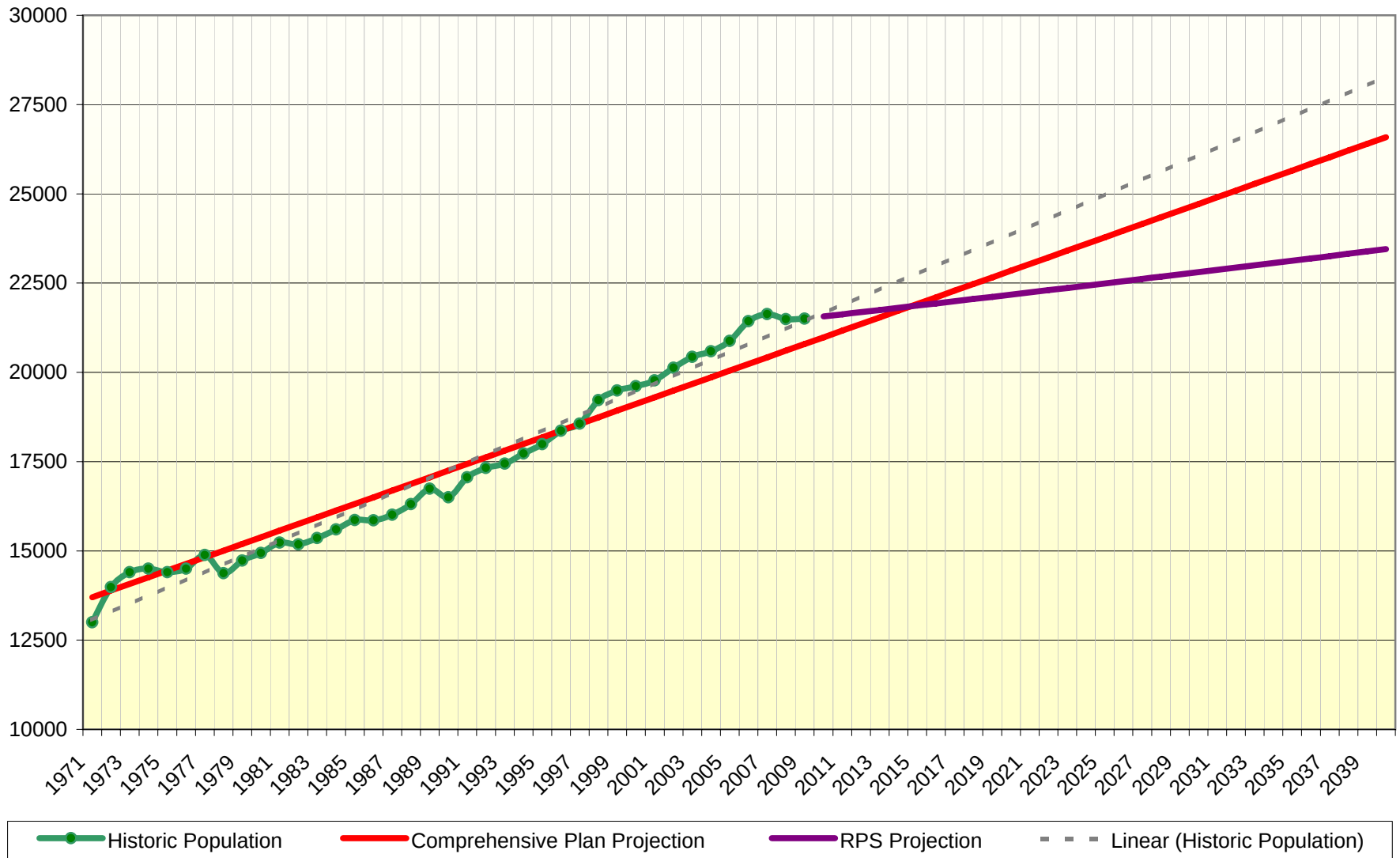


Appendix A

City Population Data

Ashland Population Projections



Ashland Historical Population and Projections							
Year	Historic Population	Comprehensive Plan Projection	RPS Projection	Actual Population Change	Annual growth rate	annual projected population increase	expected % growth based on compplan chart
1971	13000	13701		658	5.33%	187	1.36%
1972	13980	13888		980	7.54%	187	1.35%
1973	14400	14074		420	3.00%	187	1.33%
1974	14500	14261		100	0.69%	187	1.31%
1975	14400	14448		-100	-0.69%	187	1.29%
1976	14500	14634		100	0.69%	187	1.28%
1977	14885	14821		385	2.66%	187	1.26%
1978	14375	15007		-510	-3.43%	187	1.25%
1979	14725	15194		350	2.43%	187	1.23%
1980	14943	15381		218	1.48%	187	1.22%
1981	15230	15567		287	1.92%	187	1.20%
1982	15180	15754		-50	-0.33%	187	1.19%
1983	15360	15941		180	1.19%	187	1.17%
1984	15600	16127		240	1.56%	187	1.16%
1985	15860	16314		260	1.67%	187	1.15%
1986	15855	16501		-5	-0.03%	187	1.13%
1987	16010	16687		155	0.98%	187	1.12%
1988	16310	16874		300	1.87%	187	1.11%
1989	16740	17060		430	2.64%	187	1.10%
1990	16500	17247		-240	-1.43%	187	1.08%
1991	17060	17434		560	3.39%	187	1.07%
1992	17320	17620		260	1.52%	187	1.06%
1993	17445	17807		125	0.72%	187	1.05%
1994	17725	17994		280	1.61%	187	1.04%
1995	17985	18180		260	1.47%	187	1.03%
1996	18360	18367		375	2.09%	187	1.02%
1997	18560	18554		200	1.09%	187	1.01%
1998	19220	18740		660	3.56%	187	1.00%
1999	19490	18927		270	1.40%	187	0.99%
2000	19610	19113		120	0.62%	187	0.98%
2001	19770	19300		160	0.82%	187	0.97%
2002	20130	19487		360	1.82%	187	0.96%
2003	20430	19673		300	1.49%	187	0.95%
2004	20590	19860		160	0.78%	187	0.94%
2005	20880	20047		290	1.41%	187	0.93%
2006	21430	20233		550	2.63%	187	0.92%
2007	21630	20420		200	0.93%	187	0.92%
2008	21485	20607		-145	-0.67%	187	0.91%
2009	21505	20793		20	0.09%	187	0.90%
2010		20980	21565			187	0.89%
2011		21166	21626			187	0.88%
2012		21353	21686			187	0.88%
2013		21540	21747			187	0.87%
2014		21726	21808			187	0.86%
2015		21913	21869			187	0.85%
2016		22100	21930			187	0.85%
2017		22286	21991			187	0.84%
2018		22473	22053			187	0.83%
2019		22660	22115			187	0.83%
2020		22846	22177			187	0.82%
2021		23033	22239			187	0.82%
2022		23220	22301			187	0.81%
2023		23407	22364			187	0.81%
2024		23594	22426			187	0.80%
2025		23781	22489			187	0.79%
2026		23968	22552			187	0.79%
2027		24155	22615			187	0.78%
2028		24342	22678			187	0.77%
2029		24529	22742			187	0.77%
2030		24716	22806			187	0.76%
2031		24903	22869			187	0.76%
2032		25090	22933			187	0.75%
2033		25277	22998			187	0.75%
2034		25464	23062			187	0.74%
2035		25651	23127			187	0.73%
2036		25838	23191			187	0.73%
2037		26025	23256			187	0.72%
2038		26212	23321			187	0.72%
2039		26399	23387			187	0.71%
2040		26586	23452			187	0.71%
2041		26773				187	0.70%
2042		26960				187	0.70%
2043		27147				187	0.69%
2044		27334				187	0.69%
2045		27521				187	0.68%
2046		27708				187	0.68%
2047		27895				187	0.67%
2048		28082				187	0.67%
2049		28269				187	0.67%
2050		28456				187	0.66%
2051		28643				187	0.66%
2052		28830				187	0.65%
2053		29017				187	0.65%
2054		29204				187	0.64%
2055		29391				187	0.64%
2056		29578				187	0.64%
2057		29765				187	0.63%
2058		29952				187	0.63%
2059		30139				187	0.62%
2060		30326				187	0.62%

Appendix B
RVMPO2 Model Data

10/20/2010
RVMPO v2.2
2006 Peak Volumes



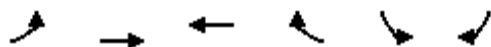
10/20/2010
RVMPO v2.2
2034 Peak Volumes



Appendix C
Year 2034 No-Build Traffic
Conditions Worksheets

2034 Future No-Build Traffic Conditions
1: OR-99 & South Valley View Rd

Weekday PM Peak Hour
1/13/2011

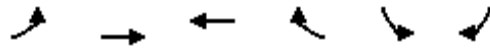


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	78	465	751	693	554	77
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)	150			100	0	0
Storage Lanes	1			1	1	0
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor				0.97		
Frt				0.850	0.984	
Flt Protected	0.950				0.958	
Satd. Flow (prot)	1409	3023	3167	1390	1608	0
Flt Permitted	0.950				0.958	
Satd. Flow (perm)	1409	3023	3167	1351	1608	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				553	10	
Link Speed (mph)		55	45		35	
Link Distance (ft)		1328	1103		739	
Travel Time (s)		16.5	16.7		14.4	
Confl. Peds. (#/hr)				5		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	18%	10%	5%	7%	1%	14%
Adj. Flow (vph)	82	489	791	729	583	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	82	489	791	729	664	0
Turn Type	Prot			Perm		
Protected Phases	1	6	2		8	
Permitted Phases				2		
Detector Phase	1	6	2	2	8	
Switch Phase						
Minimum Initial (s)	3.0	10.0	10.0	10.0	5.0	
Minimum Split (s)	7.0	15.0	33.0	33.0	32.0	
Total Split (s)	10.0	48.0	38.0	38.0	42.0	0.0
Total Split (%)	11.1%	53.3%	42.2%	42.2%	46.7%	0.0%
Maximum Green (s)	6.0	43.0	33.0	33.0	38.0	
Yellow Time (s)	4.0	5.0	5.0	5.0	4.0	
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	5.0	5.0	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	2.5	5.2	5.2	5.2	3.5	
Minimum Gap (s)	1.0	3.2	3.2	3.2	3.5	
Time Before Reduce (s)	10.0	10.0	10.0	10.0	0.0	
Time To Reduce (s)	5.0	20.0	20.0	20.0	0.0	
Recall Mode	None	Min	Min	Min	None	
Walk Time (s)			7.0	7.0	7.0	
Flash Dont Walk (s)			21.0	21.0	21.0	
Pedestrian Calls (#/hr)			0	0	0	
v/c Ratio	0.84	0.34	0.70	0.87	0.97	

2034 Future No-Build Traffic Conditions
1: OR-99 & South Valley View Rd

Weekday PM Peak Hour

1/13/2011



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Control Delay	100.2	15.3	27.9	19.4	54.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	100.2	15.3	27.9	19.4	54.1	
Queue Length 50th (ft)	47	87	196	86	355	
Queue Length 95th (ft)	#133	123	263	#364	#594	
Internal Link Dist (ft)		1248	1023		659	
Turn Bay Length (ft)	150			100		
Base Capacity (vph)	98	1500	1206	857	711	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.84	0.33	0.66	0.85	0.93	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 87.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

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

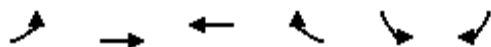
Queue shown is maximum after two cycles.

Splits and Phases: 1: OR-99 & South Valley View Rd

ø1	ø2	
10 s	38 s	
ø6	ø8	
48 s	42 s	

2034 Future No-Build Traffic Conditions
1: OR-99 & South Valley View Rd

Weekday PM Peak Hour
1/13/2011



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	78	465	751	693	554	77
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	5.0	5.0	5.0	4.0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	1.00	0.85	0.98	
Flt Protected	0.95	1.00	1.00	1.00	0.96	
Satd. Flow (prot)	1409	3023	3167	1352	1607	
Flt Permitted	0.95	1.00	1.00	1.00	0.96	
Satd. Flow (perm)	1409	3023	3167	1352	1607	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	82	489	791	729	583	81
RTOR Reduction (vph)	0	0	0	354	6	0
Lane Group Flow (vph)	82	489	791	375	658	0
Confl. Peds. (#/hr)				5		
Heavy Vehicles (%)	18%	10%	5%	7%	1%	14%
Turn Type	Prot			Perm		
Protected Phases	1	6	2		8	
Permitted Phases				2		
Actuated Green, G (s)	6.0	41.3	31.3	31.3	36.8	
Effective Green, g (s)	6.0	41.3	31.3	31.3	36.8	
Actuated g/C Ratio	0.07	0.47	0.36	0.36	0.42	
Clearance Time (s)	4.0	5.0	5.0	5.0	4.0	
Vehicle Extension (s)	2.5	5.2	5.2	5.2	3.5	
Lane Grp Cap (vph)	97	1433	1138	486	679	
v/s Ratio Prot	c0.06	0.16	0.25		c0.41	
v/s Ratio Perm				c0.28		
v/c Ratio	0.85	0.34	0.70	0.77	0.97	
Uniform Delay, d1	40.1	14.4	23.8	24.7	24.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	45.1	0.3	2.5	8.8	26.9	
Delay (s)	85.2	14.7	26.3	33.5	51.5	
Level of Service	F	B	C	C	D	
Approach Delay (s)		24.8	29.7		51.5	
Approach LOS		C	C		D	
Intersection Summary						
HCM Average Control Delay			34.0	HCM Level of Service		C
HCM Volume to Capacity ratio			0.88			
Actuated Cycle Length (s)			87.1	Sum of lost time (s)		13.0
Intersection Capacity Utilization			76.6%	ICU Level of Service		D
Analysis Period (min)			15			
c Critical Lane Group						

2034 Future No-Build Traffic Conditions
2: Maple St & OR-99

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	1	105	10	2	14	64	1074	9	1	919	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0		0	0		0	160		0	120		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor							1.00	1.00		1.00	1.00	
Frt		0.942			0.928			0.999			0.995	
Flt Protected		0.972			0.981		0.950			0.950		
Satd. Flow (prot)	0	1570	0	0	1487	0	1662	3256	0	1662	3274	0
Flt Permitted		0.809			0.874		0.237			0.191		
Satd. Flow (perm)	0	1306	0	0	1325	0	414	3256	0	334	3274	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			15			1			7	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		231			234			1145			889	
Travel Time (s)		6.3			6.4			31.2			24.2	
Confl. Peds. (#/hr)							3		1	1		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	100%	0%	0%	100%	0%	0%	2%	0%	0%	1%	0%
Adj. Flow (vph)	146	1	111	11	2	15	67	1131	9	1	967	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	258	0	0	28	0	67	1140	0	1	1003	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		21.0	21.0		25.0	25.0	
Total Split (s)	34.0	34.0	0.0	34.0	34.0	0.0	44.0	44.0	0.0	44.0	44.0	0.0
Total Split (%)	43.6%	43.6%	0.0%	43.6%	43.6%	0.0%	56.4%	56.4%	0.0%	56.4%	56.4%	0.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		6.9	6.9		6.9	6.9	
Minimum Gap (s)	1.0	1.0		1.0	1.0		4.9	4.9		4.9	4.9	
Time Before Reduce (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Time To Reduce (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0		10.0	10.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio		0.66			0.08		0.29	0.62		0.01	0.54	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		22.2			11.1		11.2	9.9		7.0	8.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		22.2			11.1		11.2	9.9		7.0	8.9	
Queue Length 50th (ft)		45			2		8	97		0	79	
Queue Length 95th (ft)		142			20		40	224		2	184	
Internal Link Dist (ft)		151			154			1065			809	
Turn Bay Length (ft)							160			120		
Base Capacity (vph)		825			821		338	2660		273	2676	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.31			0.03		0.20	0.43		0.00	0.37	

Intersection Summary

Area Type: Other

Cycle Length: 78

Actuated Cycle Length: 51.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Maple St & OR-99

 ø2	 ø4
44 s	34 s
 ø6	 ø8
44 s	34 s

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

2: Maple St & OR-99

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	139	1	105	10	2	14	64	1074	9	1	919	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.93		1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1570			1486		1661	3256		1662	3273	
Flt Permitted		0.81			0.87		0.24	1.00		0.19	1.00	
Satd. Flow (perm)		1306			1324		414	3256		333	3273	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	1	111	11	2	15	67	1131	9	1	967	36
RTOR Reduction (vph)	0	42	0	0	11	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	216	0	0	17	0	67	1140	0	1	1000	0
Confl. Peds. (#/hr)							3		1	1		3
Heavy Vehicles (%)	3%	100%	0%	0%	100%	0%	0%	2%	0%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		13.7			13.7		29.1	29.1		29.1	29.1	
Effective Green, g (s)		13.7			13.7		29.1	29.1		29.1	29.1	
Actuated g/C Ratio		0.27			0.27		0.57	0.57		0.57	0.57	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		2.5			2.5		6.9	6.9		6.9	6.9	
Lane Grp Cap (vph)		352			357		237	1865		191	1875	
v/s Ratio Prot								c0.35			0.31	
v/s Ratio Perm		c0.17			0.01		0.16			0.00		
v/c Ratio		0.61			0.05		0.28	0.61		0.01	0.53	
Uniform Delay, d1		16.2			13.7		5.5	7.1		4.6	6.7	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.7			0.0		2.3	1.2		0.0	0.8	
Delay (s)		19.0			13.8		7.8	8.3		4.7	7.5	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		19.0			13.8			8.3			7.5	
Approach LOS		B			B			A			A	
Intersection Summary												
HCM Average Control Delay			9.1			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			50.8			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			72.9%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
3: Wimer St & OR-99

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	11	52	8	8	180	65	945	11	88	908	23
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.900			0.876			0.998			0.997	
Flt Protected		0.995			0.998			0.997			0.996	
Satd. Flow (prot)	0	1542	0	0	1516	0	0	3240	0	0	3273	0
Flt Permitted		0.995			0.998			0.997			0.996	
Satd. Flow (perm)	0	1542	0	0	1516	0	0	3240	0	0	3273	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			248			1939			1145	
Travel Time (s)		7.8			6.8			52.9			31.2	
Confl. Peds. (#/hr)			1	1			9		9	9		9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	10%	0%	0%	0%	1%	2%	2%	11%	0%	1%	0%
Adj. Flow (vph)	7	12	55	8	8	189	68	995	12	93	956	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	205	0	0	1075	0	0	1073	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
3: Wimer St & OR-99

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	11	52	8	8	180	65	945	11	88	908	23
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	12	55	8	8	189	68	995	12	93	956	24
Pedestrians		9			9			1				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											1145	
pX, platoon unblocked												
vC, conflicting volume	1990	2314	500	1871	2321	512	989			1015		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1990	2314	500	1871	2321	512	989			1015		
tC, single (s)	7.5	6.7	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	50	55	89	61	71	63	90			86		
cM capacity (veh/h)	15	26	517	22	29	506	689			686		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	74	206	566	509	571	502						
Volume Left	7	8	68	0	93	0						
Volume Right	55	189	0	12	0	24						
cSH	70	196	689	1700	686	1700						
Volume to Capacity	1.06	1.05	0.10	0.30	0.14	0.30						
Queue Length 95th (ft)	138	236	8	0	12	0						
Control Delay (s)	226.1	128.5	2.6	0.0	3.5	0.0						
Lane LOS	F	F	A		A							
Approach Delay (s)	226.1	128.5	1.4		1.9							
Approach LOS	F	F										
Intersection Summary												
Average Delay			19.2									
Intersection Capacity Utilization			86.2%		ICU Level of Service				E			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
4: OR-99 & Helman St

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	906	0	977	74	0	0	0	0	68	11
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.98						0.99	
Frt			0.850		0.989						0.981	
Flt Protected												
Satd. Flow (prot)	0	0	2567	0	3234	0	0	0	0	0	1698	0
Flt Permitted												
Satd. Flow (perm)	0	0	2567	0	3234	0	0	0	0	0	1698	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			1057		15						12	
Link Speed (mph)		25			20			20			25	
Link Distance (ft)		1939			136			128			618	
Travel Time (s)		52.9			4.6			4.4			16.9	
Confl. Peds. (#/hr)	84					84	57		9	9		57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	2%	2%	0%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	954	0	1028	78	0	0	0	0	72	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	954	0	1106	0	0	0	0	0	84	0
Turn Type			custom									
Protected Phases			6		2						4	
Permitted Phases												
Detector Phase			6		2						4	
Switch Phase												
Minimum Initial (s)			3.0		10.0						3.0	
Minimum Split (s)			23.0		20.0						24.0	
Total Split (s)	0.0	0.0	41.0	0.0	41.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0
Total Split (%)	0.0%	0.0%	54.7%	0.0%	54.7%	0.0%	0.0%	0.0%	0.0%	0.0%	45.3%	0.0%
Maximum Green (s)			37.0		37.0						30.0	
Yellow Time (s)			4.0		4.0						4.0	
All-Red Time (s)			0.0		0.0						0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)			0.2		6.0						2.5	
Minimum Gap (s)			0.2		4.0						1.0	
Time Before Reduce (s)			0.0		10.0						10.0	
Time To Reduce (s)			0.0		10.0						5.0	
Recall Mode			C-Max		C-Max						Ped	
Walk Time (s)			10.0		5.0						5.0	
Flash Dont Walk (s)			9.0		11.0						15.0	
Pedestrian Calls (#/hr)			0		0						0	
v/c Ratio			0.48		0.54						0.18	
Control Delay			1.0		9.1						19.8	
Queue Delay			0.0		0.0						0.0	
Total Delay			1.0		9.1						19.8	

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

4: OR-99 & Helman St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)			0		133						26	
Queue Length 95th (ft)			10		181						59	
Internal Link Dist (ft)		1859			56			48			538	
Turn Bay Length (ft)												
Base Capacity (vph)			2003		2032						686	
Starvation Cap Reductn			0		0						0	
Spillback Cap Reductn			0		0						0	
Storage Cap Reductn			0		0						0	
Reduced v/c Ratio			0.48		0.54						0.12	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBR, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 4: OR-99 & Helman St

	
ø2	ø4
41 s	34 s
	
ø6	
41 s	

2034 Future No-Build Traffic Conditions
4: OR-99 & Helman St

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	906	0	977	74	0	0	0	0	68	11
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)			4.0		4.0						4.0	
Lane Util. Factor			0.88		0.95						1.00	
Frpb, ped/bikes			1.00		0.98						0.99	
Flpb, ped/bikes			1.00		1.00						1.00	
Frt			0.85		0.99						0.98	
Flt Protected			1.00		1.00						1.00	
Satd. Flow (prot)			2567		3236						1698	
Flt Permitted			1.00		1.00						1.00	
Satd. Flow (perm)			2567		3236						1698	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	954	0	1028	78	0	0	0	0	72	12
RTOR Reduction (vph)	0	0	356	0	6	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	598	0	1100	0	0	0	0	0	75	0
Confl. Peds. (#/hr)	84					84	57		9	9		57
Heavy Vehicles (%)	0%	0%	2%	2%	0%	2%	0%	0%	0%	0%	0%	0%
Turn Type	custom											
Protected Phases			6		2						4	
Permitted Phases												
Actuated Green, G (s)			47.0		47.0						20.0	
Effective Green, g (s)			47.0		47.0						20.0	
Actuated g/C Ratio			0.63		0.63						0.27	
Clearance Time (s)			4.0		4.0						4.0	
Vehicle Extension (s)			0.2		6.0						2.5	
Lane Grp Cap (vph)			1609		2028						453	
v/s Ratio Prot			0.23		c0.34						c0.04	
v/s Ratio Perm												
v/c Ratio			0.37		0.54						0.17	
Uniform Delay, d1			6.8		7.9						21.1	
Progression Factor			1.00		1.00						1.00	
Incremental Delay, d2			0.7		1.0						0.1	
Delay (s)			7.5		9.0						21.2	
Level of Service			A		A						C	
Approach Delay (s)		7.5			9.0			0.0			21.2	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay			8.8		HCM Level of Service					A		
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			75.0		Sum of lost time (s)					8.0		
Intersection Capacity Utilization			57.7%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

5: Main St & Oak St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	1070	0	0	0	0	0	108	153	182	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt									0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	3258	0	0	0	0	0	1750	1488	1646	0	0
Flt Permitted		0.999								0.950		
Satd. Flow (perm)	0	3258	0	0	0	0	0	1750	1488	1646	0	0
Link Speed (mph)		20			20			25			25	
Link Distance (ft)		555			1657			310			266	
Travel Time (s)		18.9			56.5			8.5			7.3	
Confl. Peds. (#/hr)	88		48	48		88	83		50	50		83
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
Heavy Vehicles (%)	0%	2%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	25	1103	0	0	0	0	0	111	158	188	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1128	0	0	0	0	0	111	158	188	0	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

5: Main St & Oak St

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1070	0	0	0	0	0	108	153	182	0	0
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)	25	1103	0	0	0	0	0	111	158	188	0	0
Pedestrians		83			50			48			88	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		7			0			4			7	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		872										
pX, platoon unblocked												
vC, conflicting volume	88			1151			1284	1289	650	795	1289	171
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			1151			1284	1289	650	795	1289	171
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	23	61	0	100	100
cM capacity (veh/h)	1409			590			100	144	400	53	144	733
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1							
Volume Total	392	735	111	158	188							
Volume Left	25	0	0	0	188							
Volume Right	0	0	0	158	0							
cSH	1409	1700	144	400	53							
Volume to Capacity	0.02	0.43	0.77	0.39	3.55							
Queue Length 95th (ft)	1	0	118	46	Err							
Control Delay (s)	0.6	0.0	84.7	19.7	Err							
Lane LOS	A		F	C	F							
Approach Delay (s)	0.2		46.6		Err							
Approach LOS			E		F							
Intersection Summary												
Average Delay			1192.1									
Intersection Capacity Utilization			68.1%		ICU Level of Service				C			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
6: E Main St & OR-99

Weekday PM Peak Hour

1/13/2011

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	243	994
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Ped Bike Factor						
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	0	1630	3260
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	0	1630	3260
Link Speed (mph)	25		20			20
Link Distance (ft)	133		236			1657
Travel Time (s)	3.6		8.0			56.5
Confl. Peds. (#/hr)	27			91	91	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	2%	2%
Adj. Flow (vph)	0	0	0	0	251	1025
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	251	1025
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2034 Future No-Build Traffic Conditions
6: E Main St & OR-99

Weekday PM Peak Hour

1/13/2011

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	0	0	243	994
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	0	0	0	251	1025
Pedestrians	91		27			
Lane Width (ft)	0.0		0.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1131	91			91	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1131	91			91	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			83	
cM capacity (veh/h)	167	955			1502	
Direction, Lane #	SB 1	SB 2	SB 3			
Volume Total	251	512	512			
Volume Left	251	0	0			
Volume Right	0	0	0			
cSH	1502	1700	1700			
Volume to Capacity	0.17	0.30	0.30			
Queue Length 95th (ft)	15	0	0			
Control Delay (s)	7.9	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	1.5					
Approach LOS						
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization			214.2%	ICU Level of Service		H
Analysis Period (min)			15			

2034 Future No-Build Traffic Conditions
7: OR-99 & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	815	46	128	1112	95	83	13	69	79	47	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	75		0	120		0	0		50	100		0
Storage Lanes	1		0	1		0	0		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	0.99		0.97	1.00			0.99				
Frt		0.992			0.988			0.943				0.850
Flt Protected	0.950			0.950				0.976			0.970	
Satd. Flow (prot)	1662	3245	0	1662	3246	0	0	1602	0	0	1676	1488
Flt Permitted	0.950			0.950				0.976			0.619	
Satd. Flow (perm)	1658	3245	0	1609	3246	0	0	1602	0	0	1070	1488
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			9			41				64
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		3150			983			1339			456	
Travel Time (s)		85.9			26.8			36.5			12.4	
Confl. Peds. (#/hr)	6		40	40		6			1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	44	858	48	135	1171	100	87	14	73	83	49	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	906	0	135	1271	0	0	174	0	0	132	64
Turn Type	Prot			Prot			Split			Perm		Perm
Protected Phases	5	2		1	6		8	8			4	
Permitted Phases										4		4
Detector Phase	5	2		1	6		8	8		4	4	4
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0		3.0	3.0		3.0	3.0	3.0
Minimum Split (s)	6.5	20.0		6.5	23.0		30.0	30.0		32.0	32.0	32.0
Total Split (s)	9.0	20.0	0.0	9.0	20.0	0.0	30.0	30.0	0.0	31.0	31.0	31.0
Total Split (%)	10.0%	22.2%	0.0%	10.0%	22.2%	0.0%	33.3%	33.3%	0.0%	34.4%	34.4%	34.4%
Maximum Green (s)	5.5	16.0		5.5	16.0		26.0	26.0		27.0	27.0	27.0
Yellow Time (s)	3.5	4.0		3.5	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.5	6.0		2.5	6.0		2.5	2.5		2.5	2.5	2.5
Minimum Gap (s)	1.0	4.0		1.0	4.0		1.0	1.0		1.0	1.0	1.0
Time Before Reduce (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	10.0
Time To Reduce (s)	5.0	20.0		5.0	20.0		5.0	5.0		5.0	5.0	5.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		7.0			7.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)		9.0			12.0		21.0	21.0		23.0	23.0	23.0
Pedestrian Calls (#/hr)		0			0		0	0		0	0	0
v/c Ratio	0.43	0.74		0.49	0.76			0.68			0.85	0.24

2034 Future No-Build Traffic Conditions
7: OR-99 & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	52.9	31.5		41.1	25.8			40.5			74.7	9.2
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	52.9	31.5		41.1	25.8			40.5			74.7	9.2
Queue Length 50th (ft)	25	223		72	306			72			69	2
Queue Length 95th (ft)	57	#463		128	#626			129			111	m28
Internal Link Dist (ft)		3070			903			1259			376	
Turn Bay Length (ft)	75			120								
Base Capacity (vph)	116	1229		277	1675			492			321	491
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.38	0.74		0.49	0.76			0.35			0.41	0.13

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 82 (91%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow

Natural Cycle: 115

Control Type: Actuated-Coordinated

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 7: OR-99 & Mountain Ave

 ø1	 ø2	 ø4	 ø8
9 s	20 s	31 s	30 s
 ø5	 ø6		
9 s	20 s		

2034 Future No-Build Traffic Conditions
7: OR-99 & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	815	46	128	1112	95	83	13	69	79	47	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	3.5	4.0		3.5	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00			0.99			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1662	3245		1662	3247			1602			1675	1488
Flt Permitted	0.95	1.00		0.95	1.00			0.98			0.62	1.00
Satd. Flow (perm)	1662	3245		1662	3247			1602			1069	1488
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	858	48	135	1171	100	87	14	73	83	49	64
RTOR Reduction (vph)	0	3	0	0	5	0	0	35	0	0	0	55
Lane Group Flow (vph)	44	903	0	135	1266	0	0	139	0	0	132	9
Confl. Peds. (#/hr)	6		40	40		6			1	1		
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	2%	0%	0%
Turn Type	Prot			Prot			Split			Perm		Perm
Protected Phases	5	2		1	6		8	8			4	
Permitted Phases										4		4
Actuated Green, G (s)	4.1	34.0		15.0	44.9			12.4			13.1	13.1
Effective Green, g (s)	4.1	34.0		15.0	44.9			12.4			13.1	13.1
Actuated g/C Ratio	0.05	0.38		0.17	0.50			0.14			0.15	0.15
Clearance Time (s)	3.5	4.0		3.5	4.0			4.0			4.0	4.0
Vehicle Extension (s)	2.5	6.0		2.5	6.0			2.5			2.5	2.5
Lane Grp Cap (vph)	76	1226		277	1620			221			156	217
v/s Ratio Prot	0.03	0.28		c0.08	c0.39			c0.09				
v/s Ratio Perm											c0.12	0.01
v/c Ratio	0.58	0.74		0.49	0.78			0.63			0.85	0.04
Uniform Delay, d1	42.1	24.1		34.0	18.5			36.6			37.5	33.1
Progression Factor	1.00	1.00		1.00	1.00			1.00			0.95	0.86
Incremental Delay, d2	8.5	4.0		1.0	3.8			4.7			31.6	0.1
Delay (s)	50.6	28.1		35.0	22.4			41.4			67.1	28.6
Level of Service	D	C		C	C			D			E	C
Approach Delay (s)		29.1			23.6			41.4			54.6	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM Average Control Delay			28.9			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			15.5			
Intersection Capacity Utilization			67.2%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
8: OR-99 & Garfield St

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	50		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	1750	3260	0	1750	3260	0	0	0	0	0	1750	0
Flt Permitted												
Satd. Flow (perm)	1750	3260	0	1750	3260	0	0	0	0	0	1750	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		983			1436			455			639	
Travel Time (s)		26.8			39.2			12.4			17.4	
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
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
8: OR-99 & Garfield St

Weekday PM Peak Hour
1/13/2011

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0							
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)	0	0	0	0	0	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)	983																		
pX, platoon unblocked																			
vC, conflicting volume	0			0			0	0	0	0	0	0							
vC1, stage 1 conf vol																			
vC2, stage 2 conf vol																			
vCu, unblocked vol	0			0			0	0	0	0	0	0							
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9							
tC, 2 stage (s)																			
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3							
p0 queue free %	100			100			100	100	100	100	100	100							
cM capacity (veh/h)	1636			1636			1029	900	1091	1029	900	1091							
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1												
Volume Total	0	0	0	0	0	0	0												
Volume Left	0	0	0	0	0	0	0												
Volume Right	0	0	0	0	0	0	0												
cSH	1700	1700	1700	1700	1700	1700	1700												
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00												
Queue Length 95th (ft)	0	0	0	0	0	0	0												
Control Delay (s)	0.0	0.0	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				0.0%	ICU Level of Service				A										
Analysis Period (min)				15															

2034 Future No-Build Traffic Conditions
9: OR-66 & OR-99

Weekday PM Peak Hour
1/13/2011

								
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø3	ø5
Lane Configurations								
Volume (vph)	0	559	561	0	682	679		
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750		
Storage Length (ft)	0	0		0	100			
Storage Lanes	0	2		0	1			
Taper Length (ft)	25	25		25	25			
Lane Util. Factor	1.00	0.88	0.95	0.95	0.97	1.00		
Ped Bike Factor					0.99			
Frt		0.850						
Flt Protected					0.950			
Satd. Flow (prot)	0	2493	3197	0	3043	1699		
Flt Permitted					0.950			
Satd. Flow (perm)	0	2493	3197	0	3012	1699		
Right Turn on Red		Yes		Yes				
Satd. Flow (RTOR)		73						
Link Speed (mph)	30		25			25		
Link Distance (ft)	1002		1230			1436		
Travel Time (s)	22.8		33.5			39.2		
Confl. Peds. (#/hr)	40	17		18	18			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	0%	5%	4%	0%	6%	3%		
Adj. Flow (vph)	0	582	584	0	710	707		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	582	584	0	710	707		
Turn Type		Over			Prot			
Protected Phases		3 5	6		3 5	2	3	5
Permitted Phases								
Detector Phase			6		5	2		
Switch Phase								
Minimum Initial (s)			3.0			10.0	1.0	3.0
Minimum Split (s)			40.0			14.0	23.0	7.0
Total Split (s)	0.0	63.0	27.0	0.0	63.0	67.0	23.0	40.0
Total Split (%)	0.0%	70.0%	30.0%	0.0%	70.0%	74.4%	26%	44%
Maximum Green (s)			23.0			63.0	20.0	36.0
Yellow Time (s)			4.0			4.0	3.0	4.0
All-Red Time (s)			0.0			0.0	0.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.0	3.0	4.0	4.0	3.0	4.0		
Lead/Lag			Lead					Lag
Lead-Lag Optimize?			Yes					Yes
Vehicle Extension (s)			4.0			6.0	0.2	2.5
Minimum Gap (s)			2.0			4.0	0.2	1.0
Time Before Reduce (s)			10.0			10.0	0.0	10.0
Time To Reduce (s)			10.0			10.0	0.0	5.0
Recall Mode			C-Max			Min	None	None
Walk Time (s)			5.0				5.0	
Flash Dont Walk (s)			31.0				15.0	
Pedestrian Calls (#/hr)			0				0	
v/c Ratio		0.69	0.30		0.73	0.42		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø3	ø5
Control Delay		27.1	8.3		31.6	0.8		
Queue Delay		0.0	0.0		0.0	0.0		
Total Delay		27.1	8.3		31.6	0.8		
Queue Length 50th (ft)		143	78		184	0		
Queue Length 95th (ft)		176	134		211	0		
Internal Link Dist (ft)	922		1150			1356		
Turn Bay Length (ft)					100			
Base Capacity (vph)		841	1933		1251	1699		
Starvation Cap Reductn		0	0		0	0		
Spillback Cap Reductn		0	0		0	0		
Storage Cap Reductn		0	0		0	0		
Reduced v/c Ratio		0.69	0.30		0.57	0.42		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 28 (31%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 9: OR-66 & OR-99

ø2 67 s		ø3 23 s	
ø6 27 s		ø5 40 s	

2034 Future No-Build Traffic Conditions
9: OR-66 & OR-99

Weekday PM Peak Hour
1/13/2011



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗↗	↕↕		↖↖	↕
Volume (vph)	0	559	561	0	682	679
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)		3.0	4.0		3.0	4.0
Lane Util. Factor		0.88	0.95		0.97	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2493	3197		3043	1699
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2493	3197		3043	1699
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	582	584	0	710	707
RTOR Reduction (vph)	0	51	0	0	0	0
Lane Group Flow (vph)	0	531	584	0	710	707
Confl. Peds. (#/hr)	40	17		18	18	
Heavy Vehicles (%)	0%	5%	4%	0%	6%	3%
Turn Type		Over			Prot	
Protected Phases		3 5	6		3 5	2
Permitted Phases						
Actuated Green, G (s)		27.6	54.4		27.6	90.0
Effective Green, g (s)		27.6	54.4		27.6	90.0
Actuated g/C Ratio		0.31	0.60		0.31	1.00
Clearance Time (s)			4.0			4.0
Vehicle Extension (s)			4.0			6.0
Lane Grp Cap (vph)		765	1932		933	1699
v/s Ratio Prot		0.21	0.18		c0.23	c0.42
v/s Ratio Perm						
v/c Ratio		0.69	0.30		0.76	0.42
Uniform Delay, d1		27.5	8.6		28.2	0.0
Progression Factor		1.00	0.82		1.00	1.00
Incremental Delay, d2		2.2	0.4		3.3	0.5
Delay (s)		29.7	7.4		31.6	0.5
Level of Service		C	A		C	A
Approach Delay (s)	29.7		7.4			16.0
Approach LOS	C		A			B
Intersection Summary						
HCM Average Control Delay			17.2		HCM Level of Service	B
HCM Volume to Capacity ratio			0.52			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	3.0
Intersection Capacity Utilization			68.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

2034 Future No-Build Traffic Conditions
10: OR-99 & Walker Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	490	53	49	492	33	28	50	39	33	44	41
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99	1.00			0.99			0.99	
Frt		0.985			0.991			0.955			0.953	
Flt Protected	0.950			0.950				0.988			0.986	
Satd. Flow (prot)	1662	1699	0	1662	1682	0	0	1637	0	0	1584	0
Flt Permitted	0.417			0.405				0.926			0.910	
Satd. Flow (perm)	721	1699	0	698	1682	0	0	1534	0	0	1460	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			12			41			43	
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		1230			5391			850			689	
Travel Time (s)		33.5			122.5			23.2			18.8	
Confl. Peds. (#/hr)	32		38	38		32	3		8	8		3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	0%	0%	3%	0%	0%	0%	0%	0%	9%	0%
Adj. Flow (vph)	56	516	56	52	518	35	29	53	41	35	46	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	572	0	52	553	0	0	123	0	0	124	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	27.0	27.0		29.0	29.0		32.0	32.0		31.0	31.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	16.0	16.0	0.0	16.0	16.0	0.0
Total Split (%)	64.4%	64.4%	0.0%	64.4%	64.4%	0.0%	35.6%	35.6%	0.0%	35.6%	35.6%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		12.0	12.0		12.0	12.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.9	6.9		6.9	6.9		2.5	2.5		3.0	3.0	
Minimum Gap (s)	4.9	4.9		4.9	4.9		1.0	1.0		3.0	3.0	
Time Before Reduce (s)	10.0	10.0		10.0	10.0		5.0	5.0		0.0	0.0	
Time To Reduce (s)	20.0	20.0		20.0	20.0		10.0	10.0		0.0	0.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	18.0	18.0		20.0	20.0		23.0	23.0		22.0	22.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio	0.11	0.48		0.11	0.47			0.40			0.42	

2034 Future No-Build Traffic Conditions
10: OR-99 & Walker Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	4.4	5.8		4.7	6.3			15.0			15.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.4	5.8		4.7	6.3			15.0			15.3	
Queue Length 50th (ft)	4	56		4	54			19			19	
Queue Length 95th (ft)	14	120		17	145			48			48	
Internal Link Dist (ft)		1150			5311			770			609	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	506	1198		490	1184			439			421	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.11	0.48		0.11	0.47			0.28			0.29	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 10: OR-99 & Walker Ave

 ø2	 ø4
29 s	16 s
 ø6	 ø8
29 s	16 s

2034 Future No-Build Traffic Conditions
10: OR-99 & Walker Ave

Weekday PM Peak Hour
1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	53	490	53	49	492	33	28	50	39	33	44	41
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Frbp, ped/bikes	1.00	0.99		1.00	1.00			0.99			1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.95			0.95	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1641	1699		1636	1681			1637			1582	
Flt Permitted	0.42	1.00		0.40	1.00			0.93			0.91	
Satd. Flow (perm)	720	1699		697	1681			1534			1460	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	56	516	56	52	518	35	29	53	41	35	46	43
RTOR Reduction (vph)	0	7	0	0	4	0	0	35	0	0	36	0
Lane Group Flow (vph)	56	565	0	52	549	0	0	88	0	0	88	0
Confl. Peds. (#/hr)	32		38	38		32	3		8	8		3
Heavy Vehicles (%)	0%	1%	0%	0%	3%	0%	0%	0%	0%	0%	9%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			4		
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	30.0	30.0		30.0	30.0			7.0			7.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0			7.0			7.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.67			0.16			0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	6.9	6.9		6.9	6.9			2.5			3.0	
Lane Grp Cap (vph)	480	1133		465	1121			239			227	
v/s Ratio Prot	c0.33			0.33								
v/s Ratio Perm	0.08			0.07				0.06			c0.06	
v/c Ratio	0.12	0.50		0.11	0.49			0.37			0.39	
Uniform Delay, d1	2.7	3.7		2.7	3.7			17.0			17.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	0.5	1.5		0.5	1.5			0.7			1.1	
Delay (s)	3.2	5.2		3.2	5.2			17.7			18.2	
Level of Service	A	A		A	A			B			B	
Approach Delay (s)	5.0			5.1				17.7			18.2	
Approach LOS	A			A				B			B	
Intersection Summary												
HCM Average Control Delay			7.2	HCM Level of Service			A					
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			45.0	Sum of lost time (s)			8.0					
Intersection Capacity Utilization			62.7%	ICU Level of Service			B					
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
11: OR-99 & Tolman Creek Rd

Weekday PM Peak Hour
1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	158	42	1	138	31	22	28	4	39	44	142
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0		0	0		0	0		0	0		160
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.975			0.990				0.850
Flt Protected		0.981						0.980			0.977	
Satd. Flow (prot)	0	1635	0	0	1612	0	0	1664	0	0	1611	1444
Flt Permitted		0.981						0.980			0.977	
Satd. Flow (perm)	0	1635	0	0	1612	0	0	1664	0	0	1611	1444
Link Speed (mph)		35			35			25			20	
Link Distance (ft)		5391			939			1137			2513	
Travel Time (s)		105.0			18.3			31.0			85.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	5%	0%	0%	4%	14%	5%	0%	0%	13%	0%	3%
Adj. Flow (vph)	134	166	44	1	145	33	23	29	4	41	46	149
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	344	0	0	179	0	0	56	0	0	87	149
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
11: OR-99 & Tolman Creek Rd

Weekday PM Peak Hour

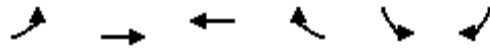
1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	158	42	1	138	31	22	28	4	39	44	142
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	134	166	44	1	145	33	23	29	4	41	46	149
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												6
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	178			211			643	636	188	638	642	162
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	178			211			643	636	188	638	642	162
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.0	3.3
p0 queue free %	90			100			91	92	100	87	87	83
cM capacity (veh/h)	1398			1372			265	360	859	324	357	881
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	344	179	57	237								
Volume Left	134	1	23	41								
Volume Right	44	33	4	149								
cSH	1398	1372	327	925								
Volume to Capacity	0.10	0.00	0.17	0.26								
Queue Length 95th (ft)	8	0	16	25								
Control Delay (s)	3.6	0.1	18.3	13.3								
Lane LOS	A	A	C	B								
Approach Delay (s)	3.6	0.1	18.3	13.3								
Approach LOS			C	B								
Intersection Summary												
Average Delay			6.7									
Intersection Capacity Utilization			49.3%		ICU Level of Service				A			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
12: OR-99 & Mistletoe Rd

Weekday PM Peak Hour

1/13/2011



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	21	205	152	7	14	38
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.994		0.902	
Flt Protected		0.995			0.987	
Satd. Flow (prot)	0	1693	1740	0	1558	0
Flt Permitted		0.995			0.987	
Satd. Flow (perm)	0	1693	1740	0	1558	0
Link Speed (mph)		35	40		25	
Link Distance (ft)		939	1070		511	
Travel Time (s)		18.3	18.2		13.9	
Confl. Peds. (#/hr)						1
Confl. Bikes (#/hr)			1	43		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	31%	0%	0%	0%	0%	0%
Adj. Flow (vph)	22	216	160	7	15	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	238	167	0	55	0
Sign Control		Free	Free		Stop	

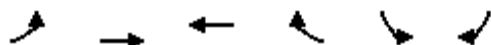
Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
12: OR-99 & Mistletoe Rd

Weekday PM Peak Hour
1/13/2011



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	21	205	152	7	14	38
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)	22	216	160	7	15	40
Pedestrians		1				
Lane Width (ft)		12.0				
Walking Speed (ft/s)		4.0				
Percent Blockage		0				
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	167				424	165
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	167				424	165
tC, single (s)	4.4				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.5				3.5	3.3
p0 queue free %	98				97	95
cM capacity (veh/h)	1252				580	884
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	238	167	55			
Volume Left	22	0	15			
Volume Right	0	7	40			
cSH	1252	1700	775			
Volume to Capacity	0.02	0.10	0.07			
Queue Length 95th (ft)	1	0	6			
Control Delay (s)	0.9	0.0	10.0			
Lane LOS	A		A			
Approach Delay (s)	0.9	0.0	10.0			
Approach LOS			A			
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization			35.9%	ICU Level of Service	A	
Analysis Period (min)			15			

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

13: Nevada St & Oak St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	0	35	1	0	1	40	157	6	1	134	76
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.933			0.932			0.996			0.952	
Flt Protected		0.975			0.976			0.990				
Satd. Flow (prot)	0	1487	0	0	1592	0	0	1712	0	0	1633	0
Flt Permitted		0.975			0.976			0.990				
Satd. Flow (perm)	0	1487	0	0	1592	0	0	1712	0	0	1633	0
Link Speed (mph)		25			25			25			35	
Link Distance (ft)		783			636			1804			749	
Travel Time (s)		21.4			17.3			49.2			14.6	
Confl. Peds. (#/hr)			4	4								
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	0%	4%	0%	0%	0%	0%	1%	0%	0%	2%	2%
Adj. Flow (vph)	40	0	39	1	0	1	44	174	7	1	149	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	2	0	0	225	0	0	234	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

13: Nevada St & Oak St

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	0	35	1	0	1	40	157	6	1	134	76
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	40	0	39	1	0	1	44	174	7	1	149	84
Pedestrians								4				
Lane Width (ft)								12.0				
Walking Speed (ft/s)								4.0				
Percent Blockage								0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	461	463	195	503	502	178	233			181		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	461	463	195	503	502	178	233			181		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	100	95	100	100	100	97			100		
cM capacity (veh/h)	484	482	838	447	458	870	1346			1406		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	79	2	226	234								
Volume Left	40	1	44	1								
Volume Right	39	1	7	84								
cSH	611	590	1346	1406								
Volume to Capacity	0.13	0.00	0.03	0.00								
Queue Length 95th (ft)	11	0	3	0								
Control Delay (s)	11.8	11.1	1.8	0.0								
Lane LOS	B	B	A	A								
Approach Delay (s)	11.8	11.1	1.8	0.0								
Approach LOS	B	B										
Intersection Summary												
Average Delay			2.5									
Intersection Capacity Utilization			41.3%	ICU Level of Service					A			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

14: Hersey St & Oak St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	117	54	39	137	71	94	211	14	85	116	16
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.949			0.990			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	1656	0	1662	1639	0	1630	1685	0	1539	1718	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1662	1656	0	1662	1639	0	1630	1685	0	1539	1718	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		563			2704			680			1510	
Travel Time (s)		12.8			61.5			15.5			34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	2%	3%	0%	8%	0%	0%
Adj. Flow (vph)	19	130	60	43	152	79	104	234	16	94	129	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	190	0	43	231	0	104	250	0	94	147	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

14: Hersey St & Oak St

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	17	117	54	39	137	71	94	211	14	85	116	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	130	60	43	152	79	104	234	16	94	129	18
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2				
Volume Total (vph)	19	190	43	231	104	250	94	147				
Volume Left (vph)	19	0	43	0	104	0	94	0				
Volume Right (vph)	0	60	0	79	0	16	0	18				
Hadj (s)	0.50	-0.21	0.50	-0.22	0.53	0.00	0.64	-0.08				
Departure Headway (s)	7.1	6.4	7.0	6.3	6.9	6.3	7.1	6.4				
Degree Utilization, x	0.04	0.34	0.08	0.41	0.20	0.44	0.19	0.26				
Capacity (veh/h)	470	526	480	540	500	544	475	528				
Control Delay (s)	9.2	11.5	9.5	12.3	10.3	13.0	10.5	10.4				
Approach Delay (s)	11.3		11.9		12.2		10.5					
Approach LOS	B		B		B		B					
Intersection Summary												
Delay			11.6									
HCM Level of Service			B									
Intersection Capacity Utilization			47.3%		ICU Level of Service		A					
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
15: Hersey St & Mountain Ave

Weekday PM Peak Hour
1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	0	241	0	0	0	225	121	27	0	129	36
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0		100	0		0	0		0	0		100
Storage Lanes	1		1	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850					0.990				0.850
Flt Protected	0.950							0.971				
Satd. Flow (prot)	1662	0	1488	0	0	0	0	1664	0	0	1750	1488
Flt Permitted	0.950							0.971				
Satd. Flow (perm)	1662	0	1488	0	0	0	0	1664	0	0	1750	1488
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		2704			207			758			679	
Travel Time (s)		73.7			5.6			20.7			18.5	
Confl. Peds. (#/hr)	3		3				2					2
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
Heavy Vehicles (%)	0%	2%	0%	2%	2%	2%	1%	1%	2%	2%	0%	0%
Adj. Flow (vph)	28	0	251	0	0	0	234	126	28	0	134	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	0	251	0	0	0	0	388	0	0	134	38
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2034 Future No-Build Traffic Conditions
15: Hersey St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop				Stop			Stop	
Volume (vph)	27	0	241	0	0	0	225	121	27	0	129	36
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)	28	0	251	0	0	0	234	126	28	0	134	38
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2							
Volume Total (vph)	28	251	389	134	38							
Volume Left (vph)	28	0	234	0	0							
Volume Right (vph)	0	251	28	0	38							
Hadj (s)	0.50	-0.70	0.10	0.00	-0.70							
Departure Headway (s)	6.5	5.3	5.6	5.8	5.1							
Degree Utilization, x	0.05	0.37	0.61	0.22	0.05							
Capacity (veh/h)	515	632	616	586	661							
Control Delay (s)	8.7	10.2	17.0	9.2	7.2							
Approach Delay (s)	10.1		17.0	8.7								
Approach LOS	B		C	A								
Intersection Summary												
Delay			13.0									
HCM Level of Service			B									
Intersection Capacity Utilization			43.3%			ICU Level of Service			A			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

16: Lithia Way & Oak St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	32	1145	135	77	70	0	0	42	54
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt					0.985						0.924	
Flt Protected					0.999			0.975				
Satd. Flow (prot)	0	0	0	0	3206	0	0	1706	0	0	1590	0
Flt Permitted					0.999			0.975				
Satd. Flow (perm)	0	0	0	0	3206	0	0	1706	0	0	1590	0
Link Speed (mph)		20			20			25			25	
Link Distance (ft)		407			223			266			332	
Travel Time (s)		13.9			7.6			7.3			9.1	
Confl. Peds. (#/hr)	3		35	35		3	45		28	28		45
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	2%	3%	0%	0%	0%	0%	0%	3%
Adj. Flow (vph)	0	0	0	34	1205	142	81	74	0	0	44	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1381	0	0	155	0	0	101	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

16: Lithia Way & Oak St

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	32	1145	135	77	70	0	0	42	54
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	0	34	1205	142	81	74	0	0	44	57
Pedestrians		45			28			35			3	
Lane Width (ft)		0.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			3			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1350			35			829	1453	63	1412	1382	722
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1350			35			829	1453	63	1412	1382	722
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			49	41	100	100	68	84
cM capacity (veh/h)	515			1543			158	125	943	50	138	366
Direction, Lane #	WB 1	WB 2	NB 1	SB 1								
Volume Total	636	745	155	101								
Volume Left	34	0	81	0								
Volume Right	0	142	0	57								
cSH	1543	1700	140	212								
Volume to Capacity	0.02	0.44	1.10	0.48								
Queue Length 95th (ft)	2	0	215	58								
Control Delay (s)	0.6	0.0	169.5	36.5								
Lane LOS	A		F	E								
Approach Delay (s)	0.3		169.5	36.5								
Approach LOS			F	E								
Intersection Summary												
Average Delay			18.5									
Intersection Capacity Utilization			65.4%		ICU Level of Service				C			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
17: E Main St & Lithia Way

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	243	0	0	0	297	0	1037	2	0	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor						0.95		1.00				
Frt						0.865						
Flt Protected												
Satd. Flow (prot)	0	1620	0	0	0	1456	0	3131	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	1620	0	0	0	1382	0	3131	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						36						
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		133			915			147			584	
Travel Time (s)		3.0			20.8			3.3			13.3	
Confl. Peds. (#/hr)	28		5	5		28	22		29	29		22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	8%	0%	0%	0%	4%	0%	6%	100%	0%	0%	0%
Adj. Flow (vph)	0	256	0	0	0	313	0	1092	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	0	0	0	313	0	1094	0	0	0	0
Turn Type						custom						
Protected Phases		4						6				
Permitted Phases						8						
Detector Phase		4				8		6				
Switch Phase												
Minimum Initial (s)		3.0				3.0		6.0				
Minimum Split (s)		20.0				20.0		27.0				
Total Split (s)	0.0	37.0	0.0	0.0	0.0	37.0	0.0	38.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	49.3%	0.0%	0.0%	0.0%	49.3%	0.0%	50.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		33.0				33.0		34.0				
Yellow Time (s)		4.0				4.0		4.0				
All-Red Time (s)		0.0				0.0		0.0				
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5				2.5		6.0				
Minimum Gap (s)		1.0				1.0		4.0				
Time Before Reduce (s)		10.0				10.0		10.0				
Time To Reduce (s)		5.0				5.0		10.0				
Recall Mode		Ped				Ped		C-Max				
Walk Time (s)		7.0				7.0		10.0				
Flash Dont Walk (s)		9.0				9.0		13.0				
Pedestrian Calls (#/hr)		0				0		0				
v/c Ratio		0.59				0.79		0.56				
Control Delay		28.7				36.2		10.5				
Queue Delay		0.0				0.0		0.0				
Total Delay		28.7				36.2		10.5				

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

17: E Main St & Lithia Way

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		107				124		124				
Queue Length 95th (ft)		148				181		252				
Internal Link Dist (ft)		53			835			67			504	
Turn Bay Length (ft)												
Base Capacity (vph)		713				628		1954				
Starvation Cap Reductn		0				0		0				
Spillback Cap Reductn		0				0		0				
Storage Cap Reductn		0				0		0				
Reduced v/c Ratio		0.36				0.50		0.56				

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 74 (99%), Referenced to phase 6:NBT, Start of Yellow

Natural Cycle: 50

Control Type: Actuated-Coordinated

Splits and Phases: 17: E Main St & Lithia Way

	
ø6	ø4
38 s	37 s
	ø8
	37 s

2034 Future No-Build Traffic Conditions
17: E Main St & Lithia Way

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 				
Volume (vph)	0	243	0	0	0	297	0	1037	2	0	0	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)		4.0				4.0		4.0				
Lane Util. Factor		1.00				1.00		0.95				
Frpb, ped/bikes		1.00				0.95		1.00				
Flpb, ped/bikes		1.00				1.00		1.00				
Frt		1.00				0.86		1.00				
Flt Protected		1.00				1.00		1.00				
Satd. Flow (prot)		1620				1382		3130				
Flt Permitted		1.00				1.00		1.00				
Satd. Flow (perm)		1620				1382		3130				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	256	0	0	0	313	0	1092	2	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	26	0	0	0	0	0	0
Lane Group Flow (vph)	0	256	0	0	0	287	0	1094	0	0	0	0
Confl. Peds. (#/hr)	28		5	5		28	22		29	29		22
Heavy Vehicles (%)	0%	8%	0%	0%	0%	4%	0%	6%	100%	0%	0%	0%
Turn Type	custom											
Protected Phases	4						6					
Permitted Phases							8					
Actuated Green, G (s)	20.2						20.2					
Effective Green, g (s)	20.2						20.2					
Actuated g/C Ratio	0.27						0.27					
Clearance Time (s)	4.0						4.0					
Vehicle Extension (s)	2.5						2.5					
Lane Grp Cap (vph)	436						372					
v/s Ratio Prot	0.16						c0.35					
v/s Ratio Perm							c0.21					
v/c Ratio	0.59						0.77					
Uniform Delay, d1	23.8						25.3					
Progression Factor	1.00						1.00					
Incremental Delay, d2	1.7						9.1					
Delay (s)	25.5						34.4					
Level of Service	C						C					
Approach Delay (s)	25.5						34.4					
Approach LOS	C						C					
Intersection Summary												
HCM Average Control Delay	16.5						HCM Level of Service					
HCM Volume to Capacity ratio	0.62						B					
Actuated Cycle Length (s)	75.0						Sum of lost time (s)					
Intersection Capacity Utilization	88.6%						8.0					
Analysis Period (min)	15						ICU Level of Service					
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
18: E Main St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	336	34	18	353	197	41	136	32	357	126	38
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		0	100		0	0		200
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99		0.99	0.99		0.99	0.99	
Frt		0.986			0.946			0.971			0.965	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	1704	0	1662	1633	0	1599	1690	0	1662	1677	0
Flt Permitted	0.271			0.454			0.648			0.646		
Satd. Flow (perm)	450	1704	0	787	1633	0	1081	1690	0	1123	1677	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			74			33			40	
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		650			1810			1283			2102	
Travel Time (s)		17.7			49.4			35.0			57.3	
Confl. Peds. (#/hr)	6		13	13		6	7		6	6		7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	1%	0%	0%	0%	1%	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	53	354	36	19	372	207	43	143	34	376	133	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	390	0	19	579	0	43	177	0	376	173	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	19.0	19.0		19.0	19.0		19.0	19.0		19.0	19.0	
Total Split (s)	22.0	22.0	0.0	22.0	22.0	0.0	23.0	23.0	0.0	23.0	23.0	0.0
Total Split (%)	48.9%	48.9%	0.0%	48.9%	48.9%	0.0%	51.1%	51.1%	0.0%	51.1%	51.1%	0.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
v/c Ratio	0.27	0.51		0.05	0.75		0.11	0.27		0.89	0.26	
Control Delay	13.6	12.5		8.9	19.5		9.0	8.7		38.7	7.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.6	12.5		8.9	19.5		9.0	8.7		38.7	7.9	

2034 Future No-Build Traffic Conditions
18: E Main St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	70		3	110		7	25		78	20	
Queue Length 95th (ft)	31	136		12	#270		m16	m45		#204	49	
Internal Link Dist (ft)		570			1730			1203			2022	
Turn Bay Length (ft)	100			100			100					
Base Capacity (vph)	200	766		350	768		456	733		474	731	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.27	0.51		0.05	0.75		0.09	0.24		0.79	0.24	

Intersection Summary

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 18: E Main St & Mountain Ave

 ø2	 ø4
22 s	23 s
 ø6	 ø8
22 s	23 s

2034 Future No-Build Traffic Conditions
18: E Main St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	336	34	18	353	197	41	136	32	357	126	38
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.99	1.00		0.99	1.00	
Frt	1.00	0.99		1.00	0.95		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1579	1704		1645	1633		1585	1690		1651	1677	
Flt Permitted	0.27	1.00		0.45	1.00		0.65	1.00		0.65	1.00	
Satd. Flow (perm)	450	1704		786	1633		1081	1690		1122	1677	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	354	36	19	372	207	43	143	34	376	133	40
RTOR Reduction (vph)	0	8	0	0	41	0	0	21	0	0	25	0
Lane Group Flow (vph)	53	382	0	19	538	0	43	156	0	376	148	0
Confl. Peds. (#/hr)	6		13	13		6	7		6	6		7
Heavy Vehicles (%)	5%	1%	0%	0%	0%	1%	4%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			8			8		4
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		17.0	17.0		17.0	17.0	
Effective Green, g (s)	20.0	20.0		20.0	20.0		17.0	17.0		17.0	17.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.38	0.38		0.38	0.38	
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)	200	757		349	726		408	638		424	634	
v/s Ratio Prot		0.22			c0.33			0.09			0.09	
v/s Ratio Perm	0.12			0.02			0.04			c0.34		
v/c Ratio	0.27	0.50		0.05	0.74		0.11	0.25		0.89	0.23	
Uniform Delay, d1	7.9	9.0		7.1	10.4		9.1	9.6		13.1	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.04	1.07		1.00	1.00	
Incremental Delay, d2	3.2	2.4		0.3	6.7		0.1	0.2		19.4	0.2	
Delay (s)	11.1	11.4		7.4	17.1		9.6	10.4		32.5	9.7	
Level of Service	B	B		A	B		A	B		C	A	
Approach Delay (s)		11.3			16.8			10.3			25.4	
Approach LOS		B			B			B			C	
Intersection Summary												
HCM Average Control Delay			17.2			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			45.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			87.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
19: E Main St & Walker Ave

Weekday PM Peak Hour
1/13/2011

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	530	150	33	354	80	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)		0	0		0	100
Storage Lanes		0	0		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.970					0.850
Flt Protected				0.996	0.950	
Satd. Flow (prot)	1596	0	0	1647	1614	1293
Flt Permitted				0.996	0.950	
Satd. Flow (perm)	1596	0	0	1647	1614	1293
Link Speed (mph)	25			40	25	
Link Distance (ft)	1205			775	1627	
Travel Time (s)	32.9			13.2	44.4	
Confl. Peds. (#/hr)		1	1		1	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	7%	4%	4%	6%	3%	15%
Adj. Flow (vph)	558	158	35	373	84	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	716	0	0	408	84	32
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2034 Future No-Build Traffic Conditions
19: E Main St & Walker Ave

Weekday PM Peak Hour
1/13/2011

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	530	150	33	354	80	30
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)	558	158	35	373	84	32
Pedestrians	1			8	1	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			1	0	
Right turn flare (veh)						4
Median type	None			None		
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			717		1081	646
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			717		1081	646
tC, single (s)			4.1		6.4	6.4
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			96		63	93
cM capacity (veh/h)			874		230	446
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	716	407	116			
Volume Left	0	35	84			
Volume Right	158	0	32			
cSH	1700	874	316			
Volume to Capacity	0.42	0.04	0.37			
Queue Length 95th (ft)	0	3	41			
Control Delay (s)	0.0	1.2	25.1			
Lane LOS		A	D			
Approach Delay (s)	0.0	1.2	25.1			
Approach LOS			D			
Intersection Summary						
Average Delay		2.8				
Intersection Capacity Utilization		63.4%	ICU Level of Service	B		
Analysis Period (min)		15				

2034 Future No-Build Traffic Conditions
20: Iowa St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	23	2	40	0	339	0	138	34	57	144	0
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.879			0.973				
Flt Protected		0.997			0.995						0.986	
Satd. Flow (prot)	0	1729	0	0	1531	0	0	1689	0	0	1713	0
Flt Permitted		0.997			0.995						0.986	
Satd. Flow (perm)	0	1729	0	0	1531	0	0	1689	0	0	1713	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		210			3008			456			1283	
Travel Time (s)		5.7			82.0			12.4			35.0	
Confl. Peds. (#/hr)	22		2	2		22			14	14		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Adj. Flow (vph)	2	26	2	44	0	377	0	153	38	63	160	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	421	0	0	191	0	0	223	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
20: Iowa St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	23	2	40	0	339	0	138	34	57	144	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2	26	2	44	0	377	0	153	38	63	160	0
Pedestrians					14			2			22	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					1			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)								456			1283	
pX, platoon unblocked												
vC, conflicting volume	858	492	162	490	473	208	160			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	858	492	162	490	473	208	160			205		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	94	100	90	100	54	100			95		
cM capacity (veh/h)	141	453	887	443	464	812	1432			1362		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	30	421	191	223								
Volume Left	2	44	0	63								
Volume Right	2	377	38	0								
cSH	401	747	1700	1362								
Volume to Capacity	0.07	0.56	0.11	0.05								
Queue Length 95th (ft)	6	89	0	4								
Control Delay (s)	14.7	15.9	0.0	2.5								
Lane LOS	B	C		A								
Approach Delay (s)	14.7	15.9	0.0	2.5								
Approach LOS	B	C										
Intersection Summary												
Average Delay			8.9									
Intersection Capacity Utilization			66.8%	ICU Level of Service						C		
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

21: Iowa St & Walker Ave

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	71	1	1	0	57	120	2	0	139	13
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.894						0.999			0.989	
Flt Protected		0.989			0.976			0.984				
Satd. Flow (prot)	0	1523	0	0	1675	0	0	1676	0	0	1715	0
Flt Permitted		0.989			0.976			0.984				
Satd. Flow (perm)	0	1523	0	0	1675	0	0	1676	0	0	1715	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		3008			237			1808			1627	
Travel Time (s)		82.0			6.5			49.3			44.4	
Confl. Peds. (#/hr)	8		5				6					6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	2%	2%	2%	2%	2%	2%	3%	2%	2%	1%	0%
Adj. Flow (vph)	22	0	79	1	1	0	63	133	2	0	154	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	2	0	0	198	0	0	168	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

21: Iowa St & Walker Ave

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	0	71	1	1	0	57	120	2	0	139	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	0	79	1	1	0	63	133	2	0	154	14
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	101	2	199	169								
Volume Left (vph)	22	1	63	0								
Volume Right (vph)	79	0	2	14								
Hadj (s)	-0.40	0.13	0.10	-0.04								
Departure Headway (s)	4.3	5.0	4.4	4.3								
Degree Utilization, x	0.12	0.00	0.24	0.20								
Capacity (veh/h)	762	653	787	798								
Control Delay (s)	7.9	8.0	8.8	8.4								
Approach Delay (s)	7.9	8.0	8.8	8.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.5									
HCM Level of Service			A									
Intersection Capacity Utilization			37.8%	ICU Level of Service	A							
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
22: OR-66 & Walker Ave

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	913	23	70	588	89	10	41	88	126	35	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	0.99			0.99			0.99	
Frt		0.996			0.980			0.915			0.963	
Flt Protected	0.950			0.950				0.996			0.972	
Satd. Flow (prot)	1630	3246	0	1614	3237	0	0	1496	0	0	1601	0
Flt Permitted	0.950			0.950				0.974			0.772	
Satd. Flow (perm)	1618	3246	0	1612	3237	0	0	1462	0	0	1267	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			21			93			22	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		1002			4493			689			1808	
Travel Time (s)		22.8			102.1			18.8			49.3	
Confl. Peds. (#/hr)	10		3	3		10	12		9	9		12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	0%	3%	0%	1%	0%	3%	7%	2%	0%	2%
Adj. Flow (vph)	89	961	24	74	619	94	11	43	93	133	37	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	89	985	0	74	713	0	0	147	0	0	234	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	6.0	26.0		6.0	26.0		34.0	34.0		34.0	34.0	
Total Split (s)	25.0	39.0	0.0	20.0	34.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	28.4%	44.3%	0.0%	22.7%	38.6%	0.0%	33.0%	33.0%	0.0%	33.0%	33.0%	0.0%
Maximum Green (s)	22.0	35.0		17.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	2.5	4.9		2.5	4.9		2.5	2.5		2.5	2.5	
Minimum Gap (s)	1.5	4.9		1.5	4.9		1.5	1.5		1.5	1.5	
Time Before Reduce (s)	5.0	0.0		5.0	0.0		5.0	5.0		5.0	5.0	
Time To Reduce (s)	10.0	0.0		10.0	0.0		10.0	10.0		10.0	10.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		10.0			10.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)		12.0			12.0		20.0	20.0		20.0	20.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
v/c Ratio	0.44	0.72		0.40	0.53			0.30			0.61	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	35.8	18.7		36.1	15.4			10.7			26.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	35.8	18.7		36.1	15.4			10.7			26.5	
Queue Length 50th (ft)	30	146		25	93			14			64	
Queue Length 95th (ft)	86	279		75	185			63			165	
Internal Link Dist (ft)		922			4413			609			1728	
Turn Bay Length (ft)	100			100								
Base Capacity (vph)	721	2100		552	1934			781			648	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.12	0.47		0.13	0.37			0.19			0.36	

Intersection Summary

Area Type: Other

Cycle Length: 88

Actuated Cycle Length: 57.7

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Splits and Phases: 22: OR-66 & Walker Ave

 ø1	 ø2	 ø4
20 s	39 s	29 s
 ø5	 ø6	 ø8
25 s	34 s	29 s

2034 Future No-Build Traffic Conditions
22: OR-66 & Walker Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	913	23	70	588	89	10	41	88	126	35	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	3.0	4.0		3.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00			0.99			0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	
Frt	1.00	1.00		1.00	0.98			0.91			0.96	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.97	
Satd. Flow (prot)	1630	3248		1614	3241			1497			1600	
Flt Permitted	0.95	1.00		0.95	1.00			0.97			0.77	
Satd. Flow (perm)	1630	3248		1614	3241			1464			1270	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	961	24	74	619	94	11	43	93	133	37	64
RTOR Reduction (vph)	0	2	0	0	12	0	0	66	0	0	16	0
Lane Group Flow (vph)	89	983	0	74	701	0	0	81	0	0	218	0
Confl. Peds. (#/hr)	10		3	3		10	12		9	9		12
Heavy Vehicles (%)	2%	2%	0%	3%	0%	1%	0%	3%	7%	2%	0%	2%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	5.7	24.3		5.2	23.8			16.8			16.8	
Effective Green, g (s)	5.7	24.3		5.2	23.8			16.8			16.8	
Actuated g/C Ratio	0.10	0.42		0.09	0.42			0.29			0.29	
Clearance Time (s)	3.0	4.0		3.0	4.0			4.0			4.0	
Vehicle Extension (s)	2.5	4.9		2.5	4.9			2.5			2.5	
Lane Grp Cap (vph)	162	1377		146	1346			429			372	
v/s Ratio Prot	c0.05	c0.30		0.05	0.22							
v/s Ratio Perm								0.06			c0.17	
v/c Ratio	0.55	0.71		0.51	0.52			0.19			0.59	
Uniform Delay, d1	24.6	13.6		24.8	12.5			15.2			17.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	3.0	2.2		2.0	0.7			0.2			2.0	
Delay (s)	27.6	15.8		26.8	13.2			15.3			19.3	
Level of Service	C	B		C	B			B			B	
Approach Delay (s)		16.8			14.5			15.3			19.3	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM Average Control Delay			16.1			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			57.3			Sum of lost time (s)			7.0			
Intersection Capacity Utilization			76.8%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
23: OR-66 & Tolman Creek Rd

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	843	90	236	606	78	87	151	237	77	177	77
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		0	100		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		0.99	0.98		0.99	0.99	
Frt		0.985			0.983			0.908			0.954	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	3210	0	1630	3218	0	1662	1544	0	1614	1630	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1651	3210	0	1623	3218	0	1646	1544	0	1600	1630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			57			16	
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		4493			703			1154			868	
Travel Time (s)		87.5			13.7			31.5			23.7	
Confl. Peds. (#/hr)	6		5	5		6	10		10	10		10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	8%	2%	1%	2%	0%	0%	2%	3%	1%	3%
Adj. Flow (vph)	158	887	95	248	638	82	92	159	249	81	186	81
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	982	0	248	720	0	92	408	0	81	267	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	10.0		3.0	10.0		3.0	5.0		3.0	5.0	
Minimum Split (s)	6.0	24.0		6.0	24.0		6.0	28.5		6.0	30.5	
Total Split (s)	28.0	44.0	0.0	28.0	44.0	0.0	23.0	33.5	0.0	23.0	33.5	0.0
Total Split (%)	21.8%	34.2%	0.0%	21.8%	34.2%	0.0%	17.9%	26.1%	0.0%	17.9%	26.1%	0.0%
Maximum Green (s)	25.0	40.0		25.0	40.0		20.0	30.0		20.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	4.0	4.0	3.0	4.0	4.0	3.0	3.5	4.0	3.0	3.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	5.2		2.5	5.2		2.5	2.5		2.5	2.5	
Minimum Gap (s)	1.0	3.2		1.0	3.2		1.0	1.0		1.0	1.0	
Time Before Reduce (s)	5.0	10.0		5.0	10.0		5.0	5.0		5.0	5.0	
Time To Reduce (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		13.0			13.0			18.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
v/c Ratio	0.74	0.87		0.85	0.56		0.56	0.88		0.53	0.59	

2034 Future No-Build Traffic Conditions
23: OR-66 & Tolman Creek Rd

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	69.3	45.1		70.5	29.0		63.6	56.2		63.9	42.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	69.3	45.1		70.5	29.0		63.6	56.2		63.9	42.4	
Queue Length 50th (ft)	116	357		179	208		67	262		59	167	
Queue Length 95th (ft)	191	#543		#311	320		125	#495		113	282	
Internal Link Dist (ft)		4413			623			1074			788	
Turn Bay Length (ft)	100			100			100			100		
Base Capacity (vph)	379	1178		372	1316		303	466		295	458	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.83		0.67	0.55		0.30	0.88		0.27	0.58	

Intersection Summary

Area Type: Other

Cycle Length: 128.5

Actuated Cycle Length: 111.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

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

Queue shown is maximum after two cycles.

Splits and Phases: 23: OR-66 & Tolman Creek Rd

 ø1	 ø2	 ø3	 ø4
28 s	44 s	23 s	33.5 s
 ø5	 ø6	 ø7	 ø8
28 s	44 s	23 s	33.5 s

2034 Future No-Build Traffic Conditions
23: OR-66 & Tolman Creek Rd

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	843	90	236	606	78	87	151	237	77	177	77
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.91		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	3212		1630	3219		1662	1546		1614	1632	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1662	3212		1630	3219		1662	1546		1614	1632	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	887	95	248	638	82	92	159	249	81	186	81
RTOR Reduction (vph)	0	6	0	0	7	0	0	41	0	0	12	0
Lane Group Flow (vph)	158	976	0	248	713	0	92	367	0	81	255	0
Confl. Peds. (#/hr)	6		5	5		6	10		10	10		10
Heavy Vehicles (%)	0%	1%	8%	2%	1%	2%	0%	0%	2%	3%	1%	3%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	14.3	38.9		20.1	44.7		9.4	30.7		8.9	30.2	
Effective Green, g (s)	14.3	38.9		20.1	44.7		9.4	30.7		8.9	30.2	
Actuated g/C Ratio	0.13	0.35		0.18	0.40		0.08	0.27		0.08	0.27	
Clearance Time (s)	3.0	4.0		3.0	4.0		3.0	3.5		3.0	3.5	
Vehicle Extension (s)	2.5	5.2		2.5	5.2		2.5	2.5		2.5	2.5	
Lane Grp Cap (vph)	212	1115		292	1284		139	423		128	440	
v/s Ratio Prot	0.10	c0.30		c0.15	0.22		c0.06	c0.24		0.05	0.16	
v/s Ratio Perm												
v/c Ratio	0.75	0.88		0.85	0.56		0.66	0.87		0.63	0.58	
Uniform Delay, d1	47.1	34.3		44.5	26.0		49.8	38.8		50.0	35.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.6	8.6		19.7	0.9		10.2	16.6		8.6	1.6	
Delay (s)	59.8	42.9		64.2	27.0		60.0	55.4		58.6	37.1	
Level of Service	E	D		E	C		E	E		E	D	
Approach Delay (s)		45.2			36.5			56.2			42.1	
Approach LOS		D			D			E			D	
Intersection Summary												
HCM Average Control Delay			43.9			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			112.1			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			85.7%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

2034 Future No-Build Traffic Conditions
24: OR-66 & Washington St.

Weekday PM Peak Hour
1/13/2011

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1155	72	22	765	106	88
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)		0	320		150	0
Storage Lanes		0	1		1	1
Taper Length (ft)		25	25		25	25
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.991					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3251	0	1568	3228	1599	1444
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3251	0	1568	3228	1599	1444
Link Speed (mph)	35			35	25	
Link Distance (ft)	703			442	846	
Travel Time (s)	13.7			8.6	23.1	
Confl. Peds. (#/hr)		1	1		5	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	7%	6%	3%	4%	3%
Adj. Flow (vph)	1216	76	23	805	112	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1292	0	23	805	112	93
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

2034 Future No-Build Traffic Conditions
24: OR-66 & Washington St.

Weekday PM Peak Hour
1/13/2011

							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations							
Volume (veh/h)	1155	72	22	765	106	88	
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)	1216	76	23	805	112	93	
Pedestrians	5			1	1		
Lane Width (ft)	12.0			12.0	12.0		
Walking Speed (ft/s)	4.0			4.0	4.0		
Percent Blockage	0			0	0		
Right turn flare (veh)							
Median type	TWLT			TWLT			
Median storage veh	2			2			
Upstream signal (ft)	703						
pX, platoon unblocked			0.73		0.73	0.73	
vC, conflicting volume			1293		1709	648	
vC1, stage 1 conf vol					1255		
vC2, stage 2 conf vol					454		
vCu, unblocked vol			671		1238	0	
tC, single (s)			4.2		6.9	7.0	
tC, 2 stage (s)					5.9		
tF (s)			2.3		3.5	3.3	
p0 queue free %			96		65	88	
cM capacity (veh/h)			651		316	791	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	811	481	23	403	403	112	93
Volume Left	0	0	23	0	0	112	0
Volume Right	0	76	0	0	0	0	93
cSH	1700	1700	651	1700	1700	316	791
Volume to Capacity	0.48	0.28	0.04	0.24	0.24	0.35	0.12
Queue Length 95th (ft)	0	0	3	0	0	39	10
Control Delay (s)	0.0	0.0	10.7	0.0	0.0	22.5	10.2
Lane LOS			B			C	B
Approach Delay (s)	0.0		0.3			16.9	
Approach LOS						C	
Intersection Summary							
Average Delay			1.6				
Intersection Capacity Utilization			50.4%		ICU Level of Service		A
Analysis Period (min)			15				

2034 Future No-Build Traffic Conditions
25: OR-66 & I-5 Southbound Exit Ramp

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1200	76	26	374	0	0	0	0	176	0	430
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0		0	0		0	0		0	0		150
Storage Lanes	0		1	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.850										0.850
Flt Protected					0.997						0.950	
Satd. Flow (prot)	0	1733	1458	0	1706	0	0	0	0	0	1614	1458
Flt Permitted					0.997						0.950	
Satd. Flow (perm)	0	1733	1458	0	1706	0	0	0	0	0	1614	1458
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		442			581			572			571	
Travel Time (s)		8.6			11.3			9.8			9.7	
Confl. Peds. (#/hr)	2		4	4		2						
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
Heavy Vehicles (%)	0%	1%	2%	6%	2%	0%	0%	0%	0%	3%	0%	2%
Adj. Flow (vph)	0	1237	78	27	386	0	0	0	0	181	0	443
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1237	78	0	413	0	0	0	0	0	181	443
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2034 Future No-Build Traffic Conditions
25: OR-66 & I-5 Southbound Exit Ramp

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1200	76	26	374	0	0	0	0	176	0	430
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	1237	78	27	386	0	0	0	0	181	0	443
Pedestrians								4			2	
Lane Width (ft)								0.0			12.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			0	
Right turn flare (veh)												6
Median type	TWLTL			None								
Median storage veh	2											
Upstream signal (ft)	1145											
pX, platoon unblocked				0.66			0.66	0.66	0.66	0.66	0.66	
vC, conflicting volume	388			1319			1680	1682	1241	1678	1761	388
vC1, stage 1 conf vol							1241	1241		441	441	
vC2, stage 2 conf vol							439	441		1237	1319	
vCu, unblocked vol	388			1227			1773	1776	1108	1770	1895	388
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			100	100	100	0	100	33
cM capacity (veh/h)	1180			366			119	177	170	135	134	659
Direction, Lane #	EB 1	EB 2	WB 1	SB 1								
Volume Total	1237	78	412	625								
Volume Left	0	0	27	181								
Volume Right	0	78	0	443								
cSH	1700	1700	366	377								
Volume to Capacity	0.73	0.05	0.07	1.66								
Queue Length 95th (ft)	0	0	6	931								
Control Delay (s)	0.0	0.0	2.4	332.3								
Lane LOS			A	F								
Approach Delay (s)	0.0		2.4	332.3								
Approach LOS				F								
Intersection Summary												
Average Delay			88.7									
Intersection Capacity Utilization			85.8%	ICU Level of Service	E							
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
26: OR-66 & I-5 Northbound Exit Ramp

Weekday PM Peak Hour

1/13/2011

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	709	667	0	0	362	289	38	0	35	0	0	0	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	0		0	0		0	0		150	0		0	
Storage Lanes	0		0	0		0	0		1	0		0	
Taper Length (ft)	25		25	25		25	25		25	25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor													
Frt					0.940					0.850			
Flt Protected	0.975								0.950				
Satd. Flow (prot)	0	1673	0	0	1587	0	0	1568	1365	0	0	0	
Flt Permitted	0.975								0.950				
Satd. Flow (perm)	0	1673	0	0	1587	0	0	1568	1365	0	0	0	
Link Speed (mph)	35						35	40		40			
Link Distance (ft)	581						777	456		764			
Travel Time (s)	11.3						15.1	7.8		13.0			
Confl. Peds. (#/hr)							2						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	2%	2%	0%	0%	1%	7%	6%	0%	9%	0%	0%	0%	
Adj. Flow (vph)	746	702	0	0	381	304	40	0	37	0	0	0	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1448	0	0	685	0	0	40	37	0	0	0	
Sign Control	Free		Free				Stop			Stop			
Intersection Summary													
Area Type:	Other												
Control Type:	Unsignalized												

2034 Future No-Build Traffic Conditions
26: OR-66 & I-5 Northbound Exit Ramp

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	709	667	0	0	362	289	38	0	35	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	746	702	0	0	381	304	40	0	37	0	0	0
Pedestrians		2										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)									6			
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	685			702			2730	2880	702	2728	2728	535
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	685			702			2730	2880	702	2728	2728	535
tC, single (s)	4.1			4.1			7.2	6.5	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.5	4.0	3.3
p0 queue free %	18			100			0	100	91	100	100	100
cM capacity (veh/h)	908			905			4	3	426	4	4	548
Direction, Lane #	EB 1	WB 1	NB 1									
Volume Total	1448	685	77									
Volume Left	746	0	40									
Volume Right	0	304	37									
cSH	908	1700	8									
Volume to Capacity	0.82	0.40	10.04									
Queue Length 95th (ft)	236	0	Err									
Control Delay (s)	24.3	0.0	Err									
Lane LOS	C		F									
Approach Delay (s)	24.3	0.0	Err									
Approach LOS			F									
Intersection Summary												
Average Delay		363.5										
Intersection Capacity Utilization		139.5%	ICU Level of Service							H		
Analysis Period (min)		15										

2034 Future No-Build Traffic Conditions
27: Oak Knoll Dr & OR-66

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	9	56	60	14	0	15	306	31	1	266	83
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0		0	25		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.952						0.988			0.968	
Flt Protected		0.971		0.950				0.998				
Satd. Flow (prot)	0	1498	0	1662	1400	0	0	1528	0	0	1559	0
Flt Permitted		0.971		0.950				0.998				
Satd. Flow (perm)	0	1498	0	1662	1400	0	0	1528	0	0	1559	0
Link Speed (mph)		25			40			35			35	
Link Distance (ft)		443			782			1306			592	
Travel Time (s)		12.1			13.3			25.4			11.5	
Confl. Peds. (#/hr)									2	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	14%	7%	0%	25%	0%	18%	14%	0%	0%	8%	11%
Adj. Flow (vph)	99	9	59	63	15	0	16	322	33	1	280	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	63	15	0	0	371	0	0	368	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2034 Future No-Build Traffic Conditions
27: Oak Knoll Dr & OR-66

Weekday PM Peak Hour
1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	94	9	56	60	14	0	15	306	31	1	266	83
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	99	9	59	63	15	0	16	322	33	1	280	87
Pedestrians					2							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	703	681	324	761	654	340	280			324		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	703	681	324	761	654	340	280			324		
tC, single (s)	7.2	6.6	6.3	7.1	6.8	6.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.2	3.3	2.4			2.2		
p0 queue free %	70	97	92	78	96	100	99			100		
cM capacity (veh/h)	329	352	706	287	352	705	1196			1245		
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1							
Volume Total	167	63	15	371	368							
Volume Left	99	63	0	16	1							
Volume Right	59	0	0	33	87							
cSH	407	287	352	1196	1245							
Volume to Capacity	0.41	0.22	0.04	0.01	0.00							
Queue Length 95th (ft)	49	21	3	1	0							
Control Delay (s)	19.9	21.0	15.7	0.5	0.0							
Lane LOS	C	C	C	A	A							
Approach Delay (s)	19.9	20.0		0.5	0.0							
Approach LOS	C	C										
Intersection Summary												
Average Delay			5.2									
Intersection Capacity Utilization			55.1%	ICU Level of Service					B			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
28: Dead Indian Memorial Rd & OR-66

Weekday PM Peak Hour

1/13/2011

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	8	117	316	11	87	293
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.873		0.995			
Flt Protected	0.997					0.989
Satd. Flow (prot)	1495	0	1646	0	0	1656
Flt Permitted	0.997					0.989
Satd. Flow (perm)	1495	0	1646	0	0	1656
Link Speed (mph)	55		40			35
Link Distance (ft)	285		716			1306
Travel Time (s)	3.5		12.2			25.4
Confl. Peds. (#/hr)	2					
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	2%	6%	0%	3%	5%
Adj. Flow (vph)	8	123	333	12	92	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	131	0	345	0	0	400
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
28: Dead Indian Memorial Rd & OR-66

Weekday PM Peak Hour
1/13/2011

									
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Volume (veh/h)	8	117	316	11	87	293			
Sign Control	Stop		Free			Free			
Grade	0%		0%			0%			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95			
Hourly flow rate (vph)	8	123	333	12	92	308			
Pedestrians			2						
Lane Width (ft)			12.0						
Walking Speed (ft/s)			4.0						
Percent Blockage			0						
Right turn flare (veh)									
Median type			None			None			
Median storage (veh)									
Upstream signal (ft)									
pX, platoon unblocked									
vC, conflicting volume	832	338			333				
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol	832	338			333				
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	83			93				
cM capacity (veh/h)	316	704			1221				
Direction, Lane #	WB 1	NB 1	SB 1						
Volume Total	132	344	400						
Volume Left	8	0	92						
Volume Right	123	12	0						
cSH	652	1700	1221						
Volume to Capacity	0.20	0.20	0.07						
Queue Length 95th (ft)	19	0	6						
Control Delay (s)	11.9	0.0	2.5						
Lane LOS	B		A						
Approach Delay (s)	11.9	0.0	2.5						
Approach LOS	B								
Intersection Summary									
Average Delay		2.9							
Intersection Capacity Utilization		59.1%	ICU Level of Service	B					
Analysis Period (min)		15							

2034 Future No-Build Traffic Conditions
29: Mistletoe Rd & Tolman Creek Rd

Weekday PM Peak Hour

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	0	5	9	1	50	1	245	9	24	268	22
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.971			0.888			0.995			0.990	
Flt Protected		0.962			0.992						0.996	
Satd. Flow (prot)	0	1635	0	0	1542	0	0	1692	0	0	1656	0
Flt Permitted		0.962			0.992						0.996	
Satd. Flow (perm)	0	1635	0	0	1542	0	0	1692	0	0	1656	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		505			897			2513			1154	
Travel Time (s)		13.8			24.5			68.5			31.5	
Confl. Peds. (#/hr)	1		1	1		1	16		2	2		16
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	5%	4%	6%
Adj. Flow (vph)	18	0	5	10	1	54	1	266	10	26	291	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	23	0	0	65	0	0	277	0	0	341	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions
29: Mistletoe Rd & Tolman Creek Rd

Weekday PM Peak Hour
1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	0	5	9	1	50	1	245	9	24	268	22
Sign Control		Stop			Stop			Free			Free	
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)	18	0	5	10	1	54	1	266	10	26	291	24
Pedestrians		16			2			1			1	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											1154	
pX, platoon unblocked												
vC, conflicting volume	701	652	320	637	659	274	331			278		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	701	652	320	637	659	274	331			278		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	99	97	100	93	100			98		
cM capacity (veh/h)	317	376	715	378	372	767	1223			1265		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	24	65	277	341								
Volume Left	18	10	1	26								
Volume Right	5	54	10	24								
cSH	362	655	1223	1265								
Volume to Capacity	0.07	0.10	0.00	0.02								
Queue Length 95th (ft)	5	8	0	2								
Control Delay (s)	15.6	11.1	0.0	0.8								
Lane LOS	C	B	A	A								
Approach Delay (s)	15.6	11.1	0.0	0.8								
Approach LOS	C	B										
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilization			48.3%	ICU Level of Service					A			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

30: Nutley St & Granite St

1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	6	2	3	13	27	3	23	6	1	21	7
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.914			0.974			0.966	
Flt Protected		0.995			0.997			0.996			0.998	
Satd. Flow (prot)	0	1694	0	0	1595	0	0	1639	0	0	1630	0
Flt Permitted		0.995			0.997			0.996			0.998	
Satd. Flow (perm)	0	1694	0	0	1595	0	0	1639	0	0	1630	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		300			392			678			1183	
Travel Time (s)		8.2			10.7			18.5			32.3	
Confl. Peds. (#/hr)	10		3	3		10	12		9	9		12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	14%
Adj. Flow (vph)	1	7	2	3	14	30	3	26	7	1	23	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	47	0	0	36	0	0	32	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

2034 Future No-Build Traffic Conditions

Weekday PM Peak Hour

30: Nutley St & Granite St

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	6	2	3	13	27	3	23	6	1	21	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1	7	2	3	14	30	3	26	7	1	23	8
Pedestrians		12			9			3			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	124	89	42	83	90	48	43			41		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	124	89	42	83	90	48	43			41		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	100	98	97	100			100		
cM capacity (veh/h)	790	788	1021	879	788	1011	1563			1569		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	10	48	36	32								
Volume Left	1	3	3	1								
Volume Right	2	30	7	8								
cSH	831	922	1563	1569								
Volume to Capacity	0.01	0.05	0.00	0.00								
Queue Length 95th (ft)	1	4	0	0								
Control Delay (s)	9.4	9.1	0.7	0.3								
Lane LOS	A	A	A	A								
Approach Delay (s)	9.4	9.1	0.7	0.3								
Approach LOS	A	A										
Intersection Summary												
Average Delay			4.5									
Intersection Capacity Utilization			19.9%		ICU Level of Service				A			
Analysis Period (min)			15									

2034 Future No-Build Traffic Conditions
31: Ashland St & Mountain Ave

Weekday PM Peak Hour
1/13/2011

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	10	2	0	3	46	1	14	1	63	53	62
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.995			0.873			0.993			0.953	
Flt Protected		0.964						0.997			0.983	
Satd. Flow (prot)	0	1679	0	0	1499	0	0	1733	0	0	1639	0
Flt Permitted		0.964						0.997			0.983	
Satd. Flow (perm)	0	1679	0	0	1499	0	0	1733	0	0	1639	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		487			452			593			1339	
Travel Time (s)		13.3			12.3			16.2			36.5	
Confl. Peds. (#/hr)	9					9						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	39	11	2	0	3	51	1	16	1	70	59	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	0	0	54	0	0	18	0	0	198	0
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											

2034 Future No-Build Traffic Conditions
31: Ashland St & Mountain Ave

Weekday PM Peak Hour

1/13/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	35	10	2	0	3	46	1	14	1	63	53	62
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	11	2	0	3	51	1	16	1	70	59	69
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	52	54	18	198								
Volume Left (vph)	39	0	1	70								
Volume Right (vph)	2	51	1	69								
Hadj (s)	0.12	-0.53	-0.02	-0.14								
Departure Headway (s)	4.5	3.9	4.3	4.0								
Degree Utilization, x	0.07	0.06	0.02	0.22								
Capacity (veh/h)	752	871	797	873								
Control Delay (s)	7.9	7.1	7.4	8.2								
Approach Delay (s)	7.9	7.1	7.4	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.9									
HCM Level of Service			A									
Intersection Capacity Utilization			33.7%	ICU Level of Service		A						
Analysis Period (min)			15									

Appendix D
Signal Warrant Analysis
Worksheets

**KITTELSON & ASSOCIATES, INC.**

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Date: 12/23/2010
File: H:\profile\10633 - City of Ashland TSP
 Update\excel\signal_warrants\[Sig Warrant_99NB-Oak.xls]Data
Intersection: OR99 (NB)/Oak Street
Scenario: 2034 Future No-Build Traffic Conditions

Raw Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
4:15 AM	5:15 AM	0	1312	147	96
2nd	Highest Hour	0	1260	141	92
3rd	Highest Hour	0	1233	138	90
4th	Highest Hour	0	1050	118	77
5th	Highest Hour	0	997	112	73
6th	Highest Hour	0	892	100	65
7th	Highest Hour	0	827	93	60
8th	Highest Hour	0	787	88	58
9th	Highest Hour	0	630	71	46
10th	Highest Hour	0	590	66	43
11th	Highest Hour	0	590	66	43
12th	Highest Hour	0	564	63	41
13th	Highest Hour	0	512	57	37
14th	Highest Hour	0	472	53	35
15th	Highest Hour	0	472	53	35
16th	Highest Hour	0	459	51	34
17th	Highest Hour	0	262	29	19
18th	Highest Hour	0	144	16	11
19th	Highest Hour	0	131	15	10
20th	Highest Hour	0	52	6	4
21st	Highest Hour	0	39	4	3
22nd	Highest Hour	0	39	4	3
23rd	Highest Hour	0	26	3	2
24th	Highest Hour	0	26	3	2

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
4:15 AM	5:15 AM	0	1312	147	96
2nd	Highest Hour	0	1260	141	92
3rd	Highest Hour	0	1233	138	90
4th	Highest Hour	0	1050	118	77
5th	Highest Hour	0	997	112	73
6th	Highest Hour	0	892	100	65
7th	Highest Hour	0	827	93	60
8th	Highest Hour	0	787	88	58
9th	Highest Hour	0	630	71	46
10th	Highest Hour	0	590	66	43
11th	Highest Hour	0	590	66	43
12th	Highest Hour	0	564	63	41
13th	Highest Hour	0	512	57	37
14th	Highest Hour	0	472	53	35
15th	Highest Hour	0	472	53	35
16th	Highest Hour	0	459	51	34
17th	Highest Hour	0	262	29	19
18th	Highest Hour	0	144	16	11
19th	Highest Hour	0	131	15	10
20th	Highest Hour	0	52	6	4
21st	Highest Hour	0	39	4	3
22nd	Highest Hour	0	39	4	3
23rd	Highest Hour	0	26	3	2
24th	Highest Hour	0	26	3	2

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	2
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	80%
Major Street: 8th-Highest Hour / Peak Hour	60%
Minor Street: 4th-Highest Hour / Peak Hour	80%
Minor Street: 8th-Highest Hour / Peak Hour	60%

**KITTELSON & ASSOCIATES, INC.**

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Project #: 10633
Project Name: Ashland TSP Update
Analyst: MJB
Date: 12/23/2010
File: H:\profile\10633 - City of Ashland TSP
 Update\excel\signal_warrants\[Sig Warrant_99-Hersey.xls]Data
Intersection: OR99/Hersey/Wimer Street
Scenario: 2034 Future No-Build Traffic Conditions

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Raw Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	NB	SB	EB	WB
4:15 AM	5:15 AM	1021	1019	18	29
2nd	Highest Hour	980	978	17	28
3rd	Highest Hour	960	958	17	27
4th	Highest Hour	817	815	14	23
5th	Highest Hour	776	774	14	22
6th	Highest Hour	694	693	12	20
7th	Highest Hour	643	642	11	18
8th	Highest Hour	613	611	11	17
9th	Highest Hour	490	489	9	14
10th	Highest Hour	459	459	8	13
11th	Highest Hour	459	459	8	13
12th	Highest Hour	439	438	8	12
13th	Highest Hour	398	397	7	11
14th	Highest Hour	368	367	6	10
15th	Highest Hour	368	367	6	10
16th	Highest Hour	357	357	6	10
17th	Highest Hour	204	204	4	6
18th	Highest Hour	112	112	2	3
19th	Highest Hour	102	102	2	3
20th	Highest Hour	41	41	1	1
21st	Highest Hour	31	31	1	1
22nd	Highest Hour	31	31	1	1
23rd	Highest Hour	20	20	0	1
24th	Highest Hour	20	20	0	1

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	NB	SB	EB	WB
4:15 AM	5:15 AM	1021	1019	18	29
2nd	Highest Hour	980	978	17	28
3rd	Highest Hour	960	958	17	27
4th	Highest Hour	817	815	14	23
5th	Highest Hour	776	774	14	22
6th	Highest Hour	694	693	12	20
7th	Highest Hour	643	642	11	18
8th	Highest Hour	613	611	11	17
9th	Highest Hour	490	489	9	14
10th	Highest Hour	459	459	8	13
11th	Highest Hour	459	459	8	13
12th	Highest Hour	439	438	8	12
13th	Highest Hour	398	397	7	11
14th	Highest Hour	368	367	6	10
15th	Highest Hour	368	367	6	10
16th	Highest Hour	357	357	6	10
17th	Highest Hour	204	204	4	6
18th	Highest Hour	112	112	2	3
19th	Highest Hour	102	102	2	3
20th	Highest Hour	41	41	1	1
21st	Highest Hour	31	31	1	1
22nd	Highest Hour	31	31	1	1
23rd	Highest Hour	20	20	0	1
24th	Highest Hour	20	20	0	1

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Major
East-West Approach =	Minor
Major Street Thru Lanes =	2
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	80%
Major Street: 8th-Highest Hour / Peak Hour	60%
Minor Street: 4th-Highest Hour / Peak Hour	80%
Minor Street: 8th-Highest Hour / Peak Hour	60%

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Project #: 10633
Project Name: Ashland TSP Update
Analyst: MJB
Date: 12/23/2010
File: H:\profile\10633 - City of Ashland TSP
 Update\excel\signal_warrants\[Sig Warrant_99SB-Oak.xls]Data
Intersection: OR99 (SB)/Oak Street
Scenario: 2034 Future No-Build Traffic Conditions

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Raw Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
4:15 AM	5:15 AM	1094	0	108	182
2nd	Highest Hour	1050	0	104	175
3rd	Highest Hour	1028	0	102	171
4th	Highest Hour	875	0	86	146
5th	Highest Hour	831	0	82	138
6th	Highest Hour	744	0	73	124
7th	Highest Hour	689	0	68	115
8th	Highest Hour	656	0	65	109
9th	Highest Hour	525	0	52	87
10th	Highest Hour	492	0	49	82
11th	Highest Hour	492	0	49	82
12th	Highest Hour	470	0	46	78
13th	Highest Hour	427	0	42	71
14th	Highest Hour	394	0	39	66
15th	Highest Hour	394	0	39	66
16th	Highest Hour	383	0	38	64
17th	Highest Hour	219	0	22	36
18th	Highest Hour	120	0	12	20
19th	Highest Hour	109	0	11	18
20th	Highest Hour	44	0	4	7
21st	Highest Hour	33	0	3	5
22nd	Highest Hour	33	0	3	5
23rd	Highest Hour	22	0	2	4
24th	Highest Hour	22	0	2	4

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
4:15 AM	5:15 AM	1094	0	108	182
2nd	Highest Hour	1050	0	104	175
3rd	Highest Hour	1028	0	102	171
4th	Highest Hour	875	0	86	146
5th	Highest Hour	831	0	82	138
6th	Highest Hour	744	0	73	124
7th	Highest Hour	689	0	68	115
8th	Highest Hour	656	0	65	109
9th	Highest Hour	525	0	52	87
10th	Highest Hour	492	0	49	82
11th	Highest Hour	492	0	49	82
12th	Highest Hour	470	0	46	78
13th	Highest Hour	427	0	42	71
14th	Highest Hour	394	0	39	66
15th	Highest Hour	394	0	39	66
16th	Highest Hour	383	0	38	64
17th	Highest Hour	219	0	22	36
18th	Highest Hour	120	0	12	20
19th	Highest Hour	109	0	11	18
20th	Highest Hour	44	0	4	7
21st	Highest Hour	33	0	3	5
22nd	Highest Hour	33	0	3	5
23rd	Highest Hour	22	0	2	4
24th	Highest Hour	22	0	2	4

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	2
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	80%
Major Street: 8th-Highest Hour / Peak Hour	60%
Minor Street: 4th-Highest Hour / Peak Hour	80%
Minor Street: 8th-Highest Hour / Peak Hour	60%

Appendix E
Queuing Analysis
Worksheets

Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	3	3	3	3	3	3	3
# of Recorded Intvls	2	2	2	2	2	2	2
Vehs Entered	14561	14359	14551	14599	14327	14390	14483
Vehs Exited	14198	14156	14172	14172	14000	14016	14208
Starting Vehs	783	894	820	768	837	851	824
Ending Vehs	1146	1097	1199	1195	1164	1225	1099
Denied Entry Before	55	52	66	13	79	49	61
Denied Entry After	1003	1259	1139	1012	1234	1133	1102
Travel Distance (mi)	14538	14295	14484	14365	14014	14259	14421
Travel Time (hr)	1521.8	1690.3	1568.9	1532.8	1599.8	1545.5	1590.9
Total Delay (hr)	991.8	1168.2	1040.8	1008.1	1087.0	1024.4	1064.5
Total Stops	28578	29943	29547	28449	28255	29461	29531
Fuel Used (gal)	692.5	727.4	702.5	693.1	700.5	693.6	706.1

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	3	3	3	3
# of Recorded Intvls	2	2	2	2
Vehs Entered	14747	14211	14526	14471
Vehs Exited	14327	13834	14182	14128
Starting Vehs	776	766	848	803
Ending Vehs	1196	1143	1192	1158
Denied Entry Before	66	51	27	49
Denied Entry After	1003	1336	1178	1139
Travel Distance (mi)	14783	14001	14576	14374
Travel Time (hr)	1522.8	1657.0	1603.0	1583.3
Total Delay (hr)	984.1	1145.6	1070.9	1058.5
Total Stops	28464	27315	30146	28967
Fuel Used (gal)	702.4	711.9	711.4	704.1

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10
Volumes adjusted by PHF, Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	1	10	2	3	4	5	6
Vehs Entered	3896	3876	3813	3833	3817	3838	3852
Vehs Exited	3706	3696	3631	3684	3735	3665	3670
Starting Vehs	783	894	820	768	837	851	824
Ending Vehs	973	1074	1002	917	919	1024	1006
Denied Entry Before	55	52	66	13	79	49	61
Denied Entry After	275	278	312	270	304	246	305
Travel Distance (mi)	3847	3831	3756	3801	3773	3844	3758
Travel Time (hr)	267.4	279.4	264.0	247.3	269.9	272.7	278.2
Total Delay (hr)	127.1	139.5	126.9	108.5	132.6	132.1	141.1
Total Stops	6300	6205	6428	6094	6514	6908	6438
Fuel Used (gal)	153.0	154.5	149.6	146.9	151.9	153.6	153.0

Interval #1 Information Recording

Start Time	5:00
End Time	5:15
Total Time (min)	15
Volumes adjusted by PHF, Growth Factors.	

Run Number	7	8	9	Avg
Vehs Entered	3964	3828	3886	3864
Vehs Exited	3768	3578	3744	3689
Starting Vehs	776	766	848	803
Ending Vehs	972	1016	990	971
Denied Entry Before	66	51	27	49
Denied Entry After	295	283	239	280
Travel Distance (mi)	3985	3690	3963	3825
Travel Time (hr)	269.1	259.8	268.2	267.6
Total Delay (hr)	123.9	125.2	123.4	128.0
Total Stops	6959	5922	6962	6472
Fuel Used (gal)	157.4	147.7	155.3	152.3

Interval #2 Information Recording2

Start Time	5:15
End Time	6:00
Total Time (min)	45
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	1	10	2	3	4	5	6
Vehs Entered	10665	10483	10738	10766	10510	10552	10631
Vehs Exited	10492	10460	10541	10488	10265	10351	10538
Starting Vehs	973	1074	1002	917	919	1024	1006
Ending Vehs	1146	1097	1199	1195	1164	1225	1099
Denied Entry Before	275	278	312	270	304	246	305
Denied Entry After	1003	1259	1139	1012	1234	1133	1102
Travel Distance (mi)	10692	10465	10729	10564	10241	10415	10664
Travel Time (hr)	1254.4	1410.9	1305.0	1285.5	1329.9	1272.9	1312.7
Total Delay (hr)	864.6	1028.6	913.9	899.6	954.5	892.3	923.4
Total Stops	22278	23738	23119	22355	21741	22553	23093
Fuel Used (gal)	539.5	572.8	552.9	546.2	548.6	540.0	553.1

Interval #2 Information Recording2

Start Time	5:15
End Time	6:00
Total Time (min)	45
Volumes adjusted by Growth Factors, Anti PHF.	

Run Number	7	8	9	Avg
Vehs Entered	10783	10383	10640	10617
Vehs Exited	10559	10256	10438	10438
Starting Vehs	972	1016	990	971
Ending Vehs	1196	1143	1192	1158
Denied Entry Before	295	283	239	280
Denied Entry After	1003	1336	1178	1139
Travel Distance (mi)	10797	10311	10612	10549
Travel Time (hr)	1253.6	1397.3	1334.8	1315.7
Total Delay (hr)	860.2	1020.5	947.4	930.5
Total Stops	21505	21393	23184	22491
Fuel Used (gal)	544.9	564.1	556.2	551.8

Future Traffic Conditions
Queuing and Blocking Report

Weekday PM Peak Hour

12/7/2010

Intersection: 1: OR-99 & South Valley View Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	B89	B89	SB
Directions Served	L	T	T	T	T	R	T	T	LR
Maximum Queue (ft)	160	236	220	532	621	125	15	27	667
Average Queue (ft)	115	128	128	341	448	122	2	4	581
95th Queue (ft)	198	277	249	618	721	141	18	27	850
Link Distance (ft)		1274	1274	1059	1059		5375	5375	670
Upstream Blk Time (%)									25
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	150					100			
Storage Blk Time (%)	19	2			27	17			
Queuing Penalty (veh)	47	1			194	68			

Intersection: 1: OR-99 & South Valley View Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	B89	B89	SB
Directions Served	L	T	T	T	T	R	T	T	LR
Maximum Queue (ft)	163	230	218	478	628	125	3	15	693
Average Queue (ft)	100	93	105	241	338	121	0	1	529
95th Queue (ft)	181	203	191	414	570	142	4	13	804
Link Distance (ft)		1274	1274	1059	1059		5375	5375	670
Upstream Blk Time (%)									14
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	150					100			
Storage Blk Time (%)	13	0			21	13			
Queuing Penalty (veh)	29	0			143	47			

Intersection: 1: OR-99 & South Valley View Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	B89	B89	SB
Directions Served	L	T	T	T	T	R	T	T	LR
Maximum Queue (ft)	169	263	250	600	705	125	19	39	699
Average Queue (ft)	103	101	111	265	365	121	1	2	541
95th Queue (ft)	186	225	208	480	619	142	9	17	818
Link Distance (ft)		1274	1274	1059	1059		5375	5375	670
Upstream Blk Time (%)									17
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	150					100			
Storage Blk Time (%)	14	1			22	14			
Queuing Penalty (veh)	33	1			156	52			

Future Traffic Conditions
Queuing and Blocking Report

Weekday PM Peak Hour

12/7/2010

Intersection: 2: Maple St & OR-99, Interval #1

Movement	EB	WB	NB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	T	TR	T	TR
Maximum Queue (ft)	189	46	98	222	259	170	192
Average Queue (ft)	134	19	39	107	141	83	105
95th Queue (ft)	201	51	87	237	274	171	202
Link Distance (ft)	185	187		1056	1056	833	833
Upstream Blk Time (%)	2						
Queuing Penalty (veh)	0						
Storage Bay Dist (ft)			160				
Storage Blk Time (%)				1		2	
Queuing Penalty (veh)				1		0	

Intersection: 2: Maple St & OR-99, Interval #2

Movement	EB	WB	NB	NB	NB	SB	SB	SB	B60
Directions Served	LTR	LTR	L	T	TR	L	T	TR	T
Maximum Queue (ft)	208	62	105	238	275	20	203	236	3
Average Queue (ft)	132	20	35	87	123	1	79	106	0
95th Queue (ft)	211	52	80	181	225	11	163	196	4
Link Distance (ft)	185	187		1056	1056		833	833	5375
Upstream Blk Time (%)	3								
Queuing Penalty (veh)	0								
Storage Bay Dist (ft)			160			120			
Storage Blk Time (%)				1			1		
Queuing Penalty (veh)				0			0		

Intersection: 2: Maple St & OR-99, All Intervals

Movement	EB	WB	NB	NB	NB	SB	SB	SB	B60
Directions Served	LTR	LTR	L	T	TR	L	T	TR	T
Maximum Queue (ft)	208	62	110	275	310	20	212	246	3
Average Queue (ft)	132	20	36	92	127	1	80	106	0
95th Queue (ft)	208	52	82	197	239	10	165	197	3
Link Distance (ft)	185	187		1056	1056		833	833	5375
Upstream Blk Time (%)	2								
Queuing Penalty (veh)	0								
Storage Bay Dist (ft)			160			120			
Storage Blk Time (%)				1			1		
Queuing Penalty (veh)				1			0		

Future Traffic Conditions
Queuing and Blocking Report

Weekday PM Peak Hour
12/7/2010

Intersection: 3: Wimer St & OR-99, Interval #1

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	129	199	150	113	151	125
Average Queue (ft)	68	150	60	27	84	38
95th Queue (ft)	135	250	152	124	166	132
Link Distance (ft)	236	200	1856	1856	1056	1056
Upstream Blk Time (%)		20				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Wimer St & OR-99, Interval #2

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	165	222	241	225	178	172
Average Queue (ft)	64	130	79	37	61	21
95th Queue (ft)	146	237	185	149	140	100
Link Distance (ft)	236	200	1856	1856	1056	1056
Upstream Blk Time (%)	2	16				
Queuing Penalty (veh)	0	0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 3: Wimer St & OR-99, All Intervals

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	166	224	248	228	187	183
Average Queue (ft)	65	135	75	35	67	25
95th Queue (ft)	144	241	178	144	148	109
Link Distance (ft)	236	200	1856	1856	1056	1056
Upstream Blk Time (%)	1	17				
Queuing Penalty (veh)	0	0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Future Traffic Conditions
Queuing and Blocking Report

Weekday PM Peak Hour

12/7/2010

Intersection: 4: OR-99 & Helman St, Interval #1

Movement	EB	EB	WB	WB	SB
Directions Served	R	R	T	TR	TR
Maximum Queue (ft)	128	137	57	57	89
Average Queue (ft)	70	85	55	57	52
95th Queue (ft)	133	143	59	57	96
Link Distance (ft)	1856	1856			554
Upstream Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: OR-99 & Helman St, Interval #2

Movement	EB	EB	WB	WB	SB
Directions Served	R	R	T	TR	TR
Maximum Queue (ft)	128	168	57	58	104
Average Queue (ft)	63	83	54	56	44
95th Queue (ft)	109	137	60	64	89
Link Distance (ft)	1856	1856			554
Upstream Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 4: OR-99 & Helman St, All Intervals

Movement	EB	EB	WB	WB	SB
Directions Served	R	R	T	TR	TR
Maximum Queue (ft)	140	170	57	58	111
Average Queue (ft)	65	83	54	56	46
95th Queue (ft)	116	138	60	63	91
Link Distance (ft)	1856	1856			554
Upstream Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

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Intersection: 5: Main St & Oak St, Interval #1

Movement	EB	EB	NB	NB	SB
Directions Served	LT	T	T	R	L
Maximum Queue (ft)	119	134	207	79	207
Average Queue (ft)	49	60	164	47	156
95th Queue (ft)	116	134	290	212	216
Link Distance (ft)			247	247	219
Upstream Blk Time (%)			22	7	2
Queuing Penalty (veh)			0	0	1
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Main St & Oak St, Interval #2

Movement	EB	EB	NB	NB	SB
Directions Served	LT	T	T	R	L
Maximum Queue (ft)	147	163	266	213	218
Average Queue (ft)	38	51	217	98	148
95th Queue (ft)	101	117	334	306	216
Link Distance (ft)			247	247	219
Upstream Blk Time (%)			53	13	1
Queuing Penalty (veh)			0	0	1
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Main St & Oak St, All Intervals

Movement	EB	EB	NB	NB	SB
Directions Served	LT	T	T	R	L
Maximum Queue (ft)	172	190	266	213	224
Average Queue (ft)	40	53	205	86	150
95th Queue (ft)	105	121	330	288	216
Link Distance (ft)			247	247	219
Upstream Blk Time (%)			45	12	1
Queuing Penalty (veh)			0	0	1
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

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Intersection: 6: E Main St & OR-99, Interval #1

Movement	SB	SB	SB
Directions Served	L	T	T
Maximum Queue (ft)	192	31	45
Average Queue (ft)	104	6	11
95th Queue (ft)	224	32	46
Link Distance (ft)	1600	1600	1600
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: E Main St & OR-99, Interval #2

Movement	SB	SB	SB
Directions Served	L	T	T
Maximum Queue (ft)	238	92	88
Average Queue (ft)	105	11	12
95th Queue (ft)	237	72	66
Link Distance (ft)	1600	1600	1600
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: E Main St & OR-99, All Intervals

Movement	SB	SB	SB
Directions Served	L	T	T
Maximum Queue (ft)	255	92	93
Average Queue (ft)	105	10	12
95th Queue (ft)	234	65	62
Link Distance (ft)	1600	1600	1600
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 7: OR-99 & Mountain Ave, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	71	358	376	144	421	418	275	117	148
Average Queue (ft)	24	152	171	103	266	287	169	85	56
95th Queue (ft)	73	449	465	167	487	486	356	132	152
Link Distance (ft)							1247		344
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	75			120				100	
Storage Blk Time (%)	2	16		16	12			9	1
Queuing Penalty (veh)	8	7		95	16			6	1

Intersection: 7: OR-99 & Mountain Ave, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	93	325	366	144	431	448	376	124	267
Average Queue (ft)	29	128	146	100	214	236	168	82	63
95th Queue (ft)	81	292	311	166	406	416	361	138	186
Link Distance (ft)							1247		344
Upstream Blk Time (%)									0
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	75			120				100	
Storage Blk Time (%)	4	14		15	10			13	0
Queuing Penalty (veh)	15	6		84	13			8	0

Intersection: 7: OR-99 & Mountain Ave, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	96	455	488	145	446	454	396	124	271
Average Queue (ft)	28	134	152	101	226	248	168	83	61
95th Queue (ft)	79	339	356	166	430	437	360	136	178
Link Distance (ft)							1247		344
Upstream Blk Time (%)									0
Queuing Penalty (veh)									0
Storage Bay Dist (ft)	75			120				100	
Storage Blk Time (%)	3	14		16	11			12	0
Queuing Penalty (veh)	13	6		87	14			7	0

Intersection: 8: OR-99 & Garfield St, Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: OR-99 & Garfield St, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: OR-99 & Garfield St, All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

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Intersection: 9: OR-66 & OR-99, Interval #1

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	R	R	T	TR	L	L	T
Maximum Queue (ft)	40	49	191	214	125	723	711
Average Queue (ft)	11	13	108	129	120	624	471
95th Queue (ft)	47	56	202	230	146	877	947
Link Distance (ft)	826	826	1031	1031			
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					100		
Storage Blk Time (%)					22	52	
Queuing Penalty (veh)					79	185	

Intersection: 9: OR-66 & OR-99, Interval #2

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	R	R	T	TR	L	L	T
Maximum Queue (ft)	56	60	196	224	125	737	724
Average Queue (ft)	8	6	94	113	116	592	458
95th Queue (ft)	34	34	181	204	146	888	919
Link Distance (ft)	826	826	1031	1031			
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					100		
Storage Blk Time (%)					26	52	
Queuing Penalty (veh)					88	174	

Intersection: 9: OR-66 & OR-99, All Intervals

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	R	R	T	TR	L	L	T
Maximum Queue (ft)	64	74	208	238	125	743	726
Average Queue (ft)	9	8	97	116	117	600	461
95th Queue (ft)	38	40	187	211	146	887	926
Link Distance (ft)	826	826	1031	1031			
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					100		
Storage Blk Time (%)					25	52	
Queuing Penalty (veh)					86	177	

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Intersection: 10: OR-99 & Walker Ave, Interval #1

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	75	332	73	247	120	88
Average Queue (ft)	18	121	25	114	71	52
95th Queue (ft)	69	310	74	265	135	97
Link Distance (ft)		1031		5289	787	563
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		100			
Storage Blk Time (%)	0	8	0	6		
Queuing Penalty (veh)	2	4	0	3		

Intersection: 10: OR-99 & Walker Ave, Interval #2

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	74	422	114	253	127	122
Average Queue (ft)	12	117	23	85	58	42
95th Queue (ft)	51	325	72	202	107	94
Link Distance (ft)		1031		5289	787	563
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		100			
Storage Blk Time (%)		6	0	4		
Queuing Penalty (veh)		3	0	2		

Intersection: 10: OR-99 & Walker Ave, All Intervals

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	97	460	120	290	145	130
Average Queue (ft)	13	118	23	92	61	44
95th Queue (ft)	56	321	72	219	115	95
Link Distance (ft)		1031		5289	787	563
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	100		100			
Storage Blk Time (%)	0	6	0	4		
Queuing Penalty (veh)	0	3	0	2		

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Intersection: 11: OR-99 & Tolman Creek Rd, Interval #1

Movement	EB	NB	SB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	98	48	78
Average Queue (ft)	37	28	38
95th Queue (ft)	110	55	79
Link Distance (ft)	5289	1076	2436
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: OR-99 & Tolman Creek Rd, Interval #2

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	LT	R
Maximum Queue (ft)	90	1	68	87	33
Average Queue (ft)	23	0	29	35	1
95th Queue (ft)	70	1	57	74	23
Link Distance (ft)	5289	866	1076	2436	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					160
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: OR-99 & Tolman Creek Rd, All Intervals

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	LT	R
Maximum Queue (ft)	118	1	72	92	33
Average Queue (ft)	27	0	29	36	1
95th Queue (ft)	82	1	57	76	20
Link Distance (ft)	5289	866	1076	2436	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					160
Storage Blk Time (%)					
Queuing Penalty (veh)					

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Intersection: 12: OR-99 & Mistletoe Rd, Interval #1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	44	26
Average Queue (ft)	9	13
95th Queue (ft)	42	30
Link Distance (ft)	866	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: OR-99 & Mistletoe Rd, Interval #2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	37	30
Average Queue (ft)	3	13
95th Queue (ft)	21	25
Link Distance (ft)	866	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: OR-99 & Mistletoe Rd, All Intervals

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	60	36
Average Queue (ft)	4	13
95th Queue (ft)	27	26
Link Distance (ft)	866	450
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 13: Nevada St & Oak St, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LR	LR	LTR	LTR
Maximum Queue (ft)	74	10	49	2
Average Queue (ft)	44	2	17	0
95th Queue (ft)	78	15	53	4
Link Distance (ft)	754	607	1747	720
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Nevada St & Oak St, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LR	LR	LTR	LTR
Maximum Queue (ft)	82	31	63	6
Average Queue (ft)	37	3	10	0
95th Queue (ft)	68	20	41	5
Link Distance (ft)	754	607	1747	720
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 13: Nevada St & Oak St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LR	LR	LTR	LTR
Maximum Queue (ft)	89	35	70	8
Average Queue (ft)	39	3	11	0
95th Queue (ft)	71	19	44	5
Link Distance (ft)	754	607	1747	720
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 14: Hersey St & Oak St, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	34	100	73	102	64	89	66	69
Average Queue (ft)	18	56	31	69	35	52	43	45
95th Queue (ft)	44	97	76	109	65	93	71	71
Link Distance (ft)		515		2631		598		1441
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)		1	0	1		0	0	0
Queuing Penalty (veh)		0	0	1		0	0	0

Intersection: 14: Hersey St & Oak St, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	38	96	70	114	62	95	80	87
Average Queue (ft)	13	51	27	63	30	43	39	46
95th Queue (ft)	39	80	59	99	53	77	73	73
Link Distance (ft)		515		2631		598		1441
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)		0	0	1		0	0	0
Queuing Penalty (veh)		0	0	0		0	0	0

Intersection: 14: Hersey St & Oak St, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	38	108	87	125	77	104	85	87
Average Queue (ft)	14	52	28	64	31	45	40	46
95th Queue (ft)	41	85	64	102	57	82	72	72
Link Distance (ft)		515		2631		598		1441
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100		100	
Storage Blk Time (%)		0	0	1		0	0	0
Queuing Penalty (veh)		0	0	0		0	0	0

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Intersection: 15: Hersey St & Mountain Ave, Interval #1

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	LTR	T	R
Maximum Queue (ft)	26	82	117	63	41
Average Queue (ft)	12	44	84	35	25
95th Queue (ft)	30	81	123	65	55
Link Distance (ft)	2631		701	636	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			100
Storage Blk Time (%)		0		0	0
Queuing Penalty (veh)		0		0	0

Intersection: 15: Hersey St & Mountain Ave, Interval #2

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	LTR	T	R
Maximum Queue (ft)	46	99	151	69	41
Average Queue (ft)	13	43	81	34	22
95th Queue (ft)	37	77	124	59	46
Link Distance (ft)	2631		701	636	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			100
Storage Blk Time (%)		0		0	
Queuing Penalty (veh)		0		0	

Intersection: 15: Hersey St & Mountain Ave, All Intervals

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	LTR	T	R
Maximum Queue (ft)	49	106	153	77	51
Average Queue (ft)	12	43	82	34	23
95th Queue (ft)	36	78	124	61	49
Link Distance (ft)	2631		701	636	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			100
Storage Blk Time (%)		0		0	0
Queuing Penalty (veh)		0		0	0

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Intersection: 16: Lithia Way & Oak St, Interval #1

Movement	WB	WB	B95	NB	SB
Directions Served	LT	TR	T	LT	TR
Maximum Queue (ft)	114	112	4	169	125
Average Queue (ft)	44	52	0	102	74
95th Queue (ft)	119	117	7	185	141
Link Distance (ft)	157	157	1032	219	250
Upstream Blk Time (%)	0	0		1	0
Queuing Penalty (veh)	1	0		1	1
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 16: Lithia Way & Oak St, Interval #2

Movement	WB	WB	B95	B95	NB	SB
Directions Served	LT	TR	T	T	LT	TR
Maximum Queue (ft)	143	187	4	19	216	181
Average Queue (ft)	41	56	0	1	116	72
95th Queue (ft)	111	140	5	13	216	145
Link Distance (ft)	157	157	1032	1032	219	250
Upstream Blk Time (%)	0	0			2	0
Queuing Penalty (veh)	1	3			3	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 16: Lithia Way & Oak St, All Intervals

Movement	WB	WB	B95	B95	NB	SB
Directions Served	LT	TR	T	T	LT	TR
Maximum Queue (ft)	160	191	8	19	220	187
Average Queue (ft)	42	55	0	1	113	72
95th Queue (ft)	113	135	6	11	209	144
Link Distance (ft)	157	157	1032	1032	219	250
Upstream Blk Time (%)	0	0			2	0
Queuing Penalty (veh)	1	2			2	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

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Intersection: 17: E Main St & Lithia Way, Interval #1

Movement	EB	WB	NB	NB
Directions Served	T	R	T	TR
Maximum Queue (ft)	106	174	67	64
Average Queue (ft)	97	89	52	47
95th Queue (ft)	111	170	73	64
Link Distance (ft)	91	828		
Upstream Blk Time (%)	40		4	5
Queuing Penalty (veh)	99		0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 17: E Main St & Lithia Way, Interval #2

Movement	EB	WB	NB	NB
Directions Served	T	R	T	TR
Maximum Queue (ft)	112	164	75	78
Average Queue (ft)	94	80	49	47
95th Queue (ft)	112	143	63	63
Link Distance (ft)	91	828		
Upstream Blk Time (%)	37		3	4
Queuing Penalty (veh)	90		0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 17: E Main St & Lithia Way, All Intervals

Movement	EB	WB	NB	NB
Directions Served	T	R	T	TR
Maximum Queue (ft)	113	191	83	87
Average Queue (ft)	95	82	49	47
95th Queue (ft)	112	150	66	64
Link Distance (ft)	91	828		
Upstream Blk Time (%)	38		3	4
Queuing Penalty (veh)	92		0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 18: E Main St & Mountain Ave, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	102	243	72	399	57	104	664	224
Average Queue (ft)	43	166	25	236	27	63	465	155
95th Queue (ft)	98	263	84	420	66	106	1042	288
Link Distance (ft)		588		1747		1219	2047	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100			200
Storage Blk Time (%)	0	13	0	28		1	30	1
Queuing Penalty (veh)	0	7	0	5		0	53	2

Intersection: 18: E Main St & Mountain Ave, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	121	268	114	411	74	117	659	225
Average Queue (ft)	44	128	21	181	24	58	285	117
95th Queue (ft)	105	228	77	342	62	101	659	250
Link Distance (ft)		588		1747		1219	2047	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100			200
Storage Blk Time (%)	1	8	0	18	0	1	17	0
Queuing Penalty (veh)	2	4	0	3	0	0	28	1

Intersection: 18: E Main St & Mountain Ave, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	122	274	115	443	76	126	829	225
Average Queue (ft)	44	137	22	194	25	59	328	126
95th Queue (ft)	103	240	79	365	63	103	778	262
Link Distance (ft)		588		1747		1219	2047	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100		100		100			200
Storage Blk Time (%)	1	9	0	21	0	1	21	0
Queuing Penalty (veh)	2	5	0	4	0	0	34	1

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Intersection: 19: E Main St & Walker Ave, Interval #1

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	22	107	118	63
Average Queue (ft)	3	42	54	29
95th Queue (ft)	21	121	118	72
Link Distance (ft)	1143	741	1571	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			4	0
Queuing Penalty (veh)			1	0

Intersection: 19: E Main St & Walker Ave, Interval #2

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	37	110	114	87
Average Queue (ft)	3	28	44	24
95th Queue (ft)	25	86	93	67
Link Distance (ft)	1143	741	1571	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			1	0
Queuing Penalty (veh)			0	0

Intersection: 19: E Main St & Walker Ave, All Intervals

Movement	EB	WB	NB	NB
Directions Served	TR	LT	L	R
Maximum Queue (ft)	44	133	148	94
Average Queue (ft)	3	32	46	25
95th Queue (ft)	24	96	100	68
Link Distance (ft)	1143	741	1571	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				100
Storage Blk Time (%)			1	0
Queuing Penalty (veh)			0	0

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Intersection: 20: Iowa St & Mountain Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LTR	LR	TR	LT
Maximum Queue (ft)	37	234	6	51
Average Queue (ft)	23	125	1	14
95th Queue (ft)	50	273	10	50
Link Distance (ft)	176	2945	344	1219
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Iowa St & Mountain Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LTR	LR	TR	LT
Maximum Queue (ft)	47	168	22	70
Average Queue (ft)	20	86	2	13
95th Queue (ft)	49	142	14	47
Link Distance (ft)	176	2945	344	1219
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Iowa St & Mountain Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LR	TR	LT
Maximum Queue (ft)	47	243	25	73
Average Queue (ft)	20	95	2	13
95th Queue (ft)	50	187	13	48
Link Distance (ft)	176	2945	344	1219
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 21: Iowa St & Walker Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	63	18	87	82
Average Queue (ft)	46	2	54	52
95th Queue (ft)	69	17	87	81
Link Distance (ft)	2945	209	1734	1571
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: Iowa St & Walker Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	72	24	97	87
Average Queue (ft)	43	2	49	49
95th Queue (ft)	74	16	81	77
Link Distance (ft)	2945	209	1734	1571
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: Iowa St & Walker Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	72	31	101	96
Average Queue (ft)	43	2	50	50
95th Queue (ft)	73	17	82	78
Link Distance (ft)	2945	209	1734	1571
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 22: OR-66 & Walker Ave, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	106	280	291	80	81	127	143	200
Average Queue (ft)	69	149	168	47	46	77	76	118
95th Queue (ft)	120	294	310	88	99	141	149	203
Link Distance (ft)		826	826		4429	4429	563	1734
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	100			100				
Storage Blk Time (%)	3	9		1	0			
Queuing Penalty (veh)	12	8		2	0			

Intersection: 22: OR-66 & Walker Ave, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	125	853	840	112	150	176	281	780
Average Queue (ft)	71	429	444	37	56	81	117	306
95th Queue (ft)	140	956	950	88	122	150	279	810
Link Distance (ft)		826	826		4429	4429	563	1734
Upstream Blk Time (%)		9	10					
Queuing Penalty (veh)		30	35					
Storage Bay Dist (ft)	100			100				
Storage Blk Time (%)	5	45		1	1			
Queuing Penalty (veh)	23	38		4	1			

Intersection: 22: OR-66 & Walker Ave, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	L	T	TR	L	T	TR	LTR	LTR
Maximum Queue (ft)	125	853	840	115	150	181	285	780
Average Queue (ft)	70	362	377	40	53	80	107	261
95th Queue (ft)	136	866	864	89	117	148	255	721
Link Distance (ft)		826	826		4429	4429	563	1734
Upstream Blk Time (%)		7	8					
Queuing Penalty (veh)		23	26					
Storage Bay Dist (ft)	100			100				
Storage Blk Time (%)	4	36		1	1			
Queuing Penalty (veh)	20	31		3	1			

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Intersection: 23: OR-66 & Tolman Creek Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	125	1860	1677	123	241	192	124	819	125	541
Average Queue (ft)	101	1061	884	101	136	112	91	548	102	346
95th Queue (ft)	165	1890	1694	155	290	225	156	905	154	736
Link Distance (ft)		4429	4429		635	635		1079		821
Upstream Blk Time (%)										8
Queuing Penalty (veh)										0
Storage Bay Dist (ft)	100			100			100		100	
Storage Blk Time (%)	22	76		30	2		8	68	32	29
Queuing Penalty (veh)	97	120		94	5		34	62	84	24

Intersection: 23: OR-66 & Tolman Creek Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	125	4449	4448	125	288	255	125	1023	125	847
Average Queue (ft)	104	3836	3829	97	113	105	87	806	107	574
95th Queue (ft)	163	5239	5249	146	277	210	156	1044	153	1035
Link Distance (ft)		4429	4429		635	635		1079		821
Upstream Blk Time (%)		32	30					4		29
Queuing Penalty (veh)		175	167					12		0
Storage Bay Dist (ft)	100			100			100		100	
Storage Blk Time (%)	24	73		21	2		8	75	46	36
Queuing Penalty (veh)	101	108		63	5		31	64	115	28

Intersection: 23: OR-66 & Tolman Creek Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	125	4449	4448	125	298	258	125	1030	125	847
Average Queue (ft)	103	3166	3118	98	119	106	88	743	106	519
95th Queue (ft)	164	5511	5570	149	281	214	156	1071	153	992
Link Distance (ft)		4429	4429		635	635		1079		821
Upstream Blk Time (%)		24	23					3		24
Queuing Penalty (veh)		131	125					9		0
Storage Bay Dist (ft)	100			100			100		100	
Storage Blk Time (%)	24	74		23	2		8	73	42	35
Queuing Penalty (veh)	100	111		71	5		32	64	107	27

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Intersection: 24: OR-66 & Washington St., Interval #1

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	667	687	37	145	584
Average Queue (ft)	627	618	7	83	352
95th Queue (ft)	743	788	30	203	820
Link Distance (ft)	635	635			799
Upstream Blk Time (%)	35	19			15
Queuing Penalty (veh)	214	115			0
Storage Bay Dist (ft)			320	150	
Storage Blk Time (%)				15	47
Queuing Penalty (veh)				14	53

Intersection: 24: OR-66 & Washington St., Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (ft)	687	700	40	19	25	157	818
Average Queue (ft)	649	642	7	1	1	48	727
95th Queue (ft)	686	729	30	11	14	169	1031
Link Distance (ft)	635	635		371	371		799
Upstream Blk Time (%)	35	20					74
Queuing Penalty (veh)	199	114					0
Storage Bay Dist (ft)			320			150	
Storage Blk Time (%)						12	84
Queuing Penalty (veh)						10	88

Intersection: 24: OR-66 & Washington St., All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	TR	L	T	T	L	R
Maximum Queue (ft)	688	704	41	19	25	163	820
Average Queue (ft)	644	636	7	1	1	56	637
95th Queue (ft)	711	750	30	9	12	180	1076
Link Distance (ft)	635	635		371	371		799
Upstream Blk Time (%)	35	20					59
Queuing Penalty (veh)	203	114					0
Storage Bay Dist (ft)			320			150	
Storage Blk Time (%)						13	75
Queuing Penalty (veh)						11	79

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Intersection: 25: OR-66 & I-5 Southbound Exit Ramp, Interval #1

Movement	EB	EB	WB	SB	SB
Directions Served	T	R	LT	LT	R
Maximum Queue (ft)	420	415	48	528	52
Average Queue (ft)	396	124	11	521	5
95th Queue (ft)	420	428	49	535	53
Link Distance (ft)	371	371	500	521	
Upstream Blk Time (%)	40	2		99	
Queuing Penalty (veh)	262	11		0	
Storage Bay Dist (ft)					150
Storage Blk Time (%)				100	0
Queuing Penalty (veh)				442	0

Intersection: 25: OR-66 & I-5 Southbound Exit Ramp, Interval #2

Movement	EB	EB	WB	SB	SB
Directions Served	T	R	LT	LT	R
Maximum Queue (ft)	433	432	122	539	122
Average Queue (ft)	392	127	14	523	11
95th Queue (ft)	437	426	66	537	82
Link Distance (ft)	371	371	500	521	
Upstream Blk Time (%)	36	2		99	
Queuing Penalty (veh)	221	11		0	
Storage Bay Dist (ft)					150
Storage Blk Time (%)				99	0
Queuing Penalty (veh)				423	0

Intersection: 25: OR-66 & I-5 Southbound Exit Ramp, All Intervals

Movement	EB	EB	WB	SB	SB
Directions Served	T	R	LT	LT	R
Maximum Queue (ft)	436	443	129	539	122
Average Queue (ft)	393	126	13	523	10
95th Queue (ft)	434	426	63	536	75
Link Distance (ft)	371	371	500	521	
Upstream Blk Time (%)	37	2		99	
Queuing Penalty (veh)	231	11		0	
Storage Bay Dist (ft)					150
Storage Blk Time (%)				99	0
Queuing Penalty (veh)				428	0

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Intersection: 26: OR-66 & I-5 Northbound Exit Ramp, Interval #1

Movement	EB	WB	NB	NB
Directions Served	LT	TR	LT	R
Maximum Queue (ft)	521	5	434	34
Average Queue (ft)	513	1	335	5
95th Queue (ft)	524	9	499	52
Link Distance (ft)	500	711	424	
Upstream Blk Time (%)	35		39	
Queuing Penalty (veh)	491		0	
Storage Bay Dist (ft)				150
Storage Blk Time (%)			93	0
Queuing Penalty (veh)			34	0

Intersection: 26: OR-66 & I-5 Northbound Exit Ramp, Interval #2

Movement	EB	WB	NB
Directions Served	LT	TR	LT
Maximum Queue (ft)	523	23	432
Average Queue (ft)	511	1	426
95th Queue (ft)	529	13	437
Link Distance (ft)	500	711	424
Upstream Blk Time (%)	30		100
Queuing Penalty (veh)	411		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			100
Queuing Penalty (veh)			34

Intersection: 26: OR-66 & I-5 Northbound Exit Ramp, All Intervals

Movement	EB	WB	NB	NB
Directions Served	LT	TR	LT	R
Maximum Queue (ft)	524	25	441	34
Average Queue (ft)	511	1	404	1
95th Queue (ft)	528	12	508	25
Link Distance (ft)	500	711	424	
Upstream Blk Time (%)	31		85	
Queuing Penalty (veh)	431		0	
Storage Bay Dist (ft)				150
Storage Blk Time (%)			98	0
Queuing Penalty (veh)			34	0

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Intersection: 27: Oak Knoll Dr & OR-66, Interval #1

Movement	EB	WB	WB	NB
Directions Served	LTR	L	TR	LTR
Maximum Queue (ft)	88	41	55	17
Average Queue (ft)	48	14	16	3
95th Queue (ft)	92	37	51	18
Link Distance (ft)	381		697	1250
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		25		
Storage Blk Time (%)		4	3	
Queuing Penalty (veh)		1	2	

Intersection: 27: Oak Knoll Dr & OR-66, Interval #2

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	118	46	69	67	3
Average Queue (ft)	46	12	15	6	0
95th Queue (ft)	93	34	48	35	4
Link Distance (ft)	381		697	1250	475
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		3	3		
Queuing Penalty (veh)		0	2		

Intersection: 27: Oak Knoll Dr & OR-66, All Intervals

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	LTR	LTR
Maximum Queue (ft)	124	46	69	70	3
Average Queue (ft)	47	13	15	5	0
95th Queue (ft)	93	35	49	32	3
Link Distance (ft)	381		697	1250	475
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		25			
Storage Blk Time (%)		3	3		
Queuing Penalty (veh)		0	2		

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Intersection: 28: Dead Indian Memorial Rd & OR-66, Interval #1

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	78	60
Average Queue (ft)	46	18
95th Queue (ft)	77	59
Link Distance (ft)	257	1250
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 28: Dead Indian Memorial Rd & OR-66, Interval #2

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	98	2	76
Average Queue (ft)	46	0	20
95th Queue (ft)	81	2	59
Link Distance (ft)	257	682	1250
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 28: Dead Indian Memorial Rd & OR-66, All Intervals

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	105	2	84
Average Queue (ft)	46	0	19
95th Queue (ft)	80	2	59
Link Distance (ft)	257	682	1250
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 29: Mistletoe Rd & Tolman Creek Rd, Interval #1

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	38	50	6	16
Average Queue (ft)	21	34	1	5
95th Queue (ft)	50	58	13	27
Link Distance (ft)	470	862	2436	1079
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 29: Mistletoe Rd & Tolman Creek Rd, Interval #2

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	45	76	101	77
Average Queue (ft)	18	33	12	9
95th Queue (ft)	49	65	84	49
Link Distance (ft)	470	862	2436	1079
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 29: Mistletoe Rd & Tolman Creek Rd, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LR	LTR	LTR	LTR
Maximum Queue (ft)	48	76	107	80
Average Queue (ft)	19	33	10	8
95th Queue (ft)	49	64	73	44
Link Distance (ft)	470	862	2436	1079
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 30: Nutley St & Granite St, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	28	40	4
Average Queue (ft)	8	26	1
95th Queue (ft)	31	46	6
Link Distance (ft)	270		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Nutley St & Granite St, Interval #2

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	35	49	6
Average Queue (ft)	8	24	0
95th Queue (ft)	32	47	5
Link Distance (ft)	270		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Nutley St & Granite St, All Intervals

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	35	52	6	4
Average Queue (ft)	8	25	0	0
95th Queue (ft)	32	47	4	3
Link Distance (ft)	270			
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 31: Ashland St & Mountain Ave, Interval #1

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	48	40	10
Average Queue (ft)	29	26	1
95th Queue (ft)	56	53	13
Link Distance (ft)	459	423	1247
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 31: Ashland St & Mountain Ave, Interval #2

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	53	54	50
Average Queue (ft)	29	28	4
95th Queue (ft)	55	54	28
Link Distance (ft)	459	423	1247
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 31: Ashland St & Mountain Ave, All Intervals

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	54	55	54
Average Queue (ft)	29	28	3
95th Queue (ft)	55	54	25
Link Distance (ft)	459	423	1247
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 57: Lithia Way & OR-99, Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 57: Lithia Way & OR-99, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 57: Lithia Way & OR-99, All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 66: Int, Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 66: Int, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 66: Int, All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 70: Granite St & , Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 70: Granite St & , Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 70: Granite St & , All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 73: Lithia Way & , Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 73: Lithia Way & , Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 73: Lithia Way & , All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 76: Granite St & , Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 76: Granite St & , Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 76: Granite St & , All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 77: Winburn Way & , Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 77: Winburn Way & , Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 77: Winburn Way & , All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 78: Winburn Way & Granite St, Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 78: Winburn Way & Granite St, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 78: Winburn Way & Granite St, All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Future Traffic Conditions
Queuing and Blocking Report

Weekday PM Peak Hour
12/7/2010

Intersection: 81: Nutley St & Winburn Way, Interval #1

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 81: Nutley St & Winburn Way, Interval #2

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 81: Nutley St & Winburn Way, All Intervals

Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty, Interval #1: 3077
Network wide Queuing Penalty, Interval #2: 3263
Network wide Queuing Penalty, All Intervals: 3217

Appendix F
Multimodal Level-of-
Service Worksheets

Existing MMLOS

Multimodal Level of Service for Urban Streets

Results

Street: Walker Avenue

Date: 40522

Limits: Full Length

Observer: EMF

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Southern End		
2365 ft	Seg.	
25 mph	#1	
109 vph		
1 lanes		
Siskiyou Blvd		
665 ft	Seg.	
25 mph	#2	
112 vph		
1 lanes		
Ashland St		
1795 ft	Seg.	
25 mph	#3	
242 vph		
1 lanes		
Iowa St		
1635 ft	Seg.	
25 mph	#4	
0 vph		
1 lanes		
E Main St		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.88	C	N/A
Bike	4.38	A	A
Ped	2.38	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.92	C	N/A
Bike	3.38	A	A
Ped	2.67	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.86	C	N/A
Bike	4.28	A	A
Ped	2.22	B	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.72	A	A
Ped	2.25	A	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	2.15	B
Bike	4.08	D
Ped	2.33	B

Multimodal Level of Service for Urban Streets

Results

Street: OR99Date: 40522Limits: Valley View Road to Maple StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Valley View		
4518 ft	Seg.	
45 mph	#1	
2028 vph		
2 lanes		
Ashland Milne		
2936 ft	Seg.	
35 mph	#2	
1850 vph		
2 lanes		
Maple		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.15	D	N/A
Bike	4.11	C	C
Ped	3.78	F	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.08	D	N/A
Bike	4.49	C	C
Ped	3.33	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.12	D
Bike	4.26	E
Ped	3.60	D

Multimodal Level of Service for Urban Streets

Results

Street: Tolman Creek Road

Date: 40522

Limits: E Main Street to Ashland Street

Observer: EMF

Analysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main Street		
2925 ft	Seg.	
25 mph	#1	
327 vph		
1 lanes		
Ashland Street		
1110 ft	Seg.	
25 mph	#2	
499 vph		
1 lanes		
Mistletoe Rd		
2510 ft	Seg.	
25 mph	#3	
71 vph		
1 lanes		
Siskiyou Blvd		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.97	C	N/A
Bike	3.90	A	B
Ped	3.02	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.90	C	N/A
Bike	3.20	A	A
Ped	2.52	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.87	C	N/A
Bike	3.95	B	B
Ped	2.27	B	B

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.27	B
Transit	2.92	C
Bike	3.80	D
Ped	2.65	B

Multimodal Level of Service for Urban Streets

Results

Street: Tolman Creek Road

Date: 40522

Limits: E Main Street to Ashland Street

Observer: EMF

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Siskiyou Blvd		
2510 ft	Seg.	
25 mph	#1	
339 vph		
1 lanes		
Mistletoe Rd		
1110 ft	Seg.	
25 mph	#2	
192 vph		
1 lanes		
Ashland St		
2925 ft	Seg.	
25 mph	#3	
0 vph		
1 lanes		
E Main Street		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.85	C	N/A
Bike	3.98	A	A
Ped	2.18	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.91	C	N/A
Bike	3.61	A	A
Ped	2.58	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.01	C	N/A
Bike	3.39	A	A
Ped	3.29	D	C

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.27	B
Transit	2.93	C
Bike	3.66	D
Ped	2.74	B

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Tolman Creek Road to OR99 (Siskyou Boulevard)Observer: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Tolman Creek			
4508 ft	Seg. #1		
35 mph			
1112 vph			
2 lanes			
Walker			
1004 ft	Seg. #2		
30 mph			
0 vph			
2 lanes			
Siskyou			
0 ft	Seg. #3		
0 mph			
0 vph			
0 lanes			
0			
0 ft	Seg. #4		
0 mph			
0 vph			
0 lanes			
0			
0 ft	Seg. #5		
0 mph			
0 vph			
0 lanes			
0			

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	3.87	A	B
Ped	3.13	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	3.42	A	B
Ped	3.15	B	C

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	2.99	C
Bike	3.79	D
Ped	3.13	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Tolman Creek Road to Dead Indian Memorial RoadObserver: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

<u>Tolman Creek</u>			
1142 ft 35 mph 1349 vph 2 lanes	Seg. #1		
<u>I5-SB Ramp</u>			
567 ft 35 mph 586 vph 1 lanes	Seg. #2		
<u>I5-NB Ramp</u>			
1879 ft 35 mph 528 vph 1 lanes	Seg. #3		
<u>Oak Knoll</u>			
1290 ft 35 mph 532 vph 1 lanes	Seg. #4		
<u>Dead Indian Memorial</u>			
0 ft 0 mph 0 vph 0 lanes	Seg. #5		
<u>0</u>			

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.00	C	N/A
Bike	4.31	A	B
Ped	3.15	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.11	C	N/A
Bike	3.58	B	C
Ped	3.91	F	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.10	D	N/A
Bike	3.98	B	B
Ped	3.45	E	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.09	D	N/A
Bike	3.47	A	A
Ped	3.34	D	A

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	3.72	D
Bike	3.87	D
Ped	3.40	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: OR99 (Siskyou Boulevard) to Tolman Creek RoadObserver: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Siskyou		
1004 ft	Seg.	
35 mph	#1	
1069 vph		
2 lanes		
Walker		
4508 ft	Seg.	
35 mph	#2	
1086 vph		
2 lanes		
Tolman Creek		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.98	C	N/A
Bike	3.91	A	B
Ped	3.03	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.00	C	N/A
Bike	4.11	A	B
Ped	3.17	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	2.99	C
Bike	4.07	D
Ped	3.14	C

Multimodal Level of Service for Urban Streets

Results

Street: E Main StreetDate: 40522Limits: OR99 (Siskyou Boulevard) to OR66 (Ashland Street)Observer: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

OR99		
2842 ft 25 mph 581 vph 1 lanes	Seg. #1	
Mountain		
3031 ft 25 mph 700 vph 1 lanes	Seg. #2	
Walker		
4232 ft 40 mph 590 vph 2 lanes	Seg. #3	
Tolman Creek		
5157 ft 45 mph 11 vph 2 lanes	Seg. #4	
Ashland Street		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.97	C	N/A
Bike	4.41	B	B
Ped	2.97	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.85	A	B
Ped	3.23	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.01	C	N/A
Bike	4.06	B	B
Ped	3.27	D	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.97	C	N/A
Bike	2.95	A	A
Ped	3.02	C	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	2.39	B
Bike	3.71	D
Ped	3.12	C

Multimodal Level of Service for Urban Streets

Results

Street: Mountain AvenueDate: 40522Limits: Full LengthObserver: EMFAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Trail Crossing		
1125 ft 25 mph 175 vph 1 lanes	Seg. #1	
Hersey St		
2830 ft 25 mph 169 vph 1 lanes	Seg. #2	
E Main St		
1725 ft 25 mph 145 vph 1 lanes	Seg. #3	
Siskiyou Blvd		
1350 ft 25 mph 42 vph 1 lanes	Seg. #4	
Ashland St		
1325 ft 25 mph 0 vph 1 lanes	Seg. #5	
Prospect Ave		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.16	A	A
Ped	2.02	A	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.38	A	A
Ped	2.96	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.87	C	N/A
Bike	3.61	A	B
Ped	2.29	B	C

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.82	C	N/A
Bike	4.55	A	A
Ped	1.96	A	B

Seg 5	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.46	A	A
Ped	#DIV/0!	B	#DIV/0!

Street	Score	LOS
Auto	2.30	B
Transit	1.05	A
Bike	3.60	D
Ped	2.06	B

Multimodal Level of Service for Urban Streets

Results

Street: Mountain AvenueDate: 40522Limits: Full LengthObserver: EMFAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Prospect Ave		
1325 ft	Seg.	
25 mph	#1	
100 vph		
1 lanes		
Ashland St		
1350 ft	Seg.	
25 mph	#2	
20 vph		
1 lanes		
Siskiyou Blvd		
1725 ft	Seg.	
25 mph	#3	
458 vph		
1 lanes		
E Main St		
2830 ft	Seg.	
25 mph	#4	
83 vph		
1 lanes		
Hersey St		
1125 ft	Seg.	
25 mph	#5	
0 vph		
1 lanes		
Trail Crossing		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.86	C	N/A
Bike	4.61	A	A
Ped	2.28	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.85	C	N/A
Bike	4.03	A	A
Ped	2.15	A	C

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.46	A	B
Ped	3.07	C	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.07	A	B
Ped	2.19	B	B

Seg 5	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	2.45	A	A
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.30	B
Transit	0.91	A
Bike	4.01	D
Ped	2.08	B

Multimodal Level of Service for Urban Streets

Results

Street: OR99Date: 40522Limits: Maple Street to Valley View RoadObserver: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Maple		
2936 ft	Seg.	
35 mph	#1	
2215 vph		
2 lanes		
Ashland Milne		
4518 ft	Seg.	
45 mph	#2	
1152 vph		
2 lanes		
Valley View		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.10	D	N/A
Bike	4.10	D	C
Ped	3.46	E	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.14	D	N/A
Bike	4.87	D	E
Ped	3.72	E	C

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.13	D
Bike	4.57	E
Ped	3.62	D

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Maple Street to Helman StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Maple		
1115 ft	Seg.	
25 mph	#1	
1736 vph		
2 lanes		
Wimer		
1962 ft	Seg.	
25 mph	#2	
1625 vph		
2 lanes		
Helman		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.09	D	N/A
Bike	4.46	D	D
Ped	3.39	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.06	D	N/A
Bike	4.26	D	C
Ped	3.16	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	4.07	D
Bike	4.33	E
Ped	3.24	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99

Date: 40522

Limits: Helman Street to Maple Street

Observer: MJB

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Helman		
1927 ft	Seg.	
25 mph	#1	
1734 vph		
2 lanes		
Hersey		
1151 ft	Seg.	
25 mph	#2	
1798 vph		
2 lanes		
Maple		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.09	D	N/A
Bike	4.74	D	D
Ped	3.38	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.08	D	N/A
Bike	4.22	D	D
Ped	3.34	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.09	D
Bike	4.54	E
Ped	3.37	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Helman Street to E Main StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Helman		
885 ft	Seg.	
20 mph	#1	
922 vph		
3 lanes		
Oak		
1644 ft	Seg.	
20 mph	#2	
821 vph		
3 lanes		
E Main		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.44	B	N/A
Bike	4.14	B	A
Ped	3.43	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.41	B	N/A
Bike	3.64	A	A
Ped	3.28	A	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	2.42	B
Bike	3.82	D
Ped	3.33	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: E Main Street to Helman StreetObserver: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main		
1904 ft	Seg.	
20 mph	#1	
1064 vph		
2 lanes		
Oak		
785 ft	Seg.	
20 mph	#2	
829 vph		
3 lanes		
Helman		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.37	B	N/A
Bike	4.15	A	A
Ped	2.99	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.34	B	N/A
Bike	3.35	B	A
Ped	2.78	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	2.36	B
Bike	3.91	D
Ped	2.93	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: E Main Street to OR66 (Ashland Street)Observer: MJB

Analysis Direction:	SB
(Down Direction on this Sheet)	

Auto LOS Model:	NCHRP 3-70 Stops Model
-----------------	------------------------

E Main		
3365 ft	Seg.	
25 mph	#1	
1558 vph		
2 lanes		
Mountain		
2412 ft	Seg.	
25 mph	#2	
924 vph		
2 lanes		
Ashland		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	3.90	B	B
Ped	3.12	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.00	C	N/A
Bike	3.77	B	B
Ped	3.17	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	2.99	C
Bike	3.85	D
Ped	3.14	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Lead Indian Memorial Road to Tolman Creek RoadObserver: MJBAnalysis Direction: WB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops ModelLead Indian Memorial Road1290 ft
35 mph
554 vph
1 lanesSeg.
#1Oak Knoll1935 ft
35 mph
539 vph
1 lanesSeg.
#2I5-NB Ramp567 ft
35 mph
1148 vph
1 lanesSeg.
#3I5-SB Ramp1142 ft
35 mph
1080 vph
2 lanesSeg.
#4Tolman Creek Road0 ft
0 mph
0 vph
0 lanesSeg.
#50

Seg 1 Score Seg LOS Int LOS

Auto	2.34	B	N/A
Transit	4.09	D	N/A
Bike	4.18	B	C
Ped	3.35	D	B

Seg 2 Score Seg LOS Int LOS

Auto	2.34	B	N/A
Transit	4.06	D	N/A
Bike	3.21	A	C
Ped	3.21	C	B

Seg 3 Score Seg LOS Int LOS

Auto	2.34	B	N/A
Transit	3.11	C	N/A
Bike	3.92	B	D
Ped	3.89	F	B

Seg 4 Score Seg LOS Int LOS

Auto	2.14	B	N/A
Transit	3.01	C	N/A
Bike	4.10	A	C
Ped	3.24	D	B

Seg 5 Score Seg LOS Int LOS

Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street Score LOS

Auto	2.29	B
Transit	3.72	D
Bike	3.75	D
Ped	3.33	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Crowson Road to Or66 (Ashland Street)Observer: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Crowson		
1851 ft	Seg.	
35 mph	#1	
296 vph		
1 lanes		
Mistletoe		
929 ft	Seg.	
35 mph	#2	
253 vph		
1 lanes		
Tolman Creek		
5435 ft	Seg.	
35 mph	#3	
855 vph		
1 lanes		
Walker		
1209 ft	Seg.	
25 mph	#4	
915 vph		
1 lanes		
Ashland		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.89	C	N/A
Bike	3.29	A	A
Ped	2.44	C	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.90	C	N/A
Bike	3.92	A	A
Ped	2.53	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#REF!	N/A	N/A
Bike	4.24	A	C
Ped	3.93	D	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.09	C	N/A
Bike	3.06	A	A
Ped	3.78	C	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	1.25	C
Bike	3.87	D
Ped	3.48	C

Multimodal Level of Service for Urban Streets

Results

Street: E Main StreetDate: 40522Limits: OR66 (Ashland Street) to OR99 (Lithia way)Observer: MJBAnalysis Direction: WB
(Down Direction on this Sheet)Auto LOS Model: NCHRP 3-70 Stops Model

Ashland		
5157 ft	Seg.	
45 mph	#1	
693 vph		
2 lanes		
Tollman Creek		
4232 ft	Seg.	
40 mph	#2	
693 vph		
2 lanes		
Walker		
3031 ft	Seg.	
25 mph	#3	
673 vph		
1 lanes		
Mountain		
2842 ft	Seg.	
25 mph	#4	
0 vph		
1 lanes		
Lithia		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.00	C	N/A
Bike	3.75	C	A
Ped	3.21	D	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.00	C	N/A
Bike	3.79	B	A
Ped	3.19	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.20	A	C
Ped	3.35	D	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.93	C	N/A
Bike	4.08	B	B
Ped	2.72	B	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	2.39	B
Bike	3.91	D
Ped	3.14	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: OR66 (Ashland Street) to E Main StreetObserver: MJB

Analysis Direction:	NB
(Down Direction on this Sheet)	

Auto LOS Model:	NCHRP 3-70 Stops Model
-----------------	------------------------

Ashland		
2412 ft	Seg.	
25 mph	#1	
1494 vph		
2 lanes		
Mountain		
3296 ft	Seg.	
25 mph	#2	
922 vph		
2 lanes		
E Main		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	4.42	B	C
Ped	3.13	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.94	C	N/A
Bike	3.80	A	B
Ped	2.81	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	2.96	C
Bike	4.07	D
Ped	2.95	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: OR66 (Ashland Street) to Crowson RoadObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Ashland		
1209 ft	Seg.	
25 mph	#1	
749 vph		
2 lanes		
Walker		
5435 ft	Seg.	
35 mph	#2	
250 vph		
1 lanes		
Tolman Creek		
929 ft	Seg.	
35 mph	#3	
350 vph		
1 lanes		
Mistletoe		
1851 ft	Seg.	
35 mph	#4	
361 vph		
1 lanes		
Crowson		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.95	C	N/A
Bike	4.05	A	A
Ped	2.88	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.96	C	N/A
Bike	3.96	A	A
Ped	2.94	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.98	C	N/A
Bike	3.67	A	A
Ped	3.08	C	A

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.98	C	N/A
Bike	3.37	A	A
Ped	3.06	C	A

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	2.97	C
Bike	3.82	D
Ped	2.97	C

Multimodal Level of Service for Urban Streets

Results

Street: Walker AvenueDate: 40522Limits: Full LengthObserver: EMFAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main St		
1635 ft 25 mph 327 vph 1 lanes	Seg. #1	
Iowa St		
1795 ft 25 mph 60 vph 1 lanes	Seg. #2	
Ashland St		
665 ft 25 mph 80 vph 1 lanes	Seg. #3	
Siskiyou Blvd		
2365 ft 25 mph 0 vph 1 lanes	Seg. #4	
Southern End		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.05	A	A
Ped	2.15	B	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.92	C	N/A
Bike	3.40	A	A
Ped	2.67	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.89	C	N/A
Bike	3.64	A	A
Ped	2.42	C	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	2.75	A	A
Ped	#DIV/0!	B	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	1.11	A
Bike	3.10	C
Ped	1.53	A

Future MMLOS

Multimodal Level of Service for Urban Streets

Results

Street: Walker Avenue

Date: 40522

Limits: Full Length

Observer: EMF

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Southern End		
2365 ft	Seg. #1	
25 mph		
138 vph		
1 lanes		
Siskiyou Blvd		
665 ft	Seg. #2	
25 mph		
84 vph		
1 lanes		
Ashland St		
1795 ft	Seg. #3	
25 mph		
209 vph		
1 lanes		
Iowa St		
1635 ft	Seg. #4	
25 mph		
0 vph		
1 lanes		
E Main St		
0 ft	Seg. #5	
0 mph		
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.89	C	N/A
Bike	4.41	A	A
Ped	2.38	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.89	C	N/A
Bike	3.34	A	A
Ped	2.44	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.85	C	N/A
Bike	4.26	A	A
Ped	2.19	B	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.74	A	A
Ped	2.19	B	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	2.15	B
Bike	4.09	D
Ped	2.29	B

Multimodal Level of Service for Urban Streets

Results

Street: OR99Date: 40522Limits: Valley View Road to Maple StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Valley View		
4518 ft	Seg.	
45 mph	#1	
2028 vph		
2 lanes		
Ashland Milne		
2936 ft	Seg.	
35 mph	#2	
1850 vph		
2 lanes		
Maple		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.15	D	N/A
Bike	4.11	C	C
Ped	3.77	F	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.08	D	N/A
Bike	4.49	C	C
Ped	3.33	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.12	D
Bike	4.26	E
Ped	3.60	D

Multimodal Level of Service for Urban Streets

Results

Street: Tolman Creek Road

Date: 40522

Limits: E Main Street to Ashland Street

Observer: EMF

Analysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main Street		
2925 ft 25 mph 411 vph 1 lanes	Seg. #1	
Ashland Street		
1110 ft 25 mph 578 vph 1 lanes	Seg. #2	
Mistletoe Rd		
2510 ft 25 mph 87 vph 1 lanes	Seg. #3	
Siskiyou Blvd		
0 ft 0 mph 0 vph 0 lanes	Seg. #4	
0		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.04	C	N/A
Bike	3.96	A	B
Ped	3.45	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.96	C	N/A
Bike	3.21	A	A
Ped	2.94	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.90	C	N/A
Bike	3.98	B	B
Ped	2.53	B	B

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.27	B
Transit	2.97	C
Bike	3.84	D
Ped	3.01	C

Multimodal Level of Service for Urban Streets

Results

Street: Tolman Creek Road

Date: 40522

Limits: E Main Street to Ashland Street

Observer: EMF

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Siskiyou Blvd		
2510 ft	Seg.	
25 mph	#1	
543 vph		
1 lanes		
Mistletoe Rd		
1110 ft	Seg.	
25 mph	#2	
329 vph		
1 lanes		
Ashland St		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.91	C	N/A
Bike	4.05	A	B
Ped	2.55	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.14	C	N/A
Bike	3.68	A	A
Ped	4.12	C	C

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	2.98	C
Bike	3.94	D
Ped	3.03	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Tolman Creek Road to OR99 (Siskyou Boulevard)Observer: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Tolman Creek			
4508 ft	Seg.		
35 mph	#1		
1553 vph			
2 lanes			
Walker			
1004 ft	Seg.		
30 mph	#2		
0 vph			
2 lanes			
Siskyou			
0 ft	Seg.		
0 mph	#3		
0 vph			
0 lanes			
0			
0 ft	Seg.		
0 mph	#4		
0 vph			
0 lanes			
0			
0 ft	Seg.		
0 mph	#5		
0 vph			
0 lanes			
0			

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.02	C	N/A
Bike	3.98	A	C
Ped	3.34	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.03	C	N/A
Bike	3.49	A	C
Ped	3.36	C	D

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	3.03	C
Bike	3.89	D
Ped	3.35	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Tolman Creek Road to Dead Indian Memorial RoadObserver: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

<u>Tolman Creek</u>		
1142 ft	Seg.	
35 mph	#1	
2015 vph		
2 lanes		
<u>I5-SB Ramp</u>		
567 ft	Seg.	
35 mph	#2	
906 vph		
1 lanes		
<u>I5-NB Ramp</u>		
1879 ft	Seg.	
35 mph	#3	
599 vph		
1 lanes		
<u>Oak Knoll</u>		
1290 ft	Seg.	
35 mph	#4	
660 vph		
1 lanes		
<u>Dead Indian Memorial Road</u>		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
<u>0</u>		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.04	C	N/A
Bike	4.42	A	B
Ped	3.46	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.19	C	N/A
Bike	4.27	C	E
Ped	4.44	F	C

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.11	D	N/A
Bike	4.01	B	C
Ped	3.53	E	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.10	D	N/A
Bike	3.50	A	A
Ped	3.46	E	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	3.75	D
Bike	4.00	D
Ped	3.60	D

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: OR99 (Siskyou Boulevard) to Tolman Creek RoadObserver: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Siskyou		
1004 ft	Seg.	
35 mph	#1	
1581 vph		
2 lanes		
Walker		
4508 ft	Seg.	
35 mph	#2	
1518 vph		
2 lanes		
Tolman Creek		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.01	C	N/A
Bike	4.00	A	B
Ped	3.25	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.03	C	N/A
Bike	4.21	A	C
Ped	3.39	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	3.03	C
Bike	4.17	D
Ped	3.36	C

Multimodal Level of Service for Urban Streets

Results

Street: E Main StreetDate: 40522Limits: OR99 (Siskyou Boulevard) to Walker AvenueObserver: MJBAnalysis Direction: EB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

OR99		
2842 ft 25 mph 716 vph 1 lanes	Seg. #1	
Mountain		
3031 ft 25 mph 914 vph 1 lanes	Seg. #2	
Walker		
4232 ft 40 mph 777 vph 2 lanes	Seg. #3	
Tolman Creek		
5157 ft 45 mph 70 vph 2 lanes	Seg. #4	
Ashland Street		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	4.48	B	C
Ped	3.11	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.94	A	C
Ped	3.44	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.02	C	N/A
Bike	4.10	B	B
Ped	3.37	D	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	3.52	C	A
Ped	3.15	C	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	2.41	B
Bike	3.95	D
Ped	3.26	C

Multimodal Level of Service for Urban Streets

Results

Street: Mountain AvenueDate: 40522Limits: Full LengthObserver: EMFAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Trail Crossing		
1125 ft 25 mph 228 vph 1 lanes	Seg. #1	
Hersey St		
2830 ft 25 mph 228 vph 1 lanes	Seg. #2	
E Main St		
1725 ft 25 mph 206 vph 1 lanes	Seg. #3	
Siskiyou Blvd		
1350 ft 25 mph 76 vph 1 lanes	Seg. #4	
Ashland St		
1325 ft 25 mph 0 vph 1 lanes	Seg. #5	
Prospect Ave		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.18	A	A
Ped	2.08	A	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.41	A	A
Ped	3.89	C	C

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.88	C	N/A
Bike	3.66	A	B
Ped	2.40	B	C

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.83	C	N/A
Bike	4.60	B	A
Ped	2.02	A	B

Seg 5	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.46	A	A
Ped	#DIV/0!	B	#DIV/0!

Street	Score	LOS
Auto	2.30	B
Transit	1.05	A
Bike	3.63	D
Ped	2.42	B

Multimodal Level of Service for Urban Streets

Results

Street: Mountain AvenueDate: 40522Limits: Full LengthObserver: EMFAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Prospect Ave		
1325 ft	Seg.	
25 mph	#1	
69 vph		
1 lanes		
Ashland St		
1350 ft	Seg.	
25 mph	#2	
32 vph		
1 lanes		
Siskiyou Blvd		
1725 ft	Seg.	
25 mph	#3	
265 vph		
1 lanes		
E Main St		
2830 ft	Seg.	
25 mph	#4	
251 vph		
1 lanes		
Hersey St		
1125 ft	Seg.	
25 mph	#5	
0 vph		
1 lanes		
Trail Crossing		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.86	C	N/A
Bike	4.02	A	A
Ped	2.22	B	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.87	C	N/A
Bike	4.09	B	B
Ped	2.31	A	C

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.36	A	A
Ped	2.56	B	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.28	A	C
Ped	3.51	C	B

Seg 5	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	2.45	A	A
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.30	B
Transit	0.92	A
Bike	3.98	D
Ped	2.44	B

Multimodal Level of Service for Urban Streets

Results

Street: OR99Date: 40522Limits: Maple Street to Valley View RoadObserver: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Maple		
2936 ft	Seg.	
35 mph	#1	
2215 vph		
2 lanes		
Ashland Milne		
4518 ft	Seg.	
45 mph	#2	
1152 vph		
2 lanes		
Valley View		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.10	D	N/A
Bike	4.10	D	C
Ped	3.46	E	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.14	D	N/A
Bike	4.87	D	E
Ped	3.72	E	C

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.13	D
Bike	4.57	E
Ped	3.62	D

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Maple Street to Helman StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Maple		
1115 ft	Seg.	
25 mph	#1	
1736 vph		
2 lanes		
Wimer		
1962 ft	Seg.	
25 mph	#2	
1625 vph		
2 lanes		
Helman		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.09	D	N/A
Bike	4.46	D	D
Ped	3.39	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.06	D	N/A
Bike	4.26	D	C
Ped	3.16	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	4.07	D
Bike	4.33	E
Ped	3.24	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Helman Street to Maple StreetObserver: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Helman		
1927 ft	Seg.	
25 mph	#1	
1734 vph		
2 lanes		
Hersey		
1151 ft	Seg.	
25 mph	#2	
1798 vph		
2 lanes		
Maple		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.09	D	N/A
Bike	4.74	D	D
Ped	3.38	D	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	4.08	D	N/A
Bike	4.22	D	D
Ped	3.34	D	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	4.09	D
Bike	4.54	E
Ped	3.37	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: Helman Street to E Main StreetObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Helman		
885 ft 20 mph 922 vph 3 lanes	Seg. #1	
Oak		
1644 ft 20 mph 821 vph 3 lanes	Seg. #2	
E Main		
0 ft 0 mph 0 vph 0 lanes	Seg. #3	
0		
0 ft 0 mph 0 vph 0 lanes	Seg. #4	
0		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#VALUE!	N/A	N/A
Bike	4.14	B	A
Ped	#VALUE!	B	#VALUE!

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.64	A	A
Ped	#DIV/0!	A	#DIV/0!

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	0.00	A
Bike	3.82	D
Ped	0.00	A

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: E Main Street to Helman StreetObserver: MJBAnalysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main		
1904 ft	Seg.	
20 mph	#1	
1064 vph		
2 lanes		
Oak		
785 ft	Seg.	
20 mph	#2	
829 vph		
3 lanes		
Helman		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.37	B	N/A
Bike	3.47	A	A
Ped	2.99	B	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.34	B	N/A
Bike	5.23	B	A
Ped	2.78	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	2.36	B
Bike	3.98	D
Ped	2.93	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: E Main Street to OR66 (Ashland Street)Observer: MJB

Analysis Direction:	SB
(Down Direction on this Sheet)	

Auto LOS Model:	NCHRP 3-70 Stops Model
-----------------	------------------------

E Main		
3365 ft	Seg.	
25 mph	#1	
1558 vph		
2 lanes		
Mountain		
2412 ft	Seg.	
25 mph	#2	
924 vph		
2 lanes		
Ashland		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	3.90	B	B
Ped	3.12	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.00	C	N/A
Bike	3.77	B	B
Ped	3.17	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.14	B
Transit	2.99	C
Bike	3.85	D
Ped	3.14	C

Multimodal Level of Service for Urban Streets

Results

Street: OR66 (Ashland Street)Date: 40522Limits: Lead Indian Memorial Road to Tolman Creek RoadObserver: MJBAnalysis Direction: WB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops ModelLead Indian Memorial1290 ft
35 mph
322 vph
1 lanesSeg.
#1

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.06	D	N/A
Bike	4.04	A	B
Ped	3.17	C	B

Oak Knoll1935 ft
35 mph
792 vph
1 lanesSeg.
#2

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	4.12	D	N/A
Bike	3.56	A	D
Ped	3.58	E	B

I5-NB Ramp567 ft
35 mph
1756 vph
1 lanesSeg.
#3

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.18	C	N/A
Bike	5.23	C	F
Ped	4.40	F	C

I5-SB Ramp1142 ft
35 mph
1440 vph
2 lanesSeg.
#4

Seg 4	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	3.04	C	N/A
Bike	4.24	A	C
Ped	3.45	D	B

Tolman Creek0 ft
0 mph
0 vph
0 lanesSeg.
#5

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

0

Street	Score	LOS
Auto	2.29	B
Transit	3.75	D
Bike	4.03	D
Ped	3.54	D

Multimodal Level of Service for Urban Streets

Results

Street: OR 99

Date: 40522

Limits: Crowson Road to Or66 (Ashland Street)

Observer: MJB

Analysis Direction: NB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Crowson		
1851 ft	Seg.	
35 mph	#1	
379 vph		
1 lanes		
Mistletoe		
929 ft	Seg.	
35 mph	#2	
318 vph		
1 lanes		
Tolman Creek		
5435 ft	Seg.	
35 mph	#3	
1025 vph		
1 lanes		
Walker		
1209 ft	Seg.	
25 mph	#4	
1292 vph		
1 lanes		
Ashland		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.92	C	N/A
Bike	3.33	A	A
Ped	2.66	C	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.91	C	N/A
Bike	3.95	A	B
Ped	2.58	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	#REF!	N/A	N/A
Bike	4.35	A	C
Ped	4.11	D	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	F (v/c>1)	N/A
Transit	3.14	C	N/A
Bike	3.15	A	B
Ped	4.14	D	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	F (v/c>1)
Transit	1.26	C
Bike	3.96	D
Ped	3.68	D

Multimodal Level of Service for Urban Streets

Results

Street: E Main StreetDate: 40522Limits: OR66 (Ashland Street) to OR99 (Lithia way)Observer: MJB

Analysis Direction:	WB
(Down Direction on this Sheet)	

Auto LOS Model:	NCHRP 3-70 Stops Model
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Ashland		
5157 ft	Seg.	
45 mph	#1	
913 vph		
2 lanes		
Tollman Creek		
4232 ft	Seg.	
40 mph	#2	
913 vph		
2 lanes		
Walker		
3031 ft	Seg.	
25 mph	#3	
845 vph		
1 lanes		
Mountain		
2842 ft	Seg.	
25 mph	#4	
0 vph		
1 lanes		
Lithia		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.02	C	N/A
Bike	3.78	C	A
Ped	3.30	D	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	3.01	C	N/A
Bike	3.83	B	A
Ped	3.29	D	A

Seg 3	Score	Seg LOS	Int LOS
Auto	2.14	F (v/c>1)	N/A
Transit	#DIV/0!	N/A	N/A
Bike	4.34	A	C
Ped	3.62	E	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.94	C	N/A
Bike	4.11	B	B
Ped	2.77	B	B

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	F (v/c>1)
Transit	2.40	B
Bike	3.97	D
Ped	3.26	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: OR66 (Ashland Street) to E Main StreetObserver: MJB

Analysis Direction:	NB
(Down Direction on this Sheet)	

Auto LOS Model:	NCHRP 3-70 Stops Model
-----------------	------------------------

Ashland		
2412 ft	Seg.	
25 mph	#1	
1494 vph		
2 lanes		
Mountain		
3296 ft	Seg.	
25 mph	#2	
922 vph		
2 lanes		
E Main		
0 ft	Seg.	
0 mph	#3	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#4	
0 vph		
0 lanes		
0		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.99	C	N/A
Bike	4.42	B	C
Ped	3.13	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.94	C	N/A
Bike	3.80	A	B
Ped	2.81	B	B

Seg 3	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 4	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.24	B
Transit	2.96	C
Bike	4.07	D
Ped	2.95	C

Multimodal Level of Service for Urban Streets

Results

Street: OR 99Date: 40522Limits: OR66 (Ashland Street) to Crowson RoadObserver: MJBAnalysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

Ashland		
1209 ft	Seg.	
25 mph	#1	
1001 vph		
2 lanes		
Walker		
5435 ft	Seg.	
35 mph	#2	
320 vph		
1 lanes		
Tolman Creek		
929 ft	Seg.	
35 mph	#3	
397 vph		
1 lanes		
Mistletoe		
1851 ft	Seg.	
35 mph	#4	
362 vph		
1 lanes		
Crowson		
0 ft	Seg.	
0 mph	#5	
0 vph		
0 lanes		
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.14	B	N/A
Transit	2.97	C	N/A
Bike	4.09	A	B
Ped	3.00	C	B

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.98	C	N/A
Bike	4.00	A	B
Ped	3.07	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.99	C	N/A
Bike	3.69	A	A
Ped	3.13	C	A

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.99	C	N/A
Bike	3.38	A	A
Ped	3.10	C	A

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.29	B
Transit	2.98	C
Bike	3.86	D
Ped	3.07	C

Multimodal Level of Service for Urban Streets

Results

Street: Walker Avenue

Date: 40522

Limits: Full Length

Observer: EMF

Analysis Direction: SB

(Down Direction on this Sheet)

Auto LOS Model: NCHRP 3-70 Stops Model

E Main St		
1635 ft 25 mph 295 vph 1 lanes	Seg. #1	
Iowa St		
1795 ft 25 mph 74 vph 1 lanes	Seg. #2	
Ashland St		
665 ft 25 mph 99 vph 1 lanes	Seg. #3	
Siskiyou Blvd		
2365 ft 25 mph 0 vph 1 lanes	Seg. #4	
Southern End		
0 ft 0 mph 0 vph 0 lanes	Seg. #5	
0		

Seg 1	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	3.04	A	A
Ped	2.13	A	A

Seg 2	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.93	C	N/A
Bike	3.43	A	B
Ped	2.69	C	B

Seg 3	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	2.89	C	N/A
Bike	3.66	A	A
Ped	2.42	C	B

Seg 4	Score	Seg LOS	Int LOS
Auto	2.34	B	N/A
Transit	#DIV/0!	N/A	N/A
Bike	2.75	A	A
Ped	#DIV/0!	B	#DIV/0!

Seg 5	Score	Seg LOS	Int LOS
Auto	N/A	#N/A	N/A
Transit	#DIV/0!	N/A	N/A
Bike	#DIV/0!	#DIV/0!	D
Ped	#DIV/0!	A	#DIV/0!

Street	Score	LOS
Auto	2.34	B
Transit	1.11	A
Bike	3.11	C
Ped	1.53	A