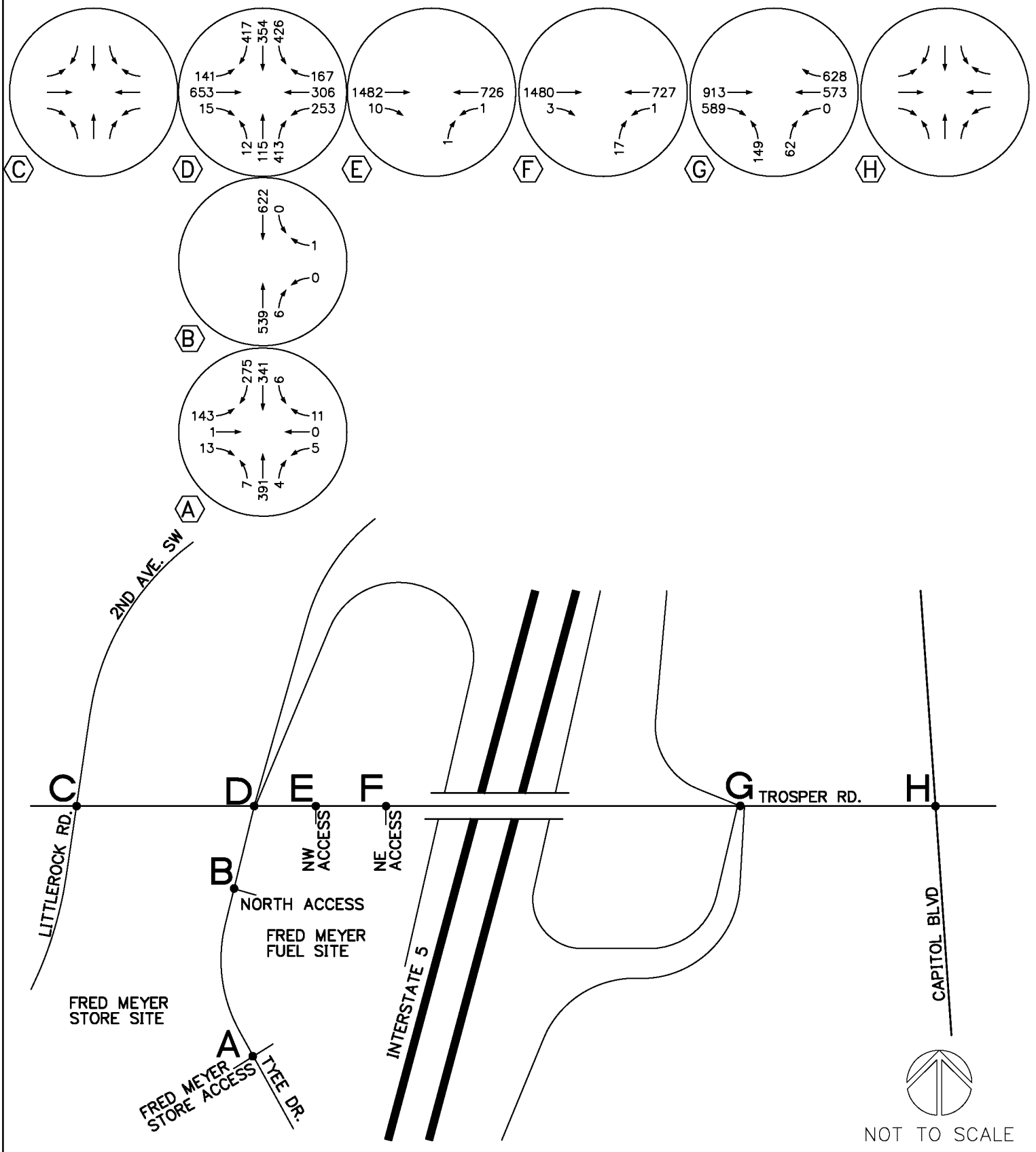


GROUP MACKENZIE

Portland OR 503.224.9560
Vancouver WA 360.695.7879
Seattle WA 206.749.9993

DATE: 05.25.12
DRAWN BY: MJS
CHECKED BY: BTA/DAH
JOB NO: 2110317.00

2012 EXISTING TRAFFIC VOLUMES - WEEKDAY PM PEAK HOUR

FRED MEYER TUMWATER FUEL FACILITY
TUMWATER, WASHINGTON

FIGURE 4

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Tyee Dr SW -- Fred Meyer's Access Dwy

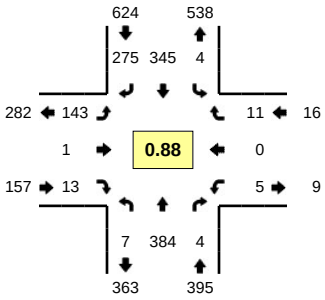
QC JOB #: 10755003

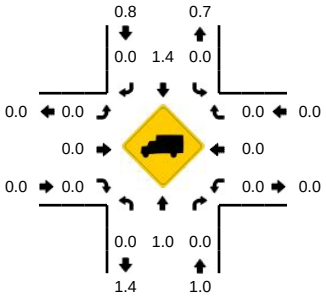
CITY/STATE: Tumwater, WA

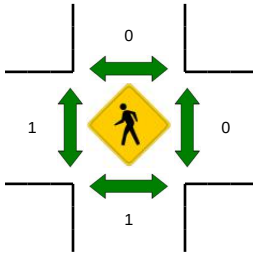
DATE: Tue, May 08 2012

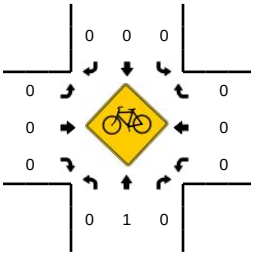
Peak-Hour: 4:45 PM -- 5:45 PM

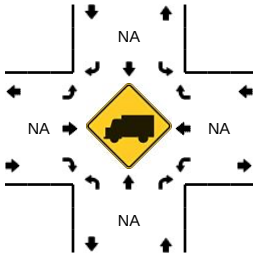
Peak 15-Min: 5:05 PM -- 5:20 PM

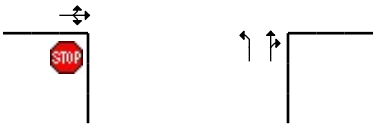


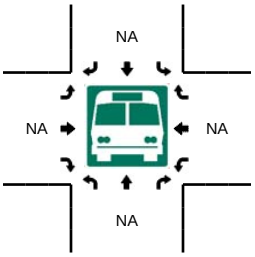












5-Min Count Period Beginning At	Tyee Dr SW (Northbound)				Tyee Dr SW (Southbound)				Fred Meyer's Access Dwy (Eastbound)				Fred Meyer's Access Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	34	0	0	0	23	24	0	6	0	0	0	1	0	1	0	90	
4:05 PM	1	29	1	0	0	25	15	0	11	0	0	0	1	0	0	0	83	
4:10 PM	1	27	0	0	0	35	24	0	9	0	0	0	0	0	2	0	98	
4:15 PM	0	22	0	0	1	23	27	0	10	1	0	0	0	0	1	0	85	
4:20 PM	1	27	0	0	0	27	18	0	12	0	2	0	2	0	0	0	89	
4:25 PM	0	28	0	0	0	34	9	0	9	0	1	0	0	1	1	0	83	
4:30 PM	0	25	1	0	1	27	17	0	11	0	2	0	1	0	2	0	87	
4:35 PM	0	32	0	0	1	34	26	0	12	0	0	0	0	0	0	0	105	
4:40 PM	1	42	0	0	0	30	26	0	8	0	1	0	0	1	1	0	110	
4:45 PM	0	31	0	0	0	35	15	0	10	1	3	0	0	0	1	0	96	
4:50 PM	1	23	1	0	2	24	19	0	3	0	0	0	1	0	0	0	74	
4:55 PM	1	17	0	0	0	28	13	0	8	0	0	0	1	0	3	0	71	1071
5:00 PM	0	35	1	0	1	24	24	0	13	0	0	0	0	0	0	0	98	1079
5:05 PM	0	32	0	0	0	27	25	0	18	0	2	0	1	0	2	0	107	1103
5:10 PM	2	41	2	0	0	33	27	0	6	0	0	0	1	0	1	0	113	1118
5:15 PM	1	34	0	0	0	34	32	0	15	0	3	0	0	0	0	0	119	1152
5:20 PM	0	42	0	0	0	31	26	0	11	0	0	0	0	0	0	0	110	1173
5:25 PM	0	40	0	0	0	22	28	0	17	0	2	0	0	0	1	0	110	1200
5:30 PM	1	32	0	0	0	22	22	0	16	0	2	0	0	0	0	0	95	1208
5:35 PM	0	17	0	0	1	30	24	0	16	0	1	0	1	0	3	0	93	1196
5:40 PM	1	40	0	0	0	35	20	0	10	0	0	0	0	0	0	0	106	1192
5:45 PM	0	24	0	0	0	12	19	0	15	0	0	0	0	0	0	0	70	1166
5:50 PM	0	29	0	0	0	34	21	0	11	0	0	0	1	0	0	0	96	1188
5:55 PM	1	13	1	0	0	24	14	0	10	0	1	0	0	0	0	0	64	1181

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	428	8	0	0	376	336	0	156	0	20	0	8	0	12	0	1356
Heavy Trucks	0	8	0		0	4	0		0	0	0		0	0	0		12
Pedestrians		0				0				0				0			0
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments: be sure to capture east leg driveway entrance

Report generated on 5/16/2012 3:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

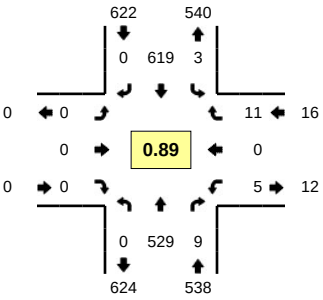
LOCATION: Tyee Dr SW -- Southeast Dwy

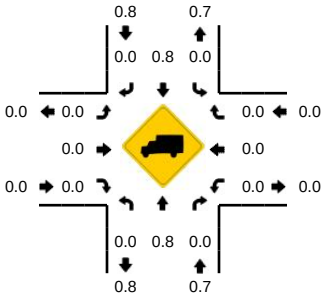
QC JOB #: 10755002

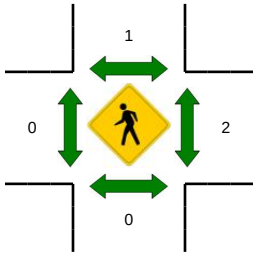
CITY/STATE: Tumwater, WA

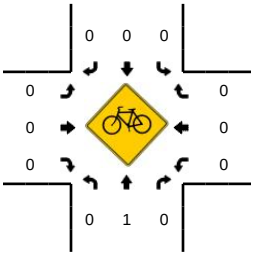
DATE: Tue, May 08 2012

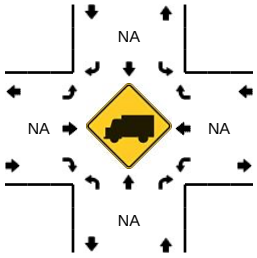
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

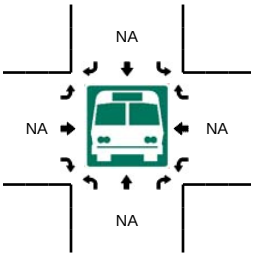












5-Min Count Period Beginning At	Tyee Dr SW (Northbound)				Tyee Dr SW (Southbound)				Southeast Dwy (Eastbound)				Southeast Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	41	0	0	0	46	0	0	0	0	0	0	1	0	1	0	89	
4:05 PM	0	39	1	0	0	39	0	0	0	0	0	0	1	0	0	0	80	
4:10 PM	0	38	0	0	0	57	0	0	0	0	0	0	2	0	0	0	97	
4:15 PM	0	31	2	0	0	51	0	0	0	0	0	0	0	0	1	0	85	
4:20 PM	0	39	0	0	0	43	0	0	0	0	0	0	2	0	0	0	84	
4:25 PM	0	38	0	0	0	42	0	0	0	0	0	0	1	0	1	0	82	
4:30 PM	0	37	1	0	1	44	0	0	0	0	0	0	1	0	1	0	85	
4:35 PM	0	44	0	0	1	61	0	0	0	0	0	0	0	0	0	0	106	
4:40 PM	0	51	0	0	0	55	0	0	0	0	0	0	1	0	1	0	108	
4:45 PM	0	41	1	0	1	50	0	0	0	0	0	0	0	0	1	0	94	
4:50 PM	0	24	2	0	1	44	0	0	0	0	0	0	1	0	0	0	72	
4:55 PM	0	28	0	0	0	40	0	0	0	0	0	0	1	0	3	0	72	1054
5:00 PM	0	47	1	0	1	49	0	0	0	0	0	0	0	0	0	0	98	1063
5:05 PM	0	51	1	0	0	51	0	0	0	0	0	0	1	0	2	0	106	1089
5:10 PM	0	46	2	0	0	59	0	0	0	0	0	0	1	0	1	0	109	1101
5:15 PM	0	49	0	0	0	66	0	0	0	0	0	0	0	0	0	0	115	1131
5:20 PM	0	53	0	0	0	57	0	0	0	0	0	0	0	0	0	0	110	1157
5:25 PM	0	58	0	0	0	50	0	0	0	0	0	0	0	0	1	0	109	1184
5:30 PM	0	47	1	0	0	44	0	0	0	0	0	0	0	0	0	0	92	1191
5:35 PM	0	35	1	0	0	54	0	0	0	0	0	0	1	0	3	0	94	1179
5:40 PM	0	50	0	0	0	55	0	0	0	0	0	0	0	0	0	0	105	1176
5:45 PM	0	39	0	0	0	31	0	0	0	0	0	0	0	0	0	0	70	1152
5:50 PM	0	40	0	0	0	54	0	0	0	0	0	0	1	0	0	0	95	1175
5:55 PM	0	22	1	0	0	38	0	0	0	0	0	0	0	0	0	0	61	1164

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	584	12	0	0	704	0	0	0	0	0	0	8	0	12	0	1320
Heavy Trucks	0	8	0		0	4	0		0	0	0		0	0	0		12
Pedestrians		0				0				0				0			0
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/16/2012 3:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

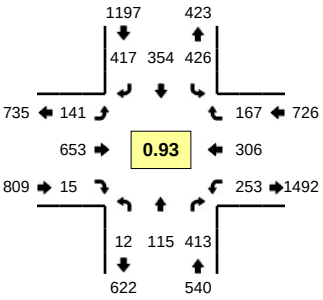
Method for determining peak hour: Total Entering Volume

LOCATION: Tyee Dr SW -- Trosper Rd SW/I-5 SB Ramps

QC JOB #: 10755001

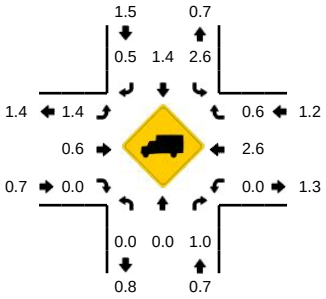
CITY/STATE: Tumwater, WA

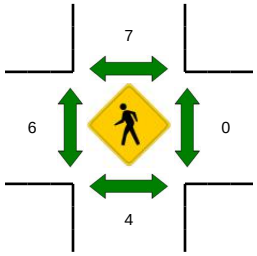
DATE: Tue, May 08 2012

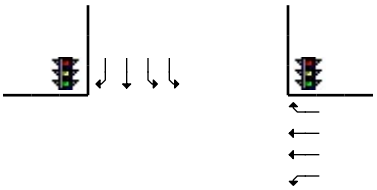


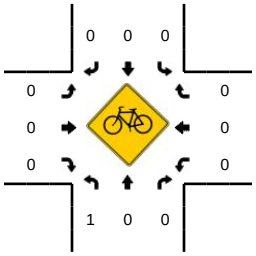
Peak-Hour: 4:45 PM -- 5:45 PM

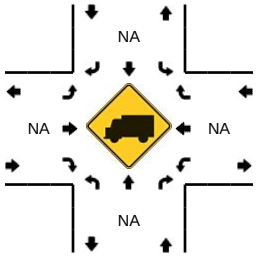
Peak 15-Min: 5:05 PM -- 5:20 PM

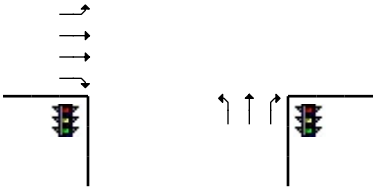


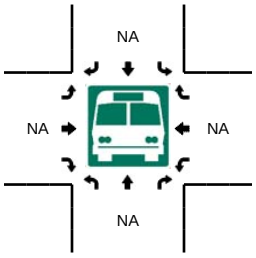












5-Min Count Period Beginning At	Tyee Dr SW (Northbound)				Tyee Dr SW (Southbound)				Trosper Rd SW/I-5 SB Ramps (Eastbound)				Trosper Rd SW/I-5 SB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	9	31	0	29	26	22	0	16	53	0	0	20	26	10	0	244	
4:05 PM	1	10	28	0	33	22	21	0	7	67	3	0	14	25	6	0	237	
4:10 PM	2	9	27	0	35	29	41	0	11	41	1	0	27	25	16	0	264	
4:15 PM	1	7	24	0	46	24	42	0	10	64	3	0	24	22	8	0	275	
4:20 PM	1	5	33	0	35	23	36	0	13	70	2	0	18	22	12	0	270	
4:25 PM	1	9	29	0	35	24	28	0	9	49	0	0	18	24	13	0	239	
4:30 PM	0	3	35	0	43	27	37	0	14	50	1	0	17	25	11	0	263	
4:35 PM	2	12	30	0	33	39	39	0	7	46	1	0	22	34	13	0	278	
4:40 PM	0	18	34	0	38	33	38	0	11	37	0	0	22	26	9	0	266	
4:45 PM	0	14	28	0	33	26	46	0	17	50	4	0	21	32	10	0	281	
4:50 PM	0	7	17	0	29	26	34	0	16	70	0	0	19	25	12	0	255	
4:55 PM	1	9	21	0	44	32	36	0	8	58	0	0	8	23	7	0	247	3119
5:00 PM	3	9	35	0	32	34	33	0	13	45	1	0	15	23	17	0	260	3135
5:05 PM	1	9	43	0	32	22	33	0	17	46	0	0	29	29	19	0	280	3178
5:10 PM	0	7	40	0	25	34	37	0	13	59	2	0	23	30	15	0	285	3199
5:15 PM	1	11	37	0	57	36	41	0	11	50	3	0	27	27	16	0	317	3241
5:20 PM	3	8	42	0	47	38	34	0	12	36	1	0	18	18	18	0	275	3246
5:25 PM	2	15	42	0	35	21	29	0	11	40	2	0	27	30	18	0	272	3279
5:30 PM	1	12	34	0	29	27	33	0	11	67	1	0	16	21	11	0	263	3279
5:35 PM	0	8	30	0	35	22	33	0	9	71	1	0	31	29	11	0	280	3281
5:40 PM	0	6	44	0	28	36	28	0	3	61	0	0	19	19	13	0	257	3272
5:45 PM	1	3	35	0	19	10	26	0	9	50	1	0	20	14	9	0	197	3188
5:50 PM	1	13	26	0	49	36	37	0	13	48	1	0	17	17	16	0	274	3207
5:55 PM	0	5	17	0	37	18	17	0	9	51	0	0	20	17	13	0	204	3164

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	108	480	0	456	368	444	0	164	620	20	0	316	344	200	0	3528
Heavy Trucks	0	0	8		16	4	0		4	4	0		0	8	0		44
Pedestrians		4				20				20				0			44
Bicycles	1	0	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/16/2012 3:08 PM

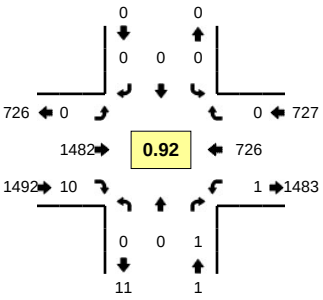
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

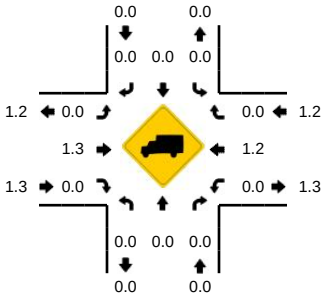
Type of peak hour being reported: System Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Northwest Dwy -- Trosper Rd SW | **QC JOB #:** 10755004

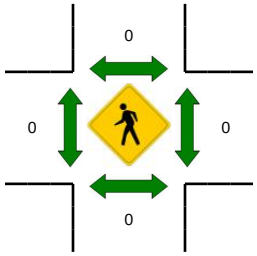
CITY/STATE: Tumwater, WA | **DATE:** Tue, May 08 2012

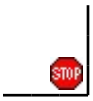
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

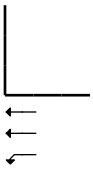


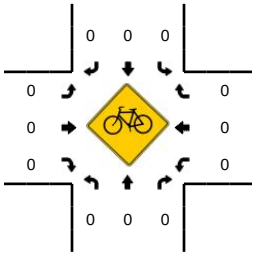


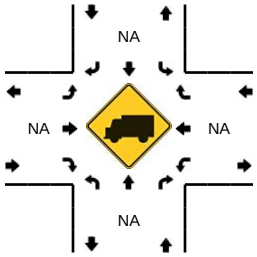
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

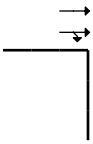


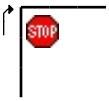


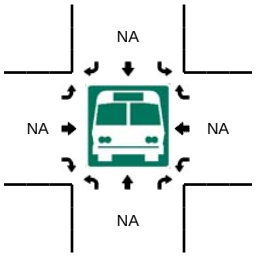












5-Min Count Period Beginning At	Northwest Dwy (Northbound)				Northwest Dwy (Southbound)				Trosper Rd SW (Eastbound)				Trosper Rd SW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	113	0	0	0	56	0	0	169	
4:05 PM	0	0	1	0	0	0	0	0	0	127	1	0	0	45	0	0	174	
4:10 PM	0	0	1	0	0	0	0	0	0	102	1	0	0	68	0	0	172	
4:15 PM	0	0	0	0	0	0	0	0	0	132	2	0	0	54	0	0	188	
4:20 PM	0	0	0	0	0	0	0	0	0	135	3	0	0	52	0	0	190	
4:25 PM	0	0	0	0	0	0	0	0	0	110	3	0	0	55	0	0	168	
4:30 PM	0	0	0	0	0	0	0	0	0	128	0	0	0	53	0	0	181	
4:35 PM	0	0	1	0	0	0	0	0	0	107	2	0	0	69	0	0	179	
4:40 PM	0	0	0	0	0	0	0	0	0	107	2	0	0	57	0	0	166	
4:45 PM	0	0	0	0	0	0	0	0	0	111	0	0	0	63	0	0	174	
4:50 PM	0	0	0	0	0	0	0	0	0	114	2	0	0	56	0	0	172	
4:55 PM	0	0	0	0	0	0	0	0	0	123	0	0	0	38	0	0	161	2094
5:00 PM	0	0	0	0	0	0	0	0	0	112	0	0	0	55	0	0	167	2092
5:05 PM	0	0	0	0	0	0	0	0	0	119	2	0	0	77	0	0	198	2116
5:10 PM	0	0	0	0	0	0	0	0	0	123	1	0	0	68	0	0	192	2136
5:15 PM	0	0	0	0	0	0	0	0	0	142	2	0	0	70	0	0	214	2162
5:20 PM	0	0	0	0	0	0	0	0	0	124	1	0	0	54	0	0	179	2151
5:25 PM	0	0	1	0	0	0	0	0	0	117	0	0	1	75	0	0	194	2177
5:30 PM	0	0	0	0	0	0	0	0	0	129	1	0	0	48	0	0	178	2174
5:35 PM	0	0	0	0	0	0	0	0	0	135	1	0	0	71	0	0	207	2202
5:40 PM	0	0	0	0	0	0	0	0	0	133	0	0	0	51	0	0	184	2220
5:45 PM	0	0	0	0	0	0	0	0	0	104	0	0	0	43	0	0	147	2193
5:50 PM	0	0	0	0	0	0	0	0	0	120	3	0	0	50	0	0	173	2194
5:55 PM	0	0	0	0	0	0	0	0	0	103	2	0	0	50	0	0	155	2188

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	1536	20	0	0	860	0	0	2416
Heavy Trucks	0	0	0		0	0	0		0	28	0		0	8	0		36
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: This is the first driveway east of Tyee Dr & Trosper rd

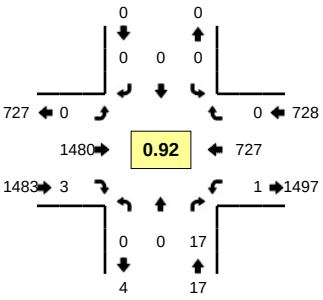
Report generated on 5/16/2012 3:08 PM

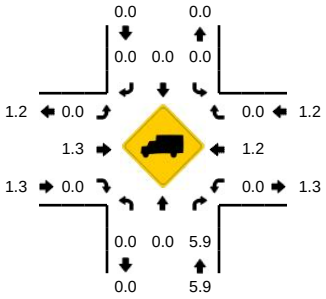
Type of peak hour being reported: System Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Northeast Dwy -- Trosper Rd SW | **QC JOB #:** 10755005

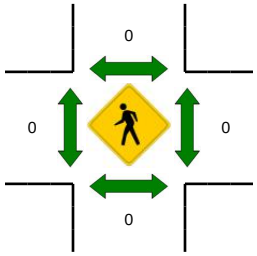
CITY/STATE: Tumwater, WA | **DATE:** Tue, May 08 2012

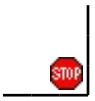
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

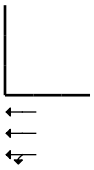


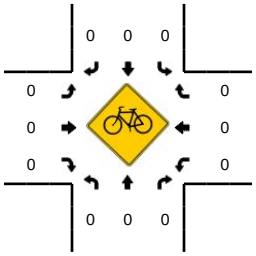


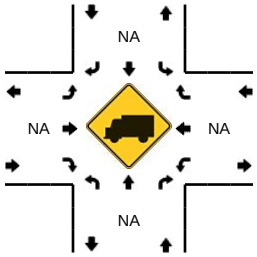
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

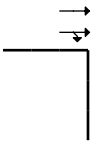


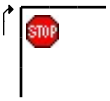


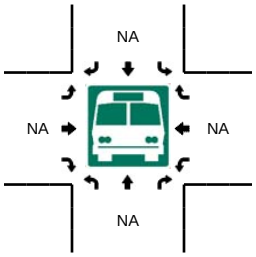












5-Min Count Period Beginning At	Northeast Dwy (Northbound)				Northeast Dwy (Southbound)				Trosper Rd SW (Eastbound)				Trosper Rd SW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	1	0	0	0	0	0	0	113	0	0	0	56	0	0	170	
4:05 PM	0	0	0	0	0	0	0	0	0	127	1	0	0	45	0	0	173	
4:10 PM	0	0	2	0	0	0	0	0	0	103	0	0	0	68	0	0	173	
4:15 PM	0	0	3	0	0	0	0	0	0	132	0	0	2	54	0	0	191	
4:20 PM	0	0	1	0	0	0	0	0	0	135	0	0	0	52	0	0	188	
4:25 PM	0	0	1	0	0	0	0	0	0	110	0	0	0	55	0	0	166	
4:30 PM	0	0	1	0	0	0	0	0	0	128	0	0	1	53	0	0	183	
4:35 PM	0	0	1	0	0	0	0	0	0	108	0	0	0	69	0	0	178	
4:40 PM	0	0	1	0	0	0	0	0	0	107	0	0	0	57	0	0	165	
4:45 PM	0	0	3	0	0	0	0	0	0	111	0	0	0	63	0	0	177	
4:50 PM	0	0	2	0	0	0	0	0	0	114	0	0	0	56	0	0	172	
4:55 PM	0	0	1	0	0	0	0	0	0	123	0	0	0	38	0	0	162	2098
5:00 PM	0	0	2	0	0	0	0	0	0	112	0	0	0	55	0	0	169	2097
5:05 PM	0	0	0	0	0	0	0	0	0	118	1	0	0	77	0	0	196	2120
5:10 PM	0	0	2	0	0	0	0	0	0	123	0	0	0	68	0	0	193	2140
5:15 PM	0	0	2	0	0	0	0	0	0	142	0	0	0	70	0	0	214	2163
5:20 PM	0	0	1	0	0	0	0	0	0	124	0	0	0	54	0	0	179	2154
5:25 PM	0	0	2	0	0	0	0	0	0	118	0	0	1	76	0	0	197	2185
5:30 PM	0	0	0	0	0	0	0	0	0	128	1	0	0	48	0	0	177	2179
5:35 PM	0	0	1	0	0	0	0	0	0	134	1	0	0	71	0	0	207	2208
5:40 PM	0	0	1	0	0	0	0	0	0	133	0	0	0	51	0	0	185	2228
5:45 PM	0	0	0	0	0	0	0	0	0	104	0	0	0	43	0	0	147	2198
5:50 PM	0	0	0	0	0	0	0	0	0	120	0	0	0	50	0	0	170	2196
5:55 PM	0	0	2	0	0	0	0	0	0	103	0	0	0	50	0	0	155	2189

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	16	0	0	0	0	0	0	1532	4	0	0	860	0	0	2412
Heavy Trucks	0	0	4		0	0	0		0	28	0		0	8	0		40
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: This is the second driveway east of intersection

Report generated on 5/16/2012 3:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: I-5 NB Ramps -- Trosper Rd SW

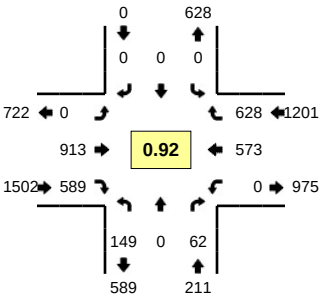
QC JOB #: 10755006

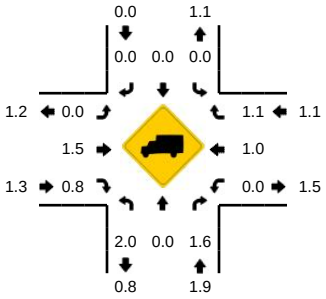
CITY/STATE: Tumwater, WA

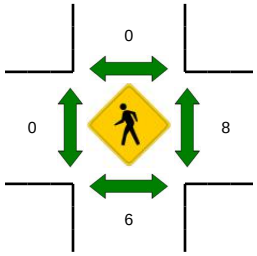
DATE: Tue, May 08 2012

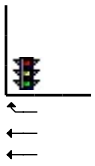
Peak-Hour: 4:45 PM -- 5:45 PM

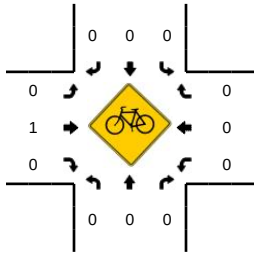
Peak 15-Min: 5:05 PM -- 5:20 PM

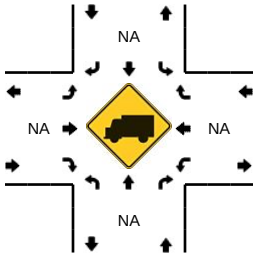


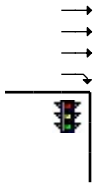


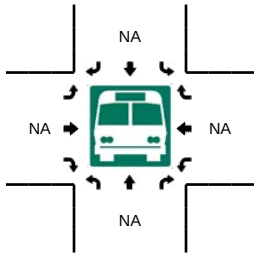












5-Min Count Period Beginning At	I-5 NB Ramps (Northbound)				I-5 NB Ramps (Southbound)				Trosper Rd SW (Eastbound)				Trosper Rd SW (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	0	9	0	0	0	0	0	0	76	44	0	0	43	33	0	213	
4:05 PM	8	0	3	0	0	0	0	0	0	67	49	0	0	46	60	0	233	
4:10 PM	9	0	3	0	0	0	0	0	0	77	45	0	0	52	43	0	229	
4:15 PM	17	0	5	0	0	0	0	0	0	64	46	0	0	42	45	0	219	
4:20 PM	8	0	9	0	0	0	0	0	0	95	56	0	0	45	49	0	262	
4:25 PM	11	0	6	0	0	0	0	0	0	67	43	0	0	41	46	0	214	
4:30 PM	7	0	8	0	0	0	0	0	0	82	53	0	0	52	56	0	258	
4:35 PM	22	0	8	0	0	0	0	0	0	49	52	0	0	45	63	0	239	
4:40 PM	8	0	6	0	0	0	0	0	0	82	28	0	0	52	66	0	242	
4:45 PM	15	0	5	0	0	0	0	0	0	74	51	0	0	46	65	0	256	
4:50 PM	7	0	7	0	0	0	0	0	0	62	44	0	0	40	44	0	204	
4:55 PM	11	0	6	0	0	0	0	0	0	73	52	0	0	31	42	0	215	2784
5:00 PM	13	0	9	0	0	0	0	0	0	74	37	0	0	55	47	0	235	2806
5:05 PM	13	0	4	0	0	0	0	0	0	74	55	0	0	49	74	0	269	2842
5:10 PM	14	0	6	0	0	0	0	0	0	69	45	0	0	55	58	0	247	2860
5:15 PM	15	0	4	0	0	0	0	0	0	85	56	0	0	63	56	0	279	2920
5:20 PM	13	0	5	0	0	0	0	0	0	89	35	0	0	47	59	0	248	2906
5:25 PM	7	0	4	0	0	0	0	0	0	91	44	0	0	61	48	0	255	2947
5:30 PM	21	0	2	0	0	0	0	0	0	59	56	0	0	34	43	0	215	2904
5:35 PM	10	0	4	0	0	0	0	0	0	82	46	0	0	56	41	0	239	2904
5:40 PM	10	0	6	0	0	0	0	0	0	81	68	0	0	36	51	0	252	2914
5:45 PM	10	0	5	0	0	0	0	0	0	64	44	0	0	30	34	0	187	2845
5:50 PM	10	0	1	0	0	0	0	0	0	81	38	0	0	55	41	0	226	2867
5:55 PM	7	0	5	0	0	0	0	0	0	66	39	0	0	31	43	0	191	2843

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	168	0	56	0	0	0	0	0	0	912	624	0	0	668	752	0	3180
Heavy Trucks	0	0	0		0	0	0		0	24	4		0	8	8		44
Pedestrians		8				0				0				12			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 5/16/2012 3:08 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

APPENDIX D

Trip Survey

GROUP MACKENZIE

RiverEast Center | 1515 SE Water Avenue, Suite 100 | Portland, OR 97214
P.O. Box 14310 | Portland, OR 97293
Tel: 503.224.9560 Web: www.grpmack.com Fax: 503.228.1285

Group Mackenzie, Incorporated

Architecture
Interiors
Structural Engineering
Civil Engineering
Land Use Planning
Transportation Planning
Landscape Architecture

Locations:
Portland, Oregon
Seattle, Washington
Vancouver, Washington

February 7, 2012

Fred Meyer
Attention: James Coombes
PO Box 42121
Portland, OR 97242-0121

Re: **Fred Meyer Wood Village**
Fuel Facility Trip Surveys
Project Number 2100074.01

Dear Mr. Coombes:

This letter presents a summary of the customer surveys conducted by Group Mackenzie staff at the Gresham and Sandy, Oregon Fred Meyer fuel facility locations. The purpose of the surveys was to determine the number of each trip type, percentage of shared trips and use of rewards cards. Copies of the surveys are attached.

The Gresham, Oregon fuel facility has 10 fueling positions and is located in the main store parking lot along Burnside Street. The survey was conducted between 4:00 PM – 6:00 PM on Wednesday, January 18, 2012. Weather conditions were cold and overcast, normal for this time of year at this location. It is believed the weather had no impact on normal customer behavior.

The Sandy, Oregon fuel facility has 14 fueling positions and is located adjacent to the main store along Industrial Way. The survey was conducted between 4:00 PM – 6:00 PM on Thursday, January 19, 2012. Weather conditions were cold and rainy, normal for this time of year at this location. It is believed the weather had no impact on normal customer behavior.

TRIP TYPES

The surveys were designed to identify the trip type (primary, pass-by or diverted) and if the trip was shared with another use at the site. Shared trips are made by customers who also visit one or more other uses at the site. We further identified if purchasing fuel or visiting another use was the primary reason for the trip.

The following table presents the trip type results for both locations.

TABLE 1 – SURVEY TRIP TYPE SUMMARY

Location	Trip Type									
	Primary			Pass-by			Diverted			Total
	External	Shared		External	Shared		External	Shared		
		Fuel	Other		Fuel	Other		Fuel	Other	
Gresham	14(13%)	3(3%)	7(7%)	22(20%)	10(9%)	7(7%)	34(32%)	5(5%)	5(4%)	107
Sandy	15(11%)	4(3%)	6(4%)	55(40%)	24(17%)	17(12%)	10(7%)	5(4%)	3(2%)	139
Average	**12%**	**3%**	**6%**	**30%**	**13%**	**9%**	**20%**	**4%**	**3%**	**100%**

Primary Trips are vehicle trips to the site that immediately return to their point of origin. The two sites have similar Primary Trip characteristics. On the average, 12% of the surveyed trips were primary trips for fuel only. Another 9% were primary trips, but visited more than one use at the site, resulting in a shared trip.

Pass-by Trips are those trips to the site that are already driving by on the adjacent roadways. Trips to the Sandy fuel facility that were already traveling along Highway 26 are considered pass-by trips. The two sites have different Pass-by Trip characteristics. The Gresham site has a much lower percentage of pass-by trips at 20%, which is only half as many as Sandy. One likely reason for this difference is the Gresham location draws fuel customers using their rewards card discounts from the Wood Village Fred Meyer, which does not currently have a fuel facility.

Diverted Linked Trips are from vehicles already traveling in the area, but not on the roadways immediately adjacent to the site, and must change their travel route to get to the site. The Gresham site has a higher percentage of Diverted linked trips, at 32% of the total. This offsets the higher pass-by trip percentage noted at Sandy, and is likely due to trips by customers of other Fred Meyer stores without fuel facilities, notably Wood Village. These customers are already driving in the area, but travel to the Gresham fuel facility specifically to take advantage of the rewards card discount.

SHARED TRIPS

Shared trips are those taking advantage of more than one use at the site in the same trip. These are also referred to as Internal Capture trips, and are presented in the following table along with the external trip percentages. ITE rates for a stand along gas station are presented for comparison.

TABLE 2 – INTERNAL TRIP SUMMARY (%)

Location	Internal	External			
		Total	Primary	Pass-by	Diverted
Gresham	35	65	13	20	32
Sandy	42	58	11	40	7
Average	38	62	12	30	20
ITE (stand–alone gas station)	20	80	11	41.5	27.5

On the average, 38% of the surveyed trips are Internal Capture trips compared to the recommended 20% for retail to retail trips in the ITE Trip Generation Handbook.

REWARDS CARD

A high percentage of fuel customers utilized their rewards cards. Overall, 93% used a card at Gresham with 88% taking a discount, while 91% used a card at Sandy, with 76% taking a discount. The following table presents the rewards card use by trip type.

TABLE 3 – REWARD CARD USE BY TRIP TYPE												
Location	Primary Trips			Pass-by Trips			Diverted Trips			Shared Trips		
	Total	Reward Card	%	Total	Reward Card	%	Total	Reward Card	%	Total	Reward Card	%
Gresham	14	13	93	22	21	95	34	33	97	37	32	93
Sandy	15	10	67	55	52	95	10	10	100	59	55	91
Average			80			95			99			90

The only significant difference in rewards card use between the two sites is a higher percentage of primary trips using the card at Gresham. This may be due to customers from other Fred Meyer stores making a special trip to Gresham to take advantage of a fuel discount.

The following table presents reward card use for shared trips only, identifying if the shared trip was with the Fred Meyer store or another use at the site. The results indicate a very high percentage of Fred Meyer store shoppers use the rewards card for fuel purchases in the same trip. Of those Fred Meyer store shoppers using the rewards card, 78% took advantage of a discount. This compares to 83% of customers taking advantage of a fuel discount when the shared trip is with another use.

TABLE 4 – REWARD CARD USE FOR SHARED TRIPS									
Location	Fred Meyer			Other			Total		
	Total	Rewards Card	%	Total	Used Rewards Card	%	Total	Used Rewards Card	%
Gresham	32	32	100	5	0	0	37	32	86
Sandy	54	50	93	5	5	100	59	55	93
Average			96			50			90

In summary, the surveys indicate a high shared trip percentage, with most customers taking advantage of fuel discounts in the same trip. The Gresham fuel facility has a higher percentage of diverted linked trips, which is likely from customers of other Fred Meyer stores traveling to Gresham to purchase fuel.

If you have any questions about the data or would like more information please do not hesitate to ask.

Sincerely,

Brent Ahrend, PE
Senior Associate | Traffic Engineer

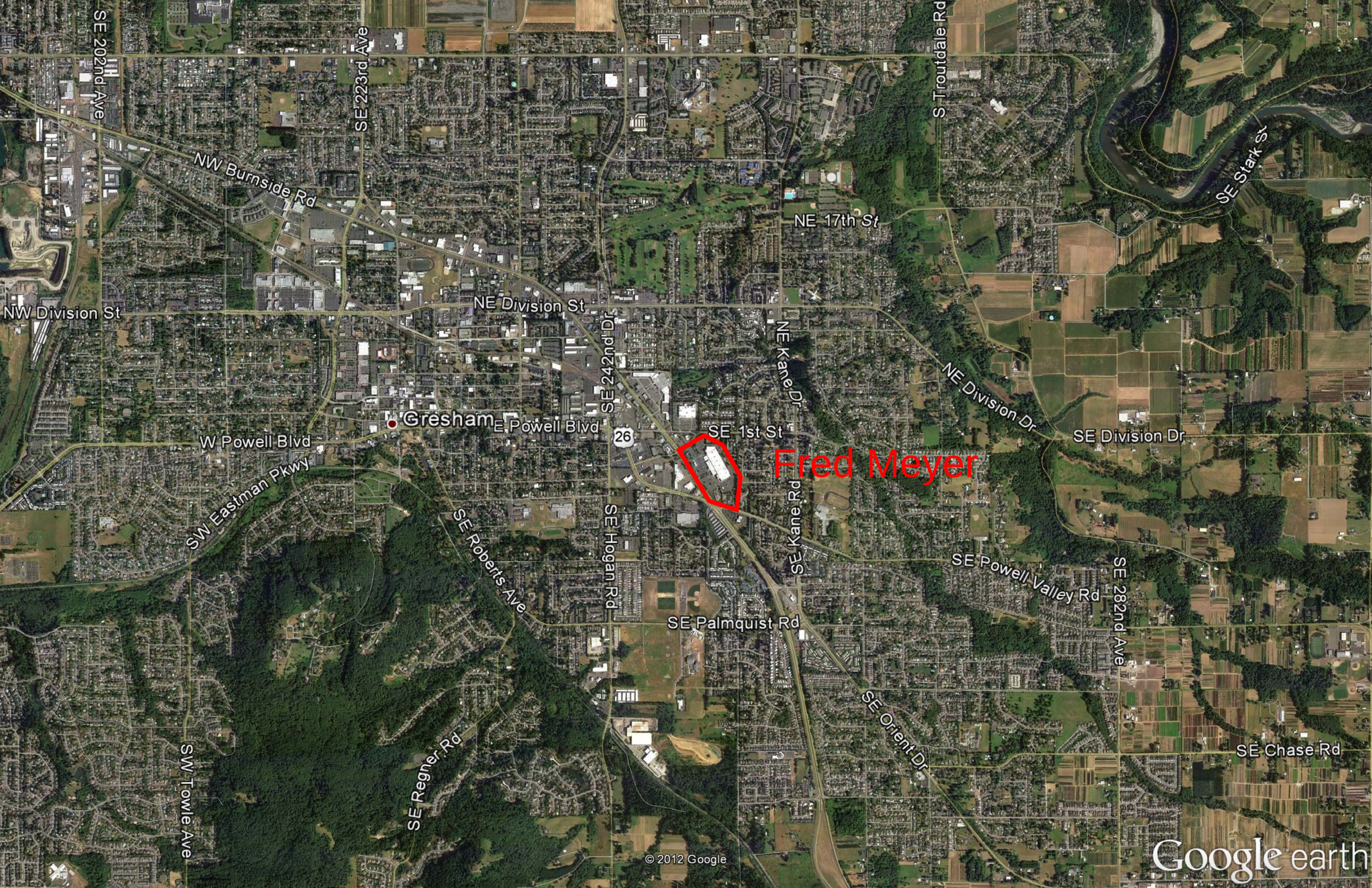
Enclosures: Survey Data Sheets
Vicinity Maps

c: Pam Child – Fred Meyer
Lee Leighton – Westlake Consultants

FRED MEYER SURVEY QUESTIONS

Below are questions for the gas survey that will need to be asked to each of the following customers that approach the fueling station. **Please talk with as many of these customers as you can.** This is very important so we can get the most accurate data we need for our study.

1. I am conducting a trip survey for Fred Meyer. Will you please answer a few questions?
2. Of the following locations, where did your trip begin immediately prior to arriving here? **(i.e. Home/Work/Retail Store/Other)**
3. Will you go directly back there from here? (if yes go to 5)
4. If you had not needed to buy fuel today, would you have been driving by this site anyway? **(Sandy – Hwy 26, 362nd; Gresham – Burnside, Powell Valley, 1st/3rd)**
5. Was purchasing fuel the primary reason for your stop here today?
6. In addition to buying gas, on this visit will you or did you go to any of the other uses on site? [If no, go to 8]
7. Will you or did you go to the Fred Meyer store on this visit?
8. For your gas purchase did you use your rewards card? [If no, done. If yes, go to 9]
9. Did you use your rewards card discount?


Fred Meyer
SE 202nd Ave
SE 223rd Ave
S Troutdale Rd
SE Stark St
NW Burnside Rd
NE 17th St
NW Division St
NE Division St
SE 242nd Dr
NE Kane Dr
NE Division Dr
SE Division Dr
Gresham
E Powell Blvd
W Powell Blvd
SE 1st St
26
SW Eastman Pkwy
SE Roberts Ave
SE Hogan Rd
SE Kane Rd
SE Powell Valley Rd
SE 282nd Ave
SE Palmquist Rd
SE Orient Dr
SE Chase Rd
SE Regner Rd
SW Towle Ave
© 2012 Google
Google earth

Location: Gresham Date: 1/18/12

Project No.: 2100074.01 Surveyor: MKD

Question	1	2	3	4	5	6	7	8	9	10
	Home	✓	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	Gym	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	Store	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	W	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	h	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	R	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	O	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	W	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	O	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	O	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	O	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	O	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	H	/	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	NO		Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	

51

2	3*	4	5	6*	7	8	9	
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
NO	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	

Location: E BURNSIDE GRESHAM FM Date: 1/18/12

Project No.: 2100074.01 Surveyor: JMH

Question	1	2	3	4	5	6	7	8	9	10
		O /	Y (N)	(Y) / N	(Y) / N	(Y) N	Y (N)	Y (N)	Y / N	.
		W /	Y (N)	Y (N)	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	.
		W /	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	.
		W /	Y (N)	Y (N)	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	.
		O /	Y (N)	Y (N)	(Y) N	Y / N	Y (N)	(Y) N	(Y) N	.
		W /	Y (N)	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	.
		W /	Y (N)	(Y) N	(Y) N	Y / N	Y (N)	Y (N)	Y / N	.
		W /	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	.
		H /	Y (N)	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	.
		H /	(Y) / N	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	Y (N)	
		O /	Y (N)	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	Y (N)	
		W /	Y (N)	Y (N)	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	
		H /	Y (N)	(Y) N	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	
		H /	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	
		O /	Y (N)	(Y) N	Y (N)	(Y) N	(Y) N	(Y) N	Y (N)	.
		O /	Y (N)	Y (N)	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	.
		O /	Y (N)	(Y) N	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	.
		O /	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	.
		O	Y (N)	(Y) N	Y (N)	(Y) N	(Y) N	(Y) N	Y (N)	.
		H	(Y) N	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	Y (N)	.
		O	Y (N)	Y (N)	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	.
		H	(Y) N	Y / N	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	.
		W	(Y) N	Y (N)	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	.
		O	Y (N)	(Y) N	(Y) N	Y (N)	Y / N	(Y) N	Y (N)	.
		W	Y (N)	(Y) N	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	.
		W	Y (N)	Y (N)	(Y) N	Y (N)	Y / N	(Y) N	(Y) N	.
		O	N	N	Y	N		Y	N	.

60

70

28

	2	3	4	5	6	7	8	9	
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	
O	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	(Y) N	Y/N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	(Y) N	Y/N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	Y (N)	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N		
O	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	(Y) N	Y/N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
O	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	(Y) N	Y/N	Y (N)	(Y) N	(Y) N	Y (N)	Y/N		
H	(Y) N	Y/N	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N		
H	(Y) N	Y/N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	(Y) N	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N		
W	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
W	Y (N)	Y (N)	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	Y (N)	Y (N)	(Y) N	(Y) N	Y (N)	(Y) N	(Y) N		
W	Y (N)	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N		
O	Y (N)	Y (N)	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N		
O	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	Y (N)	(Y) N	(Y) N	Y (N)	Y (N)	(Y) N	(Y) N		
H	(Y) N	Y/N	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N		
O	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
O	Y (N)	(Y) N	(Y) N	(Y) N	(Y) N	(Y) N	Y (N)		
H	(Y) N	Y/N	Y (N)	(Y) N	(Y) N	Y (N)	Y/N		
O	Y (N)	(Y) N	(Y) N	Y (N)	Y/N	(Y) N	(Y) N		
H	(Y) N	(Y) N	Y/N	Y (N)	Y/N	(Y) N	(Y) N		
H	Y	Y	Y	N		Y	Y		

80

90

100

107

FRED MEYER SURVEY QUESTIONS

Below are questions for the gas survey that will need to be asked to each of the following customers that approach the fueling station. **Please talk with as many of these customers as you can.** This is very important so we can get the most accurate data we need for our study.

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6. In addition to buying gas, on this visit will you or did you go to any of the other uses on site? [If no, go to 8]
7. Will you or did you go to the Fred Meyer store on this visit?
8. For your gas purchase did you use your rewards card? [If no, done. If yes, go to 9]
9. Did you use your rewards card discount?


SE Orient Dr
26
Fred Meyer
Mt Hood Hwy
SE Bluff Rd
Proctor Blvd
Sandy
211
© 2012 Google
Google earth

2	3	4	5	6	7	8	9		
A	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
O	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	10
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
R	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
R	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	20
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	28
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		

NO

2 3 4 5 6 7 8 9

2	3	4	5	6	7	8	9	
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
P	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
2	3	4	5	6	7	8	9	

30

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5

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ND

12

2	3	4	5	6	7	8	9	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.
O	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	. 60
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	. 62
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
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	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	

2 3 4 5 6 7 8 9

Location: Date:

Project No.: Surveyor:

Question	1	2	3	4	5	6	7	8	9	10	
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		10
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		20
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
			Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		26

2	3	4	5	6	7	8	9	
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	. 30
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
L	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	. 40
R	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
O	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
H	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	. 50
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	.
W	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	. 55

				6	7	8	9		
R	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	60
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
O	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	70
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
H	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	
W	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	.	77
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		
	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N		

APPENDIX E

Collision Data and Calculations

COLLISION RATE CALCULATIONS

Tyee Drive / Fred Meyer Store Access / Fuel Site Access

2012 Existing PM Peak Hour Total Entering Volume (TEV) = 1,197 vehicles

Million Entering Vehicles (MEV) per Year =

$$\left(\frac{ADT * 365}{1{,}000{,}000}\right) \approx \left(\frac{Peak\,Hour\,TEV * 10 * 365}{1{,}000{,}000}\right) = \left(\frac{1{,}197 * 10 * 365}{1{,}000{,}000}\right) = 4.37$$

Collision Rate per Year (using WSDOT data Apr. 2006 – Mar. 2011) =

$$\left(\frac{\left(Total\ number\ of\ collisions \,/\, Number\ of\ Years\right)}{MEV\ per\ Year}\right) = \left(\frac{4\,collisions \,/\, 5\,years}{4.37\,MEV\ per\ Year}\right) = \mathbf{0.18}$$

Trosper Road / Tyee Drive / Interstate 5 Southbound Ramps

2012 Existing PM Peak Hour Volume = 2,420 vehicles

Million Entering Vehicles (MEV) per Year =

$$\left(\frac{ADT * 365}{1{,}000{,}000}\right) \approx \left(\frac{Peak\,Hour\,TEV * 10 * 365}{1{,}000{,}000}\right) = \left(\frac{3{,}272 * 10 * 365}{1{,}000{,}000}\right) = 11.94$$

Collision Rate per Year (using WSDOT data Apr. 2006 – Mar. 2011) =

$$\left(\frac{\left(Total\ number\ of\ collisions \,/\, Number\ of\ Years\right)}{MEV\ per\ Year}\right) = \left(\frac{59\,collisions \,/\, 5\,years}{11.94\,MEV\ per\ Year}\right) = \mathbf{0.99}$$

COLLISION RATE CALCULATIONS

Trosper Road / Northeast Fuel Site Access

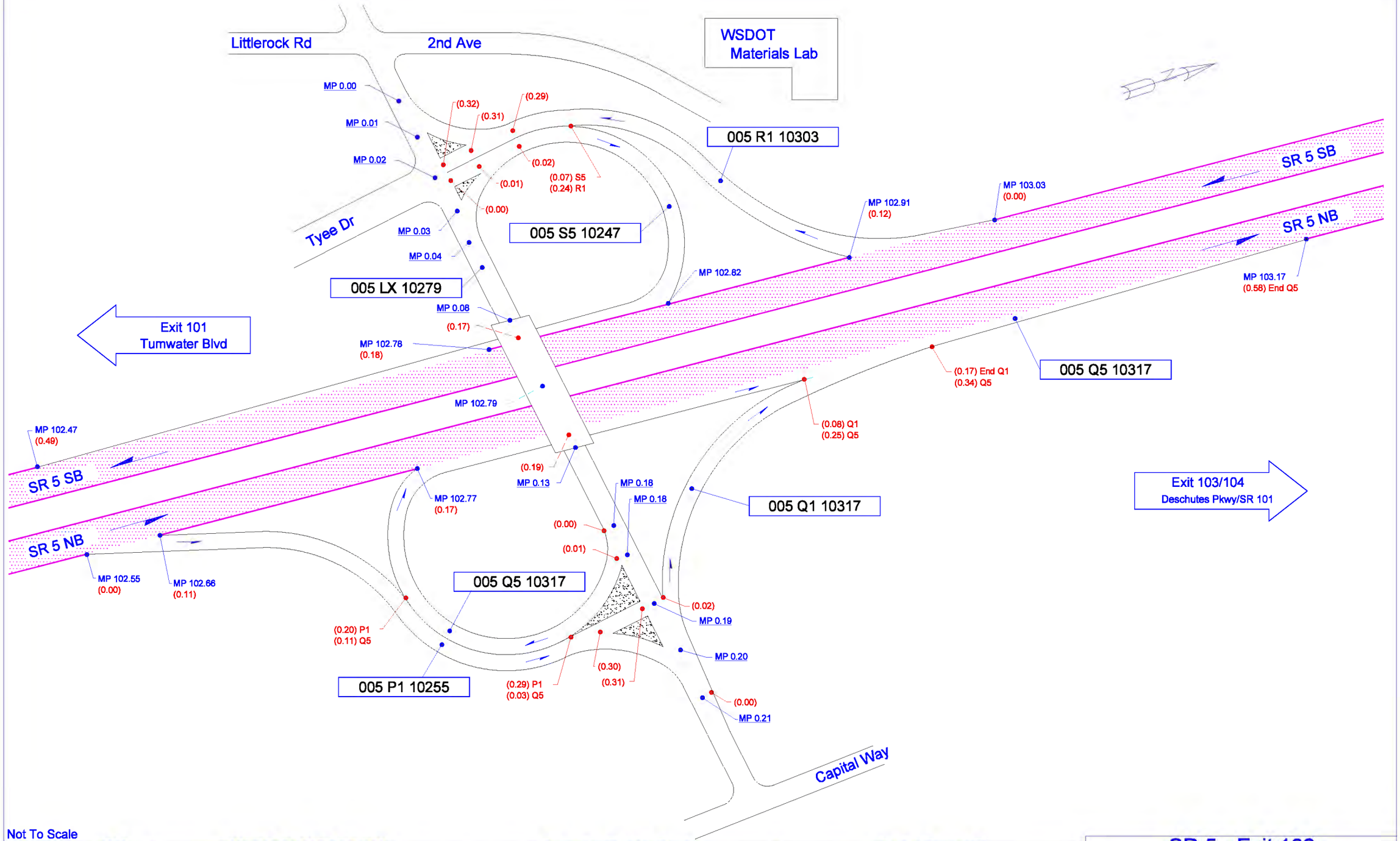
2012 Existing PM Peak Hour Volume = 2,228 vehicles

Million Entering Vehicles (MEV) per Year =

$$\left(\frac{ADT * 365}{1{,}000{,}000}\right) \approx \left(\frac{Peak\,Hour\,TEV * 10 * 365}{1{,}000{,}000}\right) = \left(\frac{2{,}228 * 10 * 365}{1{,}000{,}000}\right) = 8.13$$

Collision Rate per Year (using WSDOT data Apr. 2006 – Mar. 2011) =

$$\left(\frac{\left(Total\ number\ of\ collisions \,/\, Number\ of\ Years\right)}{MEV\ per\ Year}\right) = \left(\frac{5\,collisions \,/\, 5\,years}{8.13\,MEV\ per\ Year}\right) = \mathbf{0.12}$$



Not To Scale

11/14/2005	KLK	WSDOT OLYMPIC REGION	Tumwater, Thurston County	Junction Trosper Rd	SR 5 - Exit 102

Reported collisions that occurred within the City of Tumwater.....04/01/06 - 03/31/11
*As of 1/1/2009 citizen reports are no longer being captured (Report # begins with "C")

TYEE DRIVE SW / FRED MEYER ACCESS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	BLOCK NUMBER	INTER-SECTING TRAFFIC-WAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REF POINT NAME	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1
City Street	TYEE DR SW		FRED MEYER	300	FT	S	TROSPER RD SW		2515433	12/15/06	3:05 PM	No Injury	Had NOT Been Drinking	0	0	2	One car leaving driveway access	At Driveway	Clear or Partly Cloudy	Daylight	Dry	Straight & Level	Passenger Car	Making Left Turn	No Traffic Control	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport				Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	No Traffic Control	South	North	None	Collision Involving Motor Vehicle in Transport
City Street	TYEE DR	500							2572216	03/29/08	12:14 AM	No Injury	Had NOT Been Drinking	0	0	1	Curb, Raised Traffic Island or Raised Median Curb	Not at Intersection and Not Related	Raining	Dark-Street Lights On	Wet	Curve & Level	Passenger Car	Going Straight Ahead	No Traffic Control	South	North	Exceeding Stated Speed Limit		Collision Involving Fixed Object	Ran off the Road	Collision Involving Fixed Object	Out of control (ice, turned to fast, etc.) or sliding (not skidding)							
City Street	TYEE DR		FRED MEYER						3297453	11/12/08	9:31 PM	Possible Injury	Had NOT Been Drinking	1	0	2	One car leaving driveway access	At Driveway	Raining	Dark-Street Lights On	Wet	Curve & Level	Passenger Car	Making Left Turn	Stop Sign	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport			Turn after stopping at red flashing light or stop sign	Passenger Car	Going Straight Ahead	No Traffic Control	South	North	None	Collision Involving Motor Vehicle in Transport
City Street	TYEE SR SE		FRED MEYER THRUWAY					Lane of Primary Trafficway	3297845	03/09/10	10:27 AM	No Injury	Had NOT Been Drinking	0	0	2	Entering at angle	At Intersection and Related	Overcast	Daylight	Dry	Straight & Level	Pickup, Panel Truck or Vanette under 10,000 lb	Making Left Turn	Stop Sign	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport			Turn after stopping at red flashing light or stop sign	Passenger Car	Going Straight Ahead	No Traffic Control	North	South	None	Collision Involving Motor Vehicle in Transport

TROSPER ROAD SW / TYEE DRIVE SW / INTERSTATE 5 SOUTHBOUND RAMPS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	# PEDS	# PEDA L	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	MV DRIVER MISC ACTION 2 (UNIT 1)	MV DRIVER MISC ACTION 3 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	MV DRIVER MISC ACTION 2 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005LX 10279	0.00	Lane 2 LX Increasing Milepost	2285503	06/02/06	3:22 PM	No Injury	Had NOT Been Drinking	0	0	2			One car leaving driveway access	At Driveway within Major Intersection	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	West	East	None		Collision Involving Motor Vehicle in Transport						Passenger Car	Making Left Turn	No Traffic Control	North	East	Did Not Grant RW to Vehicle	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.00	Intersecting Road Increasing Milepost	2723181	02/06/07	4:57 PM	Possible Injury	Had NOT Been Drinking	1	0	1	1		Vehicle going straight hits Pedes-trian	At Driveway within Major Intersection	Raining	Daylight	Wet	Straight & Grade	Parking Lot	Passenger Car	Starting in Traffic Lane	No Traffic Control	South	North	Fail to Yield Row to Pedes-trian		Collision Involving Pedes-trian																
State Route	005LX 10279	0.00	Lane 1 LX Decreasing Milepost	3297526	02/06/09	5:30 PM	No Injury	Had NOT Been Drinking	0	0	2			From opposite direction - one left turn - one straight	At Driveway within Major Intersection	Overcast	Dusk	Dry	Straight & Level		Passenger Car	Making Left Turn	Signals	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2285992	04/27/06	4:49 PM	No Injury	Had NOT Been Drinking	0	0	4			From same direction - both going straight - both moving - rear-end	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade		Passenger Car	Going Straight Ahead	Signals	West	East	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Passenger Car	Slowing	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle			
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	2285502	05/13/06	4:52 PM	Possible Injury	Had NOT Been Drinking	1	0	2			From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Passenger Car	Stopped at Signal or Stop Sign	Signals	East	Vehicle Stopped	None		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	Follow Too Closely	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2319951	06/15/06	1:08 PM	No Injury	Had NOT Been Drinking	0	0	3			From same direction - all others	At Intersection and Related	Overcast	Daylight	Dry	Straight & Grade		Truck Tractor & Semi-Trailer	Backing	Signals	North	Vehicle Backing	Improper Backing		Collision Involving Motor Vehicle in Transport				Hit and run			Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	Signals	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped for another vehicle			
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	2572229	09/30/06	3:49 PM	Possible Injury	Had NOT Been Drinking	2	0	2			From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	South	North	Inattention		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	South	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped for another vehicle			
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	C680133	11/22/06	5:10 PM	Possible Injury		1	0	2			From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Unknown	Dusk	Dry	Straight & Level		Passenger Car	Stopped at Signal or Stop Sign	Signals	West	Vehicle Stopped									Passenger Car	Going Straight Ahead	Signals	West	East						
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2136235	12/19/06	4:55 PM	Possible Injury	Had NOT Been Drinking	1	0	2			Entering at angle	At Intersection and Related	Overcast	Dark-Street Lights On	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	West	East	Other		Collision Involving Motor Vehicle in Transport	Ran off the Road	Collision Involving Fixed Object				Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	South	North	Other	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2515349	01/12/07	6:43 PM	Possible Injury	Had NOT Been Drinking	2	0	2			From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Snowing	Dark-Street Lights On	Ice	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	Exceeding Reas. Safe Speed		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped at Signal or Stop Sign	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2452971	05/04/07	7:54 AM	Possible Injury	Had NOT Been Drinking	1	0	2			From same direction - both going straight - both moving - rear-end	At Intersection and Not Related	Overcast	Daylight	Dry	Straight & Grade	Bridge or Overpass	Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Inattention		Collision Involving Motor Vehicle in Transport						Passenger Car	Slowing	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle			
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2723056	05/04/07	7:56 AM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - both moving - rear-end	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade		Truck (Flatbad, Van, etc)	Going Straight Ahead	No Traffic Control	West	East	Driver Operating Handheld Telecommu nications		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2515362	06/25/07	9:12 PM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - both moving - sideswipe	At Intersection and Not Related	Clear or Partly Cloudy	Dusk	Dry	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Changing Lanes	No Traffic Control	West	East	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2723015	10/04/07	7:32 PM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - one left turn - one straight	At Intersection and Related	Clear or Partly Cloudy	Dusk	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	North	South	Improper Turn		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Making Left Turn	Signals	North	East	None	Collision Involving Motor Vehicle in Transport				

TROSPER ROAD SW / TYEE DRIVE SW / INTERSTATE 5 SOUTHBOUND RAMPS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	# PEDS	# PEDA	L	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	MV DRIVER MISC ACTION 2 (UNIT 1)	MV DRIVER MISC ACTION 3 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	MV DRIVER MISC ACTION 2 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	2722535	11/02/07	12:17 PM	Possible Injury	Had NOT Been Drinking	2	0	3				From same direction - both going straight - one stopped - rear-end	At Intersection and Not Related	Overcast	Daylight	Dry	Straight & Grade	Bridge or Overpass	Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	No Traffic Control	West	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic			
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2722804	12/08/07	5:47 PM	No Injury	Had NOT Been Drinking	0	0	2				Entering at angle	At Intersection and Related	Clear or Partly Cloudy	Dark-Street Lights On	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	East	West	Disregard Stop and Go Light		Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	Signals	South	North	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	2722805	12/09/07	3:19 PM	No Injury	Had NOT Been Drinking	0	0	2				Entering at angle	At Intersection and Related	Raining	Daylight	Wet	Straight & Grade		Truck Tractor & Semi-Trailer	Making Left Turn	Signals	North	East	Other		Collision Involving Motor Vehicle in Transport			Attached trailer struck another vehicle or object, Pedes-trian or Pedal-cyclist			Pickup, Panel Truck or Vanette under 10,000 lb	Stopped at Signal or Stop Sign	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2722631	04/19/08	2:55 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Overcast	Daylight	Dry	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	Unknown Driver Distraction		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped at Signal or Stop Sign	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 2 LX Increasing Milepost	3297009	08/24/08	11:07 PM	Possible Injury	Had NOT Been Drinking	1	0	2				Entering at angle	At Intersection and Related	Overcast	Dark-Street Lights On	Wet	Straight & Level		Passenger Car	Going Straight Ahead	Signals	West	East	Disregard Stop and Go Light		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 1 LX Decreasing Milepost	3297201	10/03/08	5:27 PM	Evident Injury	Had NOT Been Drinking	1	0	1				Vehicle overturned	At Driveway within Major Intersection	Raining	Daylight	Wet	Straight & Level		Motorcycle	Going Straight Ahead	No Traffic Control	East	West	Other		Overturn (Rollover)			Avoiding another vehicle														
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	E009485	10/25/08	10:11 AM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - one left turn - one straight	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Passenger Car	Going Straight Ahead	Signals	North	South	Other		Collision Involving Motor Vehicle in Transport						Passenger Car	Making Left Turn	Signals	North	East	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Lane 1 LX Decreasing Milepost	C712486	11/08/08	2:30 PM	Possible Injury		1	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade		Passenger Car	Stopped for Traffic	Signals	East	Vehicle Stopped						Stopped in line of traffic						Passenger Car	Going Straight Ahead	Signals	East	West					
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	3297452	11/12/08	5:45 PM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Not Related	Raining	Dark-Street Lights On	Wet	Straight & Grade		Passenger Car	Going Straight Ahead	No Traffic Control	East	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	No Traffic Control	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic			
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	C714602	12/03/08	7:10 AM	No Injury		0	0	2				Entering at angle	At Intersection and Related	Overcast	Dark-Street Lights On	Wet	Straight & Level		Passenger Car	Going Straight Ahead	Signals	West	East									Passenger Car	Making Right Turn	Signals	South	East			View obscured by frost, ice, etc. on windshield			
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	2572218	12/05/08	5:49 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Dark-Street Lights Off	Dry	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Starting in Traffic Lane	Signals	East	West	Inattention		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped for another vehicle			
State Route	005LX 10279	0.02	Lane 1 LX Decreasing Milepost	3297306	02/24/09	11:08 PM	Possible Injury	Had NOT Been Drinking	1	0	2				Entering at angle	At Intersection and Related	Raining	Dark-Street Lights On	Wet	Straight & Level		Passenger Car	Going Straight Ahead	Signals	East	West	Disregard Stop and Go Light	Exceeding Reas. Safe Speed	Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport				
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	3297507	03/01/09	11:35 AM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Raining	Daylight	Wet	Straight & Grade		Passenger Car	Going Straight Ahead	Signals	East	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic			

TROSPER ROAD SW / TYEE DRIVE SW / INTERSTATE 5 SOUTHBOUND RAMPS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	# PEDS	# PEDA	L	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	MV DRIVER MISC ACTION 2 (UNIT 1)	MV DRIVER MISC ACTION 3 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	MV DRIVER MISC ACTION 2 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005LX 10279	0.02	Past Right Shoulder LX Increasing Milepost	3297530	03/29/09	7:04 AM	No Injury	Had NOT Been Drinking	0	0	1				Bridge Rail - Face	At Intersection and Not Related	Clear or Partly Cloudy	Dawn	Ice	Straight & Grade	Bridge or Overpass	Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Exceeding Reas. Safe Speed		Ran off the Road	Collision Involving Fixed Object		Out of control (ice, turned to fast, etc.) or sliding (not skidding)	Struck curb, traffic island, or raised barrier before additional impacts																
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	3297224	09/29/09	1:19 PM	No Injury	Had NOT Been Drinking	0	0	2				From opposite direction - one left turn - one straight	At Driveway within Major Intersection	Overcast	Daylight	Dry	Straight & Level		Passenger Car	Making Left Turn	Stop Sign	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport			Turn after stopping at red flashing light or stop sign			Passenger Car	Going Straight Ahead	Stop Sign	East	West	None	Collision Involving Motor Vehicle in Transport	Proceeded after stopping for flashing red light or stop sign				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	3297544	11/06/09	12:44 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Overcast	Daylight	Wet	Straight & Grade	Bridge or Overpass	Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Taxi	Stopped for Traffic	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3297905	12/05/09	2:00 PM	Possible Injury	Had NOT Been Drinking	2	0	2				From same direction - both going straight - both moving - rear-end	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Wet	Straight & Grade		Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Exceeding Reas. Safe Speed	Follow Too Closely	Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Slowing	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle				
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	3297788	12/31/09	2:22 PM	No Injury	Had NOT Been Drinking	0	0	3				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Raining	Daylight	Wet	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	East	West	Exceeding Reas. Safe Speed	Follow Too Closely	Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic				
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	2722846	04/07/10	3:46 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - one left turn - one straight	At Intersection and Related	Raining	Daylight	Wet	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Other Traffic Control	North	South	Inattention		Collision Involving Motor Vehicle in Transport						Passenger Car	Making Left Turn	Signals	North	East	None	Collision Involving Motor Vehicle in Transport					
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	3297446	09/25/10	9:38 PM	No Injury	Had NOT Been Drinking	0	0	2				From opposite direction - one left turn - one straight	At Intersection and Related	Clear or Partly Cloudy	Dark-Street Lights On	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Left Turn	Signals	West	North	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	Signals	East	West	None	Collision Involving Motor Vehicle in Transport					
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3297894	10/05/10	4:47 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade		Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	No Traffic Control	West	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3298135	10/23/10	6:24 PM	No Injury	Had NOT Been Drinking	0	0	2				Entering at angle	At Intersection and Related	Raining	Dark-Street Lights On	Wet	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	West	East	Other		Collision Involving Motor Vehicle in Transport						Passenger Car	Making Right Turn	Signals	South	East	Other	Collision Involving Motor Vehicle in Transport					
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3298276	10/29/10	4:15 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - both moving - rear-end	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade	Bridge or Overpass	Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Slowing	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle				
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3297756	12/21/10	5:55 PM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Not Related	Overcast	Dark-Street Lights On	Wet	Straight & Grade		Passenger Car	Going Straight Ahead	No Traffic Control	West	East	Follow Too Closely		Collision Involving Motor Vehicle in Transport			Out of control (ice, turned to fast, etc.) or sliding (not skidding)			Passenger Car	Stopped for Traffic	No Traffic Control	West	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic				
State Route	005LX 10279	0.02	Lane 2 LX Decreasing Milepost	3297097	01/09/11	11:17 AM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - both moving - sideswipe	At Intersection and Related	Overcast	Daylight	Wet	Straight & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Changing Lanes	Signals	East	West	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	Signals	East	West	None	Collision Involving Motor Vehicle in Transport					

TROSPER ROAD SW / TYEE DRIVE SW / INTERSTATE 5 SOUTHBOUND RAMPS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	# PEDS	# PEDA	L	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	MV DRIVER MISC ACTION 2 (UNIT 1)	MV DRIVER MISC ACTION 3 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	MV DRIVER MISC ACTION 2 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005LX 10279	0.02	Left Turn Lane LX Decreasing Milepost	3298290	02/24/11	4:40 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Snowing	Daylight	Snow/Slush	Straight & Grade		Passenger Car	Going Straight Ahead	Signals	East	West	Exceeding Reas. Safe Speed	Follow Too Closely	Collision Involving Motor Vehicle in Transport			Out of control (ice, turned to fast, etc.) or sliding (not skidding)			Pickup, Panel Truck or Vanette under 10,000 lb	Stopped at Signal or Stop Sign	Signals	East	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport				
State Route	005R1 10303	0.08	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	C689481	06/06/07	7:50 AM	Possible Injury		2	0	2				From same direction - both going straight - one stopped - rear-end	Not at Intersection and Not Related	Unknown	Daylight	Dry	Straight & Level		Passenger Car	Stopped for Traffic	No Traffic Control	North-east	Vehicle Stopped						Stopped in line of traffic			Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	No Traffic Control	North-east	South-west						
State Route	005R1 10303	0.14	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	E013186	12/30/08	2:24 PM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - both moving - rear-end	Not at Intersection and Not Related	Clear or Partly Cloudy	Daylight	Wet	Curve & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Other Traffic Control	North-east	South-west	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Passenger Car	Slowing	Other Traffic Control	North-east	South-west	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle			
State Route	005R1 10303	0.15	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	E000213	06/04/07	8:06 AM	No Injury	Had NOT Been Drinking	0	0	1				All other non-collision	Not at Intersection and Not Related	Raining	Daylight	Wet	Curve & Level	Other	Truck & Trailer	Going Straight Ahead	Other Traffic Control	North	South-west	Exceeding Reas. Safe Speed		Jackknife			Struck curb, traffic island, or raised barrier before additional impacts		Trailer or towed vehicle struck towing vehicle										
State Route	005R1 10303	0.18	Past Right Shoulder Off Ramp Decreasing Milepost Side of Mainline	2824358	12/05/07	3:00 AM	No Injury	Unknown	0	0	1				Wood Sign Post	Not at Intersection and Not Related	Raining	Dark-Street Lights On	Wet	Curve & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	No Traffic Control	North-east	South-west	Apparently Asleep		Ran off the Road	Collision Involving Fixed Object															
State Route	005R1 10303	0.28	Lane 2 Off Ramp Decreasing Milepost Side of Mainline	2822528	02/19/09	12:53 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - both moving - rear-end	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Daylight	Dry	Curve & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	South	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Slowing	Signals	North	South	None	Collision Involving Motor Vehicle in Transport	Slowing for another vehicle			
State Route	005R1 10303	0.30	Left Turn Lane Off Ramp Decreasing Milepost Side of Mainline	E089948	02/01/11	4:20 PM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - all others	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Daylight	Dry	Curve & Grade		Pickup, Panel Truck or Vanette under 10,000 lb	Changing Lanes	Signals	North	South	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport				
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	2180595	05/11/06	5:02 PM	Possible Injury	Had NOT Been Drinking	1	0	2				Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Curve & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Right Turn	Yield	North-east	West	Follow Too Closely								Passenger Car	Stopped for Traffic	Yield	North-east	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped for another vehicle	Stopped in process of turning		
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	2319980	06/09/06	1:05 PM	No Injury	Had NOT Been Drinking	0	0	2				Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Overcast	Daylight	Dry	Curve & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	Yield	North	Vehicle Stopped	None		Collision Involving Motor Vehicle in Transport			Stopped for another vehicle			Passenger Car	Making Right Turn	Yield	North	West	Inattention	Collision Involving Motor Vehicle in Transport				
State Route	005R1 10303	0.32	Lane 2 Off Ramp Decreasing Milepost Side of Mainline	2824320	01/15/08	11:49 AM	Possible Injury	Had NOT Been Drinking	1	0	2				From same direction - both going straight - both moving - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	South	Exceeding Reas. Safe Speed	Driver Operating Handheld Telecommunications	Collision Involving Motor Vehicle in Transport				Hit and run		Passenger Car	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport				
State Route	005R1 10303	0.32	Left Turn Lane Off Ramp Decreasing Milepost Side of Mainline	2849697	05/31/08	10:00 AM	No Injury	Had NOT Been Drinking	0	0	2				From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	South	Exceeding Reas. Safe Speed		Collision Involving Motor Vehicle in Transport			Skidded attempting to avoid collision with vehicle, person, object, etc.			Pickup, Panel Truck or Vanette under 10,000 lb	Stopped for Traffic	Signals	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in line of traffic			
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	3297004	08/03/08	11:44 AM	Evident Injury	Had NOT Been Drinking	2	0	2				Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Signals	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in process of turning			

TROSPER ROAD SW / TYEE DRIVE SW / INTERSTATE 5 SOUTHBOUND RAMPS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# INJ	# FAT	# VEH	# PEDS	# PEDA L	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER 1 SEQ 2	MV DRIVER 1 SEQ 3	MV DRIVER MISC ACTION 1 (UNIT 1)	MV DRIVER MISC ACTION 2 (UNIT 1)	MV DRIVER MISC ACTION 3 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	MV DRIVER MISC ACTION 2 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	3116336	03/23/09	11:14 AM	No Injury	Had NOT Been Drinking	0	0	2			Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Overcast	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Right Turn	Yield	North-east	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Yield	North-east	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in process of turning				
State Route	005R1 10303	0.32	Lane 2 Off Ramp Decreasing Milepost Side of Mainline	E022102	06/22/09	2:34 PM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - one stopped - rear-end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Truck (Flatbad, Van, etc)	Starting in Traffic Lane	Signals	North	South	Inattention	Follow Too Closely	Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Signals	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped for another vehicle				
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	E025384	08/12/09	2:31 PM	No Injury	Had NOT Been Drinking	0	0	2			Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Curve & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Right Turn	Signals	North	West	Follow Too Closely		Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Signals	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in process of turning				
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	E051637	05/07/10	2:10 PM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - both moving - sideswipe	At Intersection and Related	Clear or Partly Cloudy	Daylight	Dry	Curve & Grade		Passenger Car	Changing Lanes	Signals	North	South	Other		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Changing Lanes	Signals	North	South	Other	Collision Involving Motor Vehicle in Transport					
State Route	005R1 10303	0.32	Left Turn Lane Off Ramp Decreasing Milepost Side of Mainline	E070440	10/05/10	12:38 PM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - both moving - sideswipe	At Intersection and Not Related	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Passenger Car	Changing Lanes	Signals	North	South	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport						Pickup, Panel Truck or Vanette under 10,000 lb	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport					
State Route	005R1 10303	0.32	Lane 1 Off Ramp Decreasing Milepost Side of Mainline	E092614	02/16/11	6:06 PM	No Injury	Had NOT Been Drinking	0	0	2			Same direction - - both turning right -- one stopped -- rear end	At Intersection and Related	Overcast	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Right Turn	Yield	North	West	Exceeding Reas. Safe Speed	Follow Too Closely	Collision Involving Motor Vehicle in Transport						Passenger Car	Stopped for Traffic	Yield	North	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped in process of turning				
State Route	005S5 10247	0.01	Lane 1 On Ramp Decreasing Milepost Side of Mainline	2822434	03/17/09	7:05 AM	No Injury	Had NOT Been Drinking	0	0	2			From same direction - both going straight - both moving - rear-end	At Intersection and Related	Raining	Daylight	Wet	Curve & Grade		Passenger Car	Going Straight Ahead	No Traffic Control	East	North-west	Exceeding Reas. Safe Speed	Driver Distractions Outside Vehicle	Collision Involving Motor Vehicle in Transport						Passenger Car	Going Straight Ahead	No Traffic Control	East	North-west	None	Collision Involving Motor Vehicle in Transport					
State Route	005S5 10247	0.01	Left Shoulder On Ramp Decreasing Milepost Side of Mainline	2849047	08/12/09	9:46 AM	Unknown	Had NOT Been Drinking	0	0	1			Curb, Raised Traffic Island or Raised Median Curb	Not at Intersection and Not Related	Raining	Daylight	Wet	Curve & Level		Passenger Car	Going Straight Ahead	No Traffic Control	South-east	North-west	Exceeding Reas. Safe Speed		Collision Involving Fixed Object			Out of control (ice, turned to fast, etc.) or sliding (not skidding)													

Reported collisions that occurred within the City of Tumwater.....04/01/06 - 03/31/11
*As of 1/1/2009 citizen reports are no longer being captured (Report # begins with "C")

TROSPER ROAD SW / NORTHWEST FUEL SITE ACCESS

JUR-IS-DIC-TION	PRIMARY TRAFFIC-WAY	MILE POST	IMPACT LOCATION	*REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	MOST SEVERE SOBRIETY TYPE	# I N J	# F A T	# V E H	# P E D	L A	FIRST COLLISION TYPE / OBJECT STRUCK	JUNCTION RELA-TIONSHIP	WEATHER	LIGHT-ING CONDI-TIONS	ROAD-WAY SUR-FACE CONDI-TIONS	ROAD-WAY CHARAC-TERIS-TICS	LOCATION CHARAC-TERISTICS	VEH 1 TYPE	VEH 1 ACTION	VEH 1 TRAFFIC CONTROL	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 2 (UNIT 1)	MV DRIVER 1 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 1)	VEH 2 TYPE	VEH 2 ACTION	VEH 2 TRAFFIC CONTROL	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	MV DRIVER CONT CIRC 1 (UNIT 2)	MV DRIVER 2 SEQ 1	MV DRIVER MISC ACTION 1 (UNIT 2)	PED-CYCLIST CONT CIRC 1 (UNIT 2)	PED-CYCLIST CONT CIRC 2 (UNIT 2)
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	2572701	10/12/06	8:56 PM	Evident Injury	Had NOT Been Drinking	1	0	1	1		Vehicle - Pedal-cyclist	At Driveway within Major Intersection	Clear or Partly Cloudy	Dark-Street Lights On	Dry	Straight & Grade		Passenger Car	Making Right Turn	No Traffic Control	South	East	Other		Collision Involving Pedal-cyclist	Hit and run									On Wrong Side Of Road	Headlight Violation
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	2384938	01/02/07	5:39 PM	No Injury	Had NOT Been Drinking	0	0	2			One car entering driveway access	At Driveway within Major Intersection	Raining	Dark-Street Lights On	Wet	Curve & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Left Turn	No Traffic Control	East	South	Did Not Grant RW to Vehicle		Collision Involving Motor Vehicle in Transport		Truck Tractor & Semi-Trailer	Going Straight Ahead	No Traffic Control	North	South	None	Collision Involving Motor Vehicle in Transport			
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	2722754	10/26/07	7:17 PM	No Injury	Had NOT Been Drinking	0	0	2			One car leaving driveway access	At Driveway within Major Intersection	Clear or Partly Cloudy	Dusk	Dry	Straight & Grade	Parking Lot	Pickup, Panel Truck or Vanette under 10,000 lb	Making Right Turn	No Traffic Control	South	East	Improper Turn		Collision Involving Motor Vehicle in Transport		Passenger Car	Stopped for Traffic	No Traffic Control	South	Vehicle Stopped	None	Collision Involving Motor Vehicle in Transport	Stopped prior to turning right		
State Route	005LX 10279	0.02	Intersecting Road Increasing Milepost	2722630	04/10/08	3:13 PM	No Injury	Had NOT Been Drinking	0	0	2			One car entering driveway access	At Driveway within Major Intersection	Clear or Partly Cloudy	Daylight	Dry	Straight & Level		Pickup, Panel Truck or Vanette under 10,000 lb	Making Left Turn	Signals	North	East	Improper Turn		Collision Involving Motor Vehicle in Transport		Passenger Car	Going Straight Ahead	Signals	North	South	None	Collision Involving Motor Vehicle in Transport			
State Route	005LX 10279	0.02	Lane 1 LX Increasing Milepost	3297504	02/20/09	4:16 PM	No Injury	Had NOT Been Drinking	0	0	2			Entering at angle	At Driveway within Major Intersection	Clear or Partly Cloudy	Daylight	Dry	Straight & Grade		Passenger Car	Making Right Turn	No Traffic Control	South	East	Did Not Grant RW to Vehicle	Inattention	Collision Involving Motor Vehicle in Transport		Passenger Car	Going Straight Ahead	No Traffic Control	West	East	None	Collision Involving Motor Vehicle in Transport			

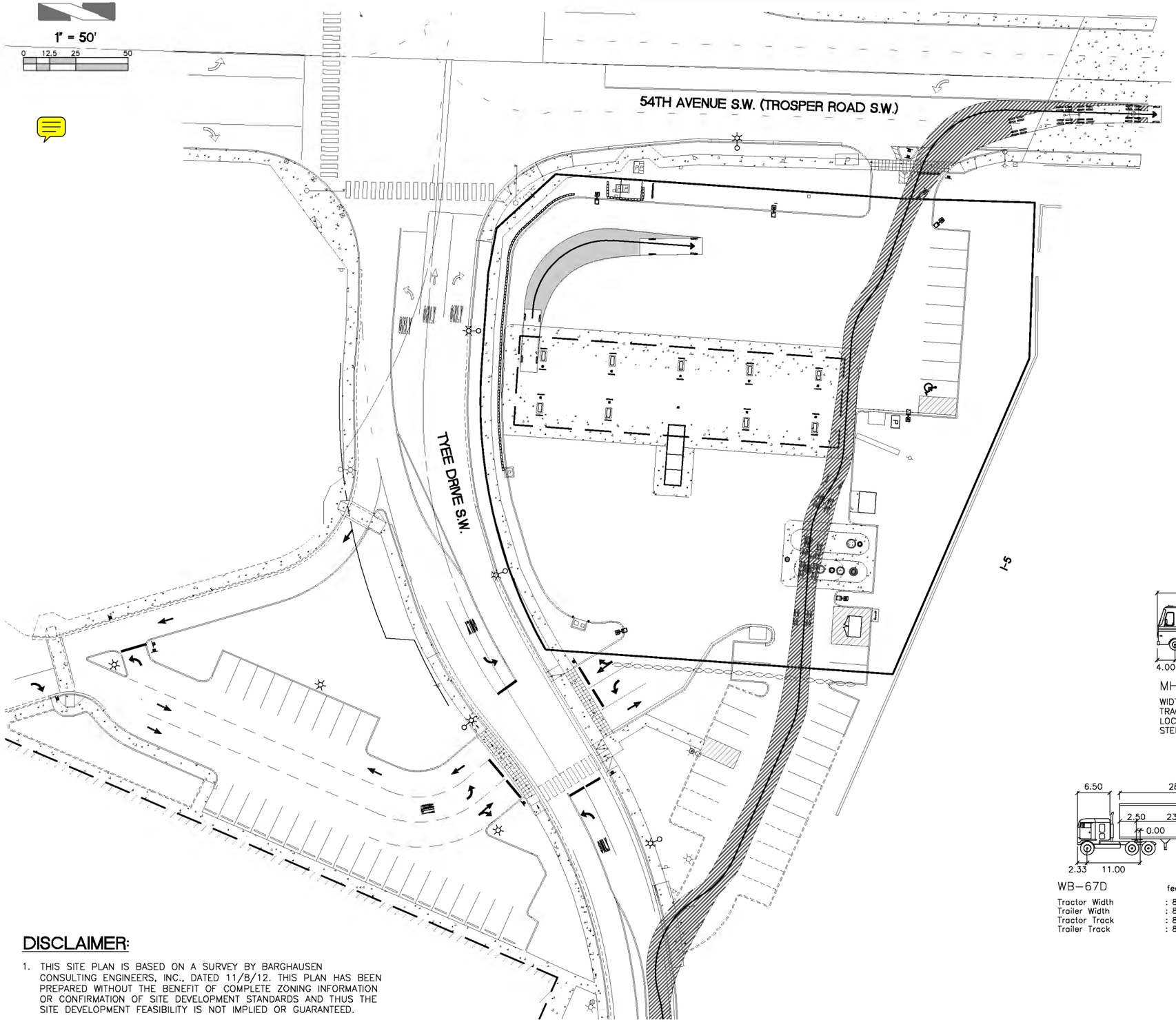
APPENDIX F

Vehicle Turning Path

TRUCK TURNING PLAN

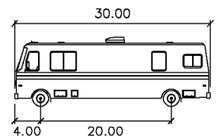
1" = 50'

0 12.5 25 50



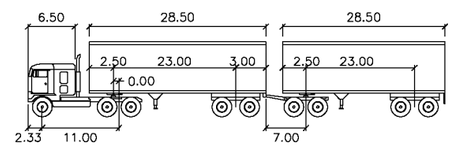
DISCLAIMER:

1. THIS SITE PLAN IS BASED ON A SURVEY BY BARGHAUSEN CONSULTING ENGINEERS, INC., DATED 11/8/12. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF COMPLETE ZONING INFORMATION OR CONFIRMATION OF SITE DEVELOPMENT STANDARDS AND THUS THE SITE DEVELOPMENT FEASIBILITY IS NOT IMPLIED OR GUARANTEED.



MH feet

WIDTH	: 8.00
TRACK	: 8.00
LOCK TO LOCK TIME	: 6.0
STEERING ANGLE	: 33.8



WB–67D feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.00
Trailer Width	: 8.50	Steering Angle	: 15.6
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

Fred Meyer
STORE #00–
TUMWATER
501 TROSPER ROAD S.W.
TUMWATER, WA

THE KROGER CO.
AND FRED MEYER
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FRED MEYER
FUELING
FACILITY
501 TROSPER ROAD S.W.
TUMWATER, WA

DATE	DESCRIPTION
-	-

BCE #15204
PM: CHRIS FERKO
DATE: 4/19/11

DD-4 TRUCK TURNING PLAN

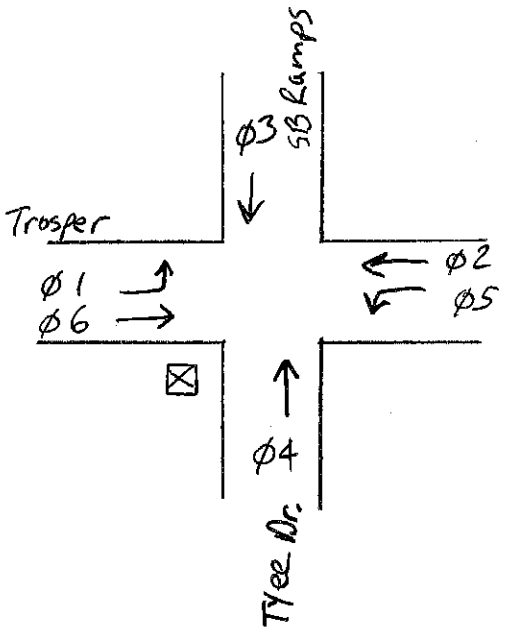
File:P:\15000s\15204\preliminary\Option 12\15204-dd4.dwg Date/Time:6/18/2012 1:05 PM Scale:1"-0" = 1'-0" XREF JSTEFANICK Xref: ----

APPENDIX G

Signal Timing Plans

TRACONEX TMP390 DATA BASE REPORTER FILE A:\DBASE-A1\SBOFF.I11

SYSTEM # 11 TROSPER Drop Name: I-5 SB OFFRAMP Drop # 2
This report printed: 08:20:58 05-23-2012



(1)TOD CURRENT CALENDAR AND CLOCK

MNEM		DATA
YR	CURRENT CALENDAR YEAR	11
MON	CURRENT CALENDAR MONTH	12
DOM	CURRENT DAY OF MONTH	7
HR	CURRENT HOUR OF DAY	14
MIN	CURRENT MINUTE	20
RTC	REAL TIME CLK-1=DAYLT SAVE-2=NOT DAYLT	1
SEC	CURRENT SECOND	18
DOW	DAY OF WEEK 1=SUNDAY	4
RSV	RESERVED - DO NOT EDIT	32
CON	39=TMP390 DO NOT EDIT	39
REV	REVISION 1=A 2=B ETC DO NOT EDIT	10
VER	VERSION DISPLAY ONLY - DO NOT EDIT	8

(2)390 MODE, PAGE 0, PHASE 0 - OPTION SELECTION

MNEM		DATA
USE	PHASES IN USE	..654321
PED	PEDESTRIAN - ENABLE CONCURRENT PED MOVE	..6..32.
FWK	FLASHING WALK	....
ARW	ACTUATED REST IN WALK	....
WCP	WALK CLEARANCE PROTECT	....
DEN	DENSITY - ENABLES DENSITY OPERATION	....
LCP	LAST CAR PASSAGE	....
VN1	VEHICLE TO NON-ACTUATED NO. 1	..6...2.
PN1	PEDESTRIAN TO NON-ACTUATED NO. 1	..6...2.
VN2	VEHICLE TO NON-ACTUATED NO. 2	....
PN2	PEDESTRIAN TO NON-ACTUATED NO. 2	....
FGN	CANADA FAST FLASH GREEN	....
MNU	ENABLE MENU DISPLAY AND TIMING	0
LAB	SELECT LEFT TURN AMBER BLANK	....
ABU	SELECT ANTI-BACKUP PHASES	....

(3)390 MODE, PAGE 0, PHASES 1 TO 8 - PHASE TIMING

MNEM		PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
MIN	MINIMUM GREEN INTERVAL	4	10	4	4	4	10	0	0
WLK	WALK INTERVAL	0	6	6	0	0	6	0	0
PCL	PEDESTRIAN CLEARANCE	0	14	19	0	0	19	0	0
PSG	PASSAGE TIME (PRESET GAP)	3.0	3.0	3.5	3.2	3.0	2.7	0.0	0.0
MX1	MAXIMUM GREEN NO. 1	20	28	22	15	15	28	0	0
MX2	MAXIMUM GREEN NO. 2	20	40	38	14	40	30	0	0
YEL	YELLOW CLEARANCE	3.6	3.6	3.6	3.6	3.6	3.6	3.0	3.0
RED	ALL RED CLEARANCE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
RRT	RED REVERT MIN TIME	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ABA	ACTUATIONS BEFORE ADDED INITIAL	2	2	2	0	2	2	0	0
S/A	SECS PER ACTUATION ADDED INITIAL	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
MXI	MAXIMUM ADDED INITIAL TIME	6	6	6	0	6	6	0	0
TBR	TIME BEFORE REDUCTION	6	6	6	0	6	6	0	0
TTR	TIME TO REDUCE TO MINIMUM GAP	20	20	20	20	20	20	20	20
MNG	MINIMUM GAP	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
CMN	CONDITIONAL MINIMUM	6	6	6	0	6	6	0	0

(4)390 MODE, PAGE 0, PHASE 9 - ADDITIONAL PARAMETERS

MNEM		DATA
PUF	POWER UP FLASH	0
SAR	START-UP ALL RED TIME	5
SUR	START UP RED	.....
SUY	START UP YELLOW	.....
SUG	START UP GREEN	..6...2.
MSF	MAIN STREETS FOR MUTCD FLASH	..6...2.
FMN	MINIMUM MUTCD FLASH TIME	15
DLE	DUAL ENTRY	..6...2.
SGO	SIMULTANEOUS GAP OUT	..6...2.
MNR	MINIMUM RECALLS	..6...2.
MNS	FLAGS FOR SOFT MNR	.....
MXR	MAXIMUM RECALLS	.....
PDR	PEDESTRIAN RECALLS	.....
LKD	LOCKING VEHICLE DETECTORS	.....
LCD	LCD DISPLAY TEST	0
BLT	DISPLAY BACKLIGHT ENABLE	1

(5)390 MODE, PAGE 0, PHASES A TO D - OVERLAPS (IF FOE=0 THEN NEMA)

MNEM		OVERLAP A	OVERLAP B	OVERLAP C	OVERLAP D
STD	STANDARD OVERLAPS	...54...	.....	.....	.....
PRO	PROTECTED OVERLAPS	.....	.....	.....	.....
PER	PERMISSIVE OVERLAPS	.....	.....	.....	.....
AXG	AUXILIARY GREEN	0	0	0	0
AXY	AUXILIARY YELLOW	3.0	3.0	3.0	3.0
AXR	AUXILIARY RED	0.0	0.0	0.0	0.0
FPP	FOLLOW PARENT PHASES	.....	.....	.....	.....

(6)390 MODE, PAGE 0, PHASE E - MISC. FUNCTION ENABLE

MNEM		
FOE	FRTPNLOL 2=RT T 3=FST FLS 1=STD OL	1
SFE	ENABLE PED CLEARS AS SPEC FUNCT OUTPUT	0
STE	STE - ENB INTERVAL RESET AFTER STOP TIME	0
SQE	SEQ ENABLE - 1=ENAB EXT ROTATION INPUTS	0
CSE	CONDITIONAL SERVICE ENABLE	.....
NOE	NEGATIVE OVERLAP ENABLE	0
DME	DIMMING ENABLE	0
PFE	PREEMPT FLASH ENABLE	.....
POM	PREEMPT OUTPUT MODE	0
TOD	TIME OF DAY ENABLE 1=ON 0=OFF	1
CRD	COORDINATION ENABLE 1=ON 0=OFF	1
DIA	DIAG ENAB 4=EEPROM 3=CPU 2=RAM 1=PROM	.....
SCY	SECURITY CODE ACCESS - DO NOT EDIT	0
CFG	CONTROLLER CONFIGURATION	0
FLE	DISABLE VOLTAGE MONITOR IN MUTCD FLASH	0
TBS	START TBR AFTER INITIAL INTERVALS	0

(7)390 MODE, PAGE 0, PHASE F - MORE DATA

MNEM		DATA
PNT	PRINTED REPORT ENABLE SELECT START PAGE	0
SQK	FRONT PANEL SEQ SEL - PAGE 5-7 IN MANUAL	0
SQC	PHASE SEQ SELECTED BY EXTERNAL INPUT	0
SQI	EFFECTIVE PHASE SEQUENCE - DO NOT EDIT	0
DRD	DIM REDS	.....
DYL	DIM YELLOWS	.....
DGN	DIM GREENS	.....
DWK	DIM WALKS	.....
DDW	DIM DON'T WALK	.....
DOR	DIM OVERLAP REDS	.....
DOY	DIM OVERLAP YELLOWS	.....
DOG	DIM OVERLAP GREENS	.....
CLK	TEST FUNCTION - DO NOT EDIT	12
SAV	ENABLE TOD EDIT SAVE	1
ACT	ACTIVE TOD PLAN 0=TOD OFF OR NO PLAN	9
AUD	ENABLE AUDIBLE KEY	1

(8)390 MODE, PAGE 1, PHASE 0 - RR PREEMPT TIMING

MNEM		DATA
TPC	PEDESTRIAN CLEARANCE	3
TY1	YELLOW 1	3.0
TR1	ALL RED 1	1.0
TM1	MINIMUM GREEN 1	3
TG1	GAP 1	0.0
TY2	YELLOW 2	3.0
TR2	ALL RED 2	1.0
TM2	MINIMUM GREEN 2	0
TG2	GAP 2	0.0
TY3	YELLOW 3	3.0
TR3	ALL RED 3	0.0
TPM	PHASE MINIMUM	3
TPG	PHASE GAP	3.0
TY4	YELLOW 4	3.0
TR4	ALL RED 4	1.0

(9)390 MODE, PAGE 1, PHASE 1 - RR PREEMPT SEQUENCE SELECT

MNEM		DATA
CGR	1ST TRACK CLEAR GREENS	.....
COG	1ST TRACK CLEAR OVERLAPS (ABCD) 1=A, ETC	.....
TC2	2ND TRACK CLEAR GREENS	.....
T2O	2ND TRACK CLEAR OVERLAPS (ABCD) 1=A, ETC.	.....
TGR	TRACK PREEMPT GREENS	.....
TOG	TRACK PREEMPT OVERLAPS (ABCD) 1=A, ETC.	.....
TRG	RETURN PHASE GREENS	..6...2.
PRM	RR PREEMPT RETURN MODE TO COORDINATION	.....
PRR	PREEMPT RED REVERT TIME	2.0
PPE	PED CALLS AFTER PREEMPT	.....
PVE	VEHICLE CALLS AFTER PREEMPT	.....
TVO	VEHICLE OMITTED IN MINI CYCLE(ABCD)1=A,ETC	.....
TPO	PED OMITS FOR MINI CYCLE PHASES	.....
TOO	OVERLAP OMITTED IN MINI CYCLE(ABCD)1=A,ETC	.....

(10)390 MODE, PAGE 1, PHASES 2 TO 5 - EMERGENCY VEHICLE PREEMPT

MNEM		EMER.VEH. 1	EMER.VEH. 2	EMER.VEH. 3	EMER.VEH. 4
EDE	DELAY	0	0	0	0
EPC	PED CLEAR	6	6	6	6
EY1	YELLOW 1	3.5	3.5	3.5	3.5
ER1	ALL RED 1	1.0	1.0	1.0	1.0
EMN	MINIMUM PREEMPT DWELL GREEN	3	3	3	3
EPG	GAP TIME	3.0	3.0	3.0	3.0
EY2	YELLOW 2	3.5	3.5	3.5	3.5
ER2	ALL RED 2	1.0	1.0	1.0	1.0
PRG	PREEMPT GREENS	...5..2.	....4...	..6....1	.....3..
OLG	PREEMPT DWELL OVERLAP GREEN(ABCD) A=1, ETC	.....	1	.....	.....
ERG	RETURN GREENS	..6...2.	...5...1	..6...2.	....4...
PRM	PREEMPT RETURN MODE TO COORDINATION	.....	.....	.....	.....
LOK	PREEMPT CALL LOCKING	.....	.....	.....	.....
EMX	PREEMPT MAXIMUM GREEN IN LOW PRIORITY	255	255	255	255

(11)CRD, PAGE 0, PHASE 0 - MANUAL SELECTIONS

MNEM		DATA
F/C	FREE/COORDINATED - 1=COORDINATED	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0
DRQ	DOWNLOAD REQUEST ENABLE	0
SYC	SYNC TOLERANCE IN SECONDS	2
M/L	MASTER/LOC CYCLE DISPLAY-1=LOCAL CYCLE	1
DAL	DIAL SELECT	0
OFF	OFFSET SELECT	0
SPL	SPLIT SELECT	0
L/R	LOCAL/REMOTE SWITCH - 0=LOCAL 1=REMOTE	1
TDP	TIME OF DAY PLAN MANUAL SELECTION	0
SMP	DETECTOR SAMPLING PERIOD IN MINUTES	15
DVV	DIVIDER FOR DETECTOR REPORT VOLUMES	1
CME	ENABLE MAX DURING CRD PHASES	.....
DPO	DISABLE PED OMIT IN CRD PHASES	.....
SCP	ENABLE SECONDARY COORDINATION PHASES	.....

(12)CRD, PAGES 1 TO 6, PHASE 0 - DIAL PARAMETERS

MNEM		DIAL 1	DIAL 2	DIAL 3	DIAL 4	DIAL 5	DIAL 6
CYC	CYCLE LENGTH	120	120	135	135	120	120
OF1	OFFSET 1	8	0	28	0	116	116
OF2	OFFSET 2	116	0	0	0	0	0
OF3	OFFSET 3	0	0	0	0	0	0
OF4	OFFSET 4	0	0	0	0	0	0
OF5	OFFSET 5	0	0	0	0	0	0
SHK	MAXIMUM SHRINKAGE PER CYCLE	10	10	10	10	10	10
EXP	MAXIMUM EXPANSION PER CYCLE	10	10	10	10	10	10
YLD	YIELD PERIOD	0	0	0	0	0	0
SEQ	PHASE SEQUENCE - PAGE 2-16 OF MANUAL	0	0	0	0	0	0
MSG	MAIN STREET GREEN COORD PHASES(1 PER RING)	..6...2.	.....3..	..6...2.	.....3..	..6...2.	..6...2.

(13)CRD, PAGES 1 TO 6, PHASES 1 TO 3 - SPLIT DIVISIONS

MNEM		1>1	1>2	1>3	2>1	2>2	2>3	3>1	3>2	3>3	4>1	4>2	4>3	5>1	5>2	5>3	6>1	6>2	6>3
SD1	PHASE 1 SPLIT DIVISION	21	17	17	14	17	17	19	19	19	14	14	14	17	17	17	17	17	17
SD2	PHASE 2 SPLIT DIVISION	45	38	38	36	38	38	42	42	42	36	36	36	38	38	38	38	38	38
SD3	PHASE 3 SPLIT DIVISION	31	34	34	39	34	34	43	43	43	54	54	54	34	34	34	34	34	34
SD4	PHASE 4 SPLIT DIVISION	23	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
SD5	PHASE 5 SPLIT DIVISION	23	13	13	19	13	13	26	26	26	19	19	19	13	13	13	13	13	13
SD6	PHASE 6 SPLIT DIVISION	43	42	42	31	42	42	35	35	35	31	31	31	42	42	42	42	42	42
SD7	PHASE 7 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD8	PHASE 8 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(14)CRD - ACTIVE PARAMETERS

MNEM		DATA
DAL	CURRENT DIAL IN EFFECT - DO NOT EDIT	0
OFF	CURRENT OFFSET IN EFFECT - DO NOT EDIT	0
SPL	CURRENT SPLIT IN EFFECT - DO NOT EDIT	0
SEQ	CURRENT SEQUENCE IN EFFECT	0

(15)CRD, PAGE 8, PHASE 0 - SYSTEM PARAMETERS

MNEM		
SYE	SYSTEM MODE ENABLE	1
SDT	ENABLE AUXILIARY DETS AS SYSTEM DETECTORS	....
ADD	DROP ADDRESS FOR SYSTEM	2
IPL	INTERSECTION PLAN NUMBER - DISPLAY ONLY	9
IPM	INTERSECTION PLAN MODE 1=ON 2=WWV RECEIVE	1
DFT	DETECTOR FAILURE TIME	255
FDT	FAILED DETECTORS DISPLAY ONLY NO EDIT	....
DFM	ENABLE LOCAL DET FAIL MONITORING	....
5MV	FIVE MINUTE VOLUME DIV 10 DISPLAY ONLY	7
SHR	HOUR OF SYNCHRONIZATION	0
SMN	MINUTE OF SYNCHRONIZATION	0
EHR	HOUR TO SET CLOCK TO ON EXTERNAL INPUT	0
EMN	MINUTE TO SET CLOCK TO ON EXTERNAL INPUT	0

(16)TOD, PAGE 1, PHASE 0 - PLANS 1 THROUGH 6

MNEMS		PLAN 1	PLAN 2	PLAN 3	PLAN 4	PLAN 5	PLAN 6
NUM	NUMBER OF THIS PLAN	1	2	3	4	5	0
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	7	7	7	6	0
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	9	9	9	10	10
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	11	11	11	20	20
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	7	7	8	8	11	0
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	15	35	0	15	30	0
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	8	8	8	8	8
F/C	FREE/COORDINATED - 1=COORDINATED	1	1	1	0	1	0
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	2	4	2	0	1	0
OFF	OFFSET	1	1	1	0	1	0
SPL	SPLIT	1	1	1	0	1	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	.....	.....	.....	.....	..6...2.	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

(17)TOD, PAGE 1, PHASE 0 - PLANS 7 THROUGH 12

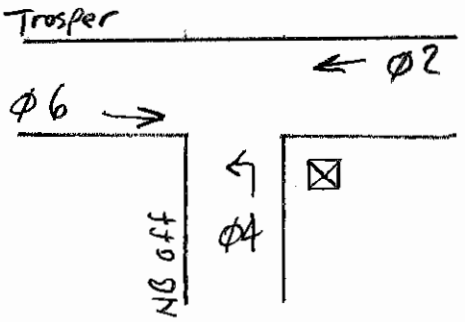
MNEMS		PLAN 7	PLAN 8	PLAN 9	PLAN 10	PLAN 11	PLAN 12
NUM	NUMBER OF THIS PLAN	7	0	9	0	11	12
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	0	6	0	6	7
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	10	10	10	10	1
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	20	20	20	20	9
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	12	0	13	0	15	16
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	20	0	15	0	10	15
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	0	8	0	8	8
F/C	FREE/COORDINATED - 1=COORDINATED	1	0	0	0	1	1
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	1	0	0	0	1	3
OFF	OFFSET	1	0	0	0	2	1
SPL	SPLIT	1	0	0	0	2	1
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	..6...2.	.....	.....	.....	..6...2.	..6...2.
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

(18)TOD, PAGE 1, PHASE 0 - PLANS 13 THROUGH 18

MNEMS		PLAN 13	PLAN 14	PLAN 15	PLAN 16	PLAN 17	PLAN 18
NUM	NUMBER OF THIS PLAN	13	14	0	0	0	0
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	6	0	0	0	0
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	10	0	0	0	0
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	20	0	0	0	0
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	18	17	0	0	0	0
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	30	50	0	0	0	0
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	8	0	0	0	0
F/C	FREE/COORDINATED - 1=COORDINATED	0	1	0	0	0	0
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	0	1	0	0	0	0
OFF	OFFSET	0	2	0	0	0	0
SPL	SPLIT	0	2	0	0	0	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	.....	..6...2.	.....	.....	.....	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

TRACONEX TMP390 DATA BASE REPORTER FILE A:\DBASE-A1\NBOFF.I11

SYSTEM # 11 TROSPER Drop Name: I-5 NB OFFRAMP Drop # 3
This report printed: 08:25:59 05-23-2012



(1)TOD CURRENT CALENDAR AND CLOCK

MNEM		DATA
YR	CURRENT CALENDAR YEAR	11
MON	CURRENT CALENDAR MONTH	12
DOM	CURRENT DAY OF MONTH	7
HR	CURRENT HOUR OF DAY	14
MIN	CURRENT MINUTE	17
RTC	REAL TIME CLK-1=DAYLT SAVE-2=NOT DAYLT	1
SEC	CURRENT SECOND	24
DOW	DAY OF WEEK 1=SUNDAY	4
RSV	RESERVED - DO NOT EDIT	32
CON	39=TMP390 DO NOT EDIT	39
REV	REVISION 1=A 2=B ETC DO NOT EDIT	10
VER	VERSION DISPLAY ONLY - DO NOT EDIT	8

(2)390 MODE, PAGE 0, PHASE 0 - OPTION SELECTION

MNEM		DATA
USE	PHASES IN USE	..6.4.2.
PED	PEDESTRIAN - ENABLE CONCURRENT PED MOVE	..6.....
FWK	FLASHING WALK	.....
ARW	ACTUATED REST IN WALK	.....
WCP	WALK CLEARANCE PROTECT	.....
DEN	DENSITY - ENABLES DENSITY OPERATION	.....
LCP	LAST CAR PASSAGE	.....
VN1	VEHICLE TO NON-ACTUATED NO. 1	..6...2.
PN1	PEDESTRIAN TO NON-ACTUATED NO. 1	..6...2.
VN2	VEHICLE TO NON-ACTUATED NO. 2	.....
PN2	PEDESTRIAN TO NON-ACTUATED NO. 2	.....
FGN	CANADA FAST FLASH GREEN	.....
MNU	ENABLE MENU DISPLAY AND TIMING	0
LAB	SELECT LEFT TURN AMBER BLANK	.....
ABU	SELECT ANTI-BACKUP PHASES	.....

(3)390 MODE, PAGE 0, PHASES 1 TO 8 - PHASE TIMING

MNEM		PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
MIN	MINIMUM GREEN INTERVAL	0	10	0	6	0	10	0	0
WLK	WALK INTERVAL	0	0	0	0	0	5	0	0
WCL	PEDESTRIAN CLEARANCE	0	0	0	0	0	4	0	0
PSG	PASSAGE TIME (PRESET GAP)	0.0	2.5	0.0	2.0	0.0	2.5	0.0	0.0
MX1	MAXIMUM GREEN NO. 1	0	30	0	19	0	30	0	0
MX2	MAXIMUM GREEN NO. 2	0	0	0	0	0	0	0	0
YEL	YELLOW CLEARANCE	3.0	3.6	3.0	3.6	3.0	3.6	3.0	3.0
RED	ALL RED CLEARANCE	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
RRT	RED REVERT MIN TIME	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ABA	ACTUATIONS BEFORE ADDED INITIAL	0	0	0	0	0	0	0	0
S/A	SECS PER ACTUATION ADDED INITIAL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MXI	MAXIMUM ADDED INITIAL TIME	0	0	0	0	0	0	0	0
TBR	TIME BEFORE REDUCTION	0	0	0	0	0	0	0	0
TTR	TIME TO REDUCE TO MINIMUM GAP	20	20	20	20	20	20	20	20
MNG	MINIMUM GAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CMN	CONDITIONAL MINIMUM	0	0	0	0	0	0	0	0

(4)390 MODE, PAGE 0, PHASE 9 - ADDITIONAL PARAMETERS

MNEM		DATA
PUF	POWER UP FLASH	0
SAR	START-UP ALL RED TIME	5
SUR	START UP RED	.....
SUY	START UP YELLOW	.....
SUG	START UP GREEN	..6...2.
MSF	MAIN STREETS FOR MUTCD FLASH	..6...2.
FMN	MINIMUM MUTCD FLASH TIME	15
DLE	DUAL ENTRY	..6...2.
SGO	SIMULTANEOUS GAP OUT	..6...2.
MNR	MINIMUM RECALLS	..6...2.
MNS	FLAGS FOR SOFT MNR	.....
MXR	MAXIMUM RECALLS	.....
PDR	PEDESTRIAN RECALLS	.....
LKD	LOCKING VEHICLE DETECTORS	.....
LCD	LCD DISPLAY TEST	0
BLT	DISPLAY BACKLIGHT ENABLE	1

(5)390 MODE, PAGE 0, PHASES A TO D - OVERLAPS (IF FOE=0 THEN NEMA)

MNEM		OVERLAP A	OVERLAP B	OVERLAP C	OVERLAP D
STD	STANDARD OVERLAPS	.....	.....	.....	.....
PRO	PROTECTED OVERLAPS	.....	.....	.....	.....
PER	PERMISSIVE OVERLAPS	.....	.....	.....	.....
AXG	AUXILIARY GREEN	0	0	0	0
AXY	AUXILIARY YELLOW	3.0	3.0	3.0	3.0
AXR	AUXILIARY RED	0.0	0.0	0.0	0.0
FPP	FOLLOW PARENT PHASES	.....	.....	.....	.....

(6)390 MODE, PAGE 0, PHASE E - MISC. FUNCTION ENABLE

MNEM		
FOE	FRTPNLOL 2=RT T 3=FST FLS 1=STD OL	1
SFE	ENABLE PED CLEARS AS SPEC FUNCT OUTPUT	0
STE	STR - ENB INTERVAL RESET AFTER STOP TIME	0
SQE	SEQ ENABLE - 1=ENAB EXT ROTATION INPUTS	0
CSE	CONDITIONAL SERVICE ENABLE	.....
NOE	NEGATIVE OVERLAP ENABLE	0
DME	DIMMING ENABLE	0
PFE	PREEMPT FLASH ENABLE	.....
POM	PREEMPT OUTPUT MODE	0
TOD	TIME OF DAY ENABLE 1=ON 0=OFF	1
CRD	COORDINATION ENABLE 1=ON 0=OFF	1
DIA	DIAG ENAB 4=EEPROM 3=CPU 2=RAM 1=PROM	.....
SCY	SECURITY CODE ACCESS - DO NOT EDIT	0
CFG	CONTROLLER CONFIGURATION	0
FLE	DISABLE VOLTAGE MONITOR IN MUTCD FLASH	0
TBS	START TBR AFTER INITIAL INTERVALS	0

(7)390 MODE, PAGE 0, PHASE F - MORE DATA

MNEM		DATA
PNT	PRINTED REPORT ENABLE SELECT START PAGE	0
SQK	FRONT PANEL SEQ SEL - PAGE 5-7 IN MANUAL	0
SQC	PHASE SEQ SELECTED BY EXTERNAL INPUT	0
SQI	EFFECTIVE PHASE SEQUENCE - DO NOT EDIT	0
DRD	DIM REDS	.....
DYL	DIM YELLOWS	.....
DGN	DIM GREENS	.....
DWK	DIM WALKS	.....
DDW	DIM DON'T WALK	.....
DOR	DIM OVERLAP REDS	.....
DOY	DIM OVERLAP YELLOWS	.....
DOG	DIM OVERLAP GREENS	.....
CLK	TEST FUNCTION - DO NOT EDIT	3
SAV	ENABLE TOD EDIT SAVE	1
ACT	ACTIVE TOD PLAN 0=TOD OFF OR NO PLAN	9
AUD	ENABLE AUDIBLE KEY	1

(8)390 MODE, PAGE 1, PHASE 0 - RR PREEMPT TIMING

MNEM		DATA
TPC	PEDESTRIAN CLEARANCE	3
TY1	YELLOW 1	3.0
TR1	ALL RED 1	1.0
TM1	MINIMUM GREEN 1	3
TG1	GAP 1	0.0
TY2	YELLOW 2	3.0
TR2	ALL RED 2	1.0
TM2	MINIMUM GREEN 2	0
TG2	GAP 2	0.0
TY3	YELLOW 3	3.0
TR3	ALL RED 3	0.0
TPM	PHASE MINIMUM	3
TPG	PHASE GAP	3.0
TY4	YELLOW 4	3.0
TR4	ALL RED 4	1.0

(9)390 MODE, PAGE 1, PHASE 1 - RR PREEMPT SEQUENCE SELECT

MNEM		DATA
CGR	1ST TRACK CLEAR GREENS	.....
COG	1ST TRACK CLEAR OVERLAPS (ABCD) 1=A, ETC	.....
TC2	2ND TRACK CLEAR GREENS	.....
T2O	2ND TRACK CLEAR OVERLAPS (ABCD) 1=A, ETC.	.....
TGR	TRACK PREEMPT GREENS	.....
TOG	TRACK PREEMPT OVERLAPS (ABCD) 1=A, ETC.	.....
TRG	RETURN PHASE GREENS	..6...2.
PRM	RR PREEMPT RETURN MODE TO COORDINATION	.....
PRR	PREEMPT RED REVERT TIME	2.0
PPE	PED CALLS AFTER PREEMPT	.....
PVE	VEHICLE CALLS AFTER PREEMPT	.....
TVO	VEHICLE OMITTED IN MINI CYCLE(ABCD)1=A,ETC	.....
TPO	PED OMITS FOR MINI CYCLE PHASES	.....
TOO	OVERLAP OMITTED IN MINI CYCLE(ABCD)1=A,ETC	.....

(10)390 MODE, PAGE 1, PHASES 2 TO 5 - EMERGENCY VEHICLE PREEMPT

MNEM		EMER.VEH. 1	EMER.VEH. 2	EMER.VEH. 3	EMER.VEH. 4
EDE	DELAY	0	0	0	0
EPC	PED CLEAR	6	6	6	6
EY1	YELLOW 1	3.0	3.0	3.0	3.0
ER1	ALL RED 1	1.0	1.0	1.0	1.0
EMN	MINIMUM PREEMPT DWELL GREEN	3	3	3	3
EPG	GAP TIME	3.0	3.0	3.0	3.0
EY2	YELLOW 2	3.0	3.0	3.0	3.0
ER2	ALL RED 2	1.0	1.0	1.0	1.0
PRG	PREEMPT GREENS	......2.	....4...	..6.....	....
OLG	PREEMPT DWELL OVERLAP GREEN(ABCD) A=1, ETC	....	....	....	....
ERG	RETURN GREENS	..6...2.	..6...2.	..6...2.	....
PRM	PREEMPT RETURN MODE TO COORDINATION	....	....	....	....
LOK	PREEMPT CALL LOCKING	1	1	1	1
EMX	PREEMPT MAXIMUM GREEN IN LOW PRIORITY	255	255	255	255

(11)CRD, PAGE 0, PHASE 0 - MANUAL SELECTIONS

MNEM		DATA
F/C	FREE/COORDINATED - 1=COORDINATED	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0
DRQ	DOWNLOAD REQUEST ENABLE	0
SYC	SYNC TOLERANCE IN SECONDS	2
M/L	MASTER/LOC CYCLE DISPLAY-1=LOCAL CYCLE	1
DAL	DIAL SELECT	0
OFF	OFFSET SELECT	0
SPL	SPLIT SELECT	0
L/R	LOCAL/REMOTE SWITCH - 0=LOCAL 1=REMOTE	1
TDP	TIME OF DAY PLAN MANUAL SELECTION	0
SMP	DETECTOR SAMPLING PERIOD IN MINUTES	15
DVV	DIVIDER FOR DETECTOR REPORT VOLUMES	1
CME	ENABLE MAX DURING CRD PHASES	....
DPO	DISABLE PED OMIT IN CRD PHASES	....
SCP	ENABLE SECONDARY COORDINATION PHASES	....

(12)CRD, PAGES 1 TO 6, PHASE 0 - DIAL PARAMETERS

MNEM		DIAL 1	DIAL 2	DIAL 3	DIAL 4	DIAL 5	DIAL 6
CYC	CYCLE LENGTH	120	120	135	135	120	120
OF1	OFFSET 1	95	7	127	7	14	14
OF2	OFFSET 2	14	0	0	0	0	0
OF3	OFFSET 3	0	0	0	0	0	0
OF4	OFFSET 4	0	0	0	0	0	0
OF5	OFFSET 5	0	0	0	0	0	0
SHK	MAXIMUM SHRINKAGE PER CYCLE	10	10	10	10	10	10
EXP	MAXIMUM EXPANSION PER CYCLE	10	10	10	10	10	10
YLD	YIELD PERIOD	0	0	0	0	0	0
SEQ	PHASE SEQUENCE - PAGE 2-16 OF MANUAL	0	0	0	0	0	0
MSG	MAIN STREET GREEN COORD PHASES(1 PER RING)	..6...2.	..6...2.	..6...2.	..6...2.	..6...2.	..6...2.

(13)CRD, PAGES 1 TO 6, PHASES 1 TO 3 - SPLIT DIVISIONS

MNEM		1>1	1>2	1>3	2>1	2>2	2>3	3>1	3>2	3>3	4>1	4>2	4>3	5>1	5>2	5>3	6>1	6>2	6>3
SD1	PHASE 1 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD2	PHASE 2 SPLIT DIVISION	80	88	88	70	88	88	98	98	98	85	85	85	88	88	88	88	88	88
SD3	PHASE 3 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD4	PHASE 4 SPLIT DIVISION	40	32	32	50	32	32	37	37	37	50	50	50	32	32	32	32	32	32
SD5	PHASE 5 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD6	PHASE 6 SPLIT DIVISION	80	88	88	70	88	88	98	98	98	85	85	85	88	88	88	88	88	88
SD7	PHASE 7 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD8	PHASE 8 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(14)CRD - ACTIVE PARAMETERS

MNEM		DATA
DAL	CURRENT DIAL IN EFFECT - DO NOT EDIT	0
OFF	CURRENT OFFSET IN EFFECT - DO NOT EDIT	0
SPL	CURRENT SPLIT IN EFFECT - DO NOT EDIT	0
SEQ	CURRENT SEQUENCE IN EFFECT	0

(15)CRD, PAGE 8, PHASE 0 - SYSTEM PARAMETERS

MNEM		
SYE	SYSTEM MODE ENABLE	1
SDT	ENABLE AUXILIARY DETS AS SYSTEM DETECTORS	....
ADD	DROP ADDRESS FOR SYSTEM	3
IPL	INTERSECTION PLAN NUMBER - DISPLAY ONLY	9
IPM	INTERSECTION PLAN MODE 1=ON 2=WWV RECEIVE	1
DFT	DETECTOR FAILURE TIME	255
FDT	FAILED DETECTORS DISPLAY ONLY NO EDIT	....
DFM	ENABLE LOCAL DET FAIL MONITORING	....
5MV	FIVE MINUTE VOLUME DIV 10 DISPLAY ONLY	10
SHR	HOUR OF SYNCHRONIZATION	0
SMN	MINUTE OF SYNCHRONIZATION	0
EHR	HOUR TO SET CLOCK TO ON EXTERNAL INPUT	0
EMN	MINUTE TO SET CLOCK TO ON EXTERNAL INPUT	0

(16)TOD, PAGE 1, PHASE 0 - PLANS 1 THROUGH 6

MNEMS		PLAN 1	PLAN 2	PLAN 3	PLAN 4	PLAN 5	PLAN 6
NUM	NUMBER OF THIS PLAN	1	2	3	4	5	0
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	7	7	7	6	0
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	9	9	9	10	0
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	11	11	11	20	0
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	7	7	8	8	11	0
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	15	35	0	15	30	0
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	8	8	8	8	0
F/C	FREE/COORDINATED - 1=COORDINATED	1	1	1	0	1	0
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	2	4	2	0	1	0
OFF	OFFSET	1	1	1	0	1	0
SPL	SPLIT	1	1	1	0	1	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	.....	.....	.....	.....	.....	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

(17)TOD, PAGE 1, PHASE 0 - PLANS 7 THROUGH 12

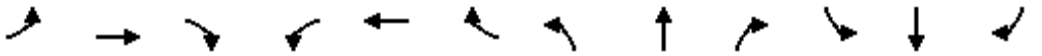
MNEMS		PLAN 7	PLAN 8	PLAN 9	PLAN 10	PLAN 11	PLAN 12
NUM	NUMBER OF THIS PLAN	7	0	9	0	11	12
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	0	6	0	6	7
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	0	10	0	10	1
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	0	20	0	20	9
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	12	0	13	0	15	16
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	20	0	15	0	10	15
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	0	8	0	8	8
F/C	FREE/COORDINATED - 1=COORDINATED	1	0	0	0	1	1
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	1	0	0	0	1	3
OFF	OFFSET	1	0	0	0	2	1
SPL	SPLIT	1	0	0	0	2	1
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	.....	.....	.....	.....	.....	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

(18)TOD, PAGE 1, PHASE 0 - PLANS 13 THROUGH 18

MNEMS		PLAN 13	PLAN 14	PLAN 15	PLAN 16	PLAN 17	PLAN 18
NUM	NUMBER OF THIS PLAN	13	14	0	0	0	0
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	6	6	0	0	0	0
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	10	10	0	0	0	0
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	20	20	0	0	0	0
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	18	17	0	0	0	0
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	30	50	0	0	0	0
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	8	0	0	0	0
F/C	FREE/COORDINATED - 1=COORDINATED	0	1	0	0	0	0
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....	.....	.....	.....	.....	.....
DAL	DIAL	0	1	0	0	0	0
OFF	OFFSET	0	2	0	0	0	0
SPL	SPLIT	0	2	0	0	0	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	.....	.....	.....	.....	.....	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

APPENDIX H

Capacity Calculations



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	1	13	5	0	11	7	391	4	6	341	275
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	161	1	15	6	0	12	8	439	4	7	383	309
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											231	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	864	856	383	869	854	442	383			444		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	769	760	216	775	757	442	216			444		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	41	100	98	98	100	98	99			99		
cM capacity (veh/h)	271	290	721	267	291	620	1188			1127		

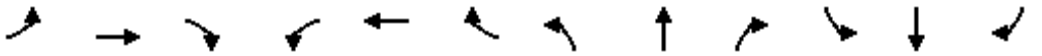
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	176	18	8	444	390	309
Volume Left	161	6	8	0	7	0
Volume Right	15	12	0	4	0	309
cSH	286	439	1188	1700	1127	1700
Volume to Capacity	0.62	0.04	0.01	0.26	0.01	0.18
Queue Length 95th (ft)	95	3	0	0	0	0
Control Delay (s)	36.0	13.5	8.1	0.0	0.2	0.0
Lane LOS	E	B	A		A	
Approach Delay (s)	36.0	13.5	0.1		0.1	
Approach LOS	E	B				

Intersection Summary				
Average Delay	5.0			
Intersection Capacity Utilization	51.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	1	539	6	0	622
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1	599	7	0	691
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						110
pX, platoon unblocked	0.81					
vC, conflicting volume	1293	203			606	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1244	203			606	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	137	810			982	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1
Volume Total	1	240	240	126	691
Volume Left	0	0	0	0	0
Volume Right	1	0	0	7	0
cSH	810	1700	1700	1700	982
Volume to Capacity	0.00	0.14	0.14	0.07	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.4	0.0			0.0
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	653	15	253	306	167	12	115	413	426	354	417
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	13	13	12	13
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1615	1805	3342		1805	1900	1652	3513	1881	1652
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3574	1615	1805	3342		1805	1900	1652	3513	1881	1652
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	152	702	16	272	329	180	13	124	444	458	381	448
RTOR Reduction (vph)	0	0	4	0	51	0	0	0	50	0	0	335
Lane Group Flow (vph)	152	702	12	272	458	0	13	124	394	458	381	113
Heavy Vehicles (%)	1%	1%	0%	0%	3%	1%	0%	0%	1%	3%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	pt+ov	Split	NA	Perm
Protected Phases	1	6		5	2		4	4	4 5	3	3	
Permitted Phases			6									3
Actuated Green, G (s)	13.8	35.8	35.8	21.4	43.4		25.4	25.4	51.4	34.0	34.0	34.0
Effective Green, g (s)	13.8	35.8	35.8	21.4	43.4		25.4	25.4	51.4	34.0	34.0	34.0
Actuated g/C Ratio	0.10	0.27	0.27	0.16	0.32		0.19	0.19	0.38	0.25	0.25	0.25
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	3.0	2.7	2.7	3.0	3.0		3.2	3.2		3.5	3.5	3.5
Lane Grp Cap (vph)	183	948	428	286	1074		340	357	629	885	474	416
v/s Ratio Prot	0.09	c0.20		c0.15	0.14		0.01	0.07	c0.24	0.13	c0.20	
v/s Ratio Perm			0.01									0.07
v/c Ratio	0.83	0.74	0.03	0.95	0.43		0.04	0.35	0.63	0.52	0.80	0.27
Uniform Delay, d1	59.5	45.4	36.7	56.3	36.0		44.8	47.6	34.0	43.4	47.4	40.6
Progression Factor	1.00	1.00	1.00	0.85	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	26.1	5.2	0.1	37.7	1.1		0.0	0.6	2.0	0.6	9.8	0.4
Delay (s)	85.6	50.5	36.8	85.5	35.2		44.9	48.2	36.0	44.0	57.2	41.0
Level of Service	F	D	D	F	D		D	D	D	D	E	D
Approach Delay (s)		56.4			52.7			38.8			46.9	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	49.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1482	10	1	726	0	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1611	11	1	789	0	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	79			816		
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1622		1882	811
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1320		1637	332
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			435		76	549

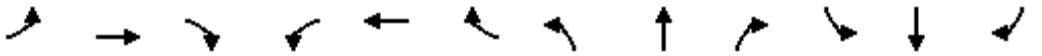
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1074	548	159	316	316	1
Volume Left	0	0	1	0	0	0
Volume Right	0	11	0	0	0	1
cSH	1700	1700	435	1700	1700	549
Volume to Capacity	0.63	0.32	0.00	0.19	0.19	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	11.6
Lane LOS			A			B
Approach Delay (s)	0.0		0.0			11.6
Approach LOS						B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1480	3	1	727	0	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1609	3	1	790	0	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	161			734		
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1612		1876	806
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1309		1631	328
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		100	97
cM capacity (veh/h)			439		77	539

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1072	539	159	316	316	18
Volume Left	0	0	1	0	0	0
Volume Right	0	3	0	0	0	18
cSH	1700	1700	439	1700	1700	539
Volume to Capacity	0.63	0.32	0.00	0.19	0.19	0.03
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	11.9
Lane LOS			A			B
Approach Delay (s)	0.0		0.0			11.9
Approach LOS						B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	1	13	5	0	11	7	399	4	6	348	275
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	161	1	15	6	0	12	8	448	4	7	391	309
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											231	
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	881	873	391	886	871	451	391			453		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	782	773	214	788	771	451	214			453		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	39	100	98	98	100	98	99			99		
cM capacity (veh/h)	263	283	717	260	284	613	1180			1118		

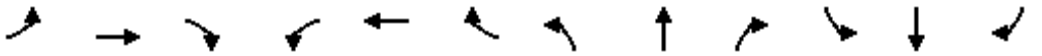
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	176	18	8	453	398	309
Volume Left	161	6	8	0	7	0
Volume Right	15	12	0	4	0	309
cSH	278	430	1180	1700	1118	1700
Volume to Capacity	0.64	0.04	0.01	0.27	0.01	0.18
Queue Length 95th (ft)	100	3	1	0	0	0
Control Delay (s)	38.1	13.7	8.1	0.0	0.2	0.0
Lane LOS	E	B	A		A	
Approach Delay (s)	38.1	13.7	0.1		0.1	
Approach LOS	E	B				

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	51.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	1	550	6	0	634
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1	611	7	0	704
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						110
pX, platoon unblocked	0.80					
vC, conflicting volume	1319	207			618	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1275	207			618	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	130	805			972	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1
Volume Total	1	244	244	129	704
Volume Left	0	0	0	0	0
Volume Right	1	0	0	7	0
cSH	805	1700	1700	1700	972
Volume to Capacity	0.00	0.14	0.14	0.08	0.00
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.5	0.0			0.0
Approach LOS	A				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	666	15	258	312	170	12	117	421	435	361	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	13	13	12	13
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1615	1805	3342		1805	1900	1652	3513	1881	1652
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3574	1615	1805	3342		1805	1900	1652	3513	1881	1652
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	155	716	16	277	335	183	13	126	453	468	388	457
RTOR Reduction (vph)	0	0	4	0	51	0	0	0	47	0	0	341
Lane Group Flow (vph)	155	716	12	277	467	0	13	126	406	468	388	116
Heavy Vehicles (%)	1%	1%	0%	0%	3%	1%	0%	0%	1%	3%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	pt+ov	Split	NA	Perm
Protected Phases	1	6		5	2		4	4	4 5	3	3	
Permitted Phases			6									3
Actuated Green, G (s)	13.9	35.3	35.3	21.4	42.8		25.6	25.6	51.6	34.3	34.3	34.3
Effective Green, g (s)	13.9	35.3	35.3	21.4	42.8		25.6	25.6	51.6	34.3	34.3	34.3
Actuated g/C Ratio	0.10	0.26	0.26	0.16	0.32		0.19	0.19	0.38	0.25	0.25	0.25
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	3.0	2.7	2.7	3.0	3.0		3.2	3.2		3.5	3.5	3.5
Lane Grp Cap (vph)	184	935	422	286	1060		342	360	631	893	478	420
v/s Ratio Prot	0.09	c0.20		c0.15	0.14		0.01	0.07	c0.25	0.13	c0.21	
v/s Ratio Perm			0.01									0.07
v/c Ratio	0.84	0.77	0.03	0.97	0.44		0.04	0.35	0.64	0.52	0.81	0.28
Uniform Delay, d1	59.5	46.0	37.1	56.5	36.6		44.6	47.5	34.2	43.3	47.3	40.4
Progression Factor	1.00	1.00	1.00	0.86	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.9	6.0	0.1	41.6	1.2		0.0	0.6	2.3	0.6	10.4	0.4
Delay (s)	87.4	52.0	37.2	89.9	35.8		44.7	48.1	36.5	44.0	57.7	40.8
Level of Service	F	D	D	F	D		D	D	D	D	E	D
Approach Delay (s)		57.9			54.6			39.1			46.9	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1512	10	1	741	0	1
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1643	11	1	805	0	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	79			816		
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1654		1920	827
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1349		1675	334
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			421		72	544

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1096	559	162	322	322	1
Volume Left	0	0	1	0	0	0
Volume Right	0	11	0	0	0	1
cSH	1700	1700	421	1700	1700	544
Volume to Capacity	0.64	0.33	0.00	0.19	0.19	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	11.6
Lane LOS			A			B
Approach Delay (s)	0.0		0.0			11.6
Approach LOS						B

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1510	3	1	742	0	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1641	3	1	807	0	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	161			734		
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			1645		1914	822
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1338		1668	330
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		100	97
cM capacity (veh/h)			426		72	534

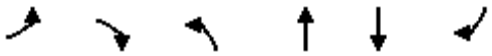
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1094	550	162	323	323	18
Volume Left	0	0	1	0	0	0
Volume Right	0	3	0	0	0	18
cSH	1700	1700	426	1700	1700	534
Volume to Capacity	0.64	0.32	0.00	0.19	0.19	0.03
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.1	0.0	0.0	12.0
Lane LOS			A			B
Approach Delay (s)	0.0		0.0			12.0
Approach LOS						B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	47	13	9	47	35	7	389	15	27	345	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	161	53	15	10	53	39	8	437	17	30	388	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											329	
pX, platoon unblocked	0.91	0.91	0.91	0.91	0.91		0.91					
vC, conflicting volume	970	921	390	951	915	446	393			454		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	916	862	278	895	856	446	281			454		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	10	80	98	95	80	94	99			97		
cM capacity (veh/h)	178	258	693	192	260	615	1174			1112		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	161	67	10	92	8	454	30	393
Volume Left	161	0	10	0	8	0	30	0
Volume Right	0	15	0	39	0	17	0	6
cSH	178	298	192	345	1174	1700	1112	1700
Volume to Capacity	0.90	0.23	0.05	0.27	0.01	0.27	0.03	0.23
Queue Length 95th (ft)	169	21	4	26	1	0	2	0
Control Delay (s)	97.0	20.6	24.8	19.2	8.1	0.0	8.3	0.0
Lane LOS	F	C	C	C	A		A	
Approach Delay (s)	74.4		19.8		0.1		0.6	
Approach LOS	F		C					

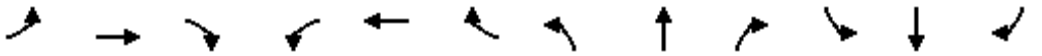
Intersection Summary				
Average Delay	15.9			
Intersection Capacity Utilization	43.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	570	382	270
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	633	424	300
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					226	
pX, platoon unblocked	0.85	0.85	0.85			
vC, conflicting volume	1058	424	424			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	980	236	236			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	238	688	1143			

Direction, Lane #	NB 1	SB 1	SB 2
Volume Total	633	424	300
Volume Left	0	0	0
Volume Right	0	0	300
cSH	1700	1700	1700
Volume to Capacity	0.37	0.25	0.18
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			
Approach Delay (s)	0.0	0.0	
Approach LOS			

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	680	15	276	306	170	31	119	419	439	361	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	13	13	12	13
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6	4.6	4.6	4.6	4.6
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1615	1805	3340		1805	1900	1652	3513	1881	1652
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1787	3574	1615	1805	3340		1805	1900	1652	3513	1881	1652
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	155	731	16	297	329	183	33	128	451	472	388	457
RTOR Reduction (vph)	0	0	4	0	53	0	0	0	46	0	0	341
Lane Group Flow (vph)	155	731	12	297	459	0	33	128	405	472	388	116
Heavy Vehicles (%)	1%	1%	0%	0%	3%	1%	0%	0%	1%	3%	1%	1%
Turn Type	Prot	NA	Perm	Prot	NA		Split	NA	pt+ov	Split	NA	Perm
Protected Phases	1	6		5	2		4	4	4 5	3	3	
Permitted Phases			6									3
Actuated Green, G (s)	13.9	35.4	35.4	21.4	42.9		25.5	25.5	51.5	34.3	34.3	34.3
Effective Green, g (s)	13.9	35.4	35.4	21.4	42.9		25.5	25.5	51.5	34.3	34.3	34.3
Actuated g/C Ratio	0.10	0.26	0.26	0.16	0.32		0.19	0.19	0.38	0.25	0.25	0.25
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6		4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	3.0	2.7	2.7	3.0	3.0		3.2	3.2		3.5	3.5	3.5
Lane Grp Cap (vph)	184	937	423	286	1061		341	359	630	893	478	420
v/s Ratio Prot	0.09	c0.20		c0.16	0.14		0.02	0.07	c0.25	0.13	c0.21	
v/s Ratio Perm			0.01									0.07
v/c Ratio	0.84	0.78	0.03	1.04	0.43		0.10	0.36	0.64	0.53	0.81	0.28
Uniform Delay, d1	59.5	46.2	37.0	56.8	36.4		45.2	47.6	34.2	43.4	47.3	40.4
Progression Factor	1.00	1.00	1.00	0.86	0.94		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	27.9	6.4	0.1	60.8	1.2		0.1	0.7	2.3	0.6	10.4	0.4
Delay (s)	87.4	52.6	37.1	109.5	35.4		45.4	48.3	36.5	44.0	57.7	40.8
Level of Service	F	D	D	F	D		D	D	D	D	E	D
Approach Delay (s)		58.3			62.6			39.5			46.9	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1502	36	0	753	0	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1633	39	0	818	0	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	228			667		
pX, platoon unblocked			0.81		0.81	0.81
vC, conflicting volume			1672		1925	836
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1361		1674	330
tC, single (s)			4.1		6.8	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			415		72	537

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	1088	583	273	273	273	37
Volume Left	0	0	0	0	0	0
Volume Right	0	39	0	0	0	37
cSH	1700	1700	1700	1700	1700	537
Volume to Capacity	0.64	0.34	0.16	0.16	0.16	0.07
Queue Length 95th (ft)	0	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	12.2
Lane LOS						B
Approach Delay (s)	0.0		0.0			12.2
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX I

Queue Calculations

SIGNALIZED QUEUING ANALYSIS - 2013 PRE-DEVELOPMENT CONDITIONS - WEEKDAY PM PEAK HOUR									
Intersection	Lane(s)	# Lanes	Lane Factor	Volume*	Cycle (s)	Green (s)	Queue (ft)	Available (ft)**	Queue> Avail?
Trosper Road / Tyee Drive / I-5 Southbound Ramps	EB LT	1	1	144	135.0	13.9	250	100	YES
	EB TH	2	1.05	666	135.0	35.3	475	400	YES
	EB RT	1	1	14	135.0	35.3	25	75	no
	WB LT	1	1	258	135.0	21.4	400	300	YES
	WB TH+ TH/RT	2	1.05	465	135.0	42.8	325	500+	no
	NB LT	1	1	12	135.0	25.6	25	95	no
	NB TH	1	1	117	135.0	25.6	175	105	YES
	NB RT	1	1	379	135.0	51.6	450	225	YES
	SB LT	2	1.05	435	135.0	34.3	325	400	no
	SB TH	1	1	361	135.0	34.3	500	400	YES
	SB RT	1	1	383	135.0	34.3	525	400	YES

** Volumes include a 10% right turn on red (RTOR) reduction for shared through/right lanes.*

*** Available storage lanes are measured for the length of the full-width lane; transitions (tapers) are not included.*

BOLD values either exceed available storage or, in thru lanes, extend into the influence area of the prior driveway/intersection.

SIGNALIZED QUEUING ANALYSIS - 2013 POST-DEVELOPMENT CONDITIONS - WEEKDAY PM PEAK HOUR									
Intersection	Lane(s)	# Lanes	Lane Factor	Volume*	Cycle (s)	Green (s)	Queue (ft)	Available (ft)**	Queue> Avail?
Trosper Road / Tyee Drive / I-5 Southbound Ramps	EB LT	1	1	144	135.0	13.9	250	100	YES
	EB TH	2	1.05	680	135.0	35.4	500	400	YES
	EB RT	1	1	14	135.0	35.4	25	75	no
	WB LT	1	1	276	135.0	21.4	425	300	YES
	WB TH+ TH/RT	2	1.05	459	135.0	42.9	300	500+	no
	NB LT	1	1	31	135.0	25.5	50	95	no
	NB TH	1	1	119	135.0	25.5	175	105	YES
	NB RT	1	1	419	135.0	51.5	475	225	YES
	SB LT	2	1.05	439	135.0	34.3	325	400	no
	SB TH	1	1	361	135.0	34.3	500	400	YES
	SB RT	1	1	383	135.0	34.3	525	400	YES

** Volumes include a 10% right turn on red (RTOR) reduction for shared through/right lanes.*

*** Available storage lanes are measured for the length of the full-width lane; transitions (tapers) are not included.*

BOLD values either exceed available storage or, in thru lanes, extend into the influence area of the prior driveway/intersection.

APPENDIX J

Mitigation Results

Intersection: 1: Tyee Drive & FM Fuel Access

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	346	325	34	145	27	197	40	85
Average Queue (ft)	124	70	9	59	2	25	12	9
95th Queue (ft)	298	224	31	126	13	108	36	56
Link Distance (ft)	577	577	309	309		774		51
Upstream Blk Time (%)							1	1
Queuing Penalty (veh)							0	6
Storage Bay Dist (ft)					50		50	
Storage Blk Time (%)						3	1	1
Queuing Penalty (veh)						0	3	0

Intersection: 1: Tyee Drive & FM Fuel Access

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	156	81	43	100	100	801	29	58
Average Queue (ft)	66	33	8	44	18	559	2	3
95th Queue (ft)	134	62	31	80	80	990	15	32
Link Distance (ft)	577	577	309	309		774		51
Upstream Blk Time (%)						33		1
Queuing Penalty (veh)						0		2
Storage Bay Dist (ft)					50		50	
Storage Blk Time (%)						89		1
Queuing Penalty (veh)						6		0

Intersection: 1: Tyee Drive & FM Fuel Access

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	LT	TR	LTR
Maximum Queue (ft)	127	61	34	105	100	435	76
Average Queue (ft)	52	30	8	42	53	133	5
95th Queue (ft)	100	55	29	79	106	353	37
Link Distance (ft)	583	583	302	302		775	50
Upstream Blk Time (%)							1
Queuing Penalty (veh)							4
Storage Bay Dist (ft)					50		
Storage Blk Time (%)					3	36	
Queuing Penalty (veh)					6	76	

1: Tyee Drive & FM Fuel Access Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	3.7	1.1	0.4	0.1	5.3
Total Del/Veh (s)	66.1	40.3	3.2	1.5	17.8
Speed Delay (hr)	3.7	1.1	0.3	0.1	5.2
Speed Del/Veh (s)	66.0	40.1	2.7	1.5	17.6
Total Stops	201	92	38	21	352
Stop/Veh	1.00	0.96	0.09	0.06	0.33
Avg Speed (mph)	4	4	22	16	10
Vehicles Entered	194	92	409	355	1050
Vehicles Exited	198	95	409	356	1058
Hourly Exit Rate	198	95	409	356	1058
Input Volume	203	92	411	382	1087
% of Volume	98	104	100	93	97

1: Tyee Drive & FM Fuel Access Performance by lane

Lane	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	TR	L	TR	L	TR	L	TR	
Total Delay (hr)	3.1	0.5	0.0	1.0	0.0	0.3	0.1	0.1	5.3
Speed Delay (hr)	3.1	0.5	0.0	1.0	0.0	0.3	0.1	0.1	5.2
Total Stops	132	69	10	82	2	36	14	8	352
Avg Speed (mph)	4	7	7	4	9	22	2	18	10
Vehicles Entered	0	0	0	0	0	0	0	356	1050
Vehicles Exited	140	59	10	86	7	402	24	333	1058
Hourly Exit Rate	140	59	10	86	7	402	24	333	1058

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.2	0.4	0.1	0.0	0.6	0.4	0.0	0.3	0.0	0.1	0.1	0.0
Total Del/Veh (s)	81.7	31.7	18.4	16.5	49.0	35.8	7.9	3.1	2.5	10.4	0.8	1.6
Speed Delay (hr)	3.2	0.4	0.1	0.0	0.6	0.4	0.0	0.3	0.0	0.1	0.1	0.0
Speed Del/Veh (s)	81.5	31.6	18.3	16.4	48.9	35.6	4.3	2.7	2.0	10.4	0.8	1.6
Total Stops	139	49	13	10	44	38	3	34	1	16	5	0
Stop/Veh	0.99	1.04	1.08	1.00	0.94	0.97	0.43	0.09	0.07	0.67	0.02	0.00
Avg Speed (mph)	4	7	9	7	3	4	20	22	21	5	19	11
Vehicles Entered	136	46	12	10	44	38	7	387	15	24	327	4
Vehicles Exited	140	46	12	10	46	39	7	387	15	24	328	4
Hourly Exit Rate	140	46	12	10	46	39	7	387	15	24	328	4
Input Volume	143	47	13	9	47	35	7	389	15	27	350	5
% of Volume	98	98	94	108	98	111	97	99	102	89	94	76

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	All
Total Delay (hr)	5.3
Total Del/Veh (s)	17.8
Speed Delay (hr)	5.2
Speed Del/Veh (s)	17.6
Total Stops	352
Stop/Veh	0.33
Avg Speed (mph)	10
Vehicles Entered	1050
Vehicles Exited	1058
Hourly Exit Rate	1058
Input Volume	1087
% of Volume	97

1: Tyee Drive & FM Fuel Access Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	1.3	0.4	23.8	0.1	25.5
Total Del/Veh (s)	21.8	17.7	201.0	0.6	86.6
Speed Delay (hr)	1.2	0.4	18.8	0.1	20.5
Speed Del/Veh (s)	21.7	17.6	159.1	0.6	69.7
Total Stops	204	87	642	6	939
Stop/Veh	0.99	1.00	1.51	0.02	0.89
Avg Speed (mph)	8	7	3	20	4
Vehicles Entered	204	86	411	341	1042
Vehicles Exited	206	88	411	341	1046
Hourly Exit Rate	206	88	411	341	1046
Input Volume	203	92	411	382	1087
% of Volume	102	96	100	89	96

1: Tyee Drive & FM Fuel Access Performance by lane

Lane	EB	EB	WB	WB	NB	NB	SB	SB	All
Movements Served	L	TR	L	TR	L	TR	L	TR	
Total Delay (hr)	1.1	0.2	0.0	0.4	0.0	18.8	0.0	0.0	25.5
Speed Delay (hr)	1.1	0.2	0.0	0.4	0.0	18.8	0.0	0.0	20.5
Total Stops	139	65	10	78	7	635	3	3	939
Avg Speed (mph)	7	11	9	6	5	3	11	21	4
Vehicles Entered	0	0	0	0	0	0	0	341	1042
Vehicles Exited	141	65	10	79	7	404	25	316	1046
Hourly Exit Rate	141	65	10	79	7	404	25	316	1046

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.1	0.2	0.0	0.0	0.2	0.2	0.4	22.5	0.9	0.0	0.0	0.0
Total Del/Veh (s)	27.1	11.7	6.4	9.6	17.1	19.4	193.4	201.4	206.7	1.0	0.5	-0.1
Speed Delay (hr)	1.1	0.2	0.0	0.0	0.2	0.2	0.3	17.8	0.7	0.0	0.0	0.0
Speed Del/Veh (s)	26.9	11.5	6.2	9.6	17.0	19.3	160.4	159.3	161.2	1.0	0.5	-0.1
Total Stops	139	48	17	10	45	32	18	599	25	3	3	0
Stop/Veh	0.98	1.00	1.00	1.00	0.98	0.94	2.57	1.49	1.56	0.12	0.01	0.00
Avg Speed (mph)	7	10	12	9	7	6	3	3	3	15	21	15
Vehicles Entered	140	47	17	9	45	32	7	388	16	25	312	4
Vehicles Exited	141	48	17	10	45	33	7	388	16	25	312	4
Hourly Exit Rate	141	48	17	10	45	33	7	388	16	25	312	4
Input Volume	143	47	13	9	47	35	7	389	15	27	350	5
% of Volume	99	102	133	108	96	94	97	100	108	93	89	76

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	All
Total Delay (hr)	25.5
Total Del/Veh (s)	86.6
Speed Delay (hr)	20.5
Speed Del/Veh (s)	69.7
Total Stops	939
Stop/Veh	0.89
Avg Speed (mph)	4
Vehicles Entered	1042
Vehicles Exited	1046
Hourly Exit Rate	1046
Input Volume	1087
% of Volume	96

1: Tyee Drive & FM Fuel Access Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.7	0.3	3.2	0.1	4.4
Total Del/Veh (s)	13.4	12.1	27.7	0.7	14.9
Speed Delay (hr)	0.7	0.3	3.0	0.1	4.1
Speed Del/Veh (s)	13.2	12.0	25.7	0.7	14.0
Total Stops	196	96	462	4	758
Stop/Veh	0.99	0.98	1.10	0.01	0.72
Avg Speed (mph)	10	8	11	19	11
Vehicles Entered	195	96	411	339	1041
Vehicles Exited	197	98	417	340	1052
Hourly Exit Rate	197	98	417	340	1052
Input Volume	203	92	411	382	1087
% of Volume	97	107	101	89	97

1: Tyee Drive & FM Fuel Access Performance by lane

Lane	EB	EB	WB	WB	NB	NB	SB	All
Movements Served	L	TR	L	TR	LT	TR	LTR	
Total Delay (hr)	0.6	0.1	0.0	0.3	0.2	2.8	0.1	4.4
Speed Delay (hr)	0.6	0.1	0.0	0.3	0.2	2.8	0.1	4.1
Total Stops	137	59	9	87	113	350	5	758
Avg Speed (mph)	9	11	10	8	6	11	19	11
Vehicles Entered	0	0	0	0	0	0	339	1041
Vehicles Exited	138	59	9	88	111	305	340	1052
Hourly Exit Rate	138	59	9	88	111	305	340	1052

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.6	0.1	0.0	0.0	0.2	0.1	0.0	3.1	0.1	0.0	0.1	0.0
Total Del/Veh (s)	15.5	9.0	6.0	7.3	13.8	10.9	24.5	28.0	22.7	0.9	0.7	-0.1
Speed Delay (hr)	0.6	0.1	0.0	0.0	0.2	0.1	0.0	2.9	0.1	0.0	0.1	0.0
Speed Del/Veh (s)	15.3	8.9	5.9	7.2	13.7	10.8	20.5	26.0	21.5	0.9	0.7	-0.1
Total Stops	137	46	13	9	50	37	9	437	16	1	3	0
Stop/Veh	0.99	1.00	1.00	1.00	0.98	0.97	1.29	1.10	1.07	0.04	0.01	0.00
Avg Speed (mph)	9	11	12	10	7	8	12	11	12	15	20	15
Vehicles Entered	136	46	13	9	50	37	7	389	15	28	306	5
Vehicles Exited	138	46	13	9	51	38	7	395	15	28	307	5
Hourly Exit Rate	138	46	13	9	51	38	7	395	15	28	307	5
Input Volume	143	47	13	9	47	35	7	389	15	27	350	5
% of Volume	97	98	102	97	109	108	97	102	102	104	88	95

1: Tyee Drive & FM Fuel Access Performance by movement

Movement	All
Total Delay (hr)	4.4
Total Del/Veh (s)	14.9
Speed Delay (hr)	4.1
Speed Del/Veh (s)	14.0
Total Stops	758
Stop/Veh	0.72
Avg Speed (mph)	11
Vehicles Entered	1041
Vehicles Exited	1052
Hourly Exit Rate	1052
Input Volume	1087
% of Volume	97

APPENDIX K

Scoping

David Holt

From: Matt Webb [MWEBB@ci.tumwater.wa.us]
Sent: Thursday, May 24, 2012 4:47 PM
To: David Holt
Subject: Re: Fwd: Fred Meyer Fuel: Growth Rate

>>> Jay Eaton 5/24/2012 4:42 PM >>>
The 2% is acceptable.

>>> On 5/24/2012 at 4:20 PM, in message <4FBEC22A.771 : 117 : 7076>, Matt Webb wrote:

>>> David Holt <DHolt@grpmack.com> 5/24/2012 2:46 PM >>>
Hi Matt,

Today's question regarding the proposed Fred Meyer fuel facility at the Trosper Road/Tyee Drive intersection addresses traffic growth. The WSDOT 2011 Annual Traffic Report shows increases from 2008 to 2011 of 1% to 2% at nearby locations along Interstate 5; the average is 0.5% per year.

We propose to apply a 2.0% growth rate for one year --- anticipating the Fred Meyer Fuel opening in the next 12 months --- to the existing traffic. Since the WalMart was open at the time of the traffic counts (May 8th), 2.0% should more than cover both general background growth and any pipeline trips from developments already approved but not yet occupied.

Please confirm this 2.0% growth rate will be acceptable. Thanks very much for your time.

David Holt, P.E.
Transportation/Civil Project Engineer

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David Holt

From: David Holt
Sent: Wednesday, May 23, 2012 2:57 PM
To: Matt Webb
Cc: Brent Ahrend
Subject: RE: Fred Meyer Tumwater Fuel - Trips
Attachments: Trip Generation Estimate (PM).pdf; Trip Assignments (Prelim).pdf; Site Plan with Existing Demo.pdf

Thanks very much, Matt (and Jay).

We anticipated analyzing the net increase of the Fred Meyer Fuel trips over the counted 76 Fuel trips; the updated trip accounting is attached. We expected to provide thorough documentation of the unique trip generation, trip types, and trip distribution patterns, so these comments are as expected as well. The updated total trip assignment sheet is attached; the detailed assignments of shared trips, pass-by+diverted trips, and primary trips will be provided with the analysis.

The proposed site plan includes a single right-in/right-out driveway on Trosper Road and a single full-movement driveway on Tyee Drive aligned with the Fred Meyer Store exit, and these modifications are consistent with the concern over consolidating or restricting driveways. The current site plan is attached for reference.

So just to be clear: our analysis will address traffic conditions at the site driveways and the Trosper Road/Tyee Drive/I-5 Southbound Ramps intersection (the adjacent intersection). The Fred Meyer Fuel trips are anticipated to add no more than 20 trips to other intersections, well below the thresholds noted in Tumwater Municipal Code 15.48.60, so no other intersections will be included in the analysis.

Thank you again for your quick reply. We will be in contact again soon.

David Holt

From: Matt Webb [mailto:MWEBB@ci.tumwater.wa.us]
Sent: Wednesday, May 23, 2012 2:31 PM
To: David Holt
Cc: Brent Ahrend
Subject: Fwd: RE: Fred Meyer Tumwater Fuel - Trips

Hi David. Here are the comments.

Matt

>>> Jay Eaton 5/23/2012 9:31 AM >>>
Matt

The data from the existing Circle K is what I had expected. What this means, is that the ADDITIONAL trips at the driveways will be significantly greater than what was originally discussed. This is important when assessing existing intersection/driveway operations and comparing them to future operations with the project.

The survey information seems to be (unless I'm reading it wrong) indicating that virtually all of the trips to the surveyed Fred Meyer gas locations used a Fred Meyer Rewards card. In as much as the counts to/from the existing Circle K include almost no Fred Meyer traffic, I would infer that any Fred Meyer trips (primary, pass-by, or diverted) would be additive to the existing traffic at the Circle K. This seems logical due to the location of the facility at the junction of a ramp terminal from I-5 as well as it's location on a Major arterial with 1500 to 2000 vehicles per hour in the pm peak.

It also seems logical that by virtue of being located on the I-5 ramp the gas facility would be very likely to draw "out of area" Fred Meyer customers from the I-5 corridor as a diverted trip from I-5 (which is a new trip to the local system).

In summary, the *unique* location of the proposed facility requires that there are additional influences that need to be considered. The trip generation for the proposed facility needs to include and discuss:

1. Typical LOCAL Fred Meyer Gas Station trip generation.
2. Non Fred Meyer Store trip generation (similar to what the Circle K currently generates).
3. Fred Meyer Gas Station OUT OF AREA trips (FM patrons diverted from I-5).

The total trips as well as the shared trip and primary trip percentages could be significantly impacted by the above.

The consultant needs to include analysis and discussion of the above in their work in regards to the trip generation and total traffic volumes to be used in the analysis.

The *expanded* use of this site is (very) likely to result in the elimination/restriction of one or more of the existing driveways. Operational analysis of the driveways and adjacent intersections will ultimately need to include driveway trip assignments based on reduced/modified access points.

Jay

>>> On 5/22/2012 at 3:34 PM, in message <4FBC1468.73D : 117 : 7076>, Matt Webb wrote:

>>> David Holt <DHolt@grpmack.com> 5/22/2012 10:12 AM >>>
Hi Matt,

Linked below are the driveway counts for the existing 76/Circle K establishment. With 67 total trips during the weekday PM peak hour, these data are much lower than ITE would predict for a similar facility (8 fueling positions + 1,736 SF convenience market), no matter which ITE land use (853 or 945) is used or which unit (VFP or KSF) is used as the trip basis.

Also linked below is the recent survey of Fred Meyer fuel facilities in Gresham and Sandy, Oregon. The average results show (of the total trips):
> 38% shared trips with the Fred Meyer store
> 30% pass-by trips
> 20% diverted linked trips
> 12% primary trips
We propose to apply these trip type percentages to the proposed Fred Meyer fuel facility development in Tumwater.

Click on the link below to access the files that have been referred to you:
http://www.grpmack.org/dl/dl.php?id=WbWLk9JOFEd735KlmdBm
*The files will be available until August 20th, 2012.

Our client has asked us to submit an application as soon as possible, so please complete your review of the traffic study scope at your earliest opportunity. Thank you for your time.
Sincerely,

David Holt, P.E.
Transportation/Civil Project Engineer

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Civil Engineering | Landscape Architecture | Land Use Planning | Transportation Planning

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From: Matt Webb [mailto:MWEBB@ci.tumwater.wa.us]
Sent: Tuesday, May 01, 2012 4:02 PM
To: David Holt
Cc: Brent Ahrend
Subject: Re: Fred Meyer Tumwater Fuel - Trips

Hi David. Sorry for the long delay. Can you provide us with the existing driveway counts for the 76/Circle K and get us copies of the data from recent surveys of other Fred Meyer fuel locations.

Thanks,

Matt

>>> David Holt <DHolt@grpmack.com> 4/18/2012 3:22 PM >>>
Hi Matt,

Following upon our phone message this afternoon, attached are the numbers and estimates we'd like to discuss with you. The trip generation estimate includes the following assumptions:

- 5% of the trips currently at the 76/Circle-K are traveling to/from the Fred Meyer store. These are labeled "internal trips."
- 38% of the trips at the proposed Fred Meyer Fuel will travel directly to/from the Fred Meyer store. This value, like the 50% pass-by+diverted linked and the 12% primary rates, is based on recent surveys we've conducted at similar Fred Meyer Fuel locations.
- You'll see that we're modeling the pass-by and diverted linked trips together, an approach we've often used for sites such as this one where several high-volume roadways are located nearby.
- The trip assignments address only the net increases in site trips (internal + primary). The decrease in pass-by+diverted linked trips is ignored for a conservative estimate.

Ultimately the new Fred Meyer Fuel facility is anticipated to add 79 peak hour trips at the relocated driveways to Tyee Drive. Fewer than 5 peak hour trips will be added at the nearby intersections along Trosper Road. Based on this information, we'd like to discuss the scope of the traffic analysis required for the project. We look forward to hearing from you.

Sincerely,

David Holt, P.E.
Transportation/Civil Project Engineer

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ITE TRIP GENERATION RATES -- PROPOSED USE

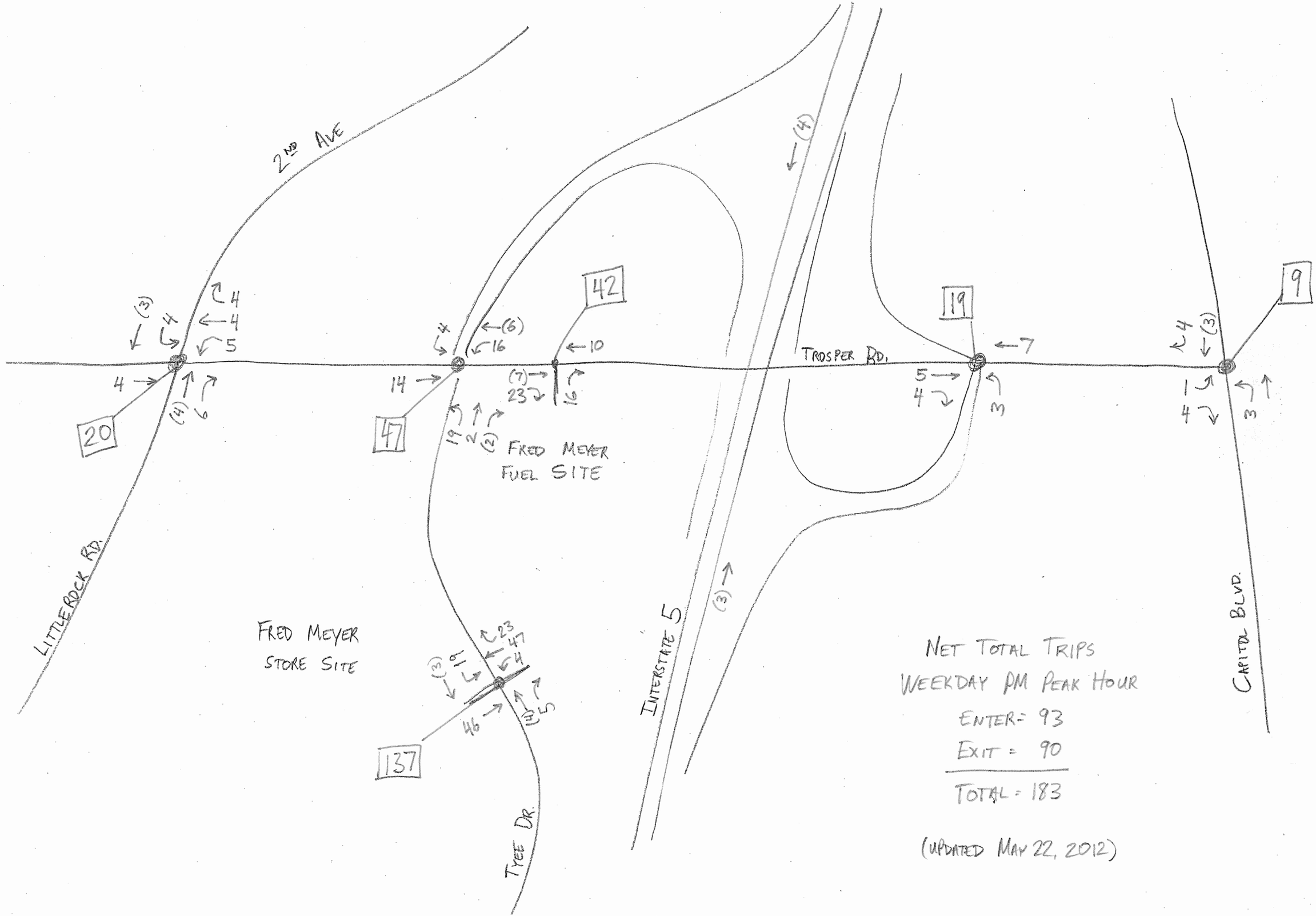
ITE Ed.	ITE CODE	LAND USE	VAR	UNITS	**PM Total**	PM Enter	PM Exit
8	944	Gasoline/Service Station	VFP	18	**250**	125	125
		Internal		*38%*	***94***	*47*	*46*
		Pass-By + Diverted Linked		*50%*	***125***	*62*	*63*
		Primary		12%	**31**	16	16

ITE TRIP GENERATION RATES -- EXISTING USE

ITE Ed.	ITE CODE	LAND USE	VAR	UNITS	**PM Total**	PM Enter	PM Exit
8	853	Convenience Market with Gas Pumps	VFP	8	**153**	76	77
		Internal		*5%*	***8***	*4*	*4*
		Pass-By + Diverted Linked		*80%*	***122***	*61*	*61*
		Primary		15%	**23**	11	12

NET TRIPS = (PROPOSED TRIPS) - (EXISTING TRIPS)

ITE Ed.	ITE CODE	LAND USE	VAR	UNITS	**PM Total**	PM Enter	PM Exit
		Total Trips			**97**	49	48
		Internal			***86***	*43*	*42*
		Pass-By + Diverted Linked			***3***	*1*	*2*
		Primary			**8**	5	4



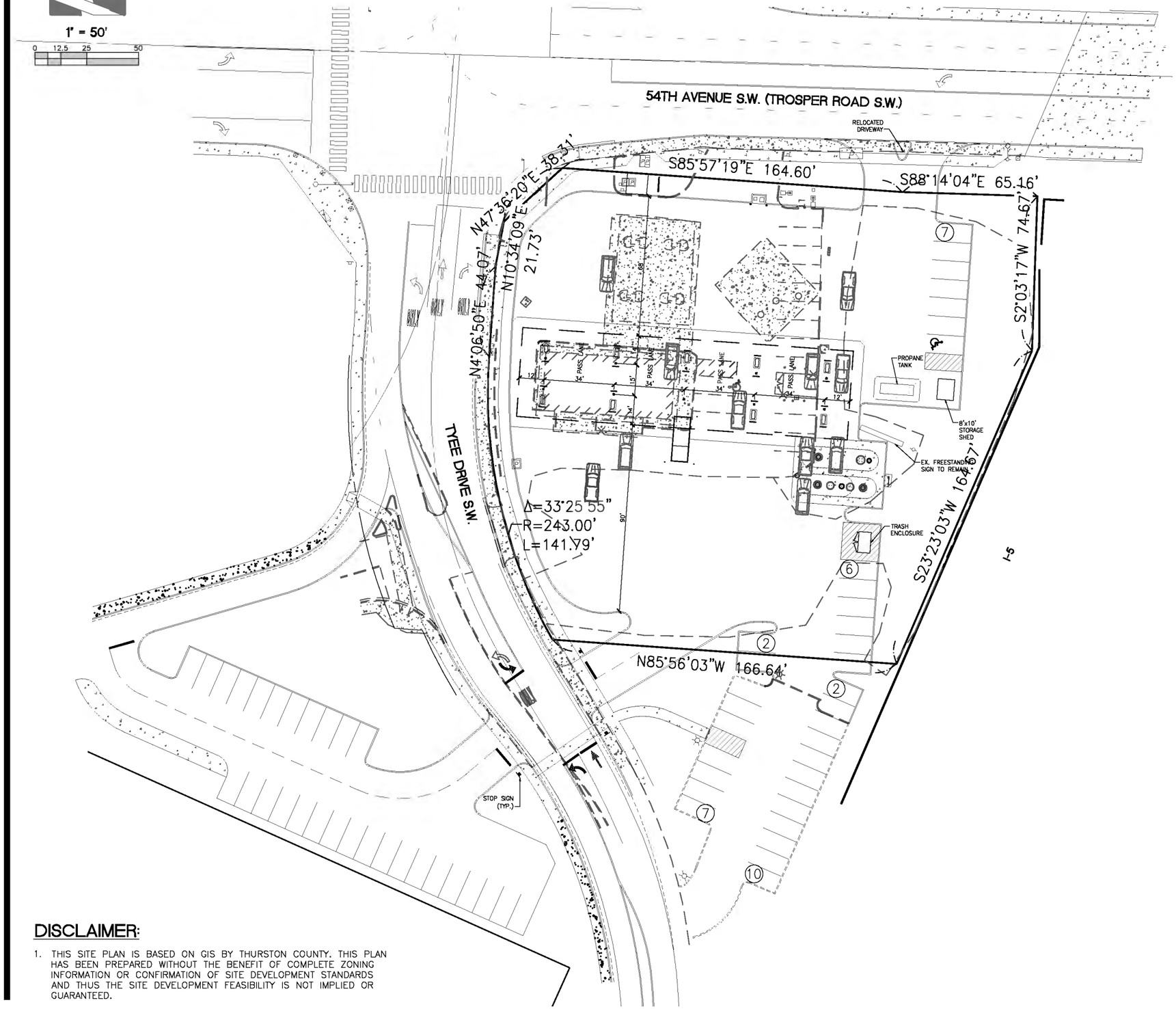
NET TOTAL TRIPS
WEEKDAY PM PEAK HOUR
ENTER= 93
EXIT = 90
TOTAL = 183

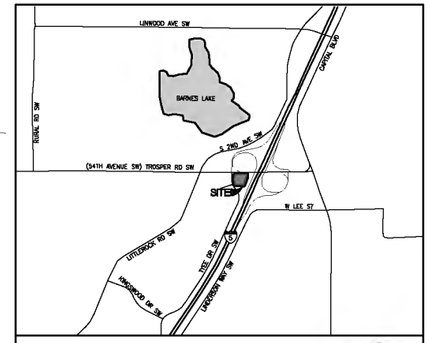
(UPDATED MAY 22, 2012)

OVERALL SITE PLAN

1" = 50'

0 12.5 25 50





VICINITY MAP N.T.S.

DISCLAIMER:

1. THIS SITE PLAN IS BASED ON GIS BY THURSTON COUNTY. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF COMPLETE ZONING INFORMATION OR CONFIRMATION OF SITE DEVELOPMENT STANDARDS AND THUS THE SITE DEVELOPMENT FEASIBILITY IS NOT IMPLIED OR GUARANTEED.

Fred Meyer
STORE #00--
TUMWATER
501 TROSPER ROAD S.W.
TUMWATER, WA

THE KROGER CO.
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FRED MEYER
FUELING
FACILITY
501 TROSPER ROAD S.W.
TUMWATER, WA

△	DATE	DESCRIPTION
-	-	-

PLOTTED ON: May 04, 2012 - 8:20am BY: JSteffanick

BCE #15204
PM: CHRIS FERKO
DATE: 4/18/11

OVERALL SITE PLAN

File: P:\15000s\15204\preliminary\Option 9\15204-pp.dwg Date/Time:5/3/2012 5:00 PM Scale:1"=0" = 1'-0" XREF JSTEFFANICK Xref: