	1700	1700	1700	2	1700
Volume to Capacity	0.16	0.72	0.36	0.00	1.23	0.62	2.11	0.00
Queue Length 95th (ft)	14	0	0	0	0	0	37	0
Control Delay (s)	51.1	0.0	0.0	0.0	0.0	0.0	3128.1	0.0
Lane LOS	F						F	A
Approach Delay (s)	0.4			0.0			3128.1	0.0
Approach LOS							F	A

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	83.9%	ICU Level of Service		E
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1550	8	0	2650	26	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1824	9	0	3118	31	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1833		3382	912
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1833		3382	912
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		0	87
cM capacity (veh/h)			317		5	271

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	912	912	9	0	1559	1559	66
Volume Left	0	0	0	0	0	0	31
Volume Right	0	0	9	0	0	0	35
cSH	1700	1700	1700	1700	1700	1700	11
Volume to Capacity	0.54	0.54	0.01	0.00	0.92	0.92	5.83
Queue Length 95th (ft)	0	0	0	0	0	0	Err
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	Err
Lane LOS							F
Approach Delay (s)	0.0			0.0			Err
Approach LOS							F

Intersection Summary			
Average Delay	131.3		
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

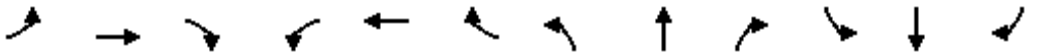
Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

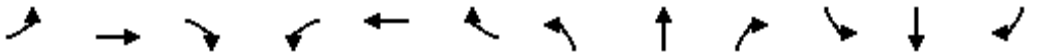
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	189	525	6	1	1244	0	10	1	2	13	3	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0			5.0	5.0		5.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.96	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438			1727	1538		1739	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.72	1.00		0.75	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438			1302	1538		1358	1538
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor (vph)	121%	211%	211%	213%	213%	121%	211%	121%	211%	121%	121%	121%
Adj. Flow (vph)	246	1191	14	2	2849	0	23	1	5	17	4	288
RTOR Reduction (vph)	0	0	2	0	0	0	0	0	5	0	0	0
Lane Group Flow (vph)	246	1191	12	2	2849	0	0	24	0	0	21	288
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Over
Protected Phases	1	6		5	2			4			4	1
Permitted Phases			6			2	4		4	4		
Actuated Green, G (s)	21.2	117.1	117.1	0.8	96.7			7.1	7.1		7.1	21.2
Effective Green, g (s)	21.2	117.1	117.1	0.8	96.7			7.1	7.1		7.1	21.2
Actuated g/C Ratio	0.15	0.84	0.84	0.01	0.69			0.05	0.05		0.05	0.15
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0			5.0	5.0		5.0	4.0
Vehicle Extension (s)	3.0	5.0	5.0	2.5	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	505	2876	1286	10	2375			66	78		69	233
v/s Ratio Prot	0.07	0.35		0.00	c0.83							c0.19
v/s Ratio Perm			0.01					c0.02	0.00		0.02	
v/c Ratio	0.49	0.41	0.01	0.20	1.20			0.36	0.00		0.30	1.24
Uniform Delay, d1	54.4	2.9	1.9	69.3	21.6			64.3	63.1		64.1	59.4
Progression Factor	1.00	1.00	1.00	1.04	0.30			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.4	0.0	0.6	90.2			3.4	0.0		2.5	137.5
Delay (s)	55.2	3.3	1.9	72.5	96.8			67.7	63.1		66.6	196.9
Level of Service	E	A	A	E	F			E	E		E	F
Approach Delay (s)		12.1			96.8			66.9			188.0	
Approach LOS		B			F			E			F	

Intersection Summary			
HCM Average Control Delay	76.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

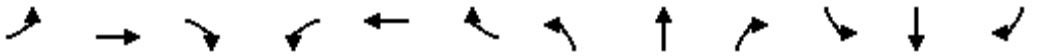
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	512	35	10	1291	0	50	5	5	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.92			1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438		1719	1674			1810	
Flt Permitted	0.04	1.00	1.00	0.19	1.00		0.38	1.00			1.00	
Satd. Flow (perm)	71	3438	1538	352	3438		693	1674			1810	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor (vph)	213%	213%	125%	125%	213%	213%	125%	125%	125%	213%	125%	213%
Adj. Flow (vph)	5	1225	49	14	3090	0	70	7	7	0	7	0
RTOR Reduction (vph)	0	0	13	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	5	1225	36	14	3090	0	70	8	0	0	7	0
Turn Type	pm+pt		Perm	pm+pt			pm+pt			Perm		
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	102.3	101.5	101.5	106.3	103.5		17.7	17.7			6.2	
Effective Green, g (s)	102.3	101.5	101.5	106.3	103.5		17.7	17.7			6.2	
Actuated g/C Ratio	0.73	0.72	0.72	0.76	0.74		0.13	0.13			0.04	
Clearance Time (s)	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	
Lane Grp Cap (vph)	61	2493	1115	295	2542		128	212			80	
v/s Ratio Prot	0.00	0.36		c0.00	c0.90		c0.02	0.00			0.00	
v/s Ratio Perm	0.06		0.02	0.04			c0.05					
v/c Ratio	0.08	0.49	0.03	0.05	1.22		0.55	0.04			0.09	
Uniform Delay, d1	69.4	8.2	5.4	8.9	18.2		55.8	53.7			64.2	
Progression Factor	1.00	0.98	0.97	0.44	0.33		1.00	1.00			1.00	
Incremental Delay, d2	0.6	0.7	0.1	0.0	97.4		4.7	0.1			0.5	
Delay (s)	70.0	8.7	5.3	4.0	103.3		60.5	53.7			64.7	
Level of Service	E	A	A	A	F		E	D			E	
Approach Delay (s)		8.8			102.9			59.4			64.7	
Approach LOS		A			F			E			E	

Intersection Summary			
HCM Average Control Delay	75.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

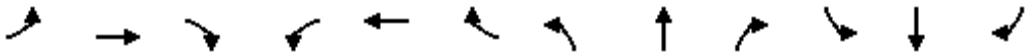
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	435	24	27	1047	22	139	20	15	27	29	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	5.5		5.0	5.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	1719	1693		1719	1669	
Flt Permitted	0.05	1.00	1.00	0.22	1.00	1.00	0.28	1.00		0.70	1.00	
Satd. Flow (perm)	84	3438	1538	393	3438	1538	499	1693		1263	1669	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor (vph)	213%	213%	213%	236%	228%	228%	236%	236%	236%	228%	236%	228%
Adj. Flow (vph)	84	1018	56	70	2623	55	360	52	39	68	75	80
RTOR Reduction (vph)	0	0	20	0	0	5	0	19	0	0	19	0
Lane Group Flow (vph)	84	1018	36	70	2623	50	360	72	0	68	136	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	91.0	88.0	88.0	87.2	87.2	87.2	31.5	20.9		15.1	9.5	
Effective Green, g (s)	91.0	88.0	88.0	87.2	87.2	87.2	31.5	20.9		15.1	9.5	
Actuated g/C Ratio	0.65	0.63	0.63	0.62	0.62	0.62	0.22	0.15		0.11	0.07	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	111	2161	967	283	2141	958	260	253		154	113	
v/s Ratio Prot	c0.03	0.30		0.01	c0.76		c0.17	0.04		0.02	0.08	
v/s Ratio Perm	0.47		0.02	0.15		0.03	c0.14			0.03		
v/c Ratio	0.76	0.47	0.04	0.25	1.23	0.05	1.38	0.29		0.44	1.21	
Uniform Delay, d1	62.4	13.7	9.9	11.9	26.4	10.3	51.3	52.9		58.0	65.2	
Progression Factor	0.80	0.86	0.67	0.37	0.35	0.21	1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.8	0.7	0.1	0.2	104.5	0.1	195.2	0.6		2.0	150.5	
Delay (s)	71.5	12.5	6.6	4.6	113.8	2.2	246.4	53.5		60.0	215.7	
Level of Service	E	B	A	A	F	A	F	D		E	F	
Approach Delay (s)		16.5			108.8			207.5			168.3	
Approach LOS		B			F			F			F	

Intersection Summary			
HCM Average Control Delay	98.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		

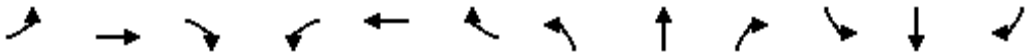
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	9	727	30	1	27	0	0	28	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	6.0	6.0		6.0			6.0	
Lane Util. Factor				1.00	0.95	1.00		1.00			1.00	
Frt				1.00	1.00	0.85		1.00			0.93	
Flt Protected				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (prot)				1719	3438	1538		1806			1675	
Flt Permitted				0.95	1.00	1.00		0.59			1.00	
Satd. Flow (perm)				1719	3438	1538		1061			1675	
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
Growth Factor (vph)	100%	100%	100%	274%	274%	274%	274%	274%	274%	274%	274%	274%
Adj. Flow (vph)	0	0	0	27	2165	89	3	80	0	0	83	101
RTOR Reduction (vph)	0	0	0	0	0	32	0	0	0	0	31	0
Lane Group Flow (vph)	0	0	0	27	2165	57	0	83	0	0	153	0
Turn Type				pm+pt		Perm	Perm					
Protected Phases				5	6			1 8			4	
Permitted Phases				6		6	1 8					
Actuated Green, G (s)				90.0	82.8	82.8		28.0			15.2	
Effective Green, g (s)				90.0	82.8	82.8		28.0			15.2	
Actuated g/C Ratio				0.64	0.59	0.59		0.20			0.11	
Clearance Time (s)				4.0	6.0	6.0					6.0	
Vehicle Extension (s)				3.0	3.0	3.0					3.0	
Lane Grp Cap (vph)				1105	2033	910		212			182	
v/s Ratio Prot				c0.00	c0.63						c0.09	
v/s Ratio Perm				0.01		0.04		c0.08				
v/c Ratio				0.02	1.06	0.06		0.39			0.84	
Uniform Delay, d1				9.1	28.6	12.1		48.6			61.2	
Progression Factor				0.15	0.16	0.00		1.25			1.00	
Incremental Delay, d2				0.0	30.5	0.0		1.2			27.3	
Delay (s)				1.3	35.1	0.0		62.0			88.5	
Level of Service				A	D	A		E			F	
Approach Delay (s)		0.0			33.3			62.0			88.5	
Approach LOS		A			C			E			F	

Intersection Summary			
HCM Average Control Delay	38.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		

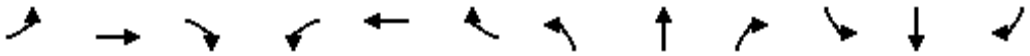
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	293	0	0	0	0	0	7	4	24	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0						6.0			6.0	
Lane Util. Factor	1.00	0.95						1.00			1.00	
Frt	1.00	1.00						0.95			1.00	
Flt Protected	0.95	1.00						1.00			0.97	
Satd. Flow (prot)	1719	3438						1721			1753	
Flt Permitted	0.95	1.00						1.00			0.39	
Satd. Flow (perm)	1719	3438						1721			710	
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
Growth Factor (vph)	274%	274%	274%	100%	100%	100%	274%	274%	274%	274%	274%	274%
Adj. Flow (vph)	63	873	0	0	0	0	0	21	12	71	39	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	63	873	0	0	0	0	0	22	0	0	110	0
Turn Type	pm+pt		Perm							Perm		
Protected Phases	1	2						8			4 5	
Permitted Phases	2		2							4 5		
Actuated Green, G (s)	95.6	82.8						15.2			26.4	
Effective Green, g (s)	95.6	82.8						15.2			22.4	
Actuated g/C Ratio	0.68	0.59						0.11			0.16	
Clearance Time (s)	6.0	6.0						6.0				
Vehicle Extension (s)	3.0	3.0						3.0				
Lane Grp Cap (vph)	1248	2033						187			114	
v/s Ratio Prot	c0.00	c0.25						0.01				
v/s Ratio Perm	0.03										c0.15	
v/c Ratio	0.05	0.43						0.12			0.96	
Uniform Delay, d1	7.3	15.7						56.4			58.4	
Progression Factor	0.47	0.62						1.00			0.58	
Incremental Delay, d2	0.0	0.6						0.3			63.1	
Delay (s)	3.5	10.4						56.6			96.9	
Level of Service	A	B						E			F	
Approach Delay (s)		9.9			0.0			56.6			96.9	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

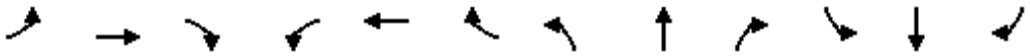
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	8	677	7	49	56	0	0	18	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0		6.0			6.0	
Lane Util. Factor				1.00	0.95	1.00		1.00			1.00	
Frt				1.00	1.00	0.85		1.00			0.91	
Flt Protected				0.95	1.00	1.00		0.98			1.00	
Satd. Flow (prot)				1719	3438	1538		1768			1639	
Flt Permitted				0.95	1.00	1.00		0.35			1.00	
Satd. Flow (perm)				1719	3438	1538		638			1639	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor (vph)	100%	100%	100%	131%	300%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	0	0	0	12	2308	10	73	83	0	0	27	63
RTOR Reduction (vph)	0	0	0	0	0	3	0	0	0	0	56	0
Lane Group Flow (vph)	0	0	0	12	2308	7	0	156	0	0	34	0
Turn Type				pm+pt		Perm	Perm					
Protected Phases				5	6			1 8			4	
Permitted Phases				6		6	1 8					
Actuated Green, G (s)				82.0	78.8	78.8		40.0			16.0	
Effective Green, g (s)				82.0	78.8	78.8		40.0			16.0	
Actuated g/C Ratio				0.59	0.56	0.56		0.29			0.11	
Clearance Time (s)				6.0	6.0	6.0					6.0	
Vehicle Extension (s)				3.0	3.0	3.0					3.0	
Lane Grp Cap (vph)				1081	1935	866		182			187	
v/s Ratio Prot				c0.00	c0.67						0.02	
v/s Ratio Perm				0.01		0.00		c0.24				
v/c Ratio				0.01	1.19	0.01		0.86			0.18	
Uniform Delay, d1				12.1	30.6	13.4		47.3			56.1	
Progression Factor				1.13	1.04	1.20		1.14			1.00	
Incremental Delay, d2				0.0	91.9	0.0		28.9			0.5	
Delay (s)				13.7	123.8	16.1		83.0			56.6	
Level of Service				B	F	B		F			E	
Approach Delay (s)		0.0			122.8			83.0			56.6	
Approach LOS		A			F			F			E	

Intersection Summary			
HCM Average Control Delay	118.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	140.0	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



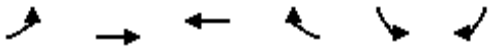
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	275	1	0	0	0	0	69	14	8	18	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0					6.0			6.0	
Lane Util. Factor	1.00	0.95	1.00					1.00			1.00	
Frt	1.00	1.00	0.85					0.98			1.00	
Flt Protected	0.95	1.00	1.00					1.00			0.98	
Satd. Flow (prot)	1719	3438	1538					1768			1782	
Flt Permitted	0.95	1.00	1.00					1.00			0.27	
Satd. Flow (perm)	1719	3438	1538					1768			497	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Growth Factor (vph)	131%	274%	131%	100%	100%	100%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	54	856	1	0	0	0	0	103	21	12	27	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	54	856	1	0	0	0	0	119	0	0	39	0
Turn Type	pm+pt		Perm							Perm		
Protected Phases	1	2						8			4 5	
Permitted Phases	2		2							4 5		
Actuated Green, G (s)	96.8	78.8	78.8					16.0			19.2	
Effective Green, g (s)	96.8	78.8	78.8					16.0			19.2	
Actuated g/C Ratio	0.69	0.56	0.56					0.11			0.14	
Clearance Time (s)	6.0	6.0	6.0					6.0				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	1189	1935	866					202			68	
v/s Ratio Prot	c0.01	c0.25						c0.07				
v/s Ratio Perm	0.03		0.00								c0.08	
v/c Ratio	0.05	0.44	0.00					0.59			0.57	
Uniform Delay, d1	6.9	17.8	13.4					58.9			56.6	
Progression Factor	1.70	1.00	0.72					1.00			0.83	
Incremental Delay, d2	0.0	0.7	0.0					4.3			10.9	
Delay (s)	11.7	18.4	9.6					63.2			58.1	
Level of Service	B	B	A					E			E	
Approach Delay (s)		18.0			0.0			63.2			58.1	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBT	WBR	SBT	SBR2	NEL
Lane Configurations					
Volume (vph)	2270	348	261	466	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	9.0	6.5	6.5	6.5	6.0
Lane Util. Factor	0.95	1.00	0.95	1.00	0.97
Frt	1.00	0.85	1.00	0.85	1.00
Flt Protected	1.00	1.00	1.00	1.00	0.95
Satd. Flow (prot)	3438	1538	3438	1538	3335
Flt Permitted	1.00	1.00	1.00	1.00	0.95
Satd. Flow (perm)	3438	1538	3438	1538	3335
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.92
Adj. Flow (vph)	2495	382	287	512	407
RTOR Reduction (vph)	0	2	0	122	0
Lane Group Flow (vph)	2495	380	287	390	407
Turn Type		custom		Perm	
Protected Phases	6	4 6	4		5
Permitted Phases		6		4	
Actuated Green, G (s)	76.0	109.0	26.5	26.5	16.0
Effective Green, g (s)	76.0	109.0	26.5	26.5	16.0
Actuated g/C Ratio	0.54	0.78	0.19	0.19	0.11
Clearance Time (s)	9.0		6.5	6.5	6.0
Vehicle Extension (s)	4.0		6.0	6.0	2.0
Lane Grp Cap (vph)	1866	1197	651	291	381
v/s Ratio Prot	c0.73	0.25	0.08		c0.12
v/s Ratio Perm				c0.25	
v/c Ratio	1.34	0.32	0.44	1.34	1.07
Uniform Delay, d1	32.0	4.6	50.2	56.8	62.0
Progression Factor	0.68	1.11	1.00	1.00	0.69
Incremental Delay, d2	152.0	0.0	1.3	173.9	64.7
Delay (s)	173.9	5.1	51.5	230.6	107.3
Level of Service	F	A	D	F	F
Approach Delay (s)	151.5		166.3		107.3
Approach LOS	F		F		F

Intersection Summary			
HCM Average Control Delay	150.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

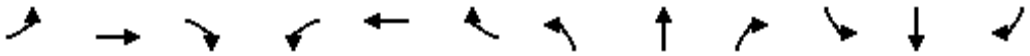


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑			↰↰	
Volume (vph)	0	755	0	0	261	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.5	
Lane Util. Factor		0.95			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		3438			3335	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		3438			3335	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	830	0	0	287	0
RTOR Reduction (vph)	0	0	0	0	233	0
Lane Group Flow (vph)	0	830	0	0	54	0
Turn Type						
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		101.0			26.5	
Effective Green, g (s)		101.0			26.5	
Actuated g/C Ratio		0.72			0.19	
Clearance Time (s)		6.0			6.5	
Vehicle Extension (s)		3.0			6.0	
Lane Grp Cap (vph)		2480			631	
v/s Ratio Prot		c0.24			c0.02	
v/s Ratio Perm						
v/c Ratio		0.33			0.09	
Uniform Delay, d1		7.2			46.8	
Progression Factor		0.32			1.00	
Incremental Delay, d2		0.4			0.2	
Delay (s)		2.6			46.9	
Level of Service		A			D	
Approach Delay (s)		2.6	0.0		46.9	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

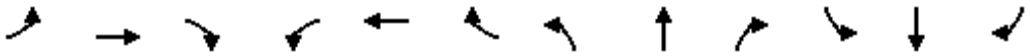
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	3018	159	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	7.0	
Lane Util. Factor				0.95	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				3438	3335	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				3438	3335	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	3353	177	0
RTOR Reduction (vph)	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	0	3353	176	0
Turn Type						
Protected Phases				6	5 8	
Permitted Phases						
Actuated Green, G (s)				96.2	30.8	
Effective Green, g (s)				96.2	24.8	
Actuated g/C Ratio				0.69	0.18	
Clearance Time (s)				6.0		
Vehicle Extension (s)				3.0		
Lane Grp Cap (vph)				2362	591	
v/s Ratio Prot				c0.98	c0.05	
v/s Ratio Perm						
v/c Ratio				1.42	0.30	
Uniform Delay, d1				21.9	50.0	
Progression Factor				1.07	0.08	
Incremental Delay, d2				189.0	0.3	
Delay (s)				212.6	4.1	
Level of Service				F	A	
Approach Delay (s)	0.0			212.6	4.1	
Approach LOS	A			F	A	

Intersection Summary			
HCM Average Control Delay	202.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



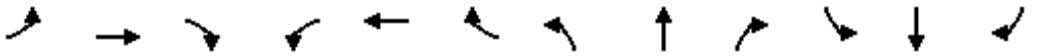
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	0	0	5	0	0	0	150	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0			6.0				6.0				
Lane Util. Factor	1.00			1.00				0.95				
Frt	1.00			1.00				1.00				
Flt Protected	0.95			0.95				1.00				
Satd. Flow (prot)	1719			1719				3438				
Flt Permitted	0.95			0.95				1.00				
Satd. Flow (perm)	1719			1719				3438				
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)	10	0	0	5	0	0	0	163	0	0	0	0
RTOR Reduction (vph)	9	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	1	0	0	5	0	0	0	163	0	0	0	0
Turn Type	Prot			Prot								
Protected Phases	5			1				8				
Permitted Phases												
Actuated Green, G (s)	12.0			1.7				12.8				
Effective Green, g (s)	12.0			1.7				12.8				
Actuated g/C Ratio	0.09			0.01				0.09				
Clearance Time (s)	7.0			6.0				6.0				
Vehicle Extension (s)	3.0			3.0				3.0				
Lane Grp Cap (vph)	147			21				314				
v/s Ratio Prot	c0.00			c0.00				c0.05				
v/s Ratio Perm												
v/c Ratio	0.01			0.24				0.52				
Uniform Delay, d1	58.5			68.5				60.7				
Progression Factor	1.00			0.88				0.02				
Incremental Delay, d2	0.0			0.5				1.3				
Delay (s)	58.6			60.9				2.6				
Level of Service	E			E				A				
Approach Delay (s)		58.6			60.9			2.6			0.0	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	114.2
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



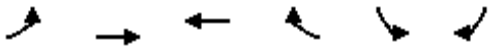
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1308	36	0	0	0	0	150	9	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0					6.0	6.0		6.0	
Lane Util. Factor		0.95	1.00					0.95	1.00		1.00	
Frt		1.00	0.85					1.00	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		3438	1538					3438	1538		1810	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		3438	1538					3438	1538		1810	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1453	40	0	0	0	0	167	10	0	6	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	0	1453	31	0	0	0	0	167	1	0	6	0
Turn Type			Perm						Perm	Split		
Protected Phases		2						8		1	1	
Permitted Phases			2						8			
Actuated Green, G (s)		107.5	107.5					12.8	12.8		1.7	
Effective Green, g (s)		107.5	107.5					12.8	12.8		1.7	
Actuated g/C Ratio		0.77	0.77					0.09	0.09		0.01	
Clearance Time (s)		6.0	6.0					6.0	6.0		6.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)		2640	1181					314	141		22	
v/s Ratio Prot		c0.42						c0.05			c0.00	
v/s Ratio Perm			0.02						0.00			
v/c Ratio		0.55	0.03					0.53	0.01		0.27	
Uniform Delay, d1		6.5	3.8					60.7	57.8		68.5	
Progression Factor		0.74	0.38					1.00	1.00		0.19	
Incremental Delay, d2		0.8	0.0					1.7	0.0		6.6	
Delay (s)		5.7	1.5					62.5	57.8		19.9	
Level of Service		A	A					E	E		B	
Approach Delay (s)		5.6			0.0			62.2			19.9	
Approach LOS		A			A			E			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



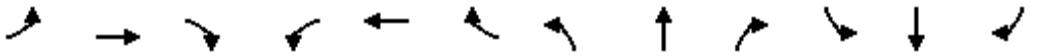
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	1318	9	0	2462	9	160	5	14	27	0	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0		6.0	6.0	4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95	1.00		0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.89		1.00	0.85	
Flt Protected	0.95	1.00	1.00		1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3438	1538		3438	1538	1719	1612		1719	1538	
Flt Permitted	0.04	1.00	1.00		1.00	1.00	0.14	1.00		0.74	1.00	
Satd. Flow (perm)	81	3438	1538		3438	1538	248	1612		1344	1538	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	1464	10	0	2736	10	178	6	16	30	0	329
RTOR Reduction (vph)	0	0	2	0	0	4	0	13	0	0	41	0
Lane Group Flow (vph)	36	1464	8	0	2736	6	178	9	0	30	288	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	92.4	92.4	92.4		85.2	85.2	35.2	29.2		28.0	25.6	
Effective Green, g (s)	92.4	92.4	92.4		85.2	85.2	35.2	29.2		28.0	25.6	
Actuated g/C Ratio	0.66	0.66	0.66		0.61	0.61	0.25	0.21		0.20	0.18	
Clearance Time (s)	4.0	6.0	6.0		6.0	6.0	4.0	6.0		4.0	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)	91	2269	1015		2092	936	125	336		275	281	
v/s Ratio Prot	0.01	c0.43			c0.80		c0.06	0.01		0.00	0.19	
v/s Ratio Perm	0.25		0.00			0.00	c0.30			0.02		
v/c Ratio	0.40	0.65	0.01		1.31	0.01	1.42	0.03		0.11	1.03	
Uniform Delay, d1	68.3	14.1	8.1		27.4	10.8	49.8	44.1		45.6	57.2	
Progression Factor	1.95	0.82	1.06		1.56	1.58	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	1.3	0.0		139.8	0.0	230.8	0.0		0.2	60.4	
Delay (s)	135.7	12.8	8.6		182.5	17.1	280.6	44.1		45.8	117.6	
Level of Service	F	B	A		F	B	F	D		D	F	
Approach Delay (s)		15.7			181.9			254.6			111.6	
Approach LOS		B			F			F			F	

Intersection Summary			
HCM Average Control Delay	127.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	61	1254	2300	114	61	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3438	3438	1538	1719	1538
Flt Permitted	0.04	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	66	3438	3438	1538	1719	1538
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	69	1409	2584	128	69	128
RTOR Reduction (vph)	0	0	0	33	0	45
Lane Group Flow (vph)	69	1409	2584	95	69	83
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	115.8	115.8	104.1	104.1	12.2	12.2
Effective Green, g (s)	115.8	115.8	104.1	104.1	12.2	12.2
Actuated g/C Ratio	0.83	0.83	0.74	0.74	0.09	0.09
Clearance Time (s)	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
Lane Grp Cap (vph)	122	2844	2556	1144	150	134
v/s Ratio Prot	0.02	c0.41	c0.75		0.04	
v/s Ratio Perm	0.45			0.06		c0.05
v/c Ratio	0.57	0.50	1.01	0.08	0.46	0.62
Uniform Delay, d1	67.1	3.5	18.0	4.9	60.8	61.7
Progression Factor	2.10	0.12	0.03	0.00	1.00	1.00
Incremental Delay, d2	4.9	0.5	8.4	0.0	2.2	8.6
Delay (s)	146.0	0.9	9.0	0.0	63.0	70.3
Level of Service	F	A	A	A	E	E
Approach Delay (s)		7.7	8.6		67.8	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



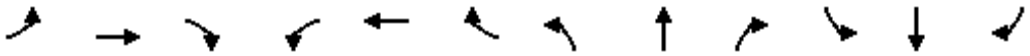
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1223	5	23	2408	112	9	0	65	93	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1719	1538	1719	1538	
Flt Permitted	0.04	1.00	1.00	0.19	1.00	1.00		0.75	1.00	0.75	1.00	
Satd. Flow (perm)	71	3438	1538	336	3438	1538		1352	1538	1359	1538	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	1359	6	26	2676	124	10	0	72	103	0	16
RTOR Reduction (vph)	0	0	1	0	0	24	0	0	65	0	14	0
Lane Group Flow (vph)	37	1359	5	26	2676	100	0	10	7	103	2	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	105.4	105.4	105.4	104.2	104.2	104.2		14.2	14.2	14.2	14.2	
Effective Green, g (s)	105.4	105.4	105.4	104.2	104.2	104.2		14.2	14.2	14.2	14.2	
Actuated g/C Ratio	0.75	0.75	0.75	0.74	0.74	0.74		0.10	0.10	0.10	0.10	
Clearance Time (s)	6.0	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	3.0	
Lane Grp Cap (vph)	96	2588	1158	274	2559	1145		137	156	138	156	
v/s Ratio Prot	0.01	c0.40		0.00	c0.78						0.00	
v/s Ratio Perm	0.28		0.00	0.07		0.07		0.01	0.00	c0.08		
v/c Ratio	0.39	0.53	0.00	0.09	1.05	0.09		0.07	0.05	0.75	0.01	
Uniform Delay, d1	41.4	7.1	4.3	7.1	17.9	4.9		56.9	56.8	61.1	56.6	
Progression Factor	1.61	2.41	2.29	0.29	0.32	0.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	0.7	0.0	0.0	21.9	0.0		0.2	0.1	19.5	0.0	
Delay (s)	68.7	17.7	9.8	2.0	27.6	0.0		57.2	56.9	80.7	56.6	
Level of Service	E	B	A	A	C	A		E	E	F	E	
Approach Delay (s)		19.1			26.1			56.9			77.4	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBT	WBR	NBT	SBL	SBR
Lane Configurations					
Volume (vph)	2280	150	73	157	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	5.6	5.6
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00
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)	3438	1538	3438	1719	1538
Flt Permitted	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	3438	1719	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90
Growth Factor (vph)	100%	251%	251%	251%	251%
Adj. Flow (vph)	2533	418	204	438	229
RTOR Reduction (vph)	0	89	0	0	67
Lane Group Flow (vph)	2533	329	204	438	162
Turn Type		Perm		Prot	custom
Protected Phases	6		5	4	
Permitted Phases		6	5		4
Actuated Green, G (s)	86.0	86.0	7.0	29.4	29.4
Effective Green, g (s)	86.0	86.0	7.0	29.4	29.4
Actuated g/C Ratio	0.61	0.61	0.05	0.21	0.21
Clearance Time (s)	6.0	6.0	6.0	5.6	5.6
Vehicle Extension (s)	5.0	5.0	4.0	4.0	4.0
Lane Grp Cap (vph)	2112	945	172	361	323
v/s Ratio Prot	c0.74		c0.06	c0.25	
v/s Ratio Perm		0.21			0.11
v/c Ratio	1.20	0.35	1.19	1.21	0.50
Uniform Delay, d1	27.0	13.3	66.5	55.3	48.8
Progression Factor	1.00	1.00	0.74	1.00	1.00
Incremental Delay, d2	94.6	1.0	123.6	118.9	1.7
Delay (s)	121.6	14.3	172.7	174.2	50.5
Level of Service	F	B	F	F	D
Approach Delay (s)	106.4		172.7		
Approach LOS	F		F		

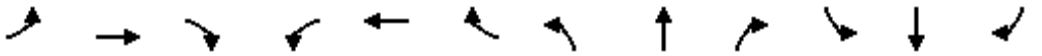
Intersection Summary			
HCM Average Control Delay	114.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1563	0	5	2650	0	51	0	4	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.99				
Flt Protected		1.00		0.95	1.00			0.96				
Satd. Flow (prot)		3438		1719	3438			1712				
Flt Permitted		1.00		0.09	1.00			0.74				
Satd. Flow (perm)		3438		154	3438			1329				
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	0	1839	0	6	3118	0	60	0	5	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1839	0	6	3118	0	0	63	0	0	0	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		110.1		116.9	116.9			11.5				
Effective Green, g (s)		110.1		116.9	116.9			11.5				
Actuated g/C Ratio		0.78		0.83	0.83			0.08				
Clearance Time (s)		6.0		6.0	6.0			6.0				
Vehicle Extension (s)		3.0		3.0	3.0			3.0				
Lane Grp Cap (vph)		2696		137	2863			109				
v/s Ratio Prot		0.53		0.00	c0.91							
v/s Ratio Perm				0.04				c0.05				
v/c Ratio		0.68		0.04	1.09			0.58				
Uniform Delay, d1		7.0		6.5	11.8			62.1				
Progression Factor		1.00		1.00	1.00			1.00				
Incremental Delay, d2		0.7		0.1	46.7			7.3				
Delay (s)		7.8		6.7	58.4			69.4				
Level of Service		A		A	E			E				
Approach Delay (s)		7.8			58.3			69.4			0.0	
Approach LOS		A			E			E			A	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	140.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



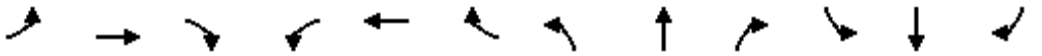
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	1453	0	4	2245	0	0	0	0	21	0	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0						6.0	6.0
Lane Util. Factor	0.97	0.95		1.00	0.95						1.00	1.00
Frt	1.00	1.00		1.00	1.00						1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00						0.95	1.00
Satd. Flow (prot)	3335	3438		1719	3438						1719	1538
Flt Permitted	0.04	1.00		0.12	1.00						0.76	1.00
Satd. Flow (perm)	136	3438		210	3438						1370	1538
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	147	1670	0	5	2580	0	0	0	0	24	0	407
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	4
Lane Group Flow (vph)	147	1670	0	5	2580	0	0	0	0	0	24	403
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	119.9	113.1		97.9	97.1						8.1	24.9
Effective Green, g (s)	119.9	113.1		97.9	97.1						8.1	24.9
Actuated g/C Ratio	0.86	0.81		0.70	0.69						0.06	0.18
Clearance Time (s)	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
Lane Grp Cap (vph)	500	2777		155	2384						79	339
v/s Ratio Prot	0.04	0.49		0.00	c0.75							c0.14
v/s Ratio Perm	0.22			0.02							0.02	0.12
v/c Ratio	0.29	0.60		0.03	1.08						0.30	1.19
Uniform Delay, d1	51.7	5.0		7.8	21.5						63.2	57.6
Progression Factor	1.00	1.00		0.55	0.57						1.00	1.00
Incremental Delay, d2	0.3	1.0		0.0	40.2						2.2	110.5
Delay (s)	52.0	6.0		4.3	52.4						65.4	168.1
Level of Service	D	A		A	D						E	F
Approach Delay (s)		9.7			52.3			0.0			162.3	
Approach LOS		A			D			A			F	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1218	63	5	2050	68	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
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)	3438	1538	1719	3438	1719	1538
Flt Permitted	1.00	1.00	0.13	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	230	3438	1719	1538
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Growth Factor (vph)	100%	279%	279%	100%	279%	279%
Adj. Flow (vph)	1467	212	17	2470	229	10
RTOR Reduction (vph)	0	62	0	0	0	8
Lane Group Flow (vph)	1467	150	17	2470	229	2
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Actuated Green, G (s)	99.3	99.3	106.9	106.9	21.1	21.1
Effective Green, g (s)	99.3	99.3	106.9	106.9	21.1	21.1
Actuated g/C Ratio	0.71	0.71	0.76	0.76	0.15	0.15
Clearance Time (s)	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
Lane Grp Cap (vph)	2439	1091	193	2625	259	232
v/s Ratio Prot	0.43		0.00	c0.72	c0.13	
v/s Ratio Perm		0.10	0.07			0.00
v/c Ratio	0.60	0.14	0.09	0.94	0.88	0.01
Uniform Delay, d1	10.3	6.6	7.5	13.9	58.3	50.6
Progression Factor	0.62	0.16	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.2	0.2	8.3	27.9	0.0
Delay (s)	7.3	1.3	7.7	22.2	86.2	50.6
Level of Service	A	A	A	C	F	D
Approach Delay (s)	6.5			22.1	84.7	
Approach LOS	A			C	F	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	1769	1	23	1035	0	2	0	0	1	0	41
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	4057	2	53	2374	0	5	0	0	2	0	94
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2374			4059			5411	6551	2030	4522	6552	1187
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2374			4059			5411	6551	2030	4522	6552	1187
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	96			0			0	0	100	0	0	47
cM capacity (veh/h)	192			39			0	0	46	0	0	177

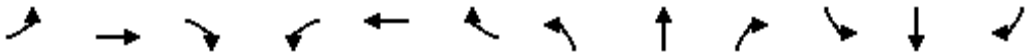
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	7	2705	1355	53	1582	791	5	96
Volume Left	7	0	0	53	0	0	5	2
Volume Right	0	0	2	0	0	0	0	94
cSH	192	1700	1700	39	1700	1700	0	0
Volume to Capacity	0.04	1.59	0.80	1.36	0.93	0.47	Err	Err
Queue Length 95th (ft)	3	0	0	135	0	0	Err	Err
Control Delay (s)	24.4	0.0	0.0	432.6	0.0	0.0	Err	Err
Lane LOS	C			F			F	F
Approach Delay (s)	0.0			9.4			Err	Err
Approach LOS							F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	113.4%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (veh/h)	1771	7	0	1029	0	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	3975	16	0	2310	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1069		
pX, platoon unblocked					0.48	
vC, conflicting volume			3991		5138	1996
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3991		7426	1996
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	91
cM capacity (veh/h)			41		0	49

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NE 1
Volume Total	2650	1341	1155	1155	4
Volume Left	0	0	0	0	0
Volume Right	0	16	0	0	4
cSH	1700	1700	1700	1700	49
Volume to Capacity	1.56	0.79	0.68	0.68	0.09
Queue Length 95th (ft)	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	86.1
Lane LOS					F
Approach Delay (s)	0.0		0.0		86.1
Approach LOS					F

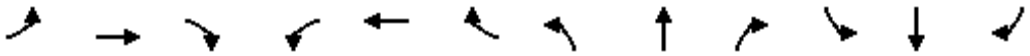
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	1733	0	1	1001	8	0	0	0	1	0	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	92	3890	0	2	2247	18	0	0	0	2	0	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					634							
pX, platoon unblocked	0.48						0.48	0.48		0.48	0.48	0.48
vC, conflicting volume	2265			3890			5256	6343	1945	4389	6334	1132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1455			3890			7742	10028	1945	5921	10010	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	57			95			100	100	100	0	100	89
cM capacity (veh/h)	212			46			0	0	53	0	0	511

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	92	2593	1297	2	1498	767	0	56
Volume Left	92	0	0	2	0	0	0	2
Volume Right	0	0	0	0	0	18	0	54
cSH	212	1700	1700	46	1700	1700	1700	0
Volume to Capacity	0.43	1.53	0.76	0.05	0.88	0.45	0.00	334.06
Queue Length 95th (ft)	51	0	0	4	0	0	0	Err
Control Delay (s)	34.3	0.0	0.0	88.0	0.0	0.0	0.0	Err
Lane LOS	D			F			A	F
Approach Delay (s)	0.8			0.1			0.0	9999.0
Approach LOS							A	F

Intersection Summary				
Average Delay	89.5			
Intersection Capacity Utilization	111.1%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1502	0	0	794	1	0	0	0	1	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	3298	0	0	1744	2	0	0	0	2	0	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		513										
pX, platoon unblocked				0.22			0.22	0.22	0.22	0.22	0.22	
vC, conflicting volume	1746			3298			4179	5044	1649	3394	5043	873
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1746			4368			8408	12378	0	4806	12373	873
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	100	100	0	100	97
cM capacity (veh/h)	343			6			0	0	234	0	0	288

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	2199	1099	0	1162	583	0	11
Volume Left	0	0	0	0	0	0	0	2
Volume Right	0	0	0	0	0	2	0	9
cSH	1700	1700	1700	1700	1700	1700	1700	0
Volume to Capacity	0.00	1.29	0.65	0.00	0.68	0.34	0.00	53.04
Queue Length 95th (ft)	0	0	0	0	0	0	0	Err
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Err
Lane LOS							A	F
Approach Delay (s)	0.0			0.0			0.0	Err
Approach LOS							A	F

Intersection Summary				
Average Delay	21.7			
Intersection Capacity Utilization	98.4%	ICU Level of Service		F
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1507	10	0	793	0	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	3344	22	0	1759	0	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1023			1090		
pX, platoon unblocked			0.22		0.37	0.22
vC, conflicting volume			3366		4234	1683
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4633		2827	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	99
cM capacity (veh/h)			5		5	241

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	2229	1137	880	880	2
Volume Left	0	0	0	0	0
Volume Right	0	22	0	0	2
cSH	1700	1700	1700	1700	241
Volume to Capacity	1.31	0.67	0.52	0.52	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	20.1
Lane LOS					C
Approach Delay (s)	0.0		0.0		20.1
Approach LOS					C

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1508	10	13	794	5	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3381	22	29	1780	11	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1190			923		
pX, platoon unblocked			0.23		0.37	0.23
vC, conflicting volume			3404		4341	1702
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			4785		3036	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			0		0	85
cM capacity (veh/h)			4		0	243

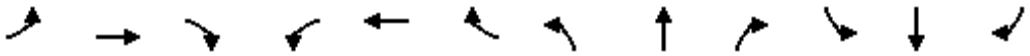
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	2254	1149	29	890	890	47
Volume Left	0	0	29	0	0	11
Volume Right	0	22	0	0	0	36
cSH	1700	1700	4	1700	1700	0
Volume to Capacity	1.33	0.68	6.81	0.52	0.52	Err
Queue Length 95th (ft)	0	0	Err	0	0	Err
Control Delay (s)	0.0	0.0	4220.7	0.0	0.0	Err
Lane LOS			F			F
Approach Delay (s)	0.0		68.0			Err
Approach LOS						F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1501	15	0	794	0	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3296	33	0	1744	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				596		
pX, platoon unblocked					0.70	
vC, conflicting volume			3329		4184	1664
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3329		4693	1664
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	81
cM capacity (veh/h)			78		0	83

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	2197	1132	872	872	15
Volume Left	0	0	0	0	0
Volume Right	0	33	0	0	15
cSH	1700	1700	1700	1700	83
Volume to Capacity	1.29	0.67	0.51	0.51	0.19
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	57.9
Lane LOS					F
Approach Delay (s)	0.0		0.0		57.9
Approach LOS					F

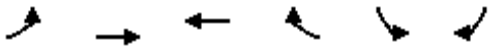
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	1498	16	13	805	0	6	2	3	3	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	20	3289	21	17	1768	0	13	4	7	7	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					381							
pX, platoon unblocked	0.70						0.70	0.70		0.70	0.70	0.70
vC, conflicting volume	1768			3310			4261	5140	1655	3494	5151	884
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1229			3310			4813	6077	1655	3710	6092	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	95			79			0	0	92	0	100	99
cM capacity (veh/h)	380			80			0	0	84	0	0	748

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	20	2193	1117	17	1178	589	24	11
Volume Left	20	0	0	17	0	0	13	7
Volume Right	0	0	21	0	0	0	7	4
cSH	380	1700	1700	80	1700	1700	0	0
Volume to Capacity	0.05	1.29	0.66	0.21	0.69	0.35	221.47	Err
Queue Length 95th (ft)	4	0	0	18	0	0	Err	Err
Control Delay (s)	15.0	0.0	0.0	61.8	0.0	0.0	Err	Err
Lane LOS	B			F			F	F
Approach Delay (s)	0.1			0.6			Err	Err
Approach LOS							F	F

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	98.8%	ICU Level of Service	F	
Analysis Period (min)	15			

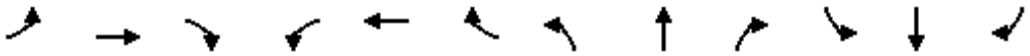


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	1475	770	7	2	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	34	3342	1745	16	5	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		420				
pX, platoon unblocked					0.30	
vC, conflicting volume	1761				3492	880
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1761				4641	880
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	90				0	98
cM capacity (veh/h)	338				0	284

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	34	1671	1671	1163	597	11
Volume Left	34	0	0	0	0	5
Volume Right	0	0	0	0	16	7
cSH	338	1700	1700	1700	1700	0
Volume to Capacity	0.10	0.98	0.98	0.68	0.35	26.19
Queue Length 95th (ft)	8	0	0	0	0	Err
Control Delay (s)	16.8	0.0	0.0	0.0	0.0	Err
Lane LOS	C					F
Approach Delay (s)	0.2			0.0		Err
Approach LOS						F

Intersection Summary			
Average Delay	22.1		
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

Intersection has too many legs for HCM analysis.

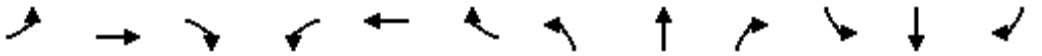


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	1138	265	29	700	3	30	1	6	9	1	18
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	44	2760	643	70	1698	7	73	2	15	22	2	44
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		807										
pX, platoon unblocked				0.33			0.33	0.33	0.33	0.33	0.33	
vC, conflicting volume	1705			2760			3882	4693	1380	3325	4690	853
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1705			2262			5714	8210	0	4001	8199	853
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	88			0			0	0	96	0	0	85
cM capacity (veh/h)	356			69			0	0	349	0	0	297

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	44	1380	1380	643	70	1132	573	90	68
Volume Left	44	0	0	0	70	0	0	73	22
Volume Right	0	0	0	643	0	0	7	15	44
cSH	356	1700	1700	1700	69	1700	1700	0	0
Volume to Capacity	0.12	0.81	0.81	0.38	1.01	0.67	0.34	Err	Err
Queue Length 95th (ft)	10	0	0	0	130	0	0	Err	Err
Control Delay (s)	16.5	0.0	0.0	0.0	213.9	0.0	0.0	Err	Err
Lane LOS	C				F			F	F
Approach Delay (s)	0.2				8.5			Err	Err
Approach LOS								F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

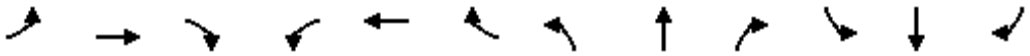
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↱			↱
Volume (veh/h)	0	807	0	0	538	0	0	0	6	0	0	180
Sign Control		Free			Free			Yield			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2000	0	0	1602	0	0	0	10	0	0	286
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1602			2000			3087	3602	1000	2612	3602	801
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1602			2000			3087	3602	1000	2612	3602	801
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	100	96	100	100	11
cM capacity (veh/h)	391			272			1	5	236	11	5	321

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	1000	1000	801	801	10	286
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	10	286
cSH	1700	1700	1700	1700	236	321
Volume to Capacity	0.59	0.59	0.47	0.47	0.04	0.89
Queue Length 95th (ft)	0	0	0	0	3	209
Control Delay (s)	0.0	0.0	0.0	0.0	20.9	62.8
Lane LOS					C	F
Approach Delay (s)	0.0		0.0		20.9	62.8
Approach LOS					C	F

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	124	726	1	10	475	4	6	4	9	1	5	57
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	354	2072	3	29	1356	11	17	11	26	3	14	163
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1367			2075			3685	4204	1036	3188	4196	678
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1367			2075			3685	4204	1036	3188	4196	678
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	27			89			0	0	88	0	0	58
cM capacity (veh/h)	483			254			0	0	223	0	0	388

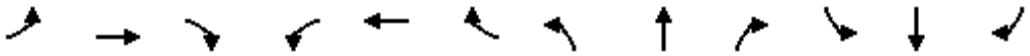
Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	354	1036	1036	3	29	678	678	11	54	180
Volume Left	354	0	0	0	29	0	0	0	17	3
Volume Right	0	0	0	3	0	0	0	11	26	163
cSH	483	1700	1700	1700	254	1700	1700	1700	0	0
Volume to Capacity	0.73	0.61	0.61	0.00	0.11	0.40	0.40	0.01	Err	Err
Queue Length 95th (ft)	150	0	0	0	9	0	0	0	Err	Err
Control Delay (s)	30.3	0.0	0.0	0.0	21.0	0.0	0.0	0.0	Err	Err
Lane LOS	D				C				F	F
Approach Delay (s)	4.4				0.4				Err	Err
Approach LOS									F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	18	479	6	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	53	1411	18	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1235					
pX, platoon unblocked						
vC, conflicting volume			0		812	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		812	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			97		94	100
cM capacity (veh/h)			1600		301	1075

Direction, Lane #	WB 1	WB 2	WB 3	NB 1
Volume Total	53	706	706	18
Volume Left	53	0	0	18
Volume Right	0	0	0	0
cSH	1600	1700	1700	301
Volume to Capacity	0.03	0.42	0.42	0.06
Queue Length 95th (ft)	3	0	0	5
Control Delay (s)	7.3	0.0	0.0	17.7
Lane LOS	A			C
Approach Delay (s)	0.3			17.7
Approach LOS				C

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	759	10	0	0	0	0	6	0	0	18	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	2236	29	0	0	0	0	18	0	0	53	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1250										
pX, platoon unblocked				0.50			0.50	0.50	0.50	0.50	0.50	
vC, conflicting volume	0			2266			2263	2236	1118	1127	2266	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			1536			1530	1478	0	0	1536	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	71	100	100	5	100
cM capacity (veh/h)	1600			208			6	61	539	395	56	1075

Direction, Lane #	EB 1	EB 2	EB 3	NB 1	SB 1
Volume Total	1118	1118	29	18	53
Volume Left	0	0	0	0	0
Volume Right	0	0	29	0	0
cSH	1700	1700	1700	61	56
Volume to Capacity	0.66	0.66	0.02	0.29	0.95
Queue Length 95th (ft)	0	0	0	26	107
Control Delay (s)	0.0	0.0	0.0	86.6	222.9
Lane LOS				F	F
Approach Delay (s)	0.0			86.6	222.9
Approach LOS				F	F

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	102.4%	ICU Level of Service	G	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	754	15	0	0	0	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2246	45	0	0	0	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			2290		2268	1145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2290		2268	1145
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	79
cM capacity (veh/h)			208		33	188

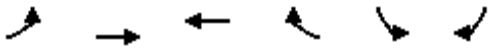
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total	1497	793	39
Volume Left	0	0	0
Volume Right	0	45	39
cSH	1700	1700	188
Volume to Capacity	0.88	0.47	0.21
Queue Length 95th (ft)	0	0	19
Control Delay (s)	0.0	0.0	29.0
Lane LOS			D
Approach Delay (s)	0.0		29.0
Approach LOS			D

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		68.4%	ICU Level of Service C
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2108	60	0	0	0	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	2316	66	0	0	0	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	831					
pX, platoon unblocked			0.60		0.60	0.60
vC, conflicting volume			2382		2316	1158
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1964		1854	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	98
cM capacity (veh/h)			167		38	641

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	1158	1158	66	10
Volume Left	0	0	0	0
Volume Right	0	0	66	10
cSH	1700	1700	1700	641
Volume to Capacity	0.68	0.68	0.04	0.02
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	10.7
Lane LOS				B
Approach Delay (s)	0.0			10.7
Approach LOS				B

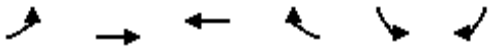
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	1558	0	0	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1693	0	0	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1096				
pX, platoon unblocked						
vC, conflicting volume	1693				1693	847
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1693				1693	847
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	99
cM capacity (veh/h)	360				81	299

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1129	564	4
Volume Left	0	0	0
Volume Right	0	0	4
cSH	1700	1700	299
Volume to Capacity	0.66	0.33	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	17.2
Lane LOS			C
Approach Delay (s)	0.0		17.2
Approach LOS			C

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	1643	9	0	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	0	0	1711	9	0	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1721				1716	860
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1721				1716	860
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	99
cM capacity (veh/h)	351				78	293

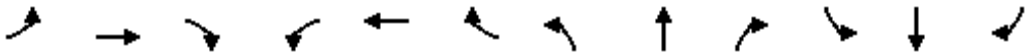
Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1141	580	3
Volume Left	0	0	0
Volume Right	0	9	3
cSH	1700	1700	293
Volume to Capacity	0.67	0.34	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	17.4
Lane LOS			C
Approach Delay (s)	0.0		17.4
Approach LOS			C

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	1681	9	0
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	0	1808	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0		904	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		904	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		96	100
cM capacity (veh/h)			1600		271	1075

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	603	1205	10
Volume Left	0	0	10
Volume Right	0	0	0
cSH	1600	1700	271
Volume to Capacity	0.00	0.71	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	18.8
Lane LOS			C
Approach Delay (s)	0.0		18.8
Approach LOS			C

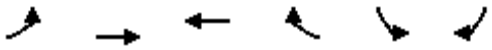
Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		56.5%	ICU Level of Service B
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	2171	0	0	0	0	0	0	3	9	6	0
Sign Control		Free			Free			Stop			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	10	2334	0	0	0	0	0	0	3	10	6	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			2334			2357	2354	1167	1190	2354	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			2334			2357	2354	1167	1190	2354	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	99			100			100	100	98	93	81	100
cM capacity (veh/h)	1600			200			15	34	182	137	34	1075

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	1177	1167	3	16
Volume Left	10	0	0	10
Volume Right	0	0	3	0
cSH	1600	1700	182	61
Volume to Capacity	0.01	0.69	0.02	0.26
Queue Length 95th (ft)	0	0	1	23
Control Delay (s)	0.2	0.0	25.1	83.3
Lane LOS	A		D	F
Approach Delay (s)	0.1		25.1	83.3
Approach LOS			D	F

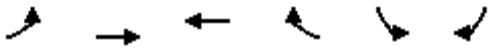
Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	1678	3	0	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	1785	3	0	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1788				1787	894
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1788				1787	894
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	99
cM capacity (veh/h)	330				70	278

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1190	598	3
Volume Left	0	0	0
Volume Right	0	3	3
cSH	1700	1700	278
Volume to Capacity	0.70	0.35	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	18.1
Lane LOS			C
Approach Delay (s)	0.0		18.1
Approach LOS			C

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	0	1675	0	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1763	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			389			
pX, platoon unblocked	0.62				0.62	0.62
vC, conflicting volume	1763				1763	882
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	994				994	0
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.4
p0 queue free %	100				100	100
cM capacity (veh/h)	415				146	663

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	1175	588	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.69	0.35	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0		0.0
Approach LOS			A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		49.6%	ICU Level of Service A
Analysis Period (min)		15	

Intersection has too many lanes per leg.

HCM All-Way analysis is limited to two lanes per leg.

Channelized right turn lanes are not counted.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2969	18	0	0	0	18
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	3452	21	0	0	0	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	595					
pX, platoon unblocked			0.19		0.19	0.19
vC, conflicting volume			3473		3463	1737
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			5486		5431	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		100	90
cM capacity (veh/h)			2		0	205

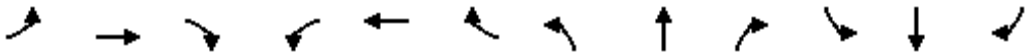
Direction, Lane #	EB 1	EB 2	NB 1
Volume Total	2302	1172	21
Volume Left	0	0	0
Volume Right	0	21	21
cSH	1700	1700	205
Volume to Capacity	1.35	0.69	0.10
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.0	0.0	24.6
Lane LOS			C
Approach Delay (s)	0.0		24.6
Approach LOS			C

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		92.6%	ICU Level of Service F
Analysis Period (min)		15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	1900	123	0
Sign Control	Free			Free	Yield	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	2209	143	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1002					
pX, platoon unblocked						
vC, conflicting volume			0		1105	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		1105	0
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			100		29	100
cM capacity (veh/h)			1600		200	1075

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	736	1473	143
Volume Left	0	0	143
Volume Right	0	0	0
cSH	1600	1700	200
Volume to Capacity	0.00	0.87	0.71
Queue Length 95th (ft)	0	0	114
Control Delay (s)	0.0	0.0	58.2
Lane LOS			F
Approach Delay (s)	0.0		58.2
Approach LOS			F

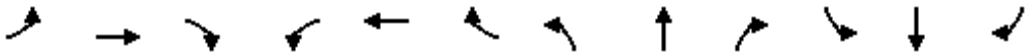
Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	150.0%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2827	91	0	0	0	0	123	0	0	0	0
Sign Control		Free			Free			Stop			Yield	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	0	3287	106	0	0	0	0	143	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		969										
pX, platoon unblocked				0.19			0.19	0.19	0.19	0.19	0.19	
vC, conflicting volume	0			3393			3340	3340	1697	1715	3393	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			5026			4754	4754	0	0	5026	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			100	0	100	0	100	100
cM capacity (veh/h)	1600			3			0	0	208	0	0	1075

Direction, Lane #	EB 1	EB 2	NB 1	SB 1
Volume Total	1644	1749	143	0
Volume Left	0	0	0	0
Volume Right	0	106	0	0
cSH	1600	1700	0	1700
Volume to Capacity	0.00	1.03	940.52	0.00
Queue Length 95th (ft)	0	0	Err	0
Control Delay (s)	0.0	0.0	Err	0.0
Lane LOS			F	A
Approach Delay (s)	0.0		Err	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay	404.4			
Intersection Capacity Utilization	94.2%	ICU Level of Service	F	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	2200	100	100	1650	19	100	0	100	14	5	46
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.89	0.92	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	15	2472	112	112	1854	21	112	0	112	15	5	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1875			2584			3707	4602	1236	3457	4693	927
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1875			2584			3707	4602	1236	3457	4693	927
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	95			29			0	100	31	0	0	81
cM capacity (veh/h)	305			158			0	0	164	0	0	264

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	15	1236	1236	112	112	927	927	21	225	71
Volume Left	15	0	0	0	112	0	0	0	112	15
Volume Right	0	0	0	112	0	0	0	21	112	50
cSH	305	1700	1700	1700	158	1700	1700	1700	0	1
Volume to Capacity	0.05	0.73	0.73	0.07	0.71	0.55	0.55	0.01	Err	72.10
Queue Length 95th (ft)	4	0	0	0	106	0	0	0	Err	Err
Control Delay (s)	17.4	0.0	0.0	0.0	69.9	0.0	0.0	0.0	Err	Err
Lane LOS	C				F				F	F
Approach Delay (s)	0.1				4.0				Err	Err
Approach LOS									F	F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2500	10	15	1702	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	2551	10	15	1737	0	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			2561		3455	1281
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2561		3455	1281
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			91		100	97
cM capacity (veh/h)			162		4	152

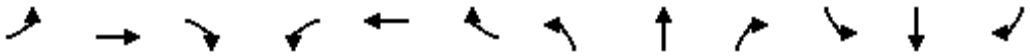
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1701	861	15	868	868	5
Volume Left	0	0	15	0	0	0
Volume Right	0	10	0	0	0	5
cSH	1700	1700	162	1700	1700	152
Volume to Capacity	1.00	0.51	0.09	0.51	0.51	0.03
Queue Length 95th (ft)	0	0	8	0	0	3
Control Delay (s)	0.0	0.0	29.6	0.0	0.0	29.4
Lane LOS			D			D
Approach Delay (s)	0.0		0.3			29.4
Approach LOS						D

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2867	13	13	1768	72	9
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	3186	14	14	1964	80	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			3200		3869	1593
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3200		3869	1593
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			84		0	89
cM capacity (veh/h)			88		2	93

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1
Volume Total	1593	1593	14	14	655	655	655	90
Volume Left	0	0	0	14	0	0	0	80
Volume Right	0	0	14	0	0	0	0	10
cSH	1700	1700	1700	88	1700	1700	1700	2
Volume to Capacity	0.94	0.94	0.01	0.16	0.39	0.39	0.39	40.28
Queue Length 95th (ft)	0	0	0	14	0	0	0	Err
Control Delay (s)	0.0	0.0	0.0	53.5	0.0	0.0	0.0	Err
Lane LOS				F				F
Approach Delay (s)	0.0			0.4				Err
Approach LOS								F

Intersection Summary			
Average Delay	170.9		
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	2854	9	0	1964	9	4	0	9	9	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	3136	10	0	2158	10	4	0	10	10	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2168			3146			4230	5309	1573	3741	5309	1084
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2168			3146			4230	5309	1573	3741	5309	1084
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	100			100			0	100	90	0	100	95
cM capacity (veh/h)	233			93			1	0	96	1	0	207

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	0	2091	1055	0	1439	729	14	20
Volume Left	0	0	0	0	0	0	4	10
Volume Right	0	0	10	0	0	10	10	10
cSH	1700	1700	1700	1700	1700	1700	2	3
Volume to Capacity	0.00	1.23	0.62	0.00	0.85	0.43	8.22	7.78
Queue Length 95th (ft)	0	0	0	0	0	0	Err	Err
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	Err	Err
Lane LOS							F	F
Approach Delay (s)	0.0			0.0			Err	Err
Approach LOS							F	F

Intersection Summary				
Average Delay	63.7			
Intersection Capacity Utilization	89.2%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	2918	38	4	2002	51	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	3138	41	4	2153	55	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			3178		4223	1569
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3178		4223	1569
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			95		0	67
cM capacity (veh/h)			90		1	97

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	1569	1569	41	4	1076	1076	87
Volume Left	0	0	0	4	0	0	55
Volume Right	0	0	41	0	0	0	32
cSH	1700	1700	1700	90	1700	1700	2
Volume to Capacity	0.92	0.92	0.02	0.05	0.63	0.63	44.26
Queue Length 95th (ft)	0	0	0	4	0	0	Err
Control Delay (s)	0.0	0.0	0.0	46.8	0.0	0.0	Err
Lane LOS				E			F
Approach Delay (s)	0.0			0.1			Err
Approach LOS							F

Intersection Summary			
Average Delay	160.6		
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

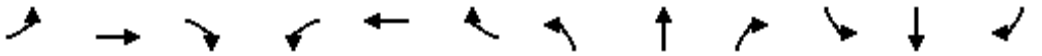
Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

Intersection Sign configuration not allowed in HCM analysis.

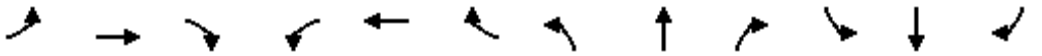
Intersection Sign configuration not allowed in HCM analysis.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	1496	5	1	803	0	39	11	8	8	0	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0	6.0	4.0	6.0			5.0	5.0		5.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96	1.00		0.95	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438			1741	1538		1719	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.77	1.00		0.72	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438			1387	1538		1294	1538
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor (vph)	121%	211%	121%	121%	213%	121%	121%	121%	121%	121%	121%	121%
Adj. Flow (vph)	323	3358	6	1	1820	0	50	14	10	10	0	247
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	323	3358	6	1	1820	0	0	64	1	0	10	247
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Over
Protected Phases	1	6		5	2			4			4	1
Permitted Phases			6			2	4		4	4		
Actuated Green, G (s)	38.5	110.5	110.5	4.0	76.0			10.5	10.5		10.5	38.5
Effective Green, g (s)	38.5	110.5	110.5	4.0	76.0			10.5	10.5		10.5	38.5
Actuated g/C Ratio	0.28	0.79	0.79	0.03	0.54			0.08	0.08		0.08	0.28
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0			5.0	5.0		5.0	4.0
Vehicle Extension (s)	3.0	5.0	5.0	2.5	3.5			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	917	2714	1214	49	1866			104	115		97	423
v/s Ratio Prot	0.10	c0.98		0.00	c0.53							0.16
v/s Ratio Perm			0.00					c0.05	0.00		0.01	
v/c Ratio	0.35	1.24	0.00	0.02	0.98			0.62	0.01		0.10	0.58
Uniform Delay, d1	40.7	14.8	3.1	66.1	31.1			62.8	59.9		60.4	43.8
Progression Factor	1.00	1.00	1.00	0.79	0.52			1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	110.1	0.0	0.5	12.5			10.3	0.0		0.5	5.8
Delay (s)	41.8	124.9	3.1	53.0	28.7			73.1	59.9		60.8	49.6
Level of Service	D	F	A	D	C			E	E		E	D
Approach Delay (s)		117.4			28.7			71.4			50.1	
Approach LOS		F			C			E			D	

Intersection Summary			
HCM Average Control Delay	86.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		

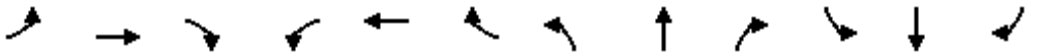
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	1475	95	30	787	4	157	10	38	3	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1719	3438	1538	1719	3436		1719	1596			1673	
Flt Permitted	0.09	1.00	1.00	0.04	1.00		0.55	1.00			0.93	
Satd. Flow (perm)	165	3438	1538	74	3436		992	1596			1563	
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
Growth Factor (vph)	213%	213%	125%	125%	213%	213%	125%	125%	125%	213%	125%	213%
Adj. Flow (vph)	14	3415	129	41	1822	9	213	14	52	7	14	21
RTOR Reduction (vph)	0	0	17	0	0	0	0	43	0	0	20	0
Lane Group Flow (vph)	14	3415	112	41	1831	0	213	23	0	0	22	0
Turn Type	pm+pt		Perm	pm+pt			pm+pt			Perm		
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	98.9	98.9	98.9	102.7	102.7		17.7	17.7			7.7	
Effective Green, g (s)	98.9	98.9	98.9	102.7	102.7		17.7	17.7			7.7	
Actuated g/C Ratio	0.71	0.71	0.71	0.73	0.73		0.13	0.13			0.06	
Clearance Time (s)	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	
Lane Grp Cap (vph)	134	2429	1086	118	2521		146	202			86	
v/s Ratio Prot	0.00	c0.99		0.01	c0.53		c0.04	0.01				
v/s Ratio Perm	0.07		0.07	0.24			c0.14				0.01	
v/c Ratio	0.10	1.41	0.10	0.35	0.73		1.46	0.11			0.26	
Uniform Delay, d1	16.9	20.5	6.5	66.3	10.6		62.4	54.2			63.4	
Progression Factor	0.39	0.44	0.15	1.30	1.48		1.00	1.00			1.00	
Incremental Delay, d2	0.0	182.9	0.0	1.0	1.1		240.2	0.3			1.6	
Delay (s)	6.7	192.0	1.0	86.9	16.9		302.6	54.5			65.0	
Level of Service	A	F	A	F	B		F	D			E	
Approach Delay (s)		184.3			18.4			243.9			65.0	
Approach LOS		F			B			F			E	

Intersection Summary			
HCM Average Control Delay	132.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		

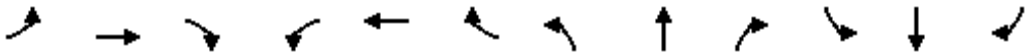
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	1323	75	27	675	50	87	36	20	85	41	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	5.5		5.0	5.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	1719	1713		1719	1765	
Flt Permitted	0.06	1.00	1.00	0.05	1.00	1.00	1.00	1.00		1.00	1.00	
Satd. Flow (perm)	107	3438	1538	89	3438	1538	1810	1713		1810	1765	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor (vph)	236%	213%	236%	236%	228%	236%	236%	236%	236%	236%	236%	236%
Adj. Flow (vph)	166	2998	188	68	1637	126	218	90	50	213	103	20
RTOR Reduction (vph)	0	0	23	0	0	19	0	14	0	0	5	0
Lane Group Flow (vph)	166	2998	165	68	1637	107	218	126	0	213	118	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	96.0	96.0	96.0	88.0	85.0	85.0	9.0	8.5		7.5	7.5	
Effective Green, g (s)	96.0	96.0	96.0	88.0	85.0	85.0	9.0	8.5		7.5	7.5	
Actuated g/C Ratio	0.69	0.69	0.69	0.63	0.61	0.61	0.06	0.06		0.05	0.05	
Clearance Time (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	2.2	2.2	2.2	2.2	2.2	2.2	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	281	2357	1055	137	2087	934	116	104		97	95	
v/s Ratio Prot	0.08	c0.87		0.02	c0.48		0.11	0.07		0.11	0.07	
v/s Ratio Perm	0.33		0.11	0.29		0.07	c0.02			c0.01		
v/c Ratio	0.59	1.27	0.16	0.50	0.78	0.11	1.88	1.21		2.20	1.24	
Uniform Delay, d1	33.9	22.0	7.7	60.0	20.6	11.6	65.3	65.8		67.0	66.2	
Progression Factor	1.38	0.23	0.02	0.50	0.28	0.14	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	122.7	0.0	11.2	2.8	0.2	426.5	155.5		570.3	171.9	
Delay (s)	47.7	127.8	0.2	41.5	8.6	1.9	491.7	221.2		637.3	238.2	
Level of Service	D	F	A	D	A	A	F	F		F	F	
Approach Delay (s)		116.6			9.3			385.9			491.2	
Approach LOS		F			A			F			F	

Intersection Summary			
HCM Average Control Delay	121.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		

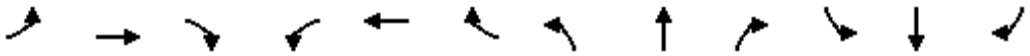
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	434	49	1	84	0	0	119	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					6.0	6.0		6.0			6.0	
Lane Util. Factor					0.95	1.00		1.00			1.00	
Frt					1.00	0.85		1.00			0.97	
Flt Protected					1.00	1.00		1.00			1.00	
Satd. Flow (prot)					3438	1538		1808			1758	
Flt Permitted					1.00	1.00		0.65			1.00	
Satd. Flow (perm)					3438	1538		1177			1758	
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
Growth Factor (vph)	100%	100%	100%	274%	274%	274%	274%	274%	274%	274%	274%	274%
Adj. Flow (vph)	0	0	0	0	1252	141	3	242	0	0	343	92
RTOR Reduction (vph)	0	0	0	0	0	68	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	1252	73	0	245	0	0	428	0
Turn Type				pm+pt		Perm	Perm					
Protected Phases				5	6			1 8			4	
Permitted Phases				6		6	1 8					
Actuated Green, G (s)					72.0	72.0		40.0			32.0	
Effective Green, g (s)					72.0	72.0		40.0			32.0	
Actuated g/C Ratio					0.51	0.51		0.29			0.23	
Clearance Time (s)					6.0	6.0					6.0	
Vehicle Extension (s)					3.0	3.0					3.0	
Lane Grp Cap (vph)					1768	791		336			402	
v/s Ratio Prot					c0.36						c0.24	
v/s Ratio Perm						0.05		c0.21				
v/c Ratio					0.71	0.09		0.73			1.06	
Uniform Delay, d1					26.0	17.3		45.1			54.0	
Progression Factor					0.09	0.00		1.91			1.00	
Incremental Delay, d2					0.2	0.0		7.6			63.1	
Delay (s)					2.7	0.1		94.0			117.1	
Level of Service					A	A		F			F	
Approach Delay (s)		0.0			2.4			94.0			117.1	
Approach LOS		A			A			F			F	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	28.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

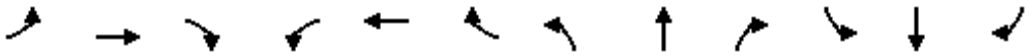
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	678	2	0	0	0	0	2	10	113	6	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0					6.0			6.0	
Lane Util. Factor	1.00	0.95	1.00					1.00			1.00	
Frt	1.00	1.00	0.85					0.89			1.00	
Flt Protected	0.95	1.00	1.00					1.00			0.95	
Satd. Flow (prot)	1719	3438	1538					1607			1727	
Flt Permitted	0.95	1.00	1.00					1.00			0.54	
Satd. Flow (perm)	1719	3438	1538					1607			980	
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
Growth Factor (vph)	274%	274%	274%	100%	100%	100%	274%	274%	274%	274%	274%	274%
Adj. Flow (vph)	239	1955	6	0	0	0	0	6	29	326	17	0
RTOR Reduction (vph)	0	0	2	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	239	1955	4	0	0	0	0	13	0	0	343	0
Turn Type	pm+pt		Perm							Perm		
Protected Phases	1	2						8			4 5	
Permitted Phases	2		2							4 5		
Actuated Green, G (s)	80.0	72.0	72.0					32.0			42.0	
Effective Green, g (s)	80.0	72.0	72.0					32.0			42.0	
Actuated g/C Ratio	0.57	0.51	0.51					0.23			0.30	
Clearance Time (s)	6.0	6.0	6.0					6.0				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	1056	1768	791					367			294	
v/s Ratio Prot	c0.01	c0.57						0.01				
v/s Ratio Perm	0.13		0.00								c0.35	
v/c Ratio	0.23	1.11	0.00					0.03			1.17	
Uniform Delay, d1	14.9	34.0	16.6					42.0			49.0	
Progression Factor	1.19	1.02	0.83					1.00			0.62	
Incremental Delay, d2	0.0	50.7	0.0					0.0			78.7	
Delay (s)	17.7	85.4	13.7					42.0			109.3	
Level of Service	B	F	B					D			F	
Approach Delay (s)		77.8			0.0			42.0			109.3	
Approach LOS		E			A			D			F	

Intersection Summary			
HCM Average Control Delay	81.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

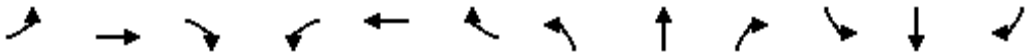
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	34	1457	4	32	116	0	0	14	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0		6.0			6.0	
Lane Util. Factor				1.00	0.95	1.00		1.00			1.00	
Frt				1.00	1.00	0.85		1.00			0.94	
Flt Protected				0.95	1.00	1.00		0.99			1.00	
Satd. Flow (prot)				1719	3438	1538		1790			1694	
Flt Permitted				0.95	1.00	1.00		0.23			1.00	
Satd. Flow (perm)				1719	3438	1538		420			1694	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor (vph)	100%	100%	100%	131%	100%	131%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	0	0	0	47	1550	6	45	162	0	0	20	18
RTOR Reduction (vph)	0	0	0	0	0	2	0	0	0	0	16	0
Lane Group Flow (vph)	0	0	0	47	1550	4	0	207	0	0	22	0
Turn Type				pm+pt		Perm	Perm					
Protected Phases				5	6			1 8			4	
Permitted Phases				6		6	1 8					
Actuated Green, G (s)				61.0	57.8	57.8		55.0			18.0	
Effective Green, g (s)				61.0	57.8	57.8		55.0			18.0	
Actuated g/C Ratio				0.44	0.41	0.41		0.39			0.13	
Clearance Time (s)				6.0	6.0	6.0					6.0	
Vehicle Extension (s)				3.0	3.0	3.0					3.0	
Lane Grp Cap (vph)				749	1419	635		165			218	
v/s Ratio Prot				c0.00	c0.45						0.01	
v/s Ratio Perm				0.03		0.00		c0.49				
v/c Ratio				0.06	1.09	0.01		1.25			0.10	
Uniform Delay, d1				22.9	41.1	24.2		42.5			53.9	
Progression Factor				0.84	0.78	0.47		1.46			1.00	
Incremental Delay, d2				0.0	42.9	0.0		154.2			0.2	
Delay (s)				19.2	74.7	11.4		216.3			54.1	
Level of Service				B	E	B		F			D	
Approach Delay (s)		0.0			72.8			216.3			54.1	
Approach LOS		A			E			F			D	

Intersection Summary			
HCM Average Control Delay	88.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



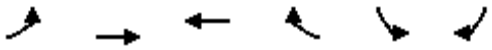
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	2050	18	0	0	0	0	52	4	5	43	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0					6.0			6.0	
Lane Util. Factor	1.00	0.95	1.00					1.00			1.00	
Frt	1.00	1.00	0.85					0.99			1.00	
Flt Protected	0.95	1.00	1.00					1.00			0.99	
Satd. Flow (prot)	1719	3438	1538					1791			1800	
Flt Permitted	0.95	1.00	1.00					1.00			0.97	
Satd. Flow (perm)	1719	3438	1538					1791			1762	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor (vph)	131%	100%	131%	100%	100%	100%	131%	131%	131%	131%	131%	131%
Adj. Flow (vph)	134	2181	25	0	0	0	0	72	6	7	60	0
RTOR Reduction (vph)	0	0	8	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	134	2181	17	0	0	0	0	76	0	0	67	0
Turn Type	pm+pt		Perm							Perm		
Protected Phases	1	2						8			4 5	
Permitted Phases	2		2							4 5		
Actuated Green, G (s)	94.8	57.8	57.8					18.0			27.2	
Effective Green, g (s)	94.8	57.8	57.8					18.0			27.2	
Actuated g/C Ratio	0.68	0.41	0.41					0.13			0.19	
Clearance Time (s)	6.0	6.0	6.0					6.0				
Vehicle Extension (s)	3.0	3.0	3.0					3.0				
Lane Grp Cap (vph)	1238	1419	635					230			342	
v/s Ratio Prot	c0.03	c0.63						c0.04				
v/s Ratio Perm	0.05		0.01								c0.04	
v/c Ratio	0.11	1.54	0.03					0.33			0.20	
Uniform Delay, d1	7.9	41.1	24.4					55.5			47.2	
Progression Factor	0.82	0.63	0.32					1.00			1.29	
Incremental Delay, d2	0.0	242.0	0.0					0.9			0.3	
Delay (s)	6.5	267.8	7.9					56.4			61.5	
Level of Service	A	F	A					E			E	
Approach Delay (s)		250.1			0.0			56.4			61.5	
Approach LOS		F			A			E			E	

Intersection Summary			
HCM Average Control Delay	238.9	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBT	WBR	SBT	SBR2	NEL
Lane Configurations					
Volume (vph)	1330	374	486	558	609
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	9.0	6.5	6.5	6.5	6.0
Lane Util. Factor	0.95	1.00	0.95	1.00	0.97
Frt	1.00	0.85	1.00	0.85	1.00
Flt Protected	1.00	1.00	1.00	1.00	0.95
Satd. Flow (prot)	3438	1538	3438	1538	3335
Flt Permitted	1.00	1.00	1.00	1.00	0.95
Satd. Flow (perm)	3438	1538	3438	1538	3335
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	1430	402	523	600	655
RTOR Reduction (vph)	0	1	0	79	0
Lane Group Flow (vph)	1430	401	523	521	655
Turn Type		custom		Perm	
Protected Phases	6		4		5
Permitted Phases		4 6		4	
Actuated Green, G (s)	55.0	104.5	40.5	40.5	23.0
Effective Green, g (s)	55.0	95.5	40.5	40.5	23.0
Actuated g/C Ratio	0.39	0.68	0.29	0.29	0.16
Clearance Time (s)	9.0		6.5	6.5	6.0
Vehicle Extension (s)	4.0		6.0	6.0	2.0
Lane Grp Cap (vph)	1351	1049	995	445	548
v/s Ratio Prot	c0.42		0.15		c0.20
v/s Ratio Perm		0.26		c0.34	
v/c Ratio	1.06	0.38	0.53	1.17	1.20
Uniform Delay, d1	42.5	9.6	41.7	49.7	58.5
Progression Factor	0.65	0.55	1.00	1.00	1.26
Incremental Delay, d2	36.1	0.4	1.3	98.6	89.6
Delay (s)	63.7	5.6	43.0	148.3	163.5
Level of Service	E	A	D	F	F
Approach Delay (s)	50.9		99.3		163.5
Approach LOS	D		F		F

Intersection Summary			
HCM Average Control Delay	86.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

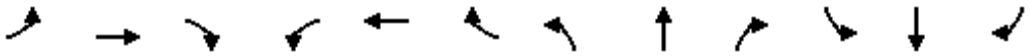


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1838	0	0	486	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.5	
Lane Util. Factor		0.95			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		3438			3335	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		3438			3335	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	1976	0	0	523	0
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	0	1976	0	0	504	0
Turn Type						
Protected Phases		2			4	
Permitted Phases						
Actuated Green, G (s)		87.0			40.5	
Effective Green, g (s)		87.0			40.5	
Actuated g/C Ratio		0.62			0.29	
Clearance Time (s)		6.0			6.5	
Vehicle Extension (s)		3.0			6.0	
Lane Grp Cap (vph)		2136			965	
v/s Ratio Prot		c0.57			c0.15	
v/s Ratio Perm						
v/c Ratio		0.93			0.52	
Uniform Delay, d1		23.6			41.6	
Progression Factor		0.35			0.02	
Incremental Delay, d2		0.9			1.1	
Delay (s)		9.2			1.8	
Level of Service		A			A	
Approach Delay (s)		9.2	0.0		1.8	
Approach LOS		A	A		A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

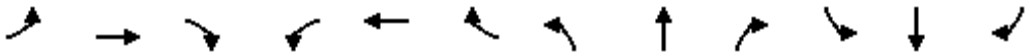
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	1900	55	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	
Lane Util. Factor				0.95	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				3438	3335	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				3438	3335	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	2135	62	0
RTOR Reduction (vph)	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	0	2135	41	0
Turn Type						
Protected Phases				6	5 8	
Permitted Phases						
Actuated Green, G (s)				103.3	24.7	
Effective Green, g (s)				103.3	24.7	
Actuated g/C Ratio				0.74	0.18	
Clearance Time (s)				6.0		
Vehicle Extension (s)				3.0		
Lane Grp Cap (vph)				2537	588	
v/s Ratio Prot				c0.62	c0.01	
v/s Ratio Perm						
v/c Ratio				0.84	0.07	
Uniform Delay, d1				12.7	48.1	
Progression Factor				2.17	0.21	
Incremental Delay, d2				2.1	0.1	
Delay (s)				29.7	10.2	
Level of Service				C	B	
Approach Delay (s)	0.0			29.7	10.2	
Approach LOS	A			C	B	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



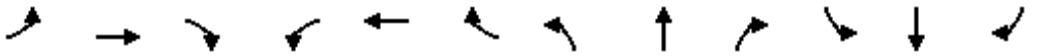
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	0	0	14	0	0	0	32	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			3.5				6.0				
Lane Util. Factor	1.00			1.00				0.95				
Frt	1.00			1.00				1.00				
Flt Protected	0.95			0.95				1.00				
Satd. Flow (prot)	1719			1719				3438				
Flt Permitted	0.95			0.95				1.00				
Satd. Flow (perm)	1719			1719				3438				
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	26	0	0	16	0	0	0	36	0	0	0	0
RTOR Reduction (vph)	24	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	2	0	0	16	0	0	0	36	0	0	0	0
Turn Type	Prot			Prot								
Protected Phases	5			1				8				
Permitted Phases												
Actuated Green, G (s)	12.0			3.3				6.7				
Effective Green, g (s)	12.0			3.3				6.7				
Actuated g/C Ratio	0.09			0.02				0.05				
Clearance Time (s)	6.0			3.5				6.0				
Vehicle Extension (s)	3.0			3.0				3.0				
Lane Grp Cap (vph)	147			41				165				
v/s Ratio Prot	c0.00			c0.01				c0.01				
v/s Ratio Perm												
v/c Ratio	0.02			0.39				0.22				
Uniform Delay, d1	58.6			67.4				64.1				
Progression Factor	1.00			1.24				0.02				
Incremental Delay, d2	0.0			3.7				0.7				
Delay (s)	58.6			87.3				2.1				
Level of Service	E			F				A				
Approach Delay (s)		58.6			87.3			2.1			0.0	
Approach LOS		E			F			A			A	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.13		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	118.0
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



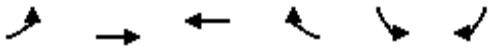
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2845	105	0	0	0	0	32	45	0	14	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0					6.0	6.0		3.5	
Lane Util. Factor		0.95	1.00					0.95	1.00		1.00	
Frt		1.00	0.85					1.00	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (prot)		3438	1538					3438	1538		1810	
Flt Permitted		1.00	1.00					1.00	1.00		1.00	
Satd. Flow (perm)		3438	1538					3438	1538		1810	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	3197	118	0	0	0	0	36	51	0	16	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	33	0	0	0
Lane Group Flow (vph)	0	3197	104	0	0	0	0	36	18	0	16	0
Turn Type			Perm						Perm	Split		
Protected Phases		2						8		1	1	
Permitted Phases			2						8			
Actuated Green, G (s)		114.5	114.5					6.7	6.7		3.3	
Effective Green, g (s)		114.5	114.5					6.7	6.7		3.3	
Actuated g/C Ratio		0.82	0.82					0.05	0.05		0.02	
Clearance Time (s)		6.0	6.0					6.0	6.0		3.5	
Vehicle Extension (s)		3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)		2812	1258					165	74		43	
v/s Ratio Prot		c0.93						0.01			c0.01	
v/s Ratio Perm			0.07						c0.01			
v/c Ratio		1.14	0.08					0.22	0.24		0.37	
Uniform Delay, d1		12.8	2.5					64.1	64.2		67.3	
Progression Factor		0.73	0.70					1.00	1.00		0.00	
Incremental Delay, d2		65.5	0.1					0.7	1.7		5.3	
Delay (s)		74.8	1.9					64.8	65.9		5.6	
Level of Service		E	A					E	E		A	
Approach Delay (s)		72.2			0.0			65.4			5.6	
Approach LOS		E			A			E			A	

Intersection Summary			
HCM Average Control Delay	71.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



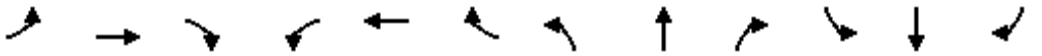
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	2302	219	14	1728	14	64	0	14	18	5	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	1719	1538		1719	1544	
Flt Permitted	0.05	1.00	1.00	0.05	1.00	1.00	0.26	1.00		0.75	1.00	
Satd. Flow (perm)	86	3438	1538	93	3438	1538	476	1538		1353	1544	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	290	2530	241	15	1899	15	70	0	15	20	5	235
RTOR Reduction (vph)	0	0	34	0	0	7	0	13	0	0	151	0
Lane Group Flow (vph)	290	2530	207	15	1899	8	70	2	0	20	89	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	106.4	98.8	98.8	79.8	78.2	78.2	19.2	15.2		16.0	13.6	
Effective Green, g (s)	106.4	98.8	98.8	79.8	78.2	78.2	19.2	15.2		16.0	13.6	
Actuated g/C Ratio	0.76	0.71	0.71	0.57	0.56	0.56	0.14	0.11		0.11	0.10	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0		4.0	6.0	
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)	324	2426	1085	72	1920	859	101	167		161	150	
v/s Ratio Prot	c0.14	c0.74		0.00	0.55		c0.02	0.00		0.00	0.06	
v/s Ratio Perm	0.54		0.13	0.12		0.01	c0.08			0.01		
v/c Ratio	0.90	1.04	0.19	0.21	0.99	0.01	0.69	0.01		0.12	0.59	
Uniform Delay, d1	49.2	20.6	7.0	69.0	30.5	13.7	57.9	55.7		55.6	60.6	
Progression Factor	1.06	1.22	0.97	1.08	0.75	1.52	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.3	20.8	0.0	1.1	15.9	0.0	18.6	0.0		0.3	6.2	
Delay (s)	55.3	45.9	6.8	76.0	38.7	20.9	76.5	55.7		55.9	66.8	
Level of Service	E	D	A	E	D	C	E	E		E	E	
Approach Delay (s)		43.7			38.8			72.8			65.9	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	137	2371	1655	113	137	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3438	3438	1538	1719	1538
Flt Permitted	0.08	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	152	3438	3438	1538	1719	1538
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	2470	1724	118	143	118
RTOR Reduction (vph)	0	0	0	38	0	106
Lane Group Flow (vph)	143	2470	1724	80	143	12
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	113.2	113.2	95.2	95.2	14.8	14.8
Effective Green, g (s)	113.2	113.2	95.2	95.2	14.8	14.8
Actuated g/C Ratio	0.81	0.81	0.68	0.68	0.11	0.11
Clearance Time (s)	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
Lane Grp Cap (vph)	257	2780	2338	1046	182	163
v/s Ratio Prot	0.05	c0.72	0.50		c0.08	
v/s Ratio Perm	0.40			0.05		0.01
v/c Ratio	0.56	0.89	0.74	0.08	0.79	0.08
Uniform Delay, d1	30.7	9.1	14.4	7.6	61.1	56.4
Progression Factor	0.51	0.66	0.33	0.57	1.00	1.00
Incremental Delay, d2	1.0	1.9	1.8	0.1	19.6	0.2
Delay (s)	16.8	7.9	6.5	4.4	80.7	56.6
Level of Service	B	A	A	A	F	E
Approach Delay (s)		8.4	6.4		69.8	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



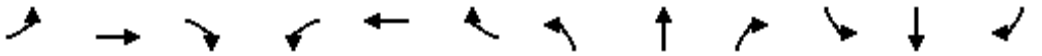
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	2274	126	46	1400	18	126	5	46	42	5	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.87	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538		1726	1538	1719	1569	
Flt Permitted	0.12	1.00	1.00	0.04	1.00	1.00		0.70	1.00	0.49	1.00	
Satd. Flow (perm)	209	3438	1538	76	3438	1538		1269	1538	878	1569	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	109	2419	134	49	1489	19	134	5	49	45	5	39
RTOR Reduction (vph)	0	0	36	0	0	6	0	0	27	0	35	0
Lane Group Flow (vph)	109	2419	98	49	1489	13	0	139	22	45	9	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	102.8	102.8	102.8	98.0	98.0	98.0		16.0	16.0	16.0	16.0	
Effective Green, g (s)	102.8	102.8	102.8	98.0	98.0	98.0		16.0	16.0	16.0	16.0	
Actuated g/C Ratio	0.73	0.73	0.73	0.70	0.70	0.70		0.11	0.11	0.11	0.11	
Clearance Time (s)	6.0	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	3.0	
Lane Grp Cap (vph)	240	2524	1129	91	2407	1077		145	176	100	179	
v/s Ratio Prot	0.03	c0.70		0.01	c0.43						0.01	
v/s Ratio Perm	0.31		0.06	0.36		0.01		c0.11	0.01	0.05		
v/c Ratio	0.45	0.96	0.09	0.54	0.62	0.01		0.96	0.12	0.45	0.05	
Uniform Delay, d1	11.0	16.7	5.3	53.8	11.1	6.4		61.7	55.7	57.9	55.2	
Progression Factor	0.67	0.48	0.23	0.43	0.23	0.17		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	6.3	0.1	4.3	0.9	0.0		61.5	0.3	3.2	0.1	
Delay (s)	8.1	14.3	1.3	27.4	3.5	1.1		123.2	56.0	61.1	55.4	
Level of Service	A	B	A	C	A	A		F	E	E	E	
Approach Delay (s)		13.4			4.2			105.7			58.3	
Approach LOS		B			A			F			E	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	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	WBT	WBR	NBT	SBL	SBR
Lane Configurations					
Volume (vph)	1180	231	59	233	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	5.6	5.6
Lane Util. Factor	0.95	1.00	0.95	1.00	1.00
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)	3438	1538	3438	1719	1538
Flt Permitted	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	3438	1719	1538
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97
Growth Factor (vph)	100%	242%	242%	242%	242%
Adj. Flow (vph)	1216	576	147	581	324
RTOR Reduction (vph)	0	242	0	0	94
Lane Group Flow (vph)	1216	334	147	581	230
Turn Type		Perm		Prot	custom
Protected Phases	6		5	4	
Permitted Phases		6	5		4
Actuated Green, G (s)	62.0	62.0	8.0	52.4	52.4
Effective Green, g (s)	62.0	62.0	8.0	52.4	52.4
Actuated g/C Ratio	0.44	0.44	0.06	0.37	0.37
Clearance Time (s)	6.0	6.0	6.0	5.6	5.6
Vehicle Extension (s)	5.0	5.0	4.0	4.0	4.0
Lane Grp Cap (vph)	1523	681	196	643	576
v/s Ratio Prot	c0.35		c0.04	c0.34	
v/s Ratio Perm		0.22			0.15
v/c Ratio	0.80	0.49	0.75	0.90	0.40
Uniform Delay, d1	33.6	27.7	65.0	41.4	32.2
Progression Factor	1.00	1.00	1.03	1.00	1.00
Incremental Delay, d2	4.5	2.5	7.0	16.4	0.6
Delay (s)	38.1	30.3	74.1	57.8	32.8
Level of Service	D	C	E	E	C
Approach Delay (s)	35.6		74.1		
Approach LOS	D		E		

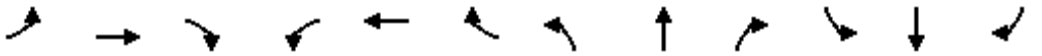
Intersection Summary			
HCM Average Control Delay	41.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2863	34	0	1977	9	13	0	4	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0		6.0				
Lane Util. Factor		0.95	1.00		0.95	1.00		1.00				
Frt		1.00	0.85		1.00	0.85		0.97				
Flt Protected		1.00	1.00		1.00	1.00		0.96				
Satd. Flow (prot)		3438	1538		3438	1538		1690				
Flt Permitted		1.00	1.00		1.00	1.00		0.77				
Satd. Flow (perm)		3438	1538		3438	1538		1358				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	0	3146	37	0	2173	10	14	0	4	0	0	0
RTOR Reduction (vph)	0	0	5	0	0	1	0	4	0	0	0	0
Lane Group Flow (vph)	0	3146	32	0	2173	9	0	14	0	0	0	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)		112.0	112.0		112.0	112.0		7.0				
Effective Green, g (s)		112.0	112.0		112.0	112.0		7.0				
Actuated g/C Ratio		0.85	0.85		0.85	0.85		0.05				
Clearance Time (s)		6.0	6.0		6.0	6.0		6.0				
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0				
Lane Grp Cap (vph)		2939	1315		2939	1315		73				
v/s Ratio Prot		c0.92			0.63							
v/s Ratio Perm			0.02			0.01		c0.01				
v/c Ratio		1.07	0.02		0.74	0.01		0.19				
Uniform Delay, d1		9.5	1.4		3.7	1.4		59.3				
Progression Factor		1.00	1.00		1.00	1.00		1.00				
Incremental Delay, d2		39.2	0.0		1.0	0.0		1.3				
Delay (s)		48.7	1.4		4.7	1.4		60.6				
Level of Service		D	A		A	A		E				
Approach Delay (s)		48.2			4.7			60.6			0.0	
Approach LOS		D			A			E			A	

Intersection Summary			
HCM Average Control Delay	30.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.5%	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												
Volume (vph)	341	2616	4	9	1934	30	13	9	13	21	4	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0			6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.96	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538		1687			1736	1538
Flt Permitted	0.05	1.00	1.00	0.04	1.00	1.00		0.87			0.73	1.00
Satd. Flow (perm)	160	3438	1538	76	3438	1538		1490			1329	1538
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	352	2697	4	9	1994	31	13	9	13	22	4	132
RTOR Reduction (vph)	0	0	0	0	0	8	0	12	0	0	0	77
Lane Group Flow (vph)	352	2697	4	9	1994	23	0	23	0	0	26	55
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		4
Actuated Green, G (s)	117.7	110.9	110.9	95.8	95.0	95.0		10.3			10.3	10.3
Effective Green, g (s)	117.7	110.9	110.9	95.8	95.0	95.0		10.3			10.3	10.3
Actuated g/C Ratio	0.84	0.79	0.79	0.68	0.68	0.68		0.07			0.07	0.07
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)	513	2723	1218	61	2333	1044		110			98	113
v/s Ratio Prot	c0.08	c0.78		0.00	0.58							
v/s Ratio Perm	0.49		0.00	0.10		0.01		0.02			0.02	c0.04
v/c Ratio	0.69	0.99	0.00	0.15	0.85	0.02		0.21			0.27	0.49
Uniform Delay, d1	37.6	14.0	3.0	69.6	17.2	7.3		61.0			61.3	62.3
Progression Factor	1.00	1.00	1.00	0.56	0.78	0.61		1.00			1.00	1.00
Incremental Delay, d2	3.8	15.2	0.0	0.8	3.2	0.0		0.9			1.5	3.3
Delay (s)	41.4	29.2	3.0	39.5	16.7	4.5		62.0			62.7	65.6
Level of Service	D	C	A	D	B	A		E			E	E
Approach Delay (s)		30.6			16.6			62.0			65.1	
Approach LOS		C			B			E			E	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	2400	67	8	1742	58	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
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)	3438	1538	1719	3438	1719	1538
Flt Permitted	1.00	1.00	0.04	1.00	0.95	1.00
Satd. Flow (perm)	3438	1538	66	3438	1719	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	100%	279%	279%	100%	279%	279%
Adj. Flow (vph)	2526	197	23	1834	170	12
RTOR Reduction (vph)	0	51	0	0	0	11
Lane Group Flow (vph)	2526	146	23	1834	170	1
Turn Type		Perm	pm+pt			Perm
Protected Phases	2		1	6	8	
Permitted Phases		2	6			8
Actuated Green, G (s)	104.0	104.0	112.4	112.4	15.6	15.6
Effective Green, g (s)	104.0	104.0	112.4	112.4	15.6	15.6
Actuated g/C Ratio	0.74	0.74	0.80	0.80	0.11	0.11
Clearance Time (s)	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
Lane Grp Cap (vph)	2554	1143	81	2760	192	171
v/s Ratio Prot	c0.73		0.00	c0.53	c0.10	
v/s Ratio Perm		0.10	0.22			0.00
v/c Ratio	0.99	0.13	0.28	0.66	0.89	0.01
Uniform Delay, d1	17.4	5.1	56.9	5.8	61.3	55.3
Progression Factor	0.51	0.98	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.2	0.1	1.9	1.3	34.9	0.0
Delay (s)	17.1	5.1	58.8	7.1	96.2	55.3
Level of Service	B	A	E	A	F	E
Approach Delay (s)	16.2			7.8	93.5	
Approach LOS	B			A	F	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Arterial LOS

Arterial Level of Service: EB US 50 #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Grand Mesa Ave	1	37.7	48.5	0.1	16
Gunnison Blvd	6	8.6	12.7	0.0	15
Santa Clara Ave	8	4.9	11.5	0.1	26
Unaweep Ave	11	2.8	12.2	0.1	36
	121	0.8	5.3	0.1	38
James St	14	0.3	3.6	0.0	40
Green Acre 1	107	0.6	8.4	0.1	42
Elm Park	15	0.3	2.7	0.0	42
Green Acre 2	19	0.7	5.9	0.1	38
Aspen St	24	0.7	3.8	0.0	38
Palmer St	20	5.4	11.0	0.1	24
Palisade St	27	2.1	8.3	0.1	35
Linden Ave	28	1.4	10.2	0.1	38
27 Rd	32	13.0	36.6	0.3	29
Dorothy Ave	35	3.0	14.8	0.2	38
EB Off-Ramp	38	0.3	5.5	0.1	44
EB On-Ramp	40	0.4	9.3	0.1	46
Frontage Rd	43	1.1	16.4	0.2	44
US 50 EB #2	117	0.2	4.5	0.1	43
Total		84.0	231.0	1.9	32

Arterial Level of Service: WB US 50 #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Frontage Rd	43	1.0	5.1	0.1	38
WB On-Ramp	40	5.9	21.0	0.2	34
EB Off-Ramp	38	11.4	20.8	0.1	20
Dorothy Ave	35	7.4	13.5	0.1	18
27 Rd	32	33.9	46.1	0.2	12
	28	10.4	32.4	0.3	32
Palisade St	27	5.8	15.3	0.1	28
Palmer St	20	9.4	15.7	0.1	18
Aspen St	24	3.7	9.5	0.1	27
Green Acre 2	19	1.1	4.0	0.0	37
Elm Park	15	2.3	7.7	0.1	30
Green Acre 1	107	1.1	3.5	0.0	33
James St	14	5.7	13.5	0.1	26
	121	3.7	6.8	0.0	21
Unaweep Ave	11	8.3	12.3	0.1	17
Santa Clara Ave	8	10.9	20.5	0.1	25
Gunnison Blvd	6	5.0	11.1	0.1	28
Grand Mesa Ave	1	2.4	7.1	0.0	25
Total		129.4	265.9	1.7	24

Arterial Level of Service: WB US 50 WB #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	138	36.2	44.9	0.1	9
Sundance Dr	71	21.1	27.5	0.1	11
29 Rd	68	24.9	33.5	0.1	12
Reta Dr	66	3.4	8.8	0.1	30
Elm Dr	64	1.4	16.7	0.2	41
Dee Vee Dr	62	0.1	2.0	0.0	44
Indiana St	61	0.3	3.3	0.1	62
Tennessee St	59	5.0	8.4	0.1	56
28 1/2 Rd	51	18.9	32.7	0.2	23
Fairgrounds	49	15.6	54.9	0.6	40
	127	3.8	12.5	0.1	31
27 3/4 Rd	46	22.4	32.5	0.1	14
	130	5.6	13.9	0.1	27
US 50 EB #2	117	3.1	16.2	0.2	36
Total		161.6	307.7	2.0	24

Arterial Level of Service: EB US 50 EB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
27 3/4 Rd	110	9.1	30.2	0.3	31
Fairgrounds	109	2.7	21.4	0.2	40
	136	0.3	4.7	0.1	45
KOA	112	1.3	17.9	0.2	50
28 1/2 Rd	54	6.9	25.8	0.3	41
Rainbow Dr	113	2.4	11.7	0.2	50
Dee Vee Dr	115	1.2	13.6	0.2	50
Reta Dr	56	1.6	18.3	0.2	42
29 Rd	116	4.1	10.5	0.1	28
	133	2.3	6.3	0.1	38
Sundance Dr	114	3.5	8.2	0.1	24
Redrock Rd	118	1.9	10.9	0.1	37
29 1/4 Rd	119	1.2	6.4	0.1	40
US 50 WB # 3	120	0.9	13.0	0.1	41
Total		39.2	199.0	2.2	40

Arterial Level of Service: WB US 50 WB # 3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
29 1/4 Rd	75	47.3	57.4	0.1	9
Total		47.3	57.4	0.1	9

Arterial Level of Service: EB US 50 #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
29 1/2 Rd	78	0.9	9.7	0.1	48
	131	0.7	7.0	0.1	49
29 3/4 Rd	80	10.7	23.9	0.2	31
30 Rd	84	6.9	25.5	0.3	40
S Frontage Rd	85	2.4	23.9	0.3	50
	124	1.8	24.2	0.3	50
31 Rd	87	3.2	12.1	0.1	41
US 50 EB #5	134	5.1	37.3	0.5	46
Total		31.7	163.7	2.0	44

Arterial Level of Service: WB US 50 #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
31 Rd	87	11.3	42.4	0.5	41
	124	2.6	11.7	0.1	42
S Frontage Rd	85	4.0	26.5	0.3	46
30 Rd	84	8.4	30.1	0.3	39
29 3/4 Rd	80	12.3	30.7	0.3	34
	131	14.6	28.4	0.2	26
29 1/2 Rd	78	16.5	22.8	0.1	15
US 50 WB # 3	120	45.5	55.8	0.1	12
Total		115.3	248.5	2.0	31

Arterial Level of Service: WB US 50 WB #6

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
141B	90	50.6	58.9	0.1	8
US 50 EB #5	134	10.3	20.5	0.1	26
Total		60.9	79.4	0.3	13

Arterial Level of Service: EB US 50 #7

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	111	0.0	0.0	0.1	
CDOT	92	1.6	7.5	0.1	53
	122	2.4	34.0	0.5	51
	137	3.0	37.4	0.5	50
Willow Bend Rd	94	5.1	15.0	0.2	37
	132	1.9	14.0	0.2	39
3247	97	3.3	38.1	0.5	49
1st St	100	0.6	5.4	0.1	55
3rd St	102	4.0	22.1	0.3	44
SH 141A	104	6.8	18.0	0.2	34
	72	1.7	11.8	0.1	38
Total		30.4	203.3	2.7	48

Arterial Level of Service: WB US 50 #7

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	72	144.2	148.9	0.1	7
SH 141A	104	58.5	66.7	0.1	7
3rd St	102	20.7	31.7	0.2	20
1st St	100	10.0	28.1	0.3	35
3247	97	1.5	6.7	0.1	44
	132	5.9	48.1	0.5	39
Willow Bend Rd	94	7.5	18.0	0.2	30
	137	5.4	15.6	0.2	35
	122	6.6	41.0	0.5	46
CDOT	92	17.7	49.2	0.5	35
	111	17.0	23.4	0.1	15
US 50 EB #5	125	34.3	42.4	0.1	10
Total		329.3	519.8	2.8	24

Arterial Level of Service: EB US 50 EB #5

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	139	0.8	4.2	0.0	40
	140	2.2	11.7	0.1	45
US 50 #7	125	1.0	7.2	0.1	41
Total		4.1	23.1	0.3	43

Arterial Level of Service: EB US 50 #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Grand Mesa Ave	1	652.2	662.9	0.1	12
Gunnison Blvd	6	9.8	13.8	0.0	13
Santa Clara Ave	8	12.9	19.5	0.1	15
Unaweep Ave	11	23.1	32.9	0.1	13
	121	5.2	9.8	0.1	21
James St	14	3.0	6.4	0.0	24
Green Acre 1	107	7.8	15.6	0.1	23
Elm Park	15	3.3	5.8	0.0	21
Green Acre 2	19	8.1	13.3	0.1	17
Aspen St	24	6.1	9.2	0.0	17
Palmer St	20	29.5	35.1	0.1	13
Palisade St	27	6.4	12.6	0.1	23
Linden Ave	28	22.9	31.4	0.1	24
27 Rd	32	56.2	79.7	0.3	13
Dorothy Ave	35	8.3	20.2	0.2	30
EB Off-Ramp	38	0.6	5.7	0.1	43
EB On-Ramp	40	0.5	9.4	0.1	45
Frontage Rd	43	24.4	39.0	0.2	30
US 50 EB #2	117	6.5	10.8	0.1	18
Total		886.9	1033.0	1.9	19

Arterial Level of Service: WB US 50 #1

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Frontage Rd	43	1.4	5.5	0.1	35
WB On-Ramp	40	13.1	28.3	0.2	25
EB Off-Ramp	38	22.4	32.0	0.1	13
Dorothy Ave	35	17.6	23.7	0.1	11
27 Rd	32	63.6	75.8	0.2	7
B 3/4 Road	28	74.4	96.8	0.3	11
Palisade St	27	1.8	11.6	0.1	33
Palmer St	20	5.2	11.4	0.1	26
Aspen St	24	1.9	7.6	0.1	34
Green Acre 2	19	0.3	3.2	0.0	46
Elm Park	15	0.5	5.8	0.1	39
Green Acre 1	107	0.2	2.6	0.0	43
James St	14	1.6	9.5	0.1	37
	121	2.4	5.5	0.0	26
Unaweep Ave	11	16.3	20.4	0.1	10
Santa Clara Ave	8	14.3	23.7	0.1	20
Gunnison Blvd	6	12.4	18.5	0.1	16
Grand Mesa Ave	1	4.1	8.7	0.0	22
Total		253.4	390.8	1.7	16

Arterial Level of Service: WB US 50 WB #3

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
29 1/4 Rd	75	1.7	12.0	0.1	44
	138	2.3	10.8	0.1	36
Sundance Dr	71	9.7	16.2	0.1	18
29 Rd	68	23.5	32.2	0.1	13
Reta Dr	66	3.9	9.6	0.1	28
Elm Dr	64	1.4	16.7	0.2	41
Dee Vee Dr	62	0.1	2.0	0.0	44
Indiana St	61	0.5	4.5	0.1	45
Tennessee St	59	0.7	5.7	0.1	49
28 1/2 Rd	51	12.8	26.2	0.2	29
Fairgrounds	49	8.8	47.0	0.6	47
	127	1.3	10.0	0.1	39
27 3/4 Rd	46	7.4	17.6	0.1	26
	130	2.6	11.0	0.1	34
US 50 EB #2	117	1.5	14.3	0.2	41
Total		78.2	235.9	2.2	33

Arterial Level of Service: EB US 50 EB #2

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
27 3/4 Rd	110	45.7	66.7	0.3	14
Fairgrounds	109	7.5	26.1	0.2	33
	136	0.6	5.0	0.1	43
KOA	112	3.5	20.0	0.2	45
28 1/2 Rd	54	20.1	39.2	0.3	28
Rainbow Dr	113	6.5	16.8	0.2	34
Dee Vee Dr	115	4.2	16.4	0.2	42
Reta Dr	56	11.3	27.4	0.2	31
29 Rd	116	13.4	19.7	0.1	15
	133	108.4	112.4	0.1	22
Sundance Dr	114	8.0	12.5	0.1	16
Redrock Rd	118	9.3	18.1	0.1	24
29 1/4 Rd	119	5.6	10.6	0.1	24
US 50 WB #3	120	8.9	21.0	0.1	25
Total		252.7	412.0	2.2	26

Arterial Level of Service: EB US 50 #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
29 1/2 Rd	78	3.2	11.9	0.1	39
	131	1.4	7.8	0.1	45
29 3/4 Rd	80	24.9	38.4	0.2	19
30 Rd	84	10.2	28.4	0.3	36
S Frontage Rd	85	4.8	26.4	0.3	45
	124	4.1	26.6	0.3	46
31 Rd	87	7.9	16.7	0.1	29
US 50 #5	134	10.5	42.5	0.5	41
Total		67.0	198.6	2.0	36

Arterial Level of Service: WB US 50 #4

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
31 Rd	87	11.0	41.9	0.5	41
	124	2.1	11.2	0.1	44
S Frontage Rd	85	2.2	23.4	0.3	53
30 Rd	84	9.4	30.7	0.3	39
29 3/4 Rd	80	15.2	33.6	0.3	31
	131	3.2	16.9	0.2	44
29 1/2 Rd	78	1.4	7.8	0.1	44
US 50 WB #3	120	0.6	11.0	0.1	42
Total		45.1	176.5	2.0	41

Arterial Level of Service: WB US 50 #6

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
141B	90	39.6	47.9	0.1	10
US 50 #5	134	8.5	18.6	0.1	29
Total		48.1	66.5	0.3	15

Arterial Level of Service: EB US 50 #7

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	111	0.0	0.0	0.1	
CDOT	92	1.9	8.1	0.1	49
	122	3.5	34.6	0.5	49
	141	5.3	39.7	0.5	47
Willow Bend Rd	94	6.1	16.9	0.2	35
	132	3.1	15.3	0.2	36
3247	97	5.8	40.8	0.5	46
1st St	100	2.1	6.9	0.1	52
3rd St	102	7.9	26.1	0.3	37
SH 141A	104	8.0	19.5	0.2	32
	72	2.1	12.2	0.1	36
Total		45.9	220.0	2.7	44

Arterial Level of Service: WB US 50 #7

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	72	1.4	6.9	0.1	37
SH 141A	104	10.5	19.7	0.1	23
3rd St	102	15.7	26.8	0.2	23
1st St	100	7.2	25.1	0.3	39
3247	97	1.3	6.4	0.1	46
	132	4.4	46.4	0.5	40
Willow Bend Rd	94	4.4	14.9	0.2	37
	141	3.1	13.9	0.2	42
	122	4.4	38.7	0.5	48
CDOT	92	2.5	31.7	0.5	53
	111	0.6	7.1	0.1	49
US 50 #5	125	1.8	9.7	0.1	45
Total		57.4	247.4	2.8	40

Arterial Level of Service: EB US 50 #5

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	139	1.8	5.6	0.1	33
	140	3.5	12.5	0.1	40
US 50 #7	125	1.7	8.2	0.1	38
Total		7.1	26.3	0.3	38