

# City of Sherwood Transportation System Plan

Prepared for



## TECHNICAL APPENDIX

Submitted by

**DKS Associates**

TRANSPORTATION SOLUTIONS

March 2005



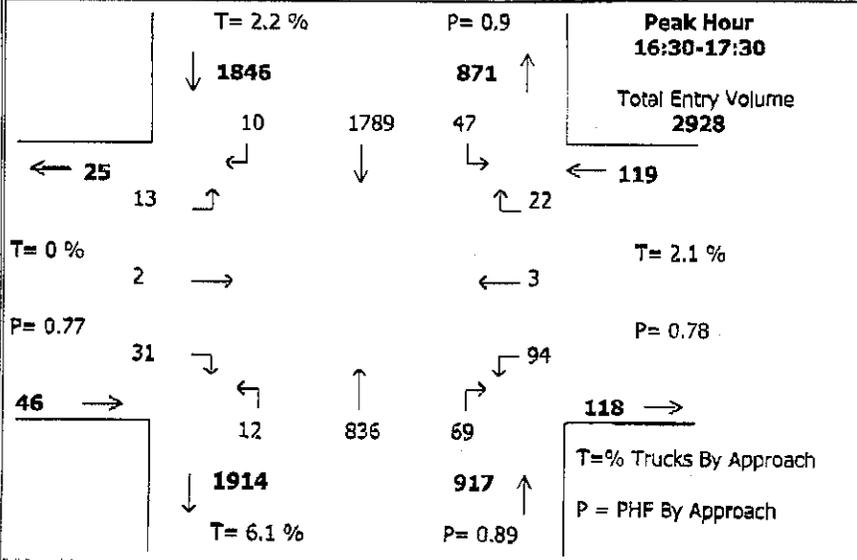
# **APPENDIX**

## Traffic Counts

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**INTERSECTION TURN MOVEMENT SUMMARY REPORT**

File: Dgwylm



**LOCATION:**

ORE 99W AT SIGNALIZED HOME DEPOT ENTRANCE  
SHERWOOD, OR

Date: **05/06/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd, Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

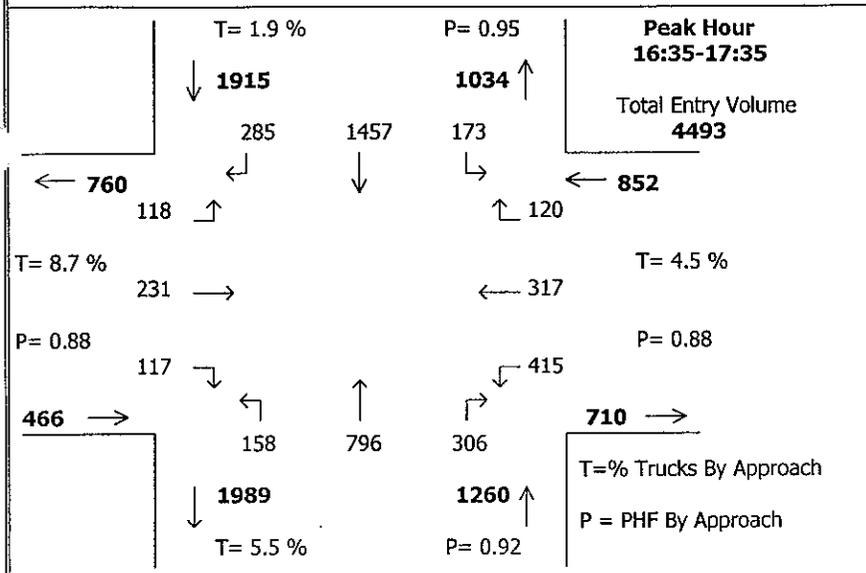
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↖	↓	↙	↖	↑	↗	↖	←	↗	
16:00-16:05	0	0	0	2	112	2	0	57	5	7	0	1	186
16:05-16:10	0	1	0	2	150	2	1	78	3	3	0	2	242
16:10-16:15	1	0	1	0	125	4	2	67	6	11	0	3	220
16:15-16:20	1	0	2	2	145	1	2	98	9	7	0	2	269
16:20-16:25	0	0	2	2	96	6	1	50	5	8	0	4	174
16:25-16:30	3	0	0	1	116	0	2	79	7	8	0	0	216
16:30-16:35	0	0	3	1	135	6	0	72	6	7	0	1	231
16:35-16:40	2	0	0	0	151	7	6	81	6	11	0	2	266
16:40-16:45	4	0	1	0	160	1	3	63	5	10	0	4	251
16:45-16:50	2	1	1	1	144	3	0	85	9	8	1	2	257
16:50-16:55	2	0	0	0	131	4	1	45	3	5	1	2	194
16:55-17:00	3	0	1	1	143	1	0	66	6	4	0	0	225
17:00-17:05	4	0	4	2	130	5	1	74	7	7	1	3	238
17:05-17:10	2	0	0	1	149	0	0	85	7	8	0	1	253
17:10-17:15	4	0	1	0	156	6	0	51	10	12	0	1	241
17:15-17:20	1	0	1	1	168	5	1	78	5	5	0	1	266
17:20-17:25	2	1	0	2	173	4	0	65	4	10	0	3	264
17:25-17:30	5	0	1	1	149	5	0	71	1	7	0	2	242
17:30-17:35	0	0	1	1	127	1	3	66	1	14	0	2	216
17:35-17:40	4	0	0	0	141	3	1	89	7	4	0	5	254
17:40-17:45	0	0	1	0	102	2	0	73	13	6	0	3	200
17:45-17:50	2	0	1	1	130	0	0	81	8	10	0	3	236
17:50-17:55	1	0	1	2	126	1	3	80	6	12	0	1	233
17:55-18:00	2	0	2	1	131	0	1	82	13	7	0	1	240

TOTALS	45	3	24	24	3290	69	28	1736	152	191	3	49	5614
PHF	0.77	0.5	0.65	0.63	0.9	0.78	0.33	0.91	0.72	0.81	0.38	0.69	0.95
% Trucks	0	0	0	0	2.2	1.4	0	6.5	2	1.6	0	4.1	3.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0		0		0	

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Dlmng.mod



**LOCATION:**

ORE 99W AT TUALATIN-SHERWOOD ROAD  
SHERWOOD, OR

Date: **04/09/03** Day: **Wed**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

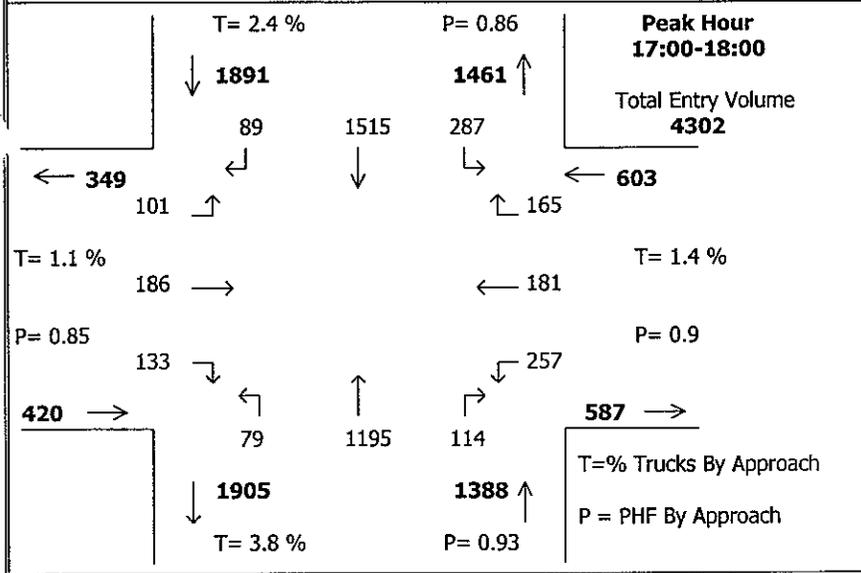
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	4	15	5	15	99	13	12	54	21	17	20	11	286
16:05-16:10	6	21	6	16	112	8	10	50	26	45	34	12	346
16:10-16:15	10	23	9	26	118	10	20	67	42	30	22	11	388
16:15-16:20	11	18	12	11	118	7	11	50	29	45	38	5	355
16:20-16:25	7	27	10	16	108	16	16	92	35	30	13	10	380
16:25-16:30	4	13	5	23	130	11	12	42	26	56	32	14	368
16:30-16:35	16	24	3	16	122	18	14	58	33	29	16	8	357
16:35-16:40	11	13	8	22	126	8	9	49	24	40	33	9	352
16:40-16:45	15	25	10	19	103	18	19	69	32	28	24	9	371
16:45-16:50	8	12	12	33	139	19	10	57	27	42	29	6	394
16:50-16:55	8	14	10	17	120	18	18	87	24	31	17	11	375
16:55-17:00	5	16	7	23	124	12	14	60	29	41	30	12	373
17:00-17:05	12	22	10	37	111	16	16	51	27	18	20	11	351
17:05-17:10	11	17	9	22	132	7	15	63	26	52	32	12	398
17:10-17:15	6	26	11	23	117	21	9	71	20	32	26	17	379
17:15-17:20	7	19	10	26	121	10	15	53	31	32	33	7	364
17:20-17:25	9	23	9	21	127	17	10	68	15	16	21	7	343
17:25-17:30	18	19	9	23	111	12	9	67	22	43	31	8	372
17:30-17:35	7	25	13	19	126	15	14	101	29	40	21	11	421
17:35-17:40	14	14	2	17	112	14	10	57	17	51	33	9	350
17:40-17:45	8	23	4	53	107	16	16	60	28	20	18	11	364
17:45-17:50	18	18	4	17	113	11	9	70	24	42	34	8	368
17:50-17:55	13	21	10	17	104	14	12	81	34	29	25	7	367
17:55-18:00	21	24	8	19	109	6	7	42	20	46	37	10	349

TOTALS	249	472	196	531	2809	317	307	1519	641	855	639	236	8771
PHF	0.86	0.85	0.92	0.87	0.95	0.79	0.82	0.84	0.92	0.89	0.87	0.75	0.98
% Trucks	1.2	10.2	14.8	1.7	1.4	7.6	3.9	4.7	8.1	4.6	4.1	5.1	4.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			4			2			9		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: djzg.mod



**LOCATION:**

HIGHWAY 99W AT SHERWOOD BLVD/EDY RD  
SHERWOOD, OR

Date: **04/15/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

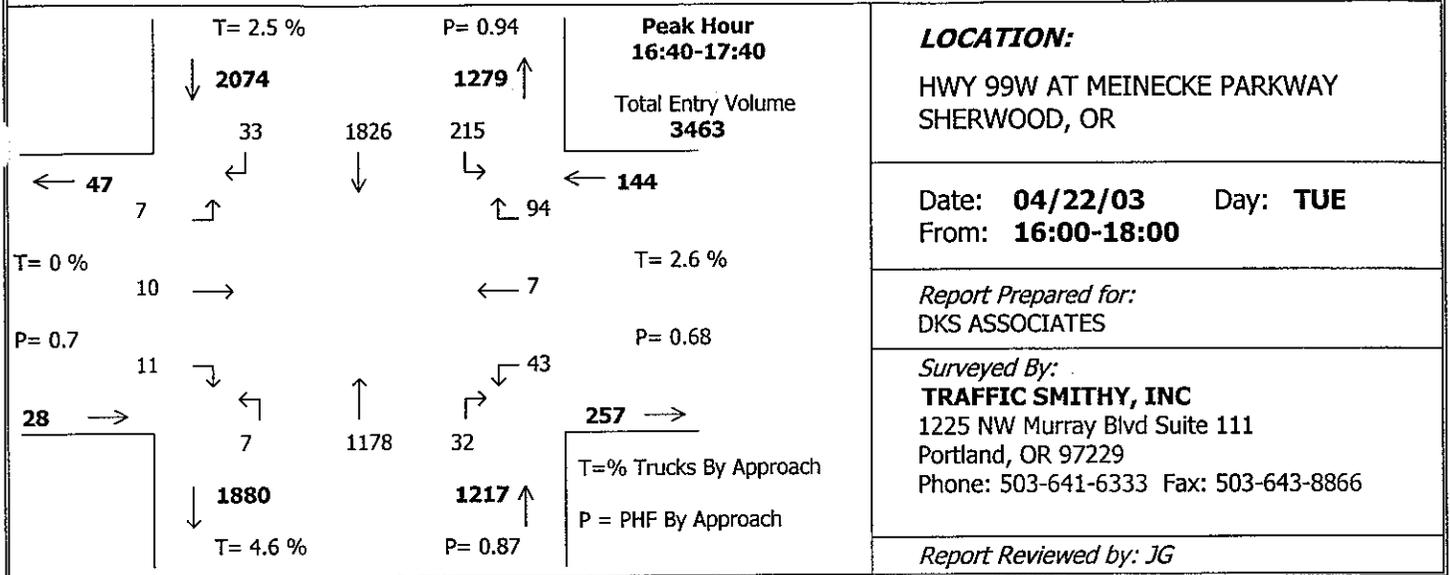
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	5	10	11	13	104	23	4	98	5	13	12	22	320
16:05-16:10	4	19	10	4	90	14	0	76	7	13	12	11	260
16:10-16:15	7	8	7	5	140	27	1	93	7	18	14	9	336
16:15-16:20	16	12	8	8	90	8	6	92	8	26	15	17	306
16:20-16:25	9	10	5	10	175	27	3	93	9	13	12	10	376
16:25-16:30	11	21	13	9	100	23	6	77	10	21	21	14	326
16:30-16:35	7	5	7	4	146	24	5	117	11	18	11	15	370
16:35-16:40	11	20	10	10	103	14	7	90	3	29	14	12	323
16:40-16:45	7	12	5	3	170	29	5	113	4	20	14	11	393
16:45-16:50	5	17	16	6	100	20	5	71	10	30	14	18	312
16:50-16:55	9	14	6	5	143	32	5	102	13	21	16	10	376
16:55-17:00	8	21	10	7	81	19	10	61	10	32	14	7	280
17:00-17:05	7	13	6	1	142	29	6	89	9	23	7	16	348
17:05-17:10	5	19	5	5	95	24	3	110	7	25	24	20	342
17:10-17:15	8	14	8	11	148	34	12	110	10	17	11	17	400
17:15-17:20	7	12	7	4	115	18	7	83	5	22	18	11	309
17:20-17:25	15	12	7	10	161	19	4	129	10	13	13	7	400
17:25-17:30	14	17	13	5	114	20	7	95	7	22	19	13	346
17:30-17:35	12	12	9	12	175	31	8	93	16	17	13	16	414
17:35-17:40	14	20	11	1	98	18	4	97	8	31	21	14	337
17:40-17:45	8	12	10	13	132	36	9	115	12	14	13	16	390
17:45-17:50	15	19	12	7	93	19	8	92	13	31	10	17	336
17:50-17:55	14	15	7	11	140	23	4	108	11	14	10	12	369
17:55-18:00	14	21	6	9	102	16	7	74	6	28	22	6	311

TOTALS	232	355	209	173	2957	547	136	2278	211	511	350	321	8280
PHF	0.77	0.85	0.77	0.72	0.84	0.82	0.86	0.93	0.79	0.85	0.85	0.78	0.93
% Trucks	1.3	0.8	1.4	1.7	2.8	0.7	1.5	4	2.4	0.4	0.9	3.7	2.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			3			6		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: DJZKLM.mod

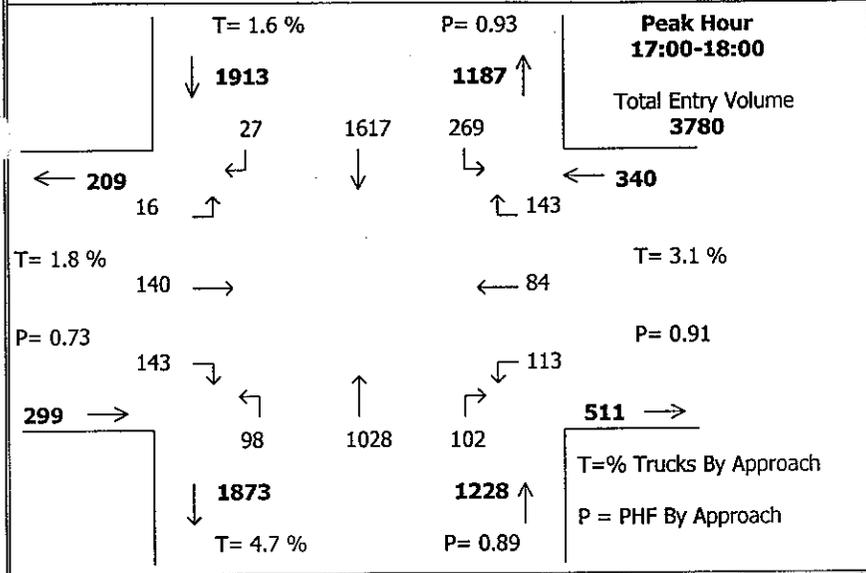


TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↘	←	↖	
16:00-16:05	1	0	1	2	129	9	0	94	5	3	1	3	248
16:05-16:10	0	1	0	1	140	15	0	94	1	0	0	6	258
16:10-16:15	0	1	1	1	135	21	1	98	1	1	1	10	271
16:15-16:20	0	0	2	3	144	11	0	100	3	4	1	7	275
16:20-16:25	0	0	0	5	147	15	0	74	0	3	0	7	251
16:25-16:30	0	0	0	4	185	14	0	84	2	3	1	3	296
16:30-16:35	0	1	0	3	164	12	2	89	0	2	0	9	282
16:35-16:40	0	1	0	2	141	7	0	82	3	3	0	4	243
16:40-16:45	2	1	1	3	169	18	2	101	1	4	3	11	316
16:45-16:50	2	2	0	2	150	24	1	91	0	2	1	5	280
16:50-16:55	0	1	1	4	157	21	0	91	6	4	0	0	285
16:55-17:00	1	1	1	1	133	14	1	92	5	2	0	3	254
17:00-17:05	0	0	0	4	139	20	1	96	3	2	0	8	273
17:05-17:10	0	2	0	1	170	21	1	76	2	10	1	12	296
17:10-17:15	1	0	0	3	163	9	0	87	0	4	0	9	276
17:15-17:20	1	0	0	1	167	19	1	130	1	4	1	12	337
17:20-17:25	3	1	0	0	135	19	0	111	2	2	0	5	278
17:25-17:30	0	1	0	2	173	19	0	96	8	3	0	10	312
17:30-17:35	1	0	2	5	140	13	0	117	3	3	1	9	294
17:35-17:40	0	1	2	7	130	18	0	90	1	3	0	10	262
17:40-17:45	1	0	1	3	150	18	0	94	1	0	1	8	277
17:45-17:50	0	1	1	6	125	23	1	84	3	2	2	13	261
17:50-17:55	1	2	0	3	135	10	2	116	1	2	0	5	277
17:55-18:00	1	1	2	3	153	28	0	71	4	6	0	15	284

TOTALS	15	18	15	69	3574	398	13	2258	56	72	14	184	6686
PHF	0.55	0.63	0.44	0.59	0.91	0.85	0.58	0.87	0.57	0.6	0.44	0.71	0.93
% Trucks	0	0	0	1.4	2.7	0.8	0	4.8	0	2.8	7.1	2.2	3.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		4			0			2			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: EROBLM



**LOCATION:**

ORE 99W AT SUNSET BOULEVARD  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

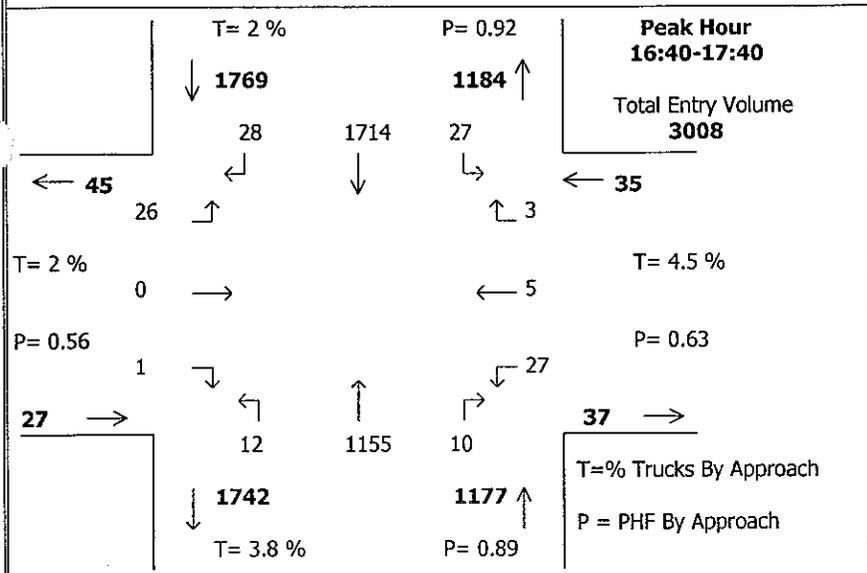
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	↖		
16:00-16:05	11	9	1	2	152	18	3	52	10	10	4	6	278
16:05-16:10	7	3	6	2	119	10	7	86	5	12	6	16	279
16:10-16:15	7	6	1	0	127	13	4	79	8	9	7	5	266
16:15-16:20	8	8	3	1	116	16	0	66	4	12	3	3	240
16:20-16:25	14	8	1	2	148	16	8	88	7	10	3	14	319
16:25-16:30	10	9	1	0	156	13	6	89	8	4	1	14	311
16:30-16:35	12	5	1	3	118	11	6	81	8	7	2	5	259
16:35-16:40	12	4	1	2	113	22	4	81	5	7	2	12	265
16:40-16:45	16	14	1	2	104	15	9	70	8	10	4	9	262
16:45-16:50	14	4	1	1	155	11	5	82	9	15	5	11	313
16:50-16:55	6	12	2	1	157	21	8	86	6	6	4	13	322
16:55-17:00	9	15	1	2	128	24	6	83	10	6	2	10	296
17:00-17:05	6	16	3	1	135	14	8	78	8	6	7	16	298
17:05-17:10	16	5	0	2	121	16	10	69	7	8	8	9	271
17:10-17:15	9	9	5	5	130	23	4	92	7	9	13	13	319
17:15-17:20	8	20	1	1	132	23	11	89	5	10	3	12	315
17:20-17:25	7	12	0	2	158	24	6	89	7	15	9	9	338
17:25-17:30	14	10	3	1	127	31	7	64	7	11	1	9	285
17:30-17:35	9	6	0	2	148	23	8	104	13	10	7	11	341
17:35-17:40	22	9	0	3	136	28	10	88	9	9	7	17	338
17:40-17:45	19	17	2	6	113	24	7	68	9	8	7	15	295
17:45-17:50	16	17	1	3	126	19	5	111	8	8	5	5	324
17:50-17:55	11	9	1	1	155	26	15	95	10	9	8	15	355
17:55-18:00	6	10	0	0	136	18	7	81	12	10	9	12	301

<b>TOTALS</b>	269	237	36	45	3210	459	164	1971	190	221	127	261	7190
PHF	0.63	0.81	0.5	0.56	0.93	0.82	0.91	0.9	0.82	0.78	0.75	0.83	0.96
% Trucks	1.1	1.7	8.3	2.2	1.7	0.7	1.2	5.3	1.1	2.3	1.6	4.6	2.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0			0		0

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Maxslm



**LOCATION:**

ORE 99W AT BROOKMAN ROAD  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

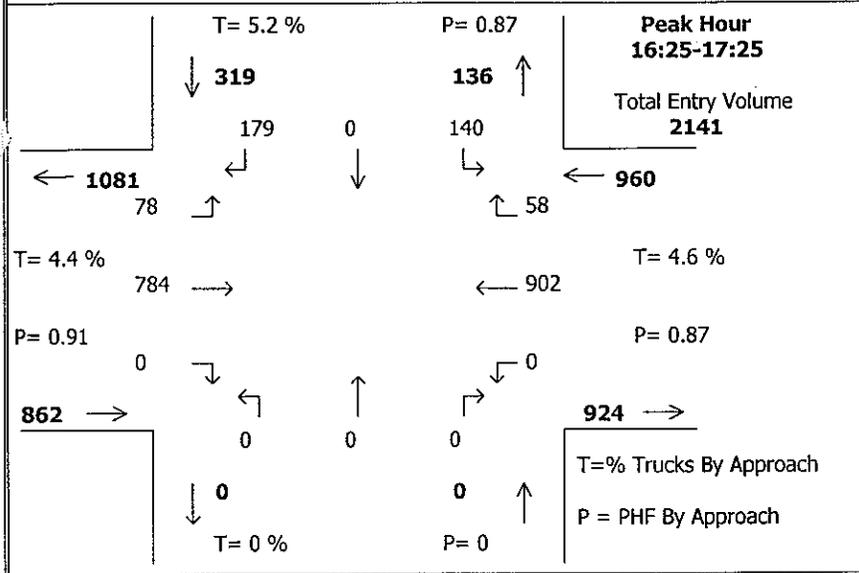
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↖	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	0	0	1	1	114	3	1	80	2	3	0	0	205
16:05-16:10	0	0	0	3	110	0	0	102	0	5	0	0	220
16:10-16:15	0	0	1	2	133	2	0	78	1	3	1	0	221
16:15-16:20	0	0	1	4	162	1	0	97	1	0	1	1	268
16:20-16:25	0	0	1	6	151	0	0	79	4	1	1	1	244
16:25-16:30	0	1	1	3	134	1	0	96	1	0	0	0	237
16:30-16:35	1	0	1	2	116	2	1	78	1	0	0	0	202
16:35-16:40	0	0	1	1	111	1	0	124	2	0	0	2	242
16:40-16:45	0	0	0	2	182	0	1	82	1	5	1	1	275
16:45-16:50	0	0	1	3	154	1	0	83	1	3	0	0	246
16:50-16:55	0	0	2	1	113	0	0	108	0	2	1	1	228
16:55-17:00	0	0	6	2	156	1	1	70	0	2	0	1	239
17:00-17:05	0	0	1	1	118	2	1	108	1	5	0	0	237
17:05-17:10	1	0	4	2	119	4	0	106	0	3	1	0	240
17:10-17:15	0	0	0	5	157	6	1	93	1	2	0	0	265
17:15-17:20	0	0	5	1	170	4	0	90	0	2	0	0	272
17:20-17:25	0	0	0	2	135	3	2	93	4	1	0	0	240
17:25-17:30	0	0	1	4	110	2	2	129	1	1	1	0	251
17:30-17:35	0	0	3	1	163	0	0	100	1	0	0	0	268
17:35-17:40	0	0	3	4	137	4	4	93	0	1	1	0	247
17:40-17:45	0	1	4	1	120	6	1	93	1	2	0	2	231
17:45-17:50	0	0	4	4	126	4	2	111	0	2	0	0	253
17:50-17:55	0	1	1	3	141	2	1	71	2	2	0	1	225
17:55-18:00	1	1	0	2	120	1	0	66	1	3	0	1	196

TOTALS	3	4	42	60	3252	50	18	2230	26	48	8	11	5752
PHF	0.25	0	0.59	0.78	0.93	0.48	0.5	0.9	0.42	0.68	0.63	0.38	0.97
% Trucks	33.3	0	0	3.3	1.9	2	0	3.9	0	4.2	0	9.1	2.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0		0		0	

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: LTIW

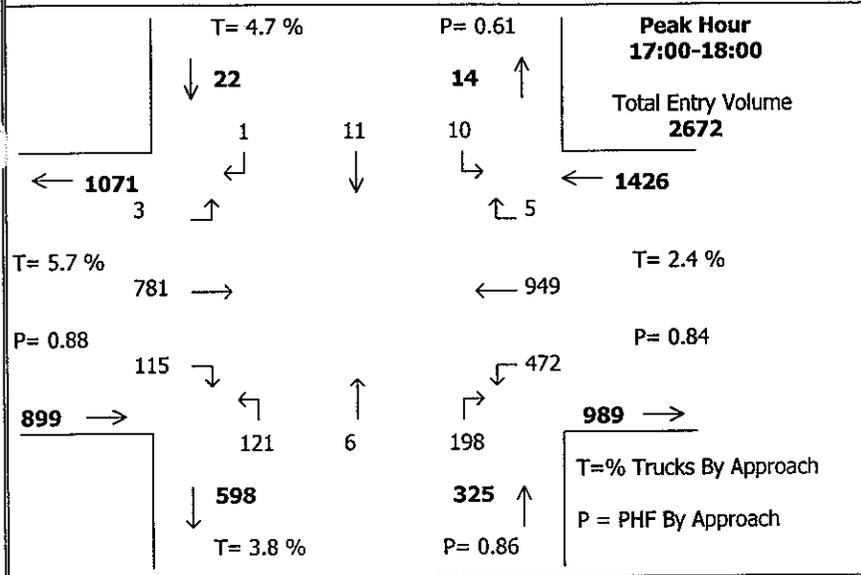


TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	0	56	5	17	0	20	0	0	0	0	58	10	166
16:05-16:10	0	70	13	17	0	30	0	0	0	0	60	6	196
16:10-16:15	0	55	8	27	0	16	0	0	0	0	55	3	164
16:15-16:20	0	70	2	12	0	10	0	0	0	0	73	1	168
16:20-16:25	0	60	3	10	0	9	0	0	0	0	41	3	126
16:25-16:30	0	57	4	13	0	7	0	0	0	0	88	9	178
16:30-16:35	0	56	6	18	0	13	0	0	0	0	59	4	156
16:35-16:40	0	75	5	18	0	18	0	0	0	0	67	7	190
16:40-16:45	0	72	4	9	0	13	0	0	0	0	90	1	189
16:45-16:50	0	72	8	15	0	11	0	0	0	0	56	3	165
16:50-16:55	0	67	8	20	0	3	0	0	0	0	53	6	157
16:55-17:00	0	61	6	9	0	5	0	0	0	0	92	7	180
17:00-17:05	0	72	5	15	0	15	0	0	0	0	57	3	167
17:05-17:10	0	54	7	13	0	17	0	0	0	0	81	2	174
17:10-17:15	0	64	14	20	0	12	0	0	0	0	68	7	185
17:15-17:20	0	76	6	14	0	12	0	0	0	0	90	3	201
17:20-17:25	0	58	5	15	0	14	0	0	0	0	101	6	199
17:25-17:30	0	60	4	12	0	10	0	0	0	0	75	3	164
17:30-17:35	0	59	13	13	0	4	0	0	0	0	5	19	113
17:35-17:40	0	34	19	17	0	4	0	0	0	0	3	22	99
17:40-17:45	0	32	24	18	0	3	0	0	0	0	9	26	112
17:45-17:50	0	25	36	25	0	5	0	0	0	0	24	11	126
17:50-17:55	0	65	20	23	0	6	0	0	0	0	64	5	183
17:55-18:00	0	89	6	24	0	6	0	0	0	0	83	3	211

<b>TOTALS</b>	0	1459	231	394	0	263	0	0	0	0	1452	170	3969
PHF	0	0.89	0.72	0.91	0	0.8	0	0	0	0	0.87	0.73	0.91
% Trucks	0	4	6.9	4.6	0	6.1	0	0	0	0	3.8	11.8	4.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0		0		0		0		0	1		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: MAXV



**LOCATION:**  
TUALATIN-SHERWOOD ROAD AT OREGON STREET  
SHERWOOD, OR

Date: **04/16/03** Day: **WED**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

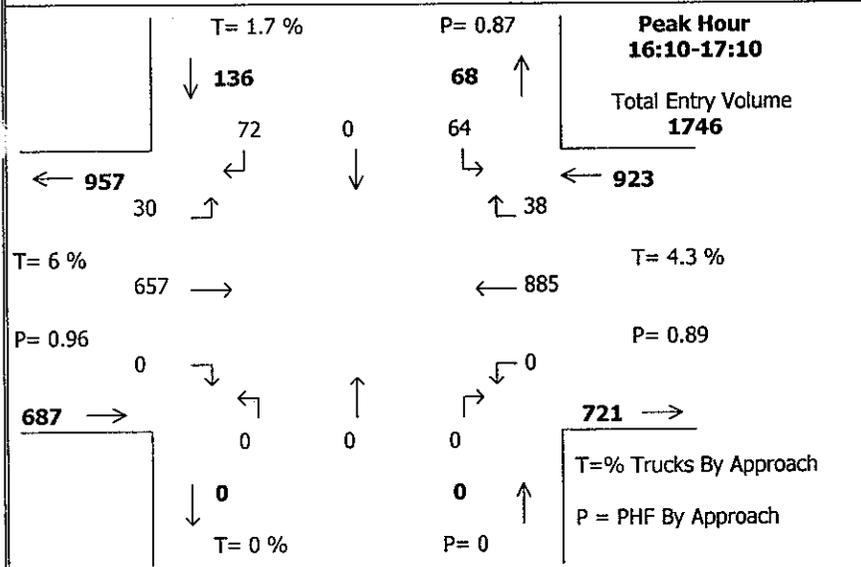
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	3	68	0	0	3	4	9	0	12	26	58	0	183
16:05-16:10	12	73	0	0	0	1	4	0	14	32	71	1	208
16:10-16:15	8	52	0	1	0	3	7	1	15	37	76	0	200
16:15-16:20	7	58	1	1	0	1	6	0	26	20	86	0	206
16:20-16:25	6	75	0	0	0	1	7	0	13	32	59	1	194
16:25-16:30	10	53	0	0	0	2	9	0	7	49	54	0	184
16:30-16:35	10	44	0	1	0	1	13	0	11	33	72	0	185
16:35-16:40	6	60	0	0	1	0	15	0	19	32	110	2	245
16:40-16:45	17	37	0	0	0	0	15	1	10	27	91	0	198
16:45-16:50	7	64	0	0	0	0	4	0	9	43	72	0	199
16:50-16:55	11	49	0	0	0	0	9	1	11	45	82	0	208
16:55-17:00	11	33	1	0	0	1	13	0	18	21	89	2	189
17:00-17:05	12	97	1	0	6	1	15	3	16	51	39	1	242
17:05-17:10	10	57	0	0	2	0	10	0	15	43	85	1	223
17:10-17:15	9	70	0	0	0	0	17	3	13	35	82	0	229
17:15-17:20	5	64	0	0	0	1	8	0	21	45	109	1	254
17:20-17:25	5	63	0	0	0	0	16	0	16	44	91	0	235
17:25-17:30	8	71	0	0	0	0	12	0	15	45	91	0	242
17:30-17:35	11	46	0	0	0	0	8	0	28	27	80	0	200
17:35-17:40	11	73	0	0	0	3	8	0	8	17	70	1	191
17:40-17:45	8	58	0	0	0	1	12	0	13	45	71	0	208
17:45-17:50	7	69	0	1	2	2	4	0	17	23	67	1	193
17:50-17:55	11	47	1	0	0	1	4	0	15	50	73	0	202
17:55-18:00	18	66	1	0	1	1	7	0	21	47	91	0	253

<b>TOTALS</b>	223	1447	5	4	15	24	232	9	363	869	1869	11	5071
PHF	0.8	0.87	0.38	0.25	0.34	0.42	0.72	0.25	0.84	0.88	0.82	0.63	0.91
% Trucks	9	5.2	0	0	0	8.3	5.2	11.1	2.8	1.3	2.8	27.3	3.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians	0	0	0	0	1	0	0	0	0	0	1	0	0

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: ErohLM



**LOCATION:**

TUALATIN-SHERWOOD ROAD AT GERDA LANE  
SHERWOOD, OR

Date: **04/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

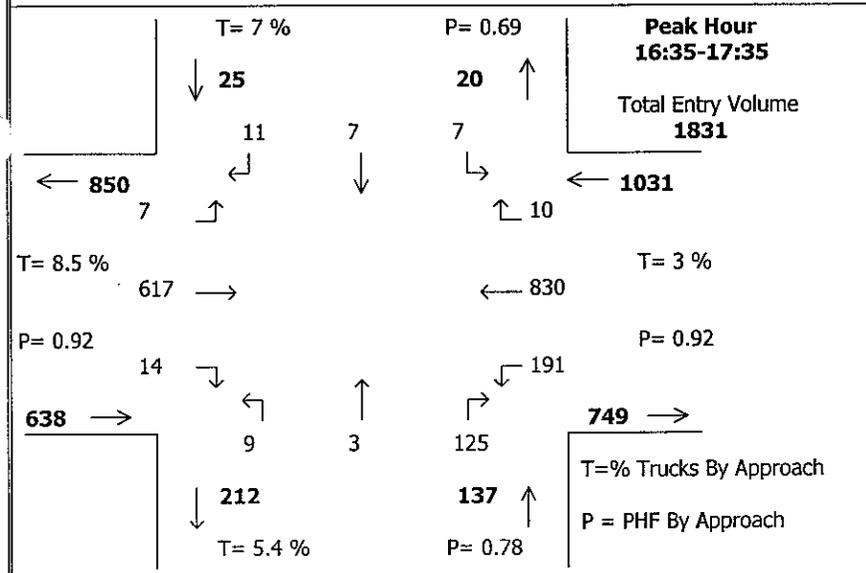
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↙	→	↗	↙	↓	↘	↙	↑	↘	↙	←	↗	
16:00-16:05	0	60	5	2	0	8	0	0	0	0	72	4	151
16:05-16:10	0	50	3	11	0	2	0	0	0	0	55	2	123
16:10-16:15	0	58	5	10	0	6	0	0	0	0	94	6	179
16:15-16:20	0	57	1	8	0	2	0	0	0	0	66	5	139
16:20-16:25	0	56	0	6	0	7	0	0	0	0	86	2	157
16:25-16:30	0	61	4	1	0	8	0	0	0	0	62	0	136
16:30-16:35	0	50	5	5	0	5	0	0	0	0	58	3	126
16:35-16:40	0	49	5	8	0	8	0	0	0	0	70	3	143
16:40-16:45	0	57	1	5	0	5	0	0	0	0	81	4	153
16:45-16:50	0	49	3	3	0	2	0	0	0	0	73	4	134
16:50-16:55	0	52	4	6	0	4	0	0	0	0	76	3	145
16:55-17:00	0	63	1	8	0	5	0	0	0	0	74	4	155
17:00-17:05	0	50	1	4	0	4	0	0	0	0	77	0	136
17:05-17:10	0	55	0	8	0	8	0	0	0	0	68	4	143
17:10-17:15	0	48	1	5	0	11	0	0	0	0	83	3	151
17:15-17:20	0	59	2	5	0	2	0	0	0	0	75	2	145
17:20-17:25	0	62	1	2	0	3	0	0	0	0	75	2	145
17:25-17:30	0	62	0	5	0	4	0	0	0	0	70	3	144
17:30-17:35	0	55	0	5	0	6	0	0	0	0	66	2	134
17:35-17:40	0	63	2	1	0	3	0	0	0	0	74	2	145
17:40-17:45	0	61	0	3	0	4	0	0	0	0	73	1	142
17:45-17:50	0	58	1	3	0	5	0	0	0	0	65	4	136
17:50-17:55	0	72	1	3	0	3	0	0	0	0	79	2	160
17:55-18:00	0	52	1	4	0	2	0	0	0	0	83	1	143

TOTALS	0	1359	47	121	0	117	0	0	0	0	1755	66	3465
PHF	0	0.94	0.54	0.75	0	0.76	0	0	0	0	0.9	0.73	0.92
% Trucks	0	5.8	10.6	0.8	0	2.6	0	0	0	0	3.9	16.7	4.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0		0			

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Djzelm



**LOCATION:**

TUALATIN-SHERWOOD ROAD AT LANGER DRIVE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

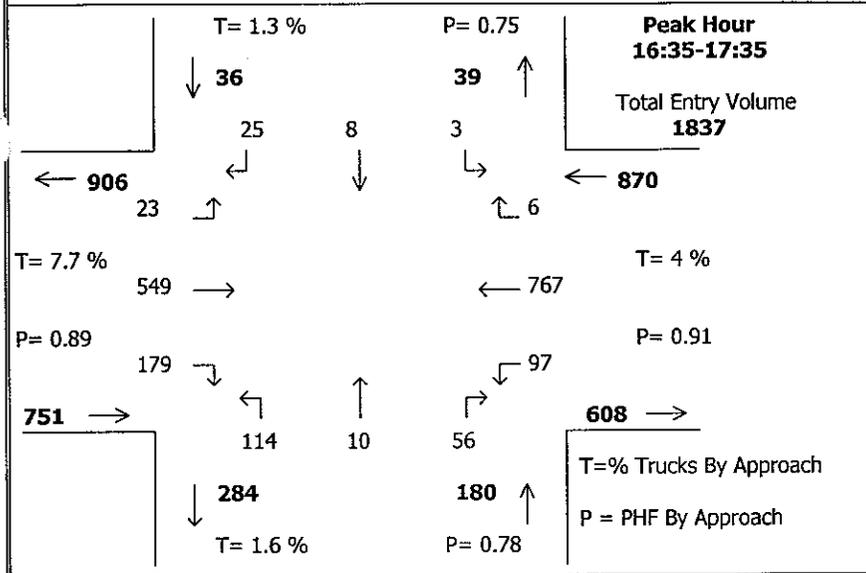
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	←	↖		
16:00-16:05	1	39	0	1	0	0	2	1	5	18	58	1	126
16:05-16:10	1	49	1	0	2	0	0	1	14	18	45	0	131
16:10-16:15	1	56	2	1	1	0	0	1	4	23	42	1	132
16:15-16:20	3	35	0	0	0	0	0	0	14	22	68	0	142
16:20-16:25	0	51	0	1	0	1	0	0	10	19	75	0	157
16:25-16:30	1	49	1	2	0	1	2	0	6	18	62	2	144
16:30-16:35	2	42	1	0	0	1	0	0	7	24	68	1	146
16:35-16:40	1	45	1	0	2	0	0	1	5	17	66	3	141
16:40-16:45	0	49	0	4	0	0	0	0	5	23	73	0	154
16:45-16:50	1	62	1	2	1	0	0	1	18	18	49	0	153
16:50-16:55	3	48	1	1	0	0	0	0	10	22	68	2	155
16:55-17:00	1	50	0	0	2	0	0	0	9	20	79	1	162
17:00-17:05	0	59	3	0	1	1	1	1	8	12	76	0	162
17:05-17:10	4	57	0	0	0	1	1	0	11	11	68	1	154
17:10-17:15	0	49	0	0	1	1	0	0	16	17	61	1	146
17:15-17:20	1	47	0	1	0	0	1	0	15	10	78	0	153
17:20-17:25	1	54	0	2	0	0	1	0	9	10	71	1	149
17:25-17:30	1	47	0	1	0	2	2	0	9	15	68	0	145
17:30-17:35	1	50	1	0	0	2	3	0	10	16	73	1	157
17:35-17:40	1	39	0	0	2	0	0	0	7	15	57	1	122
17:40-17:45	4	41	0	1	0	0	1	0	6	13	64	1	131
17:45-17:50	3	64	1	3	0	0	0	0	4	16	67	0	158
17:50-17:55	1	54	0	0	0	0	0	0	9	9	44	2	119
17:55-18:00	3	40	0	1	0	0	0	0	8	8	69	2	131

<b>TOTALS</b>	35	1176	13	21	12	10	14	6	219	394	1549	21	3470
PHF	0.7	0.93	0.44	0.39	0.58	0.44	0.38	0.38	0.74	0.76	0.93	0.83	0.96
% Trucks	65.7	6.8	7.7	9.5	0	10	28.6	0	4.1	0.5	3.5	9.5	5.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			1			1			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Dlmilm



**LOCATION:**

TUALATIN-SHERWOOD RD AT CINEMA ENTRANCE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

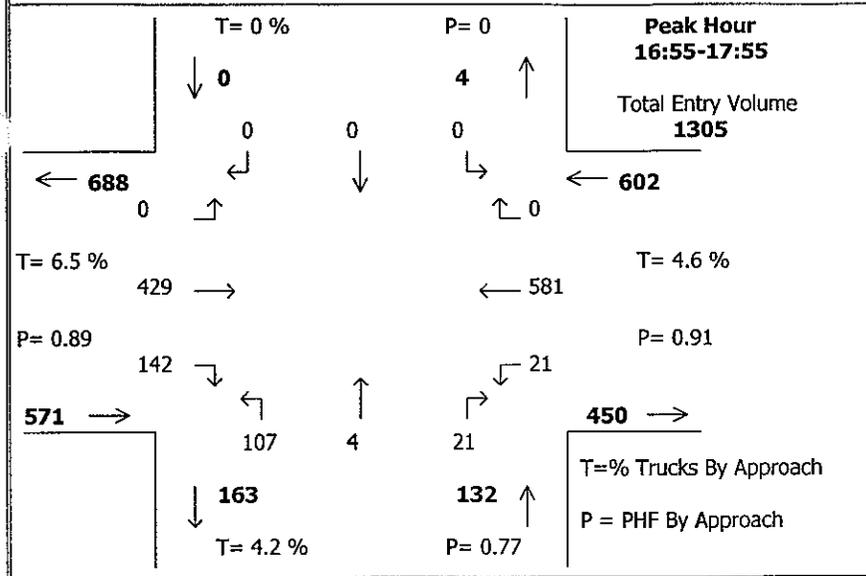
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↙	→	↗	↙	↓	↘	↙	↑	↗	↙	←	↖	
16:00-16:05	10	27	1	2	1	0	13	1	8	8	37	1	109
16:05-16:10	18	61	2	0	0	0	4	0	6	1	32	0	124
16:10-16:15	13	30	2	3	0	0	9	0	8	4	58	2	129
16:15-16:20	26	37	2	9	2	0	8	0	3	4	67	0	158
16:20-16:25	13	46	0	3	0	1	13	1	3	6	61	1	148
16:25-16:30	22	30	2	4	3	0	8	0	9	9	53	0	140
16:30-16:35	16	40	0	2	0	0	11	1	3	6	54	0	133
16:35-16:40	14	42	4	5	0	0	10	2	5	5	70	1	158
16:40-16:45	12	41	3	0	2	1	9	1	6	4	70	0	149
16:45-16:50	11	58	4	1	1	1	11	0	2	2	49	0	140
16:50-16:55	13	41	0	2	1	0	7	1	4	4	72	0	145
16:55-17:00	13	58	3	2	1	1	4	1	5	11	73	1	173
17:00-17:05	11	34	4	2	1	0	20	0	3	14	63	1	153
17:05-17:10	15	58	2	5	0	0	5	0	4	5	58	2	154
17:10-17:15	14	45	1	0	0	0	16	2	8	8	63	1	158
17:15-17:20	27	47	1	2	1	0	6	0	3	15	58	0	160
17:20-17:25	15	45	0	2	1	0	6	1	5	8	67	0	150
17:25-17:30	21	35	0	2	0	0	10	1	4	12	57	0	142
17:30-17:35	13	45	1	2	0	0	10	1	7	9	67	0	155
17:35-17:40	20	37	2	1	1	1	21	0	6	4	49	0	142
17:40-17:45	12	37	0	4	0	0	16	2	2	10	52	1	136
17:45-17:50	17	61	0	0	0	0	10	0	2	9	69	1	169
17:50-17:55	17	42	1	1	1	0	13	0	6	8	41	1	131
17:55-18:00	14	40	3	3	0	1	12	2	5	7	54	0	141

TOTALS	377	1037	38	57	16	6	252	17	117	173	1394	13	3497
PHF	0.71	0.87	0.52	0.69	0.5	0.38	0.7	0.83	0.88	0.69	0.92	0.38	0.96
% Trucks	1.1	10.4	0	0	0	16.7	1.2	0	2.6	2.3	4.2	7.7	5.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		5			28			3			4		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Jgah



**LOCATION:**

ROY ROGERS ROAD AT BORCHERS DRIVE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

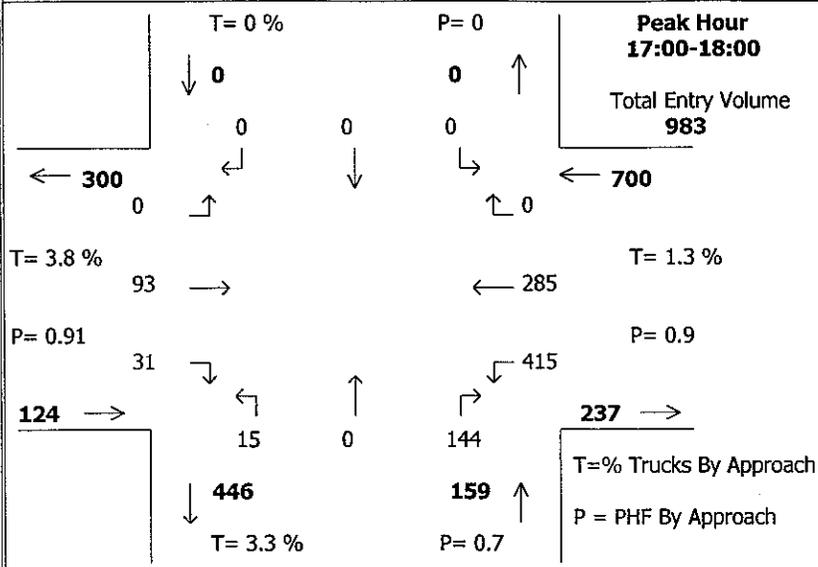
TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	6	30	0	0	0	0	10	0	1	2	29	0	78
16:05-16:10	9	25	0	0	0	0	7	0	2	3	49	0	95
16:10-16:15	6	29	0	0	0	0	6	0	1	0	40	0	82
16:15-16:20	4	29	0	0	0	0	9	0	2	1	38	0	83
16:20-16:25	8	19	0	0	0	0	5	0	0	0	53	0	85
16:25-16:30	3	28	0	0	0	0	7	0	0	3	46	0	87
16:30-16:35	15	37	0	0	0	0	4	0	2	2	41	0	101
16:35-16:40	11	30	0	0	0	0	5	0	2	0	48	0	96
16:40-16:45	3	36	0	0	0	0	5	0	1	2	50	0	97
16:45-16:50	7	36	0	0	0	0	11	0	2	1	47	0	104
16:50-16:55	9	31	0	0	0	0	10	0	0	0	47	0	97
16:55-17:00	10	41	0	0	0	0	9	0	4	2	48	0	114
17:00-17:05	13	42	0	0	0	0	6	0	1	2	42	0	106
17:05-17:10	6	38	0	0	0	0	5	0	1	1	47	0	98
17:10-17:15	13	33	0	0	0	0	11	0	0	1	55	0	113
17:15-17:20	12	35	0	0	0	0	10	3	0	2	44	0	106
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17:35-17:40	7	26	0	0	0	0	4	0	3	2	58	0	100
17:40-17:45	15	44	0	0	0	0	6	0	2	3	51	0	121
17:45-17:50	20	28	0	0	0	0	8	0	0	2	39	0	97
17:50-17:55	17	37	0	0	0	0	13	0	3	3	36	0	109
17:55-18:00	7	37	0	0	0	0	12	0	2	1	50	0	109

TOTALS	230	796	0	0	0	0	198	4	36	36	1119	0	2419
PHF	0.68	0.89	0	0	0	0	0.76	0.33	0.48	0.66	0.9	0	0.93
% Trucks	2.2	7.8	0	0	0	0	3.5	0	8.3	5.6	4.6	0	5.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	1	0	
Pedestrians		0									0		



# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: V6FYGJ.mod



**LOCATION:**  
OREGON STREET AT MURDOCK  
SHERWOOD

Date: **4/9/03** Day: **WED**  
From: **16:00-18:00**

Report Prepared for:  
DKS Associates

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

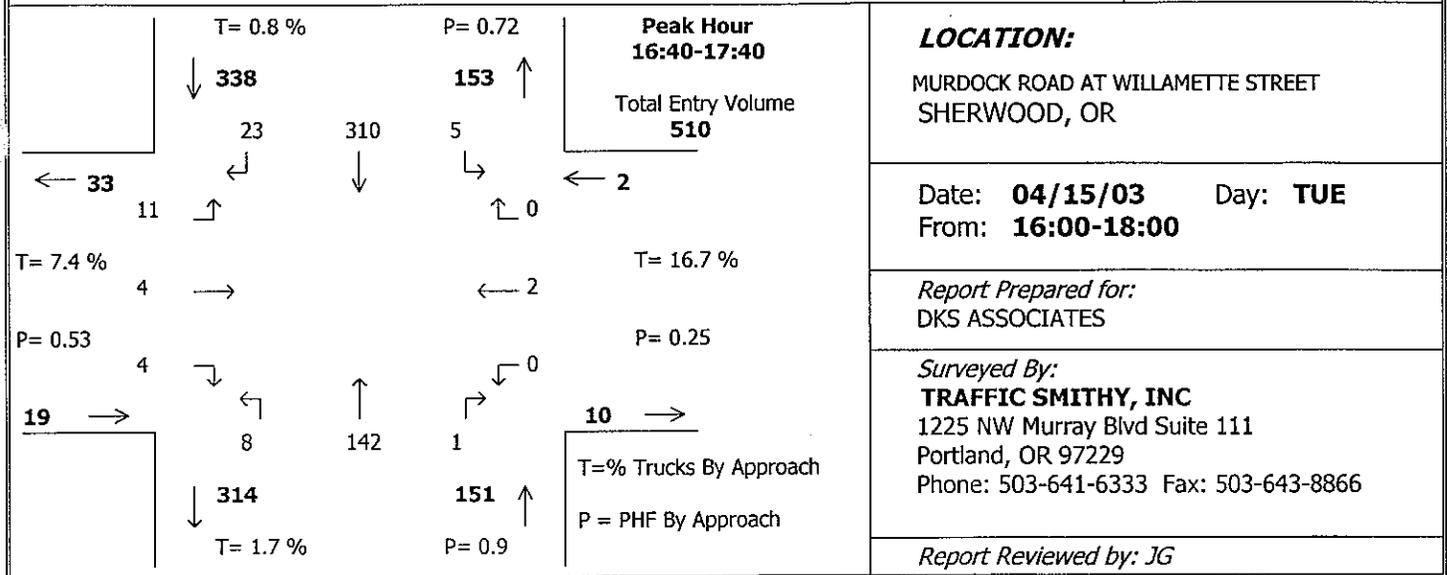
Report Reviewed by: **GREG**

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↓	→	↑	←	↓	↘	←	↑	↗	↓	←	↑	
16:00-16:05	2	6	0	0	0	0	2	0	9	17	13	0	49
16:05-16:10	2	16	0	0	0	0	1	0	14	19	25	0	77
16:10-16:15	2	8	0	0	0	0	2	0	6	17	24	0	59
16:15-16:20	1	13	0	0	0	0	0	0	10	18	25	0	67
16:20-16:25	0	11	0	0	0	0	0	0	3	20	20	0	54
16:25-16:30	2	10	0	0	0	0	0	0	9	22	14	0	57
16:30-16:35	4	11	0	0	0	0	1	0	12	26	35	0	89
16:35-16:40	4	8	0	0	0	0	1	0	9	26	22	0	70
16:40-16:45	1	6	0	0	0	0	1	0	10	23	29	0	70
16:45-16:50	2	11	0	0	0	0	1	0	10	29	26	0	79
16:50-16:55	3	9	0	0	0	0	2	0	7	24	22	0	67
16:55-17:00	2	7	0	0	0	0	2	0	5	31	24	0	71
17:00-17:05	6	8	0	0	0	0	1	0	8	21	12	0	56
17:05-17:10	3	9	0	0	0	0	2	0	13	40	28	0	95
17:10-17:15	2	6	0	0	0	0	1	0	7	28	21	0	65
17:15-17:20	6	8	0	0	0	0	1	0	17	43	29	0	104
17:20-17:25	0	8	0	0	0	0	1	0	10	33	28	0	80
17:25-17:30	0	7	0	0	0	0	2	0	11	32	29	0	81
17:30-17:35	1	6	0	0	0	0	1	0	11	39	29	0	87
17:35-17:40	7	6	0	0	0	0	1	0	7	32	27	0	80
17:40-17:45	0	7	0	0	0	0	2	0	18	37	24	0	88
17:45-17:50	2	9	0	0	0	0	1	0	21	35	19	0	87
17:50-17:55	1	9	0	0	0	0	2	0	13	39	20	0	84
17:55-18:00	3	10	0	0	0	0	0	0	8	36	19	0	76

TOTALS	56	209	0	0	0	0	28	0	248	687	564	0	1792
PHF	0.7	0.83	0	0	0	0	0.75	0	0.69	0.93	0.83	0	0.93
% Trucks	0	4.8	0	0	0	0	0	0	3.6	0.7	2	0	2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: DEAG



TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	0	0	0	0	22	0	0	6	0	0	0	0	28
16:05-16:10	0	0	1	3	23	0	0	7	0	0	0	0	34
16:10-16:15	0	0	0	2	20	0	1	13	0	0	0	0	36
16:15-16:20	0	0	0	1	22	0	3	7	1	0	0	0	34
16:20-16:25	0	0	0	1	12	1	1	10	0	0	0	2	27
16:25-16:30	0	0	1	2	18	0	1	10	0	0	0	0	32
16:30-16:35	1	0	0	3	23	0	0	12	0	0	0	0	39
16:35-16:40	1	0	1	1	13	0	0	16	0	0	0	0	32
16:40-16:45	0	0	0	1	21	0	1	17	0	0	0	0	40
16:45-16:50	1	0	1	2	31	1	2	12	0	0	0	0	50
16:50-16:55	0	1	0	0	25	0	0	7	0	0	0	0	33
16:55-17:00	0	0	2	2	18	0	0	12	0	0	0	0	34
17:00-17:05	0	0	0	4	22	1	0	10	0	0	0	0	37
17:05-17:10	0	0	2	2	20	1	0	14	0	0	0	0	39
17:10-17:15	0	1	0	1	24	0	0	13	0	0	0	0	39
17:15-17:20	0	0	0	1	24	1	0	12	0	0	0	0	38
17:20-17:25	0	0	2	3	32	0	2	15	0	0	1	0	55
17:25-17:30	0	0	1	3	33	1	0	10	0	0	1	0	49
17:30-17:35	1	1	1	4	42	0	3	10	0	0	0	0	62
17:35-17:40	2	1	2	0	18	0	0	10	1	0	0	0	34
17:40-17:45	0	0	1	0	13	0	0	18	0	0	0	0	32
17:45-17:50	0	0	1	2	20	0	0	11	1	0	0	0	35
17:50-17:55	0	1	0	2	19	1	0	16	0	0	1	0	40
17:55-18:00	0	0	0	2	32	0	1	10	0	0	0	1	46

TOTALS	6	5	16	42	547	7	15	278	3	0	3	3	925
PHF	0.33	0.5	0.69	0.57	0.72	0.63	0.4	0.89	0.25	0	0.25	0	0.77
% Trucks	0	40	0	0	0.7	14.3	0	1.8	0	0	33.3	0	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			0			0		

# INTERSECTION TURN MOVEMENT PEAK HOUR REPORT

File: Blmh

<p style="text-align: center;">T = 0.4 %      P = 0.92</p> <p style="text-align: center;">↓ 280      149 ↑</p> <p style="text-align: center;">220      46      14</p> <p style="text-align: center;">← 409      ↙      ↓      ↘      ← 13</p> <p style="text-align: center;">82      ↑      ↘      ↙      ↗      ↘      ↙      ↘      ↙</p> <p style="text-align: center;">T = 1.1 %      T = 0 %</p> <p style="text-align: center;">5      →      ← 5</p> <p style="text-align: center;">P = 0.97      P = 0.54</p> <p style="text-align: center;">88      ↘      ↙      ↘      ↙      ↘      ↙      ↘      ↙</p> <p style="text-align: center;">175 →      184      60      4      23 →</p> <p style="text-align: center;">↓ 135      248 ↑</p> <p style="text-align: center;">T = 0.8 %      P = 0.87</p> <p style="text-align: center;">Total Entry Volume <b>716</b></p>	<p><b>LOCATION:</b> MURDOCK ROAD AT SUNSET BOULEVARD/MCKINLEY SHERWOOD, OR</p> <hr/> <p>Date: <b>04/17/03</b>      Day: <b>THU</b> From: <b>16:00-18:00</b></p> <hr/> <p>Report Prepared for: DKS ASSOCIATES</p> <hr/> <p>Surveyed By: <b>TRAFFIC SMITHY, INC</b> 1225 NW Murray Blvd Suite 111 Portland, OR 97229 Phone: 503-641-6333 Fax: 503-643-8866</p> <hr/> <p>Report Reviewed by: <i>JG</i></p>
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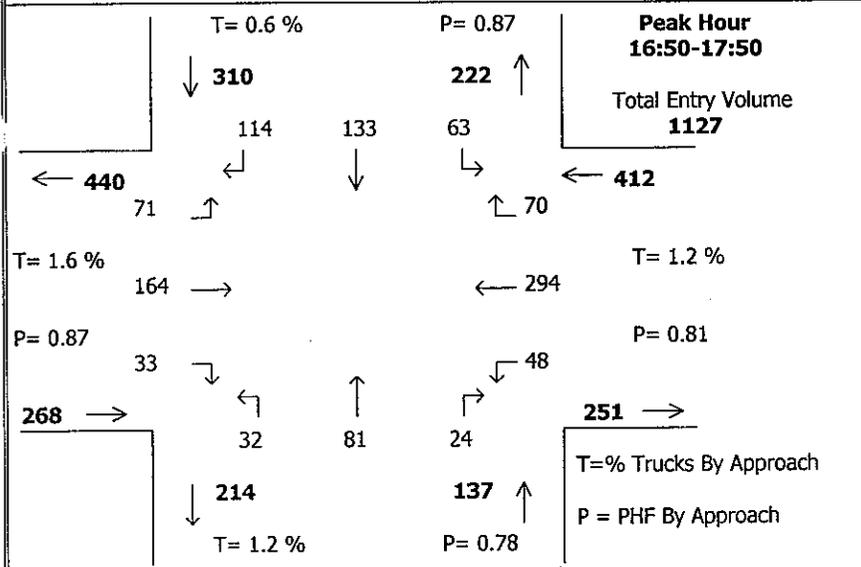
TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	←	↗	
<b>ALL VEHICLES</b>													
17:00-17:15	22	1	22	54	18	4	55	15	0	0	2	0	193
17:15-17:30	22	1	18	60	9	3	56	13	2	0	2	4	190
17:30-17:45	23	1	20	57	9	2	32	17	0	0	1	2	164
17:45-18:00	21	2	22	49	10	5	41	15	2	1	0	1	169
<b>LIGHT TRUCKS (SINGLE UNIT 2 AXLES)</b>													
17:00-17:15	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15-17:30	1	0	0	1	0	0	0	0	0	0	0	0	2
17:30-17:45	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45-18:00	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>MEDIUM TRUCKS (SINGLE UNIT &gt; 2 AXLES)</b>													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>HEAVY TRUCKS (SEMI-TRACTOR TRAILER)</b>													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>BICYCLES</b>													
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45-18:00	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEDESTRIANS</b>													
Crosswalk	SOUTH			WEST			EAST			NORTH			ALL
17:00-17:15	2			0			0			0			2
17:15-17:30	3			0			0			0			3
17:30-17:45	1			0			0			0			1
17:45-18:00	0			3			0			0			3

Peak Hour By Movement	PHF	% Trucks (All)	% Trucks (M+H)	Stopped Busses
PHF	0.96	0.63	0.93	0.92
% Trucks (All)	1.1	0	1.2	0.5
% Trucks (M+H)	0	0	0	0
Stopped Busses	0	0	0	0

Hourly Totals	16:00-17:00	16:15-17:15	16:30-17:30	16:45-17:45	17:00-18:00
16:00-17:00	80	4	60	149	36
16:15-17:15	91	4	65	170	45
16:30-17:30	87	5	70	196	45
16:45-17:45	89	4	76	220	42
17:00-18:00	88	5	82	220	46

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Mfdd



**LOCATION:**

SHERWOOD BOULEVARD AT SUNSET BOULEVARD  
SHERWOOD, OR

Date: **4/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↙	→	↗	↙	↓	↘	↙	↑	↗	↙	←	↗	
16:00-16:05	5	7	4	3	5	0	0	4	1	4	16	4	53
16:05-16:10	4	7	6	11	13	5	2	3	2	3	11	7	74
16:10-16:15	4	8	1	3	3	4	5	3	1	4	23	2	61
16:15-16:20	3	6	3	1	4	6	3	6	0	6	14	2	54
16:20-16:25	1	14	5	5	8	0	2	4	0	3	10	7	59
16:25-16:30	2	22	2	8	9	2	2	6	0	2	9	5	69
16:30-16:35	3	12	9	6	11	7	2	7	2	4	11	4	78
16:35-16:40	2	11	8	9	10	5	3	9	0	1	17	5	80
16:40-16:45	4	5	12	11	14	3	0	5	3	0	16	6	79
16:45-16:50	6	13	7	2	10	5	4	7	1	6	9	5	75
16:50-16:55	0	14	5	7	11	3	4	6	1	6	18	4	79
16:55-17:00	1	16	8	10	12	5	2	7	3	3	21	12	100
17:00-17:05	5	12	3	10	9	2	4	9	2	4	24	3	87
17:05-17:10	2	14	4	10	12	10	3	1	3	5	27	7	98
17:10-17:15	1	20	9	8	12	10	0	4	3	3	21	5	96
17:15-17:20	6	12	9	10	11	6	0	10	2	7	30	9	112
17:20-17:25	5	11	4	9	12	5	3	9	2	4	31	8	103
17:25-17:30	1	13	5	13	12	5	3	6	2	2	28	8	98
17:30-17:35	5	13	9	9	10	2	6	10	3	3	31	6	107
17:35-17:40	2	14	4	12	7	2	2	7	2	3	19	4	78
17:40-17:45	2	10	5	7	8	6	2	4	1	5	22	2	74
17:45-17:50	3	15	6	9	17	7	3	8	0	3	22	2	95
17:50-17:55	4	7	8	8	4	4	1	7	0	3	17	6	69
17:55-18:00	2	16	8	8	7	1	2	5	2	3	14	4	72

<b>TOTALS</b>	73	292	144	189	231	105	58	147	36	87	461	127	1950
PHF	0.69	0.89	0.81	0.84	0.95	0.61	0.67	0.81	0.75	0.8	0.82	0.7	0.9
% Trucks	2.7	1.4	1.4	0.5	0.4	1	0	1.4	2.8	1.1	1.1	1.6	1.1
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		2			4			4			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Mfcxlm

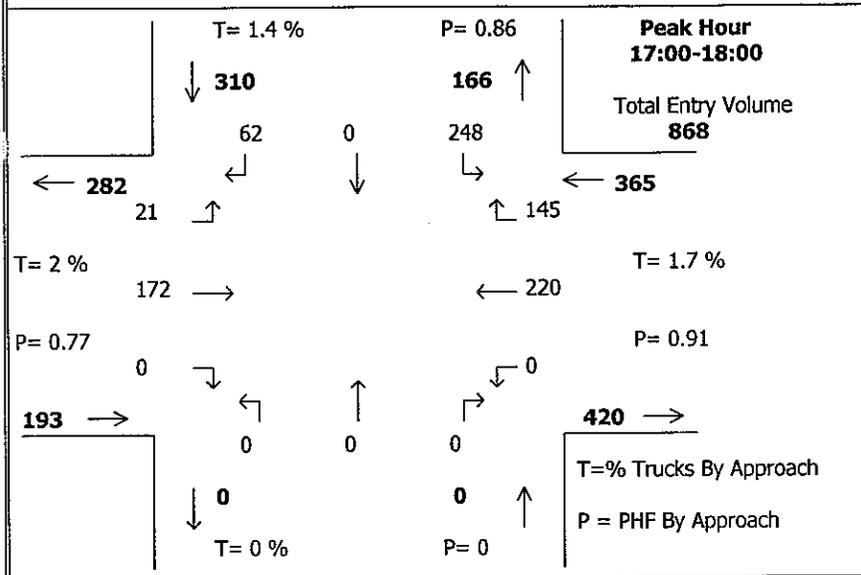
<p style="text-align: center;">T= 1.3 %</p> <p style="text-align: center;">↓ 347</p> <p style="text-align: center;">13</p> <p style="text-align: center;">← 79</p> <p style="text-align: center;">6</p> <p style="text-align: center;">T= 5.3 %</p> <p style="text-align: center;">27 →</p> <p style="text-align: center;">P= 0.68</p> <p style="text-align: center;">8</p> <p style="text-align: center;">41 →</p> <p style="text-align: center;">7</p> <p style="text-align: center;">↓ 306</p> <p style="text-align: center;">T= 1.1 %</p>	<p style="text-align: center;">P= 0.75</p> <p style="text-align: center;">170 ↑</p> <p style="text-align: center;">64</p> <p style="text-align: center;">← 126</p> <p style="text-align: center;">39</p> <p style="text-align: center;">← 59</p> <p style="text-align: center;">T= 0.5 %</p> <p style="text-align: center;">P= 0.83</p> <p style="text-align: center;">28</p> <p style="text-align: center;">26</p> <p style="text-align: center;">117 →</p> <p style="text-align: center;">T=% Trucks By Approach</p> <p style="text-align: center;">P = PHF By Approach</p> <p style="text-align: center;">P= 0.9</p>	<p style="text-align: center;">Peak Hour 17:00-18:00</p> <p style="text-align: center;">Total Entry Volume 672</p>	<p><b>LOCATION:</b></p> <p>ELWERT ROAD AT EDY ROAD SHERWOOD, OR</p> <p>Date: <b>04/10/03</b> Day: <b>THU</b> From: <b>16:00-18:00</b></p> <p>Report Prepared for: DKS ASSOCIATES</p> <p>Surveyed By: <b>TRAFFIC SMITHY, INC</b> 1225 NW Murray Blvd Suite 111 Portland, OR 97229 Phone: 503-641-6333 Fax: 503-643-8866</p> <p>Report Reviewed by: JG</p>
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TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	0	4	0	0	16	3	2	10	2	1	2	1	41
16:05-16:10	1	4	0	0	17	2	0	5	3	1	4	4	41
16:10-16:15	0	3	1	2	11	3	0	8	2	2	4	3	39
16:15-16:20	0	2	0	0	5	2	1	9	0	1	4	1	25
16:20-16:25	0	1	0	1	18	4	1	0	4	1	4	2	36
16:25-16:30	0	2	0	0	18	2	0	8	3	2	3	3	41
16:30-16:35	0	3	0	0	18	2	2	7	0	2	3	3	40
16:35-16:40	1	0	0	1	12	6	0	7	0	1	1	1	30
16:40-16:45	1	2	0	0	27	5	1	4	1	2	1	3	47
16:45-16:50	0	0	0	1	14	9	1	6	3	0	3	5	42
16:50-16:55	1	2	0	3	16	8	1	8	0	1	5	2	47
16:55-17:00	1	5	0	0	19	3	0	11	2	1	4	2	48
17:00-17:05	1	1	0	1	19	3	0	7	2	0	3	2	39
17:05-17:10	1	4	1	0	18	4	1	11	1	2	9	5	57
17:10-17:15	0	2	1	1	23	8	0	8	6	1	6	4	60
17:15-17:20	0	5	0	2	17	3	1	10	2	5	3	3	51
17:20-17:25	2	4	1	0	24	7	0	10	1	3	3	6	61
17:25-17:30	0	2	0	1	23	7	1	11	3	2	3	1	54
17:30-17:35	0	2	0	1	16	5	1	3	3	3	9	0	43
17:35-17:40	2	0	0	0	24	5	1	12	4	2	5	2	57
17:40-17:45	1	2	0	2	38	5	1	13	1	4	7	5	79
17:45-17:50	0	2	0	2	32	8	1	9	2	4	4	1	65
17:50-17:55	0	2	3	0	22	4	0	10	1	1	3	4	50
17:55-18:00	1	1	0	3	14	5	0	21	0	1	4	6	56

<b>TOTALS</b>	13	55	7	21	461	113	16	208	46	43	97	69	1149
PHF	0.67	0.61	0.5	0.65	0.72	0.84	0.58	0.78	0.65	0.7	0.7	0.75	0.84
% Trucks	7.7	5.5	0	0	0.9	3.5	0	1.4	0	0	0	1.4	1.4
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: LIATLM



**LOCATION:**

EDY ROAD AT BORCHERS DRIVE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
 From: **16:05-18:05**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
 1225 NW Murray Blvd Suite 111  
 Portland, OR 97229  
 Phone: 503-641-6333 Fax: 503-643-8866

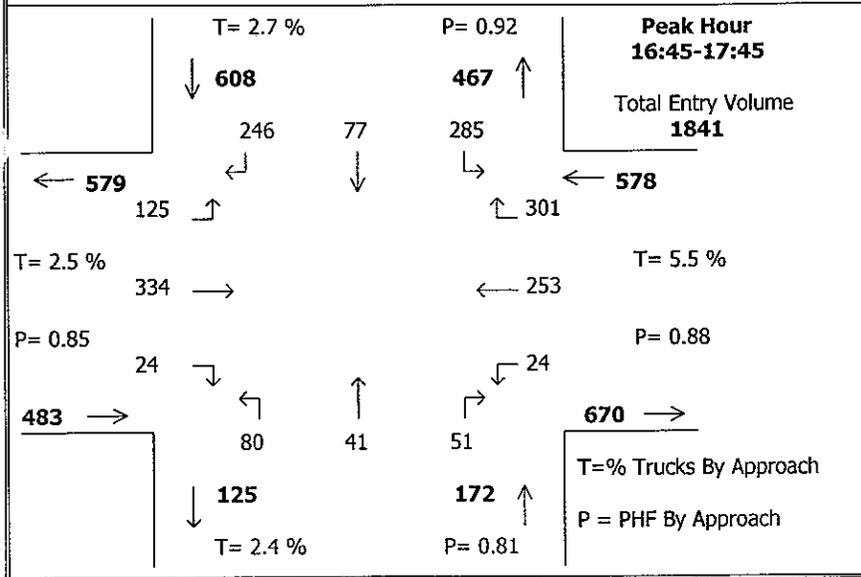
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:05-16:10	0	10	2	4	0	8	0	0	0	0	13	6	43
16:10-16:15	0	10	1	0	0	13	0	0	0	0	17	6	47
16:15-16:20	0	12	2	4	0	12	0	0	0	0	10	6	46
16:20-16:25	0	11	0	2	0	11	0	0	0	0	17	11	52
16:25-16:30	0	8	4	1	0	17	0	0	0	0	15	9	54
16:30-16:35	0	4	1	2	0	25	0	0	0	0	8	12	52
16:35-16:40	0	12	1	4	0	15	0	0	0	0	14	9	55
16:40-16:45	0	9	4	2	0	16	0	0	0	0	17	8	56
16:45-16:50	0	13	2	0	0	10	0	0	0	0	18	10	53
16:50-16:55	0	19	4	5	1	17	0	0	0	0	18	6	70
16:55-17:00	0	8	2	5	0	18	0	0	0	0	13	8	54
17:00-17:05	0	10	3	10	0	20	0	0	0	0	25	9	77
17:05-17:10	0	20	2	7	0	16	0	0	0	0	23	11	79
17:10-17:15	0	19	4	7	0	20	0	0	0	0	15	17	82
17:15-17:20	0	16	2	2	0	32	0	0	0	0	10	17	79
17:20-17:25	0	16	1	4	0	17	0	0	0	0	16	12	66
17:25-17:30	0	12	0	8	0	18	0	0	0	0	19	13	70
17:30-17:35	0	15	2	2	0	18	0	0	0	0	15	7	59
17:35-17:40	0	14	2	3	0	28	0	0	0	0	23	8	78
17:40-17:45	0	12	0	6	0	26	0	0	0	0	14	13	71
17:45-17:50	0	12	1	6	0	21	0	0	0	0	13	11	64
17:50-17:55	0	12	3	3	0	13	0	0	0	0	24	12	67
17:55-18:00	0	14	1	4	0	19	0	0	0	0	23	15	76
18:00-18:05	0	13	1	3	0	13	0	0	0	0	21	6	57

TOTALS	0	301	45	94	1	423	0	0	0	0	401	242	1507
PHF	0	0.78	0.58	0.65	0	0.83	0	0	0	0	0.87	0.79	0.9
% Trucks	0	2	2.2	0	0	1.7	0	0	0	0	1.2	2.5	1.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		1			0			0			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Caillm



**LOCATION:**

SHERWOOD BOULEVARD AT LANGER DRIVE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

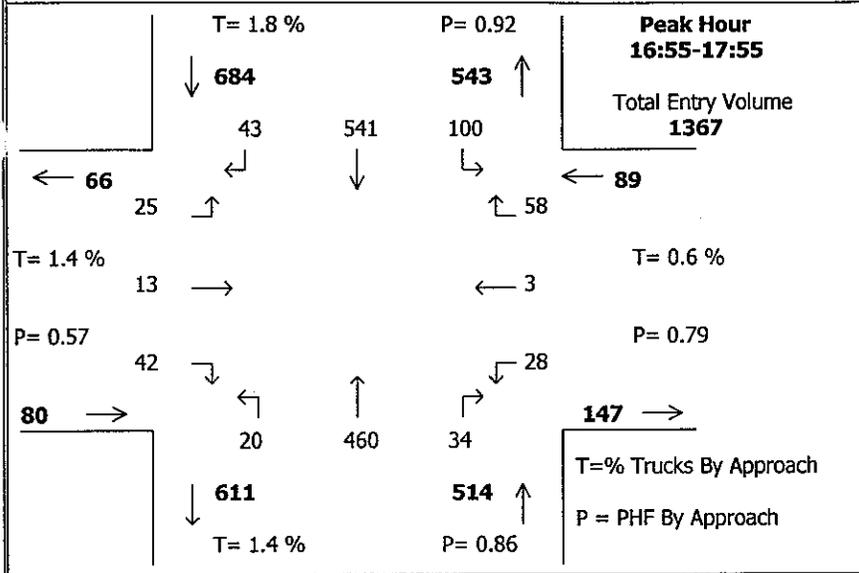
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↖	↓	↘	↖	↑	↗	↘	←	↗	
16:00-16:05	3	19	12	21	4	21	2	4	3	5	17	12	123
16:05-16:10	0	16	6	23	2	28	5	3	1	1	13	20	118
16:10-16:15	1	20	5	30	5	17	12	3	4	3	17	16	133
16:15-16:20	1	26	8	20	5	19	15	5	0	1	13	19	132
16:20-16:25	2	22	7	15	9	37	6	1	1	0	26	18	144
16:25-16:30	2	21	13	15	6	20	6	2	5	3	17	18	128
16:30-16:35	2	28	6	36	6	32	7	0	1	3	12	17	150
16:35-16:40	1	31	10	18	3	19	4	4	2	1	34	22	149
16:40-16:45	1	25	7	34	4	25	6	3	5	2	21	18	151
16:45-16:50	1	23	10	17	5	19	7	2	4	1	19	33	141
16:50-16:55	4	31	11	16	13	29	6	4	1	4	21	27	167
16:55-17:00	2	35	21	15	10	24	4	2	4	1	25	31	174
17:00-17:05	0	28	10	17	1	37	7	2	2	2	24	30	160
17:05-17:10	2	26	9	27	9	18	5	5	2	3	23	24	153
17:10-17:15	2	25	14	23	6	28	8	9	5	0	20	13	153
17:15-17:20	4	25	5	17	7	25	8	3	7	2	18	25	146
17:20-17:25	2	30	10	29	1	24	3	3	7	2	19	19	149
17:25-17:30	0	27	10	19	6	21	4	5	2	0	25	26	145
17:30-17:35	4	18	9	21	3	17	10	1	8	4	16	26	137
17:35-17:40	3	29	7	20	6	22	9	4	3	4	20	25	152
17:40-17:45	0	37	9	25	10	21	9	1	6	1	23	22	164
17:45-17:50	3	24	4	15	3	25	7	3	6	2	17	17	126
17:50-17:55	0	31	12	16	3	21	11	3	5	0	32	18	152
17:55-18:00	0	28	9	22	1	20	6	1	6	6	23	15	137

TOTALS	40	625	224	511	128	569	167	73	90	51	495	511	3484
PHF	0.75	0.89	0.74	0.89	0.69	0.79	0.71	0.6	0.67	0.67	0.88	0.83	0.92
% Trucks	0	3.4	0.4	1.2	0.8	4.6	2.4	0	4.4	2	6.9	4.5	3.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		9			0			5			5		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: LIAU36



**LOCATION:**

CENTURY DRIVE AT N SHERWOOD BOULEVARD  
SHERWOOD, OR

Date: **04/16/03** Day: **WED**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

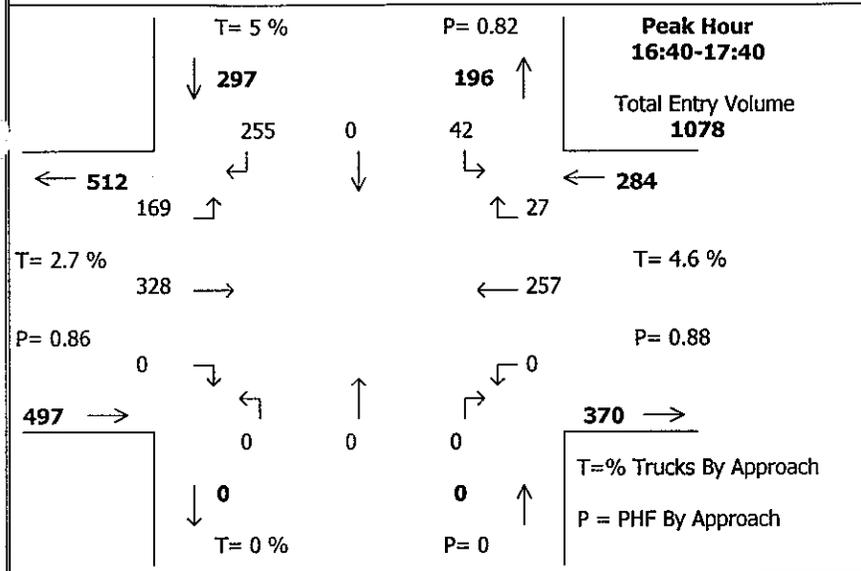
TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	1	0	0	1	28	7	1	40	0	3	0	7	88
16:05-16:10	3	2	0	2	38	7	1	29	1	3	0	4	90
16:10-16:15	1	0	4	2	26	5	2	25	1	0	0	7	73
16:15-16:20	4	0	2	6	38	7	2	37	2	1	1	3	103
16:20-16:25	0	0	2	5	50	5	1	25	5	1	0	4	98
16:25-16:30	1	1	0	3	35	6	0	35	2	0	0	7	90
16:30-16:35	2	0	3	2	43	8	2	44	3	1	1	5	114
16:35-16:40	4	1	2	2	46	5	2	34	1	2	1	6	106
16:40-16:45	3	1	0	5	26	3	5	34	2	0	0	3	82
16:45-16:50	3	1	1	0	47	5	2	39	2	3	0	4	107
16:50-16:55	7	2	2	2	37	10	3	46	2	5	0	5	121
16:55-17:00	3	0	0	7	34	10	1	54	3	3	1	6	122
17:00-17:05	1	0	1	7	31	6	1	35	3	1	0	5	91
17:05-17:10	4	0	1	3	53	10	0	35	6	0	0	0	112
17:10-17:15	2	2	1	6	46	10	5	26	1	2	0	1	102
17:15-17:20	0	1	3	3	38	8	5	33	0	2	1	8	102
17:20-17:25	10	0	7	2	50	13	1	46	3	0	0	9	141
17:25-17:30	3	4	2	3	42	9	0	46	3	3	0	5	120
17:30-17:35	3	2	4	5	56	5	2	48	1	3	0	4	133
17:35-17:40	2	1	2	2	41	3	2	34	4	6	0	4	101
17:40-17:45	5	2	1	1	40	6	1	30	3	1	0	5	95
17:45-17:50	3	0	3	4	57	12	1	34	0	4	0	5	123
17:50-17:55	6	1	0	0	53	8	1	39	7	3	1	6	125
17:55-18:00	5	2	0	0	47	13	1	23	2	3	0	8	104

<b>TOTALS</b>	76	23	41	73	1002	181	42	871	57	50	6	121	2543
PHF	0.66	0.46	0.48	0.63	0.9	0.81	0.45	0.82	0.71	0.58	0.75	0.66	0.87
% Trucks	1.3	0	2.4	0	2.1	1.1	0	1.6	0	0	0	0.8	1.6
Stopped Buses	0	0	0	0	5	0	0	0	0	0	0	0	
Pedestrians		11			9			36			13		



# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: DgwhLM.mod



**LOCATION:**

PINE ST/SHERWOOD BLVD AT OREGON STREET  
SHERWOOD, OR

Date: **04/08/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

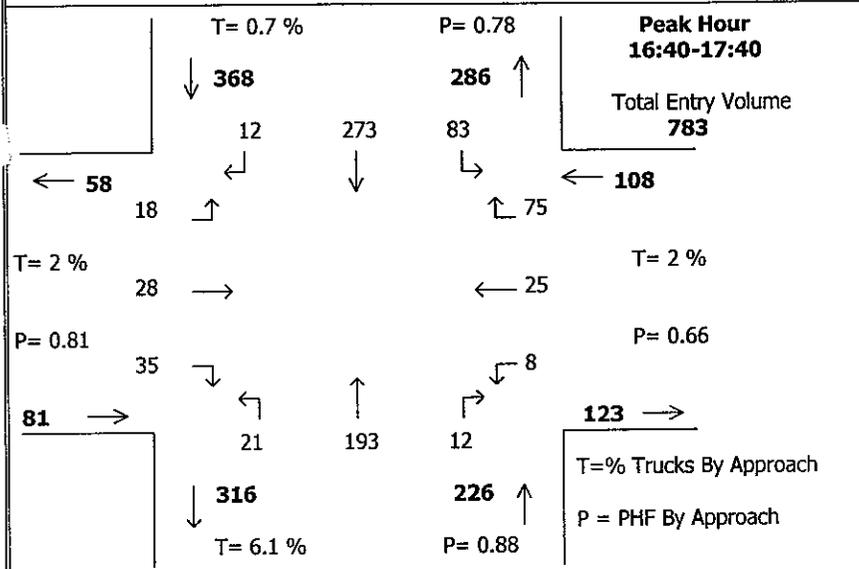
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	0	26	14	15	0	2	0	0	0	0	17	2	76
16:05-16:10	0	13	18	14	0	2	0	0	0	0	18	2	67
16:10-16:15	0	14	10	10	0	4	0	0	0	0	9	1	48
16:15-16:20	0	18	7	20	0	2	0	0	0	0	24	3	74
16:20-16:25	0	29	10	13	0	0	0	0	0	0	23	4	79
16:25-16:30	0	24	11	18	0	1	0	0	0	0	16	2	72
16:30-16:35	0	24	6	22	0	10	0	0	0	0	18	1	81
16:35-16:40	0	26	16	17	0	3	0	0	0	0	22	3	87
16:40-16:45	0	16	10	29	0	1	0	0	0	0	21	1	78
16:45-16:50	0	36	19	17	0	6	0	0	0	0	27	3	108
16:50-16:55	0	34	16	31	0	6	0	0	0	0	23	2	112
16:55-17:00	0	29	11	20	0	7	0	0	0	0	22	1	90
17:00-17:05	0	32	19	14	0	2	0	0	0	0	24	3	94
17:05-17:10	0	29	17	20	0	3	0	0	0	0	20	1	90
17:10-17:15	0	21	14	8	0	0	0	0	0	0	9	3	55
17:15-17:20	0	26	11	30	0	4	0	0	0	0	25	3	99
17:20-17:25	0	22	6	22	0	3	0	0	0	0	21	3	77
17:25-17:30	0	20	10	25	0	2	0	0	0	0	25	4	86
17:30-17:35	0	38	10	24	0	4	0	0	0	0	18	2	96
17:35-17:40	0	25	26	15	0	4	0	0	0	0	22	1	93
17:40-17:45	0	30	6	14	0	3	0	0	0	0	19	3	75
17:45-17:50	0	24	10	13	0	6	0	0	0	0	20	1	74
17:50-17:55	0	24	6	16	0	1	0	0	0	0	24	1	72
17:55-18:00	0	22	16	16	0	0	0	0	0	0	26	3	83

<b>TOTALS</b>	0	602	299	443	0	76	0	0	0	0	493	53	1966
PHF	0	0.83	0.85	0.83	0	0.55	0	0	0	0	0.89	0.68	0.87
% Trucks	0	1.2	5.4	2.9	0	11.8	0	0	0	0	3.4	7.5	4.1
Stopped Buses	0	0	0	0	0	1	0	0	0	0	0	0	
Pedestrians		5				12					7		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: D1meLM



**LOCATION:**

WASHINGTON STREET AT RAILROAD STREET  
SHERWOOD, OR

Date: **04/08/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

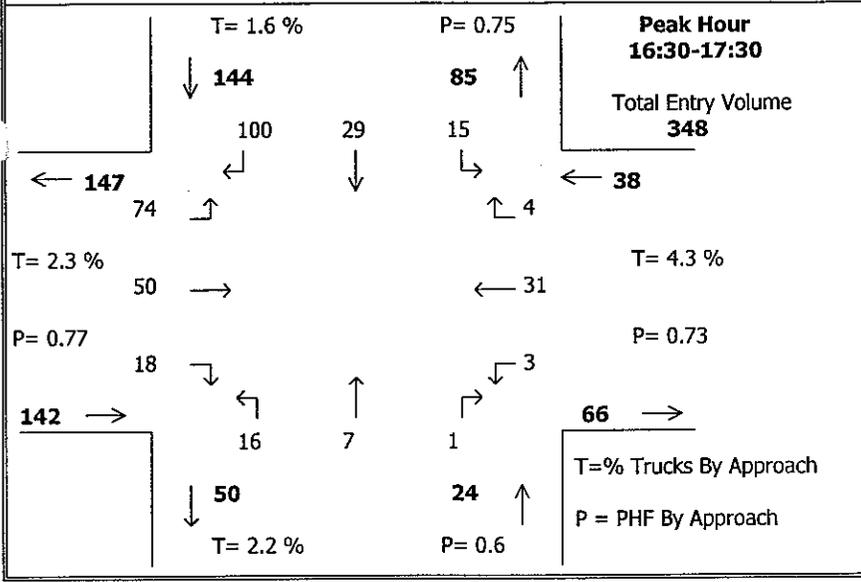
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	←	↗	
16:00-16:05	3	5	3	1	22	4	4	17	1	2	1	6	69
16:05-16:10	1	4	0	0	9	4	3	11	1	1	3	4	41
16:10-16:15	1	2	0	2	13	9	2	13	0	1	3	3	49
16:15-16:20	6	4	0	0	10	8	3	22	1	0	3	3	60
16:20-16:25	1	2	1	2	17	5	2	10	1	1	4	8	54
16:25-16:30	4	4	0	1	18	11	2	15	0	0	2	4	61
16:30-16:35	2	2	1	1	25	9	0	19	1	3	1	3	67
16:35-16:40	1	3	1	1	18	5	1	18	0	2	3	6	59
16:40-16:45	3	1	1	0	19	3	1	17	0	0	0	7	52
16:45-16:50	0	1	0	2	25	14	4	16	1	1	0	7	71
16:50-16:55	6	1	2	5	32	4	4	16	4	1	4	6	85
16:55-17:00	2	2	3	1	28	7	4	12	1	1	1	11	73
17:00-17:05	1	4	4	1	22	10	1	18	1	3	6	8	79
17:05-17:10	3	2	1	0	22	8	1	13	0	0	4	3	57
17:10-17:15	1	1	0	0	8	3	1	5	0	0	2	2	23
17:15-17:20	2	4	2	1	23	8	0	27	2	1	6	9	85
17:20-17:25	2	6	1	0	21	7	0	13	2	1	1	13	67
17:25-17:30	4	0	3	2	23	4	3	17	0	0	0	6	62
17:30-17:35	6	0	1	0	26	10	2	16	1	0	0	0	62
17:35-17:40	5	6	0	0	24	5	0	23	0	0	1	3	67
17:40-17:45	0	0	1	1	21	9	1	12	0	0	0	5	50
17:45-17:50	2	1	2	0	14	14	0	19	1	1	0	9	63
17:50-17:55	0	2	1	1	16	10	1	13	2	0	2	8	56
17:55-18:00	6	2	1	1	13	7	2	17	0	0	0	4	53

TOTALS	62	59	29	23	469	178	42	379	20	19	47	138	1465
PHF	0.58	0.64	0.5	0.38	0.8	0.83	0.44	0.85	0.5	0.4	0.52	0.67	0.83
% Trucks	0	3.4	3.4	0	0.9	0.6	4.8	6.3	5	0	6.4	0.7	2.7
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		1			74			9			48		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: MKJO



**LOCATION:**

WASHINGTON STREET AT 3RD STREET  
SHERWOOD, OR

Date: **04/15/03** Day: **TUE**  
From: **16:05-18:05**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

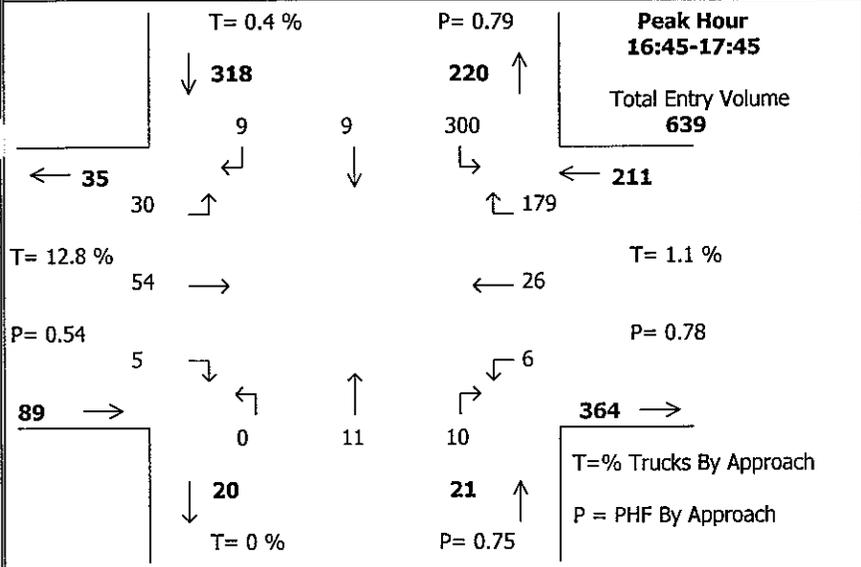
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↖	↖	↑	↗	↘	←	↖	
16:05-16:10	0	7	10	3	2	0	0	0	0	0	4	1	27
16:10-16:15	0	1	6	4	2	1	3	1	0	0	1	0	19
16:15-16:20	0	5	7	6	2	0	2	0	0	0	1	0	23
16:20-16:25	0	2	7	6	5	0	0	0	0	0	3	0	23
16:25-16:30	0	2	2	4	1	1	1	1	0	0	4	0	16
16:30-16:35	2	5	8	10	4	0	2	0	0	1	1	1	34
16:35-16:40	1	4	6	8	3	2	1	0	0	1	2	1	29
16:40-16:45	0	0	8	13	4	2	2	1	0	0	2	1	33
16:45-16:50	0	5	2	9	5	2	0	1	0	0	1	0	25
16:50-16:55	3	4	6	11	0	0	2	1	0	0	6	0	33
16:55-17:00	2	9	8	11	2	1	1	0	0	0	3	0	37
17:00-17:05	1	4	5	10	2	3	4	1	1	0	3	0	34
17:05-17:10	2	4	2	4	2	1	1	2	0	0	4	1	23
17:10-17:15	2	1	2	6	0	0	1	0	0	1	2	0	15
17:15-17:20	2	6	12	10	2	3	1	0	0	0	5	0	41
17:20-17:25	1	4	8	3	2	0	0	0	0	0	1	0	19
17:25-17:30	2	4	7	5	3	1	1	1	0	0	1	0	25
17:30-17:35	3	3	2	9	5	1	0	0	0	0	3	0	26
17:35-17:40	1	3	7	6	0	0	1	0	0	0	2	0	20
17:40-17:45	1	9	3	9	0	2	0	0	0	0	5	1	30
17:45-17:50	1	8	6	3	5	1	1	1	0	0	0	0	26
17:50-17:55	0	2	4	15	2	0	2	1	0	0	1	0	27
17:55-18:00	0	4	9	6	1	2	2	0	0	0	1	0	25
18:00-18:05	0	1	2	4	3	1	4	0	1	0	4	0	20

TOTALS	24	97	139	175	57	24	32	11	2	3	60	6	630
PHF	0.75	0.69	0.69	0.76	0.6	0.63	0.57	0.58	0.25	0.38	0.65	0.33	0.84
% Trucks	4.2	3.1	1.4	1.1	1.8	4.2	3.1	0	0	0	5	0	2.2
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		24			20			2			3		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Ltir



**LOCATION:**

RAILROAD STREET AT SHERWOOD BOULEVARD  
SHERWOOD, OR

Date: **04/08/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

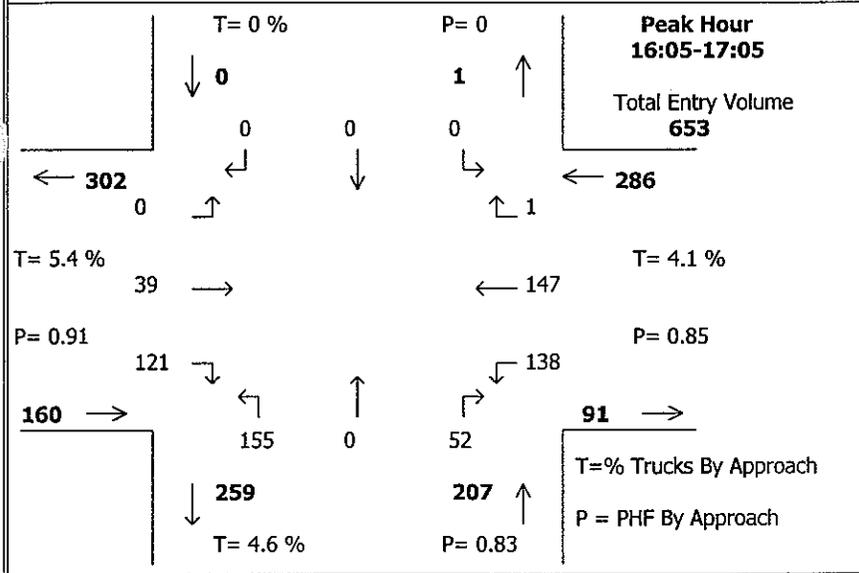
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↖	↓	↘	↖	↑	↗	↘	←	↗	
16:00-16:05	1	4	1	2	3	14	0	5	1	0	5	13	49
16:05-16:10	0	2	1	2	1	18	0	1	2	2	2	12	43
16:10-16:15	0	3	3	0	0	11	0	0	0	1	2	10	30
16:15-16:20	0	3	3	1	1	13	0	1	0	0	5	22	49
16:20-16:25	0	3	1	2	0	21	0	2	1	0	2	14	46
16:25-16:30	0	1	0	1	1	14	0	2	2	0	3	15	39
16:30-16:35	0	2	2	1	3	22	0	1	0	1	3	16	51
16:35-16:40	0	3	1	2	2	22	0	1	1	0	3	15	50
16:40-16:45	1	3	1	3	1	18	0	0	0	0	2	17	46
16:45-16:50	0	2	0	0	1	22	0	0	1	0	2	23	51
16:50-16:55	0	3	3	2	0	30	0	0	1	1	2	18	60
16:55-17:00	2	5	2	2	3	33	0	0	0	0	4	18	69
17:00-17:05	1	5	2	1	0	30	0	4	1	0	1	11	56
17:05-17:10	0	4	1	0	0	25	0	0	0	0	1	14	45
17:10-17:15	0	0	2	0	0	10	0	1	1	1	1	6	22
17:15-17:20	1	15	2	1	2	26	0	1	1	1	3	24	77
17:20-17:25	0	10	7	0	1	24	0	1	2	1	3	7	56
17:25-17:30	0	4	2	1	1	22	0	0	1	0	2	16	49
17:30-17:35	0	1	4	0	1	29	0	1	0	2	2	16	56
17:35-17:40	1	3	2	2	0	24	0	0	1	0	2	16	51
17:40-17:45	0	2	3	0	0	25	0	3	1	0	3	10	47
17:45-17:50	0	5	0	1	2	14	0	0	1	0	6	14	43
17:50-17:55	1	1	1	0	1	16	0	1	0	0	2	17	40
17:55-18:00	0	4	1	0	0	18	0	0	0	1	0	20	44

<b>TOTALS</b>	8	88	45	24	24	501	0	25	18	11	61	364	1169
PHF	0.42	0.47	0.58	0.45	0.56	0.81	0	0.55	0.63	0.5	0.81	0.76	0.86
% Trucks	0	1.1	37.8	0	0	0.4	0	0	0	0	0	1.4	2.1
Stopped Buses	0	1	0	0	0	0	0	0	0	0	0	0	
Pedestrians		56			90			2			9		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: LiavLM



**LOCATION:**

CIPOLE ROAD AT HERMAN ROAD  
SHERWOOD, OR

Date: **04/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	←	↖		
16:00-16:05	9	5	0	0	0	0	5	0	0	12	18	3	52
16:05-16:10	5	6	0	0	0	0	19	0	1	11	12	0	54
16:10-16:15	11	3	0	0	0	0	14	0	7	12	10	1	58
16:15-16:20	13	3	0	0	0	0	9	0	4	7	9	0	45
16:20-16:25	6	3	0	0	0	0	10	0	5	8	9	0	41
16:25-16:30	16	3	0	0	0	0	7	0	4	15	14	0	59
16:30-16:35	9	1	0	0	0	0	23	0	4	9	19	0	65
16:35-16:40	12	2	0	0	0	0	10	0	0	15	12	0	51
16:40-16:45	9	1	0	0	0	0	10	0	7	12	11	0	50
16:45-16:50	10	3	0	0	0	0	5	0	6	12	11	0	47
16:50-16:55	7	4	0	0	0	0	9	0	4	11	10	0	45
16:55-17:00	10	5	0	0	0	0	18	0	6	12	13	0	64
17:00-17:05	13	5	0	0	0	0	21	0	4	14	17	0	74
17:05-17:10	5	0	0	0	0	0	9	0	5	10	15	0	44
17:10-17:15	12	3	0	0	0	0	9	0	8	5	13	0	50
17:15-17:20	7	1	0	0	0	0	7	0	1	12	14	0	42
17:20-17:25	12	2	0	0	0	0	7	0	4	5	16	0	46
17:25-17:30	9	5	0	0	0	0	12	0	6	14	14	0	60
17:30-17:35	18	3	0	0	0	0	9	0	3	7	10	0	50
17:35-17:40	6	1	0	0	0	0	9	0	2	7	8	0	33
17:40-17:45	12	2	0	0	0	0	14	0	4	13	11	0	56
17:45-17:50	9	2	0	0	0	0	7	0	2	6	7	0	33
17:50-17:55	4	2	0	0	0	0	8	0	1	8	9	0	32
17:55-18:00	4	3	0	0	0	0	4	0	2	4	12	0	29

TOTALS	228	68	0	0	0	0	255	0	90	241	294	4	1180
PHF	0.82	0.7	0	0	0	0	0.81	0	0.76	0.88	0.82	0.25	0.89
% Trucks	4.4	8.8	0	0	0	0	3.1	0	8.9	3.3	4.1	50	4.6
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			1			1			0		



# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: DzziLM

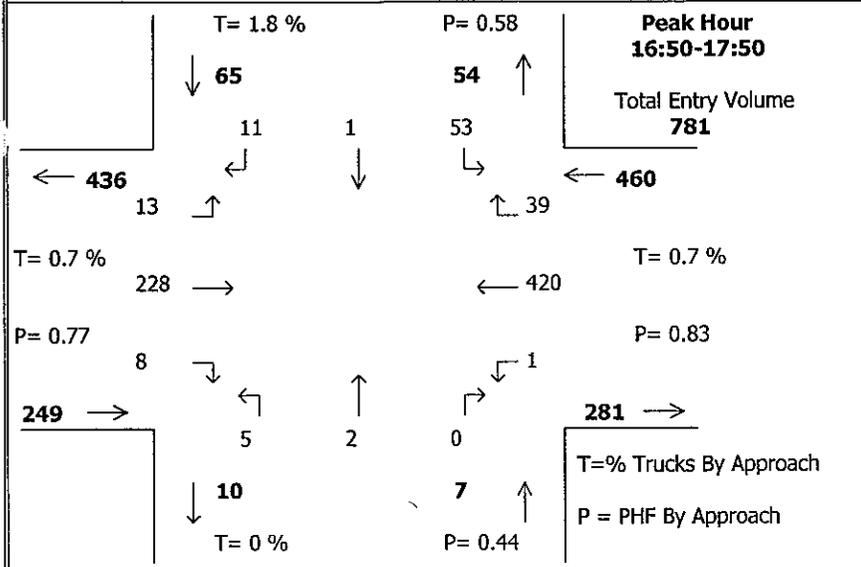
<p style="text-align: center;">T= 1.9 %      P= 0.77</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>↓ 111</p> <p>24</p> <p>← 29</p> <p>9</p> <p>↑</p> <p>0</p> <p>→</p> <p>4</p> <p>↓</p> <p>13</p> <p>→</p> <p>5</p> <p>↓ 91</p> <p style="text-align: center;">T= 0.7 %</p> </div> <div style="text-align: center;"> <p>90</p> <p>0</p> <p>← 0</p> <p>0</p> <p>← 0</p> <p>0</p> <p>← 0</p> <p>0</p> <p>0</p> <p>0</p> <p>↑ 86</p> <p style="text-align: center;">P= 0.69</p> </div> <div style="text-align: center;"> <p>↑</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>↑</p> <p style="text-align: center;">T= 0 %</p> </div> </div> <p style="text-align: center;">Total Entry Volume <b>210</b></p> <p style="text-align: center;">T=% Trucks By Approach P = PHF By Approach</p>	<p><b>LOCATION:</b> BROOKMAN ROAD AT LADD HILL ROAD SHERWOOD, OR</p> <p>Date: <b>04/17/03</b> Day: <b>THU</b> From: <b>16:00-18:00</b></p> <p><i>Report Prepared for:</i> DKS ASSOCIATES</p> <p><i>Surveyed By:</i> <b>TRAFFIC SMITHY, INC</b> 1225 NW Murray Blvd Suite 111 Portland, OR 97229 Phone: 503-641-6333 Fax: 503-643-8866</p> <p><i>Report Reviewed by:</i> JG</p>
--	--

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↖	↖	↑	↗	↘	←	↖	
16:00-16:05	0	0	2	1	7	0	1	3	0	0	0	0	14
16:05-16:10	0	0	2	1	8	0	0	3	0	0	0	0	14
16:10-16:15	0	0	1	3	5	0	0	8	0	0	0	0	17
16:15-16:20	0	0	1	3	4	0	2	5	0	0	0	0	15
16:20-16:25	0	0	1	4	6	0	0	3	0	0	0	0	14
16:25-16:30	1	0	2	5	7	0	0	8	0	0	0	0	23
16:30-16:35	0	0	2	2	0	0	2	7	0	0	0	0	13
16:35-16:40	2	0	0	2	9	0	0	1	0	0	0	0	14
16:40-16:45	0	0	1	1	8	0	0	5	0	0	0	0	15
16:45-16:50	0	0	0	1	7	0	0	3	0	0	0	0	11
16:50-16:55	1	0	0	4	9	0	0	4	0	0	0	0	18
16:55-17:00	0	0	2	4	5	0	0	7	0	0	0	0	18
17:00-17:05	1	0	2	2	8	0	0	2	0	0	0	0	15
17:05-17:10	0	0	0	0	6	0	1	5	0	0	0	0	12
17:10-17:15	0	0	0	2	9	0	1	7	0	0	0	0	19
17:15-17:20	2	0	2	2	14	0	1	7	0	0	0	0	28
17:20-17:25	0	0	0	2	6	0	0	7	0	0	0	0	15
17:25-17:30	0	0	1	1	11	0	0	14	0	0	0	0	27
17:30-17:35	0	0	1	1	3	0	0	10	0	0	0	0	15
17:35-17:40	0	0	0	2	3	0	0	3	0	0	0	0	8
17:40-17:45	0	0	0	2	11	0	1	5	0	0	0	0	19
17:45-17:50	0	0	1	2	2	0	1	10	0	0	0	0	16
17:50-17:55	1	0	0	1	4	0	2	5	0	0	0	0	13
17:55-18:00	0	0	0	0	6	0	0	4	0	0	0	0	10

TOTALS	8	0	21	48	158	0	12	136	0	0	0	0	383
PHF	0.5	0	0.56	0.6	0.7	0	0.42	0.65	0	0	0	0	0.75
% Trucks	12.5	0	4.8	0	2.5	0	0	0.7	0	0	0	0	1.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			0			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Ltja



**LOCATION:**

SUNSET BOULEVARD AT PINE STREET  
SHERWOOD, OR

Date: **04/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

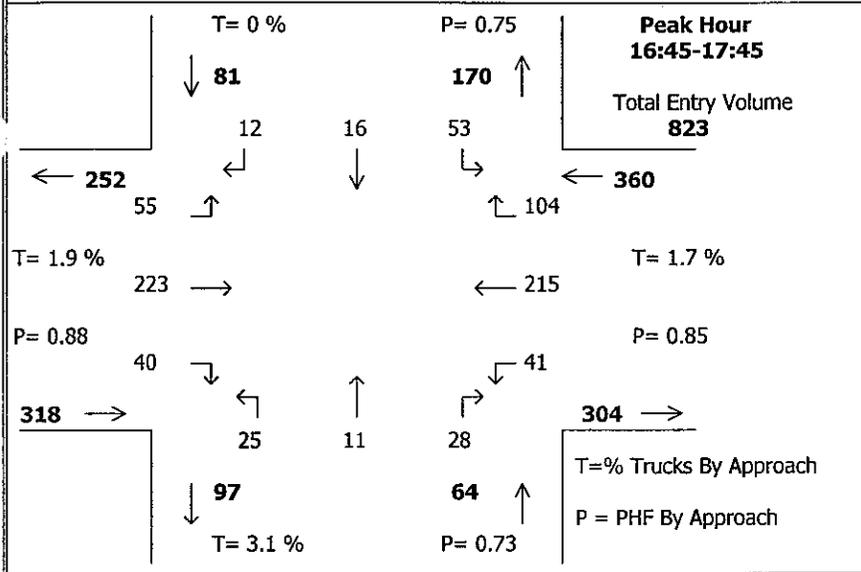
Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	0	13	0	0	0	1	0	0	0	0	22	0	36
16:05-16:10	0	10	0	1	1	1	0	0	0	0	21	1	35
16:10-16:15	0	15	2	0	0	3	0	0	0	0	24	1	45
16:15-16:20	0	14	1	1	0	3	0	0	0	1	23	0	43
16:20-16:25	0	17	0	0	1	3	0	0	0	0	18	2	41
16:25-16:30	2	17	0	0	0	6	0	0	0	0	21	2	48
16:30-16:35	1	23	0	3	0	3	1	0	0	0	22	1	54
16:35-16:40	1	10	0	0	0	2	1	0	0	1	25	3	43
16:40-16:45	1	18	0	0	1	1	1	0	0	0	14	3	39
16:45-16:50	1	11	0	1	0	5	0	0	0	0	29	3	50
16:50-16:55	0	17	0	1	0	1	0	0	0	0	35	3	57
16:55-17:00	1	25	1	2	0	8	0	0	0	0	37	1	75
17:00-17:05	1	17	1	2	0	10	0	0	0	0	39	9	79
17:05-17:10	0	32	3	0	0	6	0	0	0	0	28	3	72
17:10-17:15	1	16	1	1	0	5	0	0	0	0	49	0	73
17:15-17:20	0	15	1	2	0	2	0	0	0	0	40	5	65
17:20-17:25	0	25	2	0	0	3	3	0	0	0	39	5	77
17:25-17:30	0	12	1	1	0	2	0	0	0	0	43	2	61
17:30-17:35	2	17	1	0	1	5	0	0	0	0	30	3	59
17:35-17:40	2	18	0	0	0	4	1	0	0	0	29	4	58
17:40-17:45	0	22	0	0	0	3	1	0	0	0	26	1	53
17:45-17:50	1	12	2	2	0	4	0	2	0	1	25	3	52
17:50-17:55	1	17	0	2	0	2	0	0	0	0	24	2	48
17:55-18:00	0	15	3	0	0	3	2	1	0	2	38	1	65

TOTALS	15	408	19	19	4	86	10	3	0	5	701	58	1328
PHF	0.5	0.77	0.65	0.55	0.25	0.55	0.42	0.25	0	0.25	0.82	0.75	0.86
% Trucks	0	0.7	0	5.3	0	1.2	0	0	0	0	0.6	1.7	0.8
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		14			2			0			0		

# INTERSECTION TURN MOVEMENT PEAK HOUR REPORT

File: Jlnf



**LOCATION:**

SUNSET BOULEVARD AT PINEHURST DRIVE  
SHERWOOD, OR

Date: **04/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
<b>ALL VEHICLES</b>													
16:45-17:00	10	70	10	0	2	17	6	2	5	9	47	31	209
17:00-17:15	12	54	11	6	4	17	4	1	2	12	68	26	217
17:15-17:30	10	45	18	2	7	8	7	5	10	14	46	27	199
17:30-17:45	8	54	16	4	3	11	8	3	11	6	54	20	198
<b>LIGHT TRUCKS (SINGLE UNIT 2 AXLES)</b>													
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	1	1	0	0	0	0	1	0	0	2	1	6
17:15-17:30	1	1	0	0	0	0	1	0	0	0	1	0	4
17:30-17:45	0	0	0	0	0	0	0	0	0	1	1	0	2
<b>MEDIUM TRUCKS (SINGLE UNIT &gt; 2 AXLES)</b>													
16:45-17:00	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>HEAVY TRUCKS (SEMI-TRACTOR TRAILER)</b>													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>BICYCLES</b>													
16:45-17:00	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00-17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15-17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30-17:45	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEDESTRIANS</b>													
Crosswalk	SOUTH			WEST			EAST			NORTH			ALL
16:45-17:00	2			2			4			7			15
17:00-17:15	3			0			7			2			12
17:15-17:30	4			1			0			1			6
17:30-17:45	3			1			4			0			8

**Peak Hour By Movement**

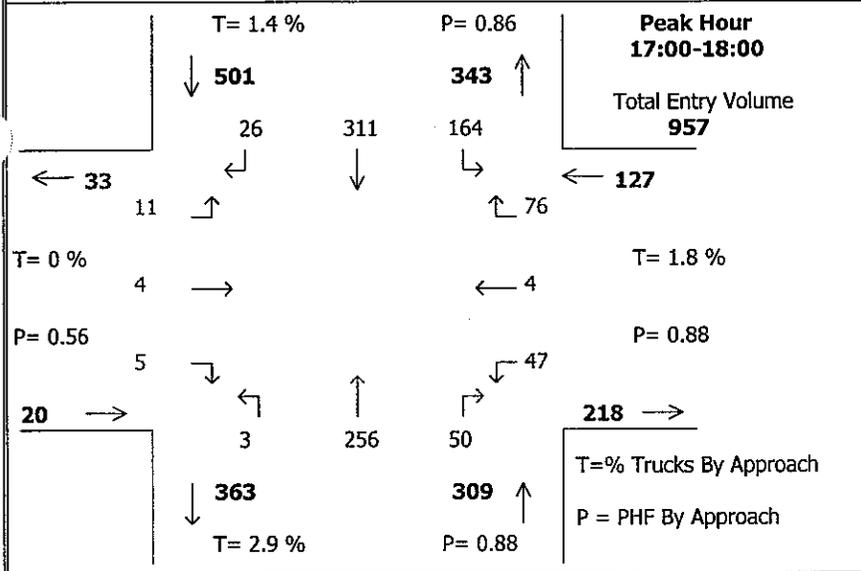
PHF	0.83	0.8	0.76	0.5	0.57	0.78	0.78	0.55	0.64	0.73	0.79	0.84	0.95
% Trucks (All)	2.5	1.8	1.8	0	0	0	4	9.1	0	2.4	1.9	1	1.7
% Trucks (M+H)	0	0.4	0	0	0	0	0	0	0	0	0	0	0.1
Stopped Busses	0	0	0	0	0	0	0	0	0	0	0	0	0

**Hourly Totals**

16:00-17:00	40	201	30	8	12	51	27	10	20	29	160	76	664
16:15-17:15	39	203	36	10	15	59	24	8	16	35	200	90	735
16:30-17:30	39	206	46	10	17	62	25	10	23	42	208	102	790
16:45-17:45	40	223	55	12	16	53	25	11	28	41	215	104	823
17:00-18:00	39	212	55	16	17	51	25	12	32	45	225	91	820

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: Maxx



**LOCATION:**

SUNSET BOULEVARD AT WOODHAVEN DRIVE  
SHERWOOD, OR

Date: **04/17/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

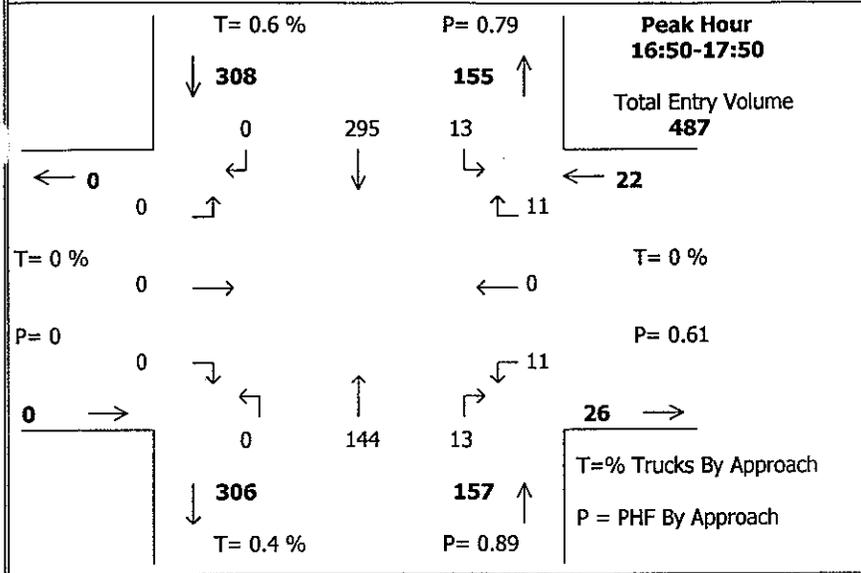
Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↙	←	↖	
16:00-16:05	0	0	0	1	10	10	1	11	0	2	0	6	41
16:05-16:10	2	0	1	1	20	6	1	16	2	0	1	5	55
16:10-16:15	0	0	0	0	17	15	0	25	5	1	1	7	71
16:15-16:20	1	1	2	0	17	11	0	14	2	1	0	5	54
16:20-16:25	0	0	3	1	30	13	0	9	2	0	0	9	67
16:25-16:30	0	1	0	1	20	8	2	9	2	2	0	3	48
16:30-16:35	0	2	0	1	10	8	0	19	7	2	1	9	59
16:35-16:40	1	2	1	3	16	7	0	16	3	4	1	4	58
16:40-16:45	0	2	0	1	21	18	0	10	1	0	0	6	59
16:45-16:50	0	0	2	3	20	13	0	15	1	0	0	3	57
16:50-16:55	0	0	0	4	19	9	3	12	4	2	0	4	57
16:55-17:00	0	0	0	3	20	13	0	22	1	1	0	10	70
17:00-17:05	1	0	2	3	16	8	1	16	1	7	0	5	60
17:05-17:10	0	0	0	1	32	14	0	21	4	2	1	10	85
17:10-17:15	1	0	1	2	41	13	0	22	2	3	0	4	89
17:15-17:20	1	1	0	4	27	12	1	27	5	4	1	8	91
17:20-17:25	0	0	1	0	29	14	0	28	3	4	1	9	89
17:25-17:30	0	1	0	2	32	7	0	18	3	1	0	8	72
17:30-17:35	0	0	0	3	17	17	1	22	7	3	0	8	78
17:35-17:40	0	0	2	0	23	26	0	18	8	2	0	4	83
17:40-17:45	0	0	0	5	30	11	0	15	2	3	0	7	73
17:45-17:50	2	1	2	2	17	14	0	28	5	3	0	3	77
17:50-17:55	0	0	2	0	16	14	0	17	3	7	1	2	62
17:55-18:00	0	1	1	4	31	14	0	24	7	8	0	8	98

<b>TOTALS</b>	9	12	20	45	531	295	10	434	80	62	8	147	1653
PHF	0.63	0.5	0.55	0.81	0.78	0.76	0.75	0.83	0.69	0.65	0.5	0.76	0.89
% Trucks	0	0	0	0	1.5	1.4	0	3.2	1.3	1.6	0	2	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		9			5			5			0		

# INTERSECTION TURN MOVEMENT SUMMARY REPORT

File: DEAFM



**LOCATION:**

ELWERT ROAD AT SWANSTROM DRIVE  
SHERWOOD, OR

Date: **04/10/03** Day: **THU**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: JG

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	←	↖		
16:00-16:05	0	0	0	0	15	1	0	9	2	0	1	1	29
16:05-16:10	0	0	0	0	11	0	0	11	0	0	0	0	22
16:10-16:15	0	0	0	0	8	0	0	6	0	1	0	0	15
16:15-16:20	0	0	0	0	18	0	0	9	0	1	0	0	28
16:20-16:25	0	0	0	0	20	1	0	9	0	0	0	1	31
16:25-16:30	0	0	0	0	18	1	0	9	1	2	0	0	31
16:30-16:35	0	0	0	0	15	0	0	5	0	0	0	1	21
16:35-16:40	0	0	0	0	35	2	0	2	0	0	0	1	40
16:40-16:45	0	0	0	0	15	1	0	12	0	0	0	0	28
16:45-16:50	0	0	0	0	14	0	0	12	1	2	0	0	29
16:50-16:55	0	0	0	0	27	0	0	9	1	1	0	0	38
16:55-17:00	0	0	0	0	17	2	0	9	2	2	0	2	34
17:00-17:05	0	0	0	0	23	0	0	11	2	0	0	1	37
17:05-17:10	0	0	0	0	17	0	0	11	3	2	0	2	35
17:10-17:15	0	0	0	0	18	1	0	16	0	0	0	0	35
17:15-17:20	0	0	0	0	23	2	0	12	1	1	0	2	41
17:20-17:25	0	0	0	0	26	1	0	8	0	0	0	1	36
17:25-17:30	0	0	0	0	27	2	0	11	1	0	0	0	41
17:30-17:35	0	0	0	0	27	1	0	16	0	0	0	1	45
17:35-17:40	0	0	0	0	33	4	0	13	1	2	0	0	53
17:40-17:45	0	0	0	0	32	0	0	13	0	2	0	0	47
17:45-17:50	0	0	0	0	25	0	0	15	2	1	0	2	45
17:50-17:55	0	0	0	0	12	2	0	19	0	0	0	3	36
17:55-18:00	0	0	0	0	17	1	0	8	2	0	0	1	29

TOTALS	0	0	0	0	493	22	0	255	19	17	1	19	826
PHF	0	0	0	0	0.8	0.46	0	0.86	0.46	0.55	0	0.55	0.84
% Trucks	0	0	0	0	0.6	0	0	0.4	0	0	0	0	0.5
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians		0			0			0		0	0		

<b>INTERSECTION TURN MOVEMENT SUMMARY REPORT</b>		File: Libblm
	<p><b>Peak Hour</b> 17:00-18:00</p> <p>Total Entry Volume <b>504</b></p>	<p><b>LOCATION:</b> SW ELWERT ROAD AT KRUGER ROAD SHERWOOD, OR</p> <p>Date: <b>05/06/03</b> Day: <b>TUE</b> From: <b>16:00-18:00</b></p> <p>Report Prepared for: DKS ASSOCIATES</p> <p>Surveyed By: <b>TRAFFIC SMITHY, INC</b> 1225 NW Murray Blvd, Suite 111 Portland, OR 97229 Phone: 503-641-6333 Fax: 503-643-8866</p> <p>Report Reviewed by: JG</p>

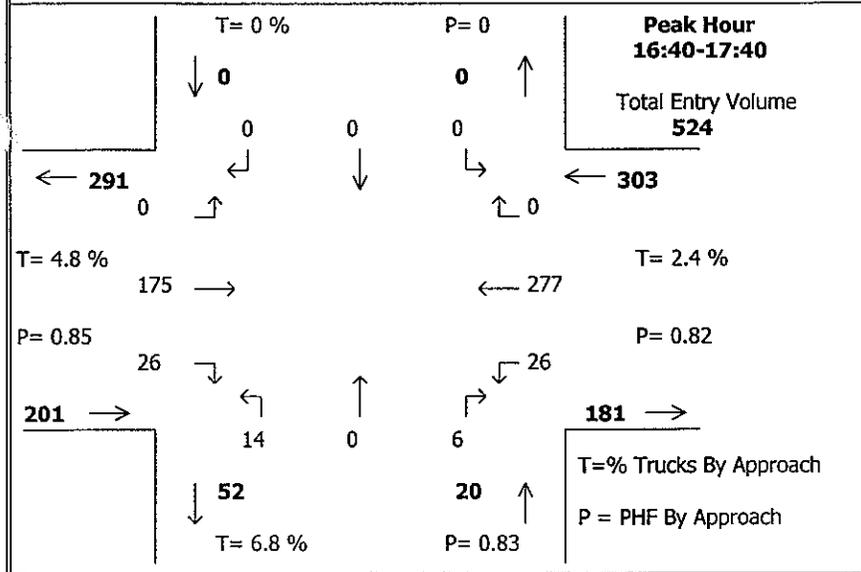
TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↘	↖	↑	↗	↖	↗		
16:00-16:05	3	0	0	0	0	0	1	0	21	14	0	0	39
16:05-16:10	4	1	0	0	0	0	0	0	8	12	0	0	25
16:10-16:15	0	0	0	0	0	0	1	0	11	12	0	0	24
16:15-16:20	1	1	0	0	0	0	4	0	4	14	0	0	24
16:20-16:25	2	0	0	0	0	0	0	0	8	16	0	0	26
16:25-16:30	2	0	0	0	0	0	2	0	10	9	0	0	23
16:30-16:35	1	0	0	0	0	0	1	0	9	30	0	0	41
16:35-16:40	2	0	0	0	0	0	1	0	11	15	0	0	29
16:40-16:45	0	0	0	0	0	0	2	0	13	20	3	0	38
16:45-16:50	1	0	0	0	0	0	1	0	17	21	0	0	40
16:50-16:55	2	0	0	0	0	0	3	0	15	21	0	0	41
16:55-17:00	0	0	0	0	0	0	4	0	14	17	0	0	35
17:00-17:05	3	1	0	0	0	0	3	0	19	18	1	0	45
17:05-17:10	0	0	0	0	0	0	2	0	13	26	0	0	41
17:10-17:15	3	1	0	0	0	0	3	0	12	21	0	0	40
17:15-17:20	0	0	0	0	0	0	2	0	11	20	0	0	33
17:20-17:25	3	0	0	0	0	0	2	0	16	30	0	0	51
17:25-17:30	1	1	0	0	0	0	1	0	13	26	1	0	43
17:30-17:35	1	0	0	0	0	0	1	0	16	31	1	0	50
17:35-17:40	3	0	0	0	0	0	0	0	11	17	0	0	31
17:40-17:45	3	0	0	0	0	0	0	0	9	31	1	0	44
17:45-17:50	1	2	0	0	0	0	2	0	17	19	0	0	41
17:50-17:55	3	0	0	0	0	0	4	0	14	18	0	0	39
17:55-18:00	2	0	0	0	0	0	1	0	19	24	0	0	46

15

TOTALS	41	7	0	0	0	0	41	0	311	482	7	0	889
PHF	0.82	0.63	0	0	0	0	0.66	0	0.85	0.81	0.5	0	0.88
% Trucks	12.2	14.3	0	0	0	0	0	0	1.6	1.2	0	0	1.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		0			0			1			0		

**INTERSECTION TURN MOVEMENT SUMMARY REPORT**

File: MaxoLM.mod



**LOCATION:**  
OREGON STREET AT LINCOLN STREET  
SHERWOOD, OR

Date: **04/08/03** Day: **TUE**  
From: **16:00-18:00**

Report Prepared for:  
DKS ASSOCIATES

Surveyed By:  
**TRAFFIC SMITHY, INC**  
1225 NW Murray Blvd Suite 111  
Portland, OR 97229  
Phone: 503-641-6333 Fax: 503-643-8866

Report Reviewed by: *JG*

TIME PERIOD	EASTBOUND			SOUTHBOUND			NORTHBOUND			WESTBOUND			ALL
	↘	→	↗	↙	↓	↖	↖	↑	↗	↘	←	↖	
16:00-16:05	1	20	0	0	0	0	1	0	1	2	16	0	41
16:05-16:10	2	12	0	0	0	0	1	0	1	5	13	0	34
16:10-16:15	2	8	0	0	0	0	0	0	0	1	15	0	26
16:15-16:20	2	11	0	0	0	0	1	0	0	4	17	0	35
16:20-16:25	2	11	0	0	0	0	1	0	1	2	16	0	33
16:25-16:30	2	14	0	0	0	0	1	0	0	2	23	0	42
16:30-16:35	1	5	0	0	0	0	2	0	1	4	23	0	36
16:35-16:40	1	13	0	0	0	0	1	0	0	1	23	0	39
16:40-16:45	3	8	0	0	0	0	2	0	1	0	26	0	40
16:45-16:50	2	22	0	0	0	0	2	0	0	2	27	0	55
16:50-16:55	1	14	0	0	0	0	1	0	0	0	22	0	38
16:55-17:00	1	18	0	0	0	0	2	0	1	5	22	0	49
17:00-17:05	2	23	0	0	0	0	0	0	1	4	9	0	39
17:05-17:10	2	11	0	0	0	0	2	0	0	4	25	0	44
17:10-17:15	3	16	0	0	0	0	0	0	1	3	40	0	63
17:15-17:20	4	8	0	0	0	0	0	0	0	2	15	0	29
17:20-17:25	1	8	0	0	0	0	2	0	0	2	30	0	43
17:25-17:30	1	14	0	0	0	0	1	0	0	2	25	0	43
17:30-17:35	2	13	0	0	0	0	0	0	1	0	19	0	35
17:35-17:40	4	20	0	0	0	0	2	0	1	2	17	0	46
17:40-17:45	1	7	0	0	0	0	4	0	3	1	22	0	38
17:45-17:50	3	5	0	0	0	0	1	0	1	0	12	0	22
17:50-17:55	1	10	0	0	0	0	2	0	0	3	19	0	35
17:55-18:00	3	13	0	0	0	0	1	0	0	6	17	0	40

<b>TOTALS</b>	47	304	0	0	0	0	30	0	14	57	493	0	945
PHF	0.72	0.8	0	0	0	0	0.7	0	0.75	0.5	0.81	0	0.9
% Trucks	17	3	0	0	0	0	10	0	0	0	2.6	0	3.9
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians		12			1			1			0		

## **Level of Service Analysis**

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Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

## Scenario Report

Scenario: 2020 PM Peak

Command: 2020 PM Peak  
Volume: Default Volume  
Geometry: Default Geometry  
Impact Fee: Default Impact Fee  
Trip Generation: Default Trip Generation  
Trip Distribution: Default Trip Distribution  
Paths: Default Paths  
Routes: Default Routes  
Configuration: Default Configuration

Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

Impact Analysis Report  
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ C	Del/ LOS	V/ C	
# 1 ORE 99W/Home Depot	C	25.9 0.895	C	25.9 0.895	+ 0.000 D/V
# 2 ORE 99W/Tualatin-Sherwood Rd	E	55.9 0.986	E	55.9 0.986	+ 0.000 D/V
# 3 ORE 99W/Sherwood Blvd	D	48.0 0.942	D	48.0 0.942	+ 0.000 D/V
# 4 ORE 99W/Meinecke	B	18.5 0.761	B	18.5 0.761	+ 0.000 D/V
# 5 ORE 99W/Sunset	D	36.8 0.919	D	36.8 0.919	+ 0.000 D/V
# 6 ORE 99W/Brookman	F	268.3 0.000	F	268.3 0.000	+ 0.000 D/V
# 7 Tualatin-Sherwood/Cipole	C	25.7 0.886	C	25.7 0.886	+ 0.000 D/V
# 8 Tualatin-Sherwood/Oregon	E	78.6 1.200	E	78.6 1.200	+ 0.000 D/V
# 9 Tualatin-Sherwood/Gerda	F	231.6 0.000	F	231.6 0.000	+ 0.000 D/V
# 10 Tualatin-Sherwood/Langer	C	33.4 0.897	C	33.4 0.897	+ 0.000 D/V
# 11 Tualatin-Sherwood/Regal Cinema	C	23.9 0.722	C	23.9 0.722	+ 0.000 D/V
# 12 Roy Rogers/Borchers	A	8.5 0.603	A	8.5 0.603	+ 0.000 D/V
# 13 Oregon/Tonquin	F	171.6 0.000	F	171.6 0.000	+ 0.000 D/V
# 14 Oregon/Murdock	A	7.9 0.000	A	7.9 0.000	+ 0.000 V/C
# 15 Murdock/Willamette	B	14.7 0.000	B	14.7 0.000	+ 0.000 D/V
# 16 Sunset/Murdock	B	11.2 0.474	B	11.2 0.474	+ 0.000 V/C
# 17 Sunset/Sherwood	D	33.3 0.970	D	33.3 0.970	+ 0.000 V/C
# 18 Edy/Elwert	B	13.0 0.649	B	13.0 0.649	+ 0.000 V/C
# 19 Edy/Borchers	C	24.3 0.000	C	24.3 0.000	+ 0.000 D/V
# 20 Sherwood/Langer	E	55.5 0.771	E	55.5 0.771	+ 0.000 D/V
# 21 Sherwood/Century	F	OVREPL 0.000	F	OVREPL 0.000	+ 0.000 D/V
# 22 Sherwood-Pine/3rd	D	31.0 0.000	D	31.0 0.000	+ 0.000 D/V
# 23 Pine/Oregon	F	63.2 0.000	F	63.2 0.000	+ 0.000 D/V

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Intersection	Base		Future		Change in	
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C		
# 24 Washington/Railroad	B 12.4	0.609	B 12.4	0.609	+ 0.000	V/C
# 25 Washington/3rd	A 9.5	0.356	A 9.5	0.356	+ 0.000	V/C
# 26 Sherwood/Railroad	B 11.2	0.525	B 11.2	0.525	+ 0.000	V/C
# 27 Cipole/Herman	B 10.2	0.411	B 10.2	0.411	+ 0.000	V/C
# 28 Meinecke/Dewey	A 4.0	0.000	A 4.0	0.000	+ 0.000	V/C
# 29 Brookman/Ladd Hill	B 11.1	0.000	B 11.1	0.000	+ 0.000	D/V
# 30 Sunset/Pine	D 27.2	0.000	D 27.2	0.000	+ 0.000	D/V
# 31 Sunset/Pinehurst	C 15.8	0.728	C 15.8	0.728	+ 0.000	V/C
# 32 Sunset/Woodhaven	E 38.8	0.000	E 38.8	0.000	+ 0.000	D/V
# 33 Elwert/Swanstrom	B 11.1	0.000	B 11.1	0.000	+ 0.000	D/V
# 34 Elwert/Kruger	B 13.5	0.000	B 13.5	0.000	+ 0.000	D/V
# 35 Oregon/Lincoln	B 13.2	0.000	B 13.2	0.000	+ 0.000	D/V

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report  
 2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #1 ORE 99W/Home Depot  
 \*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap. (X): 0.895  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.9  
 Optimal Cycle: 117 Level Of Service: C

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	0	0	1	0

-----

Volume Module:

Base Vol:	23	908	179	91	2077	12	60	1	31	251	0	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	908	179	91	2077	12	60	1	31	251	0	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	908	179	91	2077	12	60	1	31	251	0	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	908	179	91	2077	12	60	1	31	251	0	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	23	908	179	91	2077	12	60	1	31	251	0	57

-----

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.80	0.93	0.93	0.93	0.42	0.42	0.85	0.66	1.00	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.98	0.02	1.00	1.00	0.00	1.00
Final Sat.:	1702	3404	1523	1769	3514	20	777	13	1615	1248	0	1583

-----

Capacity Analysis Module:

Vol/Sat:	0.01	0.27	0.12	0.05	0.59	0.59	0.08	0.08	0.02	0.20	0.00	0.04
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.57	0.57	0.11	0.66	0.66	0.22	0.22	0.22	0.22	0.00	0.22
Volume/Cap:	0.90	0.47	0.21	0.47	0.90	0.90	0.34	0.34	0.09	0.90	0.00	0.16
Delay/Veh:	190.5	15.6	12.9	52.0	21.9	21.9	40.2	40.2	36.9	73.6	0.0	37.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	190.5	15.6	12.9	52.0	21.9	21.9	40.2	40.2	36.9	73.6	0.0	37.6
HCM2kAvg:	2	10	3	4	35	40	5	4	1	17	0	2

\*\*\*\*\*

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #2 ORE 99W/Tualatin-Sherwood Rd  
 \*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap. (X): 0.985  
 Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 55.9  
 Optimal Cycle: 180 Level Of Service: E

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 3 0 1 1 0 2 1 0 1 0 1 0 1

Volume Module:  
 Base Vol: 159 919 517 178 1760 295 137 302 117 549 319 139  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 159 919 517 178 1760 295 137 302 117 549 319 139  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 159 919 517 178 1760 295 137 302 117 549 319 139  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 159 919 517 178 1760 295 137 302 117 549 319 139  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 159 919 517 178 1760 295 137 302 117 549 319 139

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.90 0.86 0.80 0.93 0.87 0.87 0.87 0.92 0.78 0.89 0.96 0.82  
 Lanes: 1.00 3.00 1.00 1.00 2.57 0.43 1.00 1.00 1.00 2.00 1.00 1.00  
 Final Sat.: 1702 4891 1523 1769 4258 714 1655 1742 1481 3369 1828 1554

Capacity Analysis Module:  
 Vol/Sat: 0.09 0.19 0.34 0.10 0.41 0.41 0.08 0.17 0.08 0.16 0.17 0.09  
 Crit Moves: \*\*\*\* \*  
 Green/Cycle: 0.09 0.40 0.40 0.12 0.42 0.42 0.18 0.18 0.18 0.18 0.18 0.18  
 Volume/Cap: 0.99 0.47 0.86 0.86 0.99 0.99 0.47 0.99 0.45 0.92 0.99 0.51  
 Delay/Veh: 120.8 27.1 44.7 79.8 51.0 51.0 45.6 96.8 45.5 68.3 95.3 46.2  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 120.8 27.1 44.7 79.8 51.0 51.0 45.6 96.8 45.5 68.3 95.3 46.2  
 HCM2kAvg: 10 8 20 9 31 31 5 16 4 14 17 5

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
 Intersection #3 ORE 99W/Sherwood Blvd  
 \*\*\*\*\*

Cycle (sec): 120 Critical Vol./Cap. (X): 0.942  
 Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 48.0  
 Optimal Cycle: 155 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 2 1 0 1 0 2 1 0 1 1 0 0 1

Volume Module:  
 Base Vol: 83 1529 122 348 1808 173 159 280 152 294 205 179  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 83 1529 122 348 1808 173 159 280 152 294 205 179  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 83 1529 122 348 1808 173 159 280 152 294 205 179  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 83 1529 122 348 1808 173 159 280 152 294 205 179  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 83 1529 122 348 1808 173 159 280 152 294 205 179

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.91 0.87 0.87 0.93 0.88 0.88 0.94 0.99 0.84 0.96 0.96 0.84  
 Lanes: 1.00 2.78 0.22 1.00 2.74 0.26 1.00 1.00 1.00 1.18 0.82 1.00  
 Final Sat.: 1736 4570 365 1769 4579 438 1787 1881 1599 2152 1501 1599

Capacity Analysis Module:  
 Vol/Sat: 0.05 0.33 0.33 0.20 0.39 0.39 0.09 0.15 0.10 0.14 0.14 0.11  
 Crit Moves: \*\*\*\* \*  
 Green/Cycle: 0.06 0.35 0.35 0.21 0.50 0.50 0.16 0.16 0.16 0.14 0.14 0.14  
 Volume/Cap: 0.79 0.94 0.94 0.94 0.79 0.79 0.56 0.94 0.60 0.94 0.94 0.77  
 Delay/Veh: 86.6 48.3 48.3 79.0 26.2 26.2 49.3 87.0 51.0 76.3 76.3 64.2  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 86.6 48.3 48.3 79.0 26.2 26.2 49.3 87.0 51.0 76.3 76.3 64.2  
 HCM2kAvg: 5 24 24 18 21 21 6 14 6 13 13 8

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 ORE 99W/Meinecke

Cycle (sec): 120 Critical Vol./Cap. (X): 0.761  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 18.5  
 Optimal Cycle: 72 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1

Volume Module:  
 Base Vol: 13 1503 103 275 2130 55 19 15 17 87 14 118  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 13 1503 103 275 2130 55 19 15 17 87 14 118  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 13 1503 103 275 2130 55 19 15 17 87 14 118  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 13 1503 103 275 2130 55 19 15 17 87 14 118  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 13 1503 103 275 2130 55 19 15 17 87 14 118

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.90 0.90 0.81 0.93 0.93 0.83 0.76 1.00 0.85 0.73 0.97 0.83  
 Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Sat.: 1718 3437 1537 1769 3538 1583 1438 1900 1615 1395 1845 1568

Capacity Analysis Module:  
 Vol/Sat: 0.01 0.44 0.07 0.16 0.60 0.03 0.01 0.01 0.01 0.06 0.01 0.08  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.01 0.59 0.59 0.21 0.79 0.79 0.10 0.10 0.10 0.10 0.10 0.10  
 Volume/Cap: 0.76 0.74 0.11 0.74 0.76 0.04 0.13 0.08 0.11 0.63 0.08 0.76  
 Delay/Veh: 165.0 19.3 10.8 52.0 7.8 2.7 49.8 49.3 49.5 61.0 49.3 72.2  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 165.0 19.3 10.8 52.0 7.8 2.7 49.8 49.3 49.5 61.0 49.3 72.2  
 HCM2kAvg: 2 21 2 11 22 0 1 1 1 5 1 6

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 ORE 99W/Sunset

Cycle (sec): 120 Critical Vol./Cap. (X): 0.919  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 36.8  
 Optimal Cycle: 132 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 2 0 1 2 0 2 0 1 0 1 0 0 1

Volume Module:  
 Base Vol: 109 1353 149 379 1862 27 16 167 247 148 104 221  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 109 1353 149 379 1862 27 16 167 247 148 104 221  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 109 1353 149 379 1862 27 16 167 247 148 104 221  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 109 1353 149 379 1862 27 16 167 247 148 104 221  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 109 1353 149 379 1862 27 16 167 247 148 104 221

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.90 0.90 0.81 0.90 0.93 0.83 0.94 0.94 0.83 0.56 0.56 0.83  
 Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 0.09 0.91 1.00 0.59 0.41 1.00  
 Final Sat.: 1718 3437 1537 3432 3538 1583 157 1635 1583 623 438 1568

Capacity Analysis Module:  
 Vol/Sat: 0.06 0.39 0.10 0.11 0.53 0.02 0.10 0.10 0.16 0.24 0.24 0.14  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.07 0.50 0.50 0.14 0.57 0.57 0.26 0.26 0.26 0.26 0.26 0.26  
 Volume/Cap: 0.92 0.79 0.19 0.79 0.92 0.03 0.40 0.40 0.60 0.92 0.92 0.55  
 Delay/Veh: 113.5 27.1 16.7 58.1 30.5 11.2 37.3 37.3 41.7 77.0 77.0 40.0  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 113.5 27.1 16.7 58.1 30.5 11.2 37.3 37.3 41.7 77.0 77.0 40.0  
 HCM2kAvg: 7 22 3 9 35 0 6 6 9 20 20 8

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 ORE 99W/Brookman

Average Delay (sec/veh): 9.3 Worst Case Level Of Service: F[268.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 1 0 1 1 0 1 0 1 1 0 0 0 1 1 0 0 0 0 1 1 0 0

Volume Module:
Base Vol: 22 1506 55 27 2100 28 26 1 41 84 5 7
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 22 1506 55 27 2100 28 26 1 41 84 5 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 22 1506 55 27 2100 28 26 1 41 84 5 7
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 22 1506 55 27 2100 28 26 1 41 84 5 7

Critical Gap Module:
Critical Gp: 4.2 xxxxx xxxxxx 4.1 xxxxx xxxxxx 7.5 6.5 6.9 7.6 6.6 7.0
FollowUpTim: 2.2 xxxxx xxxxxx 2.2 xxxxx xxxxxx 3.5 4.0 3.3 3.5 4.0 3.3

Capacity Module:
Conflict Vol: 2128 xxxxx xxxxxx 1561 xxxxx xxxxxx 2968 3773 1064 2682 3760 781
Potent Cap.: 245 xxxxx xxxxxx 419 xxxxx xxxxxx 6 4 219 10 4 334
Move Cap.: 245 xxxxx xxxxxx 419 xxxxx xxxxxx 0 3 219 6 3 334
Total Cap: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx 42 61 xxxxxx 77 47 xxxxxx
Volume/Cap: 0.09 xxxxx xxxxx 0.06 xxxxx xxxxx 0.62 0.02 0.19 1.10 0.11 0.02

Level Of Service Module:
Queue: 0.3 xxxxx xxxxxx 0.2 xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Stopped Del: 21.1 xxxxx xxxxxx 14.2 xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
LOS by Move: C \* \* B \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
Movement: LT - LTR - RT LF - LTR - RT LF - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx 82 xxxxxx xxxxx 78 xxxxxx
SharedQueue: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx 4.2 xxxxxx xxxxx 7.2 xxxxxx
Shrd StpDel: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx 144 xxxxxx xxxxx 268 xxxxxx
Shared LOS: \*
ApproachDel: xxxxxx xxxxxx 143.8 268.3
ApproachLOS: \*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Tualatin-Sherwood/Cipole

Cycle (sec): 120 Critical Vol./Cap. (X): 0.886

Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 25.7

Optimal Cycle: 113 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1

Volume Module:
Base Vol: 0 0 0 71 0 179 89 1190 0 0 1139 60
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 71 0 179 89 1190 0 0 1139 60
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 71 0 179 89 1190 0 0 1139 60
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 71 0 179 89 1190 0 0 1139 60
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 71 0 179 89 1190 0 0 1139 60

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 1.00 1.00 1.00 0.90 1.00 0.81 0.91 0.96 1.00 1.00 0.95 0.81
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 0 0 0 1718 0 1537 1736 1828 0 0 1809 1537

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.04 0.00 0.12 0.05 0.65 0.00 0.00 0.63 0.04
Crit Moves: \*\*\*\* \*\*
Green/Cycle: 0.00 0.00 0.00 0.13 0.00 0.13 0.06 0.77 0.00 0.00 0.71 0.71
Volume/Cap: 0.00 0.00 0.00 0.31 0.00 0.89 0.89 0.85 0.00 0.00 0.89 0.05
Delay/Veh: 0.0 0.0 0.0 48.0 0.0 85.3 111.1 14.2 0.0 0.0 21.3 5.2
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 0.0 0.0 0.0 48.0 0.0 85.3 111.1 14.2 0.0 0.0 21.3 5.2
HCM2kAvg: 0 0 0 3 0 9 6 31 0 0 36 1

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 Tualatin-Sherwood/Oregon

Cycle (sec): 120 Critical Vol./Cap. (X): 1.200
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 78.6
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns and 12 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 12 columns and 12 rows including Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns and 12 rows including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 Tualatin-Sherwood/Gerda

Average Delay (sec/veh): 14.5 Worst Case Level Of Service: F[231.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Lanes.

Volume Module table with 12 columns and 12 rows including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with 12 columns and 12 rows including Critical Gap, FollowUpTim.

Capacity Module table with 12 columns and 12 rows including Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with 12 columns and 12 rows including Queue, Stopped Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #10 Tualatin-Sherwood/Langer

Cycle (sec): 120 Critical Vol./Cap. (X): 0.897  
 Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 33.4  
 Optimal Cycle: 118 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 0 0 1 0

Volume Module:  
 Base Vol: 9 3 210 7 7 11 7 909 17 267 967 10  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 9 3 210 7 7 11 7 909 17 267 967 10  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 9 3 210 7 7 11 7 909 17 267 967 10  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 9 3 210 7 7 11 7 909 17 267 967 10  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 9 3 210 7 7 11 7 909 17 267 967 10

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.72 0.81 0.81 0.28 0.85 0.85 0.88 0.93 0.79 0.92 0.97 0.97  
 Lanes: 1.00 0.01 0.99 1.00 0.39 0.61 1.00 1.00 1.00 1.00 0.99 0.01  
 Final Sat.: 1364 22 1519 526 627 986 1671 1759 1495 1753 1824 19

Capacity Analysis Module:  
 Vol/Sat: 0.01 0.14 0.14 0.01 0.01 0.01 0.00 0.52 0.01 0.15 0.53 0.53  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.15 0.15 0.15 0.15 0.15 0.15 0.01 0.58 0.58 0.17 0.74 0.74  
 Volume/Cap: 0.04 0.90 0.90 0.09 0.07 0.07 0.72 0.90 0.02 0.90 0.72 0.72  
 Delay/Veh: 43.3 82.2 82.2 44.0 43.5 43.5 189.3 32.8 10.9 76.3 10.5 10.5  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 43.3 82.2 82.2 44.0 43.5 43.5 189.3 32.8 10.9 76.3 10.5 10.5  
 HCM2kAvg: 0 14 11 1 1 1 1 33 0 13 20 21

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 Tualatin-Sherwood/Regal Cinema

Cycle (sec): 120 Critical Vol./Cap. (X): 0.722  
 Loss Time (sec): 15 (Y+R = 4 sec) Average Delay (sec/veh): 23.9  
 Optimal Cycle: 76 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Split Phase Split Phase Protected Protected  
 Rights: Include Include Include Include  
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
 Lanes: 1 0 0 1 0 1 0 1 0 1 2 0 1 0 1 1 0 1 0 1

Volume Module:  
 Base Vol: 155 15 75 11 33 30 29 810 208 102 876 28  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 155 15 75 11 33 30 29 810 208 102 876 28  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 155 15 75 11 33 30 29 810 208 102 876 28  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 155 15 75 11 33 30 29 810 208 102 876 28  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 155 15 75 11 33 30 29 810 208 102 876 28

Saturation Flow Module:  
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
 Adjustment: 0.93 0.86 0.86 0.94 0.99 0.84 0.85 0.93 0.79 0.91 0.96 0.82  
 Lanes: 1.00 0.17 0.83 1.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00  
 Final Sat.: 1769 272 1358 1787 1881 1599 3243 1759 1495 1736 1828 1554

Capacity Analysis Module:  
 Vol/Sat: 0.09 0.06 0.06 0.01 0.02 0.02 0.01 0.46 0.14 0.06 0.48 0.02  
 Crit Moves: \*\*\*\*  
 Green/Cycle: 0.12 0.12 0.12 0.03 0.03 0.03 0.01 0.64 0.64 0.08 0.71 0.71  
 Volume/Cap: 0.72 0.46 0.46 0.24 0.67 0.72 0.68 0.72 0.22 0.72 0.68 0.03  
 Delay/Veh: 62.1 50.7 50.7 59.9 89.4 104.7 95.0 16.9 9.3 70.4 11.4 5.3  
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 AdjDel/Veh: 62.1 50.7 50.7 59.9 89.4 104.7 95.0 16.9 9.3 70.4 11.4 5.3  
 HCM2kAvg: 7 4 4 1 2 2 2 21 3 5 19 0

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 Roy Rogers/Borchers

Cycle (sec): 60 Critical Vol./Cap. (X): 0.603
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 8.5
Optimal Cycle: 44 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 Oregon/Tonquin

Average Delay (sec/veh): 49.0 Worst Case Level Of Service: F[171.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns for Critical Gap, FollowUpTim.

Capacity Module table with columns for Conflict Vol, Potent Cap, Move Cap, Volume/Cap.

Level Of Service Module table with columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap, Shared Queue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

FHWA Roundabout Method (Base Volume Alternative)

Intersection #14 Oregon/Murdock

Average Delay (sec/veh): 7.9 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign  
 Lanes: 1 0 1 1

Volume Module:

Base Vol:	17	0	159	0	0	0	0	176	36	501	318	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	17	0	159	0	0	0	0	176	36	501	318	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	0	159	0	0	0	0	176	36	501	318	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	0	159	0	0	0	0	176	36	501	318	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	17	0	159	0	0	0	0	176	36	501	318	0

PCE Module:

AutoPCE:	16	0	154	0	0	0	0	169	35	496	315	0
TruckPCE:	1	0	7	0	0	0	0	8	2	8	5	0
ComboPCE:	0	0	0	0	0	0	0	4	1	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	17	0	161	0	0	0	0	180	37	504	320	0

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	180	840	504	17
MaxVolume:	1103	xxxxxx	928	1191
PedVolume:	0	0	0	0
AdjMaxVol:	1103	xxxxxx	928	1191
ApproachVol:	179	xxxxxx	217	823
ApproachDel:	3.9	xxxxxx	5.1	9.5
Queue:	0.6	xxxx	0.9	5.9

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Murdock/Willamette

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B [ 14.7]

Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
 Rights: Include Include Include Include  
 Lanes: 0 0 1:0 0 0 0 1:0 0 0 0 1:0 0 0 0 0 1:0 0

Volume Module:

Base Vol:	8	172	6	22	402	29	14	4	4	5	2	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	172	6	22	402	29	14	4	4	5	2	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	172	6	22	402	29	14	4	4	5	2	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	8	172	6	22	402	29	14	4	4	5	2	8

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxx	4.1	xxxx	xxxx	7.2	6.6	6.3	7.3	6.7	6.4
FollowUpTim:	2.2	xxxx	xxxx	2.2	xxxx	xxxx	3.6	4.1	3.4	3.7	4.2	3.5

Capacity Module:

Cnflct Vol:	431	xxxx	xxxx	178	xxxx	xxxx	657	655	417	656	666	175
Potent Cap.:	1129	xxxx	xxxx	1404	xxxx	xxxx	372	380	626	359	362	831
Move Cap.:	1129	xxxx	xxxx	1404	xxxx	xxxx	360	371	626	348	353	831
Volume/Cap.:	0.01	xxxx	xxxx	0.02	xxxx	xxxx	0.04	0.01	0.01	0.01	0.01	0.01

Level Of Service Module:

Queue:	0.0	xxxx	xxxx	0.0	xxxx							
Stopped Del:	8.2	xxxx	xxxx	7.6	xxxx							
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT											
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	392	xxxx	xxxx	506	xxxx	xxxx
SharedQueue:	xxxx	0.2	xxxx	xxxx	0.1	xxxx						
Shrd StpDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	14.7	xxxx	xxxx	12.3	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	B	*	*	B	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	14.7	xxxxxx	xxxxxx	14.7	xxxxxx	xxxxxx	12.3	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	B	*	*	B	*	*	B	*	*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Sunset/Murdock

Cycle (sec): 100 Critical Vol./Cap. (X): 0.474
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.2
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #17 Sunset/Sherwood

Cycle (sec): 100 Critical Vol./Cap. (X): 0.970
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 33.3
Optimal Cycle: 0 Level Of Service: D

Table with 4 columns: Approach, North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #18 Edy/Elwert

Cycle (sec): 100 Critical Vol./Cap. (X): 0.649
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 13.0
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes, Min. Green, and Volume Module.

Volume Module table with 11 columns and 11 rows showing various traffic volume and adjustment factors.

Saturation Flow Module table with 11 columns and 3 rows showing adjustment factors and final saturation values.

Capacity Analysis Module table with 11 columns and 11 rows showing delay, LOS, and approach delay values.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #19 Edy/Borchers

Average Delay (sec/veh): 8.3 Worst Case Level Of Service: C [ 24.3]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Lanes, and Volume Module.

Volume Module table with 11 columns and 11 rows showing various traffic volume and adjustment factors.

Critical Gap Module table with 11 columns and 2 rows showing gap and follow-up time values.

Capacity Module table with 11 columns and 4 rows showing conflict, potent, move, and volume/capacity values.

Level Of Service Module table with 11 columns and 11 rows showing queue, stopped delay, LOS, and approach delay values.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #20 Sherwood/Langer

Cycle (sec): 60 Critical Vol./Cap. (X): 0.771
Loss Time (sec): 15 (Y+R = 4 sec) Average Delay (sec/veh): 55.5
Optimal Cycle: 65 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns and 12 rows of traffic volume and adjustment factors.

Saturation Flow Module table with 12 columns and 12 rows of flow and saturation data.

Capacity Analysis Module table with 12 columns and 12 rows of capacity and delay analysis.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #21 Sherwood/Century

Average Delay (sec/veh): 231.5 Worst Case Level Of Service: F[1532.1]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module table with 12 columns and 12 rows of traffic volume and adjustment factors.

Critical Gap Module table with 12 columns and 12 rows of gap and follow-up time data.

Capacity Module table with 12 columns and 12 rows of capacity and volume/capacity data.

Level Of Service Module table with 12 columns and 12 rows of queue, delay, and LOS data.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #22 Sherwood-Pine/3rd

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: D [ 31.0]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 55 0 22 0 0 0 0 625 112 46 508 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 55 0 22 0 0 0 0 625 112 46 508 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 55 0 22 0 0 0 0 625 112 46 508 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 55 0 22 0 0 0 0 625 112 46 508 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 1281 xxxxx 681 xxxxx xxxxx xxxxx xxxxx xxxxx 737 xxxxx xxxxx
Potent Cap.: 184 xxxxx 454 xxxxx xxxxx xxxxx xxxxx xxxxx 864 xxxxx xxxxx
Move Cap.: 177 xxxxx 454 xxxxx xxxxx xxxxx xxxxx xxxxx 864 xxxxx xxxxx
Volume/Cap: 0.31 xxxxx 0.05 xxxxx xxxxx xxxxx xxxxx xxxxx 0.05 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 9.4 xxxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 214 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 1.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx 31.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* D \* \* \* \* A \* \* \*
ApproachDel: 31.0 xxxxxx xxxxxx xxxxxx
ApproachLOS: D \* \* \*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #23 Pine/Oregon

Average Delay (sec/veh): 19.0 Worst Case Level Of Service: F [ 63.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1! 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 0 0 0 80 0 277 276 362 0 0 290 28
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 80 0 277 276 362 0 0 290 28
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 80 0 277 276 362 0 0 290 28
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 80 0 277 276 362 0 0 290 28

Critical Gap Module:
Critical Gp: xxxxx xxxxx xxxxx 6.4 xxxxx 6.3 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: xxxxx xxxxx xxxxx 3.5 xxxxx 3.3 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx 1237 xxxxx 321 330 xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx 191 xxxxx 713 1224 xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx 149 xxxxx 703 1212 xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.54 xxxxx 0.39 0.23 xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.9 xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.8 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 384 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx 10.0 xxxxx 0.9 xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx 63.2 xxxxx 8.8 xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* F \* \* \* \*
ApproachDel: xxxxxx 63.2 xxxxxx xxxxxx
ApproachLOS: \* F \* \*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #24 Washington/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.609
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 12.4
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flows and 10 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of adjustment and final saturation data.

Capacity Analysis Module table with 12 columns and 10 rows of delay, LOS, and approach delay data.

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #25 Washington/3rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.356
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.5
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flows and 10 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of adjustment and final saturation data.

Capacity Analysis Module table with 12 columns and 10 rows of delay, LOS, and approach delay data.

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #26 Sherwood/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.525  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.2  
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 0 0 1 0	0 0 1 0 0	0 0 1 0 0	0 0 1 0 0

Volume Module:	North Bound		South Bound		East Bound		West Bound	
Base Vol:	0	11	10	347	9	9	30	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	11	10	347	9	9	30	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	11	10	347	9	9	30	105
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	0	11	10	347	9	9	30	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	11	10	347	9	9	30	105

Saturation Flow Module:	North Bound		South Bound		East Bound		West Bound	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.52	0.48	0.96	0.02	0.02	0.21	0.75
Final Sat.:	0	340	309	661	17	17	134	469

Capacity Analysis Module:	North Bound		South Bound		East Bound		West Bound	
Vol/Sat:	xxxx	0.03	0.03	0.52	0.52	0.22	0.22	0.22
Crit Moves:			****	****		****	****	
Delay/Veh:	0.0	8.2	8.2	13.0	13.0	9.8	9.8	9.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.2	8.2	13.0	13.0	9.8	9.8	9.8
LOS by Move:	*	A	A	B	B	A	A	A
ApproachDel:		8.2		13.0		9.8		9.5
Delay Adj:		1.00		1.00		1.00		1.00
ApprAdjDel:		8.2		13.0		9.8		9.5
LOS by Appr:		A		B		A		A

Sherwood TSP  
 Future (2020) PM Peak  
 No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #27 Cipole/Herman

Cycle (sec): 100 Critical Vol./Cap. (X): 0.411  
 Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.2  
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R

Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 0 1 0 0	0 0 0 0 0	0 0 0 1 0	0 1 0 0 0

Volume Module:	North Bound		South Bound		East Bound		West Bound	
Base Vol:	166	0	52	0	0	0	0	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	166	0	52	0	0	0	0	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	166	0	52	0	0	0	0	56
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	166	0	52	0	0	0	0	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	166	0	52	0	0	0	0	56

Saturation Flow Module:	North Bound		South Bound		East Bound		West Bound	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.76	0.00	0.24	0.00	0.00	0.00	0.00	0.30
Final Sat.:	512	0	160	0	0	0	0	232

Capacity Analysis Module:	North Bound		South Bound		East Bound		West Bound	
Vol/Sat:	0.32	xxxx	0.32	xxxx	xxxx	xxxx	xxxx	0.24
Crit Moves:	****							****
Delay/Veh:	10.3	0.0	10.3	0.0	0.0	0.0	0.0	8.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.3	0.0	10.3	0.0	0.0	0.0	0.0	8.8
LOS by Move:	B	*	B	*	*	*	A	B
ApproachDel:	10.3			xxxxxx			8.8	11.0
Delay Adj:	1.00			xxxxxx			1.00	1.00
ApprAdjDel:	10.3			xxxxxx			8.8	11.0
LOS by Appr:	B	*	B	*	*	*	A	B

Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

Level Of Service Computation Report  
FHWA Roundabout Method (Base Volume Alternative)

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Intersection #28 Meinecke/Dewey  
\*\*\*\*\*

Average Delay (sec/veh): 4.0 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign  
Lanes: 0 1 1 1

Volume Module:

Base Vol:	0	0	0	196	0	134	52	38	0	0	53	156
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	196	0	134	52	38	0	0	53	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	196	0	134	52	38	0	0	53	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	196	0	134	52	38	0	0	53	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	196	0	134	52	38	0	0	53	156

PCE Module:

AutoPCE:	0	0	0	194	0	133	52	38	0	0	52	153
TruckPCE:	0	0	0	3	0	2	0	0	0	0	2	5
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	0	0	0	197	0	135	52	38	0	0	54	158

Delay Module: >> Time Period: 0.25 hours <<

CircVolume:	287	54	197	52
MaxVolume:	xxxxxx	1171	1094	1172
PedVolume:	0	0	0	0
AdjMaxVol:	xxxxxx	1171	1094	1172
ApproachVol:	xxxxxx	332	90	211
ApproachDel:	xxxxxx	4.3	3.6	3.7
Queue:	xxxx	1.2	0.3	0.7

Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

Level Of Service Computation Report  
2000 HCM Unsignalized Method (Base Volume Alternative)

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Intersection #29 Brookman/Ladd Hill  
\*\*\*\*\*

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: B[ 11.1]

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol:	61	86	0	0	105	105	57	0	39	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	86	0	0	105	105	57	0	39	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	61	86	0	0	105	105	57	0	39	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	61	86	0	0	105	105	57	0	39	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.5	xxxx	6.3	xxxx	xxxx	xxxx
FollowUpTim:	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.6	xxxx	3.4	xxxx	xxxx	xxxx

Capacity Module:

Cnflct Vol:	210	xxxx	xxxx	xxxx	xxxx	xxxx	366	xxxx	158	xxxx	xxxx	xxxx
Potent Cap.:	1367	xxxx	xxxx	xxxx	xxxx	xxxx	624	xxxx	875	xxxx	xxxx	xxxx
Move Cap.:	1367	xxxx	xxxx	xxxx	xxxx	xxxx	602	xxxx	875	xxxx	xxxx	xxxx
Volume/Cap.:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	xxxx	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

Queue:	0.1	xxxx										
Stopped Del:	7.8	xxxx										
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT											
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	690	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	0.1	xxxx	xxxx	xxxx	xxxx	xxxx	0.5	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd StpDel:	7.8	xxxx	xxxx	xxxx	xxxx	xxxx	11.1	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	A	*	*	*	*	*	B	*	*	*	*	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	11.1	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
ApproachLOS:	*	*	*	*	*	*	B	*	*	*	*	*

Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #30 Sunset/Pine  
\*\*\*\*\*

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: D[ 27.2]  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 1 0 0 0	0 0 1 1 0 0	0 0 1 1 0 0	0 0 1 1 0 0

Volume Module:

Base Vol:	5	2	0	92	1	11	13	317	8	1	527	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	2	0	92	1	11	13	317	8	1	527	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	2	0	92	1	11	13	317	8	1	527	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	5	2	0	92	1	11	13	317	8	1	527	67

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	930	945	xxxxx	913	916	577	596	xxxx	xxxxx	325	xxxx	xxxxx
Potent Cap.:	250	264	xxxxx	254	272	517	985	xxxx	xxxxx	1240	xxxx	xxxxx
Move Cap.:	238	260	xxxxx	250	268	510	984	xxxx	xxxxx	1240	xxxx	xxxxx
Volume/Cap:	0.02	0.01	xxxx	0.37	0.00	0.02	0.01	xxxx	xxxxx	0.00	xxxx	xxxxx

Level Of Service Module:

Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx
Stopped Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.7	xxxx	xxxxx	7.9	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*
Movement:	LT - LTR - RT											
Shared Cap.:	244	xxxx	xxxxx	xxxx	264	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	1.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd StpDel:	20.2	xxxx	xxxxx	xxxxx	27.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	C	*	*	*	D	*	*	*	*	*	*	*
ApproachDel:	20.2				27.2		xxxxxxx		xxxxxxx			
ApproachLOS:	C				D		*		*			

Sherwood TSP  
Future (2020) PM Peak  
No-Build Scenario

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #31 Sunset/Pinehurst  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.728  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 15.8  
Optimal Cycle: 0 Level Of Service: C  
\*\*\*\*\*

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 0 1 1 0 0	0 0 1 1 0 0	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	25	17	42	70	20	15	56	295	41	84	358	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	17	42	70	20	15	56	295	41	84	358	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	17	42	70	20	15	56	295	41	84	358	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	17	42	70	20	15	56	295	41	84	358	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	25	17	42	70	20	15	56	295	41	84	358	123

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.30	0.20	0.50	0.67	0.19	0.14	1.00	0.88	0.12	1.00	0.74	0.26
Final Sat.:	155	106	261	343	98	73	561	547	76	583	492	169

Capacity Analysis Module:

Vol/Sat:	0.16	0.16	0.16	0.20	0.20	0.20	0.10	0.54	0.54	0.14	0.73	0.73
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	10.1	10.1	10.1	10.7	10.7	10.7	9.6	14.5	14.5	9.8	20.6	20.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.1	10.1	10.1	10.7	10.7	10.7	9.6	14.5	14.5	9.8	20.6	20.6
LOS by Move:	B	B	B	B	B	B	A	B	B	A	C	C
ApproachDel:	10.1			10.7			13.8			19.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.1			10.7			13.8			19.0		
LOS by Appr:	B			B			B			C		

\*\*\*\*\*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #32 Sunset/Woodhaven

Average Delay (sec/veh): 6.9 Worst Case Level Of Service: E[ 38.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 0 1 0 0 1 0

Volume Module:
Base Vol: 11 4 5 50 4 114 204 455 26 3 351 54
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 11 4 5 50 4 114 204 455 26 3 351 54
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 11 4 5 50 4 114 204 455 26 3 351 54
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 4 5 50 4 114 204 455 26 3 351 54

Critical Gap Module:
Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:
Cnflct Vol: 1320 1284 460 1270 1283 392 410 xxxx xxxxx 486 xxxx xxxxx
Potent Cap.: 133 164 599 146 166 659 1160 xxxx xxxxx 1077 xxxx xxxxx
Move Cap.: 92 134 597 121 135 651 1155 xxxx xxxxx 1072 xxxx xxxxx
Volume/Cap: 0.12 0.03 0.01 0.41 0.03 0.18 0.18 xxxx xxxxx 0.00 xxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.6 xxxx xxxxx 0.0 xxxx xxxxx
Stopped Del: xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.8 xxxx xxxxx 8.4 xxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \* \* \* A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 126 xxxxx xxxxx 272 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.5 xxxxx xxxxx 3.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx 38.8 xxxxx xxxxx 37.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* E \* \* \* E \* \* \* \* \* \* \* \* \* \*
ApproachDel: 38.8 37.3 xxxxxx xxxxxx
ApproachLOS: E E \* \*

Sherwood TSP
Future (2020) PM Peak
No-Build Scenario

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #33 Elwert/Swanstrom

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[ 11.1]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 1 0 0 0 0 0 0 0 1! 0 0

Volume Module:
Base Vol: 0 147 13 13 425 0 0 0 0 11 0 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 147 13 13 425 0 0 0 0 11 0 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 147 13 13 425 0 0 0 0 11 0 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 147 13 13 425 0 0 0 0 11 0 11

Critical Gap Module:
Critical Gp: xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.4 xxxxx 6.2
FollowUpTim: xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 xxxxx 3.3

Capacity Module:
Cnflct Vol: xxxxx xxxx xxxxx 160 xxxx xxxxx xxxxx xxxx xxxxx 605 xxxxx 154
Potent Cap.: xxxxx xxxx xxxxx 1425 xxxx xxxxx xxxxx xxxx xxxxx 464 xxxxx 898
Move Cap.: xxxxx xxxx xxxxx 1425 xxxx xxxxx xxxxx xxxx xxxxx 461 xxxxx 898
Volume/Cap: xxxxx xxxx xxxxx 0.01 xxxx xxxxx xxxxx xxxx xxxxx 0.02 xxxx 0.01

Level Of Service Module:
Queue: xxxxx xxxx xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Stopped Del: xxxxx xxxx xxxxx 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \* \* \* A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxx xxxxx 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd StpDel: xxxxx xxxx xxxxx 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS: \* \* \* \* \* A \* \* \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx 11.1
ApproachLOS: \* \* \* \* \* B

Sherwood TSP Future (2020) PM Peak No-Build Scenario

Level Of Service Computation Report 2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #34 Elwert/Kruger

Average Delay (sec/veh): 9.1 Worst Case Level Of Service: B [13.5]

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign Rights: Include Include Include Include Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module: Base Vol: 21 0 172 0 0 0 0 5 23 413 4 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 21 0 172 0 0 0 0 5 23 413 4 0 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 21 0 172 0 0 0 0 5 23 413 4 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Final Vol.: 21 0 172 0 0 0 0 5 23 413 4 0

Critical Gap Module: Critical Gap: 4.1 6.5 6.3 7.1 6.5 6.5 FollowUpTim: 2.2 4.1 3.4 3.5 4.0

Capacity Module: Cnflct Vol: 0 131 128 Potent Cap.: 0 844 764 Move Cap.: 0 840 764 Volume/Cap: 0.00 0.01 0.00 0.49 0.01

Level Of Service Module: Queue: 0.0 Stopped Del: 0.0 LOS by Move: A Movement: LT - LTR - RT Shared Cap.: 3732 839 SharedQueue: 0.0 2.8 Shrd StpDel: 6.0 13.5 Shared LOS: A B ApproachDel: 6.0 13.5 ApproachLOS: A B

Sherwood TSP Future (2020) PM Peak No-Build Scenario

Level Of Service Computation Report 2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #35 Oregon/Lincoln

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: B [13.2]

Approach: North Bound South Bound East Bound West Bound Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled Rights: Include Include Include Include Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module: Base Vol: 14 0 6 0 0 0 0 0 275 27 26 337 0 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 Initial Bse: 14 0 6 0 0 0 0 0 275 27 26 337 0 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 PHF Volume: 14 0 6 0 0 0 0 0 275 27 26 337 0 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 Final Vol.: 14 0 6 0 0 0 0 0 275 27 26 337 0

Critical Gap Module: Critical Gap: 6.5 6.3 6.3 4.1 4.1 4.1 FollowUpTim: 3.6 3.4 3.4 4.1 4.1

Capacity Module: Cnflct Vol: 691 290 738 1258 Move Cap.: 392 737 Volume/Cap: 0.04 0.01 0.00 0.02

Level Of Service Module: Queue: 0.1 Stopped Del: 7.9 LOS by Move: A Movement: LT - LTR - RT Shared Cap.: 456 839 SharedQueue: 0.1 2.8 Shrd StpDel: 13.2 13.5 Shared LOS: A B ApproachDel: 13.2 13.5 ApproachLOS: B

Sherwood TSP  
 Future (2020) PM Peak  
 Build

## Scenario Report

Scenario: 2020 PM Peak

Command: 2020 PM Peak  
 Volume: Default Volume  
 Geometry: Default Geometry  
 Impact Fee: Default Impact Fee  
 Trip Generation: Default Trip Generation  
 Trip Distribution: Default Trip Distribution  
 Paths: Default Paths  
 Routes: Default Routes  
 Configuration: Default Configuration

Sherwood TSP  
 Future (2020) PM Peak  
 S31000

Impact Analysis Report  
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh	V/ C	Del/ LOS Veh	V/ C	
# 1 ORE 99W/Home Depot	B	17.9 0.759	B	17.9 0.759	+ 0.000 D/V
# 2 ORE 99W/Tualatin-Sherwood Rd	D	43.9 0.864	D	43.9 0.864	+ 0.000 D/V
# 3 ORE 99W/Sherwood Blvd	D	38.1 0.801	D	38.1 0.801	+ 0.000 D/V
# 4 ORE 99W/Meinecke	B	16.4 0.717	B	16.4 0.717	+ 0.000 D/V
# 5 ORE 99W/Sunset	C	31.3 0.849	C	31.3 0.849	+ 0.000 D/V
# 6 ORE 99W/Brookman	F	102.9 0.000	F	102.9 0.000	+ 0.000 D/V
# 7 Tualatin-Sherwood/Cipole	B	15.7 0.562	B	15.7 0.562	+ 0.000 D/V
# 8 Tualatin-Sherwood/Oregon	C	22.1 0.753	C	22.1 0.753	+ 0.000 D/V
# 9 Tualatin-Sherwood/Gerda	F	64.2 0.000	F	64.2 0.000	+ 0.000 D/V
# 10 Tualatin-Sherwood/Langer	B	16.3 0.469	B	16.3 0.469	+ 0.000 D/V
# 11 Tualatin-Sherwood/Regal Cinema	B	19.3 0.518	B	19.3 0.518	+ 0.000 D/V
# 12 Roy Rogers/Borchers	A	7.6 0.559	A	7.6 0.559	+ 0.000 D/V
# 13 Oregon/Tonquin	E	35.3 0.000	E	35.3 0.000	+ 0.000 D/V
# 14 Oregon/Murdock	A	6.0 0.000	A	6.0 0.000	+ 0.000 V/C
# 15 Murdock/Willamette	B	13.4 0.000	B	13.4 0.000	+ 0.000 D/V
# 16 Sunset/Murdock	B	10.2 0.393	B	10.2 0.393	+ 0.000 V/C
# 17 Sunset/Sherwood	C	23.0 0.832	C	23.0 0.832	+ 0.000 V/C
# 18 Edy/Elwert	B	11.4 0.566	B	11.4 0.566	+ 0.000 V/C
# 19 Edy/Borchers	C	19.9 0.000	C	19.9 0.000	+ 0.000 D/V
# 20 Sherwood/Langer	D	39.0 0.611	D	39.0 0.611	+ 0.000 D/V
# 21 Sherwood/Century	F	77.4 0.000	F	77.4 0.000	+ 0.000 D/V
# 22 Sherwood-Pine/3rd	D	25.6 0.000	D	25.6 0.000	+ 0.000 D/V
# 23 Pine/Oregon	D	25.5 0.000	D	25.5 0.000	+ 0.000 D/V

Sherwood TSP  
Future (2020) PM Peak  
S31000

Intersection	Base		Future		Change in
	LOS	Veh C	LOS	Veh C	
# 24 Washington/Railroad	A	7.8 0.188	A	7.8 0.188	+ 0.000 V/C
# 25 Washington/3rd	A	7.5 0.120	A	7.5 0.120	+ 0.000 V/C
# 26 Sherwood/Railroad	B	10.7 0.448	B	10.7 0.448	+ 0.000 V/C
# 27 Cipole/Herman	A	9.2 0.284	A	9.2 0.284	+ 0.000 V/C
# 28 Meinecke/Dewey	A	3.7 0.000	A	3.7 0.000	+ 0.000 V/C
# 29 Brookman/Ladd Hill	B	10.2 0.000	B	10.2 0.000	+ 0.000 D/V
# 30 Sunset/Pine	C	21.4 0.000	C	21.4 0.000	+ 0.000 D/V
# 31 Sunset/Pinehurst	B	13.5 0.635	B	13.5 0.635	+ 0.000 V/C
# 32 Sunset/Woodhaven	D	30.9 0.000	D	30.9 0.000	+ 0.000 D/V
# 33 Elwert/Swanstrom	B	10.8 0.000	B	10.8 0.000	+ 0.000 D/V
# 34 Elwert/Kruger	B	12.5 0.000	B	12.5 0.000	+ 0.000 D/V
# 35 Oregon/Lincoln	B	11.4 0.000	B	11.4 0.000	+ 0.000 D/V

Sherwood TSP  
Future (2020) PM Peak  
S31000

Level Of Service Computation Report  
2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
Intersection #1 ORE 99W/Home Depot  
\*\*\*\*\*

Cycle (sec):            120                            Critical Vol./Cap. (X):            0.759  
Loss Time (sec):       12 (Y+R = 4 sec)            Average Delay (sec/veh):        17.9  
Optimal Cycle:           72                                    Level Of Service:                B

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	0	0	1	0

\*\*\*\*\*

Volume Module:

Base Vol:	23	833	104	99	1930	12	60	1	31	150	0	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	833	104	99	1930	12	60	1	31	150	0	91
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	833	104	99	1930	12	60	1	31	150	0	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	833	104	99	1930	12	60	1	31	150	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	833	104	99	1930	12	60	1	31	150	0	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	23	833	104	99	1930	12	60	1	31	150	0	91

\*\*\*\*\*

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.80	0.93	0.93	0.93	0.48	0.48	0.85	0.66	1.00	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.98	0.02	1.00	1.00	0.00	1.00
Final Sat.:	1702	3404	1523	1769	3512	22	888	15	1615	1248	0	1583

\*\*\*\*\*

Capacity Analysis Module:

Vol/Sat:	0.01	0.24	0.07	0.06	0.55	0.55	0.07	0.07	0.02	0.12	0.00	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.60	0.60	0.14	0.72	0.72	0.16	0.16	0.16	0.16	0.00	0.16
Volume/Cap:	0.76	0.41	0.11	0.41	0.76	0.76	0.43	0.43	0.12	0.76	0.00	0.36
Delay/Veh:	129.3	12.6	10.2	48.3	11.5	11.5	47.6	47.6	43.5	63.9	0.0	46.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	129.3	12.6	10.2	48.3	11.5	11.5	47.6	47.6	43.5	63.9	0.0	46.0
HCM2kAvg:	2	8	2	4	23	27	5	4	1	10	0	3

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Sherwood TSP
Future (2020) PM Peak
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 ORE 99W/Tualatin-Sherwood Rd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.864
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 43.9
Optimal Cycle: 113 Level Of Service: D

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns for volume types and 12 rows for various traffic metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns for capacity analysis metrics and 10 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

Sherwood TSP
Future (2020) PM Peak
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 ORE 99W/Sherwood Blvd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.801
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.1
Optimal Cycle: 93 Level Of Service: D

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 rows: Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns for volume types and 12 rows for various traffic metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module table with 12 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 12 columns for capacity analysis metrics and 10 rows for Vol/Sat, Crit Moves, Green/Cycle, etc.

Sherwood TSP
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 ORE 99W/Meinecke

Cycle (sec): 120 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.4
Optimal Cycle: 64 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 11 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 11 columns and 4 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 11 columns and 10 rows including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.

Sherwood TSP
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 ORE 99W/Sunset

Cycle (sec): 120 Critical Vol./Cap. (X): 0.849
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 31.3
Optimal Cycle: 97 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 11 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 11 columns and 4 rows including Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 11 columns and 10 rows including Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, and HCM2kAvg.



Sherwood TSP
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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tualatin-Sherwood/Oregon

Cycle (sec): 120 Critical Vol./Cap. (X): 0.753
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.1
Optimal Cycle: 71 Level Of Service: C

Table with columns: Approach, Movement, Control, Rights, Min. Green, Lanes. Rows for North, South, East, West bounds.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns: Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

Sherwood TSP
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Tualatin-Sherwood/Gerda

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F [ 64.2]

Table with columns: Approach, Movement, Control, Rights, Lanes. Rows for North, South, East, West bounds.

Volume Module table with columns: Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns: Critical Gap, FollowUpTim.

Capacity Module table with columns: Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns: Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

Sherwood TSP
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Tualatin-Sherwood/Langer

Cycle (sec): 120 Critical Vol./Cap. (X): 0.469
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.3
Optimal Cycle: 39 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flows and 10 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow data.

Capacity Analysis Module table with 12 columns and 10 rows of capacity analysis data.

Sherwood TSP
Future (2020) PM Peak
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Tualatin-Sherwood/Regal Cinema

Cycle (sec): 120 Critical Vol./Cap. (X): 0.518
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 19.3
Optimal Cycle: 52 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic flows and 10 rows of volume data.

Saturation Flow Module table with 12 columns and 4 rows of saturation flow data.

Capacity Analysis Module table with 12 columns and 10 rows of capacity analysis data.

Sherwood TSP Future (2020) PM Peak S31000

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Roy Rogers/Borchers

Cycle (sec): 60 Critical Vol./Cap. (X): 0.559
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 7.6
Optimal Cycle: 41 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

Sherwood TSP Future (2020) PM Peak S31000

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Oregon/Tonquin

Average Delay (sec/veh): 11.5 Worst Case Level Of Service: E [ 35.3]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Vol.

Critical Gap Module table with columns for Critical Gap, FollowUpTim.

Capacity Module table with columns for Conflict Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module table with columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, ApproachLOS.

Sherwood TSP  
 Future (2020) PM Peak  
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Level Of Service Computation Report  
 FHWA Roundabout Method (Future Volume Alternative)

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 Intersection #14 Oregon/Murdock  
 \*\*\*\*\*  
 Average Delay (sec/veh): 6.0 Level Of Service: A  
 \*\*\*\*\*  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Yield Sign Yield Sign Yield Sign Yield Sign  
 Lanes: 1 0 1 1  
 Volume Module:  
 Base Vol: 16 0 155 0 0 0 0 90 34 444 224 0  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 16 0 155 0 0 0 0 90 34 444 224 0  
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 16 0 155 0 0 0 0 90 34 444 224 0  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 16 0 155 0 0 0 0 90 34 444 224 0  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Reduced Vol: 16 0 155 0 0 0 0 90 34 444 224 0  
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Final Vol.: 16 0 155 0 0 0 0 90 34 444 224 0  
 PCE Module:  
 AutoPCE: 16 0 150 0 0 0 0 86 33 440 222 0  
 TruckPCE: 1 0 7 0 0 0 0 4 2 7 3 0  
 ComboPCE: 0 0 0 0 0 0 0 2 1 0 0 0  
 BicyclePCE: 0 0 0 0 0 0 0 0 0 0 0 0  
 AdjVolume: 16 0 157 0 0 0 0 92 35 446 225 0  
 Delay Module: >> Time Period: 0.25 hours <<  
 CircVolume: 92 688 446 16  
 MaxVolume: 1150 xxxxxx 959 1191  
 PedVolume: 0 0 0 0  
 AdjMaxVol: 1150 xxxxxx 959 1191  
 ApproachVol: 174 xxxxxx 127 671  
 ApproachDel: 3.7 xxxxxx 4.3 6.8  
 Queue: 0.5 xxxxx 0.5 3.7

Sherwood TSP  
 Future (2020) PM Peak  
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Level Of Service Computation Report  
 2000 HCM Unsignalized Method (Future Volume Alternative)

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 Intersection #15 Murdock/Willamette  
 \*\*\*\*\*  
 Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[ 13.4]  
 \*\*\*\*\*  
 Approach: North Bound South Bound East Bound West Bound  
 Movement: L - T - R L - T - R L - T - R L - T - R  
 Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
 Rights: Include Include Include Include  
 Lanes: 0 0 1 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0  
 Volume Module:  
 Base Vol: 8 162 4 15 342 12 14 4 4 3 2 5  
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 Initial Bse: 8 162 4 15 342 12 14 4 4 3 2 5  
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Initial Fut: 8 162 4 15 342 12 14 4 4 3 2 5  
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 PHF Volume: 8 162 4 15 342 12 14 4 4 3 2 5  
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
 Final Vol.: 8 162 4 15 342 12 14 4 4 3 2 5  
 Critical Gap Module:  
 Critical Gap: 4.1 xxxxx xxxxxx 4.1 xxxxx xxxxxx 7.2 6.6 6.3 7.3 6.7 6.4  
 FollowUpTim: 2.2 xxxxx xxxxxx 2.2 xxxxx xxxxxx 3.6 4.1 3.4 3.7 4.2 3.5  
 Capacity Module:  
 Cnflct Vol: 354 xxxxx xxxxxx 166 xxxxx xxxxxx 562 560 348 562 564 164  
 Potent Cap.: 1205 xxxxx xxxxxx 1418 xxxxx xxxxxx 430 430 684 416 415 843  
 Move Cap.: 1205 xxxxx xxxxxx 1418 xxxxx xxxxxx 421 423 684 405 408 843  
 Volume/Cap: 0.01 xxxxx xxxxx 0.01 xxxxx xxxxx 0.03 0.01 0.01 0.01 0.00 0.01  
 Level Of Service Module:  
 Queue: 0.0 xxxxx xxxxxx 0.0 xxxxx xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
 Stopped Del: 8.0 xxxxx xxxxxx 7.6 xxxxx xxxxxx xxxxx xxxxx xxxxx xxxxx xxxxx  
 LOS by Move: A \* \* A \* \* \* \* \* \* \* \* \* \*  
 Movement: LT - LTR - RT  
 Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx 453 xxxxxx xxxxx 548 xxxxxx  
 SharedQueue: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxxx 0.2 xxxxxx xxxxxx 0.1 xxxxxx  
 Shrd StpDel: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxxx 13.4 xxxxxx xxxxx 11.7 xxxxxx  
 Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
 ApproachDel: xxxxxx xxxxxx 13.4 11.7  
 ApproachLOS: \* \* B B

Sherwood TSP  
Future (2020) PM Peak  
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Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #16 Sunset/Murdock  
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.393  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.2  
Optimal Cycle: 0 Level Of Service: B

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	201	57	4	19	46	240	93	12	133	1	8	11
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	201	57	4	19	46	240	93	12	133	1	8	11
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	201	57	4	19	46	240	93	12	133	1	8	11
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	201	57	4	19	46	240	93	12	133	1	8	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	57	4	19	46	240	93	12	133	1	8	11
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	201	57	4	19	46	240	93	12	133	1	8	11

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.77	0.22	0.01	0.06	0.15	0.79	1.00	0.08	0.92	0.05	0.40	0.55
Final Sat.:	525	149	10	48	117	611	540	54	596	30	238	327

Capacity Analysis Module:

Vol/Sat:	0.38	0.38	0.38	0.39	0.39	0.39	0.17	0.22	0.22	0.03	0.03	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	11.0	11.0	11.0	10.2	10.2	10.2	10.3	9.2	9.2	8.5	8.5	8.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.0	11.0	11.0	10.2	10.2	10.2	10.3	9.2	9.2	8.5	8.5	8.5
LOS by Move:	B	B	B	B	B	B	A	A	A	A	A	A
ApproachDel:	11.0			10.2			9.6			8.5		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.0			10.2			9.6			8.5		
LOS by Appr:	B			B			A			A		

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Sherwood TSP  
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Level Of Service Computation Report  
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #17 Sunset/Sherwood  
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Cycle (sec): 100 Critical Vol./Cap. (X): 0.832  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 23.0  
Optimal Cycle: 0 Level Of Service: C

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	36	104	27	65	187	170	78	224	37	51	348	74
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	104	27	65	187	170	78	224	37	51	348	74
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	104	27	65	187	170	78	224	37	51	348	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	104	27	65	187	170	78	224	37	51	348	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	104	27	65	187	170	78	224	37	51	348	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	36	104	27	65	187	170	78	224	37	51	348	74

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.79	0.21	1.00	0.52	0.48	1.00	0.86	0.14	1.00	0.82	0.18
Final Sat.:	395	338	88	442	261	237	437	408	67	460	418	89

Capacity Analysis Module:

Vol/Sat:	0.09	0.31	0.31	0.15	0.72	0.72	0.18	0.55	0.55	0.11	0.83	0.83
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Delay/Veh:	11.9	13.5	13.5	11.8	24.2	24.2	12.2	17.8	17.8	11.2	34.0	34.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	13.5	13.5	11.8	24.2	24.2	12.2	17.8	17.8	11.2	34.0	34.0
LOS by Move:	B	B	B	B	C	C	B	C	C	B	D	D
ApproachDel:	13.2			22.3			16.6			31.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.2			22.3			16.6			31.6		
LOS by Appr:	B			C			C			D		

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Sherwood TSP
Future (2020) PM Peak
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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #18 Rdy/Elwert

Cycle (sec): 100 Critical Vol./Cap. (X): 0.566
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 0 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0

Volume Module:
Base Vol: 9 122 26 72 344 15 7 45 10 28 61 41
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 9 122 26 72 344 15 7 45 10 28 61 41
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 9 122 26 72 344 15 7 45 10 28 61 41
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 9 122 26 72 344 15 7 45 10 28 61 41
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 9 122 26 72 344 15 7 45 10 28 61 41
FCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 9 122 26 72 344 15 7 45 10 28 61 41

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.06 0.78 0.16 0.17 0.80 0.03 0.11 0.73 0.16 0.21 0.47 0.32
Final Sat.: 41 551 117 127 608 27 67 431 96 136 297 200

Capacity Analysis Module:
Vol/Sat: 0.22 0.22 0.22 0.57 0.57 0.57 0.10 0.10 0.10 0.21 0.21 0.21
Crit Moves: \*\*\*\*
Delay/Veh: 9.1 9.1 9.1 13.2 13.2 13.2 9.0 9.0 9.0 9.4 9.4 9.4
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 9.1 9.1 9.1 13.2 13.2 13.2 9.0 9.0 9.0 9.4 9.4 9.4
LOS by Move: A A A B B B A A A A A
ApproachDel: 9.1 13.2 9.0 9.4
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 9.1 13.2 9.0 9.4
LOS by Appr: A B A A

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #19 Rdy/Borchers

Average Delay (sec/veh): 7.1 Worst Case Level Of Service: C [ 19.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 0 0 1 0

Volume Module:
Base Vol: 0 0 0 0 266 0 65 22 217 0 0 256 132
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 0 266 0 65 22 217 0 0 256 132
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 266 0 65 22 217 0 0 256 132
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 0 266 0 65 22 217 0 0 256 132
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 0 266 0 65 22 217 0 0 256 132

Critical Gap Module:
Critical Sp: 6.4 6.2 4.1 2.2
FollowUpTim: 3.5 3.3

Capacity Module:
Conflict Vol: 583 323 388
Potent Cap.: 476 720 1170
Move Cap.: 469 720 1170
Volume/Cap: 0.57 0.09 0.02

Level Of Service Module:
Queue: 3.5 0.3 0.1 8.1
Stopped Del: 22.2 10.5
LOS by Move: \* \* \* C \* B A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.:
SharedQueue:
Shrd StpDel:
Shared LOS: \* \* \* \* \*
ApproachDel: 19.9
ApproachLOS: C

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Sherwood/Langer

Cycle (sec): 60 Critical Vol./Cap. (X): 0.611  
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 39.0  
Optimal Cycle: 57 Level Of Service: D

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Split Phase	Split Phase	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	4 4 4	8 4 4	4 25 4	4 20 4
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 1 1 0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	72	40	47	223	72	259	139	320	23	14	189	313
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	40	47	223	72	259	139	320	23	14	189	313
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	40	47	223	72	259	139	320	23	14	189	313
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	72	40	47	223	72	259	139	320	23	14	189	313
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	40	47	223	72	259	139	320	23	14	189	313
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	72	40	47	223	72	259	139	320	23	14	189	313

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.92	0.86	0.86	0.93	0.97	0.97	0.90	0.81	0.81
Lanes:	1.00	0.46	0.54	1.00	0.22	0.78	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	1769	787	924	1753	354	1275	1769	1720	124	1702	1542	1542

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.04	0.05	0.05	0.13	0.20	0.20	0.08	0.19	0.19	0.01	0.12	0.20
Crit Moves:	****			****			****			****		
Green/Cycle:	0.07	0.07	0.07	0.18	0.18	0.18	0.15	0.42	0.42	0.07	0.33	0.33
Volume/Cap:	0.61	0.76	0.76	0.69	1.11	1.11	0.52	0.45	0.45	0.12	0.37	0.61
Delay/Veh:	36.3	53.2	53.2	29.4	109	108.9	25.4	13.0	13.0	26.8	15.4	18.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.3	53.2	53.2	29.4	109	108.9	25.4	13.0	13.0	26.8	15.4	18.1
HCM2kAvg:	3	3	3	6	14	14	3	5	5	0	3	6

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #21 Sherwood/Century

Average Delay (sec/veh): 12.2 Worst Case Level Of Service: F [ 77.4]

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	1 0 0 1 0	1 0 0 1 0	0 0 1 0 0	0 0 1 0 0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	18	395	64	70	491	43	25	40	52	62	22	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	395	64	70	491	43	25	40	52	62	22	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	395	64	70	491	43	25	40	52	62	22	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	395	64	70	491	43	25	40	52	62	22	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	18	395	64	70	491	43	25	40	52	62	22	60

Critical Gap Module:	North Bound			South Bound			East Bound			West Bound		
Critical Gap:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:	North Bound			South Bound			East Bound			West Bound		
Cnflct Vol:	545	xxxx	xxxxx	472	xxxx	xxxxx	1177	1172	560	1210	1161	449
Potent Cap.:	1029	xxxx	xxxxx	1090	xxxx	xxxxx	169	193	530	160	196	612
Move Cap.:	1020	xxxx	xxxxx	1078	xxxx	xxxxx	127	174	509	107	177	601
Volume/Cap:	0.02	xxxx	xxxxx	0.06	xxxx	xxxxx	0.20	0.23	0.10	0.58	0.12	0.10

Level Of Service Module:	North Bound			South Bound			East Bound			West Bound		
Queue:	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Stopped Del:	8.6	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT											
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	221	xxxxx	xxxx	179	xxxxx
SharedQueue:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	2.8	xxxxx	xxxx	5.5	xxxxx
Shrd StpDel:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	38.2	xxxxx	xxxx	77.4	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	F	*
ApproachDel:	xxxxxx			xxxxxx			38.2			77.4		
ApproachLOS:	*			*			E			F		

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 Sherwood-Pine/3rd

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: D[ 25.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 0 0 0 1 0 0 0 1 0 0 0

Volume Module:
Base Vol: 105 0 27 0 0 0 0 421 162 45 383 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 105 0 27 0 0 0 0 421 162 45 383 0

Critical Gap Module:
Critical Gp: 6.4 XXXX 6.2 XXXX XXXX XXXX XXXX XXXX XXXX 4.1 XXXX XXXX
FollowUpTim: 3.5 XXXX 3.3 XXXX XXXX XXXX XXXX XXXX XXXX 2.2 XXXX XXXX

Capacity Module:
Conflict Vol: 975 XXXX 502 XXXX XXXX XXXX XXXX XXXX XXXX 583 XXXX XXXX
Potent Cap.: 281 XXXX 573 XXXX XXXX XXXX XXXX XXXX XXXX 986 XXXX XXXX
Move Cap.: 271 XXXX 573 XXXX XXXX XXXX XXXX XXXX XXXX 986 XXXX XXXX

Level Of Service Module:
Queue: XXXXX XXXX XXXXX XXXXX XXXX XXXX XXXX XXXX XXXX 0.1 XXXX XXXX
Stopped Del: XXXXX XXXX XXXXX XXXXX XXXX XXXX XXXX XXXX XXXX 8.8 XXXX XXXX
LOS by Move: \* \* \* \* \* \* \* \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: XXXX 304 XXXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
SharedQueue: XXXX 2.1 XXXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX 0.1 XXXX XXXX
Shrd StpDel: XXXXX 25.6 XXXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX 8.8 XXXX XXXX
Shared LOS: \* \* \* \* \* \* \* \* \* \* A \* \* \*
ApproachDel: 25.6 D XXXXXX XXXXXX XXXXXX
ApproachLOS: D \* \* \* \*

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Pine/Oregon

Average Delay (sec/veh): 8.9 Worst Case Level Of Service: D[ 25.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 1 0

Volume Module:
Base Vol: 0 44 0 74 63 122 92 216 0 0 203 100
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 44 0 74 63 122 92 216 0 0 203 100

Critical Gap Module:
Critical Gp: XXXXX 6.5 XXXXX 7.2 6.6 6.3 4.1 XXXX XXXXX XXXXX XXXX XXXXX
FollowUpTim: XXXXX 4.0 XXXXX 3.5 4.0 3.3 2.2 XXXX XXXXX XXXXX XXXX XXXXX

Capacity Module:
Conflict Vol: XXXX 730 XXXXX 694 680 270 315 XXXX XXXXX XXXX XXXX XXXXX
Potent Cap.: XXXX 352 XXXXX 353 369 761 1240 XXXX XXXXX XXXX XXXX XXXXX
Move Cap.: XXXX 317 XXXXX 292 333 751 1227 XXXX XXXXX XXXX XXXX XXXXX

Level Of Service Module:
Queue: XXXXX 0.5 XXXXX XXXXX XXXX XXXXX 0.2 XXXX XXXXX XXXXX XXXX XXXXX
Stopped Del: XXXXX 18.2 XXXXX XXXXX XXXX XXXXX 8.2 XXXX XXXXX XXXXX XXXX XXXXX
LOS by Move: \* C \* \* \* \* \* A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: XXXX XXXX XXXXX XXXX 428 XXXXX XXXX XXXXX XXXXX XXXX XXXXX XXXXX
SharedQueue: XXXXX XXXX XXXXX XXXXX 3.9 XXXXX 0.2 XXXX XXXXX XXXXX XXXX XXXXX
Shrd StpDel: XXXXX XXXX XXXXX XXXXX 25.5 XXXXX 8.2 XXXX XXXXX XXXXX XXXX XXXXX
Shared LOS: \* \* \* \* \* D \* \* \* \* \* A \* \* \* \* \*
ApproachDel: 18.2 25.5 XXXXXX XXXXXX
ApproachLOS: C D \* \* \*

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #24 Washington/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.188  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.8  
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	8	89	0	26	124	12	0	8	26	0	2	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	89	0	26	124	12	0	8	26	0	2	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	89	0	26	124	12	0	8	26	0	2	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	89	0	26	124	12	0	8	26	0	2	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	89	0	26	124	12	0	8	26	0	2	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	89	0	26	124	12	0	8	26	0	2	23

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.08	0.92	0.00	0.16	0.77	0.07	0.00	0.24	0.76	0.00	0.08	0.92
Final Sat.:	68	757	0	138	659	64	0	198	643	0	69	788

Capacity Analysis Module:

Vol/Sat:	0.12	0.12	xxxx	0.19	0.19	0.19	xxxx	0.04	0.04	xxxx	0.03	0.03
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	7.8	7.8	0.0	8.1	8.1	8.1	0.0	7.2	7.2	0.0	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.8	7.8	0.0	8.1	8.1	8.1	0.0	7.2	7.2	0.0	7.1	7.1
LOS by Move:	A	A	*	A	A	A	*	A	A	*	A	A
ApproachDel:	7.8	7.8	0.0	8.1	8.1	8.1	0.0	7.2	7.2	0.0	7.1	7.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ApprAdjDel:	7.8	7.8	0.0	8.1	8.1	8.1	0.0	7.2	7.2	0.0	7.1	7.1
LOS by Appr:	A	A	*	A	A	A	*	A	A	*	A	A

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #25 Washington/3rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.120  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.5  
Optimal Cycle: 0 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	16	7	1	15	29	51	46	37	18	3	15	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	16	7	1	15	29	51	46	37	18	3	15	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	7	1	15	29	51	46	37	18	3	15	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	16	7	1	15	29	51	46	37	18	3	15	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	7	1	15	29	51	46	37	18	3	15	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	16	7	1	15	29	51	46	37	18	3	15	4

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.67	0.29	0.04	0.16	0.30	0.54	0.45	0.37	0.18	0.14	0.68	0.18
Final Sat.:	530	232	33	141	272	478	382	308	150	113	563	150

Capacity Analysis Module:

Vol/Sat:	0.03	0.03	0.03	0.11	0.11	0.11	0.12	0.12	0.12	0.03	0.03	0.03
Crit Moves:	***	***	***	***	***	***	***	***	***	***	***	***
Delay/Veh:	7.5	7.5	7.5	7.4	7.4	7.4	7.7	7.7	7.7	7.3	7.3	7.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	7.5	7.5	7.5	7.4	7.4	7.4	7.7	7.7	7.7	7.3	7.3	7.3
LOS by Move:	A	A	A	A	A	A	A	A	A	A	A	A
ApproachDel:	7.5	7.5	7.5	7.4	7.4	7.4	7.7	7.7	7.7	7.3	7.3	7.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ApprAdjDel:	7.5	7.5	7.5	7.4	7.4	7.4	7.7	7.7	7.7	7.3	7.3	7.3
LOS by Appr:	A	A	A	A	A	A	A	A	A	A	A	A

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #26 Sherwood/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.448  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.7  
Optimal Cycle: 0 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 0 0 1 0 0 0 1 0 0 0 0

Volume Module:  
Base Vol: 0 11 10 158 9 9 30 281 5 6 152 97  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 11 10 158 9 9 30 281 5 6 152 97  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 11 10 158 9 9 30 281 5 6 152 97  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 0 11 10 158 9 9 30 281 5 6 152 97  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 11 10 158 9 9 30 281 5 6 152 97  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Vol.: 0 11 10 158 9 9 30 281 5 6 152 97

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 0.52 0.48 0.90 0.05 0.05 0.09 0.89 0.02 0.02 0.60 0.38  
Final Sat.: 0 317 289 557 32 32 67 627 11 18 447 285

Capacity Analysis Module:  
Vol/Sat: xxxx 0.03 0.03 0.28 0.28 0.28 0.45 0.45 0.45 0.34 0.34 0.34  
Crit Moves: \*\*\*\* \*\*  
Delay/Veh: 0.0 8.4 8.4 10.3 10.3 10.3 11.7 11.7 11.7 9.8 9.8 9.8  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 8.4 8.4 10.3 10.3 10.3 11.7 11.7 11.7 9.8 9.8 9.8  
LOS by Move: \* A A B B B B B A A A  
ApproachDel: 8.4 10.3 11.7 9.8  
Delay Adj: 1.00 1.00 1.00 1.00  
ApprAdjDel: 8.4 10.3 11.7 9.8  
LOS by Appr: A B B A

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #27 Cipole/Herman

Cycle (sec): 100 Critical Vol./Cap. (X): 0.284  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.2  
Optimal Cycle: 0 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:  
Base Vol: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 150 0 52 0 0 0 0 0 47 96 111 99 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 150 0 52 0 0 0 0 0 47 96 111 99 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Vol.: 150 0 52 0 0 0 0 0 47 96 111 99 0

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.74 0.00 0.26 0.00 0.00 0.00 0.00 0.00 0.33 0.67 0.53 0.47 0.00  
Final Sat.: 536 0 186 0 0 0 0 0 262 536 390 348 0

Capacity Analysis Module:  
Vol/Sat: 0.28 xxxx 0.28 xxxx xxxx xxxx 0.18 0.18 0.28 0.28 xxxx  
Crit Moves: \*\*\*\* \*\*  
Delay/Veh: 9.5 0.0 9.5 0.0 0.0 0.0 0.0 8.2 8.2 9.5 9.5 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 9.5 0.0 9.5 0.0 0.0 0.0 0.0 8.2 8.2 9.5 9.5 0.0  
LOS by Move: A \* A \* \* \* A A A A \*  
ApproachDel: 9.5 xxxxxx 8.2 9.5  
Delay Adj: 1.00 xxxxxx 1.00 1.00  
ApprAdjDel: 9.5 xxxxxx 8.2 9.5  
LOS by Appr: A \* A A

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Level Of Service Computation Report

FHWA Roundabout Method (Future Volume Alternative)

Intersection #28 Mainecke/Dewey

Average Delay (sec/veh): 3.7 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign
Lanes: 0 1 1 1

Volume Module:

Table with 12 columns for traffic movements and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

PCE Module:

Table with 12 columns for traffic movements and rows for AutoPCE, TruckPCE, ComboPCE, BicyclePCE, AdjVolume.

Delay Module: >> Time Period: 0.25 hours <<

Table with 4 columns for delay metrics and rows for CircVolume, MaxVolume, PedVolume, AdjMaxVol, ApproachVol, ApproachDel, Queue.

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Brookman/Ladd Hill

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: B[ 10.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Table with 12 columns for traffic movements and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduced Vol, Final Vol.

Critical Gap Module:

Critical Gap: 4.1 XXXX XXXX XXXX XXXX XXXX 6.5 XXXX 6.3 XXXX XXXX XXXX
FollowUpTim: 2.2 XXXX XXXX XXXX XXXX XXXX 3.6 XXXX 3.4 XXXX XXXX XXXX

Capacity Module:

Cnflct Vol: 172 XXXX XXXX XXXX XXXX XXXX 291 XXXX 135 XXXX XXXX XXXX
Potent Cap.: 1411 XXXX XXXX XXXX XXXX XXXX 689 XXXX 901 XXXX XXXX XXXX
Move Cap.: 1411 XXXX XXXX XXXX XXXX XXXX 675 XXXX 901 XXXX XXXX XXXX
Volume/Cap: 0.03 XXXX XXXX XXXX XXXX XXXX 0.06 XXXX 0.03 XXXX XXXX XXXX

Level Of Service Module:

Queue: 0.1 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Stopped Del: 7.6 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
LOS by Move: A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: XXXX XXXX XXXX XXXX XXXX XXXX XXXX 752 XXXX XXXX XXXX XXXX
SharedQueue: 0.1 XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX
Shrd StpDel: 7.6 XXXX XXXX XXXX XXXX XXXX XXXX XXXX 10.2 XXXX XXXX XXXX XXXX
Shared LOS: A \* \* \* \* \* B \* \* \* \* \*
ApproachDel: XXXXXX XXXXXX XXXXXX 10.2 XXXXXX
ApproachLOS: \* \* \* \* \* B \*

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30 Sunset/Pine

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: C [ 21.4 ]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 1 1 0 0 0 0 0 1 1 0 0

Volume Module:
Base Vol: 5 2 0 79 1 11 13 286 8 1 465 55
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 5 2 0 79 1 11 13 286 8 1 465 55
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 2 0 79 1 11 13 286 8 1 465 55
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 5 2 0 79 1 11 13 286 8 1 465 55
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 5 2 0 79 1 11 13 286 8 1 465 55

Critical Gap Module:
Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 831 840 xxxxx 814 816 509 522 xxxxx xxxxx 294 xxxxx xxxxx
Potent Cap.: 291 304 xxxxx 297 311 565 1050 xxxxx xxxxx 1273 xxxxx xxxxx
Move Cap.: 279 299 xxxxx 292 307 557 1048 xxxxx xxxxx 1273 xxxxx xxxxx
Volume/Cap: 0.02 0.01 xxxxx 0.27 0.00 0.02 0.01 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx 0.0 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.5 xxxxx xxxxx 7.8 xxxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \* \* \* A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 284 xxxxx xxxxx xxxxx 310 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx 1.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: 18.0 xxxxx xxxxx xxxxx 21.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: C \* \* \* \* \* C \* \* \* \* \* \* \* \* \* \*
ApproachDel: 18.0 \* 21.4 \* xxxxxx xxxxxx
ApproachLOS: C C \* \* \* \* \*

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Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #31 Sunset/Pinehurst

Cycle (sec): 100 Critical Vol./Cap. (X): 0.635
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 13.5
Optimal Cycle: 0 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 1 0 0 1 0 0 1 0

Volume Module:
Base Vol: 25 15 37 62 18 15 56 280 41 76 313 115
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 25 15 37 62 18 15 56 280 41 76 313 115
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 25 15 37 62 18 15 56 280 41 76 313 115
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 25 15 37 62 18 15 56 280 41 76 313 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 25 15 37 62 18 15 56 280 41 76 313 115
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 25 15 37 62 18 15 56 280 41 76 313 115

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.32 0.19 0.49 0.65 0.19 0.16 1.00 0.87 0.13 1.00 0.73 0.27
Final Sat.: 176 106 261 349 101 84 577 560 82 593 493 181

Capacity Analysis Module:
Vol/Sat: 0.14 0.14 0.14 0.18 0.18 0.18 0.10 0.50 0.50 0.13 0.63 0.63
Crit Moves: \*\*\*\* \*
Delay/Veh: 9.8 9.8 9.8 10.2 10.2 10.2 9.4 13.3 13.3 9.5 16.3 16.3
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 9.8 9.8 9.8 10.2 10.2 10.2 9.4 13.3 13.3 9.5 16.3 16.3
LOS by Move: A A A B B B A B B A C C
ApproachDel: 9.8 10.2 12.7 15.3
Delay Adj: 1.00 1.00 1.00 1.00
ApprAdjDel: 9.8 10.2 12.7 15.3
LOS by Appr: A B B C

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #32 Sunset/Woodhaven

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D[ 30.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1 0

Volume Module:
Base Vol: 11 4 5 49 4 98 188 408 26 3 316 52
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 11 4 5 49 4 98 188 408 26 3 316 52

Critical Gap Module:
Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxxx 4.1 xxxx xxxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:
Cnflct Vol: 1197 1168 413 1155 1168 356 373 xxxx xxxxxx 439 xxxx xxxxxx
Potent Cap.: 162 193 637 175 194 690 1197 xxxx xxxxxx 1121 xxxx xxxxxx

Level Of Service Module:
Queue: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.6 xxxx xxxxxx 0.0 xxxx xxxxxx
Stopped Del: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 8.6 xxxx xxxxxx 8.2 xxxx xxxxxx

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #33 Elwert/Swanstrom

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[ 10.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 1 0 0 0 0 0 0 0 1 0 0

Volume Module:
Base Vol: 0 144 13 13 371 0 0 0 0 11 0 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 144 13 13 371 0 0 0 0 11 0 11

Critical Gap Module:
Critical Gp: xxxxxx xxxxxx xxxxxx 4.1 xxxx xxxxxx xxxxxx xxxxxx xxxxxx 6.4 xxxx 6.2
FollowUpTim: xxxxxx xxxxxx xxxxxx 2.2 xxxx xxxxxx xxxxxx xxxxxx xxxxxx 3.5 xxxx 3.3

Capacity Module:
Cnflct Vol: xxxx xxxx xxxxxx 157 xxxx xxxxxx xxxxxx xxxxxx xxxxxx 547 xxxx 151
Potent Cap.: xxxx xxxx xxxxxx 1429 xxxx xxxxxx xxxxxx xxxxxx xxxxxx 501 xxxx 901

Level Of Service Module:
Queue: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.0 xxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
Stopped Del: xxxxxx xxxxxx xxxxxx 7.5 xxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #34 Elwert/Kruger

Average Delay (sec/veh): 8.0 Worst Case Level Of Service: B [ 12.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 1 0 0 0 0 0 0 0 1 0 0

Volume Module:
Base Vol: 0 5 23 359 4 0 0 0 0 21 0 172
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 5 23 359 4 0 0 0 0 21 0 172
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 5 23 359 4 0 0 0 0 21 0 172
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 5 23 359 4 0 0 0 0 21 0 172
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 5 23 359 4 0 0 0 0 21 0 172

Critical Gap Module:
Critical Gp: 6.5 6.2 7.1 6.5 4.1 2.2
FollowUpTim: 4.0 3.3 3.5 4.0 2.2

Capacity Module:
Conflict Vol: 214 0 131 128 0
Potent Cap.: 585 0 847 766 0
Move Cap.: 585 0 842 766 0
Volume/Cap: 0.01 0.00 0.43 0.01 0.00

Level Of Service Module:
Queue: 0.0
Stopped Del: 0.0
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 3838 841 2.2
SharedQueue: 0.0
Shrd StpDel: 5.9 12.5
Shared LOS: A B
ApproachDel: 5.9 12.5
ApproachLOS: A B

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #35 Oregon/Lincoln

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B [ 11.4]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 14 0 6 0 0 0 26 26 228 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 14 0 6 0 0 0 26 26 228 0
Added Vol: 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0
Initial Fut: 14 0 6 0 0 0 26 26 228 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 14 0 6 0 0 0 26 26 228 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0
Final Vol.: 14 0 6 0 0 0 26 26 228 0

Critical Gap Module:
Critical Gp: 6.5 6.3 4.1 2.2
FollowUpTim: 3.6 3.4

Capacity Module:
Conflict Vol: 485 193 206
Potent Cap.: 532 836 1365
Move Cap.: 519 835 1364
Volume/Cap: 0.03 0.01 0.02

Level Of Service Module:
Queue: 0.1
Stopped Del: 7.7
LOS by Move: A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 585
SharedQueue: 0.1
Shrd StpDel: 11.4
Shared LOS: B
ApproachDel: 11.4
ApproachLOS: B

Sherwood TSP  
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## Scenario Report

Scenario: 2020 PM Peak

Command: 2020 PM Peak  
 Volume: Default Volume  
 Geometry: Default Geometry  
 Impact Fee: Default Impact Fee  
 Trip Generation: Default Trip Generation  
 Trip Distribution: Default Trip Distribution  
 Paths: Default Paths  
 Routes: Default Routes  
 Configuration: Default Configuration

Sherwood TSP  
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 PM Peak Hour

Impact Analysis Report  
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1 ORE 99W/Home Depot	B	17.9 0.759	B	17.9 0.759	+ 0.000 D/V
# 2 ORE 99W/Tualatin-Sherwood Rd	D	43.9 0.864	D	43.9 0.864	+ 0.000 D/V
# 3 ORE 99W/Sherwood Blvd	D	38.1 0.801	D	38.1 0.801	+ 0.000 D/V
# 4 ORE 99W/Mainecke	B	16.4 0.717	B	16.4 0.717	+ 0.000 D/V
# 5 ORE 99W/Sunset	C	31.3 0.849	C	31.3 0.849	+ 0.000 D/V
# 6 ORE 99W/Brookman	F	102.9 0.000	F	102.9 0.000	+ 0.000 D/V
# 7 Tualatin-Sherwood/Cipole	B	15.7 0.562	B	15.7 0.562	+ 0.000 D/V
# 8 Tualatin-Sherwood/Oregon	C	22.1 0.753	C	22.1 0.753	+ 0.000 D/V
# 9 Tualatin-Sherwood/Gerda	F	64.2 0.000	F	64.2 0.000	+ 0.000 D/V
# 10 Tualatin-Sherwood/Langer	B	13.3 0.000	B	13.3 0.000	+ 0.000 D/V
# 11 Tualatin-Sherwood/Regal Cinema	B	19.3 0.518	B	19.3 0.518	+ 0.000 D/V
# 12 Roy Rogers/Borchers	A	7.6 0.559	A	7.6 0.559	+ 0.000 D/V
# 13 Oregon/Tonquin	E	35.3 0.000	E	35.3 0.000	+ 0.000 D/V
# 14 Oregon/Murdock	A	6.0 0.000	A	6.0 0.000	+ 0.000 V/C
# 15 Murdock/Willamette	B	13.4 0.000	B	13.4 0.000	+ 0.000 D/V
# 16 Sunset/Murdock	B	10.2 0.393	B	10.2 0.393	+ 0.000 V/C
# 17 Sunset/Sherwood	C	23.0 0.832	C	23.0 0.832	+ 0.000 V/C
# 18 Edy/Elwert	B	11.4 0.566	B	11.4 0.566	+ 0.000 V/C
# 19 Edy/Borchers	B	13.7 0.495	B	13.7 0.495	+ 0.000 D/V
# 20 Sherwood/Langer	C	18.0 0.000	C	18.0 0.000	+ 0.000 D/V
# 21 Sherwood/Century	B	18.7 0.507	B	18.7 0.507	+ 0.000 D/V
# 22 Sherwood-Pine/3rd	D	25.6 0.000	D	25.6 0.000	+ 0.000 D/V
# 23 Pine/Oregon	D	25.5 0.000	D	25.5 0.000	+ 0.000 D/V

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Intersection	Base			Future			Change in
	Del/ LOS	V/ Veh	C	Del/ LOS	V/ Veh	C	
# 24 Washington/Railroad	A	7.8	0.188	A	7.8	0.188	+ 0.000 V/C
# 25 Washington/3rd	A	7.5	0.120	A	7.5	0.120	+ 0.000 V/C
# 26 Sherwood/Railroad	B	10.7	0.448	B	10.7	0.448	+ 0.000 V/C
# 27 Cipole/Herman	A	9.2	0.284	A	9.2	0.284	+ 0.000 V/C
# 28 Meinecke/Dewey	A	3.7	0.000	A	3.7	0.000	+ 0.000 V/C
# 29 Brookman/Ladd Hill	B	10.2	0.000	B	10.2	0.000	+ 0.000 D/V
# 30 Sunset/Pine	C	21.4	0.000	C	21.4	0.000	+ 0.000 D/V
# 31 Sunset/Pinehurst	B	13.5	0.635	B	13.5	0.635	+ 0.000 V/C
# 32 Sunset/Woodhaven	D	30.9	0.000	D	30.9	0.000	+ 0.000 D/V
# 33 Elwert/Swanstrom	B	10.8	0.000	B	10.8	0.000	+ 0.000 D/V
# 34 Elwert/Kruger	B	10.6	0.000	B	10.6	0.000	+ 0.000 D/V
# 35 Oregon/Lincoln	B	11.4	0.000	B	11.4	0.000	+ 0.000 D/V

Sherwood TSP  
 Future (2020) Build (Mitigated)  
 PM Peak Hour

Level Of Service Computation Report  
 2000 HCM Operations Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #1 ORE 99W/Home Depot  
 \*\*\*\*\*

Cycle (sec): 120      Critical Vol./Cap. (X): 0.759  
 Loss Time (sec): 12 (Y+R = 4 sec)      Average Delay (sec/veh): 17.9  
 Optimal Cycle: 72      Level Of Service: B

\*\*\*\*\*

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	0	1	0	0	1	0

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Volume Module:

Base Vol:	23	833	104	99	1930	12	60	1	31	150	0	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	833	104	99	1930	12	60	1	31	150	0	91
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	23	833	104	99	1930	12	60	1	31	150	0	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	833	104	99	1930	12	60	1	31	150	0	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	23	833	104	99	1930	12	60	1	31	150	0	91
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	23	833	104	99	1930	12	60	1	31	150	0	91

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Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.80	0.93	0.93	0.93	0.48	0.48	0.85	0.66	1.00	0.83
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.98	0.02	1.00	1.00	0.00	1.00
Final Sat.:	1702	3404	1523	1769	3512	22	888	15	1615	1248	0	1583

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Capacity Analysis Module:

Vol/Sat:	0.01	0.24	0.07	0.06	0.55	0.55	0.07	0.07	0.02	0.12	0.00	0.06
Crit Moves:	****			****			****			****		
Green/Cycle:	0.02	0.60	0.60	0.14	0.72	0.72	0.16	0.16	0.16	0.16	0.00	0.16
Volume/Cap:	0.76	0.41	0.11	0.41	0.76	0.76	0.43	0.43	0.12	0.76	0.00	0.36
Delay/Veh:	129.3	12.6	10.2	48.3	11.5	11.5	47.6	47.6	43.5	63.9	0.0	46.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	129.3	12.6	10.2	48.3	11.5	11.5	47.6	47.6	43.5	63.9	0.0	46.0
HCM2kAvg:	2	8	2	4	23	27	5	4	1	10	0	3

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Sherwood TSP  
Future (2020) Build (Mitigated)  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 ORE 99W/Tualatin-Sherwood Rd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.864  
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 43.9  
Optimal Cycle: 113 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	3	0	1	0	1	0	1	1	0	1

Volume Module:

Base Vol:	159	788	494	176	1515	274	126	284	117	568	321	131
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	159	788	494	176	1515	274	126	284	117	568	321	131
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	159	788	494	176	1515	274	126	284	117	568	321	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	159	788	494	176	1515	274	126	284	117	568	321	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	788	494	176	1515	274	126	284	117	568	321	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	159	788	494	176	1515	274	126	284	117	568	321	131

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.86	0.80	0.93	0.87	0.87	0.87	0.83	0.83	0.89	0.87	0.87
Lanes:	1.00	3.00	1.00	1.00	2.54	0.46	1.00	1.42	0.58	2.00	1.42	0.58
Final Sat.:	1702	4891	1523	1769	4206	761	1655	2241	923	3369	2360	963

Capacity Analysis Module:

Vol/Sat:	0.09	0.16	0.32	0.10	0.36	0.36	0.08	0.13	0.13	0.17	0.14	0.14
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.11	0.40	0.40	0.12	0.42	0.42	0.15	0.15	0.15	0.20	0.20	0.20
Volume/Cap:	0.86	0.40	0.81	0.81	0.86	0.86	0.52	0.86	0.86	0.86	0.70	0.70
Delay/Veh:	84.6	25.7	39.6	70.8	36.0	36.0	49.3	65.5	65.5	58.2	48.3	48.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	84.6	25.7	39.6	70.8	36.0	36.0	49.3	65.5	65.5	58.2	48.3	48.3
HCM2kAvg:	9	7	18	9	23	23	5	10	10	13	9	9

Sherwood TSP  
Future (2020) Build (Mitigated)  
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 ORE 99W/Sherwood Blvd

Cycle (sec): 120 Critical Vol./Cap. (X): 0.801  
Loss Time (sec): 16 (Y+R = 4 sec) Average Delay (sec/veh): 38.1  
Optimal Cycle: 93 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	1	0	2	1	0	1	1	1	0

Volume Module:

Base Vol:	73	1406	106	240	1715	146	137	240	144	265	191	88
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	1406	106	240	1715	146	137	240	144	265	191	88
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	73	1406	106	240	1715	146	137	240	144	265	191	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	1406	106	240	1715	146	137	240	144	265	191	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	1406	106	240	1715	146	137	240	144	265	191	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	73	1406	106	240	1715	146	137	240	144	265	191	88

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.87	0.87	0.93	0.88	0.88	0.94	0.99	0.84	0.96	0.96	0.84
Lanes:	1.00	2.79	0.21	1.00	2.76	0.24	1.00	1.00	1.00	1.16	0.84	1.00
Final Sat.:	1736	4594	346	1769	4628	394	1787	1881	1599	2125	1532	1599

Capacity Analysis Module:

Vol/Sat:	0.04	0.31	0.31	0.14	0.37	0.37	0.08	0.13	0.09	0.12	0.12	0.06
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.06	0.38	0.38	0.17	0.50	0.50	0.16	0.16	0.16	0.16	0.16	0.16
Volume/Cap:	0.75	0.80	0.80	0.80	0.75	0.75	0.48	0.80	0.57	0.80	0.80	0.35
Delay/Veh:	82.7	35.5	35.5	62.1	25.6	25.6	47.2	62.8	49.5	56.8	56.8	46.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.7	35.5	35.5	62.1	25.6	25.6	47.2	62.8	49.5	56.8	56.8	46.1
HCM2kAvg:	4	18	18	11	19	19	5	11	6	10	10	3

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 ORE 99W/Meinecke

Cycle (sec): 120 Critical Vol./Cap. (X): 0.717
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 16.4
Optimal Cycle: 64 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1

Volume Module:
Base Vol: 11 1375 53 252 2017 47 15 13 15 56 11 108
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 11 1375 53 252 2017 47 15 13 15 56 11 108
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 11 1375 53 252 2017 47 15 13 15 56 11 108
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 11 1375 53 252 2017 47 15 13 15 56 11 108
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 11 1375 53 252 2017 47 15 13 15 56 11 108
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 11 1375 53 252 2017 47 15 13 15 56 11 108

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.90 0.81 0.93 0.93 0.83 0.76 1.00 0.85 0.74 0.97 0.83
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat.: 1718 3437 1537 1769 3538 1583 1444 1900 1615 1398 1845 1568

Capacity Analysis Module:
Vol/Sat: 0.01 0.40 0.03 0.14 0.57 0.03 0.01 0.01 0.01 0.04 0.01 0.07
Crit Moves: \*\*\*\*
Green/Cycle: 0.01 0.59 0.59 0.21 0.80 0.80 0.10 0.10 0.10 0.10 0.10 0.10
Volume/Cap: 0.72 0.67 0.06 0.67 0.72 0.04 0.11 0.07 0.10 0.42 0.06 0.72
Delay/Veh: 155.1 17.5 10.3 48.4 6.8 2.6 49.9 49.5 49.8 53.2 49.5 67.9
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 155.1 17.5 10.3 48.4 6.8 2.6 49.9 49.5 49.8 53.2 49.5 67.9
HCM2kAvg: 1 18 1 10 18 0 1 0 1 3 0 5

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 ORE 99W/Sunset

Cycle (sec): 120 Critical Vol./Cap. (X): 0.849
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 31.3
Optimal Cycle: 97 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 0 1 0 0 1

Volume Module:
Base Vol: 87 1204 146 330 1764 27 16 156 204 137 97 190
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 87 1204 146 330 1764 27 16 156 204 137 97 190
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 87 1204 146 330 1764 27 16 156 204 137 97 190
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 87 1204 146 330 1764 27 16 156 204 137 97 190
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 87 1204 146 330 1764 27 16 156 204 137 97 190
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 87 1204 146 330 1764 27 16 156 204 137 97 190

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.90 0.90 0.81 0.90 0.93 0.83 0.94 0.94 0.83 0.57 0.57 0.83
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 0.09 0.91 1.00 0.59 0.41 1.00
Final Sat.: 1718 3437 1537 3432 3538 1583 167 1628 1583 638 452 1568

Capacity Analysis Module:
Vol/Sat: 0.05 0.35 0.09 0.10 0.50 0.02 0.10 0.10 0.13 0.21 0.21 0.12
Crit Moves: \*\*\*\*
Green/Cycle: 0.06 0.51 0.51 0.14 0.59 0.59 0.25 0.25 0.25 0.25 0.25 0.25
Volume/Cap: 0.85 0.69 0.19 0.69 0.85 0.03 0.38 0.38 0.51 0.85 0.85 0.48
Delay/Veh: 100.9 23.6 16.2 53.4 23.9 10.4 37.6 37.6 39.5 63.8 63.8 39.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 100.9 23.6 16.2 53.4 23.9 10.4 37.6 37.6 39.5 63.8 63.8 39.0
HCM2kAvg: 6 17 3 7 29 0 6 5 7 16 17 6

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Table with columns for Intersection #6 ORE 99W/Brookman, Average Delay, Approach, Movement, Control, Rights, Lanes, Volume Module, Capacity Module, and Level of Service Module.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Table with columns for Intersection #7 Tualatin-Sherwood/Cipole, Cycle, Loss Time, Optimal Cycle, Approach, Movement, Control, Rights, Lanes, Volume Module, Saturation Flow Module, Capacity Analysis Module, and HCM2kAvg.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Tualatin-Sherwood/Oregon

Cycle (sec): 120 Critical Vol./Cap. (X): 0.753
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 22.1
Optimal Cycle: 71 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 12 columns and 15 rows showing traffic volume and delay metrics.

Saturation Flow Module table with 12 columns and 4 rows showing saturation flow and adjustment factors.

Capacity Analysis Module table with 12 columns and 10 rows showing capacity analysis metrics.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Tualatin-Sherwood/Gerda

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[ 64.2]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Lanes.

Volume Module table with 12 columns and 15 rows showing traffic volume and delay metrics.

Critical Gap Module table with 12 columns and 3 rows showing critical gap metrics.

Capacity Module table with 12 columns and 4 rows showing capacity metrics.

Level Of Service Module table with 12 columns and 10 rows showing level of service metrics.



Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Roy Rogers/Borchers

Cycle (sec): 60 Critical Vol./Cap. (X): 0.559
Loss Time (sec): 12 (Y+R = 4 sec) Average Delay (sec/veh): 7.6
Optimal Cycle: 41 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 1 0 0 0

Volume Module:
Base Vol: 96 0 21 0 0 0 0 0 488 166 21 576 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 96 0 21 0 0 0 0 0 488 166 21 576 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 96 0 21 0 0 0 0 0 488 166 21 576 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 96 0 21 0 0 0 0 0 488 166 21 576 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 96 0 21 0 0 0 0 0 488 166 21 576 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 96 0 21 0 0 0 0 0 488 166 21 576 0

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.91 1.00 0.82 1.00 1.00 1.00 1.00 0.91 0.91 0.90 0.95 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 1.00 0.75 0.25 1.00 1.00 0.00
Final Sat.: 1736 0 1554 0 0 0 1900 1286 437 1718 1809 0

Capacity Analysis Module:
Vol/Sat: 0.06 0.00 0.01 0.00 0.00 0.00 0.00 0.38 0.38 0.01 0.32 0.00
Crit Moves: \*\*\*\*
Green/Cycle: 0.10 0.00 0.10 0.00 0.00 0.00 0.00 0.68 0.68 0.02 0.70 0.00
Volume/Cap: 0.56 0.00 0.14 0.00 0.00 0.00 0.00 0.56 0.56 0.56 0.45 0.00
Delay/Veh: 29.9 0.0 25.1 0.0 0.0 0.0 0.0 5.6 5.6 46.5 4.2 0.0
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 29.9 0.0 25.1 0.0 0.0 0.0 0.0 5.6 5.6 46.5 4.2 0.0
HCM2kAvg: 3 0 0 0 0 0 0 7 7 1 5 0

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #13 Oregon/Tonquin

Average Delay (sec/veh): 11.5 Worst Case Level Of Service: E[ 35.3]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 1 0 1 0 1 0 0 0 0 0 0 0 0 0 1 0 0 0 1

Volume Module:
Base Vol: 0 135 124 79 473 0 0 0 0 0 275 0 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 135 124 79 473 0 0 0 0 0 275 0 90
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 135 124 79 473 0 0 0 0 0 275 0 90
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 135 124 79 473 0 0 0 0 0 275 0 90
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 135 124 79 473 0 0 0 0 0 275 0 90
Critical Gap Module:
Critical Gp:xxxx xxx xxxxxx 4.1 xxx xxxxxx xxxxxx xxx xxxxxx 6.4 xxx 6.2
FollowUpTim:xxxx xxx xxxxxx 2.2 xxx xxxxxx xxxxxx xxx xxxxxx 3.5 xxx 3.3

Capacity Module:
Cnflct Vol: xxx xxx xxxxxx 259 xxx xxxxxx xxx xxx xxxxxx 766 xxx 135
Potent Cap.: xxx xxx xxxxxx 1300 xxx xxxxxx xxx xxx xxxxxx 369 xxx 911
Move Cap.: xxx xxx xxxxxx 1300 xxx xxxxxx xxx xxx xxxxxx 351 xxx 911
Volume/Cap: xxx xxx xxx 0.06 xxx xxx xxx xxx xxx 0.78 xxx 0.10

Level Of Service Module:
Queue: xxx xxx xxxxxx 0.2 xxx xxxxxx xxx xxx xxxxxx 6.4 xxx 0.3
Stopped Del:xxxx xxx xxxxxx 7.9 xxx xxxxxx xxx xxx xxxxxx 43.8 xxx 9.4
LOS by Move: \* \* \* A \* \* \* \* \* E \* A
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
SharedQueue:xxxx xxx xxxxxx 0.2 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
Shrd StpDel:xxxx xxx xxxxxx 7.9 xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
Shared LOS: \* \* \* A \* \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx 35.3
ApproachLOS: \* \* \* \* E

Sherwood TSP  
 Future (2020) Build (Mitigated)  
 PM Peak Hour

Level Of Service Computation Report  
 FHWA Roundabout Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #14 Oregon/Murdock  
 \*\*\*\*\*

Average Delay (sec/veh):	6.0												Level Of Service:	A
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign				
Lanes:	1			0			1			1				
Volume Module:														
Base Vol:	16	0	155	0	0	0	0	90	34	444	224	0		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	16	0	155	0	0	0	0	90	34	444	224	0		
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	16	0	155	0	0	0	0	90	34	444	224	0		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	16	0	155	0	0	0	0	90	34	444	224	0		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	16	0	155	0	0	0	0	90	34	444	224	0		
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Final Vol.:	16	0	155	0	0	0	0	90	34	444	224	0		
PCE Module:														
AutoPCE:	16	0	150	0	0	0	0	86	33	440	222	0		
TruckPCE:	1	0	7	0	0	0	0	4	2	7	3	0		
ComboPCE:	0	0	0	0	0	0	0	2	1	0	0	0		
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0		
AdjVolume:	16	0	157	0	0	0	0	92	35	446	225	0		
Delay Module:	>> Time Period: 0.25 hours <<													
CircVolume:	92			688			446			16				
MaxVolume:	1150			xxxxxx			959			1191				
PedVolume:	0			0			0			0				
AdjMaxVol:	1150			xxxxxx			959			1191				
ApproachVol:	174			xxxxxx			127			671				
ApproachDel:	3.7			xxxxxx			4.3			6.8				
Queue:	0.5			xxxx			0.5			3.7				

Sherwood TSP  
 Future (2020) Build (Mitigated)  
 PM Peak Hour

Level Of Service Computation Report  
 2000 HCM Unsignalized Method (Future Volume Alternative)

\*\*\*\*\*  
 Intersection #15 Murdock/Willamette  
 \*\*\*\*\*

Average Delay (sec/veh):	1.0												Worst Case Level Of Service:	B[ 13.4]
Approach:	North Bound			South Bound			East Bound			West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign				
Rights:	Include			Include			Include			Include				
Lanes:	0 0 1 0 0			0 0 1 0 0			0 0 1 0 0			0 0 1 0 0				
Volume Module:														
Base Vol:	8	162	4	15	342	12	14	4	4	3	2	5		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	8	162	4	15	342	12	14	4	4	3	2	5		
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0		
Initial Fut:	8	162	4	15	342	12	14	4	4	3	2	5		
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
PHF Volume:	8	162	4	15	342	12	14	4	4	3	2	5		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Final Vol.:	8	162	4	15	342	12	14	4	4	3	2	5		
Critical Gap Module:														
Critical Gap:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.2	6.6	6.3	7.3	6.7	6.4		
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.6	4.1	3.4	3.7	4.2	3.5		
Capacity Module:														
Cnflct Vol:	354	xxxx	xxxxx	166	xxxx	xxxxx	562	560	348	562	564	164		
Potent Cap.:	1205	xxxx	xxxxx	1418	xxxx	xxxxx	430	430	684	416	415	843		
Move Cap.:	1205	xxxx	xxxxx	1418	xxxx	xxxxx	421	423	684	405	408	843		
Volume/Cap:	0.01	xxxx	xxxxx	0.01	xxxx	xxxxx	0.03	0.01	0.01	0.01	0.00	0.01		
Level Of Service Module:														
Queue:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Stopped Del:	8.0	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*		
Movement:	LT - LTR - RT													
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	453	xxxxx	xxxx	548	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	0.1	xxxxx		
Shrd StpDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.4	xxxxx	xxxxx	11.7	xxxxx		
Shared LOS:	*	*	*	*	*	*	*	B	*	*	B	*		
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	13.4	xxxxxx	xxxxxx	11.7	xxxxxx			
ApproachLOS:	*	*	*	*	*	*	B	*	*	B	*	*		

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Sunset/Murdock

Cycle (sec): 100 Critical Vol./Cap. (X): 0.393
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.2
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 11 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 11 columns and 4 rows including Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 11 columns and 10 rows including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #17 Sunset/Sherwood

Cycle (sec): 100 Critical Vol./Cap. (X): 0.832
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 23.0
Optimal Cycle: 0 Level Of Service: C

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, Lanes.

Volume Module table with 11 columns and 14 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 11 columns and 4 rows including Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with 11 columns and 10 rows including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #18 Edy/Elwert

Cycle (sec): 100 Critical Vol./Cap. (X): 0.566
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Edy/Borchers

Cycle (sec): 100 Critical Vol./Cap. (X): 0.495
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 13.7
Optimal Cycle: 45 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, HCM2kAvg.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #20 Sherwood/Langer
Average Delay (sec/veh): 11.5 Worst Case Level Of Service: C [ 18.0]
Approach: North Bound South Bound East Bound West Bound
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 0 0 47 0 0 259 139 320 23 14 189 313
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 47 0 0 259 139 320 23 14 189 313
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 47 0 0 259 139 320 23 14 189 313
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 47 0 0 259 139 320 23 14 189 313
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 47 0 0 259 139 320 23 14 189 313
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 7.1 6.5 6.2 7.2 6.6 6.3
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 3.6 4.1 3.4
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 404 177 130 325 283 24
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 557 717 920 621 620 1042
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 298 717 920 394 620 1042
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.47 0.45 0.02 0.04 0.31 0.30
Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.3 xxxxx xxxxx 0.1 0.5 xxxxx
Stopped Del:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 27.3 xxxxx xxxxx 14.5 11.9 xxxxx
LOS by Move: \* \* \* \* \* D \* \* B B \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 728 xxxxx xxxxx 900
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.5 xxxxx xxxxx 2.4
Shrd StpDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 14.3 xxxxx xxxxx 12.3
Shared LOS: \* \* \* \* \* B \* \* B
ApproachDel: xxxxxxx xxxxxxx 18.0 12.3
ApproachLOS: \* \* C B

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #21 Sherwood/Century
Cycle (sec): 100 Critical Vol./Cap. (X): 0.507
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 18.7
Optimal Cycle: 38 Level Of Service: B
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 0 1 0 0 1 0
Volume Module:
Base Vol: 18 395 64 70 491 43 25 40 52 285 94 60
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 18 395 64 70 491 43 25 40 52 285 94 60
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 18 395 64 70 491 43 25 40 52 285 94 60
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 18 395 64 70 491 43 25 40 52 285 94 60
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 18 395 64 70 491 43 25 40 52 285 94 60
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 18 395 64 70 491 43 25 40 52 285 94 60
Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.94 0.97 0.97 0.93 0.97 0.97 0.87 0.87 0.87 0.73 0.93 0.93
Lanes: 1.00 0.86 0.14 1.00 0.92 0.08 0.21 0.34 0.45 1.00 0.61 0.39
Final Sat.: 1787 1585 257 1769 1692 148 354 566 736 1379 1082 690
Capacity Analysis Module:
Vol/Sat: 0.01 0.25 0.25 0.04 0.29 0.29 0.07 0.07 0.07 0.21 0.09 0.09
Crit Moves: \*\*\*\*
Green/Cycle: 0.02 0.51 0.51 0.08 0.57 0.57 0.41 0.41 0.41 0.41 0.41 0.41
Volume/Cap: 0.51 0.49 0.49 0.49 0.51 0.51 0.17 0.17 0.17 0.51 0.21 0.21
Delay/Veh: 60.0 16.3 16.3 46.5 13.3 13.3 19.0 19.0 19.0 22.9 19.4 19.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 60.0 16.3 16.3 46.5 13.3 13.3 19.0 19.0 19.0 22.9 19.4 19.4
HCM2kAvg: 1 9 9 3 10 10 2 2 2 9 3 3

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #22 Sherwood-Pine/3rd

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: D[ 25.6]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0

Volume Module:
Base Vol: 105 0 27 0 0 0 0 0 421 162 45 383 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 105 0 27 0 0 0 0 0 421 162 45 383 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 105 0 27 0 0 0 0 0 421 162 45 383 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 105 0 27 0 0 0 0 0 421 162 45 383 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 105 0 27 0 0 0 0 0 421 162 45 383 0

Critical Gap Module:
Critical Gp: 6.4 xxxxx 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 975 xxxxx 502 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 583 xxxxx xxxxx
Potent Cap.: 281 xxxxx 573 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 986 xxxxx xxxxx
Move Cap.: 271 xxxxx 573 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 986 xxxxx xxxxx
Volume/Cap: 0.39 xxxxx 0.05 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.05 xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.8 xxxxx xxxxx
LOS by Move: \* \* \* \* \* \* \* \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 304 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 2.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx
Shrd StpDel: xxxxx 25.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.8 xxxxx xxxxx
Shared LOS: \* D \* \* \* \* \* \* \* A \* \*
ApproachDel: 25.6 xxxxxx xxxxxx xxxxxx xxxxxx
ApproachLOS: D \* \* \* \*

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #23 Pine/Oregon

Average Delay (sec/veh): 8.9 Worst Case Level Of Service: D[ 25.5]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1! 0 0 0 0 1! 0 0 0 1 0 0 0 0

Volume Module:
Base Vol: 0 44 0 74 63 122 92 216 0 0 203 100
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 44 0 74 63 122 92 216 0 0 203 100
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 44 0 74 63 122 92 216 0 0 203 100
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 44 0 74 63 122 92 216 0 0 203 100
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 44 0 74 63 122 92 216 0 0 203 100

Critical Gap Module:
Critical Gp: xxxxx 6.5 xxxxx 7.2 6.6 6.3 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim: xxxxx 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: xxxxx 730 xxxxx 694 680 270 315 xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx 352 xxxxx 353 369 761 1240 xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx 317 xxxxx 292 333 751 1227 xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx 0.14 xxxxx 0.25 0.19 0.16 0.07 xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:
Queue: xxxxx 0.5 xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: xxxxx 18.2 xxxxx xxxxx xxxxx xxxxx 8.2 xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: \* C \* \* \* \* \* A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx 428 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx xxxxx xxxxx xxxxx 3.9 xxxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx xxxxx 25.5 xxxxx 8.2 xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* \* \* \* \* D \* A \* \* \* \*
ApproachDel: 18.2 25.5 xxxxxx xxxxxx
ApproachLOS: C D \* \* \*

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volumes Alternative)

Intersection #24 Washington/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.188
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.8
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 10 columns and 10 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 10 columns and 3 rows including Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 10 columns and 10 rows including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #25 Washington/3rd

Cycle (sec): 100 Critical Vol./Cap. (X): 0.120
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 7.5
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 10 columns and 10 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module table with 10 columns and 3 rows including Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 10 columns and 10 rows including Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr.

Sherwood TSP  
Future (2020) Build (Mitigated)  
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #26 Sherwood/Railroad

Cycle (sec): 100 Critical Vol./Cap. (X): 0.448  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 10.7  
Optimal Cycle: 0 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0

Volume Module:  
Base Vol: 0 11 10 158 9 9 30 281 5 6 152 97  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 0 11 10 158 9 9 30 281 5 6 152 97  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 0 11 10 158 9 9 30 281 5 6 152 97  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 0 11 10 158 9 9 30 281 5 6 152 97  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 11 10 158 9 9 30 281 5 6 152 97  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Vol.: 0 11 10 158 9 9 30 281 5 6 152 97

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.00 0.52 0.48 0.90 0.05 0.05 0.09 0.89 0.02 0.02 0.60 0.38  
Final Sat.: 0 317 289 557 32 32 67 627 11 18 447 285

Capacity Analysis Module:  
Vol/Sat: xxx 0.03 0.03 0.28 0.28 0.28 0.45 0.45 0.45 0.34 0.34 0.34  
Crit Moves: \*\*\*\* \*\*  
Delay/Veh: 0.0 8.4 8.4 10.3 10.3 10.3 11.7 11.7 11.7 9.8 9.8 9.8  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 0.0 8.4 8.4 10.3 10.3 10.3 11.7 11.7 11.7 9.8 9.8 9.8  
LOS by Move: \* A A B B B B B A A A  
ApproachDel: 8.4 10.3 11.7 9.8  
Delay Adj: 1.00 1.00 1.00  
ApprAdjDel: 8.4 10.3 11.7 9.8  
LOS by Appr: A B B A

Sherwood TSP  
Future (2020) Build (Mitigated)  
PM Peak Hour

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #27 Cipole/Herman

Cycle (sec): 100 Critical Vol./Cap. (X): 0.284  
Loss Time (sec): 0 (Y+R = 4 sec) Average Delay (sec/veh): 9.2  
Optimal Cycle: 0 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Stop Sign Stop Sign  
Rights: Include Include Include Include  
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0  
Lanes: 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0

Volume Module:  
Base Vol: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Initial Bse: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Initial Fut: 150 0 52 0 0 0 0 0 47 96 111 99 0  
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
PHF Volume: 150 0 52 0 0 0 0 0 47 96 111 99 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 150 0 52 0 0 0 0 0 47 96 111 99 0  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Vol.: 150 0 52 0 0 0 0 0 47 96 111 99 0

Saturation Flow Module:  
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Lanes: 0.74 0.00 0.26 0.00 0.00 0.00 0.00 0.33 0.67 0.53 0.47 0.00  
Final Sat.: 536 0 186 0 0 0 0 0 262 536 390 348 0

Capacity Analysis Module:  
Vol/Sat: 0.28 xxx 0.28 xxx xxx 0.18 0.18 0.28 0.28 xxx  
Crit Moves: \*\*\*\* \*\*  
Delay/Veh: 9.5 0.0 9.5 0.0 0.0 0.0 8.2 8.2 9.5 9.5 0.0  
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 9.5 0.0 9.5 0.0 0.0 0.0 8.2 8.2 9.5 9.5 0.0  
LOS by Move: A \* A \* \* A A A A \*  
ApproachDel: 9.5 xxxxxx 8.2 9.5  
Delay Adj: 1.00 xxxxxx 1.00 1.00  
ApprAdjDel: 9.5 xxxxxx 8.2 9.5  
LOS by Appr: A \* A A

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

FHWA Roundabout Method (Future Volume Alternative)

Intersection #28 Meinecke/Dewey

Average Delay (sec/veh): 3.7 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Yield Sign Yield Sign Yield Sign Yield Sign
Lanes: 0 1 1 1

Volume Module:

Base Vol: 0 0 0 127 0 127 52 36 0 0 52 110
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 127 0 127 52 36 0 0 52 110
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 127 0 127 52 36 0 0 52 110
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 127 0 127 52 36 0 0 52 110
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 127 0 127 52 36 0 0 52 110
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Vol.: 0 0 0 127 0 127 52 36 0 0 52 110

PCE Module:

AutoPCE: 0 0 0 126 0 126 52 36 0 0 51 108
TruckPCE: 0 0 0 2 0 2 0 0 0 0 2 3
ComboPCE: 0 0 0 0 0 0 0 0 0 0 0 0
BicyclePCE: 0 0 0 0 0 0 0 0 0 0 0 0
AdjVolume: 0 0 0 128 0 128 52 36 0 0 53 111

Delay Module: >> Time Period: 0.25 hours <<

CircVolume: 216 53 128 52
MaxVolume: xxxxxx 1172 1131 1172
PedVolume: 0 0 0 0
AdjMaxVol: xxxxxx 1172 1131 1172
ApproachVol: xxxxxx 255 88 164
ApproachDel: xxxxxx 3.9 3.5 3.6
Queue: xxxxx 0.8 0.3 0.5

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29 Brookman/Ladd Hill

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: B [10.2]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 37 82 0 0 98 74 38 0 26 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 37 82 0 0 98 74 38 0 26 0 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 37 82 0 0 98 74 38 0 26 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 37 82 0 0 98 74 38 0 26 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 37 82 0 0 98 74 38 0 26 0 0 0 0

Critical Gap Module:

Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.5 xxxxx 6.3 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.6 xxxxx 3.4 xxxxx xxxxx xxxxx

Capacity Module:

Cnflct Vol: 172 xxxxx xxxxx xxxxx xxxxx xxxxx 291 xxxxx 135 xxxxx xxxxx xxxxx
Potent Cap.: 1411 xxxxx xxxxx xxxxx xxxxx xxxxx 689 xxxxx 901 xxxxx xxxxx xxxxx
Move Cap.: 1411 xxxxx xxxxx xxxxx xxxxx xxxxx 675 xxxxx 901 xxxxx xxxxx xxxxx
Volume/Cap: 0.03 xxxxx xxxxx xxxxx xxxxx xxxxx 0.06 xxxxx 0.03 xxxxx xxxxx xxxxx

Level Of Service Module:

Queue: 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: 7.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 752 xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: 7.6 xxxxx xxxxx xxxxx xxxxx xxxxx 10.2 xxxxx xxxxx xxxxx xxxxx
Shared LOS: A \* \* \* \* \* B \* \* \* \*
ApproachDel: xxxxxx xxxxxx 10.2 xxxxxx
ApproachLOS: \* \* B \*



Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #32 Sunset/Woodhaven

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: D [ 30.9]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 1 0 0 0 0 1 0 1 0 1 0 0 1 0

Volume Module:

Base Vol: 11 4 5 49 4 98 188 408 26 3 316 52
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 11 4 5 49 4 98 188 408 26 3 316 52
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 11 4 5 49 4 98 188 408 26 3 316 52
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 11 4 5 49 4 98 188 408 26 3 316 52
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 11 4 5 49 4 98 188 408 26 3 316 52

Critical Gap Module:

Critical Gp: 7.1 6.5 6.2 7.1 6.5 6.2 4.1 xxxx xxxxx 4.1 xxxx xxxxx
FollowUpTim: 3.5 4.0 3.3 3.5 4.0 3.3 2.2 xxxx xxxxx 2.2 xxxx xxxxx

Capacity Module:

Cnflct Vol: 1197 1168 413 1155 1168 356 373 xxxx xxxxxx 439 xxxx xxxxxx
Potent Cap.: 162 193 637 175 194 690 1197 xxxx xxxxxx 1121 xxxx xxxxxx
Move Cap.: 118 160 634 149 162 682 1192 xxxx xxxxxx 1116 xxxx xxxxxx
Volume/Cap: 0.09 0.02 0.01 0.33 0.02 0.14 0.16 xxxx xxxxx 0.00 xxxx xxxxx

Level Of Service Module:

Queue: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.6 xxxxx xxxxx 0.0 xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.6 xxxxx xxxxx 8.2 xxxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx 159 xxxxx xxxxx 303 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: xxxxx 0.4 xxxxx xxxxx 2.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd StpDel: xxxxx 30.9 xxxxx xxxxx 28.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: \* D \* \* \* D \* \* \* \*
ApproachDel: 30.9 28.1 xxxxxx xxxxxx
ApproachLOS: D D \* \*

Sherwood TSP
Future (2020) Build (Mitigated)
PM Peak Hour

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #33 Elwert/Swanstrom

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B [ 10.8]

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
Rights: Include Include Include Include
Lanes: 0 0 0 1 0 0 0 1 0 0 0 0 0 0 1 0 0 0

Volume Module:

Base Vol: 0 144 13 13 371 0 0 0 0 11 0 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 144 13 13 371 0 0 0 0 11 0 11
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 144 13 13 371 0 0 0 0 11 0 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 144 13 13 371 0 0 0 0 11 0 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 144 13 13 371 0 0 0 0 11 0 11

Critical Gap Module:

Critical Gp: xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx 6.2
FollowUpTim: xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx 157 xxxxx xxxxx xxxxx xxxxx xxxxx 547 xxxxx 151
Potent Cap.: xxxxx xxxxx xxxxx 1429 xxxxx xxxxx xxxxx xxxxx xxxxx 501 xxxxx 901
Move Cap.: xxxxx xxxxx xxxxx 1429 xxxxx xxxxx xxxxx xxxxx xxxxx 498 xxxxx 901
Volume/Cap: xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx 0.02 xxxxx 0.01

Level Of Service Module:

Queue: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Stopped Del: xxxxx xxxxx xxxxx 7.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: \* \* \* \* \* A \* \* \* A \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 641 xxxxx
SharedQueue: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx
Shrd StpDel: xxxxx xxxxx xxxxx 7.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 10.8 xxxxx
Shared LOS: \* \* \* \* \* A \* \* \* \* \* \* \*
ApproachDel: xxxxxx xxxxxx xxxxxx xxxxxx 10.8
ApproachLOS: \* \* \* \* \* B



## **Improvement Plans and Costs**

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## Century/Sherwood Roundabout

Engineer's Estimate Harper Houf Peterson Righellis Inc. (KKV)

Job Number: DKS-06, March 2004

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	\$15,000.00	\$15,000.00
2	Temporary Protection and Direction of Traffic	LS	1	\$20,000.00	\$20,000.00
3	Removal of Structures and Obstructions	LS	1	\$2,500.00	\$2,500.00
4	Roadway Excavation	CY	1360	\$8.00	\$10,880.00
5	Sawcutting	LF	250	\$1.50	\$375.00
6	Level 3 Asphalt Paving	TN	775	\$45.00	\$34,875.00
7	Concrete Curb and Gutter	LF	740	\$12.00	\$8,880.00
8	PC Conc. Mountable Island	SY	345	\$35.00	\$12,075.00
9	PC Conc. Sidewalk	SY	400	\$28.00	\$11,200.00
10	Conc. Traffic Island	SY	100	\$30.00	\$3,000.00
11	Permanent Pavement Striping	LS	1	\$3,000.00	\$3,000.00
12	Roadway Signing	LS	1	\$2,000.00	\$2,000.00
13	Miscellaneous Private Property Improvements	LS	1	\$10,000.00	\$10,000.00
14	Miscellaneous Public Improvements	LS	1	\$10,000.00	\$10,000.00
15	Erosion Control and Water Quality	LS	1	\$1,000.00	\$1,000.00
16	Bark Mulch	UNIT	4	\$185.00	\$740.00
17	Ground Cover Landscaping	SY	430	\$50.00	\$21,500.00
18	Irrigation System	LS	1	\$4,000.00	\$4,000.00
19	Landscape Maintenance	LS	1	\$500.00	\$500.00
20	10% Contingency	LS	1	\$17,152.50	\$17,152.50
<b>Total Construction Estimate</b>					<b>\$ 188,677.50</b>

### Engineering and Design

Engineering and Construction Management	LS	1	\$35,000.00	\$40,000.00
Permitting	LS	1	\$1,000.00	\$1,000.00
Inspection	LS	1	\$4,000.00	\$4,000.00
<b>Total for Engineering and Design</b>				<b>\$ 45,000.00</b>

### Surveying

Topographic Survey	LS	1	\$4,800.00	\$4,800.00
ROW-Pre	LS	1	\$2,500.00	\$2,500.00
Construction Staking	LS	1	\$2,500.00	\$2,500.00
ROW-Post	LS	1	\$2,500.00	\$2,500.00
<b>Total for Survey</b>				<b>\$ 12,300.00</b>

### ROW Acquisition

Lot 500 - Residential	SF	32	\$5.00	\$160.00
Lot 5000 - Residential*	SF	1470	\$10.00	\$14,700.00
Lot 2500 - Commercial	SF	312	\$12.00	\$3,744.00
Right-of-way acquisition costs	EA	3	\$3,500.00	\$10,500.00
<b>Total for Right-of-way</b>				<b>\$ 29,104.00</b>

\* Note: Lot 5000 may require full take.

**Total Estimate** **\$ 275,081.50**

## Century/Sherwood Roundabout Offset Centerline

Engineer's Estimate Harper Houf Peterson Righellis Inc. (KKV)

Job Number: DKS-06, March 2004

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	\$15,000.00	\$15,000.00
2	Temporary Protection and Direction of Traffic	LS	1	\$20,000.00	\$20,000.00
3	Removal of Structures and Obstructions	LS	1	\$2,500.00	\$2,500.00
4	Roadway Excavation	CY	1360	\$8.00	\$10,880.00
5	Sawcutting	LF	250	\$1.50	\$375.00
6	Level 3 Asphalt Paving	TN	775	\$45.00	\$34,875.00
7	Concrete Curb and Gutter	LF	740	\$12.00	\$8,880.00
8	PC Conc. Mountable Island	SY	345	\$35.00	\$12,075.00
9	PC Conc. Sidewalk	SY	400	\$28.00	\$11,200.00
10	Conc. Traffic Island	SY	100	\$30.00	\$3,000.00
11	Permanent Pavement Striping	LS	1	\$3,000.00	\$3,000.00
12	Roadway Signing	LS	1	\$2,000.00	\$2,000.00
13	Miscellaneous Private Property Improvements	LS	1	\$10,000.00	\$10,000.00
14	Miscellaneous Public Improvements	LS	1	\$20,000.00	\$20,000.00
15	Erosion Control and Water Quality	LS	1	\$1,000.00	\$1,000.00
16	Bark Mulch	UNIT	4	\$185.00	\$740.00
17	Ground Cover Landscaping	SY	430	\$50.00	\$21,500.00
18	Irrigation System	LS	1	\$4,000.00	\$4,000.00
19	Landscape Maintenance	LS	1	\$500.00	\$500.00
20	10% Contingency	LS	1	\$18,152.50	\$18,152.50
<b>Total Construction Estimate</b>					<b>\$ 199,677.50</b>

### Engineering and Design

Engineering and Construction Management	LS	1	\$35,000.00	\$40,000.00
Permitting	LS	1	\$1,000.00	\$1,000.00
Inspection	LS	1	\$4,000.00	\$4,000.00
<b>Total for Engineering and Design</b>				<b>\$ 45,000.00</b>

### Surveying

Topographic Survey	LS	1	\$4,800.00	\$4,800.00
ROW-Pre	LS	1	\$2,500.00	\$2,500.00
Construction Staking	LS	1	\$2,500.00	\$2,500.00
ROW-Post	LS	1	\$2,500.00	\$2,500.00
<b>Total for Survey</b>				<b>\$ 12,300.00</b>

### ROW Acquisition

Lot 500 - Residential	SF	215	\$5.00	\$1,075.00
Lot 5000 - Residential*	SF	520	\$10.00	\$5,200.00
Lot 2500 - Commercial	SF	34	\$12.00	\$408.00
Right-of-way acquisition costs	EA	3	\$3,500.00	\$10,500.00
<b>Total for Right-of-way</b>				<b>\$17,183.00</b>

\* Note: Lot 5000 may require full take.

### Total Estimate

**\$ 274,160.50**

# Elwert

Engineer's Estimate Harper Houf Peterson Righellis Inc. (KKV)

Job Number: DKS-06, March 2004

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	\$50,000.00	\$50,000.00
2	Temporary Protection and Direction of Traffic	LS	1	\$20,000.00	\$20,000.00
3	Removal of Structures and Obstructions	LS	1	\$10,000.00	\$10,000.00
3	Clearing and Grubbing	LS	1	\$10,000.00	\$10,000.00
4	Roadway Excavation	CY	5000	\$8.00	\$40,000.00
5	Sawcutting	LF	250	\$2.00	\$500.00
6	Aggregate Base 1-1/2-0	CY	2500	\$28.00	\$70,000.00
7	Level 3 Asphalt Paving	TN	3650	\$45.00	\$164,250.00
8	Concrete Curb and Gutter	LF	1220	\$12.00	\$14,640.00
9	Round about Apron Curb	LF	452	\$18.00	\$8,136.00
10	Standard Concrete Sidewalk (includes ramps)	SY	1025	\$25.00	\$25,625.00
11	PC Conc. Mountable Island	SY	780	\$35.00	\$27,300.00
12	Signal Modifications	LS	1	\$50,000.00	\$50,000.00
13	Detectable Warning Surface	SF	12	\$72.00	\$864.00
14	Roadway Lighting Complete	LS	1	\$75,000.00	\$75,000.00
15	Permanent Pavement Striping	LS	1	\$10,000.00	\$10,000.00
16	Roadway Signing	LS	1	\$1,500.00	\$1,500.00
17	Miscellaneous Private Property Improvements	LS	1	\$10,000.00	\$10,000.00
18	Miscellaneous Public Improvements	LS	1	\$25,000.00	\$25,000.00
19	Erosion Control and Water Quality	LS	1	\$10,000.00	\$10,000.00
20	Sedding and Fertilization	SF	4000	\$2.00	\$8,000.00
21	Bark Mulch	UNIT	6	\$185.00	\$1,110.00
22	Planter Strip Ground Cover	SY	1600	\$80.00	\$128,000.00
23	Street Trees	EA	47	\$200.00	\$9,400.00
24	Landscape Maintenance	LS	1	\$2,500.00	\$2,500.00
25	12" Storm Pipe	LF	1000	\$40.00	\$40,000.00
26	Storm Manhole	EA	6	\$2,500.00	\$15,000.00
27	G2 Catch Basin	EA	8	\$1,000.00	\$8,000.00
28	Ditch Inlets	EA	4	\$1,200.00	\$4,800.00
29	10% Contingency	LS	1	\$83,962.50	\$83,962.50
<b>Total Construction Estimate</b>					<b><u>\$923,587.50</u></b>

## Engineering and Design

Engineering and Construction Management	LS	1	\$65,000.00	\$70,000.00
Permitting	LS	1	\$5,000.00	\$3,000.00
Inspection	LS	1	\$20,000.00	\$15,000.00
<b>Total for Engineering and Design</b>				<b><u>\$ 88,000.00</u></b>

## Surveying

Topographic Survey	LS	1	\$10,000.00	\$10,000.00
ROW Pre-survey	LS	1	\$6,500.00	\$6,500.00
Construction Staking	LS	1	\$11,000.00	\$11,000.00
ROW Post	LS	1	\$4,500.00	\$4,500.00
<b>Survey Total</b>				<b><u>\$ 32,000.00</u></b>

## Right-of way

Tax Lot 206	SF	80000	\$5.00	\$400,000.00
Tax Lot 600	SF	5300	\$5.00	\$26,500.00
Right-of-way Acquisition Cost	EA	2	\$3,500.00	\$7,000.00
<b>Right-of-way Total</b>				<b><u>\$433,500.00</u></b>

## Total Estimate

**\$ 1,477,087.50**

# Tonquin/Oregon Intersection

Engineer's Estimate Harper Houf Peterson Righellis Inc. (KKV)

Job Number: DKS-06, March 2004

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	\$50,000.00	\$50,000.00
2	Temporary Protection and Direction of Traffic	LS	1	\$20,000.00	\$20,000.00
3	Removal of Structures and Obstructions	LS	1	\$10,000.00	\$10,000.00
4	Clearing and Grubbing	LS	1	\$10,000.00	\$10,000.00
5	Roadway Excavation	CY	2500	\$8.00	\$20,000.00
6	Sawcutting	LF	1800	\$2.00	\$3,600.00
7	Aggregate Base 1-1/2-0	CY	4500	\$28.00	\$126,000.00
8	Level 3 Asphalt Paving	TN	1700	\$45.00	\$76,500.00
9	Concrete Curb and Gutter	LF	1316	\$12.00	\$15,792.00
10	Round about Apron Curb	LF	390	\$18.00	\$7,020.00
11	Standard Concrete Sidewalk (includes ramps)	SY	4885	\$25.00	\$122,125.00
12	PC Conc. Mountable Island	SY	514	\$35.00	\$17,990.00
13	Detectable Warning Surface	SF	12	\$72.00	\$864.00
14	Roadway Lighting Complete	LS	1	\$25,000.00	\$25,000.00
15	Permanent Pavement Striping	LS	1	\$3,000.00	\$3,000.00
16	Roadway Signing	LS	1	\$6,500.00	\$6,500.00
17	Miscellaneous Public Improvements	LS	1	\$25,000.00	\$25,000.00
18	Miscellaneous Private Property Improvements	LS	1	\$10,000.00	\$10,000.00
19	Erosion Control and Water Quality	LS	1	\$10,000.00	\$10,000.00
20	Wetland Mitigation	LS	1	\$2,500.00	\$2,500.00
21	Seeding and Fertilization	SF	4000	\$2.00	\$8,000.00
22	Bark Mulch	UNIT	6	\$185.00	\$1,110.00
23	Planter Strip Ground Cover	SY	150	\$80.00	\$12,000.00
24	Street Trees	EA	5	\$200.00	\$1,000.00
25	Landscape Maintenance	LS	1	\$2,500.00	\$2,500.00
26	12" Storm Pipe	LF	400	\$40.00	\$16,000.00
27	Storm Manhole	EA	3	\$2,500.00	\$7,500.00
28	Connect to Existing Manhole	EA	1	\$1,500.00	\$1,500.00
29	G2 Catch Basin	EA	4	\$900.00	\$3,600.00
30	Adjust Existing Manhole	EA	1	\$1,200.00	\$1,200.00
31	Reconstruct Existing Manhole	EA	1	\$2,500.00	\$2,500.00
32	Fire Hydrant Relocation	EA	1	\$3,500.00	\$3,500.00
33	Retaining Wall	SF	1000	\$55.00	\$55,000.00
34	10% Contingency	LS	1	\$67,730.10	\$67,730.10

**Total Construction Estimate** **\$ 745,031.10**

## Engineering and Design

Engineering and Construction Management	LS	1	\$65,000.00	\$65,000.00
Permitting	LS	1	\$10,000.00	\$10,000.00
Inspection	LS	1	\$20,000.00	\$20,000.00

**Total for Engineering and Design** **\$ 95,000.00**

## Surveying

Topographic Survey	LS	1	\$5,500.00	\$5,500.00
ROW Pre	LS	1	\$4,500.00	\$4,500.00
Construction Staking	LS	1	\$7,500.00	\$7,500.00
ROW Post	LS	1	\$2,500.00	\$2,500.00
ROW and Easement Exhibits	EA	3	\$350.00	\$1,050.00

**Survey Total** **\$ 21,050.00**

## Right-of way

Tax Lot 500	SF	6585	\$ 12.00	\$79,020.00
Right-of-way Acquisition Cost	EA	1	\$ 3,500.00	\$3,500.00

**Right-of-way Total** **\$ 82,520.00**

**Total Estimate** **\$ 943,601.10**

# Villa Street/First Street Connection

Engineer's Estimate Harper Houf Peterson Righellis Inc. (KKV)

Job Number: DKS-06, March 2004

Item	Description	Unit	Quantity	Unit Price	Total
1	Mobilization	LS	1	\$90,000.00	\$90,000.00
2	Temporary Protection and Direction of Traffic	LS	1	\$10,000.00	\$10,000.00
3	Clearing and Grubbing	LS	1	\$35,000.00	\$35,000.00
4	Roadway Embankment	CY	10000	\$15.00	\$150,000.00
5	Sawcutting	LF	200	\$1.50	\$300.00
6	Aggregate Base 1-1/2-0	CY	1800	\$28.00	\$50,400.00
7	Geotextile Fabric	SY	3888	\$2.00	\$7,776.00
8	Level 3 Asphalt Paving	TN	2510	\$45.00	\$112,950.00
9	Standard Concrete Curb	LF	3100	\$26.00	\$80,600.00
10	Standard Concrete Sidewalk (includes ramps)	SY	2070	\$25.00	\$51,750.00
11	Concrete Driveway Aprons	SY	500	\$28.00	\$14,000.00
12	Asphalt Driveway Reconstruction	SY	500	\$50.00	\$25,000.00
13	Gravel Driveway Reconstruction	SY	500	\$12.00	\$6,000.00
14	Roadway Lighting Complete	LS	1	\$120,000.00	\$120,000.00
15	Permanent Pavement Striping	LS	1	\$3,000.00	\$3,000.00
16	Roadway Signing	LS	1	\$5,000.00	\$5,000.00
17	Erosion Control and Wetland Mitigation	AC	1.25	\$25,000.00	\$31,250.00
18	Miscellaneous Private Property Improvements	LS	1	\$30,000.00	\$30,000.00
19	Miscellaneous Public Improvements	LS	1	\$40,000.00	\$40,000.00
20	Seeding and Fertilization	SF	31250	\$2.00	\$62,500.00
21	Bark Mulch	UNIT	2	\$185.00	\$370.00
22	Planter Strip Ground Cover	SY	1500	\$80.00	\$120,000.00
23	Street Trees	EA	85	\$200.00	\$17,000.00
24	Landscape Maintenance	LS	1	\$5,000.00	\$5,000.00
25	12 x 15 Culvert	LF	240	\$1,000.00	\$240,000.00
26	12" Storm Pipe	LF	600	\$45.00	\$27,000.00
27	G2 Catch Basin	EA	12	\$1,200.00	\$14,400.00
28	Standard Manholes	EA	4	\$2,000.00	\$8,000.00
29	10" Ductile Iron Pipe	LF	1600	\$40.00	\$64,000.00
30	Fire Hydrant Installation	EA	2	\$2,500.00	\$5,000.00
31	Connect to Existing Waterline	EA	2	\$800.00	\$1,600.00
32	10% Contingency	LS	1	\$142,789.60	\$142,789.60

**Total Construction Estimate** **\$ 1,570,685.60**

## Engineering and Design

Engineering and Construction Management	\$150,000.00
Permitting	\$15,000.00
Inspection	\$60,000.00
<b>Total Engineering</b>	<b>\$ 225,000.00</b>

## Surveying

Topographic Survey	\$15,000.00
ROW Pre	\$9,000.00
Construction	\$20,000.00
ROW Post	\$4,800.00
ROW and EASE Acquisition	\$6,000.00
<b>Survey Total</b>	<b>\$ 54,800.00</b>

## Right-of-Way

Right-of-way	SF	43200	\$ 10.00	\$ 432,000.00
Easement	SF	7785	\$ 8.00	\$ 62,280.00
Right-of-way Acquisition Cost	EA	15	\$ 3,500.00	\$ 52,500.00
<b>Total Real Estate Acquisition</b>				<b>\$ 546,780.00</b>

**Project Total** **\$ 2,397,265.60**

## Bridge Option

Single Span Bridge	LF	100	\$7,000.00	\$700,000.00
Add Engineering and Survey for Bridge	LS	1		\$25,000.00

**Project Total With Bridge Option** **\$ 2,882,265.60**

Note: It is assumed there will be no cost other than paperwork costs for converting City property to right-of-way and easement.