APPENDIX B

2025 Intersection Operations Analysis Worksheets for Comp Plan 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	3359		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	3359		1719	1810	1538				1719	1810	1538
Volume (vph)	65	545	210	610	615	360	0	0	0	445	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)	71	592	228	663	668	391	0	0	0	484	293	125
RTOR Reduction (vph)	0	40	0	0	0	218	0	0	0	0	0	93
Lane Group Flow (vph)	71	780	0	663	668	173	0	0	0	484	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)	17.8	26.0		36.0	44.2	44.2				26.0	26.0	26.0
Effective Green, g (s)	17.8	26.0		36.0	44.2	44.2				26.0	26.0	26.0
Actuated g/C Ratio	0.18	0.26		0.36	0.44	0.44				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)	312	873		619	800	680				447	471	400
v/s Ratio Prot	0.04	c0.24		c0.39	c0.37					c0.28	0.16	
v/s Ratio Perm						0.25						0.08
v/c Ratio	0.23	0.89		1.07	0.83	0.25				1.08	0.62	0.08
Uniform Delay, d1	35.2	35.7		32.0	24.7	17.5				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	0.4	11.5		56.7	7.5	0.2				66.7	2.6	0.1
Delay (s)	35.6	47.2		88.7	32.2	17.7				103.7	35.2	28.1
Level of Service	D	D		F	C	B				F	D	C
Approach Delay (s)		46.2			50.7			0.0			71.0	
Approach LOS		D			D			A			E	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
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			3356			1760	1538	1703		1524
Flt Permitted	0.95	1.00			1.00			0.97	1.00	0.95		1.00
Satd. Flow (perm)	1770	3539			3356			1760	1538	1703		1524
Volume (vph)	320	680	0	0	765	145	410	325	580	30	0	405
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	348	739	0	0	832	158	446	353	630	33	0	440
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	312	0	0	134
Lane Group Flow (vph)	348	739	0	0	974	0	0	799	318	33	0	306
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			1175			299	261	324		290
v/s Ratio Prot	c0.20	c0.21			c0.30			c0.45	0.41	0.02		
v/s Ratio Perm												0.29
v/c Ratio	2.19	1.16			0.83			2.67	1.22	0.10		1.06
Uniform Delay, d1	45.5	41.0			29.8			41.5	41.5	33.5		40.5
Progression Factor	1.00	1.00			0.99			1.00	1.00	1.00		1.00
Incremental Delay, d2	555.0	88.7			0.5			762.0	127.7	0.1		68.5
Delay (s)	600.5	129.7			30.0			803.5	169.2	33.6		109.0
Level of Service	F	F			C			F	F	C		F
Approach Delay (s)		280.4			30.0			523.9			103.7	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	284.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.6%	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	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3412		1736	3471	1719	1538
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3412		1736	3471	1719	1538
Volume (vph)	985	310	115	695	210	90
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1071	337	125	755	228	98
RTOR Reduction (vph)	30	0	0	0	0	79
Lane Group Flow (vph)	1378	0	125	755	228	19
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)	2115		122	555	327	292
v/s Ratio Prot	c0.41		c0.07	c0.22	c0.13	
v/s Ratio Perm						0.06
v/c Ratio	0.65		1.02	1.36	0.70	0.06
Uniform Delay, d1	12.1		46.5	42.0	37.8	33.2
Progression Factor	0.48		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		88.2	173.6	6.3	0.1
Delay (s)	5.8		134.7	215.6	44.2	33.3
Level of Service	A		F	F	D	C
Approach Delay (s)	5.8			204.1	40.9	
Approach LOS	A			F	D	

Intersection Summary			
HCM Average Control Delay	77.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	245	15	5	995	840	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	266	16	5	1082	913	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	2005	913	913			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2005	913	913			
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)	64	329	746			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	283	1087	913	87
Volume Left	266	5	0	0
Volume Right	16	0	0	87
cSH	67	746	1700	1700
Volume to Capacity	4.21	0.01	0.54	0.05
Queue Length (ft)	Err	1	0	0
Control Delay (s)	Err	0.2	0.0	0.0
Lane LOS	F	A		
Approach Delay (s)	Err	0.2	0.0	
Approach LOS	F			

Intersection Summary			
Average Delay	1192.7		
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

Lewis River Rd (SR 503) & Goerig Street (Easterly)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	10	380	330	855	475	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	413	359	929	516	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	2168	522	527			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2168	522	527			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	68	26	66			
cM capacity (veh/h)	34	555	1040			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	424	1288	527
Volume Left	11	359	0
Volume Right	413	0	11
cSH	398	1040	1700
Volume to Capacity	1.07	0.34	0.31
Queue Length (ft)	359	39	0
Control Delay (s)	96.6	8.5	0.0
Lane LOS	F	A	
Approach Delay (s)	96.6	8.5	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	23.2		
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

Lewis River Road (SR 503) & E. Scott Avenue

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	365	5	5	865	480	190
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	397	5	5	940	522	207
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	1576	625	728			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1576	625	728			
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)	120	485	875			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	402	946	728
Volume Left	397	5	0
Volume Right	5	0	207
cSH	121	875	1700
Volume to Capacity	3.32	0.01	0.43
Queue Length (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	1937.1		
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

Lewis River Road (SR 503) & Hillshire Drive

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	75	1080	580	10	5	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	1174	630	11	5	49
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	641				1973	636
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	641				1973	636
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				91	90
cM capacity (veh/h)	943				63	478

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1255	641	54
Volume Left	82	0	5
Volume Right	0	11	49
cSH	943	1700	287
Volume to Capacity	0.09	0.38	0.19
Queue Length (ft)	7	0	17
Control Delay (s)	3.0	0.0	20.4
Lane LOS	A		C
Approach Delay (s)	3.0	0.0	20.4
Approach LOS			C

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		

Lewis River Road (SR 503) & Insel Road

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	115	895	565	5	5	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	125	973	614	5	5	65
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	620				1840	617
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	620				1840	617
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				92	87
cM capacity (veh/h)	966				71	485

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1098	620	71
Volume Left	125	0	5
Volume Right	0	5	65
cSH	966	1700	334
Volume to Capacity	0.13	0.36	0.21
Queue Length (ft)	11	0	20
Control Delay (s)	3.5	0.0	18.6
Lane LOS	A		C
Approach Delay (s)	3.5	0.0	18.6
Approach LOS			C

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	97.5%	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	800	450	5	5	120
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	229	833	469	5	5	125
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	474				1763	471
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	474				1763	471
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	79
cM capacity (veh/h)	1088				73	595

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	1062	474	130
Volume Left	229	0	5
Volume Right	0	5	125
cSH	1088	1700	463
Volume to Capacity	0.21	0.28	0.28
Queue Length 95th (ft)	20	0	29
Control Delay (s)	5.0	0.0	15.8
Lane LOS	A		C
Approach Delay (s)	5.0	0.0	15.8
Approach LOS			C

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

Lewis River Road (SR 503) & Fir Avenue

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	25	720	480	0	0	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	783	522	0	0	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	522				1359	522
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1359	522
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	98
cM capacity (veh/h)	1045				160	555

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	810	522	11
Volume Left	27	0	0
Volume Right	0	0	11
cSH	1045	1700	555
Volume to Capacity	0.03	0.31	0.02
Queue Length (ft)	2	0	1
Control Delay (s)	0.7	0.0	11.6
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.6
Approach LOS			B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Lewis River Road (SR 503) & Evergreen Lane

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	5	5	720	5	475
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	5	5	783	5	516
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	1057	264	522			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1057	264	522			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	99	99			
cM capacity (veh/h)	248	775	1045			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	11	788	522
Volume Left	5	5	0
Volume Right	5	0	516
cSH	376	1045	1700
Volume to Capacity	0.03	0.01	0.31
Queue Length (ft)	2	0	0
Control Delay (s)	14.9	0.1	0.0
Lane LOS	B	A	
Approach Delay (s)	14.9	0.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.9%	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	250	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	272	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	58	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	277
Volume Left	0	11	0	272
Volume Right	0	201	11	0
cSH	1297	1442	722	640
Volume to Capacity	0.00	0.01	0.02	0.43
Queue Length (ft)	0	1	2	55
Control Delay (s)	0.0	0.3	10.1	14.8
Lane LOS		A	B	B
Approach Delay (s)	0.0	0.3	10.1	14.8
Approach LOS			B	B

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	49.7%	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)	325	20	140	210	55	385
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	353	22	152	228	60	418
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			375		897	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			375		897	364
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		77	38
cM capacity (veh/h)			1059		263	674

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total	375	152	228	60	418
Volume Left	0	152	0	60	0
Volume Right	22	0	0	0	418
cSH	1700	1059	1700	263	674
Volume to Capacity	0.22	0.14	0.13	0.23	0.62
Queue Length (ft)	0	13	0	21	108
Control Delay (s)	0.0	9.0	0.0	22.7	18.7
Lane LOS		A		C	C
Approach Delay (s)	0.0	3.6		19.2	
Approach LOS				C	

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	48.8%	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	415	295	165	265	0	0	0	0	245	5	85
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	451	321	179	288	0	0	0	0	266	5	92
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			772			1353	1258	611	1258	1418	288
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	288			772			1353	1258	611	1258	1418	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			78			100	100	100	0	95	87
cM capacity (veh/h)	1263			809			89	134	497	117	102	730

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	772	467	364
Volume Left	0	179	266
Volume Right	321	0	92
cSH	1700	809	149
Volume to Capacity	0.45	0.22	2.45
Queue Length (ft)	0	21	783
Control Delay (s)	0.0	5.9	720.5
Lane LOS		A	F
Approach Delay (s)	0.0	5.9	720.5
Approach LOS			F

Intersection Summary			
Average Delay	165.3		
Intersection Capacity Utilization	92.0%	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)	155	505	0	0	275	120	160	0	110	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)	168	549	0	0	299	130	174	0	120	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	429			549			1250	1315	549	1370	1250	364
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429			549			1250	1315	549	1370	1250	364
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	77	100	100	100
cM capacity (veh/h)	1094			1006			126	128	517	85	147	685

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	717	429	293
Volume Left	168	0	174
Volume Right	0	130	120
cSH	1094	1700	182
Volume to Capacity	0.15	0.25	1.61
Queue Length (ft)	14	0	489
Control Delay (s)	3.6	0.0	345.9
Lane LOS	A		F
Approach Delay (s)	3.6	0.0	345.9
Approach LOS			F

Intersection Summary			
Average Delay	72.3		
Intersection Capacity Utilization	82.5%	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)	180	75	235	165	105	470
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	196	82	255	179	114	511
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	1084	345			435	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1084	345			435	
tC, single (s)	6.5	6.3			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.3	
p0 queue free %	5	88			90	
cM capacity (veh/h)	205	673			1099	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	277	435	625
Volume Left	196	0	114
Volume Right	82	179	0
cSH	258	1700	1099
Volume to Capacity	1.08	0.26	0.10
Queue Length (ft)	287	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	26.1		
Intersection Capacity Utilization	77.5%	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	80	60	210	90	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	87	65	228	98	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	293				375	179
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	293				375	179
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				82	96
cM capacity (veh/h)	1280				559	808

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	54	87	293	98	33
Volume Left	54	0	0	98	0
Volume Right	0	0	228	0	33
cSH	1280	1700	1700	559	808
Volume to Capacity	0.04	0.05	0.17	0.18	0.04
Queue Length (ft)	3	0	0	16	3
Control Delay (s)	7.9	0.0	0.0	12.8	9.6
Lane LOS	A			B	A
Approach Delay (s)	3.1		0.0	12.0	
Approach LOS				B	

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	34.4%	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)	135	50	45	160	95	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	147	54	49	174	103	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			201		446	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			201		446	174
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		81	98
cM capacity (veh/h)			1359		539	854

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	201	49	174	120
Volume Left	0	49	0	103
Volume Right	54	0	0	16
cSH	1700	1359	1700	568
Volume to Capacity	0.12	0.04	0.10	0.21
Queue Length (ft)	0	3	0	20
Control Delay (s)	0.0	7.7	0.0	13.0
Lane LOS		A		B
Approach Delay (s)	0.0	1.7		13.0
Approach LOS				B

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	29.7%	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	175	145	0	475	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	190	158	0	516	65
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	864	549	582			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	864	549	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	63	83			
cM capacity (veh/h)	260	517	941			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	190	158	582
Volume Left	0	158	0
Volume Right	190	0	65
cSH	517	941	1700
Volume to Capacity	0.37	0.17	0.34
Queue Length (ft)	42	15	0
Control Delay (s)	16.0	9.6	0.0
Lane LOS	C	A	
Approach Delay (s)	16.0	9.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	46.1%	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)	280	70	290	245	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	304	76	315	266	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			582	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315	315			582	
tC, single (s)	6.5	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	54	89			100	
cM capacity (veh/h)	665	711			1003	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2
Volume Total	304	76	315	266
Volume Left	304	0	0	0
Volume Right	0	76	0	266
cSH	665	711	1700	1700
Volume to Capacity	0.46	0.11	0.19	0.16
Queue Length (ft)	60	9	0	0
Control Delay (s)	14.9	10.7	0.0	0.0
Lane LOS	B	B		
Approach Delay (s)	14.0		0.0	
Approach LOS	B			

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	37.4%	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	80	40	10	60	150	15	315	0	275	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	87	43	11	65	163	16	342	0	299	386	174

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	201	239	359	859
Volume Left (vph)	71	11	16	299
Volume Right (vph)	43	163	0	174
Hadj (s)	0.0	-0.3	0.1	0.1
Departure Headway (s)	7.1	5.8	6.4	6.0
Degree Utilization, x	0.40	0.39	0.64	1.44
Capacity (veh/h)	468	503	535	601
Control Delay (s)	11.3	9.7	12.2	63.3
Approach Delay (s)	11.3	9.7	12.2	63.3
Approach LOS	B	A	B	F

Intersection Summary			
Delay	38.2		
HCM Level of Service	E		
Intersection Capacity Utilization	97.6%	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	40	45	85	95	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	43	49	92	103	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	304	114	125			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304	114	125			
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	95	97			
cM capacity (veh/h)	643	910	1474			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	60	141	125
Volume Left	16	49	0
Volume Right	43	0	22
cSH	817	1474	1700
Volume to Capacity	0.07	0.03	0.07
Queue Length (ft)	6	3	0
Control Delay (s)	9.8	2.8	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	2.8	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	23.6%	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	150	35	205	100	5	35	15	115	0	20	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	163	38	223	109	5	38	16	125	0	22	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	114			201			777	753	182	883	769	111
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	114			201			777	753	182	883	769	111
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			84			85	94	85	100	92	98
cM capacity (veh/h)	1475			1371			250	280	853	186	272	928

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	207	337	179	38
Volume Left	5	223	38	0
Volume Right	38	5	125	16
cSH	1475	1371	503	390
Volume to Capacity	0.00	0.16	0.36	0.10
Queue Length (ft)	0	14	40	8
Control Delay (s)	0.2	5.9	16.1	15.2
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	5.9	16.1	15.2
Approach LOS			C	C

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
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	15	110	0	610	5	135	480	115
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	16	120	0	663	5	147	522	125
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	0.66	0.66	0.66	0.66	0.66		0.66					
vC, conflicting volume	1671	1546	584	1560	1606	666	647			668		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2018	1829	369	1849	1920	666	464			668		
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	74	98	57	54	73	100			84		
cM capacity (veh/h)	12	42	447	25	36	449	720			898		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	130	147	668	793
Volume Left	109	11	0	147
Volume Right	11	120	5	125
cSH	14	127	720	898
Volume to Capacity	9.35	1.16	0.00	0.16
Queue Length (ft)	Err	219	0	15
Control Delay (s)	Err	195.3	0.0	3.9
Lane LOS	F	F		A
Approach Delay (s)	Err	195.3	0.0	3.9
Approach LOS	F	F		

Intersection Summary			
Average Delay	768.2		
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		