Northwest King SMART Corridor

Corridor Description

The cities of Seattle (north of downtown), Shoreline, and Lake Forest Park make up this corridor. Most of the land use is urban or suburban in nature. Major commercial and retail centers exist in downtown Seattle and many of its neighborhood community centers, such as Northgate, the University District, Queen Anne, and Seattle Center. Other major trip generators in the corridor include the University of Washington, Seattle University, Seattle Pacific University, North Seattle Community College, Central Seattle Community College, and many hospitals and special events that occur at the Seattle Center.

Major employers in the corridor include:

- Children's Hospital
- University of Washington
- Swedish Medical Center
- City of Seattle
- King County
- Port of Seattle
- Group Health
- Providence Health
- Harborview Hospital

Existing Congestion and Mobility Conditions

Roadways: The following facilities operate at 70% of the posted speed limit during peak periods and therefore have been identified as a bottleneck and/or chokepoint by WSDOT:

- Segments of I-5 in Downtown Seattle, North Seattle and Shoreline
- SR 99 north of Aurora Bridge.
- SR 522 at I-5 interchange and from Shoreline city limits (NE 145th St) to Bothell.
- Montlake Blvd between Montlake Cut and N 45th St.
- SR 520 from I-5 to Bellevue
Arterials identified by the Regional Traffic Operators Committee as key arterials for freight, transit, high volume/capacity ratio and alternate routes to the interstate include:

- SR 99 (K17): between the Snohomish/King County line and the Pierce/King County line
- 1st Ave N/1st Ave S/Myers Way S/1st Ave S/SR 509/S 216th/SR 516/South Kent Des Moines Road/West Willis Street (K22): between Mercer Street (in Seattle) and Central Ave S (in Kent). This corridor is primarily in the Southwest King Corridor but a portion is in the Northwest King Corridor
- SR 522 (K27): between I-405 and I-5
- Greenwood Ave N/Holman Road NW/15th Ave W/Elliot Ave W (K29): between NE 145th Street/SR 523 and SR 99

**Pavement Conditions**: The following are the pavement condition index (PCI) scores for the Northwest King County SMART Corridor

<table>
<thead>
<tr>
<th>Condition</th>
<th>PCI Range</th>
</tr>
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<tbody>
<tr>
<td>Excellent</td>
<td>89-100</td>
</tr>
<tr>
<td>Good</td>
<td>67-88</td>
</tr>
<tr>
<td>Fair</td>
<td>49-66</td>
</tr>
<tr>
<td>Poor</td>
<td>21-48</td>
</tr>
<tr>
<td>Fail</td>
<td>&lt;20</td>
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<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2008 Weighted Avg.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seattle</td>
<td>68.2</td>
</tr>
<tr>
<td>Shoreline</td>
<td>73.9</td>
</tr>
<tr>
<td>Lake Forest Park</td>
<td>64.0</td>
</tr>
<tr>
<td>Unincorporated King County</td>
<td>75.8</td>
</tr>
<tr>
<td>King County Weighted Average*</td>
<td>70.6</td>
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</tbody>
</table>

* weighted by length of roadway segment (ft)

**Roadway Safety**: PSRC is building on the safety policy guidance outlined in VISION 2040 and aligning it with the goals, strategies and objectives identified in the Washington State Strategic Highway Safety Plan, Target Zero. This plan aims to reduce serious injury and fatality collisions to zero by 2030 by focusing on four priority areas that promote safer and smarter roadways, safer walkways and pathways for bicyclists or pedestrians, enhanced emergency response systems, and improved passenger and driver behavior. The following map identifies the locations of collisions that resulted in a serious injury or fatality in 2007.

**Ferries**: There are two ferry routes serving the Seattle waterfront:

- Seattle/Bainbridge Island auto & passenger service
- Seattle/Bremerton auto & passenger service

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20 Pavement Condition Index (PCI) scores are reported to WSDOT by individual jurisdictions, or are collected by WSDOT in the case of smaller cities, on a biennial basis. PCI scores are a composite measure representing environmental and structural distress on pavement and measured on a 0-100 scale where zero is the lowest. The scores presented in this document are not representative of a jurisdiction’s entire roadway network; rather they include the principal and minor arterials for which each jurisdiction has submitted PCI information per requirements of RCW 46.68.113. Scores have been weighted by the length of the measured roadway segments to present a more accurate representation of the condition of the arterial network.
Transit: All of King County is in King County Metro’s service area and the western portion is within Sound Transit’s service area. The Northwest King County Corridor is served by King County Metro (Metro) locally and regionally, and Sound Transit regionally from Seattle to the county border in Shoreline. Community Transit operates 10 commuter routes with service from Everett and Snohomish County to the University of Washington in the University District and 19 express bus routes between Snohomish County neighborhoods and downtown Seattle. Sound Transit contracts with Metro to provide two regional commuter service routes from East King County, and with Pierce Transit to provide one regional commuter service route from Tacoma to the University District. King County Metro provides 62 core city local routes and 31 commuter routes within Seattle, many of which serve the North Seattle Corridor. King County Metro also provides service to the Colman Dock in downtown Seattle.

Existing Transit Congestion: Existing transit congestion in this corridor is a combination of all five types of transit congestion, including pedestrian loading issues and high volume over capacity (V/C) ratios for seat availability. Several of the top 5% ridership routes in the PSRC region operate in this corridor, serving downtown Seattle with peak hour buses. Several types of congestion affect the transit service travel time: arterial congestion associated with high pedestrian volumes in downtown Seattle; high pedestrian loadings at stops; problems with bus re-entry from pullouts on arterials; problems with multiple buses in queues for bus stop; and general roadway congestion. North of downtown, the routes experiencing the greatest arterial congestion are along SR 99 N/Aurora Blvd, I-5, Lake City Way, and NW 15th Ave. New Business Access Transit (BAT) lanes on the southern end of NW 15th Ave are reducing the pullout congestion through the Interbay neighborhood.

Special Needs Transportation: To provide the most options to people with special transportation needs, King County Metro Transit provides all of their fixed-route transit with full ADA accessible vehicles. King County Metro’s ADA Paratransit Program provides next-day, shared rides on Access Transportation within 3/4 of a mile on either side of non-commuter fixed-route bus service during the times and on the days those routes are operating. Access is a shared-ride shuttle service for people who, because of their disability, are unable to ride the regular fixed-route bus service within King County. Eligibility is based on whether the disability prevents the rider from performing the tasks needed to ride regular bus service some or all of the time. Metro Transit, Pierce Transit, Community Transit, Everett Transit, Kitsap Transit, Intercity Transit, and Jefferson Transit have a joint paratransit eligibility agreement. Persons found eligible by any of those agencies can use paratransit service offered by the other agencies. Applications for eligibility are processed by the transit agency that serves the area where the rider lives.

Going beyond the required ADA services, through its Community Transportation Program, King County provides:

- Enhanced Access Transportation Service (expanded service area beyond the ¾-mile of fixed-route service, advance reservations, etc.)
- Taxi Scrip Program (allows disabled low-income residents to purchase taxi scrip at 50% discount)
• Transit Instruction Program (free training for persons with disabilities on how to ride regular transit)

• Community Access Transportation:
  - CAT Advantage Vans (Provides retired Access and vanpool vehicles to participating agencies, including emergency response, vehicle maintenance and repairs, driver training, and technical assistance)
  - CAT Vanworks (Provides retired Access and vanpool vehicles and pays the cost of standard Vanpool agreement on behalf of local agencies that have a number of clients who are eligible for Metro’s ADA Paratransit Access program and are traveling to work sites.)

Other transportation programs at Metro include:
• Job Access Transportation Program or JARC (Comprehensive approach to providing transportation to transition low-income and welfare reform clients into employment)
• Rideshare Operations (provides Ridematch, vanpool and Rideshare Plus for sharing the ride to work, school or other frequent destinations. Lift-equipped vehicles are available for vanpools.)
• Custom Bus (service for employers and schools. Routes are designed to meet the specific needs of the business or educational facility. Fares are based on the length of the trip; however, a current Regional Reduced Fare Permit, reduced fare sticker, or an Access Pass is valid for the fare.)
• Car sharing (King County Metro and the City of Seattle have joined with Mobility, Inc. to introduce the car sharing program, Zipcar, to the Seattle region. Local programs using Zipcar include use of Zipcar rental for traveling to job interviews, including a drop-off and pickup at daycare.)
• Bicycling (Every Metro bus has a bicycle rack that can accommodate two bikes, and many vanpools are also equipped for transporting bikes. No special permit or extra fare is required.)

Community Resources:
  - Hopelink coordinates transport to services covered by Medicaid through Medical Transportation Brokerage.
  - Crisis Clinic operates the Community Information Line providing information and referral assistance.
  - Senior Services has two programs to assist seniors:
    • Senior Shuttles, using both paid and volunteer drivers, transport seniors to hot meal programs, medical appointments, senior centers, grocery stores, and other local destinations. Service area and type of service is specific to each van. Senior Shuttles include the Mt Si Senior Center Shuttle in North Bend.
    • Senior Services Volunteer Transportation with volunteers driving their own vehicles providing transportation to seniors 60 years of age and older living throughout King County to medical and other essential appointments. Volunteers not only provide a ride but also wait with seniors at their appointments before driving them home, offering a helping hand and moral support.
- Findaride.org provides information and referral assistance by geographic area in King County.
- Seattle Indian Health Board provides transportation and referral services to low-income native, Alaska natives and other populations.
- Northshore Senior Center Transportation Program provides door-to-door service to Northshore & Kenmore Senior Centers and local medical appointments in the Bothell/Lake Forest Park area.

Beyond the transit agency-provided special needs transportation services listed above and on Findaride.org, numerous additional human services organizations have been identified as having a transportation role. Please also refer to Appendix C—Inventory of Services—in the PSRC 2011-2014 Coordinated Transit-Human Services Transportation Plan.

**TDM Programs:** Agencies and local businesses in the Northwest King SMART Corridor offer a range of demand management programs. There are a significant number of Commute Trip Reduction-affected employers, notably Seattle’s Children’s Hospital, implementing customized programs designed to encourage employees to commute via non-SOV modes. The southern portion of the corridor contains the highest density of these employers as well as the Downtown Seattle Growth and Transportation Efficiency Center (GTEC). Jurisdictions and transit agencies operating in the corridor implement various programs and services that support healthy communities and investments in alternative mode infrastructure such as vanpools and transit service as well as programs designed to discourage single-occupant vehicles.

**Transportation System Management and Operations:** Most of the core freeway system in the corridor is instrumented with cameras and detection equipment to provide data back to traveler information portals such as the WSDOT Flow map. Cameras and detection also assist with quickly identifying incidents from the traffic management centers. There are currently three traffic management centers in the corridor: WSDOT NW Region, Seattle, and King County. There are also roving incident management teams to assist with incident clearance and reduce related congestion and delay. Transit Signal Priority is in place on some major arterial routes as well as Metro’s Rapid Ride routes. Traffic signal coordination exists on some major arterials, but there is still a need for improved multi-agency coordination. Northwest King is included in various regionwide ITS programs such as 511, transit trip planning and the ORCA regional transit fare card. All major freeways are included in the WSDOT traveler information web and mobile applications displaying travel times.

**Bicycle and Pedestrian Facilities**\(^{21}\): There are several bicycle travel options in this corridor, including off-road facilities such as the Burke Gilman and Interurban trails, but critical gaps exist in the bikeway network. The trail system is more fully developed than the on-road bicycle network, which needs significant improvements to ensure it adequately accommodates bicycle travel. There are also some difficult roadway and bridge crossings and a need to improve

\(^{21}\) Existing conditions provided in fall 2009 by participants in the Bicycle and Pedestrian Advisory Committee.
east/west connections throughout the corridor, such as a connection between the Burke Gilman and Interurban trails through Shoreline and Lake Forest Park. There is some wayfinding signage.

Many arterials north of 85th Street have no sidewalks. Nonetheless, the street network in much of this area (particularly Shoreline and North Seattle proper) is laid out in some form of a grid pattern highly conducive to walking. So, despite the scarcity of sidewalks in much of this area, there is great potential to improve walkability if safe facilities are provided. The sidewalk system south of North 85th Street is nearly complete, with a relatively small number of gaps in the network. In contrast, the street network in Lake Forest Park does not follow a grid and has limited sidewalks.

Street crossing improvements throughout the corridor are needed, particularly across a number of major arterials such as Aurora Avenue/Pacific Highway, and Lake City/Bothell Way. The poor quality of crossing facilities, as well as the long distance between crossing points, makes long sections of many of these busy arterials into major pedestrian barriers dividing neighborhoods. Areas that are perceived to be unsafe discourage walking.

Pedestrian access to transit service varies in quantity and quality, with some routes lacking covered waiting areas, route information, and benches. Pedestrian access improvements are needed to access the bus rapid transit service currently programmed for Aurora Avenue N and 15th Avenue NE in King County.

**Bicycle and Pedestrian Safety:** As part of the Target Zero safety efforts, schools in the Northwest King County SMART Corridor have been focusing on the Safe Routes to School approach, successfully obtaining grants to develop their programs. Supporting safe and healthy students, the Seattle Public School District offers:

- Safe Routes Maps for all Schools serving K-5 students
- A District-wide School Traffic & Safety Committee
- Assistance to School Safety Patrols

Multiple schools in the Seattle School District, including Lawton Elementary in Interbay, have implemented Walking School Bus programs, where parents escort a group of walking students to school and back home each day.

**Bicycle Parking:** King County Metro and Sound Transit offer secure bicycle lockers at park-and-ride lots and transit centers as well as bicycle racks on buses. As of February 2009, there is a waitlist for lockers at the Green Lake and Montlake park-and-ride lots. In 2008 King County Metro began a demonstration/pilot project on the SR 520 Bridge allowing deadheading coaches to provide free bike service in either direction between Montlake and Evergreen Point. This frees up capacity for cyclists making longer trips using regular in-service coaches across the lake. It also supports the increase in cyclists traveling across the SR 520 Bridge, which has no
pedestrian or bicycle access. There is very limited information on the availability of bicycle racks and end-of-trip facilities such as lockers and showers.

**Freight:** All of the major facilities identified within the Northwest King SMART Corridor are significant to freight and are classified as either T1 or T2 on the State of Washington’s freight tonnage classification system, each moving more than 4-10 million tons per year. This corridor contains designated regional growth centers which are likely to generate smaller specialized deliveries. This Northwest King SMART Corridor also includes the Ballard-Interbay designated manufacturing industrial center (BINMIC) which serves as a freight generator for a variety of commercial vehicle movements. It is important to note that 15th Avenue NW is a T1/T2 freight route only through the BINMIC, not north of it. Likewise, SR 99 is a T1/T2 freight route south of 65th Street and north of 145th Street. This is important because it means SR 99 is being used for local deliveries rather than longer distance freight travel.

**Park-and-Ride Lots:** The Northwest King SMART Corridor contains eight major (over 250 stalls) and 22 smaller (fewer than 250 stalls) park-and-ride lots in the corridor, totaling 3,009 stalls with an average utilization of 77% (2009). In April 2009 the Thornton Place Lot opened and in May 2009 the Northgate North and Northgate park-and-ride lots closed.

<table>
<thead>
<tr>
<th>Park-and-Ride Lot</th>
<th>2009 Capacity</th>
<th>2009 Occupancy</th>
<th>2009 Utilization</th>
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<tbody>
<tr>
<td>5th Ave NE/NE 133rd St</td>
<td>46</td>
<td>13</td>
<td>28%</td>
</tr>
<tr>
<td>Aurora Church of Nazarene</td>
<td>116</td>
<td>138</td>
<td>119%</td>
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<tr>
<td>Aurora Village Transit Center</td>
<td>202</td>
<td>198</td>
<td>98%</td>
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<tr>
<td>Bethel Lutheran Church</td>
<td>40</td>
<td>25</td>
<td>62%</td>
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<tr>
<td>Calvary Christian Assembly Church</td>
<td>125</td>
<td>101</td>
<td>81%</td>
</tr>
<tr>
<td>Greenlake (I-5/NE 65th St) #1</td>
<td>411</td>
<td>385</td>
<td>94%</td>
</tr>
<tr>
<td>Korean Zion Presbyterian Church</td>
<td>25</td>
<td>21</td>
<td>84%</td>
</tr>
<tr>
<td>Lamb of God Lutheran</td>
<td>21</td>
<td>19</td>
<td>90%</td>
</tr>
<tr>
<td>North Jackson Park</td>
<td>68</td>
<td>56</td>
<td>82%</td>
</tr>
<tr>
<td>North Seattle P&amp;R</td>
<td>143</td>
<td>124</td>
<td>87%</td>
</tr>
<tr>
<td>Northgate Mall Garage</td>
<td>280</td>
<td>276</td>
<td>99%</td>
</tr>
<tr>
<td>Northgate North Garage*</td>
<td>63</td>
<td>29</td>
<td>46%</td>
</tr>
<tr>
<td>Northgate P&amp;R*</td>
<td>418</td>
<td>392</td>
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<tr>
<td>Northgate TC Extension 1</td>
<td>397</td>
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<tr>
<td>Northgate TC Extension 2 (Carpool)</td>
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<td>64%</td>
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<tr>
<td>Northgate Transit Center</td>
<td>296</td>
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<td>100%</td>
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<tr>
<td>Prince of Peace Lutheran Church</td>
<td>40</td>
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<tr>
<td>Shoreline P&amp;R</td>
<td>384</td>
<td>288</td>
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<tr>
<td>Shoreline United Methodist Church</td>
<td>20</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Thornton Place Garage**</td>
<td>350</td>
<td>176</td>
<td>50%</td>
</tr>
</tbody>
</table>

* Closed 5/09
** Opened 4/09

PSRC Transportation Monitoring: Congestion and Mobility Report- February 2011
Security and Emergency Management: According to the Regional Transportation Recovery Plan there are six potential disruption scenarios have been identified in Northwest King County. The following describes the potential system disruption/closure and the most likely reroutes. See Maps and Alternate Routing Plan for specific and additional information.

King County Closure of I-5 Ship Canal Bridge
There are several alternative routes for this scenario.
Regional Trips:
- Northbound traffic from I-5 will be diverted onto SR 520 to I-405 and back onto I-5.
- Southbound traffic from I-5 will be diverted onto I-405 to SR 520 and back onto I-5.
- I-90 can also be used as an alternate lake crossing for both north and southbound traffic. SR 520 and I-90 are interchangeable as needed.
- Lake Washington could be used as an additional transportation corridor for passenger-only ferries at various locations.
- Local traffic around the I-5 Ship Canal Bridge will use SR 99.

King County Closure of SR 522 from I-5 to I-405
There are two routes identified as alternatives for this scenario: one through Downtown Seattle/Kirkland Route via SR 520 to I-405, and second through North Seattle/Bothell Route via I-5 to I-405.

King County Closure of SR 99 to I-90 to the Snohomish County Line
This alternative route is to divert traffic from SR 99 to SR 104 to Interstate 5.

King County Closure of SR 99 - Aurora Bridge
For the closure of Closure of SR 99 - Aurora Bridge, there are two routes presented as alternative routes. The primary route entails diverting traffic from SR 99 to I-5 through local streets back to SR 99 via N 85th St to Aurora Ave. The secondary route entails diverting traffic from SR 99 at Elliott Ave W to 15th Ave W/NW back to SR 99 (Aurora Ave).

Closure of SR 99 Alaskan Way Viaduct to Battery St Tunnel
The Seattle Department of Transportation (SDOT) is responsible for closing and inspecting the Alaska Way Viaduct. The closure of SR 99 Alaskan Way Viaduct may also restrict access to piers and terminals along the waterfront in downtown Seattle. Washington State Ferries (WSF) routes from downtown Seattle to Bainbridge Island and Bremerton may need to be rerouted out of Fauntleroy or Edmonds. The Alaskan Way Viaduct Emergency Traffic Management and Closure Plan outline WSF alternative routes and pre-negotiated agreements with transit authorities.
- North-south routing consists of diverting traffic from SR 99 onto Denny Way, Yale Ave, I-5, Corson Ave to Michigan Street back to SR 99 southbound.
- South-north routing consists of diverting traffic from SR 99 to Michigan Street, I-5, ramp to Mercer Street, Fairview Avenue, Valley Street, Broad Street to Roy Street back to SR 99 northbound.
King County Closure of I-5 SR 520 Interchange

For the closure of the I-5, SR 520 Interchange, there are a number of routes presented as alternatives for this scenario. These alternatives are as follows:

- For north-south through traffic divert from I-5 to I-405.
- For downtown Seattle access, traffic will be diverted from I-405 to I-90 to I-5.
- For north Seattle local access, traffic will be diverted from SR 520 to SR 513 to local streets.
- Lake Washington could be used as an additional transportation corridor for passenger-only ferries at various locations.
Regional Growth Centers:
- Downtown Seattle
- First Hill
- Capitol Hill
- University District
- Uptown/Queen Anne
- South Lake Union
- Northgate

Manufacturing/Industrial Centers:
- Ballard/Interbay

WSDOT "Commonly Congested" Commutes:
- Seattle to Bellevue via SR 520 (AM)
- Bellevue to Seattle via SR 520 (PM)
- Seattle to Redmond via SR 520 (AM)
- Redmond to Seattle via SR 520 (PM)
- Bellevue to Seattle via I-90 (PM)
- Seattle to Bellevue via SR 520 (PM)
- Seattle to Redmond via SR 520 (PM)
Northwest King SMART Corridor
2007: Collisions Resulting in Serious Injury or Fatality

Note: Collision data provided to PSRC by WSDOT Transportation Data Office