

Segment SimTraffic Results
 SAMP Environmental Review - Surface Transportation Analysis
 Concord Engineering
 5/25/2023

			2022 Updated				Comments	
			EB	WB	NB	SB		
Segment 1 - 24th Ave S	15	24th Ave S & S 142nd St	Veh entered model	111	57	297	295	Vehicles entered calibration values acceptable though EB high. No queuing concerns.
			Veh entered sim	145	58	312	298	
			Difference	1.31	1.02	1.05	1.01	
			Queue model (95th)	0	0	0	0	
			Queue sim (95th)	62	46	72	76	
			Difference	N/A	N/A	N/A	N/A	
			Delay model	10.1	9.3	12.4	12.3	
			Delay sim	4.3	4.7	6.3	6.5	
	Difference	0.43	0.51	0.51	0.53			
	16	24th Ave S & S 144th St	Veh entered model		110	256	283	Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim		115	260	295	
			Difference		1.05	1.02	1.04	
			Queue model (95th)		18	0	4	
			Queue sim (95th)		65	3	51	
			Difference		3.61	N/A	12.75	
			Delay model		12.3	0.0	2.1	
			Delay sim		6.4	1.0	3.2	
	Difference		0.52	N/A	1.52			
	17	24th Ave S & S 146th St	Veh entered model	131	30	337	265	Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim	135	31	345	269	
			Difference	1.03	1.03	1.02	1.02	
			Queue model (95th)	16	7	5	1	
			Queue sim (95th)	62	47	44	17	
			Difference	3.88	6.71	8.80	17.00	
			Delay model	11.4	16.7	2.0	0.3	
			Delay sim	5.3	7.3	1.1	0.9	
	Difference	0.46	0.44	0.55	3.00			
	25	24th Ave S & SeaTac Airport Parking/ S 150th St	Veh entered model	7	32	345	323	Vehicles entered calibration values acceptable. No queuing concerns.
Veh entered sim			7	32	351	327		
Difference			1.00	1.00	1.02	1.01		
Queue model (95th)			1	6	1	1		
Queue sim (95th)			48	47	15	23		
Difference			48.00	7.83	15.00	23.00		
Delay model			11.9	13.8	0.2	0.4		
Delay sim			5.3	6.0	0.6	0.3		
Difference	0.45	0.43	3.00	0.75				
26	24th Ave S & S 152nd St	Veh entered model		44	337	332	Vehicles entered calibration values acceptable. No queuing concerns.	
		Veh entered sim		44	347	327		
		Difference		1.00	1.03	0.98		
		Queue model (95th)		7	0	1		
		Queue sim (95th)		51	0	33		
		Difference		7.29	N/A	33.00		
		Delay model		12.2	0.0	0.5		
		Delay sim		5.8	1.7	0.6		
Difference		0.48	N/A	1.20				
27	Air Cargo Rd/ 24th Ave S & S 154th St	Veh entered model	406	471	228	331	Vehicles entered calibration values acceptable. WB queue may spillback to within the vicinity of the EB SR 518 off ramp stop line.	
		Veh entered sim	418	465	228	330		
		Difference	1.03	0.99	1.00	1.00		
		Queue model (95th)	191	199	60	63		
		Queue sim (95th)	156	149	80	94		
		Difference	0.82	0.75	1.33	1.49		
		Delay model	10.4	10.6	9.4	9.6		
		Delay sim	13.3	12.5	14.5	11.4		
Difference	1.28	1.18	1.54	1.19				
97	24th Ave S & S 148th St	Veh entered model		26	332	328	Vehicles entered calibration values acceptable. No queuing concerns.	
		Veh entered sim		27	348	376		
		Difference		1.04	1.05	1.15		
		Queue model (95th)		5	0	1		
		Queue sim (95th)		46	8	25		
		Difference		9.20	N/A	25.00		
Delay model		12.8	0.0	0.4				
Delay sim		5.9	0.6	0.5				

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			EB	WB	NB	SB		
Segment 2 - SW 148th St/SR 518	20	SW 148th St/SR 518 @ 1st Ave S	Difference		0.46	N/A	1.25	All four approach queues will exceed the left turn storage length. WB queue will not exceed distance between intersections. SimTraffic reporting greater delay for SB approach due to left turn movement being over capacity. Vehicles entered values calibrated acceptably.
			Veh entered model	717	1215	806	923	
			Veh entered sim	709	1090	807	923	
			Difference	0.99	0.90	1.00	1.00	
			Queue model (95th)	332	350	195	168	
			Queue sim (95th)	333	292	227	371	
			Difference	1.00	0.83	1.16	2.21	
			Delay model	55.9	62.1	33.3	44.0	
	Delay sim	49.2	45.7	39.6	64.4			
	Difference	0.88	0.74	1.19	1.46			
	21	SR 518 & SR 509 SB Ramps	Veh entered model	1194	1412		1066	EB and WB queues will not exceed distance to upstream intersection. SimTraffic reporting greater delay for SB approach due to it being over capacity. Vehicles entered calibrated on other approaches acceptably.
			Veh entered sim	1207	1269		864	
			Difference	1.01	0.90		0.81	
			Queue model (95th)	353	253		752	
			Queue sim (95th)	308	284		768	
			Difference	0.87	1.12		1.02	
			Delay model	27.7	27.3		113.1	
	Delay sim	24.5	29.1		192.7			
	Difference	0.88	1.07		1.70			
	22	SR 518 & SR 509 NB Ramps	Veh entered model	1940	2356	393		EB and WB queues will not exceed distance to upstream intersection. SimTraffic shows better EB progression than Synchro, thus lower EB queue. WB approach vehicles entered slightly below calibration target, other approaches acceptable.
			Veh entered sim	1777	2076	399		
Difference			0.92	0.88	1.02			
Queue model (95th)			3	242	143			
Queue sim (95th)			205	168	159			
Difference			68.33	0.69	1.11			
Delay model			3.7	4.2	16.0			
Delay sim			9.4	20.4	16.5			
Difference	2.54	4.86	1.03					
Segment 3 - DMMD	23	DMMD & SR 518 EB Ramps	Veh entered model	39		473	708	SBL queue does not exceed storage, EB off ramp queue does not exceed storage. Vehicles entered calibration values acceptable.
			Veh entered sim	39		466	739	
			Difference	1.00		0.99	1.04	
			Queue model (95th)	29		0	16	
			Queue sim (95th)	47		2	63	
			Difference	1.62		N/A	3.94	
			Delay model	42.8		0.0	2.6	
			Delay sim	10.6		4.3	2.0	
	Difference	0.25		N/A	0.77			
	24	DMMD & SR 518 WB Off Ramp	Veh entered model		586	214	431	Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim		591	220	441	
			Difference		1.01	1.03	1.02	
			Queue model (95th)		148	0	0	
			Queue sim (95th)		252	5	8	
Difference				1.70	N/A	N/A		
Delay model		21.6	0.0	0.0				
Delay sim		16.8	2.0	1.1				
Difference		0.78	N/A	N/A				
Segment 4 - S 154th St	27	24th Ave S / Air Cargo Rd & S 154th St	Veh entered model	406	471	228	331	Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim	404	472	234	326	
			Difference	1.00	1.00	1.03	0.98	
			Queue model (95th)	191	199	60	63	
			Queue sim (95th)	166	161	79	130	
			Difference	0.87	0.81	1.32	2.06	
			Delay model	10.4	10.6	9.4	9.6	
	Delay sim	14.1	15.0	14.2	13.4			
	Difference	1.36	1.42	1.51	1.40			
	28	EB SR 518 Off Ramp & S 152nd St	Veh entered model	281	331		355	Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim	287	338		347	
			Difference	1.02	1.02		0.98	
			Queue model (95th)	0	0		125	
			Queue sim (95th)	0	6		83	
Difference			N/A	N/A		0.66		
Delay model			0.0	0.0		18.4		

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Segment	Location	Model	2022 Updated				Comments	
			EB	WB	NB	SB		
Segment 5 - Int Blvd		Delay sim	2.3	2.8		10.3		
		Difference	N/A	N/A		0.56		
	29	WB SR 518 On Ramp & S 152nd St	Veh entered model	496	611			Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim	496	611			
			Difference	1.00	1.00			
			Queue model (95th)	0	0			
			Queue sim (95th)	0	0			
			Difference	N/A	N/A			
			Delay model	0.0	0.0			
			Delay sim	0.6	4.4			
	Difference	N/A	N/A					
	35	SR 99 & S 152nd St	Veh entered model	275	111	753	702	Vehicles entered calibration values acceptable. No queuing concerns. Note HCM 2000 may be exaggerating right turn delay for some locations.
			Veh entered sim	265	108	810	690	
			Difference	0.96	0.97	1.08	0.98	
			Queue model (95th)	85	108	268	327	
			Queue sim (95th)	125	90	193	190	
			Difference	1.47	0.83	0.72	0.58	
			Delay model	35.2	32.9	17.7	25.9	
Delay sim			16.6	24.4	16.7	21.7		
Difference			0.47	0.74	0.94	0.84		
36			SR 99 & Military Rd S	Veh entered model				
	Veh entered sim							
	Difference							
	Queue model (95th)							
	Queue sim (95th)							
	Difference							
	Delay model							
	Delay sim							
Difference								
37	SR 99 & S 154th St	Veh entered model	701	498	726	883	Vehicles entered calibration values acceptable. EB and WB left turns have slight blockages.	
		Veh entered sim	690	496	755	880		
		Difference	0.98	1.00	1.04	1.00		
		Queue model (95th)	308	201	299	424		
		Queue sim (95th)	293	226	210	346		
		Difference	0.95	1.12	0.70	0.82		
		Delay model	38.0	45.0	34.2	39.4		
		Delay sim	41.8	50.9	35.5	43.6		
		Difference	1.10	1.13	1.04	1.11		
		39	SR 99 & SR 518 EB On-Ramp	Veh entered model				1081
Veh entered sim					1100	1602		
Difference					1.02	1.01		
Queue model (95th)					223	297		
Queue sim (95th)					120	197		
Difference					0.54	0.66		
Delay model					14.1	8.0		
Delay sim					9.0	9.1		
Difference			0.64	1.14				
Segment 6 - 51st Ave	41	WB SR 518 On Ramp & 51st Ave S	Veh entered model			853	269	Vehicles entered calibration values acceptable. No queuing concerns. SimTraffic NB queue considerably longer than Synchro.
			Veh entered sim			820	269	
			Difference			0.96	1.00	
			Queue model (95th)			72	0	
			Queue sim (95th)			263	14	
			Difference			3.65	N/A	
			Delay model			9.4	0.0	
			Delay sim			10.2	0.6	
	Difference			1.09	N/A			
	42	EB SR 518 Off Ramp & 51st Ave S	Veh entered model	664		799	217	Vehicles entered calibration values acceptable. No queuing concerns. Note HCM 2000 may be exaggerating right turn delay for some locations.
			Veh entered sim	662		798	222	
			Difference	1.00		1.00	1.02	
			Queue model (95th)	192		0	0	
			Queue sim (95th)	72		25	0	
Difference			0.38		N/A	N/A		

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				EB	WB	NB	SB	
Segment 7 - SW 160th St			Delay model	22.5		0.0	0.0	
			Delay sim	4.2		0.9	0.1	
			Difference	0.19		N/A	N/A	
	49	1st Ave S & S 160th St	Veh entered model	664	865	859	931	Vehicles entered calibration values acceptable. Diagonal legs included in NB and SB approaches. WB queue likely blocking upstream intersection, SB and EB queues exceed left turn storage. EB and SB queue delay increased compared to HCM 2000.
			Veh entered sim	660	891	834	922	
			Difference	0.99	1.03	0.97	0.99	
			Queue model (95th)	283	316	289	403	
			Queue sim (95th)	580	371	257	414	
			Difference	2.05	1.17	0.89	1.03	
			Delay model	59.1	53.5	44.7	45.0	
			Delay sim	82.4	49.4	47.8	63.8	
			Difference	1.39	0.92	1.07	1.42	
	50	SR 509 SB Ramps & S 160th St	Veh entered model	819	361		756	Vehicles entered calibration values acceptable. No queuing concerns. Both SimTraffic and HCM 2000 are exaggerating delay for SBR movement, which is free-flow.
			Veh entered sim	813	368		758	
			Difference	0.99	1.02		1.00	
			Queue model (95th)	0	1		574	
			Queue sim (95th)	71	26		127	
			Difference	N/A	26.00		0.22	
			Delay model	0.0	0.4		96.2	
			Delay sim	6.1	1.7		7.0	
	Difference	N/A	4.25		0.07			
	51	SR 509 NB Ramps & S 160th St	Veh entered model	671	191	249	6	Vehicles entered calibration values acceptable. No queuing concerns. Note HCM 2000 may be exaggerating right turn delay for some locations.
			Veh entered sim	661	196	251	5	
			Difference	0.99	1.03	1.01	0.83	
Queue model (95th)			1	1	62	1		
Queue sim (95th)			13	16	57	22		
Difference			13.00	16.00	0.92	22.00		
Delay model			0.1	1.0	17.8	10.2		
Delay sim			1.9	0.8	9.3	5.5		
Difference	19.00	0.80	0.52	0.54				
52	DMMD & S 160th St	Veh entered model	272	4	294	570	Vehicles entered calibration values acceptable. No queuing concerns.	
		Veh entered sim	279	3	290	586		
		Difference	1.03	0.75	0.99	1.03		
		Queue model (95th)	129	5	100	269		
		Queue sim (95th)	123	15	72	172		
		Difference	0.95	3.00	0.72	0.64		
		Delay model	16.7	12.4	5.6	9.1		
		Delay sim	11.5	7.6	6.8	10.6		
Difference	0.69	0.61	1.21	1.16				
AE Ramps-Int Blvd	63	NB NAE Off-Ramp & S 170th St	Veh entered model	442	310	552		Vehicles entered calibration values acceptable. No queuing concerns.
			Veh entered sim	432	369	546		
			Difference	0.98	1.19	0.99		
			Queue model (95th)	71	0	83		
			Queue sim (95th)	80	42	163		
			Difference	1.13	N/A	1.96		
			Delay model	8.3	0.1	8.7		
			Delay sim	7.7	3.6	8.4		
	Difference	0.93	36.00	0.97				
	64	International Blvd/Pacific Hwy & S 170th St	Veh entered model	783	236	780	912	Vehicles entered calibration values acceptable. Minor spillback on EB approach to #63 and SB left turn may be blocked.
			Veh entered sim	792	238	794	902	
			Difference	1.01	1.01	1.02	0.99	
			Queue model (95th)	263	186	390	540	
			Queue sim (95th)	299	203	404	517	
			Difference	1.14	1.09	1.04	0.96	
			Delay model	57.6	59.6	43.4	59.9	
	Delay sim	32.4	37.1	47.7	65.1			
	Difference	0.56	0.62	1.10	1.09			
	65	International Blvd & S 176th St	Veh entered model		379	741	1078	Vehicles entered calibration values acceptable. No queuing concerns. Northbound progression better in SimTraffic than in Synchro resulting in lower delay.
			Veh entered sim		380	748	1061	
			Difference		1.00	1.01	0.98	
			Queue model (95th)		110	341	117	
			Queue sim (95th)		181	241	208	

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			EB	WB	NB	SB		
Segment 8 - N		& S 170th St	Difference		1.65	0.71	1.78	
			Delay model		45.6	58.8	3.5	
			Delay sim		30.2	15.0	13.4	
			Difference		0.66	0.26	3.83	
	66	International Blvd & S 182nd St (Arrival Dr)	Veh entered model	350	44	861	1214	Vehicles entered calibration values acceptable. SB queue may spillback to upstream signal that is not included in the model. EB queue may spillback to Arrivals loop to NB NAE.
			Veh entered sim	356	46	860	1219	
			Difference	1.02	1.05	1.00	1.00	
			Queue model (95th)	58	49	380	595	
			Queue sim (95th)	364	55	394	569	
			Difference	6.28	1.12	1.04	0.96	
			Delay model	38.5	67.2	46.8	34.2	
			Delay sim	34.3	61.7	60.1	40.7	
	67	International Blvd & S 188th St	Veh entered model	1361	842	749	1249	Vehicles entered calibration values acceptable. EB queue may spillback to upstream signal at 28th Ave S and SB left turn lane may be blocked.
			Veh entered sim	1367	834	748	1247	
			Difference	1.00	0.99	1.00	1.00	
			Queue model (95th)	436	332	242	457	
			Queue sim (95th)	573	425	239	754	
			Difference	1.31	1.28	0.99	1.65	
			Delay model	58.4	55.4	69.6	70.0	
Delay sim			52.6	54.5	46.1	88.8		
Segment 9 - SR 516	93	Pac Hwy & S Kent Des Moines Rd	Veh entered model	581	1288	1084	1842	Assumed 200 additional vehicles use SB HOV thru lane for more evenly distributed lane demand and to increase vehicles entered to be closer to target. NB and SB left turn lanes may be blocked by queues.
			Veh entered sim	584	1300	1086	1685	
			Difference	1.01	1.01	1.00	0.91	
			Queue model (95th)	325	519	471	1179	
			Queue sim (95th)	501	398	517	3270	
			Difference	1.54	0.77	1.10	2.77	
			Delay model	61.9	58.6	75.8	148.5	
			Delay sim	66.8	52.8	85.5	501.5	
	94	SB I-5 Ramps & S Kent Des Moines Rd	Veh entered model	1418	1331		719	EB vehicles entered calibration values just below target. EB queue may spillback to Pacific Hwy.
			Veh entered sim	1266	1344		713	
			Difference	0.89	1.01		0.99	
			Queue model (95th)	828	346		475	
			Queue sim (95th)	284	506		462	
			Difference	0.34	1.46		0.97	
			Delay model	58.3	28.0		77.8	
			Delay sim	49.2	27.4		59.9	
	95	NB I-5 Ramps & S Kent Des Moines Rd	Veh entered model	1040	1506	554		Vehicles entered calibration values acceptable. WB queue may spillback to Military Rd S.
			Veh entered sim	945	1503	554		
			Difference	0.91	1.00	1.00		
			Queue model (95th)	170	333	402		
			Queue sim (95th)	232	374	344		
			Difference	1.36	1.12	0.86		
			Delay model	14.0	12.1	51.8		
			Delay sim	14.5	16.8	47.5		
Difference	1.04	1.39	0.92					

Segment Arterial Travel Time and Delay Results
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#	Arterial	Direction	2022 PM Existing			
			Distance (mi)	Travel Time (s)	Delay (s/veh)	Running Time (s)
Segment 1	24th Ave S	NB	0.8	125.7	24.1	101.6
		SB	0.9	153	26.1	126.9
Segment 2	SW 148th St/SR 518	EB	0.3	123.4	93.9	29.5
		WB	0.4	127.9	97.7	30.2
Segment 3	DMMD	NB	0.3	41.5	7.4	34.1
		SB	0.4	38.3	1.4	36.9
Segment 4	S 154th St	EB	0.5	69.2	17.9	51.3
		WB	0.3	52.9	19.9	33
Segment 5	SR 99	NB	0.5	111.3	63.9	47.4
		SB	0.8	161.6	81.3	80.3
Segment 6	51st Ave S	NB	0.2	36.8	10.8	26
		SB	0.2	30.6	0.7	29.9
Segment 7	SW 160th St	EB	0.7	176.5	109.7	66.8
		WB	0.5	115.5	65.8	49.7
Segment 8	International Blvd	NB	1.4	298.9	153.4	145.5
		SB	1.8	393.7	224.4	169.3
		EB	0.1	74.4	61.7	12.7
		WB	0.9	158.6	59.0	99.6
Segment 9	S Kent Des Moines Rd	EB	0.7	265.1	189.9	75.2
		WB	0.6	149.3	81.4	67.9

#	Segments of Interest	Study Intersections Included
1	24 th Ave. S: S 142 nd St. to S 154 th St.	15, 16, 17, 97, 25, 26, 27
2	SW 148 th St.: 1 st Ave S to SR-509	20, 21, 22
3	Des Moines Memorial Dr. : SR-518 Ramp Terminals	23, 24
4	S 154 th St.: 24 th Ave S and SR-518 Ramp Terminals	27, 28, 29
5	International Boulevard: S 152 nd St. to SR-518 EB On-Ramp	35, 36, 37, 39
6	51 st Ave S.: SR-518 Ramp Terminals	41, 42
7	SW 160 th St.: 1 st Ave S. to Des Moines Memorial Dr.	49, 50, 51, 52
8	NAE Off-Ramp/S 170 th St. to International Boulevard/ S 188 th St.	63, 64, 65, 66, 67
9	SR-516: Pacific Highway S and I-5 Ramp Terminals	93, 94, 95

15: 24th Avenue S/24th Ave S & S 142nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	0.0	0.5	0.2
Total Del/Veh (s)	4.3	4.7	6.3	6.5	5.9
Vehicles Entered	145	58	312	298	813
Vehicles Exited	144	58	312	297	811
Hourly Exit Rate	144	58	312	297	811
Input Volume	138	56	302	294	792
% of Volume	104	103	103	101	102

16: 24th Avenue S/24th Ave S & S 144th St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.1
Total Del/Veh (s)	6.4	1.0	3.2	2.9
Vehicles Entered	115	260	295	670
Vehicles Exited	114	260	295	669
Hourly Exit Rate	114	260	295	669
Input Volume	110	256	290	655
% of Volume	104	102	102	102

17: 24th Avenue S/24th Ave S & S 146th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.1
Total Del/Veh (s)	5.3	7.3	1.1	0.9	2.0
Vehicles Entered	135	31	345	269	780
Vehicles Exited	135	30	345	268	778
Hourly Exit Rate	135	30	345	268	778
Input Volume	132	30	340	266	768
% of Volume	102	100	102	101	101

25: 24th Ave S & SeaTac Airport Parking/S 150th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.3	6.0	0.6	0.3	0.7
Vehicles Entered	7	32	351	327	717
Vehicles Exited	7	32	351	326	716
Hourly Exit Rate	7	32	351	326	716
Input Volume	7	32	346	328	713
% of Volume	100	98	101	100	100

26: 24th Ave S & S 152nd St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	5.8	1.7	0.6	1.4
Vehicles Entered	44	347	327	718
Vehicles Exited	44	346	328	718
Hourly Exit Rate	44	346	328	718
Input Volume	44	340	333	717
% of Volume	100	102	98	100

27: Air Cargo Rd/24th Ave S & S 154th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.3	1.7	0.0	0.0	0.9
Total Del/Veh (s)	13.3	12.5	14.5	11.4	12.8
Vehicles Entered	418	465	228	330	1441
Vehicles Exited	417	466	227	330	1440
Hourly Exit Rate	417	466	227	330	1440
Input Volume	406	470	228	334	1439
% of Volume	103	99	99	99	100

96: 16th Ave S & S 144th St Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.3	0.1	0.0	0.2
Total Del/Veh (s)	0.6	0.6	2.5	1.0
Vehicles Entered	191	148	103	442
Vehicles Exited	191	149	103	443
Hourly Exit Rate	191	149	103	443
Input Volume	185	147	104	436
% of Volume	103	102	99	102

97: 24th Ave S & S 148th St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	5.9	0.6	0.5	0.7
Vehicles Entered	27	348	376	751
Vehicles Exited	27	348	376	751
Hourly Exit Rate	27	348	376	751
Input Volume	26	341	374	742
% of Volume	102	102	101	101

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	14.9
Vehicles Entered	2108
Vehicles Exited	2106
Hourly Exit Rate	2106
Input Volume	9001
% of Volume	23

Intersection: 15: 24th Avenue S/24th Ave S & S 142nd St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	78	52	91	90
Average Queue (ft)	37	26	45	47
95th Queue (ft)	62	46	72	76
Link Distance (ft)	2553	783	601	1286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 16: 24th Avenue S/24th Ave S & S 144th St

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	83	4	70
Average Queue (ft)	38	0	17
95th Queue (ft)	65	3	51
Link Distance (ft)	2794	599	601
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 17: 24th Avenue S/24th Ave S & S 146th St

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	L	TR
Maximum Queue (ft)	32	77	48	52	7	30	2
Average Queue (ft)	6	39	21	17	0	3	0
95th Queue (ft)	27	62	47	44	6	17	2
Link Distance (ft)		2333	531		448		599
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	250			250		160	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 25: 24th Ave S & SeaTac Airport Parking/S 150th St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	70	47	29	32
Average Queue (ft)	11	21	2	5
95th Queue (ft)	48	47	15	23
Link Distance (ft)	149	509		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 26: 24th Ave S & S 152nd St

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	59	55
Average Queue (ft)	26	6
95th Queue (ft)	51	33
Link Distance (ft)	510	609
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 27: Air Cargo Rd/24th Ave S & S 154th St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	LT	TR
Maximum Queue (ft)	94	197	118	192	107	106	38	112	108
Average Queue (ft)	39	87	50	82	47	37	6	54	48
95th Queue (ft)	78	156	92	149	91	80	23	94	87
Link Distance (ft)		1444		228		729	729	764	
Upstream Blk Time (%)				0					
Queuing Penalty (veh)				0					
Storage Bay Dist (ft)	180		165		175				145
Storage Blk Time (%)		0	0	1				0	0
Queuing Penalty (veh)		0	0	1				0	0

Intersection: 96: 16th Ave S & S 144th St

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	8	59
Average Queue (ft)	1	26
95th Queue (ft)	7	53
Link Distance (ft)	2553	649
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 97: 24th Ave S & S 148th St

Movement	WB	NB	SB
Directions Served	LR	TR	L
Maximum Queue (ft)	42	12	34
Average Queue (ft)	20	1	6
95th Queue (ft)	46	8	25
Link Distance (ft)	526	608	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

Arterial Level of Service: NB 24th Ave S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S 152nd St	26	3.0	18.7	0.2	30
S 150th St	25	0.5	13.4	0.1	34
S 148th St	97	0.6	13.1	0.1	35
S 146th St	17	0.5	10.0	0.1	35
S 144th St	16	1.0	13.9	0.1	33
S 142nd St	15	6.5	23.6	0.1	19
Total		12.0	92.6	0.8	29

Arterial Level of Service: SB 24th Ave S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S 144th St	16	3.2	16.3	0.1	27
S 146th St	17	0.7	13.2	0.1	34
S 148th St	97	0.3	9.7	0.1	36
SeaTac Airport Parki	25	0.1	12.9	0.1	36
S 152nd St	26	0.4	13.2	0.1	34
S 154th St	27	12.4	28.0	0.2	20
Total		17.0	93.3	0.8	29

20: 1st Ave S & SW 148th St/SR 518 Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.8	0.1	2.1	2.1	1.2
Total Del/Veh (s)	49.2	45.7	39.6	64.4	49.9
Vehicles Entered	709	1090	807	923	3529
Vehicles Exited	699	1072	815	931	3517
Hourly Exit Rate	699	1072	815	931	3517
Input Volume	716	1226	806	923	3672
% of Volume	98	87	101	101	96

21: SR509 SB On-Ramp/SR 509 SB Off-Ramp & SR 518 Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	334.7	101.5
Total Del/Veh (s)	24.5	29.1	192.7	70.7
Vehicles Entered	1207	1269	864	3340
Vehicles Exited	1219	1276	850	3345
Hourly Exit Rate	1219	1276	850	3345
Input Volume	1197	1425	1066	3688
% of Volume	102	90	80	91

22: SR 509 NB Off-Ramp/SR 509 NB On-Ramp & SR 518 Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	293.0	0.4	154.0
Total Del/Veh (s)	9.4	20.4	16.5	15.4
Vehicles Entered	1777	2076	399	4252
Vehicles Exited	1776	2077	399	4252
Hourly Exit Rate	1776	2077	399	4252
Input Volume	1946	2356	393	4694
% of Volume	91	88	102	91

Total Network Performance

Denied Del/Veh (s)	168.4
Total Del/Veh (s)	84.3
Vehicles Entered	5811
Vehicles Exited	5798
Hourly Exit Rate	5798
Input Volume	18314
% of Volume	32

Intersection: 20: 1st Ave S & SW 148th St/SR 518

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	TR	L	L	T	T	R	L	T	T	R
Maximum Queue (ft)	203	338	368	205	259	287	283	137	194	252	213	240
Average Queue (ft)	60	198	215	104	137	208	213	58	93	154	120	122
95th Queue (ft)	139	298	333	173	224	289	292	109	169	227	204	209
Link Distance (ft)		553	553			275	275	275		609	609	
Upstream Blk Time (%)					0	2	3					
Queuing Penalty (veh)					0	8	12					
Storage Bay Dist (ft)	230			235	235				200			250
Storage Blk Time (%)	0	5		0	0	7			0	3	0	0
Queuing Penalty (veh)	0	5		0	0	22			1	4	0	0

Intersection: 20: 1st Ave S & SW 148th St/SR 518

Movement	SB	SB	SB	SB	SB
Directions Served	L	L	T	T	R
Maximum Queue (ft)	318	359	434	409	175
Average Queue (ft)	193	244	192	166	66
95th Queue (ft)	336	369	371	301	176
Link Distance (ft)			540	540	
Upstream Blk Time (%)			1	0	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)	320	320			100
Storage Blk Time (%)	1	9	0	28	0
Queuing Penalty (veh)	3	22	1	27	0

Intersection: 21: SR509 SB On-Ramp/SR 509 SB Off-Ramp & SR 518

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	TR	L	L	T	T	L	LTR	R
Maximum Queue (ft)	293	308	274	203	244	333	313	678	682	659
Average Queue (ft)	238	238	156	113	136	195	182	648	649	630
95th Queue (ft)	325	326	308	175	202	296	284	681	680	768
Link Distance (ft)	275	275				487	487	632	632	632
Upstream Blk Time (%)	3	3	0			0		72	93	51
Queuing Penalty (veh)	18	16	0			0		0	0	0
Storage Bay Dist (ft)			200	310	310					
Storage Blk Time (%)		14	2			1				
Queuing Penalty (veh)		74	7			2				

Intersection: 22: SR 509 NB Off-Ramp/SR 509 NB On-Ramp & SR 518

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	LT
Maximum Queue (ft)	281	269	201	219	186
Average Queue (ft)	71	77	80	34	85
95th Queue (ft)	198	205	168	149	159
Link Distance (ft)	487	487	1057	1057	632
Upstream Blk Time (%)	0			0	
Queuing Penalty (veh)	0			0	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 223

Arterial Level of Service: EB SR 518

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR509 SB On-Ramp	21	35.1	39.8	0.1	7
SR 509 NB Off-Ramp	22	14.0	20.9	0.1	18
Total		49.1	60.6	0.2	10

Arterial Level of Service: WB SR 518

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR 509 SB Off-Ramp	21	24.7	31.1	0.1	12
1st Ave S	20	59.5	63.8	0.1	4
Total		84.2	94.9	0.2	7

23: Des Moines Way S & SR 518 EB Ramps Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.8	0.0	0.3
Total Del/Veh (s)	10.6	4.3	2.0	3.1
Vehicles Entered	39	466	739	1244
Vehicles Exited	39	469	739	1247
Hourly Exit Rate	39	469	739	1247
Input Volume	39	473	719	1232
% of Volume	99	99	103	101

24: Des Moines Way S & SR 518 WB Off-Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	2.6	0.0	0.7	1.5
Total Del/Veh (s)	16.8	2.0	1.1	8.7
Vehicles Entered	591	220	441	1252
Vehicles Exited	588	220	442	1250
Hourly Exit Rate	588	220	442	1250
Input Volume	586	218	431	1235
% of Volume	100	101	103	101

Total Network Performance

Denied Del/Veh (s)	1.5
Total Del/Veh (s)	10.0
Vehicles Entered	1552
Vehicles Exited	1551
Hourly Exit Rate	1551
Input Volume	3996
% of Volume	39

Intersection: 23: Des Moines Way S & SR 518 EB Ramps

Movement	EB	NB	SB	SB
Directions Served	LT	TR	L	T
Maximum Queue (ft)	53	4	81	2
Average Queue (ft)	19	0	33	0
95th Queue (ft)	47	2	63	2
Link Distance (ft)	720	1240		431
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			315	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 24: Des Moines Way S & SR 518 WB Off-Ramp

Movement	WB	WB	NB	SB
Directions Served	L	R	T	T
Maximum Queue (ft)	315	155	10	14
Average Queue (ft)	120	63	0	1
95th Queue (ft)	252	118	5	8
Link Distance (ft)	751		431	1383
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		400		
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	1	0		

Network Summary

Network wide Queuing Penalty: 1

Arterial Level of Service: NB Des Moines Way S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR 518 WB Off-Ramp	24	2.0	11.3	0.1	29
Total		2.0	11.3	0.1	29

Arterial Level of Service: SB Des Moines Way S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR 518 EB Ramps	23	0.4	9.7	0.1	33
Total		0.4	9.7	0.1	33

27: Air Cargo Rd/24th Ave S & S 154th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.2	0.0	0.0	1.5	0.7
Total Del/Veh (s)	14.1	15.0	14.2	13.4	14.3
Vehicles Entered	404	472	234	326	1436
Vehicles Exited	404	474	235	325	1438
Hourly Exit Rate	404	474	235	325	1438
Input Volume	406	476	228	331	1441
% of Volume	100	100	103	98	100

28: S 154th St & EB SR518 Off Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	2.8	1.0
Total Del/Veh (s)	2.3	2.8	10.3	5.3
Vehicles Entered	287	338	347	972
Vehicles Exited	287	338	347	972
Hourly Exit Rate	287	338	347	972
Input Volume	288	332	355	975
% of Volume	100	102	98	100

29: S 154th St & WB SR 518 On Ramp Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	1.5	0.9
Total Del/Veh (s)	0.6	4.4	2.7
Vehicles Entered	496	611	1107
Vehicles Exited	497	612	1109
Hourly Exit Rate	497	612	1109
Input Volume	498	611	1109
% of Volume	100	100	100

Total Network Performance

Denied Del/Veh (s)	1.5
Total Del/Veh (s)	15.6
Vehicles Entered	1936
Vehicles Exited	1937
Hourly Exit Rate	1937
Input Volume	6126
% of Volume	32

Intersection: 27: Air Cargo Rd/24th Ave S & S 154th St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	T	R	LT	TR
Maximum Queue (ft)	106	208	135	202	119	100	37	159	113
Average Queue (ft)	40	90	52	85	46	38	5	76	32
95th Queue (ft)	81	166	105	161	90	79	21	130	71
Link Distance (ft)		1444		203		729	729	797	
Upstream Blk Time (%)				1					
Queuing Penalty (veh)				3					
Storage Bay Dist (ft)	180		165		175				145
Storage Blk Time (%)	0	1	0	1	0	0		0	0
Queuing Penalty (veh)	0	0	0	1	0	0		1	0

Intersection: 28: S 154th St & EB SR518 Off Ramp

Movement	WB	SB	SB
Directions Served	T	L	R
Maximum Queue (ft)	8	152	107
Average Queue (ft)	0	71	31
95th Queue (ft)	6	125	83
Link Distance (ft)	833		254
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		130	
Storage Blk Time (%)		1	0
Queuing Penalty (veh)		2	1

Intersection: 29: S 154th St & WB SR 518 On Ramp

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

Network Summary

Network wide Queuing Penalty: 7

Arterial Level of Service: EB S 154th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
EB SR518 Off Ramp	28	3.0	8.6	0.1	22
WB SR 518 On Ramp	29	0.3	17.2	0.2	36
Total		3.3	25.8	0.2	31

Arterial Level of Service: WB S 154th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
EB SR518 Off Ramp	28	2.8	20.5	0.2	30
24th Ave S	27	11.8	16.7	0.1	11
Total		14.6	37.2	0.2	22

35: SR 99 & S 152nd St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	1.5	0.0	0.4	0.3
Total Del/Veh (s)	16.6	24.4	16.7	21.7	19.0
Vehicles Entered	265	108	810	690	1873
Vehicles Exited	266	108	810	692	1876
Hourly Exit Rate	266	108	810	692	1876
Input Volume	274	110	803	702	1890
% of Volume	97	98	101	99	99

37: SR 99 & S 154th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.3	1.2	0.3	0.1	0.9
Total Del/Veh (s)	41.8	50.9	35.5	43.6	42.3
Vehicles Entered	690	496	755	880	2821
Vehicles Exited	690	497	752	880	2819
Hourly Exit Rate	690	497	752	880	2819
Input Volume	700	498	740	898	2836
% of Volume	99	100	102	98	99

39: SR 99 & SR 518 EB On-Ramp Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2
Total Del/Veh (s)	9.0	9.1	9.1
Vehicles Entered	1100	1602	2702
Vehicles Exited	1103	1600	2703
Hourly Exit Rate	1103	1600	2703
Input Volume	1080	1606	2687
% of Volume	102	100	101

118: SR 99 Performance by approach

Approach	NB	SB	SE	All
Denied Del/Veh (s)	0.0	0.0	1.0	0.3
Total Del/Veh (s)	6.4	3.8	4.7	4.8
Vehicles Entered	749	1102	511	2362
Vehicles Exited	749	1103	512	2364
Hourly Exit Rate	749	1103	512	2364
Input Volume	734	1112	505	2350
% of Volume	102	99	101	101

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	50.9
Vehicles Entered	3946
Vehicles Exited	3952
Hourly Exit Rate	3952
Input Volume	15308
% of Volume	26

Intersection: 35: SR 99 & S 152nd St

Movement	EB	EB	WB	WB	NB	NB	NB	NB	B36	B36	SB	SB
Directions Served	LT	R	LT	R	UL	T	T	R	T	T	UL	T
Maximum Queue (ft)	96	143	113	62	164	217	218	12	2	5	92	214
Average Queue (ft)	34	67	46	19	63	83	97	1	0	0	24	106
95th Queue (ft)	73	119	90	49	128	180	193	7	2	5	62	186
Link Distance (ft)	125	125	317			216	216	216	285	285		2744
Upstream Blk Time (%)	0	2			0	0	0					
Queuing Penalty (veh)	0	0			0	1	1					
Storage Bay Dist (ft)				90	270						140	
Storage Blk Time (%)			2	0	0	0						4
Queuing Penalty (veh)			1	0	0	0						3

Intersection: 35: SR 99 & S 152nd St

Movement	SB
Directions Served	TR
Maximum Queue (ft)	220
Average Queue (ft)	105
95th Queue (ft)	190
Link Distance (ft)	2744
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 37: SR 99 & S 154th St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	L	T	R	L	L	T	TR	UL	T	T	R
Maximum Queue (ft)	165	253	345	258	154	202	237	251	188	178	180	48
Average Queue (ft)	65	123	168	102	36	89	121	131	141	102	95	8
95th Queue (ft)	153	214	293	200	115	162	204	226	210	171	169	32
Link Distance (ft)			399	399			416	416	134	134	134	134
Upstream Blk Time (%)			1	0					24	4	4	
Queuing Penalty (veh)			0	0					44	7	7	
Storage Bay Dist (ft)	270	270			200	200						
Storage Blk Time (%)			3		0	0	1					
Queuing Penalty (veh)			6		0	0	2					

Intersection: 37: SR 99 & S 154th St

Movement	SB	SB	SB	SB	B36	B36
Directions Served	UL	T	T	R	T	T
Maximum Queue (ft)	259	353	358	175	55	72
Average Queue (ft)	99	206	218	63	2	4
95th Queue (ft)	220	325	346	198	26	32
Link Distance (ft)		285	285		216	216
Upstream Blk Time (%)		3	4			
Queuing Penalty (veh)		13	20			
Storage Bay Dist (ft)	200			100		
Storage Blk Time (%)	0	13	33	0		
Queuing Penalty (veh)	0	13	27	0		

Intersection: 39: SR 99 & SR 518 EB On-Ramp

Movement	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	U	T	T	R	UL	T	T	T
Maximum Queue (ft)	71	203	151	115	235	166	225	208
Average Queue (ft)	26	96	61	9	114	28	45	45
95th Queue (ft)	59	164	120	62	197	108	148	142
Link Distance (ft)		1221	1221	1221		610	610	610
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	220				340			
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Intersection: 118: SR 99

Movement	NB	NB	NB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	132	49	46	5
Average Queue (ft)	24	3	3	0
95th Queue (ft)	87	24	21	5
Link Distance (ft)		610	610	134
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	90			
Storage Blk Time (%)	2	0	0	
Queuing Penalty (veh)	4	0	0	

Network Summary

Network wide Queuing Penalty: 149

Arterial Level of Service: NB SR 99

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	118	6.4	17.5	0.1	25
S 154th St	37	26.7	29.9	0.0	6
	36	4.4	11.5	0.1	23
S 152nd St	35	16.5	21.4	0.1	10
Total		54.0	80.3	0.3	13

Arterial Level of Service: SB SR 99

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	36	4.6	10.3	0.1	20
S 154th St	37	43.5	49.7	0.1	5
	118	5.4	9.7	0.0	17
SR 518 EB On-Ramp	39	5.4	16.3	0.1	27
Total		58.9	86.0	0.3	13

41: 51st Ave S & SR 518 WB On-Ramp Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.5	0.1
Total Del/Veh (s)	10.2	0.6	7.9
Vehicles Entered	850	268	1118
Vehicles Exited	848	269	1117
Hourly Exit Rate	848	269	1117
Input Volume	854	269	1124
% of Volume	99	100	99

42: Klickitat Dr/51st Ave S & SR-518 EB Off-Ramp Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	4.1	2.6	0.0	2.8
Total Del/Veh (s)	4.2	0.9	0.1	2.1
Vehicles Entered	662	798	222	1682
Vehicles Exited	662	798	221	1681
Hourly Exit Rate	662	798	221	1681
Input Volume	664	799	220	1683
% of Volume	100	100	101	100

Total Network Performance

Denied Del/Veh (s)	2.8
Total Del/Veh (s)	8.2
Vehicles Entered	1732
Vehicles Exited	1731
Hourly Exit Rate	1731
Input Volume	4539
% of Volume	38

Intersection: 41: 51st Ave S & SR 518 WB On-Ramp

Movement	NB	SB
Directions Served	LT	TR
Maximum Queue (ft)	328	28
Average Queue (ft)	118	2
95th Queue (ft)	263	14
Link Distance (ft)	521	517
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 42: Klickitat Dr/51st Ave S & SR-518 EB Off-Ramp

Movement	EB	NB
Directions Served	L	T
Maximum Queue (ft)	92	32
Average Queue (ft)	34	1
95th Queue (ft)	72	25
Link Distance (ft)	320	293
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	2	

Network Summary

Network wide Queuing Penalty: 3

Arterial Level of Service: NB 51st Ave S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR 518 WB On-Ramp	41	9.9	25.2	0.1	15
Total		9.9	25.2	0.1	15

Arterial Level of Service: SB 51st Ave S

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
SR-518 EB Off-Ramp	42	0.1	15.5	0.1	25
Total		0.1	15.5	0.1	25

49: 1st Avenue S & Ambaum St SW & S 160th St Performance by approach

Approach	EB	WB	NB	SB	SE	NW	All
Denied Del/Veh (s)	1.0	0.0	1.4	1.1	0.1	0.1	0.9
Total Del/Veh (s)	82.4	49.4	47.8	63.8	0.9	1.2	59.4
Vehicles Entered	660	891	834	922	7	9	3323
Vehicles Exited	666	892	824	929	7	9	3327
Hourly Exit Rate	666	892	824	929	7	9	3327
Input Volume	664	882	848	924	7	11	3336
% of Volume	100	101	97	101	100	82	100

50: SR 519 SB Ramps/SR 509 SB Ramps & S 160th St Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.8	0.3
Total Del/Veh (s)	6.1	1.7	7.0	5.6
Vehicles Entered	813	368	758	1939
Vehicles Exited	813	368	759	1940
Hourly Exit Rate	813	368	759	1940
Input Volume	828	362	756	1947
% of Volume	98	102	100	100

51: SR 509 NB Ramps/5th PI S & S 160th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	1.2	0.1	0.3
Total Del/Veh (s)	1.9	0.8	9.3	5.5	3.4
Vehicles Entered	661	196	251	5	1113
Vehicles Exited	661	196	251	5	1113
Hourly Exit Rate	661	196	251	5	1113
Input Volume	674	195	248	6	1123
% of Volume	98	100	101	83	99

52: Des Moines Memorial Dr/Des Moines Way S & S 160th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	1.9	0.6	1.0	0.7
Total Del/Veh (s)	11.5	7.6	6.8	10.6	9.9
Vehicles Entered	279	3	290	586	1158
Vehicles Exited	280	3	289	585	1157
Hourly Exit Rate	280	3	289	585	1157
Input Volume	280	4	294	570	1148
% of Volume	100	75	98	103	101

133: Ambaum Cutoff S & S 160th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.2	31.2	4.9
Total Del/Veh (s)	20.2	15.6	33.6	35.5	20.9
Vehicles Entered	671	1041	93	323	2128
Vehicles Exited	664	1038	94	326	2122
Hourly Exit Rate	664	1038	94	326	2122
Input Volume	682	1036	87	327	2131
% of Volume	97	100	108	100	100

Total Network Performance

Denied Del/Veh (s)	3.1
Total Del/Veh (s)	57.1
Vehicles Entered	4807
Vehicles Exited	4795
Hourly Exit Rate	4795
Input Volume	14894
% of Volume	32

Intersection: 49: 1st Avenue S & Ambaum St SW & S 160th St

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	<L	T	TR>	L	T	TR>	>	<	<L	T	TR>	<
Maximum Queue (ft)	253	516	570	244	363	359	175	212	248	237	278	182
Average Queue (ft)	115	289	353	206	227	211	101	106	164	147	175	55
95th Queue (ft)	231	525	580	278	371	329	212	210	237	220	257	141
Link Distance (ft)		872	872		355	355				857	857	
Upstream Blk Time (%)					5	0						
Queuing Penalty (veh)					23	1						
Storage Bay Dist (ft)	180			170			100	265	265			250
Storage Blk Time (%)	2	12		39	6	36	0		0	0		
Queuing Penalty (veh)	3	14		93	12	22	1		0	0		

Intersection: 49: 1st Avenue S & Ambaum St SW & S 160th St

Movement	SB	SB	SB
Directions Served	<L	T	TR>
Maximum Queue (ft)	309	442	409
Average Queue (ft)	156	267	266
95th Queue (ft)	296	414	391
Link Distance (ft)		830	830
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	250		
Storage Blk Time (%)	0	15	
Queuing Penalty (veh)	0	31	

Intersection: 50: SR 519 SB Ramps/SR 509 SB Ramps & S 160th St

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	TR	L	T	LT	R
Maximum Queue (ft)	21	122	32	39	249	241
Average Queue (ft)	1	13	7	2	47	16
95th Queue (ft)	11	71	26	16	127	124
Link Distance (ft)	292	292		857	341	341
Upstream Blk Time (%)					0	1
Queuing Penalty (veh)					0	0
Storage Bay Dist (ft)			160			
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 51: SR 509 NB Ramps/5th PI S & S 160th St

Movement	EB	EB	WB	NB	NB	SB
Directions Served	LT	T	L	LT	R	LTR
Maximum Queue (ft)	28	131	23	119	31	31
Average Queue (ft)	2	0	3	57	23	4
95th Queue (ft)	13	0	16	99	44	22
Link Distance (ft)	857	857		422		302
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	0					
Storage Bay Dist (ft)	200			100		
Storage Blk Time (%)	1					
Queuing Penalty (veh)	1					

Intersection: 52: Des Moines Memorial Dr/Des Moines Way S & S 160th St

Movement	EB	EB	WB	WB	NB	NB	SB
Directions Served	L	TR	L	TR	L	TR	TR
Maximum Queue (ft)	140	46	21	4	69	85	205
Average Queue (ft)	71	2	1	0	22	37	97
95th Queue (ft)	123	21	15	6	52	72	172
Link Distance (ft)		396		233		2458	1276
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	350		100		225		
Storage Blk Time (%)							2
Queuing Penalty (veh)							0

Intersection: 133: Ambaum Cutoff S & S 160th St

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	122	287	338	184	302	350	92	108	113	113
Average Queue (ft)	40	98	169	51	135	178	29	38	93	70
95th Queue (ft)	90	228	303	136	272	327	71	81	137	125
Link Distance (ft)		355	355		292	292	146	146	98	98
Upstream Blk Time (%)		0	0		1	3	0	0	29	14
Queuing Penalty (veh)		0	0		3	16	0	0	0	0
Storage Bay Dist (ft)	50			150						
Storage Blk Time (%)	7	11			4					
Queuing Penalty (veh)	20	6			4					

Network Summary

Network wide Queuing Penalty: 251

Arterial Level of Service: EB S 160th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
1st Avenue S	49	77.3	97.1	0.2	7
Ambaum Cutoff S	133	21.1	31.3	0.1	10
SR 519 SB Ramps	50	7.0	14.0	0.1	17
SR 509 NB Ramps	51	0.4	17.8	0.2	35
	158	0.2	7.1	0.1	34
Des Moines Memorial	52	3.7	9.3	0.1	34
Total		109.7	176.5	0.7	13

Arterial Level of Service: WB S 160th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Des Moines Way S	52	13.1	16.5	0.1	11
	158	2.2	8.8	0.1	36
5th Pl S	51	0.6	7.3	0.1	33
SR 509 SB Ramps	50	1.1	18.7	0.2	33
	133	13.8	20.1	0.1	12
1st Avenue S	49	35.0	44.1	0.1	7
Total		65.8	115.5	0.5	17

63: NB NAE Off-Ramp & S 170th St Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.4	0.3	0.5	0.4
Total Del/Veh (s)	7.7	3.6	8.4	6.9
Vehicles Entered	432	369	546	1347
Vehicles Exited	433	368	547	1348
Hourly Exit Rate	433	368	547	1348
Input Volume	442	358	552	1352
% of Volume	98	103	99	100

64: Pacific Hwy #1/International Blvd & S 170th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.4	0.0	0.2	0.1
Total Del/Veh (s)	32.4	37.1	47.7	65.1	48.2
Vehicles Entered	792	238	794	902	2726
Vehicles Exited	797	239	778	897	2711
Hourly Exit Rate	797	239	778	897	2711
Input Volume	802	236	784	912	2734
% of Volume	99	101	99	98	99

65: International Blvd & S 176th St Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.1	0.5	0.4
Total Del/Veh (s)	30.2	15.0	13.4	16.9
Vehicles Entered	380	748	1061	2189
Vehicles Exited	375	757	1073	2205
Hourly Exit Rate	375	757	1073	2205
Input Volume	380	747	1072	2199
% of Volume	99	101	100	100

66: International Blvd & S 182nd St (Arrival Dr) Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	3.1	0.1	0.2	0.6	0.8
Total Del/Veh (s)	34.3	61.7	60.1	40.7	46.9
Vehicles Entered	356	46	860	1219	2481
Vehicles Exited	356	44	864	1221	2485
Hourly Exit Rate	356	44	864	1221	2485
Input Volume	350	44	870	1215	2479
% of Volume	102	99	99	100	100

67: International Blvd & S 188th St Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	1.4	0.5	1.6	1.3	1.2
Total Del/Veh (s)	52.6	54.5	46.1	88.8	62.6
Vehicles Entered	1367	834	748	1247	4196
Vehicles Exited	1373	834	742	1244	4193
Hourly Exit Rate	1373	834	742	1244	4193
Input Volume	1361	841	749	1250	4201
% of Volume	101	99	99	100	100

Total Network Performance

Denied Del/Veh (s)	1.3
Total Del/Veh (s)	79.8
Vehicles Entered	6970
Vehicles Exited	6952
Hourly Exit Rate	6952
Input Volume	19874
% of Volume	35

Intersection: 63: NB NAE Off-Ramp & S 170th St

Movement	EB	EB	WB	NB	NB
Directions Served	T	T	R	<	R
Maximum Queue (ft)	100	116	56	214	219
Average Queue (ft)	22	28	12	88	61
95th Queue (ft)	62	80	42	163	160
Link Distance (ft)	149	149	329	300	300
Upstream Blk Time (%)	0	0		0	0
Queuing Penalty (veh)	0	0		0	0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 64: Pacific Hwy #1/International Blvd & S 170th St

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R>	<T	R	UL	T	TR	UL	T	T	R>
Maximum Queue (ft)	240	308	372	243	156	303	432	443	288	532	520	186
Average Queue (ft)	103	161	152	114	43	140	194	206	109	248	256	71
95th Queue (ft)	205	283	299	203	100	260	393	404	296	517	521	158
Link Distance (ft)		329	329	4033			1865	1865		3388	3388	3388
Upstream Blk Time (%)		1	1									
Queuing Penalty (veh)		3	5									
Storage Bay Dist (ft)	200				215	375			350			
Storage Blk Time (%)	1	6		1		0	1			10		
Queuing Penalty (veh)	2	8		1		0	2			11		

Intersection: 65: International Blvd & S 176th St

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	<	<	R	T	T	R	UL	T	T	R
Maximum Queue (ft)	135	149	270	299	295	200	252	127	106	7
Average Queue (ft)	64	88	75	97	96	58	100	22	20	0
95th Queue (ft)	137	146	181	241	241	156	208	76	68	6
Link Distance (ft)			5259	1656	1656			1865	1865	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	125	125				175	300			1000
Storage Blk Time (%)	0	3	2		2	0	0			
Queuing Penalty (veh)	1	5	4		4	0	0			

Intersection: 66: International Blvd & S 182nd St (Arrival Dr)

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	R>	<	TR	UL	L	T	T	R	UL	T
Maximum Queue (ft)	214	487	76	67	66	277	287	379	395	175	103	633
Average Queue (ft)	58	134	61	21	19	144	166	185	201	14	31	279
95th Queue (ft)	145	364	98	55	53	252	270	372	394	89	83	551
Link Distance (ft)	990	990		442	442			2038	2038			1656
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			50			350	350			150	100	
Storage Blk Time (%)		15	14			0	0	1	25	0	1	34
Queuing Penalty (veh)		41	5			0	0	3	4	0	4	7

Intersection: 66: International Blvd & S 182nd St (Arrival Dr)

Movement	SB	SB
Directions Served	T	R>
Maximum Queue (ft)	681	465
Average Queue (ft)	285	170
95th Queue (ft)	569	407
Link Distance (ft)	1656	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		440
Storage Blk Time (%)	3	0
Queuing Penalty (veh)	9	0

Intersection: 67: International Blvd & S 188th St

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R>	<	T	T	R	UL	L	T	T
Maximum Queue (ft)	325	558	523	414	330	375	368	130	145	172	282	269
Average Queue (ft)	242	374	331	135	233	200	175	50	62	99	168	152
95th Queue (ft)	390	573	506	305	376	425	317	95	129	158	250	239
Link Distance (ft)		530	530	530		2881	2881				1232	1232
Upstream Blk Time (%)		4	1	0								
Queuing Penalty (veh)		0	0	0								
Storage Bay Dist (ft)	300				325			500	175	175		
Storage Blk Time (%)	3	20			15	0	0		0	0	10	4
Queuing Penalty (veh)	11	38			35	0	0		0	1	15	7

Intersection: 67: International Blvd & S 188th St

Movement	NB	SB	SB	SB	SB	SB
Directions Served	R	UL	L	T	T	R>
Maximum Queue (ft)	200	215	364	684	674	446
Average Queue (ft)	96	106	161	423	423	216
95th Queue (ft)	186	183	394	754	751	488
Link Distance (ft)				2038	2038	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	175	350	350			990
Storage Blk Time (%)	1			29	2	0
Queuing Penalty (veh)	2			74	4	0

Network Summary

Network wide Queuing Penalty: 306

Arterial Level of Service: EB S 170th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	64	54.0	62.0	0.1	5
Total		54.0	62.0	0.1	5

Arterial Level of Service: WB S 170th St

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	63	3.7	14.7	0.1	21
Total		3.7	14.7	0.1	21

Arterial Level of Service: NB International Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S 182nd St (Arrival)	66	41.2	87.3	0.4	17
S 176th St	65	15.8	54.1	0.3	22
S 170th St X	64	47.3	80.2	0.4	17
Total		104.3	221.6	1.1	18

Arterial Level of Service: SB International Blvd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	65	8.4	45.4	0.4	30
S 182nd St (Arrival)	66	37.1	69.8	0.3	17
S 188th St	67	106.6	149.6	0.4	10
Total		152.0	264.8	1.1	15

1: S Kent Des Moines Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	29.5	3.3	127.7	29.3	16.5
Vehicles Entered	1280	1327	1	37	2645
Vehicles Exited	1273	1327	1	36	2637
Hourly Exit Rate	1273	1327	1	36	2637
Input Volume	1427	1318	2	37	2784
% of Volume	89	101	50	98	95

93: Pacific Hwy #1 & S Kent Des Moines Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.4	59.6	22.9
Total Del/Veh (s)	66.8	52.8	85.5	501.5	228.1
Vehicles Entered	584	1300	1086	1685	4655
Vehicles Exited	584	1285	1077	1424	4370
Hourly Exit Rate	584	1285	1077	1424	4370
Input Volume	581	1295	1084	1842	4802
% of Volume	101	99	99	77	91

94: SB I-5 Ramps & S Kent Des Moines Rd Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.2	0.1	0.7	0.2
Total Del/Veh (s)	49.2	27.4	59.9	42.7
Vehicles Entered	1266	1344	713	3323
Vehicles Exited	1263	1348	707	3318
Hourly Exit Rate	1263	1348	707	3318
Input Volume	1422	1338	719	3479
% of Volume	89	101	98	95

95: NB I-5 Off Ramp/Bus Layover & S Kent Des Moines Rd Performance by approach

Approach	EB	WB	NB	All
Denied Del/Veh (s)	0.0	9.2	2.3	5.1
Total Del/Veh (s)	14.5	16.8	47.5	21.8
Vehicles Entered	945	1503	554	3002
Vehicles Exited	942	1499	553	2994
Hourly Exit Rate	942	1499	553	2994
Input Volume	1046	1506	556	3108
% of Volume	90	100	100	96

128: I-5 NB On (EB)/I-5 NB On (WB) & S Kent Des Moines Rd Performance by approach

Approach	EB	WB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.8	5.6	7.7
Vehicles Entered	1234	1714	2948
Vehicles Exited	1231	1717	2948
Hourly Exit Rate	1231	1717	2948
Input Volume	1360	1721	3080
% of Volume	91	100	96

Total Network Performance

Denied Del/Veh (s)	19.8
Total Del/Veh (s)	213.1
Vehicles Entered	6228
Vehicles Exited	5916
Hourly Exit Rate	5916
Input Volume	24786
% of Volume	24

Intersection: 1: S Kent Des Moines Rd

Movement	EB	EB	EB	WB	WB	WB	NB	SB
Directions Served	T	T	TR	T	T	TR	R	R
Maximum Queue (ft)	360	366	409	68	87	25	22	77
Average Queue (ft)	184	202	150	7	10	2	2	26
95th Queue (ft)	382	402	450	39	51	15	13	64
Link Distance (ft)	350	350	350		235	235	140	215
Upstream Blk Time (%)	2	3	7					
Queuing Penalty (veh)	9	16	32					
Storage Bay Dist (ft)				175				
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 93: Pacific Hwy #1 & S Kent Des Moines Rd

Movement	EB	EB	EB	EB	B132	WB	WB	WB	WB	WB	NB	NB
Directions Served	U<	T	T	R>	T	U<	<	T	T	R>	U<L	T
Maximum Queue (ft)	286	533	135	125	59	377	369	209	217	37	465	538
Average Queue (ft)	47	247	118	45	5	272	283	100	106	4	266	277
95th Queue (ft)	188	501	166	138	51	394	398	179	186	21	494	483
Link Distance (ft)		534			897	350	350	350	350	350		2561
Upstream Blk Time (%)		2				5	7					
Queuing Penalty (veh)		0				14	19					
Storage Bay Dist (ft)	170		115	115							500	
Storage Blk Time (%)	0	19	16	1							3	1
Queuing Penalty (veh)	0	71	40	1							7	2

Intersection: 93: Pacific Hwy #1 & S Kent Des Moines Rd

Movement	NB	NB	SB	SB	SB	SB	SB
Directions Served	T	R>	U<L	L	T	T	R>
Maximum Queue (ft)	574	407	630	780	2669	2657	2658
Average Queue (ft)	285	106	576	736	1943	1923	1812
95th Queue (ft)	517	445	712	907	3270	3247	3143
Link Distance (ft)	2561	2561			2631	2631	2631
Upstream Blk Time (%)					39	31	17
Queuing Penalty (veh)					0	0	0
Storage Bay Dist (ft)			480	480			
Storage Blk Time (%)			62	79	88		
Queuing Penalty (veh)			277	352	460		

Intersection: 94: SB I-5 Ramps & S Kent Des Moines Rd

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	269	293	234	275	530	432	276	314	479
Average Queue (ft)	242	247	118	230	237	177	149	198	261
95th Queue (ft)	276	284	221	309	506	383	247	281	462
Link Distance (ft)	235	235	235		667	667		665	665
Upstream Blk Time (%)	36	39	0		0	0			
Queuing Penalty (veh)	169	184	2		2	0			
Storage Bay Dist (ft)				200			400		
Storage Blk Time (%)				25	3				
Queuing Penalty (veh)				113	14				

Intersection: 95: NB I-5 Off Ramp/Bus Layover & S Kent Des Moines Rd

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	T	T	T	T	TR	LT	R
Maximum Queue (ft)	220	265	282	316	312	332	317
Average Queue (ft)	74	104	113	238	236	223	148
95th Queue (ft)	179	213	232	374	371	344	270
Link Distance (ft)		458	458	279	279	304	304
Upstream Blk Time (%)				12	13	8	1
Queuing Penalty (veh)				0	0	0	0
Storage Bay Dist (ft)	350						
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 128: I-5 NB On (EB)/I-5 NB On (WB) & S Kent Des Moines Rd

Movement	EB	EB	WB	WB
Directions Served	T	TR	T	T
Maximum Queue (ft)	19	14	30	19
Average Queue (ft)	1	1	3	1
95th Queue (ft)	11	10	32	13
Link Distance (ft)	667	667	458	458
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1783

Arterial Level of Service: EB S Kent Des Moines Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	1	27.1	37.7	0.1	9
SB I-5 Ramps	94	60.4	66.8	0.1	4
I-5 NB On (EB)	128	12.4	26.8	0.1	18
NB I-5 Off Ramp	95	14.5	24.7	0.1	14
Total		114.5	156.0	0.4	9

Arterial Level of Service: WB S Kent Des Moines Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
I-5 NB On (WB)	128	6.3	16.5	0.1	22
SB I-5 Ramps	94	16.9	30.9	0.1	16
	1	4.0	10.4	0.1	23
	93	33.4	42.3	0.1	8
Total		60.7	100.1	0.4	14