
CHAPTER 1

EXISTING CONDITIONS

Highway Location, Classification, and Function

State Route 99 North (SR 99 North) is a major north-south corridor in the Puget Sound region. This Route Development Plan (RDP) covers the SR 99 North corridor from the north end of the Battery Street tunnel in downtown Seattle to N. 145th Street (SR 523), which borders the city of Shoreline (see Figure I-1).

The SR 99 North corridor serves both local and regional trips. As one of the few continuous north-south facilities in Seattle, the vehicular traffic on SR 99 North is comprised of local and regional commuters as well as a significant volume of commercial and retail traffic. Often, when traffic accidents or incidents occur on Interstate 5 (I-5), SR 99 North serves as an alternate route for northbound and southbound vehicles.

SR 99 North is a heavily used transit corridor. Currently, five bus routes use the study corridor. Bus Route 358 is a trunk route on SR 99 North and serves the entire length of the study corridor from Denny Way to N. 145th Street. This route is in the top five routes for annual ridership within the King County Metro system and has an average weekday daily ridership over 7,200. Four other bus routes travel along a portion of the corridor.

SR 99 North is an important freight corridor. The southern half of the corridor is part of a T-1¹ freight route and the northern half of the corridor is part of a T-2 freight route. The T-1 freight route extends from SR 99 North and I-5 in south Seattle to Green Lake Way and moves 13,109,000 tons annually. The T-2 freight route extends from Green Lake Way to I-5 in Everett and moves 8,007,127 tons annually.

The corridor is not a designated bicycle route; however, bicycles do use the facility. See page 17 for a further description of bicycle facilities. Pedestrians also use the corridor with the majority of use occurring north of Green Lake.

This segment of SR 99 North is classified as a Highway of Statewide Significance and an Urban Principal Arterial by WSDOT; a Principal Arterial, Major Truck Route, and part of a Transit Priority Network by the City of Seattle; and is part of the National Highway System as designated by the Federal Highway Administration.

1. The Freight and Goods Transportation System (FGTS) is an inventory of freight movement by tonnage on Washington State highways, county roads, and city streets. Roadways that move 20,000 tons in 60 days or 100,000 tons per year are classified by the FGTS. Facilities that carry over 4 million tons annually are considered freight corridors of statewide significance. Routes are classified into 5 categories. T-1 routes move more than 10 million tons per year, T-2 routes move 4 million to 10 million tons per year, T-3 routes move 300,000 to 4 million tons per year, T-4 routes move 100,000 to 300,000 tons per year, and T-5 routes move 20,000 tons in 60 days. Sections of SR 99 fall into the T-1 and T-2 categories.

Access Management Classifications

Overview

Access Management is the process of balancing the competing needs of traffic movement and property access. In simple terms, it is the process that provides access to land development while simultaneously preserving the flow of traffic on the surrounding system in terms of safety, capacity, and speed.

Washington Administrative Codes (WAC) 468-51 and 468-52, which implement Revised Code of Washington 47.50, set guidelines for access to state highways. The guidelines classify all non-limited access state highways into one of five classes. The classifications allow for different levels of access based on the type of traffic and function of the surrounding land uses.

Applicable Classifications

The SR 99 North study corridor currently has three different access management classification designations as shown in Table 1-1 and Figure 1-1. Appendix A provides a more detailed description of these classifications.

Table 1-1 Access Management Classifications		
Class	Location	Mileposts (MP)
Class 1	End Battery St. Tunnel to Thomas St.	MP 32.44 to MP 32.58
Class 3	Thomas St. to N. 85th St.	MP 32.58 to MP 37.46
Class 4	N. 85th St. to N. 145th St.	MP 37.46 to MP 40.47
<p>Class 1: Carry high speed and/or high volume traffic movements safely and efficiently, and provide for interstate, interregional, and intercity travel needs and some intracity travel needs. Typically distinguished by a highly controlled, limited number of public and private connections, restrictive medians with limited median openings on multilane facilities, and infrequent signals. Minimum intersection spacing of 1.0 mile, though 0.5 mile spacing may be permitted when no other reasonable alternative exists. The minimum private access spacing shall be 1,320 feet.</p> <p>Class 3: Carry moderate traffic volumes at moderate travel speeds for medium and short travel distances providing for intercity, intracity, and intercommunity travel needs. Highways in this class are typically distinguished by planned restrictive medians and minimum distances between public and private connections. Desired intersection spacing of 0.5 mile or more. The minimum private access spacing shall be 330 feet.</p> <p>Class 4: Same as Class 3 except this class is typically distinguished by existing or planned nonrestrictive medians. Restrictive medians may be used as operational conditions warrant mitigating turning, weaving, and crossing conflict. Minimum connection spacing standards should be applied if adjoining properties are redeveloped. Desired intersection spacing of 0.5 mile or more. The minimum private access spacing shall be 250 feet.</p>		

Based on these classifications, the corridor was assessed to determine where the existing property access and intersection spacing does not meet the spacing standards

(the minimum spacing standards). The majority of existing private accesses along the corridor do not provide the spacing requirements specified in the WAC.

Existing Median Treatment

The median treatment on SR 99 North ranges from a restrictive median barrier in the southern section to an open two-way left-turn lane in the northern section as shown in Figure 1-1.

With the exception of the Aurora Bridge, SR 99 North from the southern project limits (MP 32.44) to N. 50th Street (MP 35.67) has a jersey type median barrier. From N. 50th Street to north of N. 63rd Street, the roadway is separated by paint stripes and curbing. From N. 63rd Street to N. 73rd Street jersey type median barrier is again present.

North of N. 73rd Street, numerous at-grade intersections exist, which allow traffic to cross SR 99 North from east to west. From N. 73rd Street to N. 86th Street, median curbing and islands are present allowing traffic to cross at the signalized intersections only. North of N. 86th Street, a center two-way left-turn lane is present with median curbing at and around signalized intersections. This median treatment continues to the northern project limit at N. 145th Street.

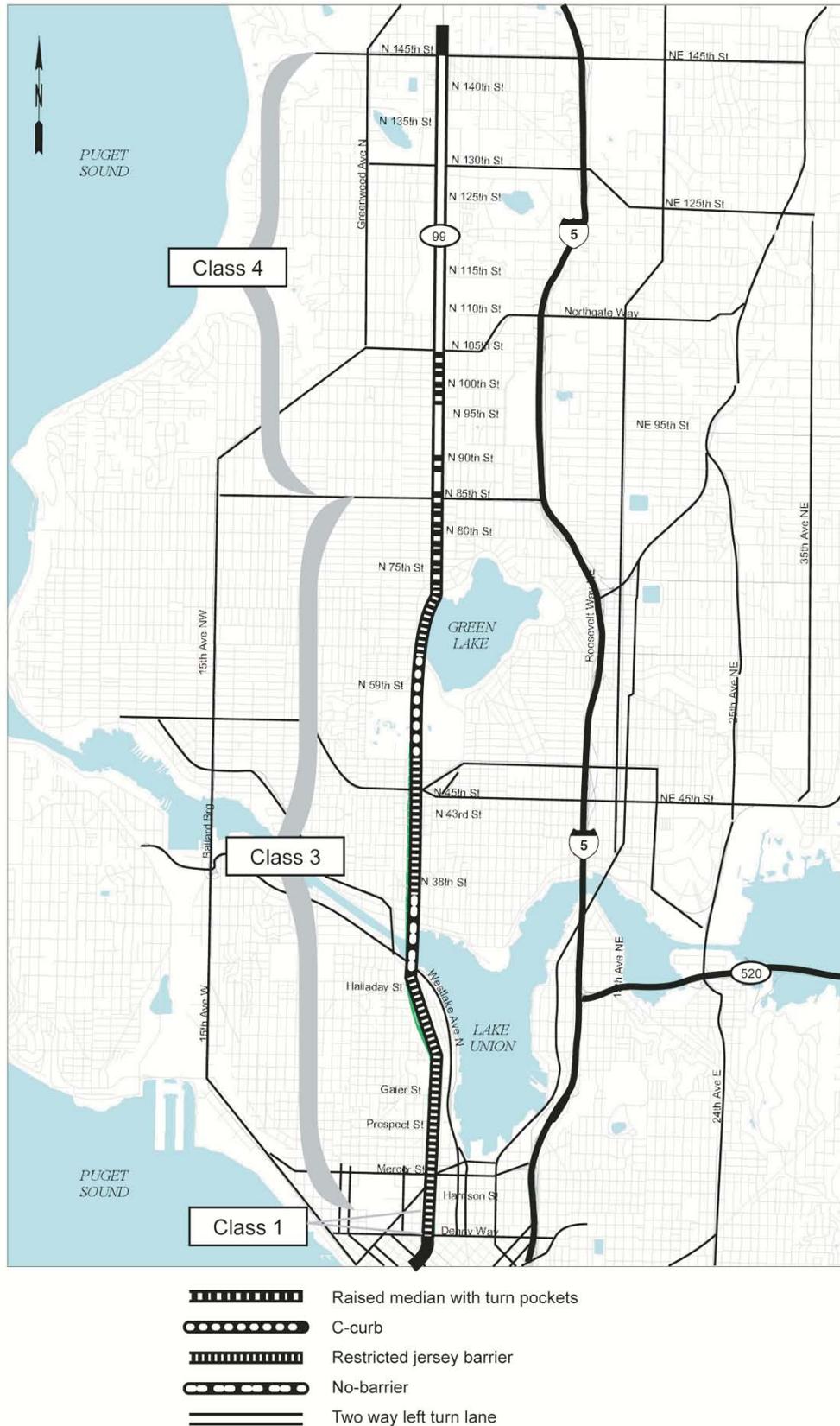
Zoning

The current land use zoning along the SR 99 North corridor varies but is primarily commercial. The City of Seattle has zoned property adjacent to SR 99 North as Commercial 1, Commercial 2, Commercial 3, Neighborhood Commercial 3, Low rise 3, and Single-Family Residential.

The adjacent land use south of Green Lake is a mix of both residential and commercial uses. North of Green Lake, the land use is primarily commercial with some areas of residential land use. Green Lake Park and Woodland Park are open space uses that directly abut the SR 99 North corridor.

The vast majority of land adjacent to SR 99 North is fully developed. Very few vacant lots or undeveloped parcels are present.

**Figure 1-1
Median Treatments and Access Classifications**

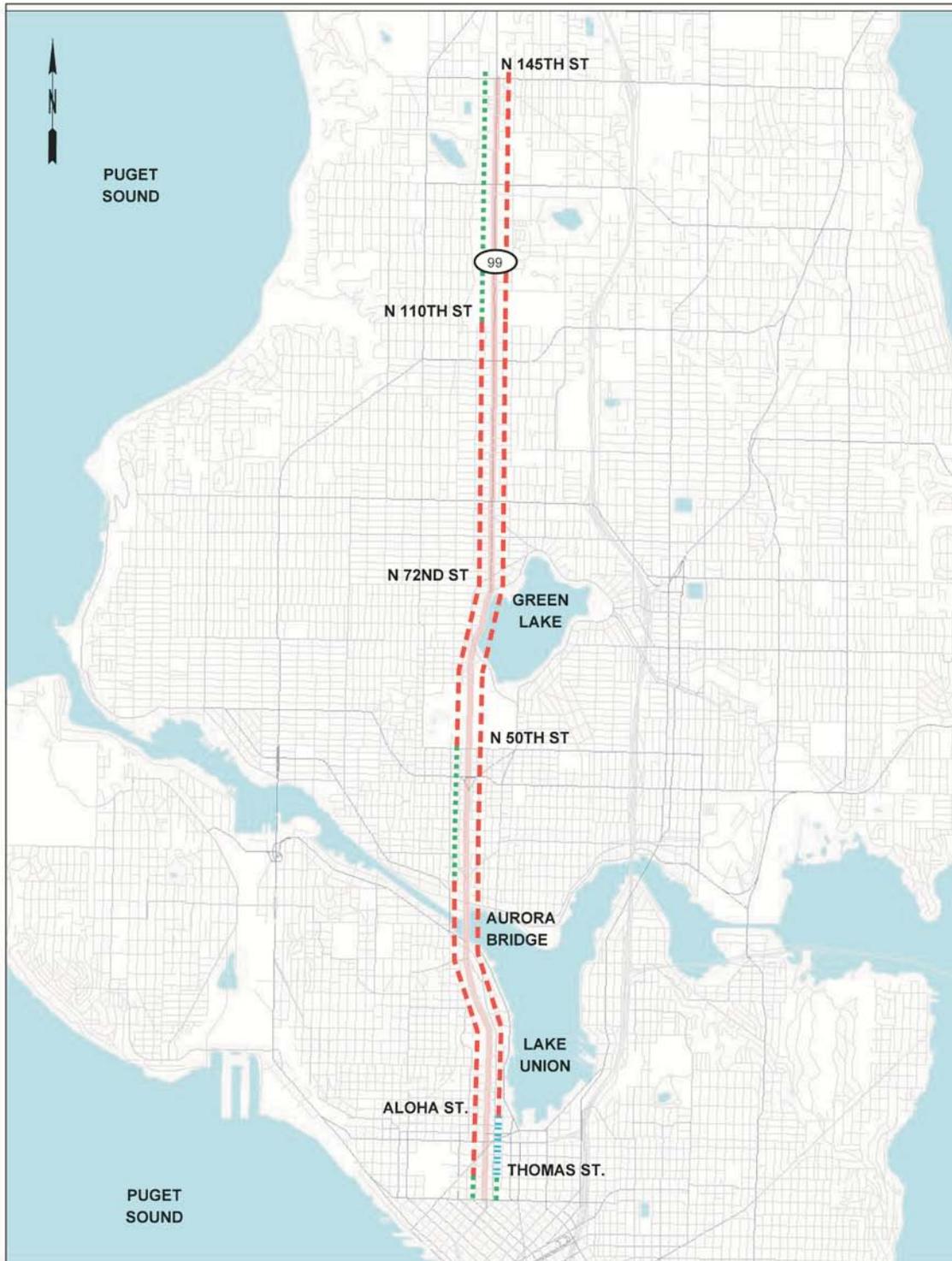


Lanes

SR 99 North study corridor has between two and four through lanes in each direction. The numbers of lanes vary based on geometric and on-street parking conflicts. Figure 1-2 details the areas that have two, three, and four lanes for the SR 99 North corridor. Table 1-2 details the typical widths for the corridor as well as the usage of the outside lane. The lane usage varies throughout the corridor including general-purpose lanes, turning lanes, parking, and business access and transit lane (BAT) uses. See Chapter 6: Long-Term Improvement Recommendations, for a description of proposed future lane widths with redevelopment.

Table 1-2 Lane Width and Function			
Street Limits	Typical Lane Widths	Outside Lane Function	
		Northbound	Southbound
Battery St Tunnel (MP 32.44) to Thomas St (MP 32.58)	All lanes 10 feet	General Purpose	General Purpose
Thomas St (MP 32.58) to Aloha St (MP 33.03)	All lanes 10 feet	Turn Lane	General Purpose
Aloha St (MP 33.03) to the south end of the Aurora Bridge (MP 34.17)	10 feet Inside 13 feet Outside	General Purpose	General Purpose
South end of the Aurora Bridge (MP 34.17) to the north end of the Aurora Bridge (MP 34.73)	All lanes 9.5 feet	General Purpose	General Purpose
North end of the Aurora Bridge (MP 34.73) to N. 50 th St (MP 35.67)	10 feet Inside 17 feet Outside	General Purpose and Parking ¹	General Purpose ²
N. 50th St (MP 35.67) to N. 72nd St (MP 36.81)	10 feet Inside 13 feet Outside	General Purpose	General Purpose
N. 72nd St (MP 36.81) to N. 110th St (MP 38.90)	10 feet Inside 13 feet Outside	General Purpose and Parking ¹	General Purpose and Parking ³
N. 110th St (MP 38.90) to N. 145th St (MP 40.47)	10 feet Inside 11 feet outside (NB) 12 feet outside (SB)	Business Access and Transit Lane	General Purpose
<ol style="list-style-type: none"> 1. Parking restricted northbound during p.m. peak traffic hours. 2. Parking and turn lanes provided outside general purpose lanes 3. Parking restricted southbound during a.m. peak traffic hours 			

Figure 1-2
Number of Lanes



LEGEND

- 2 LANES
- - - - 3 LANES
- 4 LANES

From the north end of the Battery Street Tunnel to Thomas Street, there are two through lanes in each direction. From Thomas Street to the north end of the Aurora Bridge, there are three lanes in each direction—with one northbound merge lane from the north end of the Thomas Street to Aloha Street. From the north end of the Aurora Bridge to N. 50th Street, there are three lanes northbound and two lanes southbound. With the exception of the p.m. peak period, the northbound outside lane allows parking; so only two lanes are continuous in this section.

From N. 50th Street to N. 72nd Street, three lanes are present in each direction. From N. 72nd Street to N. 110th Street, there are three lanes in each direction. The outside lanes in each direction allow parking except in the peak period to accommodate peak traffic volumes. There is currently an a.m. peak-period restriction from 6:00 a.m. – 9:00 a.m. southbound and a p.m. peak-period restriction from 3:00 p.m. – 7:00 p.m. northbound. From N. 110th Street to N. 145th Street, there are three lanes northbound and two lanes southbound. The northbound outside lane is restricted to business access, right-turning vehicles exiting SR 99 North, and transit.

Horizontal and Vertical Alignment

SR 99 North has a relatively straight alignment through the study area. South of the Aurora Bridge, SR 99 North has a series of horizontal curves and another series of horizontal curves occur north of the bridge around Green Lake. No vertical information was available, but the vertical alignment matches the rolling terrain of the area with no excessively steep grades.

The existing horizontal alignment has geometric elements that do not meet WSDOT Design Manual standards. These substandard geometric elements include horizontal stopping sight distance, super elevation rate, and compound curvature radii ratio. The vertical alignment was not evaluated since no information was readily available. Please see Chapter 4: Design Standards, for a more detailed description of these elements and the deficiencies.