

Transportation Figure A-10 is a map illustrating the location of 42 screenlines. Thirty of these screenlines are part of the City's evaluative system for level of service (LOS) performance and correspond to the screenlines in Transportation Figure A-11. Twelve other screenlines (labeled as A1 - A12 on Transportation Figure A-10) focus geographically on Seattle's urban centers.

A screenline methodology is favored because it addresses the broader geographic impacts of development and travel patterns. The methodology recognizes that no single intersection or arterial operates in isolation. Motorists have choices, and they select particular routes based on a wide variety of factors such as avoiding blocking conditions, and minimizing travel times. Accordingly, this analytic methodology focuses on a "traffic-shed" where the screenlines measure groups of arterials among which drivers logically can choose to travel.

Transportation Figure A-11 lists for each screenline the current conditions and modeled traffic results for the evening peak hour in year 2035, in comparison to the LOS standard for each screenline. The standards are expressed as vehicle-to-capacity (v/c) ratios of 1.0 or 1.20, which indicates a level of use equivalent to 100 percent or 120 percent of rated roadway capacity, measured during peak commute times.

With the anticipated implementation of the Comprehensive Plan, the future transportation and circulation conditions in the 2035 evening peak hour at all of the screenlines will not exceed the City's adopted LOS standards for peak hour congestion.

This Plan includes policies to improve transit service and related transit capital facilities, as well as to improve non-motorized transportation facilities, to provide ways for people to avoid the traffic congestion inherent in dense urban centers and urban village areas.

These results are evaluated in more detail below.

- The forecasted screenline v/c ratios for the year 2035 evening peak hour range from 0.38 to 1.19.
- Future peak hour traffic conditions will continue to reflect patterns similar to today, with the

heaviest congestion at bridge locations including the Ballard Bridge (v/c = 1.19 northbound), the West Seattle Freeway and Spokane St. bridges (collectively a v/c = 1.15 westbound), the University and Montlake Bridges (collectively a v/c = 0.96 northbound and 1.06 southbound), and the Aurora Bridge (v/c = 0.94 northbound and 0.82 southbound).

- Congestion is also projected to increase in other locations as well. This is due to growth or, in some cases, related to future planned road improvements addressing automobiles and bicycles. With respect to the latter factor, this analysis makes conservative assumptions about potential loss of automobile travel lanes. As part of future projects such as bicycle-serving "cycle tracks," a determination would be made contemporaneous with that project whether and how automobile travel lanes would be diminished. This caveat applies to all references below to future bicycle projects.
- Volumes on Aurora Ave N, Lake City Way N, Greenwood Ave N, and 3rd Ave NW near the north city limits will continue to be heavy during evening commutes, and will contribute to conditions that approach or slightly exceed the rated capacity level by 2035. (Screenlines 1.11, 1.13).
- Volumes on MLK Jr. Way S., Rainier Ave S., and Renton Ave S. near the south city limits will continue to grow, and will contribute to greater use of capacity in the southbound peak direction, approaching the rated capacity level by 2035. (Screenline 4.11).
- Southbound volumes toward southeast Seattle measured at S. Jackson St. and at S. Spokane St will contribute to conditions that reach a v/c ratio of approximately 0.90, or using about 90 percent of rated capacity by 2035. This partly reflects the potential for changes in capacity related to future possible bicycle improvements (Screenlines 9.13 and 10.12). See above caveat about future bicycle improvements.

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Transportation Figure A-11  
**Level of Service:**  
**Screenline Volume-to-Capacity (V/C) Ratios**

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Level-of-Service Screenline No.	Screenline Location	Span of Streets	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
1.11	North City Limit	3rd Ave NW to Aurora Ave N	1.20	NB	0.70	NB	1.03
				SB	0.57	SB	0.80
1.12	North City Limit	Meridian Ave N to 15th Ave NE	1.20	NB	0.41	NB	0.76
				SB	0.32	SB	0.61
1.13	North City Limit	30th Ave NE to Lake City Way NE	1.20	NB	0.73	NB	0.96
				SB	0.63	SB	0.83
2	Magnolia	Magnolia Bridge to W. Emerson Place	1.00	EB	0.53	EB	0.56
				WB	0.55	WB	0.56
3.11	Duwamish River	West Seattle Freeway and S. Spokane St	1.20	EB	0.61	EB	0.69
				WB	0.87	WB	1.15
3.12	Duwamish River	1st Ave S and 16th Ave S	1.20	EB	0.35	EB	0.38
				WB	0.52	WB	0.55
4.11	South City Limit	M L King Jr Way to Rainier Ave S	1.00	NB	0.47	NB	0.57
				SB	0.63	SB	0.98
4.12	South City Limit	Marine View Drive SW to Myers Way S	1.00	NB	0.37	NB	0.56
				SB	0.42	SB	0.72
4.13	South City Limit	SR 99 to Airport Way S	1.00	NB	0.41	NB	0.58
				SB	0.45	SB	0.73
5.11	Ship Canal	Ballard Bridge	1.20	NB	0.99	NB	1.19
				SB	0.52	SB	0.72
5.12	Ship Canal	Fremont Bridge	1.20	NB	0.71	NB	0.79
				SB	0.54	SB	0.71
5.13	Ship Canal	Aurora Ave N Bridge	1.20	NB	0.81	NB	0.94
				SB	0.62	SB	0.82
5.16	Ship Canal	University and Montlake Bridges	1.20	NB	0.80	NB	0.96
				SB	0.87	SB	1.06
6.11	South of NW 80th St	Seaview Ave NW to 15th Ave NW	1.00	NB	0.45	NB	0.52
				SB	0.43	SB	0.49
6.12	South of NW 80th St	8th Ave NW to Greenwood Ave N	1.00	NB	0.66	NB	0.87
				SB	0.49	SB	0.77
6.13	South of NE 80th St	Linden Ave N to 1st Ave NE	1.00	NB	0.44	NB	0.55
				SB	0.27	SB	0.41
6.14	South of NE 80th St	5th Ave NE to 15th Ave NE	1.00	NB	0.65	NB	0.76
					0.53	SB	0.67

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Transportation Figure A-11 (Continued)  
**Level of Service:**  
**Screenline Volume-to-Capacity (V/C) Ratios**

Level-of-Service Screenline No.	Screenline Location	Segment	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
6.15	South of NE 80th St	20th Ave NE to Sand Point Way NE	1.00	NB	0.49	NB	0.64
				SB	0.47	SB	0.58
7.11	West of Aurora Ave N	Fremont Pl N to N 65th St	1.00	EB	0.48	EB	0.55
				WB	0.58	WB	0.66
7.12	West of Aurora Ave N	N 80th St to N 145th St	1.00	EB	0.50	EB	0.56
				WB	0.57	WB	0.66
8	South of Lake Union	Valley Street to Denny Way	1.20	EB	0.78	EB	0.92
				WB	0.78	WB	0.83
9.11	South of Spokane St	Beach Dr SW to W Marginal Way SW	1.00	NB	0.51	NB	0.59
				SB	0.58	SB	0.71
9.12	South of Spokane St	E Marginal Way S to Airport Way S	1.00	NB	0.47	NB	0.60
				SB	0.52	SB	0.71
9.13	South of Spokane St	15th Ave S to Rainier Ave S	1.00	NB	0.45	NB	0.67
				SB	0.58	SB	0.89
10.11	South of S Jackson St	Alaskan Way S to 4th Ave S	1.00	NB	0.56	NB	0.64
				SB	0.65	SB	0.84
10.12	South of S Jackson St	12th Ave S to Lakeside Ave S	1.00	NB	0.48	NB	0.74
				SB	0.58	SB	0.91
12.12	East of CBD	S Jackson St to Howell St	1.20	EB	0.35	EB	0.39
				WB	0.45	WB	0.52
13.11	East of I-5	NE Northgate Way to NE 145th St	1.00	EB	0.71	EB	0.84
				WB	0.59	WB	0.78
13.12	East of I-5	NE 65th St to NE 80th St	1.00	EB	0.44	EB	0.50
				WB	0.41	WB	0.53
13.13	East of I-5	NE Pacific St to NE Ravenna Blvd	1.00	EB	0.55	EB	0.62
				WB	0.54	WB	0.67
A1	North of Seneca St	1st Ave to 6th Ave	NA	NB	0.55	NB	0.67
					0.40	SB	0.59
A2	North of Blanchard	Elliott Ave to Westlake Ave	NA	NB	0.43	NB	0.55
				SB	0.36	SB	0.52
A3	East of 9th Ave	Lenora St to Pike St	NA	EB	0.36	EB	0.44
				WB	0.32	WB	0.43
A4	South of Mercer St	Elliott Ave W to Aurora Ave N	NA	NB	0.78	NB	0.93
					0.51	SB	0.78

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Transportation Figure A-11 (Continued)  
**Level of Service:**  
**Screenline Volume-to-Capacity (V/C) Ratios**

Level-of-Service Screenline No.	Screenline Location	Segment	LOS Standard	2013 PM Peak		2035 PM Peak	
				Dir.	V/C Ratios	Dir.	V/C Ratios
A5	East of 5th Ave N	Denny Way to Valley St	NA	EB	0.39	EB	0.55
				WB	0.40	WB	0.48
A6	North of Pine St	Melrose Ave E to 15th Ave E	NA	NB	0.45	NB	0.53
				SB	0.50	SB	0.63
A7	North of James St – E Cherry St	Boren Ave to 14th Ave	NA	NB	0.62	NB	0.72
				SB	0.57	SB	0.78
A8	West of Broadway	Yesler Way to E Roy St	NA	EB	0.50	EB	0.57
				WB	0.60	WB	0.71
A9	South of NE 45th St	7th Ave NE to Montlake Blvd NE	NA	NB	0.70	NB	0.79
				SB	0.70	SB	0.75
A10	East of 15th Ave NE	NE 45th St to NE 52nd St	NA	EB	0.52	EB	0.54
				WB	0.46	WB	0.53
A11	South of Northgate Way (N/NE 110th St)	N Northgate Way to Roosevelt Way NE	NA	NB	0.50	NB	0.66
				SB	0.49	SB	0.61
A12	East of 1st Ave NE	NE 100th St to NE Northgate Way	NA	EB	0.48	EB	0.61
					0.62	WB	0.88

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Results for areas around Seattle's six urban centers are summarized as follows.

**Downtown:** Screenlines 10.11, 12.12, A1, A2, and A3 pass through or along the edge of the Downtown Urban Center, some encompassing north-south avenues, and some encompassing east-west streets. Higher v/c ratios reflect higher future volumes on most avenues and streets, and increased congestion. However, for all five of these screenlines, the future v/c ratios will remain below 1.0 in 2035 with Comprehensive Plan implementation and thus meet LOS standards.

**Uptown:** For the Uptown Urban Center, screenline A4 is an east-west screenline south of Mercer St extending as far west as Elliott Ave W and east to include Aurora Ave N, while screenline A5 is drawn north-south between 5th Ave N. and Taylor Ave N. The predicted increase in congestion, reaching above a v/c ratio of 0.90 for northbound traffic, relates to major traffic volumes on Elliott Ave W, Aurora Ave N.

It also relates to a possible reduction in capacity on 5th Ave N if bicycle improvements reduce lanes for motorized vehicle travel. Measures of east-west travel congestion will worsen but remain well below a 1.0 v/c ratio; improvements enabling a two-way Mercer Street add capacity in the westbound direction.

**South Lake Union:** For the South Lake Union Urban Center, Screenline 8 is drawn north-south at Fairview Ave N. Volumes will continue to increase, and road improvements will continue to occur for a number of years into this planning period. The v/c ratios for both directions along this screenline will decline by 2035, with higher evening congestion levels in the eastbound direction reflected by a v/c ratio of 0.93. However, the ratio will remain below the 1.20 LOS standard for this screenline.

**First Hill/Capitol Hill:** Screenlines A6, A7, and A8 are drawn through the First Hill/ Capitol Hill Urban Center. Screenline 12.12 is on the west edge of

the First Hill/Capitol Hill Urban Center adjacent to Downtown. For all four of these screenlines, the year 2035 v/c ratios under the Comprehensive Plan will remain well below the 1.20 LOS standard that applies to Screenline 12.12. Although the findings for Screenline A7 and A8 illustrate a somewhat elevated congestion level in all directions in the area between Boren Ave and 14th Ave by 2035, near James Street, and for travel east-west across Broadway, these areas are currently often congested at peak hours.

**University District:** For the University District Urban Center, screenlines 5.16 and 13.13 cover the south and west boundaries of the Urban Center, while screenline A9 passes east-west through the Center and screenline A10 is drawn north-south through the Center. Higher v/c ratios suggest higher volumes and a degree of increased congestion by 2035. However, the year 2035 v/c ratios will be below 1.0 for all four of these screenlines in the peak commuting directions. At the University and Montlake Bridges, evening peak hour volumes will continue to be high, and the southbound volumes on the University Bridge are projected to exceed the northbound volumes. This may reflect the diverse range of destinations of University employees and students. Given the pass-through nature of many evening commuters, the projected volumes for Roosevelt Way NE and Montlake Blvd. NE would continue to be high and grow slightly by 2035.

**Northgate:** For the Northgate Urban Center, screenline A11 is drawn east-west just south of Northgate Way, while screenline A12 passes north-south just east of 1st Ave NE. Screenline 13.11 also measures east-west traffic crossing 5th Ave NE. The year 2035 v/c ratios for these three screenlines will worsen but remain below 1.0. The measures of east-west traffic both indicate increasing congestion that will reach v/c ratio levels of approximately 0.8 to 0.9, meaning much of the available capacity will be used by 2035. The analysis also shows relatively high volumes west of I-5, for westbound Northgate Way and for both directions of Meridian Ave N.

**State highway level of service standards**

There are two different types of State highways with segments in Seattle with two different Level of Service standards. The larger facilities are "Highways of Statewide Significance" (HSS), These are I-5, I-90, SR 99, SR 509, SR 519, SR 520, and SR 522. Highways of Statewide Significance include, at a minimum, interstate highways and other principal arterials needed to connect major communities in the state.

For all the HSS, the State defines a level of service standard of "D." RCW 36.70A.070(6)(a)(iii)(C) provides that local jurisdictions' Comprehensive Plans should indicate LOS for state-owned facilities, but specifies that local concurrency requirements do not apply to the HSS routes. Including LOS standards for HSS is a communication and coordination tool in local plans, so that the State of Washington has a current understanding of performance on their facilities. Accordingly, the State legislation that designates HSS also directs the State Transportation Commission to give higher priority for correcting identified deficiencies on highways of statewide significance.

Non-HSS facilities (also called "Highways of Regional Significance") in Seattle are SR 513, SR 523, and SR 99 (only those portions south of S Holden St). These highways are monitored by the Puget Sound Regional Council for regional planning purposes. For these highways the Level of Service standard is "E/mitigated."

**state-funded highway improvements & local improvements to State highways**

The City of Seattle will continue to coordinate with the Washington State Department of Transportation (WSDOT) for consistency in plans and projects. Transportation Figure A-12 shows the known anticipated major projects for the metropolitan area that will address State highways and facilities including ferries, and an indication of project status as applicable today and/or into the future until 2035.

These are the primary projects in the city and broader metropolitan area that will affect the functioning of portions of the State highway system

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