APPENDIX C

2025 Intersection Operations Analysis Worksheets for Comp Plan Plus Scenario

17: Lewis River Rd (SR 503) & Pacific Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00				1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	1752	3370		1719	1810	1538				1719	1810	1538
Flt Permitted	0.95	1.00		0.95	1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	1752	3370		1719	1810	1538				1719	1810	1538
Volume (vph)	70	610	210	610	805	355	0	0	0	440	270	115
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)	76	663	228	663	875	386	0	0	0	478	293	125
RTOR Reduction (vph)	0	34	0	0	0	195	0	0	0	0	0	93
Lane Group Flow (vph)	76	857	0	663	875	191	0	0	0	478	293	33
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	0%	0%	0%	5%	5%	5%
Turn Type	Prot			Prot		Perm				Split		Perm
Protected Phases	1	6		5	2					4	4	
Permitted Phases						2						4
Actuated Green, G (s)	12.6	26.0		36.0	49.4	49.4				26.0	26.0	26.0
Effective Green, g (s)	12.6	26.0		36.0	49.4	49.4				26.0	26.0	26.0
Actuated g/C Ratio	0.13	0.26		0.36	0.49	0.49				0.26	0.26	0.26
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	221	876		619	894	760				447	471	400
v/s Ratio Prot	0.04	c0.26		c0.39	c0.48					c0.28	0.16	
v/s Ratio Perm						0.25						0.08
v/c Ratio	0.34	0.98		1.07	0.98	0.25				1.07	0.62	0.08
Uniform Delay, d1	39.9	36.7		32.0	24.8	14.6				37.0	32.7	28.0
Progression Factor	1.00	1.00		1.00	1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.9	24.9		56.7	24.7	0.2				62.3	2.6	0.1
Delay (s)	40.9	61.6		88.7	49.5	14.8				99.3	35.2	28.1
Level of Service	D	E		F	D	B				F	D	C
Approach Delay (s)		60.0			56.0			0.0			68.4	
Approach LOS		E			E			A			E	

Intersection Summary

HCM Average Control Delay	60.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

18: Lewis River Rd (SR 503) & Atlantic Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.98			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.97	1.00	0.95		1.00
Satd. Flow (prot)	1770	3539			3366			1758	1538	1703		1524
Flt Permitted	0.95	1.00			1.00			0.97	1.00	0.95		1.00
Satd. Flow (perm)	1770	3539			3366			1758	1538	1703		1524
Volume (vph)	335	720	0	0	855	140	475	330	580	30	0	440
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)	364	783	0	0	929	152	516	359	630	33	0	478
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	286	0	0	123
Lane Group Flow (vph)	364	783	0	0	1068	0	0	875	344	33	0	355
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	5%	5%	5%	6%	6%	6%
Turn Type	Prot						Split		Prot	Prot		custom
Protected Phases	1	6			2 8		3	3	3	4		
Permitted Phases												4
Actuated Green, G (s)	9.0	18.0			35.0			17.0	17.0	19.0		19.0
Effective Green, g (s)	9.0	18.0			35.0			17.0	17.0	19.0		19.0
Actuated g/C Ratio	0.09	0.18			0.35			0.17	0.17	0.19		0.19
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	159	637			1178			299	261	324		290
v/s Ratio Prot	c0.21	c0.22			c0.32			c0.50	0.41	0.02		
v/s Ratio Perm												0.31
v/c Ratio	2.29	1.23			0.91			2.93	1.32	0.10		1.22
Uniform Delay, d1	45.5	41.0			30.9			41.5	41.5	33.5		40.5
Progression Factor	1.00	1.00			1.12			1.00	1.00	1.00		1.00
Incremental Delay, d2	599.6	116.6			1.1			875.9	168.3	0.1		127.5
Delay (s)	645.1	157.6			35.7			917.4	209.8	33.6		168.0
Level of Service	F	F			D			F	F	C		F
Approach Delay (s)		312.3			35.7			621.2			159.3	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM Average Control Delay	333.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

19: Lewis River Rd (SR 503) & CC St

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3416		1736	3471	1719	1538
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3416		1736	3471	1719	1538
Volume (vph)	1025	310	115	780	215	85
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1114	337	125	848	234	92
RTOR Reduction (vph)	29	0	0	0	0	75
Lane Group Flow (vph)	1423	0	125	848	234	17
Heavy Vehicles (%)	2%	2%	4%	4%	5%	5%
Turn Type			Prot			Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	62.0		7.0	16.0	19.0	19.0
Effective Green, g (s)	62.0		7.0	16.0	19.0	19.0
Actuated g/C Ratio	0.62		0.07	0.16	0.19	0.19
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2118		122	555	327	292
v/s Ratio Prot	c0.42		c0.07	c0.24	c0.14	
v/s Ratio Perm						0.06
v/c Ratio	0.67		1.02	1.53	0.72	0.06
Uniform Delay, d1	12.4		46.5	42.0	38.0	33.2
Progression Factor	0.48		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		88.2	246.6	7.3	0.1
Delay (s)	6.0		134.7	288.6	45.2	33.3
Level of Service	A		F	F	D	C
Approach Delay (s)	6.0			268.8	41.9	
Approach LOS	A			F	D	

Intersection Summary			
HCM Average Control Delay	103.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lewis River Road (SR 503) at Goerig Street (Westerly)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	250	15	5	1020	900	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	272	16	5	1109	978	87
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2098	978	978			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2098	978	978			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	95	99			
cM capacity (veh/h)	56	301	705			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	288	1114	978	87
Volume Left	272	5	0	0
Volume Right	16	0	0	87
cSH	59	705	1700	1700
Volume to Capacity	4.91	0.01	0.58	0.05
Queue Length (ft)	Err	1	0	0
Control Delay (s)	Err	0.3	0.0	0.0
Lane LOS	F	A		
Approach Delay (s)	Err	0.3	0.0	
Approach LOS	F			

Intersection Summary			
Average Delay	1167.4		
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: N Goerig St & Lewis River Rd (SR 503) Easterly 9/14/2007

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	10	405	340	875	510	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	11	435	366	941	548	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2226	554	559			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2226	554	559			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	64	18	64			
cM capacity (veh/h)	30	528	1012			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	446	1306	559
Volume Left	11	366	0
Volume Right	435	0	11
cSH	377	1012	1700
Volume to Capacity	1.18	0.36	0.33
Queue Length 95th (ft)	450	42	0
Control Delay (s)	138.5	9.1	0.0
Lane LOS	F	A	
Approach Delay (s)	138.5	9.1	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	31.9		
Intersection Capacity Utilization	127.9%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	355	5	5	880	515	180
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	382	5	5	946	554	194
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1608	651	747			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1608	651	747			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	99	99			
cM capacity (veh/h)	115	469	861			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	387	952	747
Volume Left	382	5	0
Volume Right	5	0	194
cSH	116	861	1700
Volume to Capacity	3.34	0.01	0.44
Queue Length 95th (ft)	Err	0	0
Control Delay (s)	Err	0.2	0.0
Lane LOS	F	A	
Approach Delay (s)	Err	0.2	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	1855.6		
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	75	1090	600	5	5	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	83	1211	667	6	6	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	672				2047	669
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	672				2047	669
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				90	88
cM capacity (veh/h)	923				56	459

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1294	672	61
Volume Left	83	0	6
Volume Right	0	6	56
cSH	923	1700	278
Volume to Capacity	0.09	0.40	0.22
Queue Length 95th (ft)	7	0	20
Control Delay (s)	3.3	0.0	21.6
Lane LOS	A		C
Approach Delay (s)	3.3	0.0	21.6
Approach LOS			C

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	115	905	585	5	5	65
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	128	1006	650	6	6	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	656				1914	653
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	656				1914	653
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				91	84
cM capacity (veh/h)	936				63	462

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1133	656	78
Volume Left	128	0	6
Volume Right	0	6	72
cSH	936	1700	318
Volume to Capacity	0.14	0.39	0.24
Queue Length 95th (ft)	12	0	24
Control Delay (s)	3.9	0.0	19.9
Lane LOS	A		C
Approach Delay (s)	3.9	0.0	19.9
Approach LOS			C

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	220	805	465	5	5	125
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	229	839	484	5	5	130
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	490				1784	487
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490				1784	487
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	79				93	78
cM capacity (veh/h)	1074				71	583

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1068	490	135
Volume Left	229	0	5
Volume Right	0	5	130
cSH	1074	1700	456
Volume to Capacity	0.21	0.29	0.30
Queue Length 95th (ft)	20	0	31
Control Delay (s)	5.1	0.0	16.2
Lane LOS	A		C
Approach Delay (s)	5.1	0.0	16.2
Approach LOS			C

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	25	725	490	0	0	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	26	755	510	0	0	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	510				1318	510
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	510				1318	510
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1055				170	565

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	781	510	10
Volume Left	26	0	0
Volume Right	0	0	10
cSH	1055	1700	565
Volume to Capacity	0.02	0.30	0.02
Queue Length 95th (ft)	2	0	1
Control Delay (s)	0.6	0.0	11.5
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	11.5
Approach LOS			B

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	5	5	725	485	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	5	5	5	755	505	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1273	508	510			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1273	508	510			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	185	567	1055			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	10	760	510
Volume Left	5	5	0
Volume Right	5	0	5
cSH	279	1055	1700
Volume to Capacity	0.04	0.00	0.30
Queue Length 95th (ft)	3	0	0
Control Delay (s)	18.4	0.1	0.0
Lane LOS	C	A	
Approach Delay (s)	18.4	0.1	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

1: Dike Access Rd & Robinson Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	80	0	10	70	185	0	5	10	255	5	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	87	0	11	76	201	0	5	11	277	5	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	277			87			288	386	87	299	285	177
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	277			87			288	386	87	299	285	177
tC, single (s)	4.1			4.2			7.3	6.8	6.5	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.7	4.2	3.5	3.5	4.0	3.3
p0 queue free %	100			99			100	99	99	57	99	100
cM capacity (veh/h)	1297			1442			613	510	912	641	623	872

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	87	288	16	283
Volume Left	0	11	0	277
Volume Right	0	201	11	0
cSH	1297	1442	722	640
Volume to Capacity	0.00	0.01	0.02	0.44
Queue Length (ft)	0	1	2	56
Control Delay (s)	0.0	0.3	10.1	15.0
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.3	10.1	15.0
Approach LOS			B	B

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

2: Dike Access Rd & Shurman Way

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	305	45	135	210	55	390
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	332	49	147	228	60	424
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			380		878	356
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			380		878	356
tC, single (s)			4.4		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.4		3.5	3.3
p0 queue free %			86		78	38
cM capacity (veh/h)			1054		271	681

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	380	147	228	60	424
Volume Left	0	147	0	60	0
Volume Right	49	0	0	0	424
cSH	1700	1054	1700	271	681
Volume to Capacity	0.22	0.14	0.13	0.22	0.62
Queue Length (ft)	0	12	0	21	109
Control Delay (s)	0.0	9.0	0.0	22.0	18.6
Lane LOS		A		C	C
Approach Delay (s)	0.0	3.5		19.0	
Approach LOS				C	

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

3: Dike Access Rd & I-5 SB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	410	285	175	265	0	0	0	0	240	5	80
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	446	310	190	288	0	0	0	0	261	5	87
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	288			755			1359	1269	601	1269	1424	288
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	288			755			1359	1269	601	1269	1424	288
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			77			100	100	100	0	95	88
cM capacity (veh/h)	1263			820			88	130	504	114	100	730

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	755	478	353
Volume Left	0	190	261
Volume Right	310	0	87
cSH	1700	820	144
Volume to Capacity	0.44	0.23	2.46
Queue Length (ft)	0	22	763
Control Delay (s)	0.0	6.1	726.2
Lane LOS		A	F
Approach Delay (s)	0.0	6.1	726.2
Approach LOS			F

Intersection Summary			
Average Delay	163.5		
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		

4: Dike Access Rd & I-5 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	150	494	0	0	280	120	160	0	115	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)	163	537	0	0	304	130	174	0	125	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	435			537			1233	1298	537	1358	1233	370
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	435			537			1233	1298	537	1358	1233	370
tC, single (s)	4.2			4.1			7.2	6.6	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.6	4.1	3.4	3.5	4.0	3.3
p0 queue free %	85			100			0	100	76	100	100	100
cM capacity (veh/h)	1089			1016			130	131	525	86	152	681

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	700	435	299
Volume Left	163	0	174
Volume Right	0	130	125
cSH	1089	1700	189
Volume to Capacity	0.15	0.26	1.58
Queue Length (ft)	13	0	486
Control Delay (s)	3.6	0.0	328.3
Lane LOS	A		F
Approach Delay (s)	3.6	0.0	328.3
Approach LOS			F

Intersection Summary			
Average Delay	70.2		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

5: Green Mtn Rd & Old Pacific Hwy

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	185	75	230	165	105	460
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	201	82	250	179	114	500
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1068	340			429	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1068	340			429	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	4	88			90	
cM capacity (veh/h)	210	678			1104	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	283	429	614
Volume Left	201	0	114
Volume Right	82	179	0
cSH	262	1700	1104
Volume to Capacity	1.08	0.25	0.10
Queue Length (ft)	292	0	9
Control Delay (s)	120.1	0.0	2.6
Lane LOS	F		A
Approach Delay (s)	120.1	0.0	2.6
Approach LOS	F		

Intersection Summary			
Average Delay	26.8		
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

6: Guild Rd & Shurman Way

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	50	85	65	225	125	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	92	71	245	136	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	315				394	193
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315				394	193
tC, single (s)	4.1				6.6	6.5
tC, 2 stage (s)						
tF (s)	2.2				3.7	3.5
p0 queue free %	96				75	96
cM capacity (veh/h)	1256				544	793

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	54	92	315	136	33
Volume Left	54	0	0	136	0
Volume Right	0	0	245	0	33
cSH	1256	1700	1700	544	793
Volume to Capacity	0.04	0.05	0.19	0.25	0.04
Queue Length (ft)	3	0	0	25	3
Control Delay (s)	8.0	0.0	0.0	13.8	9.7
Lane LOS	A			B	A
Approach Delay (s)	3.0		0.0	13.0	
Approach LOS				B	

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

7: W Scott Ave & N Pekin Rd

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	130	95	50	165	105	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	141	103	54	179	114	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			245		481	193
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			245		481	193
tC, single (s)			4.1		6.5	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			96		78	97
cM capacity (veh/h)			1310		511	833

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	245	54	179	136
Volume Left	0	54	0	114
Volume Right	103	0	0	22
cSH	1700	1310	1700	545
Volume to Capacity	0.14	0.04	0.11	0.25
Queue Length (ft)	0	3	0	24
Control Delay (s)	0.0	7.9	0.0	13.8
Lane LOS		A		B
Approach Delay (s)	0.0	1.8		13.8
Approach LOS				B

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

8: W Scott Ave & Pacific Ave

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	170	150	0	480	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	185	163	0	522	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	878	552	582			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	878	552	582			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	64	83			
cM capacity (veh/h)	253	515	941			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	185	163	582
Volume Left	0	163	0
Volume Right	185	0	60
cSH	515	941	1700
Volume to Capacity	0.36	0.17	0.34
Queue Length (ft)	40	16	0
Control Delay (s)	15.9	9.6	0.0
Lane LOS	C	A	
Approach Delay (s)	15.9	9.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

9: E Scott Ave & Atlantic Ave

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	285	70	290	250	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	310	76	315	272	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	315	315			587	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315	315			587	
tC, single (s)	6.5	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	53	89			100	
cM capacity (veh/h)	665	711			998	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2
Volume Total	310	76	315	272
Volume Left	310	0	0	0
Volume Right	0	76	0	272
cSH	665	711	1700	1700
Volume to Capacity	0.47	0.11	0.19	0.16
Queue Length (ft)	62	9	0	0
Control Delay (s)	15.0	10.7	0.0	0.0
Lane LOS	C	B		
Approach Delay (s)	14.2		0.0	
Approach LOS	B			

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

10: E Scott Ave & Old Pacific Hwy

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	65	75	40	10	60	150	15	325	0	265	355	160
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)	71	82	43	11	65	163	16	353	0	288	386	174

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	196	239	370	848
Volume Left (vph)	71	11	16	288
Volume Right (vph)	43	163	0	174
Hadj (s)	0.0	-0.3	0.1	0.1
Departure Headway (s)	7.2	5.8	6.4	6.0
Degree Utilization, x	0.39	0.39	0.66	1.42
Capacity (veh/h)	466	502	538	600
Control Delay (s)	11.3	9.8	12.3	61.4
Approach Delay (s)	11.3	9.8	12.3	61.4
Approach LOS	B	A	B	F

Intersection Summary			
Delay	37.0		
HCM Level of Service	E		
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

14: Caples Rd & N Pekin Rd

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	15	45	45	100	150	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	49	49	109	163	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	378	171	179			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	378	171	179			
tC, single (s)	6.5	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	97	94	97			
cM capacity (veh/h)	582	845	1408			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	65	158	179
Volume Left	16	49	0
Volume Right	49	0	16
cSH	759	1408	1700
Volume to Capacity	0.09	0.03	0.11
Queue Length (ft)	7	3	0
Control Delay (s)	10.2	2.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.2	2.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

15: Davidson Ave & 5th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	145	95	445	90	5	55	25	200	0	50	15
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	158	103	484	98	5	60	27	217	0	54	16
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	103			261			1332	1291	209	1519	1340	101
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	103			261			1332	1291	209	1519	1340	101
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.2	6.6	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			63			0	73	74	100	42	98
cM capacity (veh/h)	1489			1304			51	101	824	40	93	941

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	266	587	304	71
Volume Left	5	484	60	0
Volume Right	103	5	217	16
cSH	1489	1304	177	118
Volume to Capacity	0.00	0.37	1.72	0.60
Queue Length (ft)	0	44	531	75
Control Delay (s)	0.2	8.4	390.6	73.3
Lane LOS	A	A	F	F
Approach Delay (s)	0.2	8.4	390.6	73.3
Approach LOS			F	F

Intersection Summary			
Average Delay	105.0		
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

16: Buckeye St & Lewis River Rd (SR 503)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	100	10	10	10	10	110	0	685	5	135	700	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	11	11	11	11	120	0	745	5	147	761	120
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											362	
pX, platoon unblocked	0.52	0.52	0.52	0.52	0.52		0.52					
vC, conflicting volume	1986	1864	821	1878	1921	747	880			750		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2889	2655	657	2681	2764	747	771			750		
tC, single (s)	7.1	6.5	6.2	7.2	6.6	6.3	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.2			2.3		
p0 queue free %	0	0	96	0	0	70	100			82		
cM capacity (veh/h)	0	10	244	0	8	403	438			837		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	130	141	750	1027
Volume Left	109	11	0	147
Volume Right	11	120	5	120
cSH	0	0	438	837
Volume to Capacity	Err	Err	0.00	0.18
Queue Length (ft)	Err	Err	0	16
Control Delay (s)	Err	Err	0.0	4.6
Lane LOS	F	F		A
Approach Delay (s)	Err	Err	0.0	4.6
Approach LOS	F	F		

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	110.7%	ICU Level of Service	H
Analysis Period (min)	15		