

An integrated program

Part of WSDOT's program for easing congestion is managing the demand for highway lane space by offering commuters more choices. Our integrated program offers more and better commute choices by partnering with:

- Community Transit in Snohomish County
- Everett Transit
- Intercity Transit in Olympia
- C-Tran in Vancouver
- King County Metro
- Pierce Transit
- Sound Transit
- Spokane Transit
- Amtrak Cascades
- Employers in the Commute Trip Reduction program

How soon will we see results?

Moving Washington is a program of specific actions that can achieve tangible early results. We've already started to realize some results from the program's strategies with the completion of numerous highway construction projects. Many more projects are under construction, and we'll soon see their benefits as well.

Over the next 10 years *Moving Washington* can improve travel times by 10 percent, reduce collisions by 25 percent, improve trip reliability by 10 percent and provide more choices for commuters in our major corridors.

Our vision for the future

To enhance our economic vitality and personal mobility while safeguarding the environment, Washington State must continue to make improvements in our transportation system. A balanced, efficient and reliable transportation system can meet our increasing population needs and allow us to stay competitive in a global economy for the years to come.

Moving Washington provides the tools and the blueprints.

How could transportation look in 2020 with *Moving Washington*?

- Travel times improve
- Rush-hour commuters can choose a reliable trip in free-flowing express lanes
- Fewer collisions mean fewer resulting backups
- Less idling in gridlock reduces greenhouse gas emissions and makes our streams and rivers cleaner
- Transit operates in free-flowing lanes with reliable buses that make intermodal connections to light rail and commuter rail
- Freight flows in and out of the ports of Seattle, Tacoma and Everett, and farm produce and other goods move rapidly across the state

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Washington depends on mobility

Effective transportation is critical to maintaining our economy, environment and quality of life. "*Moving Washington*" is WSDOT's vision of investments and priorities for the next 10 years. It integrates new capacity, efficiencies and commute options to address congestion head-on and improve the performance of our state's transportation system. The program's primary objective is mobility, one of the state Legislature's five transportation priorities along with preserving our transportation infrastructure, making the system safe for all, ensuring environmental sustainability and practicing sound stewardship.

The transportation improvements outlined here are necessary for us to continue to enjoy all our state has to offer. From the coastal rain forests of the Olympic Peninsula to the river gorges in the south and east, Washington State is rich with landscapes and a diverse economy. We depend on a reliable trip to work, and we want to spend time with our families when our work is done. Industries from agriculture and manufacturing to retail and tourism rely on our transportation system.

The Challenge

Surging population, growing job markets and an aging transportation infrastructure are stretching many of our roads and bridges beyond capacity. Skyrocketing fuel prices and global climate concerns underscore the need for a more efficient transportation system.

Washington's population has grown more than 24 percent since 1992 with 3.5 million additional vehicles on our roads today. By 2030 the state's population will grow by another 2 million people, including 1 million more in central Puget Sound.

The Program

This balanced, integrated program includes three strategies to address traffic congestion and mobility in our urban corridors and across the state.

The three strategies of *Moving Washington* include:

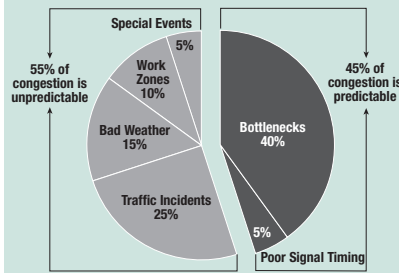
- **Adding capacity strategically** to best use limited resources by targeting the most congested areas
- **Operating efficiently** to get the most use out of the roads and infrastructure we have
- **Managing demand** by offering more commute choices

The Return

The *Moving Washington* 10-year transportation program will improve current traffic conditions and prepare our system for heightened demands in the future. The return on our investment could:

- Improve travel times by 10% in our urban corridors
- Reduce collisions by 25%
- Improve trip reliability by 10%
- Offer more choices for more commuters in our metro areas

What causes congestion?



Source: FHWA, 2004. Data reflects national estimate

The pie chart above shows that the majority of factors that cause congestion are unpredictable. Non-recurrent congestion accounts for 55 percent of all delays in our system. Traffic accidents alone are responsible for at least 25 percent of all congestion. Bottlenecks, where heavy traffic causes daily backups, account for 40 percent of all congestion.

What we're already doing to fight congestion

Building additional highway capacity

- Many of the 391 construction projects included in the 2003 and 2005 transportation funding packages are targeted at reducing congestion.
- Out of 129 completed projects, 91 percent were delivered on time as of April 2008.
- Out of 129 completed projects, 84 percent were under or on budget as of April 2008.

Using intelligent transportation systems

- Traffic cameras
- Traffic management centers
- Variable message signs
- Integrated traffic signals
- Ramp meters
- Traffic data collectors

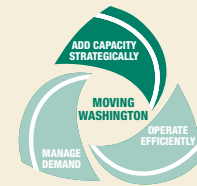
Providing commute choices to manage demand

- Vanpools
- Park and ride lots
- Transit partnerships
- Telecommuting programs
- Commute trip reduction programs
- HOV/carpooling

The Moving Washington strategies

There is no single solution for traffic congestion, but experience has shown us we can reduce congestion by focusing on three key strategies.

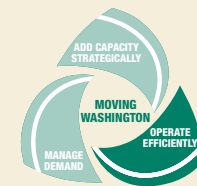
Add capacity strategically



As our state continues to grow, it will be necessary to develop additional traffic capacity. However, budgetary constraints and other factors mean we can't simply build our way out of congestion. We must plan our projects wisely by targeting the worst traffic-flow bottlenecks in our system. By addressing specific bottleneck locations we will be able to improve mobility on longer stretches of our highways.

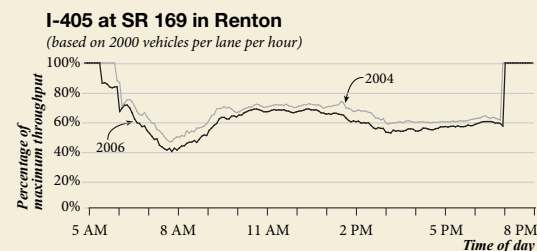
Already we are addressing the most troublesome sections of our highway system. The 2003 and 2005 transportation funding packages include 391 projects, including many that add capacity where it makes the most sense. Washington continues to invest in improvements to I-5, I-405, SR 520 and US 395 among others.

Operate efficiently



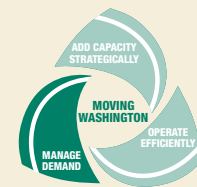
Efficiency means taking steps to smooth traffic flow and avoid or reduce situations that constrict road capacity. Collisions account for at least 25 percent of traffic backups, so making our roads safer will go a long way toward easing congestion. Technology, such as driver information signs, enables our highways to react quickly to unforeseen traffic fluctuations. Among the tools that provide this efficiency are metered freeway on-ramps, incident response teams, variable speed-limit systems, variable tolling and integrated traffic signals.

Highway efficiency targets lost lane productivity. Under ideal conditions, the maximum number of vehicles passing through a freeway segment can be as many as 2,000 per lane per hour, when speeds range 42-51 mph (70-85 percent of the posted speed limit). The graph to the right shows that nearly half of a lane's productivity is lost when congestion occurs.



Lost lane productivity
Despite increased demand during rush-hour congestion, the graph shows, fewer vehicles move through each lane.

Manage demand



We can make the best use of our highway capacity if we better distribute the demand we place on our most congested bridges and roadways. That means offering commuters more choices, such as convenient bus service, incentives to carpool or vanpool, safe bicycle and pedestrian paths and telecommuting. We also can encourage drivers to use less congested routes and times to travel by displaying real-time traffic information on the Internet and electronic road signs.

Decades of experience fighting congestion has taught WSDOT planners and engineers that there is no single solution. *Moving Washington* was conceived under that axiom. With these three strategies, the program will start to yield results in the first two years and achieve its full set of goals over 10 years.

Elements of the Moving Washington vision

The program includes a comprehensive list of actions, each of which employ one or more of the three strategies, to improve mobility in key corridor across the state.

Complete critical bridges

Several bridges require upgrades or replacement to address major traffic disruptions. Replacement projects provide an opportunity to create more efficient highways and new travel options. Bridge replacement projects in the program include:

- SR 520 across Lake Washington
- Alaskan Way Viaduct in Seattle
- Columbia River Crossing in Vancouver

Reduce bottleneck & complete corridor gaps

The capacity of a corridor is limited by the point where it is most constrained; therefore it makes strategic sense to remove bottlenecks. Improving short segments can improve traffic flow through the entire corridor. The program would target gaps on corridors, such as:

- I-405 in East King County
- SR 167 in King and Pierce counties
- US 395 in Spokane
- I-90 across Snoqualmie Pass
- SR 509 Sea-Tac Airport South Access

Implement express lanes

HOV lanes have been used in Washington for 30 years to provide a faster, more reliable trip for buses and carpools, but the benefit is eroding as many HOV lanes become overburdened.

Moving Washington envisions a new system combining HOV lanes with existing express lanes to create a continuous express lane system for I-5, I-90, I-405, SR 520 and SR 16. Tolls for *Good To Go!* customers would be collected electronically and set based on traffic conditions. Buses and 3+ carpools would experience faster, more reliable commutes, while other drivers would rest assured knowing they have a choice to reach their destination on time when it matters most.

Apply advanced technologies

In Europe electronic signs over individual highway lanes use variable speed limit and real-time driver information to keep traffic moving smoothly and reduce accidents. And freeway shoulders become additional lanes during rush hour.

Moving Washington soon will apply these and other new technologies in the state's most congested corridors, starting with I-5 in advance of constructing replacements for the aging Alaskan Way Viaduct and SR 520 bridge. In the next 10 years, these technologies could be in place throughout the central Puget Sound freeway network.

Technology is key

WSDOT is a national leader in managing traffic with reversible express lanes on I-5 and I-90, ramp metering, real-time traffic information signs, HOV lanes and recently high occupancy toll (HOT) lanes. Emerging technologies known as active traffic management (ATM) are helping us get more from our highways.



Innovations, such as variable speed limit signs over each lane (see graphic above), are just around the corner for I-5, SR 520 and I-90. By helping commuters match their driving to current traffic conditions, we can reduce collisions and traffic congestion.

Other future ATM tools could include:

- Using certain highway shoulders for peak-hour traffic
- Queue warning signs to alert drivers to backups ahead

Tacoma Narrows Bridge



In July 2007 the new Tacoma Narrows Bridge opened with the state's first tolling program in nearly two decades. *Good To Go!* electronic tolling was an instant hit. It sped bridge traffic from an average 25 mph before the new bridge to 60 mph today. More than 85 percent of morning-commute tolls are collected electronically through the *Good To Go!* program.

By focusing on our worst bottlenecks and fine tuning our system with new technology and more choices for commuters, we can reduce congestion and make our roads, bridges and ferries sustainable for generations to come.