

1 Appendix E. Local Operation Results

Performance Results

AM Peak Hour		2019 Existing Conditions									2045 No-Build								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
1	Ross Street & Main Street (Hwy 99)	Overall	3	A	0.34	LOS E	Y	-	-	-	Overall	3	A	0.34	LOS E	Y	-	-	-
2	Hazel Dell & Main Street (West) & stop controlled slip ramp	Overall	5	A	0.42	LOS D	Y	-	-	-	Overall	6	A	0.49	LOS D	Y	-	-	-
3	39th Street & Main Street	Overall	17	B	0.66	LOS E	Y	EBL/WBL/SBL	70/75/75	110/100/115	Overall	36	D	0.69	LOS E	Y	EBL/WBL/SBL	70/75/75	170/145/130
4	39th Street & I-5 SB On-/Off-Ramps	NBL	350	F	1.25	LOS D	N	EBTR/NB	100/300	160/355	NBL	110	F	1.12	LOS D	N	EBTR/NBLR	100/200	170/315
5	39th Street & I-5 NB On-/Off-Ramps	Overall	14	B	0.67	LOS D	Y	-	-	-	Overall	20	B	0.70	LOS D	Y	WBTR	315	330
6	15th Ave & SR 500 WB Off-Ramp	Overall	6	A	0.38	LOS E	Y	-	-	-	Overall	9	A	0.49	LOS E	Y	-	-	-
7	15th Ave & SR 500 EB On-Ramp/39th Street	Overall	7	A	0.68	LOS E	Y	-	-	-	Overall	8	A	0.69	LOS E	Y	-	-	-
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps	Overall	12	B	0.47	LOS E	Y	-	-	-	Overall	17	B	0.58	LOS E	Y	-	-	-
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps	Overall	9	A	0.47	LOS E	Y	SBL	140	150	Overall	11	B	0.58	LOS E	Y	SBL	140	175
10	4th Plain Blvd & Main Street	Overall	59	E	0.67	LOS E	Y	WBTR/SBL/ SBTR	195/50/525	235/80/660	Overall	192	F	0.76	LOS E	N	WBTR/SBL/SB TR	195/50/525	225/70/620
11	4th Plain Blvd & Broadway Street	Overall	7	A	0.42	LOS E	Y	-	-	-	Overall	6	A	0.40	LOS E	Y	-	-	-
12	4th Plain Blvd & I-5 SB On-/Off-Ramps	Overall	14	B	0.66	LOS D	Y	EBL/SBL	170/100	185/140	Overall	13	B	0.66	LOS D	Y	EBL/SBL	170/100	185/130
13	4th Plain Blvd & I-5 NB On-/Off-Ramps	Overall	13	B	0.60	LOS D	Y	-	-	-	Overall	16	B	0.70	LOS D	Y	-	-	-
14	4th Plain Blvd & Saint Johns Blvd	Overall	8	A	0.37	LOS E	Y	EBR	75	85	Overall	7	A	0.51	LOS E	Y	-	-	-
15	4th Plain Blvd & Fort Vancouver Way	Overall	11	B	0.51	LOS E	Y	-	-	-	Overall	13	B	0.52	LOS E	Y	-	-	-
16	McLoughlin Blvd & Main Street	Overall	6	A	0.52	LOS E	Y	-	-	-	Overall	7	A	0.60	LOS E	Y	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	4	A	0.31	LOS E	Y	-	-	-	Overall	4	A	0.31	LOS E	Y	-	-	-
18	McLoughlin Blvd & F Street	NBR	3	A	0.01	LOS E	Y	-	-	-	NBR	3	A	0.01	LOS E	Y	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	10	A	0.35	LOS E	Y	-	-	-	Overall	11	B	0.40	LOS E	Y	-	-	-
20	Mill Plain Blvd & Franklin Street	Overall	15	B	0.50	LOS E	Y	SBL	50	85	Overall	19	B	0.54	LOS E	Y	SBL	50	85
21	Mill Plain Blvd WB & Columbia Street	Overall	6	A	0.32	LOS E	Y	-	-	-	Overall	5	A	0.41	LOS E	Y	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	4	A	0.41	LOS E	Y	-	-	-	Overall	4	A	0.50	LOS E	Y	-	-	-
23	Mill Plain Blvd WB & Main Street	Overall	14	B	0.54	LOS E	Y	SBTR	250	300	Overall	19	B	0.70	LOS E	Y	WBLT/SBTR	190/255	200/320
24	Mill Plain Blvd WB & Broadway Street	Overall	4	A	0.49	LOS E	Y	-	-	-	Overall	5	A	0.58	LOS E	Y	-	-	-
25	Mill Plain Blvd WB & C Street	Overall	14	B	0.47	LOS E	Y	-	-	-	Overall	16	B	0.59	LOS E	Y	-	-	-
26	Mill Plain Blvd EB & Columbia Street	Overall	12	B	0.65	LOS E	Y	-	-	-	Overall	12	B	0.66	LOS E	Y	-	-	-
27	Mill Plain Blvd EB & Washington Street	Overall	9	A	0.43	LOS E	Y	-	-	-	Overall	8	A	0.43	LOS E	Y	-	-	-
28	Mill Plain Blvd EB & Main Street	Overall	10	A	0.53	LOS E	Y	-	-	-	Overall	8	A	0.59	LOS E	Y	SBLT	190	200
29	Mill Plain Blvd EB & Broadway Street	Overall	11	B	0.49	LOS E	Y	EBTR	200	230	Overall	9	A	0.58	LOS E	Y	-	-	-
30	Mill Plain Blvd EB & C Street	Overall	9	A	0.46	LOS E	Y	EBTR	215	225	Overall	8	A	0.48	LOS E	Y	-	-	-
31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	14	B	0.58	LOS D	Y	WBL	200	355	Overall	15	B	0.62	LOS D	Y	EBR/WBL	250/200	360/225
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	21	C	0.58	LOS D	Y	NBLT	300	355	Overall	46	D	0.62	LOS D	Y	WBT/NBL	465/250	595/355
33	Mill Plain Blvd & Fort Vancouver Way	Overall	17	B	0.55	LOS E	Y	NBLT	75	100	Overall	42	D	0.68	LOS E	Y	WBL/NBL	125/75	215/195
34	Evergreen Blvd & Columbia Street	Overall	12	B	0.38	LOS E	Y	-	-	-	Overall	12	B	0.38	LOS E	Y	-	-	-
35	Evergreen Blvd & Washington Street	Overall	19	B	0.39	LOS E	Y	-	-	-	Overall	22	C	0.42	LOS E	Y	SBLT	245	270
36	Evergreen Blvd & Main Street	Overall	10	B	0.44	LOS E	Y	-	-	-	Overall	11	B	0.44	LOS E	Y	-	-	-
37	Evergreen Blvd & Broadway Street	Overall	10	A	0.68	LOS E	Y	-	-	-	Overall	11	B	0.68	LOS E	Y	-	-	-

Performance Results

AM Peak Hour		2019 Existing Conditions								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
38	Evergreen Blvd & C Street	Overall	7	A	0.42	LOS E	Y	-	-	-
39	Evergreen Blvd & Fort Vancouver Way	Overall	2	A	0.14	LOS E	Y	-	-	-
40	8th Street & Columbia Street	Overall	6	A	0.50	LOS E	Y	-	-	-
41	8th Street & C Street	Overall	15	B	0.34	LOS E	Y	-	-	-
42	6th Street & Grant Street	WBL	7	A	0.18	LOS E	Y	-	-	-
43	6th Street & Esther Street	Overall	5	A	0.16	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	7	A	0.43	LOS E	Y	-	-	-
45	6th Street & Washington Street	Overall	13	B	0.40	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	5	A	0.41	LOS E	Y	-	-	-
47	6th Street & Broadway Street	EBL	5	A	0.03	LOS E	Y	-	-	-
48	6th Street & C Street	Overall	1	A	0.00	LOS D	Y	-	-	-
49	5th Street & Washington Street/I-5 SB On-Ramp	Overall	8	A	0.33	LOS D	Y	-	-	-
50	Phil Arnold Way & Esther Street	WBL	4	A	0.02	LOS E	Y	-	-	-
51	Phil Arnold Way & Columbia Street	EBL	4	A	0.04	LOS E	Y	-	-	-
52	Columbia Way & Esther Street	Overall	4	A	0.32	LOS E	Y	-	-	-
53	Columbia Way & Columbia Street	Overall	3	A	0.24	LOS E	Y	-	-	-
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)	Overall	18	B	0.50	LOS D	Y	EBR/NBL	115/50	135/120
55	Columbia Way & Columbia Shores Blvd	Overall	18	B	0.59	LOS E	Y	SB	245	360
56	Hayden Island Dr (South) & Center Ave	Overall	8	A	0.32	V/C = 1.1	Y	-	-	-
57	Hayden Island Dr (South) & Hayden Island Dr Connector to North	Overall	5	A	0.32	V/C = 1.1	Y	-	-	-
58	Hayden Island Dr (North) & Hayden Island Dr Connector to South	Overall	3	A	0.19	LOS D	Y	-	-	-
59	I-5 SB Hayden Island Off-Ramp & Center Ave/Tomahawk Island	Overall	9	A	0.44	V/C = 0.85	Y	-	-	-
60	I-5 NB Hayden Island Off-Ramp & Tomahawk Island Dr	NBR	3	A	0.05	V/C = 0.85	Y	-	-	-
61	Tomahawk Island Dr & Jantzen Dr	NBT	12	B	0.12	LOS D	Y	-	-	-
62	Center Ave & Jantzen Ave	EBL	7	A	0.07	LOS D	Y	-	-	-
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps	Overall	26	C	0.83	V/C = 0.85	Y	WBL/NBL/ SBLT/SBR	155/175/360/ 90	285/275/370/ 275
64	Marine Dr & Vancouver Way (Loop)	Overall	6	A	0.61	V/C = 0.99	Y	NBT/NBR	55/55	70/90
65	Marine Dr and Anchor Way	SBL	10	A	0.20	LOS D	Y	-	-	-
66	I-5 NB Off-Ramp & Union Ct/Marine Way	EBL	10	A	0.28	V/C = 0.85	Y	-	-	-
67	Victory Blvd & Expo Rd	Overall	10	B	0.18	V/C = 1.1	Y	-	-	-
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp	NBL	5	A	0.05	V/C = 0.85	Y	-	-	-
69	Victory Blvd & I-5 SB On-Ramp	WBL	3	A	0.10	V/C = 0.85	Y	-	-	-
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd	Overall	5	A	0.41	V/C = 0.85	Y	WBTR	100	140
71	Interstate Ave/Denver Ave & Schmeer Rd	Overall	6	A	0.61	V/C = 0.85	Y	-	-	-
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp	Overall	16	B	0.55	V/C = 0.85	Y	WBR	95	140
73	Columbia Blvd & MLK Blvd	Overall	25	C	0.55	V/C = 0.99	Y	NBL	150	195

2045 No-Build								
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
Overall	9	A	0.42	LOS E	Y	NBL	70	80
Overall	2	A	0.20	LOS E	Y	-	-	-
Overall	7	A	0.50	LOS E	Y	-	-	-
Overall	16	B	0.39	LOS E	Y	-	-	-
WBL	11	B	0.41	LOS E	Y	WBL	100	115
Overall	6	A	0.26	LOS E	Y	-	-	-
Overall	8	A	0.47	LOS E	Y	-	-	-
Overall	15	B	0.45	LOS E	Y	WBLT	200	210
Overall	7	A	0.67	LOS E	Y	-	-	-
EBL	15	C	0.21	LOS E	Y	-	-	-
Overall	3	A	0.00	LOS D	Y	-	-	-
Overall	8	A	0.44	LOS D	Y	-	-	-
WBL	5	A	0.04	LOS E	Y	-	-	-
EBL	7	A	0.08	LOS E	Y	-	-	-
Overall	5	A	0.33	LOS E	Y	SBL	55	60
Overall	4	A	0.28	LOS E	Y	-	-	-
Overall	108	F	0.65	LOS D	N	EBL/EBL/EBR/ NBL/SBL/SBT	855/855/115/ 50/955/955	1015/1130/23 5/160/965/10
Overall	27	C	0.72	LOS E	Y	EBL/WBR/SBLT	50/100/245	70/120/470
Overall	8	A	0.36	V/C = 1.1	Y	-	-	-
Overall	6	A	0.37	V/C = 0.85	Y	WBLR	85	95
Overall	4	A	0.30	LOS D	Y	-	-	-
Overall	11	B	0.50	V/C = 0.85	Y	-	-	-
NBR	3	A	0.07	V/C = 0.85	Y	-	-	-
NBL	13	B	0.20	LOS D	Y	NBLT	50	55
EBL	8	A	0.10	LOS D	Y	-	-	-
Overall	44	D	1.07	V/C = 0.85	N	EBL/WBL/NBL /SBLT/SBR	500/155/175/ 360/90	730/305/295/ 500/290
Overall	9	A	0.84	V/C = 0.99	Y	WBL/NBT/NB R	75/55/55	80/90/95
SBL	12	B	0.30	LOS D	Y	-	-	-
EBL	10	B	0.22	V/C = 0.85	Y	-	-	-
Overall	12	B	0.32	V/C = 0.85	Y	-	-	-
NBL	6	A	0.08	V/C = 1.1	Y	-	-	-
WBL	4	A	0.16	V/C = 0.85	Y	-	-	-
Overall	7	A	0.41	V/C = 0.85	Y	-	-	-
Overall	8	A	0.66	V/C = 0.85	Y	-	-	-
Overall	16	B	0.55	V/C = 0.85	Y	EBL/WBR	225/95	240/140
Overall	28	C	0.60	V/C = 0.99	Y	WBR/NBL/SB L	125/150/200	140/195/270

Performance Results

PM Peak Hour		2019 Existing Conditions								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
1	Ross Street & Main Street (Hwy 99)	Overall	5	A	0.45	LOS E	Y	-	-	-
2	Hazel Dell & Main Street (West) & stop controlled slip ramp	Overall	7	A	0.44	LOS D	Y	-	-	-
3	39th Street & Main Street	Overall	94	F	0.65	LOS E	N	EBL/WBL/ WBTR/NLB/ SBL	70/75/785/ 75/75	175/155/940/ 90/105
4	39th Street & I-5 SB On-/Off-Ramps	NBL	395	F	0.90	LOS D	N	EBTR/WBL/ NBLR	100/115/300	140/150/405
5	39th Street & I-5 NB On-/Off-Ramps	Overall	20	B	0.73	LOS D	Y	-	-	-
6	15th Ave & SR 500 WB Off-Ramp	Overall	8	A	0.46	LOS E	Y	-	-	-
7	15th Ave & SR 500 EB On-Ramp/39th Street	Overall	6	A	0.55	LOS E	Y	-	-	-
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps	Overall	19	B	0.59	LOS E	Y	-	-	-
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps	Overall	21	C	0.59	LOS E	Y	EBL/SBL	190/140	195/175
10	4th Plain Blvd & Main Street	Overall	27	C	0.63	LOS E	Y	WBL/WBTR/ NBL/NBR/SBL	130/195/70/ 70/50	155/230/110/ 140/90
11	4th Plain Blvd & Broadway Street	Overall	13	B	0.52	LOS E	Y	-	-	-
12	4th Plain Blvd & I-5 SB On-/Off-Ramps	Overall	11	B	0.62	LOS D	Y	SBL	100	130
13	4th Plain Blvd & I-5 NB On-/Off-Ramps	Overall	14	B	0.73	LOS D	Y	-	-	-
14	4th Plain Blvd & Saint Johns Blvd	Overall	12	B	0.48	LOS E	Y	-	-	-
15	4th Plain Blvd & Fort Vancouver Way	Overall	19	B	0.54	LOS E	Y	NBR/SBL	75/75	85/85
16	McLoughlin Blvd & Main Street	Overall	6	A	0.51	LOS E	Y	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	5	A	0.38	LOS E	Y	-	-	-
18	McLoughlin Blvd & F Street	NBT	7	A	0.01	LOS E	Y	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	10	A	0.38	LOS E	Y	-	-	-
20	Mill Plain Blvd & Franklin Street	Overall	15	B	0.55	LOS E	Y	NBL/SBL	50/50	60/80
21	Mill Plain Blvd WB & Columbia Street	Overall	20	B	0.40	LOS E	Y	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	8	A	0.45	LOS E	Y	-	-	-
23	Mill Plain Blvd WB & Main Street	Overall	14	B	0.58	LOS E	Y	-	-	-
24	Mill Plain Blvd WB & Broadway Street	Overall	13	B	0.57	LOS E	Y	-	-	-
25	Mill Plain Blvd WB & C Street	Overall	25	C	0.47	LOS E	Y	SBTR	235	280
26	Mill Plain Blvd EB & Columbia Street	Overall	42	D	0.66	LOS E	Y	EBLT/EBTR/ NBTR	390/390/235	395/400/270
27	Mill Plain Blvd EB & Washington Street	Overall	29	C	0.47	LOS E	Y	EBT/EBTR	230/230	275/280
28	Mill Plain Blvd EB & Main Street	Overall	33	C	0.67	LOS E	Y	EBLT/EBT/ EBTR/SBLT	205/205/205/ 190	270/285/265/ 195
29	Mill Plain Blvd EB & Broadway Street	Overall	43	D	0.57	LOS E	Y	EBLT/EBT/ EBTR/NBTR/ SBL	205/205/205/ 240/50	275/285/270/ 305/115
30	Mill Plain Blvd EB & C Street	Overall	35	C	0.71	LOS E	Y	EBLT/EBT/ EBTR/NBR/ SBL	215/215/215/ 285/195	305/315/305/ 285/200

2045 No-Build								
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
Overall	6	A	0.46	LOS E	Y	-	-	-
Overall	8	A	0.55	LOS D	Y	-	-	-
Overall	168	F	0.70	LOS E	N	EBL/EBTR/WB L/WBTR/NBL/ SBL	70/1425/75/7 85/75/75	175/1810/155 /980/120/130
NBL	490	F	1.10	LOS D	N	EBTR/WBL/W BT/NBLR	100/115/705/ 205	160/205/905/ 300
Overall	46	D	0.80	LOS D	Y	WBTR	315	395
Overall	12	B	0.50	LOS E	Y	-	-	-
Overall	7	A	0.62	LOS E	Y	-	-	-
Overall	19	B	0.72	LOS E	Y	SBT	190	215
Overall	23	C	0.72	LOS E	Y	EBL/SBL	190/140	250/170
Overall	30	C	0.67	LOS E	Y	WBL/WBTR/ NBL/NBT/NB R/SBL	130/195/70/2 70/70/50	160/215/125/ 285/170/100
Overall	14	B	0.58	LOS E	Y	-	-	-
Overall	13	B	0.70	LOS D	Y	EBL/EBT/SBL	170/170/100	180/170/135
Overall	15	B	0.79	LOS D	Y	EBL	230	255
Overall	13	B	0.60	LOS E	Y	-	-	-
Overall	25	C	0.62	LOS E	Y	EBL/SBL	75/75	115/90
Overall	7	A	0.52	LOS E	Y	-	-	-
Overall	6	A	0.31	LOS E	Y	-	-	-
NBR	3	A	0.01	LOS E	Y	-	-	-
Overall	11	B	0.39	LOS E	Y	NBL	80	95
Overall	17	B	0.59	LOS E	Y	NBL/SBL	50/50	75/85
Overall	38	D	0.47	LOS E	Y	WBLT	225	235
Overall	17	B	0.46	LOS E	Y	-	-	-
Overall	34	C	0.67	LOS E	Y	WBLT/WBT/ WBTR/SBTR	190/190/190/ 255	200/220/230/ 270
Overall	28	C	0.60	LOS E	Y	WBLT/WBT/ WBTR	220/220/220	235/235/235
Overall	60	E	0.58	LOS E	Y	WBLT/WBT/ WBTR/SBTR	395/395/395/ 235	440/440/435/ 295
Overall	52	D	0.78	LOS E	Y	EBLT/EBTR/N BTR/SBLT	390/390/235/ 175	395/415/300/ 215
Overall	23	C	0.49	LOS E	Y	EBT/EBT/EBT R	230/230/230	240/270/285
Overall	35	D	0.76	LOS E	Y	EBLT/EBT/EB TR/NBTR/SBL	205/205/205/ 215/190	250/260/275/ 225/230
Overall	26	C	0.60	LOS E	Y	EBLT/EBT/EB TR/NBR/SBL	205/205/205/ 240/50	255/260/270/ 265/95
Overall	28	C	0.75	LOS E	Y	EBLT/EBT/EB TR/SBL	215/215/215/ 195	280/295/290/ 205

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31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	32	C	0.84	LOS D	Y	EBT/WBL	395/200	510/255
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	26	C	0.84	LOS D	Y	EBL/NBLT	210/300	245/430
33	Mill Plain Blvd & Fort Vancouver Way	Overall	24	C	0.61	LOS E	Y	NBL/SBL	75	175
34	Evergreen Blvd & Columbia Street	Overall	14	B	0.38	LOS E	Y	EBL	50	60
35	Evergreen Blvd & Washington Street	Overall	19	B	0.47	LOS E	Y	-	-	-
36	Evergreen Blvd & Main Street	Overall	11	B	0.44	LOS E	Y	-	-	-
37	Evergreen Blvd & Broadway Street	Overall	12	B	0.68	LOS E	Y	-	-	-
38	Evergreen Blvd & C Street	Overall	16	B	0.42	LOS E	Y	NBL/SBL	70	95
39	Evergreen Blvd & Fort Vancouver Way	Overall	2	A	0.15	LOS E	Y	-	-	-
40	8th Street & Columbia Street	Overall	11	B	0.50	LOS E	Y	-	-	-
41	8th Street & C Street	Overall	16	B	0.33	LOS E	Y	-	-	-
42	6th Street & Grant Street	WBL	10	B	0.28	LOS E	Y	-	-	-
43	6th Street & Esther Street	Overall	5	A	0.18	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	14	B	0.53	LOS E	Y	-	-	-
45	6th Street & Washington Street	Overall	14	B	0.63	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	6	A	0.26	LOS E	Y	-	-	-
47	6th Street & Broadway Street	EBL	4	A	0.10	LOS E	Y	-	-	-
48	6th Street & C Street	Overall	1	A	0.00	LOS D	Y	-	-	-
49	5th Street & Washington Street/I-5 SB On-Ramp	Overall	15	B	0.40	LOS D	Y	-	-	-
50	Phil Arnold Way & Esther Street	WBL	5	A	0.04	LOS E	Y	-	-	-
51	Phil Arnold Way & Columbia Street	EBL	5	A	0.03	LOS E	Y	-	-	-
52	Columbia Way & Esther Street	Overall	6	A	0.34	LOS E	Y	-	-	-
53	Columbia Way & Columbia Street	Overall	4	A	0.27	LOS E	Y	-	-	-
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)	Overall	51	D	0.63	LOS D	Y	NBL/NBT/ NBR	50/245/125	165/320/135
55	Columbia Way & Columbia Shores Blvd	Overall	179	F	0.54	LOS E	N	EBL/WBT/ WBR/SBLTR	50/710/100/ 245	155/995/185/ 290
56	Hayden Island Dr (South) & Center Ave	Overall	9	A	0.40	V/C = 1.1	Y	-	-	-
57	Hayden Island Dr (South) & Hayden Island Dr Connector to North	Overall	9	A	0.39	V/C = 1.1	Y	WBLR	85	105
58	Hayden Island Dr (North) & Hayden Island Dr Connector to South	Overall	6	A	0.30	LOS D	Y	-	-	-
59	I-5 SB Hayden Island Off-Ramp & Center Ave/Tomahawk Island	Overall	9	A	0.42	V/C = 0.85	Y	-	-	-
60	I-5 NB Hayden Island Off-Ramp & Tomahawk Island Dr	NBR	2	A	0.05	V/C = 0.85	Y	-	-	-
61	Tomahawk Island Dr & Jantzen Dr	NBT	13	B	0.27	LOS D	Y	NBLT	50	65
62	Center Ave & Jantzen Ave	EBL	8	A	0.03	LOS D	Y	-	-	-
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps	Overall	59	E	0.92	V/C = 0.85	Y	EBL/NBL	500/175	825/235

2045 No-Build								
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
Overall	50	D	0.91	LOS D	Y	EBT	385	560
Overall	43	D	0.91	LOS D	Y	EBL/NBR	210/250	310/360
Overall	32	C	0.75	LOS E	Y	NBL	75	200
Overall	17	B	0.53	LOS E	Y	EBL	50	75
Overall	20	C	0.47	LOS E	Y	-	-	-
Overall	12	B	0.60	LOS E	Y	EBL	55	60
Overall	11	B	0.68	LOS E	Y	-	-	-
Overall	19	B	0.49	LOS E	Y	NBL	70	120
Overall	2	A	0.18	LOS E	Y	-	-	-
Overall	9	A	0.50	LOS E	Y	-	-	-
Overall	18	B	0.37	LOS E	Y	-	-	-
	41	E	0.66	LOS E	Y	WBL	100	150
Overall	6	A	0.27	LOS E	Y	-	-	-
Overall	19	B	0.65	LOS E	Y	EBL	100	140
Overall	19	B	0.70	LOS E	Y	WBLT/WBT	200/200	210/200
Overall	9	A	0.39	LOS E	Y	-	-	-
EBL	5	A	0.06	LOS E	Y	-	-	-
Overall	2	A	0.00	LOS D	Y	-	-	-
Overall	15	B	0.51	LOS D	Y	EBR	175	185
WBR	6	A	0.06	LOS E	Y	-	-	-
EBL	7	A	0.13	LOS E	Y	-	-	-
Overall	6	A	0.37	LOS E	Y	-	-	-
Overall	7	A	0.34	LOS E	Y	-	-	-
Overall	126	F	0.79	LOS D	N	EBR/NBL/NBT /NBR/SBL/SB L/SBT	115/50/245/1 25/375/955/9 55	230/150/265/ 145/390/1200 /1180
Overall	245	F	0.68	LOS E	N	EBL/EBTR/WB T/WBR/NBLT R/SBLTR	50/620/710/1 00/345/245	185/700/970/ 170/390/415
Overall	11	B	0.55	V/C = 1.1	Y	-	-	-
Overall	11	B	0.51	V/C = 0.85	Y	WBLR/SBL	85/100	110/100
Overall	12	B	0.41	LOS D	Y	EBL/NBL	85/80	95/105
Overall	13	B	0.53	V/C = 0.85	Y	-	-	-
NBR	3	A	0.09	V/C = 0.85	Y	-	-	-
NBL	19	C	0.53	LOS D	Y	NBLT	50	95
EBL	7	A	0.05	LOS D	Y	-	-	-
Overall	354	F	1.12	V/C = 0.85	N	EBL/EBL/EBT/ NBL/SBR	500/2140/214 0/175/90	765/2225/222 5/290/130

Performance Results

PM Peak Hour		2019 Existing Conditions									2045 No-Build								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
64	Marine Dr & Vancouver Way (Loop)	Overall	9	A	0.52	V/C = 0.99	Y	WBL/NBT/ NBR	0	85/105/75	Overall	13	B	0.70	V/C = 0.99	Y	WBL/NBT/NB R	75/55/55	105/195/110
65	Marine Dr and Anchor Way	SBL	11	B	0.19	LOS D	Y	-	-	-	SBL	13	B	0.30	LOS D	Y	-	-	-
66	I-5 NB Off-Ramp & Union Ct/Marine Way	EBL	14	B	0.14	V/C = 0.85	Y	-	-	-	EBL	24	C	0.10	V/C = 0.85	Y	-	-	-
67	Victory Blvd & Expo Rd	Overall	8	A	0.52	V/C = 1.1	Y	SBL	65	75	Overall	9	A	0.75	V/C = 0.85	Y	SBL	65	105
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp	NBL	10	B	0.28	V/C = 0.85	Y	-	-	-	NBL	14	B	0.42	V/C = 1.1	Y	NBR	100	125
69	Victory Blvd & I-5 SB On-Ramp	WBL	6	A	0.28	V/C = 0.85	Y	-	-	-	WBL	7	A	0.37	V/C = 0.85	Y	-	-	-
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd	Overall	9	A	0.57	V/C = 0.85	Y	WBT/WBTR	185/330	275/280	Overall	185	F	0.67	V/C = 0.85	Y	EBL/WBT/WBT	100/980/150	100/1300/235
71	Interstate Ave/Denver Ave & Schmeer Rd	Overall	10	B	0.47	V/C = 0.85	Y	-	-	-	Overall	21	C	0.72	V/C = 0.85	Y	WBR/NBTR	175/540	215/610
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp	Overall	9	A	0.48	V/C = 0.85	Y	WBR	95	115	Overall	10	A	0.54	V/C = 0.85	Y	WBR	95	140
73	Columbia Blvd & MLK Blvd	Overall	36	D	0.64	V/C = 0.99	Y	WBL/WBR/ NBL/SBL	140/125/150/ 200	210/210/240/ 320	Overall	46	D	0.77	V/C = 0.99	Y	EBL/WBL/WB R/NBL/SBL	140/125/150/1 275/290/230/:	

Performance Results

AM Peak Hour		2045 Modified LPA ¹								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
1	Ross Street & Main Street (Hwy 99)	Overall	3	A	0.34	LOS D	Y	-	-	-
2	Hazel Dell & Main Street (West) & stop controlled slip ramp	Overall	5	A	0.43	LOS D	Y	-	-	-
3	39th Street & Main Street	Overall	34	C	0.64	LOS E	Y	EBL/WBL/SBL	70/75/75	155/140/100
4	39th Street & I-5 SB On-/Off-Ramps	NBL	106	F	1.14	LOS D	N	EBTR/NBLR	100/205	170/300
5	39th Street & I-5 NB On-/Off-Ramps	Overall	20	B	0.71	LOS D	Y	WBTR	315	340
6	15th Ave & SR 500 WB Off-Ramp	Overall	9	A	0.49	LOS E	Y	-	-	-
7	15th Ave & SR 500 EB On-Ramp/39th Street	Overall	7	A	0.69	LOS E	Y	-	-	-
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps	Overall	16	B	0.56	LOS E	Y	-	-	-
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps	Overall	11	B	0.56	LOS E	Y	SBL	140	170
10	4th Plain Blvd & Main Street	Overall	131	F	0.78	LOS E	N	WBTR/SBL/SB TR	195/50/525	235/100/640
11	4th Plain Blvd & Broadway Street	Overall	7	A	0.42	LOS E	Y	-	-	-
12	4th Plain Blvd & I-5 SB On-/Off-Ramps	Overall	12	B	0.61	LOS D	Y	EBL	175	205
13	4th Plain Blvd & I-5 NB On-/Off-Ramps	Overall	23	C	0.57	LOS D	Y	-	-	-
14	4th Plain Blvd & Saint Johns Blvd	Overall	8	A	0.53	LOS E	Y	-	-	-
15	4th Plain Blvd & Fort Vancouver Way	Overall	12	B	0.51	LOS E	Y	-	-	-
16	McLoughlin Blvd & Main Street	Overall	8	A	0.59	LOS E	Y	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	5	A	0.32	LOS E	Y	-	-	-
18	McLoughlin Blvd & F Street	NBR	3	A	0.01	LOS E	Y	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	11	B	0.40	LOS E	Y	-	-	-
20	Mill Plain Blvd & Franklin Street	Overall	32	C	0.59	LOS E	Y	WBL/SBL	370/50	410/90
21	Mill Plain Blvd WB & Columbia Street	Overall	7	A	0.47	LOS E	Y	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	4	A	0.55	LOS E	Y	-	-	-
23	Mill Plain Blvd WB & Main Street	Overall	27	C	0.77	LOS E	Y	WBLT/WBT/W BTR/SBTR	190/190/190/ 255	245/250/235/ 20
24	Mill Plain Blvd WB & Broadway Street	Overall	16	B	0.90	LOS E	Y	WBLT/WBT/W BTR	220/220/220	290/300/265
25	Mill Plain Blvd WB & C Street	Overall	65	E	0.73	LOS E	Y	WBLT/WBT/W BTR	395/395/395	520/520/495
26	Mill Plain Blvd EB & Columbia Street	Overall	14	B	0.68	LOS E	Y	-	-	-
27	Mill Plain Blvd EB & Washington Street	Overall	10	B	0.43	LOS E	Y	-	-	-
28	Mill Plain Blvd EB & Main Street	Overall	11	B	0.63	LOS E	Y	SBLT	190	225
29	Mill Plain Blvd EB & Broadway Street	Overall	11	B	0.90	LOS E	Y	EBTR	205	230
30	Mill Plain Blvd EB & C Street	Overall	11	B	0.52	LOS E	Y	EBTR/SBT	215/195	230/200

2045 Modified LPA Design Option ²									
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
Overall	95	F	0.69	LOS E	N	EBT/EBTR/SB L	945/945/50	1090/1080/10 5	
Overall	27	C	0.50	LOS E	Y	WBLT/WBTR	225/225	300/265	
Overall	14	B	0.58	LOS E	Y	WBT/WBTR	200/200	250/250	
Overall	91	F	0.80	LOS E	N	WBLT/WBT/ WBTR/SBTR	190/190/190/ 255	255/255/255/ 320	
Overall	28	C	1.02	LOS E	Y	WBLT/WBT/ WBTR	220/220/220	295/305/285	
Overall	218	F	0.80	LOS E	N	WBLT/WBT/ WBTR	395/395/395	470/470/510	
Overall	371	F	0.76	LOS E	N	EBLT/EBTR/N BTR/SBLT	390/390/235/ 175	515/515/335/ 235	
Overall	85	F	0.47	LOS E	N	EBT/EBTR	230/230	325/315	
Overall	62	E	0.81	LOS E	Y	EBLT/EBT/EB TR/SBLT	205/205/205/ 190	290/295/290/ 250	
Overall	121	F	1.02	LOS E	N	EBLT/EBT/EB TR/NBTR/SBL T	205/205/205/ 240/50	275/275/265/ 355/80	
Overall	68	E	0.66	LOS E	Y	EBLT/EBT/EB TR/NBT/NBR	215/215/215/ 270/270/195	295/285/270/ 345/380/220	

Performance Results

AM Peak Hour		2045 Modified LPA ¹								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	34	C	0.62	LOS D	Y	SBL/SBR	1345/1345	1450/1545
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	20	B	0.62	LOS D	Y	-	-	-
33	Mill Plain Blvd & Fort Vancouver Way	Overall	25	C	0.70	LOS E	Y	WBL/NBL/NBT R/SBL/SBTR	125/75	140/140
34	Evergreen Blvd & Columbia Street	Overall	8	A	0.38	LOS E	Y	-	-	-
35	Evergreen Blvd & Washington Street	Overall	23	C	0.42	LOS E	Y	SBLT	245	270
36	Evergreen Blvd & Main Street	Overall	12	B	0.44	LOS E	Y	-	-	-
37	Evergreen Blvd & Broadway Street	Overall	17	B	0.68	LOS E	Y	-	-	-
38	Evergreen Blvd & C Street	Overall	78	E	0.60	LOS E	Y	WBL/NBL/NBT R/SBL/SBTR	50/70/485/65/ 240	75/150/585/8 0/305
39	Evergreen Blvd & Fort Vancouver Way	Overall	2	A	0.21	LOS E	Y	-	-	-
40	8th Street & Columbia Street	Overall	14	B	0.77	LOS E	Y	NBL/NBTR	65/215	145/325
41	8th Street & C Street	Overall	44	D	0.61	LOS E	Y	NBL/NBT/SBTR	75/220/485	120/270/550
42	6th Street & Grant Street	WBL	10	A	0.26	LOS E	Y	-	-	-
43	6th Street & Esther Street	Overall	6	A	0.14	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	16	B	0.60	LOS E	Y	NBL/NBTR	55/200	130/250
45	6th Street & Washington Street	Overall	10	A	0.40	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	5	A	0.25	LOS E	Y	-	-	-
47	6th Street & Broadway Street	SBL	6	A	0.06	LOS E	Y	-	-	-
48	6th Street & C Street/I-5 SB On-Ramp	NBT	7	A	0.47	LOS D	Y	-	-	-
49	5th Street & Washington Street	Overall	6	A	0.39	LOS D	Y	-	-	-
49A	5th Street & Main St	Overall	4	A	0.22	LOS E	Y	-	-	-
50	Phil Arnold Way & Esther Street	WBL	7	A	0.37	LOS E	Y	-	-	-
51	Phil Arnold Way & Columbia Street/SR-14 WB Off-ramp	EBL	17	B	0.62	LOS E	Y	SWLR/SWR	140/140	245/170
51A	Phil Arnold Way & Main St/SR 14 EB On-Ramp	Overall	3	A	0.13	LOS D	Y	-	-	-
52	Columbia Way & Esther Street	Overall	6	A	0.34	LOS E	Y	SBL	55	85
53	Columbia Way & Columbia Street	Overall	6	A	0.27	LOS E	Y	-	-	-
53A	Columbia Way & Main St	Overall	15	B	0.28	LOS E	Y	-	-	-
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)	Overall	83	F	0.63	LOS D	N	EBL/EBL/EBR/ NBL	855/855/115/ 50	905/1060/240 /155
55	Columbia Way & Columbia Shores Blvd	Overall	27	C	0.70	LOS D	Y	EBL/WBR/SBLT R	50/100/245	60/120/465
56	Hayden Island Dr (South) & Center Ave	Overall	6	A	0.48	LOS D	Y	-	-	-
57A	Hayden Island Dr (South) & Arterial Bridge Access Rd	Overall	10	B	0.79	LOS D	Y	-	-	-
58A	Hayden Island Dr (South) & Jantzen Dr	NBL	8	A	0.46	LOS D	Y	-	-	-

2045 Modified LPA Design Option ²									
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
Overall	232	F	0.68	LOS D	N	EBT/EBR/WB T/SBL/SBR	400/350/360/ 1345/1345	560/460/405/ 470/1905/188	
Overall	57	E	0.68	LOS D	N	-	-	-	
Overall	36	D	0.72	LOS E	Y	WBL/NBL	125/75	140/195	
Overall	8	A	0.43	LOS E	Y	-	-	-	
Overall	26	C	0.42	LOS E	Y	SBLT	245	275	
Overall	16	B	0.44	LOS E	Y	-	-	-	
Overall	15	B	0.68	LOS E	Y	-	-	-	
Overall	14	B	0.42	LOS E	Y	-	-	-	
Overall	2	A	0.21	LOS E	Y	-	-	-	
Overall	15	B	0.72	LOS E	Y	NBL/NBTR	65/215	155/320	
Overall	21	C	0.38	LOS E	Y	-	-	-	
WBL	10	B	0.30	LOS E	Y	-	-	-	
Overall	6	A	0.14	LOS E	Y	-	-	-	
Overall	16	B	0.60	LOS E	Y	NBL/NBTR	55/200	130/250	
Overall	8	A	0.40	LOS E	Y	-	-	-	
Overall	4	A	0.06	LOS E	Y	-	-	-	
SBR	4	A	0.02	LOS E	Y	-	-	-	
EB	1	A	0.00	LOS D	Y	-	-	-	
WBL	18	B	0.62	LOS E	Y	-	-	-	
Overall	3	A	0.13	LOS D	Y	-	-	-	

Performance Results

AM Peak Hour		2045 Modified LPA ¹									2045 Modified LPA Design Option ²								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
59	Center Ave & N Tomahawk Island Dr	Overall	10	B	0.40	LOS D	Y	-	-	-									
59A	Tomahawk Island Dr & Arterial Bridge Access	Overall	16	B	0.72	LOS D	Y	-	-	-									
61	Tomahawk Island Dr & Jantzen Dr	Overall	9	A	0.79	LOS D	Y	-	-	-									
62A	I-5 SB Hayden Island Off-Ramp & Tomahawk Island Dr	Overall	5	A	0.36	V/C = 0.75	Y	-	-	-									
62B	I-5 NB Hayden Island On-Ramp & Tomahawk Island Dr	Overall	2	A	0.43	V/C = 0.75	Y	-	-	-									
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps	Overall	217	F	0.83	V/C = 0.75	N	EBL/EBT/EBT	650/1100/1100	810/1410/1180									
64	Marine Dr & Vancouver Way	Overall	7	A	0.36	V/C = 0.80	Y	-	-	-									
64A	I-5 SB Marine Drive On-Ramp & N Pier 99 St	Overall	5	A	0.54	V/C = 0.75	Y	-	-	-									
64B	I-5 NB Marine Drive Off-Ramp & N Pier 99 St	Overall	4	A	0.51	V/C = 0.75	Y	-	-	-									
64C	N Vancouver Way & N Pier 99 St	Overall	8	A	0.51	V/C = 0.75	Y	-	-	-									
65	Marine Dr and Anchor Way	SBL	7	A	0.11	LOS D	Y	-	-	-									
67	Victory Blvd & Expo Rd	Overall	12	B	0.32	V/C = 0.75	Y	-	-	-									
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp	NBL	7	A	0.08	V/C = 0.75	Y	-	-	-									
69	Victory Blvd & I-5 SB On-Ramp	WBL	4	A	0.17	V/C = 0.75	Y	-	-	-									
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd	Overall	5	A	0.41	V/C = 0.75	Y	WBTR	100	135									
71	Interstate Ave/Denver Ave & Schmeer Rd	Overall	9	A	0.66	V/C = 0.75	Y	-	-	-									
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp	Overall	16	B	0.57	V/C = 0.75	Y	EBL/WBR	225/95	250/150									
73	Columbia Blvd & MLK Blvd	Overall	29	C	0.62	V/C = 0.75	Y	WBL/WBR/NB L/SBL	140/125/150/ 200	140/150/205/ 295									

¹The Modified LPA Alternative includes 2 P&R locations. The Evergreen Site 2 which is bounded by Broadway Street, C Street, E 8th Street, and E 7th Street and the Waterfront Site 3 which is located west of Columbia Street at the intersection of W 4th Street.

²The Modified LPA Design Option includes the same P&R locations as the Modified LPA Alternative.

Performance Results

PM Peak Hour		2045 Modified LPA ¹								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
1	Ross Street & Main Street (Hwy 99)	Overall	6	A	0.46	LOS D	Y	-	-	-
2	Hazel Dell & Main Street (West) & stop controlled slip ramp	Overall	8	A	0.50	LOS D	Y	-	-	-
3	39th Street & Main Street	Overall	137	F	0.68	LOS E	N	EBL/EBTR/WB L/WBTR/NBL/S BL	70/1425/75/7 85/75/75	175/1725/155 /955/110/120
4	39th Street & I-5 SB On-/Off-Ramps	NBL	291	F	1.07	LOS D	N	EBTR/WBL/W BT/NBLR	100/115/705/ 205	140/175/775/ 310
5	39th Street & I-5 NB On-/Off-Ramps	Overall	39	D	0.81	LOS D	Y	EBL/WBTR	125/315	125/390
6	15th Ave & SR 500 WB Off-Ramp	Overall	12	B	0.49	LOS E	Y	-	-	-
7	15th Ave & SR 500 EB On-Ramp/39th Street	Overall	7	A	0.60	LOS E	Y	-	-	-
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps	Overall	17	B	0.66	LOS E	Y	-	-	-
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps	Overall	20	B	0.66	LOS E	Y	EBL/SBL	190/140	210/175
10	4th Plain Blvd & Main Street	Overall	29	C	0.68	LOS E	Y	WBL/WBTR/N BL/NBR/SBL	130/195/70/7 0/50	165/235/120/ 155/100
11	4th Plain Blvd & Broadway Street	Overall	15	B	0.60	LOS E	Y	WBL	125	135
12	4th Plain Blvd & I-5 SB On-/Off-Ramps	Overall	12	B	0.52	LOS D	Y	EBL	175	185
13	4th Plain Blvd & I-5 NB On-/Off-Ramps	Overall	12	B	0.63	LOS D	Y	-	-	-
14	4th Plain Blvd & Saint Johns Blvd	Overall	18	B	0.65	LOS E	Y	EBL	115	140
15	4th Plain Blvd & Fort Vancouver Way	Overall	26	C	0.66	LOS E	Y	EBL/SBL	75/75	100/105
16	McLoughlin Blvd & Main Street	Overall	6	A	0.51	LOS E	Y	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	5	A	0.38	LOS E	Y	-	-	-
18	McLoughlin Blvd & F Street	NBR	3	A	0.01	LOS E	Y	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	11	B	0.39	LOS E	Y	NBL	80	85
20	Mill Plain Blvd & Franklin Street	Overall	16	B	0.62	LOS E	Y	NBL/SBL	50/50	65/85
21	Mill Plain Blvd WB & Columbia Street	Overall	32	C	0.48	LOS E	Y	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	31	C	0.47	LOS E	Y	WBL	200	205
23	Mill Plain Blvd WB & Main Street	Overall	36	D	0.67	LOS E	Y	WBLT/WBT/N BLT/SBTR	190/190/190/ 255	220/195/210/ 275
24	Mill Plain Blvd WB & Broadway Street	Overall	41	D	0.68	LOS E	Y	WBLT/WBT/SB TR	220/220/265	275/240/290
25	Mill Plain Blvd WB & C Street	Overall	120	F	0.57	LOS E	N	WBLT/WBT/W BTR/SBTR	395/395/395/ 235	520/510/510/ 315
26	Mill Plain Blvd EB & Columbia Street	Overall	49	D	0.80	LOS E	Y	EBLT/EBTR/NB TR/SBLT	90/390/235/17	35/455/305/200
27	Mill Plain Blvd EB & Washington Street	Overall	26	C	0.52	LOS E	Y	EBT/EBTR/SBL T	230/230/180	265/295/205
28	Mill Plain Blvd EB & Main Street	Overall	49	D	0.82	LOS E	Y	EBLT/EBT/EB R/NBTR/SBLT	205/205/205/ 215/190	240/265/275/ 260/210

2045 Modified LPA Design Option ²									
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
Overall	253	F	0.65	LOS E	N	EBL/EBT/EBT R/NBL/NBTR/ SBL/SBTR	160/945/945/ 50/485/50/38 0	220/1285/127 5/105/520/15 0/435	
Overall	19	B	0.48	LOS E	Y	WBLT/SBTR	225/255	265/325	
Overall	117	F	0.47	LOS E	N	WBL/WBT/SB TR	200/200/270	275/210/370	
Overall	156	F	0.68	LOS E	N	WBLT/WBT/ WBTR//NBLT /SBTR	190/190/190/ 190/255	250/250/200/ 245/320	
Overall	100	F	1.17	LOS E	N	WBLT/WBT/S BTR	220/220/265	280/295/330	
Overall	215	F	0.64	LOS E	N	WBLT/WBT/ WBTR/NBLT/ SBTR	395/395/395/ 195/235	495/530/550/ 245/290	
Overall	208	F	0.82	LOS E	N	EBLT/EBTR/N BTR/SBLT	390/390/235/ 175	565/450/270/ 245	
Overall	80	F	0.55	LOS E	N	EBT/EBTR/SB LT	230/230/180	275/260/215	
Overall	154	F	0.91	LOS E	N	EBLT/EBT/EB TR/NBTR/SBL T	205/205/205/ 215/190	255/270/235/ 265/235	

Performance Results

PM Peak Hour		2045 Modified LPA ¹									2045 Modified LPA Design Option ²								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
29	Mill Plain Blvd EB & Broadway Street	Overall	56	E	0.68	LOS E	Y	EBLT/EBT/EBT/ R/NBTR/SBL/S BT	205/205/205/ 240/50/200	230/250/270/ 345/140/220	Overall	276	F	1.17	LOS E	N	EBT/EBTR/NB TR/SBL	205/205/240/ 50	215/280/300/ 115
30	Mill Plain Blvd EB & C Street	Overall	53	D	0.97	LOS E	Y	EBLT/EBT/EBT/ R/NBT/NBR/S BL	215/215/215/ 270/270/195	270/280/295/ 360/355/260	Overall	123	F	1.14	LOS E	N	EBLT/EBT/EB TR/NBT/NBR /SBL	215/215/215/ 270/270/195	240/280/255/ 380/420/210
31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	86	F	1.04	LOS D	N	EBT/EBT/EBT/ SBR	75/375/375/1310	40/520/550/1380	Overall	182	F	1.61	LOS D	N	EBT/WBL/WB T/SBL/SBR	375/355/355/ 1315/1315	625/365/500/ 1795/1820
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	89	F	1.04	LOS D	N	EBL/EBL/NBL/ NBLT/NBR	75/355/595/595/1	400/730/740/630	Overall	331	F	1.61	LOS D	N	EBL/WBT/NB L/NBLT/NBR	355/645/595/ 595/350	490/820/640/ 650/600
33	Mill Plain Blvd & Fort Vancouver Way	Overall	30	C	0.64	LOS E	Y	NBL	75	205	Overall	64	E	0.77	LOS E	Y	WBL/WBT/W BTR/NBL/NB T/SBTR	125/620/620/ 75/685/550	175/715/770/ 235/910/650
34	Evergreen Blvd & Columbia Street	Overall	25	C	0.67	LOS E	Y	EBL/SBLTR	50/225	75/245	Overall	27	C	0.68	LOS E	Y	EBL/SBLTR	50/225	80/265
35	Evergreen Blvd & Washington Street	Overall	20	B	0.48	LOS E	Y	SBLT	245	255	Overall	23	C	0.48	LOS E	Y	SBLT	245	260
36	Evergreen Blvd & Main Street	Overall	12	B	0.62	LOS E	Y	-	-	-	Overall	14	B	0.63	LOS E	Y	-	-	-
37	Evergreen Blvd & Broadway Street	Overall	11	B	0.68	LOS E	Y	-	-	-	Overall	13	B	0.68	LOS E	Y	NBLT	240	245
38	Evergreen Blvd & C Street	Overall	41	D	0.71	LOS E	Y	WBL/NBL/NBT R/SBL	50/70/485/65	60/135/570/95	Overall	17	B	0.42	LOS E	Y	-	-	-
39	Evergreen Blvd & Fort Vancouver Way	Overall	3	A	0.19	LOS E	Y	-	-	-	Overall	3	A	0.19	LOS E	Y	NBLTR	510	555
40	8th Street & Columbia Street	Overall	11	B	0.59	LOS E	Y	NBL/NBTR	65/215	70/255	Overall	12	B	0.59	LOS E	Y	NBL/NBTR	65/215	90/325
41	8th Street & C Street	Overall	35	C	0.52	LOS E	Y	NBL/NBT	75/220	130/245	Overall	14	B	0.34	LOS E	Y	NBL	75	85
42	6th Street & Grant Street	WBL	23	C	0.41	LOS E	Y	-	-	-	WBL	24	C	0.45	LOS E	Y	WBL	100	165
43	6th Street & Esther Street	Overall	6	A	0.19	LOS E	Y	-	-	-	Overall	6	A	0.24	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	18	B	0.68	LOS E	Y	NBL/NBTR/SBL	55/200/60	95/245/70	Overall	20	B	0.77	LOS E	Y	NBL/NBTR/SB L	55/200/60	100/225/75
45	6th Street & Washington Street	Overall	12	B	0.45	LOS E	Y	-	-	-	Overall	11	B	0.41	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	8	A	0.25	LOS E	Y	EBL	50	65	Overall	6	A	0.13	LOS E	Y	EBL	50	60
47	6th Street & Broadway Street	SBL	9	A	0.14	LOS E	Y	-	-	-	SBR	7	A	0.03	LOS E	Y	-	-	-
48	6th Street & C Street/I-5 SB On-Ramp	EBR	7	A	0.41	LOS D	Y	-	-	-	EB	0	A	0.00	LOS D	Y	-	-	-
49	5th Street & Washington Street	Overall	4	A	0.38	LOS D	Y	-	-	-									
49A	5th Street & Main St	Overall	7	A	0.43	LOS E	Y	-	-	-	WBL	15	B	0.59	LOS E	Y	WBLTR/WBR	585/585	795/690
50	Phil Arnold Way & Esther Street	WBL	9	A	0.27	LOS E	Y	-	-	-	Overall	5	A	0.40	LOS D	Y	-	-	-
51	Phil Arnold Way & Columbia Street/SR-14 WB Off-ramp	EBL	10	A	0.59	LOS E	Y	-	-	-									
51A	Phil Arnold Way & Main St/SR 14 EB On-Ramp	Overall	5	A	0.40	LOS D	Y	-	-	-									
52	Columbia Way & Esther Street	Overall	6	A	0.44	LOS E	Y	-	-	-									
53	Columbia Way & Columbia Street	Overall	6	A	0.34	LOS E	Y	-	-	-									
53A	Columbia Way & Main St	Overall	9	A	0.24	LOS E	Y	-	-	-									
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)	Overall	64	E	0.72	LOS D	N	EBR/NBL/NBT/ NBR	115/50/245/1 25	150/150/265/ 155									

Performance Results

PM Peak Hour		2045 Modified LPA ¹									2045 Modified LPA Design Option ²								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
55	Columbia Way & Columbia Shores Blvd	Overall	295	F	0.63	LOS D	N	EBL/EBTR/WB T/WBR/NBLTR /SBLTR	50/620/710/1 00/345/245	190/755/930/ 165/470/370									
56	Hayden Island Dr (South) & Center Ave	Overall	6	A	0.47	LOS D	Y	-	-	-									
57A	Hayden Island Dr (South) & Arterial Bridge Access Rd	Overall	9	A	0.69	LOS D	Y	-	-	-									
58A	Hayden Island Dr (South) & Jantzen Dr	NBL	10	B	0.59	LOS D	Y	-	-	-									
59	Center Ave & N Tomahawk Island Dr	Overall	5	A	0.38	LOS D	Y	-	-	-									
59A	Tomahawk Island Dr & Arterial Bridge Access	Overall	14	B	0.64	LOS D	Y	-	-	-									
61	Tomahawk Island Dr & Jantzen Dr	EBL	19	C	1.11	LOS D	Y	WBL	85	90									
62A	I-5 SB Hayden Island Off-Ramp & Tomahawk Island Dr	Overall	8	A	0.42	V/C = 0.75	Y	-	-	-									
62B	I-5 NB Hayden Island On-Ramp & Tomahawk Island Dr	Overall	3	A	0.64	V/C = 0.75	Y	-	-	-									
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps	Overall	70	E	0.76	V/C = 0.75	N	-	-	-									
64	Marine Dr & Vancouver Way	Overall	14	B	0.94	V/C = 0.80	N	-	-	-									
64A	I-5 SB Marine Drive On-Ramp & N Pier 99 St	Overall	5	A	0.37	V/C = 0.75	Y	-	-	-									
64B	I-5 NB Marine Drive Off-Ramp & N Pier 99 St	Overall	4	A	0.38	V/C = 0.75	Y	-	-	-									
64C	N Vancouver Way & N Pier 99 St	Overall	8	A	0.46	V/C = 0.75	Y	-	-	-									
65	Marine Dr and Anchor Way	SBL	11	B	0.31	LOS D	Y	-	-	-									
67	Victory Blvd & Expo Rd	Overall	9	A	0.69	V/C = 0.75	Y	SBL	65	95									
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp	NBL	14	B	0.36	V/C = 0.75	Y	NBR	100	115									
69	Victory Blvd & I-5 SB On-Ramp	WBL	7	A	0.32	V/C = 0.75	Y	-	-	-									
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd	Overall	13	B	0.59	V/C = 0.75	Y	-	-	-									
71	Interstate Ave/Denver Ave & Schmeer Rd	Overall	22	C	0.81	V/C = 0.75	Y	WBR/NBTR	175/540	185/635									
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp	Overall	20	C	0.66	V/C = 0.75	Y	WBR	95	235									
73	Columbia Blvd & MLK Blvd	Overall	71	E	0.81	V/C = 0.75	Y	EBL/EBR/WBL/ WBT/WBT/WB R/NBL/SBL	140/300/140/ 710/125/150/ 200	295/390/280/ 895/305/225/ 365									

¹The Modified LPA Alternative includes 2 P&R locations. The Evergreen Site 2 which is bounded by Broadway Street, C Street, E 8th Street, and E 7th Street and the Waterfront Site 3 which is located west of Columbia Street at the intersection of W 4th Street.

²The Modified LPA Design Option includes the same P&R locations as the Modified LPA Alternative.

Performance Results

AM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³									2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴									
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
1	Ross Street & Main Street (Hwy 99)																			
2	Hazel Dell & Main Street (West) & stop controlled slip ramp																			
3	39th Street & Main Street																			
4	39th Street & I-5 SB On-/Off-Ramps																			
5	39th Street & I-5 NB On-/Off-Ramps																			
6	15th Ave & SR 500 WB Off-Ramp																			
7	15th Ave & SR 500 EB On-Ramp/39th Street																			
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps																			
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps																			
10	4th Plain Blvd & Main Street																			
11	4th Plain Blvd & Broadway Street																			
12	4th Plain Blvd & I-5 SB On-/Off-Ramps																			
13	4th Plain Blvd & I-5 NB On-/Off-Ramps																			
14	4th Plain Blvd & Saint Johns Blvd																			
15	4th Plain Blvd & Fort Vancouver Way																			
16	McLoughlin Blvd & Main Street	Overall	8	A	0.59	LOS E	Y	-	-	-	Overall	8	A	0.59	LOS E	Y	-	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	5	A	0.32	LOS E	Y	-	-	-	Overall	4	A	0.32	LOS E	Y	-	-	-	-
18	McLoughlin Blvd & F Street	NBR	3	A	0.01	LOS E	Y	-	-	-	NBR	3	A	0.01	LOS E	Y	-	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	11	B	0.40	LOS E	Y	-	-	-	Overall	11	B	0.40	LOS E	Y	-	-	-	-
20	Mill Plain Blvd & Franklin Street	Overall	34	C	0.59	LOS E	Y	WBL/SBL	370/50	400/85	Overall	41	D	0.59	LOS E	Y	WBL/SBL	370/50	420/90	
21	Mill Plain Blvd WB & Columbia Street	Overall	6	A	0.46	LOS E	Y	-	-	-	Overall	6	A	0.47	LOS E	Y	-	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	4	A	0.59	LOS E	Y	-	-	-	Overall	4	A	0.55	LOS E	Y	-	-	-	-
23	Mill Plain Blvd WB & Main Street	Overall	25	C	0.77	LOS E	Y	WBLT/WBT/WBTR/SBTR	190/190/190/255	245/245/235/320	Overall	27	C	0.77	LOS E	Y	WBLT/WBT/WBTR/SBTR	190/190/190/255	240/250/245/320	
24	Mill Plain Blvd WB & Broadway Street	Overall	16	B	0.90	LOS E	Y	WBLT/WBT/WBTR	220/220/220	295/310/260	Overall	18	B	0.90	LOS E	Y	WBLT/WBT/WBTR	220/220/220	285/305/275	
25	Mill Plain Blvd WB & C Street	Overall	76	E	0.73	LOS E	Y	WBLT/WBT/WBTR	395/395/395	525/515/490	Overall	90	F	0.73	LOS E	N	WBLT/WBT/WBTR	395/395/395	515/510/495	
26	Mill Plain Blvd EB & Columbia Street	Overall	13	B	0.68	LOS E	Y	-	-	-	Overall	12	B	0.68	LOS E	Y	-	-	-	-
27	Mill Plain Blvd EB & Washington Street	Overall	10	A	0.43	LOS E	Y	-	-	-	Overall	10	A	0.43	LOS E	Y	-	-	-	-
28	Mill Plain Blvd EB & Main Street	Overall	10	B	0.61	LOS E	Y	SBLT	190	210	Overall	10	B	0.63	LOS E	Y	SBLT	190	225	
29	Mill Plain Blvd EB & Broadway Street	Overall	11	B	0.90	LOS E	Y	EBTR	205	230	Overall	11	B	0.90	LOS E	Y	EBTR/SBL	205/50	235/70	
30	Mill Plain Blvd EB & C Street	Overall	10	B	0.52	LOS E	Y	-	-	-	Overall	10	B	0.52	LOS E	Y	EBTR/SBL	215	225	
31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	28	C	0.62	LOS D	Y	SBL/SBR	1345/1345	1360/1470	Overall	42	D	0.62	LOS D	Y	SBL/SBR	1345/1345	1565/1655	
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	19	B	0.62	LOS D	Y	-	-	-	Overall	20	B	0.62	LOS D	Y	-	-	-	-
33	Mill Plain Blvd & Fort Vancouver Way	Overall	26	C	0.70	LOS E	Y	WBL/NBL	125/75	160/145	Overall	25	C	0.70	LOS E	Y	NBL	75	135	
34	Evergreen Blvd & Columbia Street	Overall	8	A	0.42	LOS E	Y	-	-	-	Overall	8	A	0.38	LOS E	Y	-	-	-	-
35	Evergreen Blvd & Washington Street	Overall	23	C	0.43	LOS E	Y	SBLT	245	285										
36	Evergreen Blvd & Main Street	Overall	11	B	0.44	LOS E	Y	-	-	-	Overall	12	B	0.44	LOS E	Y	-	-	-	-

Performance Results

AM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
37	Evergreen Blvd & Broadway Street	Overall	15	B	0.68	LOS E	Y	-	-	-
38	Evergreen Blvd & C Street	Overall	36	D	0.58	LOS E	Y	WBL/NBL/NBT R/SBTR	50/70/485/24 0	70/140/515/2 75
39	Evergreen Blvd & Fort Vancouver Way									
40	8th Street & Columbia Street	Overall	13	B	0.60	LOS E	Y	NBL/NBTR	65/215	165/330
41	8th Street & C Street	Overall	26	C	0.50	LOS E	Y	NBL/NBT	75/220	120/255
42	6th Street & Grant Street									
43	6th Street & Esther Street	Overall	6	A	0.19	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	17	B	0.62	LOS E	Y	NBL/NBTR	55/200	135/240
45	6th Street & Washington Street	Overall	10	A	0.40	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	5	A	0.25	LOS E	Y	-	-	-
47	6th Street & Broadway Street	NBR	6	A	0.05	LOS E	Y	-	-	-
48	6th Street & C Street/I-5 SB On-Ramp									
49	5th Street & Washington Street	Overall	6	A	0.47	LOS D	Y	-	-	-
49A	5th Street & Main St	Overall	5	A	0.24	LOS E	Y	-	-	-
50	Phil Arnold Way & Esther Street	NBL	7	A	0.37	LOS E	Y	-	-	-
51	Phil Arnold Way & Columbia Street/SR-14 WB Off-ramp	WBL	18	B	0.61	LOS E	Y	SWLR/SWR	140/140	260/185
51A	Phil Arnold Way & Main St/SR 14 EB On-Ramp	Overall	5	A	0.40	LOS D	Y	-	-	-
52	Columbia Way & Esther Street	Overall	6	A	0.34	LOS E	Y	SBL	55	80
53	Columbia Way & Columbia Street									
53A	Columbia Way & Main St	Overall	14	B	0.28	LOS E	Y	-	-	-
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)									
55	Columbia Way & Columbia Shores Blvd									
56	Hayden Island Dr (South) & Center Ave									
57A	Hayden Island Dr (South) & Arterial Bridge Access Rd									
58A	Hayden Island Dr (South) & Jantzen Dr									
59	Center Ave & N Tomahawk Island Dr									
59A	Tomahawk Island Dr & Arterial Bridge Access									
61	Tomahawk Island Dr & Jantzen Dr									
62A	I-5 SB Hayden Island Off-Ramp & Tomahawk Island Dr									
62B	I-5 NB Hayden Island On-Ramp & Tomahawk Island Dr									
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps									
64	Marine Dr & Vancouver Way									
64A	I-5 SB Marine Drive On-Ramp & N Pier 99 St									
64B	I-5 NB Marine Drive Off-Ramp & N Pier 99 St									
64C	N Vancouver Way & N Pier 99 St									

		2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴								
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)		
Overall	15	B	0.68	LOS E	Y	-	-	-		
Overall	47	D	0.57	LOS E	Y	WBL/NBL/NB TR/SBTR	50/70/485/24 0	70/140/515/2 90		
Overall	15	B	0.79	LOS E	Y	NBL/NBTR	65/215	165/335		
Overall	43	D	0.61	LOS E	Y	NBL/NBT/SBT R	75/220/485	120/255/530		
Overall	17	B	0.72	LOS E	Y	NBL/NBTR	55/200	130/245		
Overall	10	A	0.40	LOS E	Y	-	-	-		
Overall	5	A	0.26	LOS E	Y	-	-	-		
EBR	22	C	0.68	LOS E	Y	SWLR/SWR	585/585	780/680		
Overall	3	A	0.13	LOS D	Y	-	-	-		
Overall	8	A	0.46	LOS E	Y	SBL	100	145		
Overall	10	B	0.32	LOS E	Y	-	-	-		

Performance Results

AM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³									2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
65	Marine Dr and Anchor Way																		
67	Victory Blvd & Expo Rd																		
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp																		
69	Victory Blvd & I-5 SB On-Ramp																		
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd																		
71	Interstate Ave/Denver Ave & Schmeer Rd																		
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp																		
73	Columbia Blvd & MLK Blvd																		

³The P&R locations are assumed to be the Evergreen Site 1 which is west of I-5 between the Vancouver Community Library and a cinema complex and the Waterfront Site 1 which is between Columbia Street and Washington Street from W 4th Street to W 3rd Street

⁴The P&R locations are assumed to be the Evergreen Site 2 which is bounded by Broadway Street, C Street, E 8th Street, and E 7th Street and the Waterfront Site 2 which would be built underneath I-5 east of Washington Street

Performance Results

PM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³									2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴									
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
1	Ross Street & Main Street (Hwy 99)																			
2	Hazel Dell & Main Street (West) & stop controlled slip ramp																			
3	39th Street & Main Street																			
4	39th Street & I-5 SB On-/Off-Ramps																			
5	39th Street & I-5 NB On-/Off-Ramps																			
6	15th Ave & SR 500 WB Off-Ramp																			
7	15th Ave & SR 500 EB On-Ramp/39th Street																			
8	Saint Johns Blvd & SR 500 WB On-/Off-Ramps																			
9	Saint Johns Blvd & SR 500 EB On-/Off-Ramps																			
10	4th Plain Blvd & Main Street																			
11	4th Plain Blvd & Broadway Street																			
12	4th Plain Blvd & I-5 SB On-/Off-Ramps																			
13	4th Plain Blvd & I-5 NB On-/Off-Ramps																			
14	4th Plain Blvd & Saint Johns Blvd																			
15	4th Plain Blvd & Fort Vancouver Way																			
16	McLoughlin Blvd & Main Street	Overall	7	A	0.51	LOS E	Y	-	-	-	Overall	6	A	0.51	LOS E	Y	-	-	-	-
17	McLoughlin Blvd & Broadway Street	Overall	6	A	0.38	LOS E	Y	-	-	-	Overall	6	A	0.38	LOS E	Y	-	-	-	-
18	McLoughlin Blvd & F Street	NBR	3	A	0.01	LOS E	Y	-	-	-	NBR	3	A	0.01	LOS E	Y	-	-	-	-
19	McLoughlin Blvd & Fort Vancouver Way	Overall	11	B	0.39	LOS E	Y	NBL	80	85	Overall	11	B	0.39	LOS E	Y	NBL	80	90	90
20	Mill Plain Blvd & Franklin Street	Overall	21	C	0.62	LOS E	Y	NBL/SBL	50/50	65/85	Overall	24	C	0.62	LOS E	Y	NBL/SBL	50/50	65/90	65/90
21	Mill Plain Blvd WB & Columbia Street	Overall	17	B	0.48	LOS E	Y	-	-	-	Overall	20	B	0.48	LOS E	Y	-	-	-	-
22	Mill Plain Blvd WB & Washington Street	Overall	36	D	0.46	LOS E	Y	WBL	200	215	Overall	19	B	0.47	LOS E	Y	-	-	-	-
23	Mill Plain Blvd WB & Main Street	Overall	50	D	0.67	LOS E	Y	WBLT/WBT/WBTR/SBTR	190/190/190/255	240/200/200/290	Overall	28	C	0.67	LOS E	Y	WBLT/SBTR	190/255	200/265	200/265
24	Mill Plain Blvd WB & Broadway Street	Overall	38	D	0.67	LOS E	Y	WBLT/WBT	220/220	275/230	Overall	30	C	0.68	LOS E	Y	WBLT/WBT	220/220	265/240	265/240
25	Mill Plain Blvd WB & C Street	Overall	125	F	0.57	LOS E	N	WBLT/WBT/WBTR/SBTR	395/395/395/235	515/510/505/320	Overall	89	F	0.57	LOS E	N	WBLT/WBT/WBTR/SBTR	395/395/395/235	495/495/485/315	495/495/485/315
26	Mill Plain Blvd EB & Columbia Street	Overall	41	D	0.80	LOS E	Y	EBLT/EBTR/NBTR	390/390/235	440/450/300	Overall	47	D	0.80	LOS E	Y	EBLT/EBTR/NBTR/SBLT	390/390/235/175	415/430/305/180	415/430/305/180
27	Mill Plain Blvd EB & Washington Street	Overall	25	C	0.51	LOS E	Y	EBT/EBTR/SBLT	230/230/180	260/290/210	Overall	24	C	0.52	LOS E	Y	EBT/EBTR/SBLT	230/230/180	255/290/200	255/290/200
28	Mill Plain Blvd EB & Main Street	Overall	57	E	0.84	LOS E	Y	EBLT/EBT/EBTR/NBTR/SBLT	205/205/205/215/190	245/265/260/270/240	Overall	36	D	0.82	LOS E	Y	EBLT/EBT/EBTR/NBTR/SBLT	205/205/205/215/190	230/245/260/250/220	230/245/260/250/220
29	Mill Plain Blvd EB & Broadway Street	Overall	45	D	0.67	LOS E	Y	EBLT/EBT/EBTR/NBTR/SBLT	205/205/205/240/50	230/250/265/335/120	Overall	55	E	0.68	LOS E	Y	EBLT/EBT/EBTR/NBTR/SBLT/SBT	205/205/205/240/50/200	235/250/265/330/135/210	235/250/265/330/135/210
30	Mill Plain Blvd EB & C Street	Overall	47	D	0.98	LOS E	Y	EBLT/EBT/EBTR/NBT/NBR/SBL	215/215/215/270/270/195	265/280/280/365/355/260	Overall	53	D	0.97	LOS E	Y	EBLT/EBT/EBTR/NBT/NBR/SBL	215/215/215/270/270/195	280/285/295/365/355/260	280/285/295/365/355/260
31	Mill Plain Blvd & I-5 SB On-/Off-Ramps	Overall	86	F	1.04	LOS D	N	EBT/SBL/SBR	375/990/990	550/1045/1070	Overall	62	E	1.04	LOS D	N	EBT	375	545	545
32	Mill Plain Blvd & I-5 NB On-/Off-Ramps	Overall	94	F	1.04	LOS D	N	EBL/NBL/NBLT/NBR	355/595/595/350	400/745/750/630	Overall	72	E	1.04	LOS D	N	EBL/NBL/NBLT/NBR	355/595/595/350	390/690/685/550	390/690/685/550

Performance Results

PM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³								
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)
33	Mill Plain Blvd & Fort Vancouver Way	Overall	34	C	0.76	LOS E	Y	NBL	75	210
34	Evergreen Blvd & Columbia Street	Overall	17	B	0.59	LOS E	Y	EBL	50	75
35	Evergreen Blvd & Washington Street	Overall	20	C	0.48	LOS E	Y	SBLT	245	260
36	Evergreen Blvd & Main Street	Overall	12	B	0.63	LOS E	Y	-	-	-
37	Evergreen Blvd & Broadway Street	Overall	11	B	0.68	LOS E	Y	-	-	-
38	Evergreen Blvd & C Street	Overall	17	B	0.72	LOS E	Y	WBL/NBL	50/70	75/130
39	Evergreen Blvd & Fort Vancouver Way									
40	8th Street & Columbia Street	Overall	13	B	0.65	LOS E	Y	NBL/NBTR	65/215	75/285
41	8th Street & C Street	Overall	27	C	0.46	LOS E	Y	NBL/NBT	75/220	100/240
42	6th Street & Grant Street									
43	6th Street & Esther Street	Overall	6	A	0.19	LOS E	Y	-	-	-
44	6th Street & Columbia Street	Overall	19	B	0.70	LOS E	Y	NBL/NBTR	55/200	110/220
45	6th Street & Washington Street	Overall	12	B	0.45	LOS E	Y	-	-	-
46	6th Street & Main Street	Overall	7	A	0.27	LOS E	Y	EBL	50	65
47	6th Street & Broadway Street	SBL	9	A	0.15	LOS E	Y	-	-	-
48	6th Street & C Street/I-5 SB On-Ramp									
49	5th Street & Washington Street	Overall	11	B	0.46	LOS D	Y	-	-	-
49A	5th Street & Main St	Overall	10	A	0.01	LOS E	Y	EBLTR	200	205
50	Phil Arnold Way & Esther Street	EBL	9	A	0.27	LOS E	Y	-	-	-
51	Phil Arnold Way & Columbia Street/SR-14 WB Off-ramp	WBL	13	B	0.02	LOS E	Y	SWLR	140	155
51A	Phil Arnold Way & Main St/SR 14 EB On-Ramp	Overall	5	A	0.40	LOS D	Y	-	-	-
52	Columbia Way & Esther Street	Overall	6	A	0.44	LOS E	Y	-	-	-
53	Columbia Way & Columbia Street									
53A	Columbia Way & Main St	Overall	9	A	0.24	LOS E	Y	-	-	-
54	Columbia House Blvd & SR 14 EB/WB On-/Off-Ramp (SPUI)									
55	Columbia Way & Columbia Shores Blvd									
56	Hayden Island Dr (South) & Center Ave									
57A	Hayden Island Dr (South) & Arterial Bridge Access Rd									
58A	Hayden Island Dr (South) & Jantzen Dr									
59	Center Ave & N Tomahawk Island Dr									
59A	Tomahawk Island Dr & Arterial Bridge Access									
61	Tomahawk Island Dr & Jantzen Dr									
62A	I-5 SB Hayden Island Off-Ramp & Tomahawk Island Dr									
62B	I-5 NB Hayden Island On-Ramp & Tomahawk Island Dr									

2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴									
Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
Overall	31	C	0.76	LOS E	Y	NBL	75	210	
Overall	21	C	0.67	LOS E	Y	EBL/WBL/SBL TR	50/70/225	75/75/230	
Overall	12	B	0.62	LOS E	Y	-	-	-	
Overall	11	B	0.68	LOS E	Y	-	-	-	
Overall	41	D	0.71	LOS E	Y	WBL/NBL/NB TR/SBL	50/70/485/65	60/140/575/8 5	
Overall	13	B	0.67	LOS E	Y	NBL/NBTR	65/215	80/290	
Overall	33	C	0.52	LOS E	Y	NBL/NBT	75/220	130/245	
Overall	23	C	0.75	LOS E	Y	NBL/NBTR/SB L	55/200/60	110/215/75	
Overall	12	B	0.48	LOS E	Y	-	-	-	
Overall	8	A	0.25	LOS E	Y	EBL	50	75	
NBT	38	D	0.52	LOS E	Y	NBT/SWLR/S WR	345/140/140	395/235/145	
Overall	5	A	0.40	LOS D	Y	-	-	-	
Overall	23	C	0.42	LOS E	Y	EBL	150	160	
Overall	11	B	0.42	LOS E	Y	-	-	-	

Performance Results

PM Peak Hour		2045 Modified LPA Park and Ride Sites: Evergreen #1, Waterfront #1 ³									2045 Modified LPA Park and Ride Sites: Evergreen #2, Waterfront #2 ⁴									
#	Intersection	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	Approach/ Movement	Delay (s)	LOS	ICU/ v/c	Standard	Meets Standard	Queue Movement	Storage Length	95% Queue (ft)	
63	Marine Dr/MLK Blvd & I-5 NB/SB On-/Off-Ramps																			
64	Marine Dr & Vancouver Way																			
64A	I-5 SB Marine Drive On-Ramp & N Pier 99 St																			
64B	I-5 NB Marine Drive Off-Ramp & N Pier 99 St																			
64C	N Vancouver Way & N Pier 99 St																			
65	Marine Dr and Anchor Way																			
67	Victory Blvd & Expo Rd																			
68	Victory Blvd & Interstate Ave/Denver Ave NB Off-Ramp																			
69	Victory Blvd & I-5 SB On-Ramp																			
70	Victory Blvd & I-5 NB Off-Ramp/Whitaker Rd																			
71	Interstate Ave/Denver Ave & Schmeer Rd																			
72	Columbia Blvd & I-5 NB/SB On-/Off-Ramp																			
73	Columbia Blvd & MLK Blvd																			

³The P&R locations are assumed to be the Evergreen Site 1 which is west of I-5 between the Vancouver Community Library and a cinema complex and the Waterfront Site 1 which is between Columbia Street and Washington Street from W 4th Street to W 3rd Street

⁴The P&R locations are assumed to be the Evergreen Site 2 which is bounded by Broadway Street, C Street, E 8th Street, and E 7th Street and the Waterfront Site 2 which would be built underneath I-5 east of Washington Street