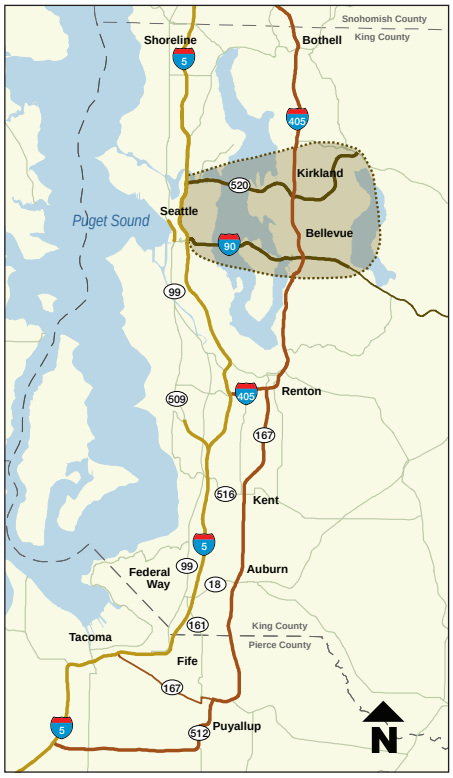
Washington State Department of Transportation

MOVING WASHINGTON

Puget Sound: Cross-Lake Corridor

September 2008



The SR 520 Evergreen Point Floating Bridge at sunset.

The I-90 floating bridge.

With Seattle to the west and Bellevue, Mercer Island, Kirkland and Redmond to the east, Lake Washington separates two of the most populous and economically robust areas of Washington State. Both the Interstate 90 and SR 520 bridges connect I-5, Seattle and the University of Washington to I-405 and the Eastside of King County.

The existing SR 520 Bridge consists of two, four-lane bridges and approaches. The SR 520 Bridge (both Evergreen Point and Portage Bay bridges) have withstood numerous winter windstorms and small earthquakes since they were constructed in the early 1960s. Carrying 110,000 vehicles each day, almost double the capacity they were designed for, the bridges are worn and nearing the end of their life spans. They must be replaced.

The Cross-Lake Corridor program

An integrated vision

We will achieve major congestion relief by completing the SR 520 corridor with new floating bridges, HOV lanes, transit stations and a bicycle-pedestrian path. The program also includes adding a lane in each direction of I-90, with the addition of active traffic management technology and more choices for commuting across Lake Washington.

An artists rendering of future electronic tolling on the SR 520 bridge offers a glimpse of tolling without toll booths.

The Lake Washington Urban Partnership with the U.S. Department of Transportation is a cooperative agreement to employ innovative transportation strategies that will improve traffic flow along SR 520 and I-90 between Seattle and the Eastside. A new variable tolling system could contribute up to $500 million to replace the aging SR 520 Bridge. Active traffic management technologies can improve traffic flow along the SR 520 and I-90 corridors, and additional transit services and telecommuting options will provide choices to commuters.

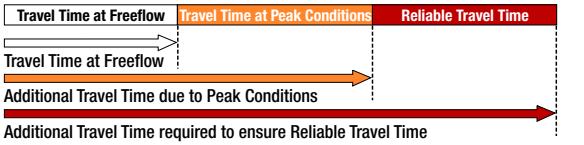
The return

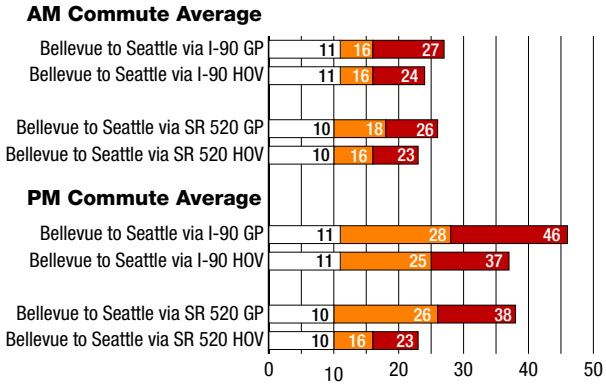
The proposed strategies of *Moving Washington* could significantly reduce the time it takes to travel across Lake Washington on both SR 520 and I-90. Completing HOV lanes in both corridors along with effectively using new highway technology, such as variable speed limits, and improving transit service could speed the westbound morning commute across the lake by 10 percent. These investments could maintain traffic speeds faster than 45 mph during the busiest hours of the day.

Moving Washington could make SR 520 significantly more efficient and able to move higher traffic levels than today in less time. This approach could ensure speeds faster than 45 mph for 97 percent of our rush-hour traffic, compared to today's 59 percent.

(OVER...)

Travel Times at Freeflow, Peak Travel Times, and Reliable Travel Times (in minutes, 2006 data)

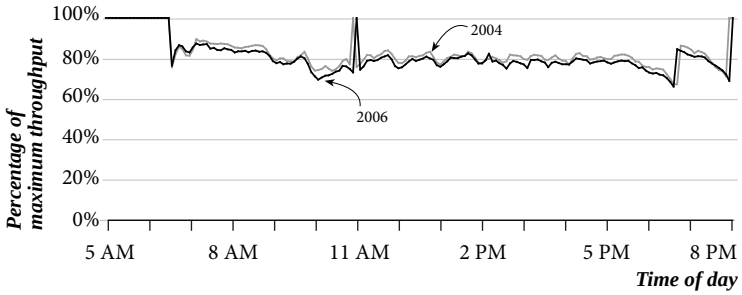




Lost lane productivity

SR 520 Floating Bridge

(based on 2000 vehicles per lane per hour)



A highway lane should carry as many as 2,000 vehicles per hour. Yet during congested periods, the productivity of our highways is reduced when we need it most. The graph above shows that traffic flow on the SR 520 Bridge declines by up to 30 percent due to congestion in the general purpose lanes.

	10-year corridor vision	Complete or underway within 2 years
	**SR 520 HOV and bridge reconstruction** • Replace the SR 520 and Portage Bay bridges with new structures that include two general purpose lanes and one HOV lane in each direction • Add an HOV lane eastbound on SR 520 between the SR 520 Bridge and I-405 • Provide bike and pedestrian facilities across Lake Washington and reconnect communities on both sides of SR 520 **I-90 Investments** • Complete the I-90 HOV and Two-way Transit project which will add HOV lanes to the I-90 mainline between Seattle and Bellevue • Extend the westbound HOV lane in Issaquah from SR 900 to the Sunset interchange • Build an eastbound auxiliary lane with a two lane off ramp to Front St. between SR 900 and Front St.	**Complete phase 2 of the SR 519 South Seattle intermodal access to facilitate movement of freight from the Port of Seattle to I-5 and I-90** **Add HOV lanes and auxiliary lanes to SR 520 between West Lake Samammish Parkway and SR 202. In addition, construct a new interchange between SR 520 and SR 202** **Construct the first phase of the I-90 Two-way Transit and HOV Project. Phase 1 adds a direct access ramp and a new HOV lane eastbound on I-90 between Mercer Island and Bellevue** **Widen SR 900 in Issaquah by one lane in each direction with HOV lanes between the park and ride lot and I-90. This improvement will reduce peak-period backups on I-90**
	**Convert HOV lanes to express lanes on I-90** between Seattle and Issaquah and on SR 520 between I-405 and SR 202. Express lanes use variable time of day tolls and limited access points to improve highway performance for all users **Construct a direct ramp connection between the new westbound SR 520 HOV Lane and the I-5 reversible lanes** **Move HOV lanes to the inside on SR 520 east of I-405**	**Automate the operation of the I-90 reversible lanes** **Active traffic management on SR 520 and I-90** Install electronic signs on both SR 520 and I-90 over each lane at regular intervals between I-5 and I-405 to advise drivers of approaching incidents and to help better manage traffic during times of congestion
	**Begin variable tolling on I-90 at I-5 to I-405** **Support Bus Rapid Transit service on SR 520 between I-5 and SR 202** **Build a transit flyer stop on SR 520 at NE 40th St.** **Build HOV direct access ramp on SR 520 at 108th Ave.** **Further expand the vanpool program** **Improve safety and mobility for bicyclists and pedestrians by completing gaps and making connections**	**Increase transit service on SR 520 between I-5 and I-405** **Work with employers to increase the potential for telecommuting to reduce cross-lake transportation demand** **Implement variable time-of-day tolling on SR 520 between I-5 and I-405** **Increase capacity of the Redmond Park and Ride lot**