



Washington State  
Department of Transportation

# The Gray Notebook

WSDOT's quarterly performance report  
on transportation systems, programs,  
and department management

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Secretary of Transportation



## GNB 36

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### In this edition

#### Annual Reports

- Bicycle & Pedestrian  
Safety and Mobility
- Highway  
Maintenance
- Pavement Condition
- Environmental  
Compliance
- Environmental  
Documentation
- Fish Passage  
Barriers

#### Quarterly Reports

- Incident Response
- Rail
- Ferries
- Capital Projects
- Workforce

#### Special Reports

- Federal Recovery  
Act-funded Projects
- Travel Times Six-  
Month Update

<http://www.wsdot.wa.gov/accountability>

# Executive Summary



## Performance highlights in this edition of the *Gray Notebook*

This edition of the *Gray Notebook* presents information on WSDOT's performance for the quarter ending December 31, 2009, as well as six annual and four semi-annual reports. Selected highlights from this edition include:

- **94% of WSDOT-managed roadway pavements were in fair or better condition in 2008.** Recovery Act funding provided \$144.5 million which helped address the current backlog of rehabilitation projects. (*Pavement Conditions Annual Report*; pp. 10-15)
- **WSDOT achieved 65% of its highway maintenance targets by December 31, 2009.** The Maintenance Accountability Process (MAP) asset condition scorecard on page 16 shows the level of service achieved in 31 areas. (*Highway Maintenance Annual Report*; pp. 16-18)
- **The number of pedestrians and bicyclists killed in road accidents in Washington continues a modest downward trend evident since 2006.** Washington's pedestrian safety ranking declined compared to other states, from 13th in 2007 (with a rate of 0.93) to 16th in 2008 (with a rate of 0.96); its ranking in bicyclist safety improved from 35th in 2007 to 14th in 2008. (*Bicycle & Pedestrian Safety Annual Report*; pp. 5-8)
- **WSDOT congestion relief projects are making a difference: the largest reduction in travel times was by 15 minutes on the I-405—Tukwila to Bellevue morning commute.** Travel times improved on 14 of 18 surveyed Puget Sound commute routes compared to the same period in 2007. Comparing July-December 2008 and 2009 shows more mixed results, with some routes faster, and about half unchanged or slower. Overall, data indicates the economy's downturn has slowed but has not yet returned to the relatively strong conditions of 2007. (*Travel Time Trends Semi-Annual Report*; pp. 20-23).
- **As of December 31, 2009, WSDOT has delivered a total of 240 Nickel and Transportation Partnership Account (TPA) projects valued at \$3.675 billion, on target with the funding provided in the 2009-2011 Transportation Budget.** At quarter end, December 31, 2009, WSDOT had completed 25 projects, 54 projects were under construction, and 13 projects advertised for construction bids. An additional 22 projects are scheduled to be advertised by June 30, 2010. 88% of Nickel and TPA projects combined are early or on time and 88% are under or on budget. (See the *Beige Pages* for a quarterly report of WSDOT's *Capital Project Delivery Program*; pp. 49-66.)
- WSDOT introduces in this edition a **new project delivery dashboard providing a status report on how the agency is delivering the program compared to the original Legislative intent** as presented in the 2003 and 2005 LEAP (Legislative program) lists (pp. 50-51).
- **More than 170 American Recovery and Reinvestment Act (Recovery Act) highway projects were awarded to contractors by the end of December, including 88 that have been completed.** The *Special Report* includes December employment data on how Washington's Recovery Act projects are creating and preserving jobs. (pp. 42-48)
- **Since the last report in June 2008's *Gray Notebook* 30, WSDOT has corrected an additional 20 fish passage barriers.** Four more construction projects to remove barriers to fish migrations are scheduled for the 2010 construction season. (*Fish Passage Barriers Annual Report*; pp. 34-36)
- **The number of reportable water quality events on WSDOT construction sites increased to 113 in 2009, 18 more than in 2008; formal violations increased to 19 in 2009, 8 more than in 2008.** This is due partly to the number of projects and activities (about 186 and 450,000 respectively), and also to the Dept of Ecology's use of a new enforcement tool. WSDOT will increase its training of agency inspectors. (*Environmental Compliance Annual Report*; pp. 37-38)

### On this quarter's cover (from top):

New concrete median barrier improves safety on a 10-mile stretch of I-5 near Marysville.

Prepping the underside of the SR 433 Lewis & Clark Bridge for a painting project receiving Recovery Act funds.

A 'dozer is dwarfed by columns for the new Benson Road bridge to I-405 in Renton, a major mobility project.

Tibett's Creek, awaiting the redirection of water – and the return of salmon – after construction on SR 900 in Issaquah.

Two workers lift a block of 'Geofoam' with ease, positioning it to support approaches to SR 519.

# Table of Contents

Table of Tables & Graphs	iv	Environmental Compliance Annual Report	37
Navigating the WSDOT Information Stream	vi	Reportable Events and Formal Violations	38
Performance Dashboard	vii	National Environmental Policy Act	
Contributors	xii	Documentation Annual Report	39
<b>Safety</b>		Duration of Documentation	40
Worker Safety Quarterly Update	2	<b>Stewardship</b>	
WSDOT employees: Rates of injuries & illnesses	2	Special Report on Federal Recovery	
OSHA-recordable injuries and illnesses	3	Act-funded Projects	42
Pedestrian and Bicyclist Safety		Recovery Act Progress Summary	43
System Safety – Annual Report	5	Recovery Act News: High Speed Rail, Tier 3 projects	44
National Rankings/Fatal Collision Locations and Actions	6	Completed Project Summaries	45
Projects that Improve Safety for Pedestrians and Bicyclists	7	WSDOT’s Capital Project Delivery Program	49
Context Sensitive Solutions to Improve Pedestrian and Bicyclist Safety	8	Highway Construction: Nickel and TPA Project Delivery Performance Overview	49
<b>Preservation</b>		Original 2003 and 2005 Transportation Funding Packages (Nickel & TPA)	
Asset Management: Pavement Conditions Annual Report	10	Performance Dashboards	50
Pavement preservation backlog	11	Paying for the Projects: 2003 Transportation Funding Package (Nickel)	52
Concrete pavement needs/ARRA pavement preservation projects	12	Paying for the Projects: 2005 Transportation Partnership Account (TPA)	53
Preventive Maintenance Strategies	13	Current 2009 Legislative Budget Performance Dashboard: Highways	54
Pavement Smoothness	14	Current 2009 Legislative Budget Performance Dashboard: Rail and Ferries	55
Basic Pavement Types and Ratings Summary	15	Schedule, Scope and Budget Summary	56
Highway Maintenance Annual Report	16	Advertisement Record	59
Maintenance Accountability Process	16	Projects To Be Advertised	63
Highway Maintenance Backlog	17	Project Milestones: Nickel Projects	65
Task Completion and Asset Condition	18	Project Milestones: TPA Projects	66
<b>Mobility</b>		Completed Projects: Delivering performance and system benefits	67
Travel Time Trends Semi-Annual Report	20	<i>Special Reports</i>	
Travel Times Continue to Improve on Major Central Puget Sound Freeways	20	Project spotlight: Southwest Washington I-5 Expansion and Improvement Program	77
Travel times improved on 8 of 18 commute routes during July-December 2009	21	New Ferry Construction	79
Peak Period and Daily Volumes/Driving Forces	22	Tacoma Pierce Co. HOV Lanes	79
Driving Forces of Travel Time Trends/I-405 Widening Project	23	Watch List: Projects with schedule or budget concerns	81
Incident Response Quarterly Update	24	<i>Pre-Existing Funds (PEF) Reporting</i>	
Incident Response Program Statewide	24	Programmatic Reporting	88
Fatality Incidents / Over-90-Minute Incidents	25	Milestones, Advertisement terms	89
Major Incident Tow	26	Advertisement and financial overviews	90
Washington State Ferries		Advertisement record	91
Quarterly Update	27	Cross Cutting Management Issues	92
Ridership and Farebox Revenue	27	Construction Cost Trends	92
Customer Feedback	28	Utilities	94
Service Reliability	29	Right-of-Way	96
Rail Quarterly Update	31	Workforce Level and Training	97
<b>Environment</b>		Status for All Original 2003 and 2005 LEAP List Projects	100
Fish Passage Barriers Annual Report	34	Highlights of Program Activities	109
Program Overview	34	Gray Notebook Subject Index	113
Completed Fish Passage Construction	35	Americans with Disabilities Act (ADA) Information	125
Planned Corrective Construction	36		

## In this issue

**5 :: The Pedestrian & Bicyclist Safety** annual report discusses safety issues that arise when state highways function as main streets.

**10 :: The annual Pavement Conditions** report shows graphically how federal Recovery Act funds helped address WSDOT’s backlog of road rehabilitation projects.

**20 :: This quarter’s Travel Time Trends** article reports that 8 of 18 major Puget Sound commute routes improved in the second half of 2009.

**27 :: Washington State Ferries’** quarterly report discusses farebox recovery, service trends, year-on-year schedule performance, and trip completion rates.

**31 :: Amtrak Cascades** quarterly Rail Update reports record ridership numbers and improved on-time performance.

**34 :: This quarter’s** environmental reporting includes **Fish Passage Barriers**, with 20 barriers corrected since the last Gray Notebook report.

**77 :: The Project Spotlight** examines the I-5 expansion and improvement program in Lewis and Thurston counties.

# Table of Tables & Graphs

<b>Safety</b>		
<b>Worker Safety</b>		
WSDOT strain/sprain and hearing loss injury rates by organizational unit	2	Average gas prices in Washington State, January 2007-December 2009 22
Headquarters safety mitigation plan progress	3	Seattle-Bellevue-Everett area unemployment rate 23
Ferries System injury reduction plan activities	3	I-405 auxiliary lane project: before and after Tukwila to Bellevue average commute times 23
Health Risk Assessments completed	4	<b>Incident Response</b>
<b>Bicycle &amp; Pedestrian Safety</b>		Annual average clearance time and total incidents responded to by the IR program 24
Statewide annual fatal and serious injury traffic collisions involving pedestrians and bicyclists	5	Number of responses and overall average clearance time 24
Fatal pedestrian incident locations at intersections	6	Number and percentage of responses by category 24
Fatal bicyclist incident locations and actions	6	Number of responses and average clearance time of fatality collisions 25
<b>Preservation</b>		Annual roll-up of GMAP incident response data 25
<b>Pavement</b>		WSDOT and WSP achieve Governor's goal for clearing 90+ minute incidents on the 9 key routes 25
State highway pavement trends, 1977-2008	10	90+ minute blocking incident types that impact performance on the nine key congested corridors 25
Pavement conditions and funding programmed by pavement type (pre-stimulus)	10	<b>Ferries</b>
Concrete Pavements	10	Ferries ridership by month 27
Asphalt backlog as associated with programmed and due miles	11	Ferries farebox revenues by month 27
Age of concrete pavements on state highways	12	Average number of complaints per 100,000 customers 28
Forecast of concrete investment needs	12	Common complaints per 100,000 customers 28
ARRA pavement preservation funding	12	Washington State Ferries missed-trip reliability comparison 29
Pavement preservation funding, fiscal years 1992-2008	14	Reasons for trip cancellations 29
Percentage of total vehicle miles traveled at good, fair, and poor levels of IRI	14	Washington State Ferries on-time performance comparison 30
Chip seal pavements	15	<b>Rail</b>
Asphalt pavements	15	Amtrak <i>Cascades</i> by funding entity 31
Concrete pavements	15	State-supported Amtrak <i>Cascades</i> quarterly ridership 31
<b>Highway Maintenance</b>		State-supported Amtrak <i>Cascades</i> on-time performance 31
Maintenance targets achieved:2009 vs. planned	16	State-supported Amtrak <i>Cascades</i> ticket revenues by quarter 32
Statewide maintenance targets achieved	16	State-supported Amtrak <i>Cascades</i> farebox recovery 32
Estimated cost of backlog for selected maintenance tasks for the 2009 - 2011 biennium	17	<b>Environment</b>
Total projected investment in maintenance backlog	17	<b>Fish Passage Barriers</b>
Biennial maintenance task completion:planned vs. actual	17	Completed fish passage construction projects in 2008 and 2009 35
MAP performance measures: Activity completion and feature condition	18	Fish passage barrier corrections planned for construction in 2010 36
Future performance reporting style for maintenance	18	<b>Environmental Compliance</b>
<b>Mobility</b>		Environmental compliance events recorded annually vs. the value of the capital project delivery program, 2005-2009 37
<b>Six Month Travel Times Update</b>		WSDOT's reportable events by category 38
Comparing changes in average travel times and volumes during peak periods: July-December 2007-2008-20091	21	<b>Environmental Documentation</b>
		Number of projects by environmental documentation type 39
		Number of environmental assessments completed by year 40
		Number of environmental impact statements completed by year 40

# Table of Tables & Graphs

<b>Stewardship</b>			
<b>Recovery Act Reporting</b>			
Recovery Act employment	42	I-405/I-5 to SR 181 – Widening (King)	71
Recovery Act-funded highway projects	43	I-405/NE 10th Street – Bridge crossing (King)	72
Recovery Act-funded state highway ‘bucket’ projects	43	SR 16/Burley-Olalla Interchange (Kitsap)	73
Recovery Act local highway projects completed between October 1, 2009 and December 31, 2009	48	SR 9/SR 96 to Marsh Rd – Add lanes and improve intersections (Snohomish)	74
Map: I/5 North Kelso to Castle Rock – Stage 2	48	SR 9/Marsh Rd intersection – Safety improvements	74
<b>Capital Projects Delivery Program</b>		I-5/172nd St NE Interchange (SR 531 Smokey Point) – Rebuild interchange (Snohomish)	75
Cumulative performance of Nickel and TPA projects	49	I-5 Water quality retrofit projects	76
Project status: Original 2003 Transportation Funding Package (Nickel)	50	<b>Special Reports</b>	
Budget update: Original 2003 Transportation Funding Package (Nickel)	50	Three I-5 corridor improvement projects	77
Project status: Original 2005 Transportation Partnership Account (TPA)	51	Washington State Ferries New 64-auto ferry	79
Budget update: Original 2005 Transportation Partnership Account (TPA)	51	Watch List summary	82
Transportation 2003 (Nickel) account revenue forecast	52	<b>Pre-Existing Funds (PEF) projects</b>	
Multimodal Account (2003 Package) revenue forecast	52	Six individually tracked PEF projects through December 31, 2009	88
Transportation Partnership Account (TPA) gas tax revenue forecast	53	Milestone tracking for PEF programmatic projects	89
Highway construction performance dashboard	54	PEF projects Biennial progress	90
Rail construction performance dashboard	55	PEF projects construction program	90
Ferries construction performance dashboard	55	PEF preservation program cash flow	90
Biennial summary of all projects completed 2003-2009	56	PEF improvement program cash flow	90
Projects completed as of December 31, 2009	56	PEF projects scheduled for advertisement or advertised this quarter	91
Biennial project completion totals, 2009-2011	58	<b>Cross Cutting Management Issues</b>	
54 Projects in construction phase as of December 31, 2009	59	Components that make up WSDOT’s CCI	92
Advertisement Record summary	62	Construction Cost Indices	92
22 Projects in delivery pipeline for January 1, 2010, through June 30, 2010	63	Washington state, FHWA, and selected western states	92
Projects to be advertised summary	64	Average number of bidders per WSDOT contract, 2000-2009	93
Schedule milestone tracking for Nickel projects	65	Utilities risk levels for advertised Nickel and TPA projects	94
Schedule milestone tracking for TPA projects	66	On-time right-of-way certification results	96
<b>Completed Projects: Delivering Performance &amp; System Benefits</b>		Acquisitions for all Nickel, TPA and PEF projects	96
US 395/Columbia Dr to SR 240 – Rebuild interchange (Benton)	68	Condemnations for all Nickel, TPA and PEF projects	96
I-205/Mill Plain Exit – Build Ramp (Clark)	69	<b>Workforce &amp; Training</b>	
I-205/Mill Plain Interchange to NE 18th St – Stage 1 (Clark)	69	Required training: All WSDOT workers	97
I-5/Boeing Access Rd vicinity to King/Snohomish county line – Pavement repair (King)	70	Number of permanent full-time employees	97
I-405/SR 181 to SR 167 – Widening (King)	71	Mandatory diversity training for all WSDOT workers	98
		Mandatory policy training for all WSDOT workers	98
		Maintenance and safety training compliance	98
		Statutorily required training	99
		Required training for maintenance employees by WSDOT region	99
		<b>Status for All Original 2003 and 2005 LEAP List Projects</b>	<b>100</b>

# Navigating the WSDOT Information Stream

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## Linking performance measures to strategic goals

The Gray Notebook is the basis for WSDOT performance reporting that links performance measures for the strategic plan, legislative, and executive policy directions, as well as federal reporting requirements.

### Statewide transportation policy goals

In 2007, the Governor and Legislature enacted a law establishing five policy goals for transportation agencies in Washington State (Chapter 516, Laws of 2007).

The five statewide transportation policy goals are:

- **Safety:** To provide for and improve the safety and security of transportation customers and the transportation system;
- **Preservation:** To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- **Mobility (Congestion Relief):** To improve the predictable movement of goods and people throughout Washington;
- **Environment:** To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- **Stewardship:** To continuously improve the quality, effectiveness, and efficiency of the transportation system.

### The Transportation Progress Report

Under this law, the Washington State Office of Financial Management (OFM) is responsible for setting objectives and establishing performance measures for each of the goals. OFM must report on the attainment of the goals and objectives to the Governor and Legislature each biennium. In January, 2008, OFM published a "baseline" report to get feedback from the Governor and Legislature on draft objectives and performance measures. The second report will be published in March 2009.

The Attainment Report is available on OFM's performance and results website: <http://www.ofm.wa.gov/performance/>.

### WSDOT Strategic Plan

WSDOT's 2009-2015 strategic plan Business Directions summarizes WSDOT's work plan based on the programs and budgets authorized by the State Legislature and the Governor. The plan describes the agency strategic directions and initiatives to address critical programs and service delivery mandates. The table on pages viii-ix illustrates this alignment. WSDOT's 2009-11 strategic plan is available online at: <http://www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm>.

### About WSDOT's Performance Dashboard

The 'dashboard' of performance measures on the facing page offers readers a snapshot glance at WSDOT's progress against the five statewide policy goals and WSDOT's strategic plan. Some results are discussed in depth within this edition of the Gray Notebook, while others are in previous editions or will be updated in coming editions based on established reporting cycles. Turn to the Subject Index (pp. 94-104) to find earlier coverage; all previous editions are available online at [www.wsdot.wa.gov/accountability](http://www.wsdot.wa.gov/accountability).

### Other performance reporting requirements

#### Priorities of Government (POG)

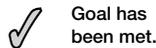
POG is an investment prioritization process used to help the Governor and Legislature develop agency budgets. Every biennium, workgroups composed of government agency and private sector representatives identify results that citizens expect from government, and evaluate the performance of state agency activities and services against those expected results. Information about the 2009-11 POG process is available at: <http://www.ofm.wa.gov/budget/pog>.

#### Government Management Accountability and Performance program (GMAP)

GMAP is a management tool that promotes the sharing and evaluation of current performance to improve results. Under GMAP, the Governor and her leadership team meet in "GMAP forums" with agency directors to review results and develop action plans to improve results. These meetings provide an opportunity for candid conversations about what is working, what is not, and how to improve results.

WSDOT regularly reports to the Governor during the Transportation GMAP forums. WSDOT's GMAP reports can be found at: <http://www.wsdot.wa.gov/Accountability/PerformanceReporting/GMAP.htm>.

# Performance Dashboard



Goal has been met.



Performance is trending in a favorable direction.



Trend is holding.



Performance is trending in an unfavorable direction.

Policy goal/Performance measure	Previous reporting period	Current reporting period	Goal	Goal met	Progress	Comments
<b>Safety</b>						
Rate of <b>traffic fatalities</b> per 100 million vehicle miles traveled (VMT) statewide (annual measure, calendar years: 2007 & 2008)	1.00	0.94	1.00			The rate of highway fatalities continues to decline (a lower rate is better)
Rate of <b>sprains and strains / hearing-loss injuries</b> per 100 WSDOT workers <sup>1</sup> (quarterly measure: FY10 Q1, FY10 Q2 <sup>2</sup> )	2.6/ 0.7	3.0/ 0.4	2.4/ 0.4	---		Meeting hearing-loss rate goal, but sprains and strains rate has increased and exceeded goal.
<b>Preservation</b>						
Percentage of state <b>highway pavements</b> in fair or better condition (annual measure, calendar years: 2007 & 2008)	93.5%	93.3%	90.0%			Recovery Act-funded projects are contributing to reductions in "due" rehabilitations
Percentage of <b>state bridges</b> in fair or better condition (annual measure, calendar years: 2007 & 2008)	97.0%	97.0%	97.0%			Performance level meets goal - trend remains flat
<b>Mobility (Congestion Relief)</b>						
<b>Highways:</b> annual weekday hours of delay statewide <sup>2</sup> (annual measure: calendar years 2006 & 2008)	37 million	32 million	N/A	N/A		Delay reduction of 13% due to gas prices, economic downturn, and completed mobility projects
<b>Highways:</b> Average clearance times for <b>major (90+ minute) incidents</b> on key western Washington corridors (quarterly: FY10 Q1, FY10 Q2 <sup>2</sup> )	156 minutes	154 minutes	155 minutes			Program met performance target, and average clearance time remains steady
<b>Ferries:</b> Percentage of trips departing on-time <sup>3</sup> (quarterly, year to year: FY09 Q2, FY10 Q2 <sup>2</sup> )	95%	93%	90%			System-wide average exceeded performance goal
<b>Rail:</b> Percentage of <b>Amtrak Cascades</b> trips arriving on-time <sup>4</sup> (quarterly, year to year: FY09 Q2, FY10 Q2 <sup>2</sup> )	69%	74%	80%	---		Performance improved over previous quarter, nearing target
<b>Environment</b>						
Cumulative number of WSDOT <b>stormwater treatment facilities</b> constructed or retrofitted <sup>5</sup> (annual measure: calendar years 2007 & 2008)	809	850	N/A	N/A		New stormwater facilities permit will expand WSDOT's responsibilities
Cumulative number of WSDOT <b>fish passage barrier improvements</b> constructed since 1990 (annual measure: calendar years 2008 & 2009)	226	236	N/A	N/A		Twelve additional retrofits completed in 2009.
<b>Stewardship</b>						
Cumulative number of Nickel and TPA <b>projects delivered, and percentage of on-time</b> (quarterly: FY10 Q1, FY10 Q2 <sup>2</sup> )	215/ 88%	240/ 88%	90% on-time	---		Currently at the peak of the Nickel and TPA programs - performance is steady
Cumulative number of Nickel and TPA <b>projects completed and percentage on-budget</b> (quarterly: FY10 Q1, FY10 Q2 <sup>2</sup> )	215/ 87%	240/ 88%	90% on-budget	---		Currently at the peak of the Nickel and TPA programs - performance is steady
Variance of total project costs compared to <b>budget expectations</b> <sup>6</sup> (quarterly: FY10 Q1, FY10 Q2 <sup>2</sup> )	over-budget by 0.4%	under-budget by 0.8%	on-budget			Total Nickel and TPA construction program costs are within 1% of budget

<sup>1</sup> Sprains/strains and hearing loss are current high priority focus areas for WSDOT. Hearing loss rate based on preliminary data.

<sup>2</sup> Compares actual travel time to travel time associated with "maximum throughput" speeds, where the greatest number of vehicles occupy the highway system at the same time (usually 50 miles per hour)

<sup>3</sup> "On-time" departures for Washington State Ferries includes any trip recorded by the automated tracking system as leaving the terminal within 10 minutes or less of the scheduled time.

<sup>4</sup> "On-time" arrivals for Amtrak Cascades are any trips that arrive at their destination within 10 minutes or less of the scheduled time.

<sup>5</sup> Facilities in Clark, King, Pierce, and Snohomish counties.

<sup>6</sup> Budget expectations are defined in the last approved State Transportation Budget.

<sup>7</sup> Washington state's fiscal year (FY) begins on July 1 and ends on June 30. There are eight fiscal quarters in the biennium, and are organized as follows: Quarters 1 & 5: July 1 - September 30, Quarters 2 & 6: October 1 - December 31, Quarters 3 & 7: January 1 - March 31, Quarters 4 & 8: April 1 - June 30

# Navigating the WSDOT Information Stream

## Linking performance measures to strategic goals

This table illustrates the alignment of WSDOT's performance measures with the five statewide transportation policy goals and the WSDOT strategic plan, *Business Directions*. (See also page vi.)

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last Gray Notebook report
<b>1. Safety:</b> To provide for and improve the safety and security of transportation customers and the transportation system	Vigilantly reduce risks and increase safety on all state-owned transportation modes; reduce fatalities and serious injuries; assist local communities in identifying effective solutions to transportation safety needs.	Number of traffic fatalities	annual	GNB 34 p. 5
		Rate of traffic fatalities per 100 million miles traveled	annual	GNB 34 p. 6
		Percent reduction in collisions before and after state highway improvements	annual	GNB 32 pp. 5-7
		Number of recordable workplace injuries and illnesses	quarterly	GNB 35 pp. 2-4
<b>2. Preservation:</b> To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.	Catch up with all necessary maintenance and preservation needs on existing highways, bridges, facilities, ferry vessels, airports, and equipment, while keeping pace with new system additions.	Percent of state highway pavement in fair or better condition	annual	GNB 32 pp. 12-16
		Percent of state bridges in fair or better condition	annual	GNB 34 pp. 16-17
		Percent of targets achieved for state highway maintenance activities	annual	GNB 32 pp. 17-20
		Number of ferry vessel life-cycle preservation activities completed	annual	GNB 35 pp. 8-9
		Percent of ferry terminals in fair or better condition	annual	GNB 35 p. 10
<b>3. Mobility (Congestion Relief):</b> To provide for the predictable movement of goods and people throughout the state.	Move people, goods, and services reliably, safely, and efficiently by adding infrastructure capacity strategically, operating transportation systems efficiently, and managing demand effectively.	Travel times and hours of delay on the most congested state highways	annual	GNB 35 pp. 12-15
		Reliable travel times on the most congested state highways around Puget Sound	annual	GNB 35 pp. 12-15
		Percentage of commute trips while driving alone	annual	GNB 27 p. 92
		Average length of time to clear major incidents lasting more than 90 minutes on key highway segments	quarterly	GNB 35 pp. 17-19
		Ferry ridership	quarterly	GNB 35 p. 20
		Ferry trip reliability	quarterly	GNB 35 pp. 22-23
		Percent of ferry trips on-time	quarterly	GNB 35 pp. 22-23
		Amtrak <i>Cascades</i> ridership	quarterly	GNB 35 p. 24
		Percent of Amtrak <i>Cascades</i> trips on time	quarterly	GNB 35 p. 24

# Navigating the WSDOT Information Stream

## Linking performance measures to strategic goals

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last Gray Notebook report
<b>4. Environment:</b> Enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.	Protect and restore the environment while improving and maintaining Washington's transportation system.	Conformance of WSDOT projects and programs with environmental legal requirements	annual	GNB 30 p. 36
		Number of fish passage barriers fixed and miles of stream habitat opened up	annual	GNB 30 p. 39
		Number of WSDOT stormwater treatment facilities constructed or retrofitted	annual	GNB 32 pp. 40-41
		Number of vehicle miles traveled	annual	GNB 31 p. 41
		Transportation-related greenhouse gas emissions (measure to be developed)	n/a	n/a
<b>5. Stewardship:</b> To continuously improve the quality, effectiveness and efficiency of the transportation system	Enhance WSDOT's management and accountability processes and systems to support making the right decisions, delivering the right projects, and operating the system efficiently and effectively in order to achieve the greatest benefit from the resources entrusted to us by the public.	Capital project delivery: on-time and within-budget	quarterly	GNB 35 pp. 43-44
		Recovery Act-funded project reporting	quarterly	GNB 35 pp. 34-39

# Navigating the WSDOT Information Stream

## Organization of the Gray Notebook

Through more than 30 editions, in fact eight years, WSDOT has published a quarterly performance report titled *Measures, Markers & Milestones*, but known far and wide by its informal moniker, the *Gray Notebook*. Between its gray covers, it was organized in two sections:

- the Beige Pages, so-called for the color of paper they were printed on, which covered project delivery on the Nickel, Transportation Partnership Account (TPA), and Pre-Existing Funds project programs, and
- the White Pages, which presented quarterly and less frequent reports on a wide variety of transportation-related topics.

With the 30th edition, the *Gray Notebook* (now its formal title) made a host of other changes. This page will help you find the information and reports you are looking for.

### How is the Gray Notebook organized?

The Gray Notebook (GNB) presents articles in a way that makes the topics' relationship to the five Legislative policy goals – and WSDOT's own strategic goals – more clear. (These goals are discussed in detail on page vi.)

The *Gray Notebook* is organized into five sections devoted to those strategic goals, each marked by a page that recaps WSDOT's goals for Safety, Preservation, Mobility/Congestion Relief, Environment, and Stewardship. Each section divider carries a mini-directory to the topics covered within the section, and points to other articles within the *Gray Notebook* that contain information relevant to that goal.

The first four sections primarily feature quarterly and annual reports on key agency functions, providing regularly updated system and program performance information that was previously covered in the White Pages. Annual system performance updates are rotated over four quarters based on data availability and relevant data cycles, to provide in-depth analysis of topics such as capital facilities, aviation, freight, and a post-winter report on highway maintenance. Quarterly topics, such as worker safety, incident response, Amtrak *Cascades*, and Washington State Ferries, are featured in each edition since data is generally available more frequently.

The Beige Pages are still beige; reporting on the delivery of the projects funded in the 2003 Transportation Funding Package (Nickel), 2005 Transportation Funding Package (TPA), and Pre-Existing Funds (PEF), they appear in the Stewardship section. They contain summary tables, detailed narrative project summaries, and financial information supporting WSDOT's "no surprises" reporting focus. The Stewardship

section also presents articles covering finance, workforce, and similar issues. Starting in *Gray Notebook* 33, this section contains pages dedicated to the reporting of WSDOT's Federal Recovery Act-funded projects.

### More easily tracked business plan results

By aligning the *Gray Notebook*'s articles with WSDOT's business goals as outlined in the strategic plan, *Business Directions*, WSDOT hopes to make tracking performance results against specific strategic actions more simple.

*Business Directions* reflects WSDOT's program and project delivery responsibilities with the goal of demonstrating the best possible return for taxpayers' dollars. For a copy of Business Directions, please visit: <http://www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm>.



### Publication frequency and archiving

The *Gray Notebook* is published quarterly in February, May, August and November. This edition and all past editions are available online at [http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb\\_archives.htm](http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm).

A separate detailed navigation folio is available at <http://www.wsdot.wa.gov/Accountability/GrayNotebook/>.

### Gray Notebook Lite

WSDOT publishes a quarterly excerpt of selected performance topics and project delivery summaries from the *Gray Notebook*, called *Gray Notebook Lite*. The folio-style *Lite* allows for a quick review of WSDOT's most important activities in the quarter. It can be accessed at <http://www.wsdot.wa.gov/Accountability/GrayNotebook/navigateGNB.htm>.

## Online capital project reporting and using the website

WSDOT prepares information for legislators, state and local officials, interested citizens, and the press on the progress of the state's three capital delivery programs. The *Gray Notebook*, in the Beige Pages section, highlights each quarter's progress and reports on financial and other program management topics, but much more detailed information can be found on-line at the WSDOT website.

WSDOT's on-line project reporting uses several different tools, including the *Gray Notebook* (as a downloadable PDF), web-based Project Pages, and Quarterly Project Reports (QPRs). There is a Project Page on the website for each major WSDOT project, and QPRs for Nickel-funded projects in the 2003 Transportation Funding Package.

*Project Pages cover:*

- Overall project vision
- Financial table, funding components
- Roll-up milestones
- Roll-up cash flow, contact information
- Maps and Links to QPRs.

### Quarterly Project Reports

The Quarterly Project Reports (QPRs) are reached by a link on the Project Page. They summarize quarterly activities:

- Highlights
- Milestones
- Status description
- Problem statement
- Risks and challenges
- Project costs, cash flow
- Contact information.



### Navigate the WSDOT website

The WSDOT home page (shown above; [www.wsdot.wa.gov](http://www.wsdot.wa.gov)) offers several ways to find information on projects. The Projects tab on the top navigation bar links to the WSDOT's Projects page; there, you'll find information and links to detailed descriptions of all WSDOT projects. The Accountability navigation menu offers links to several important topics (including Congestion Relief, Safety, and Preservation) and the most recent edition of the *Gray Notebook*.

### Project Pages

Project Pages (found at [www.wsdot.wa.gov/projects/](http://www.wsdot.wa.gov/projects/)), typical page shown below) report on virtually all WSDOT capital delivery program construction projects.

Project Pages provide details on overall project vision, funding components, financial tables, milestones, status description, problem discussions, risks and challenges, forecasting, maps, photos, links and more, which are updated regularly.



# Contributors

The work of many people goes into the writing, editing, and production of the *Gray Notebook* every quarter. This list of contributors reflects the efforts of data analysts, engineers, project leads, and many more individuals behind the scenes. Information is reported on a preliminary basis as appropriate and available for internal management use; it is subject to correction and clarification. On-line versions of this publication are available at [www.wsdot.wa.gov/accountability](http://www.wsdot.wa.gov/accountability)

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	Pedestrian & Bicyclist Safety Annual Report	Ian Macek, Paula Reeves
<b>Preservation</b>	Highway Maintenance Annual Report	Rico Baroga, Greg Selstead, Anna Zaharris
	Pavement Annual Report	Tom Baker, Bob Brooks, David Luhr, Jeff Uhlmeyer
<b>Mobility/ Congestion Relief</b>	Travel Times Six-Month Report	Katherine Boyd, Mark Hallenbeck, John Ishimaru, Duane Wright
	Incident Response	Katherine Boyd, Paula Connelley, Vince Fairhurst, Jim Hill (WSP), Lila Kirkeby (WSP), Marcia Marsh (WSP), Diane McGuerty, Tom Stidham, Captain Tim Winchell (WSP)
	Washington State Ferries, including new ferry construction program	Matt Hanbey, Laura D. Johnson, Al McCoy, Ron Wohlfrom
	Rail	George Xu
<b>Environment</b>	Environmental Compliance Annual Report	Steve Yach
	National Environmental Documentation Annual Report	Chris Regan, Carol Lee Roalkvam
	Fish Passage Barriers	Jon Peterson
<b>Stewardship</b>	Federal Recovery Act Reporting	WSDOT offices including: Project Control & Reporting, Highways & Local Programs, SAPD, Rail, Construction, Public Transportation, Aviation, Transportation Planning Office
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# Safety

## Statewide policy goal:

To provide for and improve the safety and security of transportation customers and the transportation system.

## WSDOT's business goal:

To vigilantly reduce risks and improve safety on all state-owned transportation modes; reduce fatalities and serious injuries; assist local communities in identifying effective solutions to transportation safety needs.



### In this section

Quarterly Update:	
Worker Safety	2
Bicycle & Pedestrian Safety Annual Report	5

### See also

Incident Response	24
Workforce Training	97

### Earlier safety-related articles

Highway Safety,  
GNB 30, 32, 34, 35

# Worker Safety Quarterly Update

## WSDOT employees: Rates of injuries and illnesses

### Worker Safety Highlights

WSDOT continues its strong commitment to improving worker safety in the 2009-11 biennium.

New safety goals focusing on injury rates for sprains/strains and hearing loss have been established. WSDOT's regions and divisions have prepared mitigation plans to reduce the frequency and severity of such injuries.

In light of the budget challenges facing the state, WSDOT has discontinued its monetary safety incentive program. The Safety Office is working with staff across the agency to develop alternative incentives to encourage employee safety.

WSDOT has a strong commitment to improving the safety of its employees as they perform their jobs. In 2006, WSDOT established a goal of zero workplace injuries by 2019. Significant progress has been made toward this goal and maintaining improved safety requires daily attention, both by managers and front-line workers. During the 2009-2011 biennium, WSDOT is focusing on sprains, strains, and hearing loss – the most frequent injury types across the agency.

### New injury reduction performance goals and tracking method

Tracking and understanding the types and causes of injuries are key elements of improving safety. Beginning in July 2009, WSDOT began focusing on injury rates – the number of injuries per 100 workers – in addition to the number of injuries. Measuring injury rates normalizes data across organizational units, and will help each unit better understand progress towards meeting its safety goals. WSDOT's 2009-2011 sprains, strains, and hearing loss goals are tailored to each organizational unit based on past injury rates. A significant improvement in safety will be achieved if the goals are met.

### Two of six regions meet new sprains and strains goal

During the second quarter of state fiscal year 2010, two of six regions (33%) were on track to meet the new sprains and strains goal. Two of the three regions that have conducted audio testing to date are not on track to achieve the new hearing loss reduction goal. Headquarters is not on track to meet the sprains and strains goal, and has yet to conduct audio testing. The ferry system is not on track to meet either goal.

### Highlights from the injury reduction and mitigation plans

Beginning with this edition of the *Gray Notebook*, the worker safety article will highlight worker safety activities contained in regional and division injury reduction and mitigation plans. This edition focuses on the headquarters and Ferry system plans.

### WSDOT strain/sprain and hearing loss injury rates by organizational unit

Number of injuries per 100 workers

Organizational unit	FY 2010	Rate of sprain /	On-track to	FY 2010	Rate of hearing loss	On-track to
	Sprain /	strain injuries		achieve FY 2010	Hearing	
	strain goal	Q2 FY 2010	sprains and	loss goal	Q2 FY 2010	2010 hearing
		(October –	strains goal?		(October-December	loss goal?
		December 2009)			2009)	
Northwest Region	2.2	2.9	No	0.4	0.1	Yes
North Central Region	2.2	4.6	No	0.4	NA*	NA*
Olympic Region	2.2	1.8	Yes	0.4	1.3	No
Southwest Region	2.2	1.6	Yes	0.4	NA*	NA*
South Central Region	2.2	3.6	No	0.4	2.8	No
Eastern Region	2.2	2.8	No	0.4	NA*	NA*
<b>All Regions combined</b>	<b>2.2</b>	<b>2.7</b>	<b>No</b>	<b>0.4</b>	<b>0.7</b>	<b>No</b>
Ferry System	4.7	5.1	No	0.4	1.1	No
Headquarters	0.4	1.3	No	0.0	NA*	NA*
<b>Agency-wide</b>	<b>2.4</b>	<b>3.0</b>	<b>No</b>	<b>0.4</b>	<b>0.6</b>	<b>No</b>

Data Source: WSDOT Safety Office.

\* Audio testing has not yet been conducted for this organizational unit

## OSHA-recordable injuries and illnesses

### WSDOT headquarters worker safety mitigation plan

The safety mitigation plan prepared for headquarters employees focuses on eliminating hazards and providing information on how to avoid injuries.

### Headquarters safety mitigation plan progress

Status as of December 31, 2009

Mitigation plan element	Activities achieved
Provide training to field supervisors and their supervisors on how to prepare pre-activity safety plans.	41 of 42 identified staff have received training on how to prepare pre-activity safety plans.
Require new employees to receive training on implementing pre-activity safety plans.	44 of 56 new employees have received pre-activity safety plan training.
Require new employees to view an ergonomics awareness video during orientations.	44 of 56 new employees have viewed the video.
Conduct noise surveys for 50% of all groups with potential exposure at or above regulated limits.	75% of planned noise exposure surveys have been completed.

### Ferry system injury reduction plan

The 2009-11 transportation budget directed the ferry system to develop a plan to significantly reduce the number of injuries suffered by Ferry system employees. The four major elements of the plan, completed in December 2009, are summarized in the table below.

### Ferry system injury reduction plan activities

Plan element	Examples of activities
<b>Injury investigations</b>	Establish an investigative unit within the Ferry system safety office
	Provide investigation training to supervisors
	Expedite injury investigations so that they occur as soon as possible after the event
<b>Safety awareness</b>	Continue to develop pre-activity safety plans
	Hold regular weekly or monthly safety meetings within work units, including the Eagle Harbor maintenance facility, and individual terminals and vessels
	Include safety expectations in job descriptions
	Share and communicate injury data on a monthly basis
	Discuss safety at quarterly union-management meetings
<b>Training, mitigation, and prevention</b>	Publicize the availability of wellness videos
	Require new employees to sign a statement that they have completed safety training, will abide by safety rules, and acknowledge that violations are subject to discipline
	Revise and strengthen physical fitness hiring requirements
	Conduct vessel site visits to observe work practices, general safety, and communication about safety issues
<b>Safety award program</b>	Encourage use of proper footwear
	Develop a new award system to publicly recognize safety success of employees *

\* Note: The previous monetary safety incentive program has been discontinued for all WSDOT employees.

### Number of OSHA-recordable injury/illnesses by category of worker, October through December 2009

In addition to tracking the highest priority injuries, WSDOT will continue to track all OSHA-recordable injuries and illnesses. An OSHA-recordable injury is any occupational injury or illness that requires medical treatment beyond simple first aid. During the second quarter of FY 2010 (October–December 2009), employees sustained 86 OSHA-recordable injuries and illnesses. This is 13 fewer than in the corresponding period last year, and 16 fewer than the previous quarter (July–September 2009).

#### Highway maintenance workers

Highway maintenance workers reported 34 injuries, 40% of all injuries agency-wide; this is nine fewer injuries than last quarter. There were 323 days away from work associated with the 34 injuries; 16 injuries were sprain/strain, accounting for 139 days away from work. One maintenance worker suffered a fatal accident in this quarter.

#### Highway engineering workers

Highway engineering workers reported 13 injuries, 15% of all injuries agency-wide and 10 fewer than last quarter. There were 82 days away from work associated with the 13 injuries; eight 13 were sprain/strain, accounting for 82 days away from work.

# Worker Safety Quarterly Update

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## Worker Wellness and Return to Work programs

### Administrative staff

Administrative staff reported eight injuries, six of which were sprain/strain injuries. This is six more than last quarter and four more than the same quarter of FY 2009. There were 31 days away from work associated with these injuries.

### Ferry system

Ferry system workers reported 31 injuries, 36% of all injuries agency-wide and nine fewer than last quarter. Sixteen of the 31 were sprain/strain, accounting for 120 days away from work; a total of 144 lost work-days were associated with all 31 injuries.

### Wellness program supports prevention

The WSDOT Wellness Program continues to promote the Health Risk Assessment (HRA). The voluntary HRA collects data on the health and lifestyles of employees while providing feedback to participants encouraging healthy behaviors.

WSDOT has established a goal of 30% of employees completing the HRA. As WSDOT moves closer to the goal, a more accurate snapshot of employee health will emerge, particularly regarding medical screening, chronic disease management, and health promotion.

### Health Risk Assessments completed

	2008	2009
Health risk assessments completed	729	1,168
Percent of employees completing assessment	10%	16.9%

Data Source: WSDOT Wellness Program.

### WSDOT is helping injured employees return to work

The Return to Work Unit assists injured employees in recovering from a workplace injury and to return to work more quickly. Goals of the program include:

- Improving communication with the injured worker to ensure the right medical care is provided,
- Working with medical providers and vocational counselors to monitor recovery,
- Developing return-to-work options when appropriate,
- Informing supervisors about the status of recovery and the prognosis for the future,
- When appropriate, facilitating independent medical exams to assist in claim closures, and
- Helping employees return to work more quickly not only benefits the employee and work team, but also reduces time-loss and medical costs.

The program works closely with supervisors and the Department of Labor and Industries (L&I) to facilitate timely return to work and streamline processes. Working together, WSDOT and L&I have identified the top 50 claim types that affect insurance rates paid by the agency and employees. Other program initiatives include improving options and benefits available to WSDOT's injured workers, and coordinating leave with regional payroll offices to maximize benefit coverage.

# Pedestrian and Bicyclist Safety System Safety – Annual Report

## Fatal and Serious Injury Collisions Involving Pedestrians and Bicyclists

Walking and bicycling are critical components of the transportation system, both as their own major modes of transportation, and by providing connections between destinations and other modes. WSDOT is committed to improving conditions for bicycling and walking and has set an aggressive target to reduce serious injuries and fatalities statewide. WSDOT and numerous partners at the state, local, and regional levels established a goal of reducing the number of pedestrians and bicyclists killed or injured in traffic crashes by 5% each year, while doubling the percentage of trips made by bicycle within the next 20 years.

### Statewide annual fatal and serious injury traffic collisions involving pedestrians and bicyclists 2001-2008



Data Source: Highways and Local Programs.

Between 1999 and 2008 there were 765 fatal pedestrian or bicycle collisions, accounting for 13% of all traffic deaths. The number of pedestrian fatalities decreased by one in 2008 as compared to 2007 (61 in 2008 as compared to 62 in 2007), while bicyclist fatalities decreased from 14 in 2007 to 10 in 2008. The number of pedestrian and bicyclist fatalities has generally trended downward over the years due to an overall decrease in walking and biking, yet the fatality rate remains high in many urban areas on higher speed arterials.

### Tallies identify at-risk groups and factors, including location

Between 2001 and 2008, 87% of all bicycle and pedestrian collisions and 78% of fatal and serious injury collisions involving pedestrians or bicyclists occurred in urban areas. Children, particularly school aged children under the age of fifteen, the elderly and ethnic minorities are disproportionately represented and have been identified as at-risk populations for pedestrian involved fatal collisions.

### Higher speeds increase likelihood of pedestrian fatalities

Speed is a major factor contributing to the severity of pedestrian-vehicle crashes. The faster the motorist drives prior to a collision with a pedestrian, the more likely the pedestrian will die from the injuries. A pedestrian hit while the vehicle is traveling at 40 mph has an 85% chance of being killed, while at 20 mph, the fatality rate is only 5%. In Washington, pedestrian injuries remain the third leading cause of injury deaths for children ages one to 16, according to the Washington State Department of Health.

### Older adults: A growing at-risk group

In Washington, adults age 65 and older represent 12% of the population, yet they make up 26% of all pedestrian deaths. Older adults often walk more, as indicated by the National Institute of Aging, which also reports that more than one in five adults age 65 and older do not drive. Over the next twenty years the number of older citizens in the United States will double; by 2030, 20% of Americans will be age 65 or older. By 2020, over one and a half million people in Washington State will be 65 or older – almost twice the number of people in that age group today.

### Pedestrian and Bicyclist Safety Highlights

There were 487 fatal and serious injury collisions involving bicyclists and pedestrians in 2008 on all public roads in Washington, a 3.6% reduction from 2007.

Washington's rankings among other states declined slightly for pedestrian safety from 13th in 2007 to 16th in 2008 with a crash rate of 0.96 pedestrian involved crashes per 100,000 people.

Between 1999 and 2008, 16% of traffic collisions involving bicyclists occurred while crossing roadways and another 57% occurred while riding with traffic.

Washington tops Bicycle Friendly State ranking two years in a row.

A recently completed study by WSDOT and the University of Washington found that more than 500 miles of Washington's state highways serve as main streets for cities of all sizes. A significant portion of all fatal and serious injury pedestrian collisions occur on these same sections of highways.

# Pedestrian and Bicyclist Safety System Safety – Annual Report

## National Rankings/Fatal Collision Locations and Actions

### Washington’s pedestrian and bicycle safety rankings

Washington’s rankings among other states for pedestrian and bicycle safety declined slightly for pedestrian safety and improved for bicycle safety. For pedestrian safety, Washington fell in the rankings from 13th in 2007 to 16th in 2008 with a crash rate of 0.96 pedestrian involved crashes per 100,000 people. However, this is only a slight increase in the fatality crash rate from 0.93 in 2007 to 0.96 in 2008.

Overall, Washington’s rankings improved when compared nationally in bicyclist safety performance from 35th in 2007 to 14th in 2008 with a bicyclist-involved crash rate of 1.37 per 1,000,000 people. Rankings of state bicycle crash rates often fluctuate significantly due to the relatively small numbers of fatal collisions involving bicyclists – Washington State’s bicycle safety rankings have fluctuated in the past, ranking 25th in 2005, 11th in 2006, and 35th in 2007.

In Washington, slightly more than 15% of pedestrian fatalities occurred within marked crosswalks, while over 45% occurred at unmarked crossings. On state highways, approximately 10% of all legal crosswalk locations are marked and 4% are signalized. A sampling of city and county roads indicates a similar percentage of marked legal crossings and a higher percentage of signalized locations.

### Fatal pedestrian incident locations at intersections 1999-2008

Location	Percent
Crossing – marked crosswalk not available	40%
Crossing – not in crosswalk	27%
Crossing – in crosswalk	17%
Shoulder	9%
Other – Off Roadway	7%
Unknown	0%
<b>Total</b>	<b>100%</b>

Source: WSDOT Highways & Local Programs.

Between 1999 and 2008, 16% of traffic collisions involving bicyclists occurred while crossing roadways and another 57% occurred while riding with traffic. Riding with traffic includes collisions where drivers were following too closely or exceeding safe speeds, driveway turning movements are frequent, and where bicyclists were hit by an opening car door while riding next to parked cars. Collisions occurring while riding with traffic continue to be the greatest contributor to bicyclist fatalities.

### Fatal bicyclist incident locations and actions 1999-2008

Location/Action	Percent
Cyclist turned into path of vehicle	16%
Fell into traffic	3%
Riding against traffic	4%
Riding with traffic	57%
Crossing	16%
All other actions	2%
Unknown	2%
<b>Total</b>	<b>100%</b>

Source: WSDOT Highways & Local Programs.

### Safe Routes to School Program

WSDOT’s Safe Routes to School Program provides resources and technical assistance to increase the number of children walking and biking to school safely. The program focuses on the four E’s of traffic safety (Engineering, Education, Enforcement, and Encouragement). The program has funded safety focused education programs, encouragement efforts that help students and families develop new walking and biking habits, targeted enforcement campaigns, and engineering improvements to improve safety around schools.

In the last two funding cycles, funded projects have improved walking and biking conditions for 58 schools and approximately 14,500 students. These improvements include the construction of 2.5 miles of additional pedestrian facilities, crossing improvements at 27 locations, and installation of two new bicycle facilities. In addition, the program has increased safety for pedestrians and bicyclists through a reduction in motor vehicle travel speeds and an increase in student compliance with safe crossing behavior.



School crossing guard helping a family cross the street.

## Projects that Improve Safety for Pedestrians and Bicyclists

### Improving pedestrian and bicycle mobility also improves safety

Increasing the number of pedestrians and cyclists is key to reducing the number of fatal and serious injury collisions: studies have shown that motorists are less likely to collide with pedestrians or bicyclists when there are more people bicycling and walking. A community that doubles the amount of bicycling and walking can expect to reduce an individual's risk of being struck by a motorist by more than 60%, as motorists drive slower and more cautiously when they see many pedestrians and bicyclists on the street.

Creating livable communities that increase the numbers of citizens who can safely walk and bike for transportation is becoming increasingly important. Walking and biking can improve personal and environmental health, reduce traffic congestion, and enhance ones quality of life, among other things. Transportation investments which reduce pedestrian and bicyclist deaths and injuries, while making walking and biking comfortable and convenient, is a key strategy to achieve that goal.

The 2008-2027 Washington State Bicycle Facilities and Pedestrian Walkways Plan sets a statewide target of decreasing fatal and serious injury collisions involving bicyclists and pedestrians by 5% a year for the next twenty years, while doubling the amount of walking and biking. The Plan also identifies \$1.6 billion in unfunded need across the state. Approximately 25% of these projects are located on or near state routes. In Washington, 13% of the ARRA projects (40 projects) address needs identified in the State Bicycle Facilities and Pedestrian Walkways Plan.

### WSDOT counts bicyclist and pedestrian numbers across the state

WSDOT recently completed its second annual Statewide Bicycle and Pedestrian Documentation Project to collect data on walking and bicycling across the state. From 2008 to 2009 the number of participating communities increased from 20 to 25. Volunteers counted more than 36,000 pedestrians and bicyclists at over 200 locations across the state. Although the overall total is higher, the 2009 counts were slightly lower when comparing the same locations counted in 2008. The weather was a significant factor, with temperatures averaging ten degrees cooler across the state and conditions being cloudy and rainy.

When examining the count location data, the highest numbers of bicyclists were observed at intersections with trails and

bridges. Pedestrian counts were highest near universities, in downtown cores, near transit stations, and in mixed-use neighborhoods. These findings correlate with other research that indicates that increasing connectivity also increases pedestrian and bicycle safety and mobility.

Future counts will continue to be used to assess the state's progress in its long term goals, and will also help WSDOT more accurately estimate demand, measure the benefits of investments, and design projects. This information will also help target future safety and mobility projects for bicyclists and pedestrians.

### Washington tops Bicycle Friendly State rankings two years in a row

The League of American Bicyclists named Washington as the nation's number one "Bicycle Friendly State" for the second year in a row. The designation goes beyond looking at fatality and collision rates. States are rated on how they encourage bicycling via legislation, policies and programs, education, planning, and places to ride. Highlights of the state's bicycling commitments are its exemplary bike-related laws and dedicated state-level funding sources for bicycle safety projects and programs. In addition, Washington was awarded a Bicycle Friendly State Silver award, only one of six states to pursue the award through the League of American Bicyclists, and one of two to receive the Silver distinction.



Cyclists on the Hood Canal Bridge.

# Pedestrian and Bicyclist Safety System Safety – Annual Report

## Context Sensitive Solutions to Improve Pedestrian and Bicyclist Safety

### Context sensitive design approach seeks to make main street highways safer

Understanding the needs of particular locations on the state highways system can best be understood by encouraging public participation throughout the project planning and design process. State highways range from those that focus on mobility to those intended to serve local access needs. Between these two extremes, there are sections of state highways that run through cities and therefore must serve as both thoroughfares and main streets.

### Study shows over 500 miles of state highways serve as “main streets”

A recently completed study by WSDOT and the University of Washington found that more than 500 miles of Washington’s state highways serve as main streets for cities of all sizes. Since these “main street highways” must provide both access to local destinations and serve wider regional mobility needs, they face twice the pressure to maintain traffic flow and ensure community livability and safety. Another concern is that a significant portion of all fatal and serious injury pedestrian collisions occur on these same sections of highway.

Some highlights from the study include:

- Community transportation design policy should be focused on main street highways and establish specific selection criteria and performance objectives.
- Some scope and schedule adjustments to WSDOT projects on main street highways inside cities might be avoided by applying a greater degree of community design consideration in systems analysis and project development. If successful, such input could result in a potential overall savings for the transportation agency. Reasons for scope and schedule changes on main street highways include limited right of way and the unanticipated need to acquire additional right of way which can be costly and politically unpopular.
- Projects on main street highways are likely to require more resources for community transportation design, but this is especially true for projects in smaller communities with limited or no planning staff.

The study can be found at: <http://depts.washington.edu/trac/bulkdisk/pdf/733.1.pdf>

### Retrofitting main street highways to improve safety for all users

One approach to improve main street highways is to retrofit them to provide safe access to all users including bicyclists, pedestrians, motorists, and public transportation users. A 2004 Federal Highway Administration review of the effectiveness of a wide variety of measures to improve pedestrian safety found that painting crosswalks on wide high-speed roads alone without additional safety features like sidewalks, medians, and treatments for the disabled does not reduce pedestrian crashes. Some features, such as medians, improve safety for all users since they enable pedestrians to cross busy roads in two stages, and reduce left-turning motorist collisions, a type of crash that also endangers bicyclists.

WSDOT endorses the Context Sensitive Solutions approach for all projects, large and small, from early planning through construction and eventual operation. This means that WSDOT employees working on projects and facilities should engage affected communities, assure the transportation objectives are clearly described and discussed with local communities, recognize and address community and citizen concerns, and ensure the project is a safe facility for both the user and community.



*Pedestrian improvements on SR 101 in Aberdeen.*

# Preservation

**Legislative policy goal:**

To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.

**WSDOT's strategic goal:**

To catch up with all necessary maintenance and preservation needs on existing highways, bridges, facilities, ferry vessels and terminals, airports, and equipment, while keeping pace with new system additions.



**In this section**

Asset Management: Pavement Annual Report	10
Highway Maintenance Annual Report	16

**See also**

Special Report: Federal Recovery Act-funded Projects	42
Capital Projects Quarterly Report (Beige Pages)	49

**Previous GNB reports**

Post-Winter Report, GNB 33	
Safety Rest Areas GNB 33	
Bridge Assessment Annual Report, GNB 34	
Capital Facilities Annual Report, GNB 34	
Ferries Vessel & Terminal Preservation Update, GNB 35	

# Asset Management: Pavement Conditions Annual Report

## Pavement Conditions in 2008

### Pavement Condition Highlights

94% of WSDOT-managed pavements were in fair or better condition in 2008. Asphalt pavements in poor condition decreased by 15 lane miles between 2007 and 2008.

Over 700 miles of concrete pavements have survived more than 45 years with little or no maintenance, while being originally designed for a 20 year life.

The Recovery Act provided \$144.5 million to address the current backlog of road rehabilitation projects.

WSDOT roadways with poor smoothness carry less than 8% of total statewide VMT.

WSDOT currently maintains pavement on over 18,500 lane miles of state highways, consisting of three pavement types: chip seal or bituminous surface treatments (BST), asphalts (which consists of hot mix asphalt and the new technique of warm mix asphalt) and concrete. With smaller preservation budgets, WSDOT has been at the forefront of pavement technology to implement cost saving and performance enhancing methods to make our roads last longer and cost less. The agency's pavement management system has been recognized as one of the best in the nation. It focuses on alternative preservation strategies based on lowest life-cycle costs (LLCC), in the face of sharp cost increases, reduced revenues, and continuing deterioration of concrete pavements.

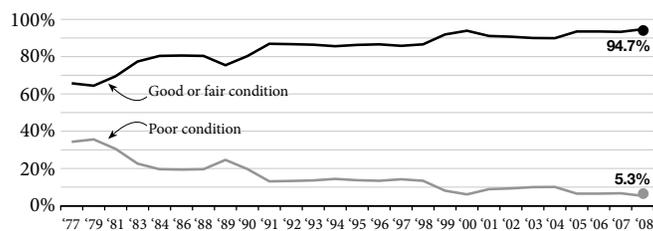
### Pavement conditions see slight improvement in 2008

According to the 2008 pavement condition survey, road conditions continued to be good in Washington State. More than 94% of all pavements were rated as good or fair. The percentage of all pavements in poor condition decreased slightly to 5.3% in 2008, compared to 6.7% in 2007. In 2000, there were 1,068 lane miles (6.1%) in poor condition, while in 2008 the total was 922 lane miles. Asphalt pavements in poor condition decreased by 15 lane miles

(or 0.1% of all asphalt lane miles) from 2007 to 2008. The condition of chip seal pavements in poor condition decreased from 381 lane miles in 2007 to 109 lane miles in 2008, and the condition of concrete pavements in poor condition increased from 110 miles in 2007 to 156 miles in 2008.

### State highway pavement trends, 1977-2008

All pavement types; 1977-2008



Data Source: WSDOT Materials Lab.

### Pavement conditions and funding programmed by pavement type (pre-stimulus)

Pavement Type	Total lane miles <sup>1</sup>	Annual VMT <sup>2</sup> 2008 (Billions) <sup>2</sup>	Rating	2007		2008		2007-09 dollars programmed (Millions) <sup>4</sup>		2009-11 dollars programmed (Millions) <sup>4</sup>	
				2007	2008	2007	2008	2007	2008		
<b>Chip Seal Pavements or Bituminous Surface Treatments (BST)</b> A chip seal is a durable surface that provides six to eight years of performance life at an initial cost of approximately \$25,000 - \$50,000 per lane-mile. <sup>4</sup>	4,425 (24%)	1.2 (3.8%)	Good/Fair	92%	97%						
			Poor	8%	3%	\$34.6	13.9%	\$52.8	15.5%		
<b>Asphalt Pavements</b> The life of an asphalt pavement surface is typically 10 to 16 years, depending on climate and traffic factors. Initial construction cost is approximately \$200,000 per lane-mile. <sup>4</sup>	11,638 (63%)	20.9 (68.3%)	Good/Fair	94%	94%						
			Poor	6%	6%	\$171.1	68.7%	\$174.6	51.2%		
<b>Concrete Pavements</b> New concrete pavements are designed for a life of 50 years at an initial cost of \$2.5 million per lane-mile. Dowel bar retrofit is a concrete pavement rehabilitation that has an initial construction cost of approximately \$700,000 per lane-mile. <sup>4</sup>	2,422 (13%)	8.6 (27.9%)	Good/Fair	93%	92%						
			Poor	7%	8%	\$43.4	17.4%	\$102.6	30.1%		
<b>Total</b>	18,500	30.7	Good/Fair	93.3%	94.7%						
			Poor	6.7%	5.3%	\$249.1		\$330.0			

<sup>1</sup>Data Source: State Highway Log Planning Report 2005- includes all lane miles.

<sup>2</sup>Data Source: Transportation Data Office - excludes ramps, collector - distributors or frontage roads.

<sup>3</sup>Vehicle Miles Traveled: A measure of the amount of vehicular travel. One vehicle traveling one mile = 1 VMT.

<sup>4</sup>These numbers are approximations and do not include other improvements that may be planned for roadway sections, such as safety enhancements. They cannot be used for budgeting specific projects. These costs do not reflect the total Life Cycle Costs of a pavement structure.

## Pavement preservation backlog

### Measuring pavement performance and managing to the Lowest Life Cycle Cost

Monitoring pavement performance is an important aspect of Pavement Management—an agency must quantify it and measure it in order to manage it. The Washington State Pavement Management System (WSPMS) has evolved over more than 40 years, and WSDOT’s experience over these decades has led to the process the agency uses today.

The State Materials Lab determined in the 1980’s that the state’s road network should be managed by Lowest Life-Cycle Costs. This concept was then mandated by RCW 47.05.030 in the 1990’s. WSDOT experience is that the lowest life-cycle cost is obtained by rehabilitating our pavement structures when they are “due”. History has shown that the condition indicators that “trigger” rehabilitation are usually the cracking and rutting indices. This is because roughness tends to be a lagging indicator that appears because the road was not rehabilitated when it was “due”.

WSDOT currently evaluates performance with an annual pavement condition survey (see description of the state survey on page 15). The survey rates the pavement condition based on a scale of 0 – 100 in three areas: a) pavement cracking and patching, b) rutting, and c) roughness. A pavement is considered “due” for rehabilitation (resurfacing) when any of the indices reach a threshold value.

### Pavement rehabilitation backlog

Pavement rehabilitation “backlog” is the number of lane-miles of state roads that are considered “Due” or “Past Due” for rehabilitation, but funds are not available to complete the work. The backlog of lane-miles that need rehabilitation should be considered in relation to the continuing aging of the system. On average, our asphalt pavements last about 14 years before rehabilitation is needed. If WSDOT rehabs 1/14 (around 7%) of the agency’s 11,500 lane-mile asphalt pavements every year it would be in a “steady state”, where each year the roads coming due for rehabilitation would be programmed and there would be no additional backlog. For chip-seal (BST) pavements every year this is about 15% of our 4,500 lane-mile BST system, or 675 lane-miles, that needs resurfacing to remain in a steady-state. Concrete is a little more difficult to estimate, because of the uneven age of these pavements. But, about 60% of our 2,500 lane-miles of concrete pavements are over 30 years old, while the design life of these older pavements is only 20 years. The strategies used to manage each of these three pavement types is discussed below.

### Chip Seal (BST) pavements

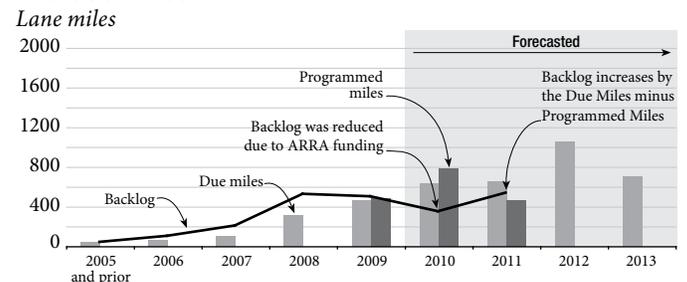
Chip seals are low cost pavement structures that are appropriate for low-volume roads (previously used on roadways under 2000 vehicles per day, but now expanded to all roadways with those carrying less than 5,000 vehicles per day). They are also used on higher volume roads to extend the pavement life before a major resurfacing is needed (see Preventive Maintenance Strategies on pp. 12-13). Because these pavements are so cost effective, they receive the highest priority when programming the pavement preservation funds. Because of this approach, we do not expect to experience a backlog of chip seal projects.

### Asphalt pavements

The strategy for asphalt pavements, which make up 62% of WSDOT’s road network, is to use innovative practices wherever possible to stretch the pavement life. These techniques are described in more detail in the section on Preventive Maintenance Strategies below. Even with the implementation of these techniques, there is an increasing backlog of needs for asphalt pavement resurfacing.

The graph below illustrates how the backlog (solid line) is expected to grow in the next several years, as the miles programmed for resurfacing are not enough to keep up with the increasing lane miles of pavement due for rehabilitation. The change in backlog each year is calculated by taking the “Due” miles in a given year, and subtracting the “Programmed” miles for the same year. A small decrease in the backlog occurs in the 2009-11 Biennium due to the effects of the ARRA stimulus (see section on ARRA below), but this effect is temporary. Although the 2011-13 Biennium preservation program has not yet been determined, the current budget shortfall will not be able to address asphalt needs and the backlog will continue to grow.

### Asphalt backlog as associated with programmed and due miles



Data Source: WSDOT Materials Lab.

Note: Programmed miles for 2012-13 have not been determined.

# Asset Management: Pavement Conditions

## Annual Report

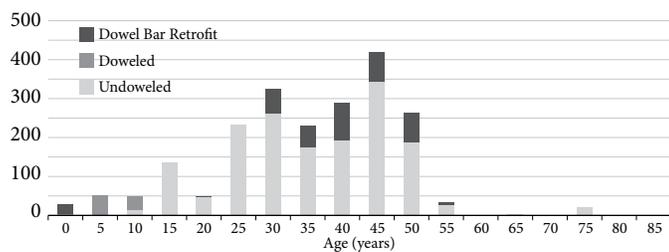
### Concrete Pavement Needs/ARRA pavement preservation projects

#### Concrete pavements

The 2,500 miles of concrete pavement in Washington State (13% of the state system) has been a high performance “work-horse”, especially for our high-traffic corridors. Over 700 miles (30%) have survived more than 45 years with little or no maintenance, while being originally designed for a 20 year life.

#### Age of concrete pavements on state highways

*In lane miles by years old*



Data Source: WSDOT Materials Lab.

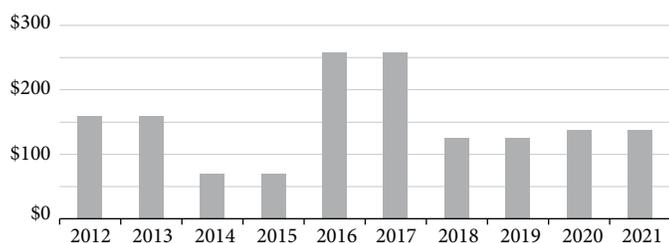
With long pavement lives, the concrete pavements have low life-cycle costs, but they have high initial construction costs. Newly constructed concrete pavements are now designed for 50 years, but the initial construction cost of \$2,500,000 per lane mile leads to an emphasis on preserving the life of existing pavements. This strategy involves the use of:

- Surface grinding – to smooth ruts and rough locations, especially at cracks and joints.
- Dowel-bar retrofit (DBR) – to retrofit dowel bars at joints in order to provide better structure and extend the pavement life another 15 years.
- Selective panel replacement – to replace only the worst slabs, and leave the sound slabs for more years of service.

Even though these techniques extend the pavement life as much as possible, they still require funds to do the work. Considering the age of the concrete pavement network, the need for more and more maintenance and rehabilitation, in addition to reconstruction where it is necessary, creates a significant

#### Forecast of concrete investment needs

*In millions*



Data Source: WSDOT Materials Lab.

funding need for the future. The anticipated funding need of approximately \$1.5 billion over the next ten years for the concrete pavement network.

#### Pavement rehabilitation backlog and the ARRA

In 2009 the American Recovery and Reinvestment Act (ARRA) provided a source of stimulus funds for Washington state, and \$144.5 million was used to address the current backlog of road rehabilitation projects. The ARRA legislation came with strict requirements that projects had to be selected and programmed in a short period of time. Because the pavement management system keeps an up-to-date assessment of the entire road network, WSDOT was able to quickly and accurately determine the best use of the stimulus funds.

With the large concrete pavement backlog, 57% of the ARRA funds were spent on concrete pavements. How this money was spent, and the lane-miles of construction it provided, is shown in the table below.

#### ARRA pavement preservation funding

Type of Construction	Dollars (millions)	% of Total	Lane-miles
Chip Seal Resurfacing	\$8.57	6%	273
Asphalt Resurfacing	\$54.3	37%	309
Concrete Dowel-Bar Retrofit	\$30.2	21%	74
Concrete Reconstruction	\$51.4	36%	49
<b>Total</b>	<b>\$144.5</b>	<b>100%</b>	<b>705</b>

Data source: WSDOT Materials Lab.

#### WSDOT preventive maintenance strategies: extending life and reducing costs

Current budget constraints in Washington State necessitate the use of new strategies with regard to preventive maintenance. Even if the optimum long-term rehabilitation plan for a particular section of roadway calls for a capital construction rehabilitation project, there may not be funds available to complete the construction. This situation has resulted in the development of preventive maintenance strategies for the purpose of delaying or avoiding capital construction spending. In these strategies, preservation funds are being specifically allocated for preventive maintenance activities.

#### Preventive maintenance activities are addressing early distress

In this situation, premature distress may be occurring relatively early in the performance period. This may be due to construction

# Asset Management: Pavement Conditions Annual Report

## Preventive Maintenance Strategies

problems, reflection cracking, or some other factors, but if those premature distresses are not addressed, then an early rehabilitation may be required which will substantially increase the life-cycle costs. It has been recognized that applying preventive maintenance treatments early in a performance period is far more effective than applying it to a pavement in poor condition.

### Strategies that are correcting short distressed sections

This strategy involves using preventive maintenance to repair distresses in short (less than 0.5 mile) sections which may be causing longer sections of roadway to be programmed for rehabilitation. In this case, the analysis is not simply project oriented (regarding one pavement section), because the evaluation is being done for a number of adjacent pavement sections.

### Maintaining sections that are currently due for rehabilitation

As discussed above, some times a section may be due for rehabilitation, but no funds are available. In this case maintenance is performed as an effort to hold the pavement together until the rehabilitation can be performed, and may prevent further damage that could lead to reconstruction. It is recognized that this is not an efficient or effective long-term use for funds, but it is sometimes necessary for short-term situations.

### Integrating preventive maintenance with rehabilitation strategies

One strategy employed by WSDOT to delay the effect of the growing backlog of asphalt pavement rehabilitation has been to use chip seals (BST) for lower-volume roadways. The chip seals cost less, but do not last as long as asphalt rehabilitations. By resurfacing lower-volume asphalt pavements with chip seals, WSDOT has added five to seven more years to its life for one-third to one-fourth the equivalent annual cost (\$5,000 vs. \$15,000-\$20,000 per lane mile a year). About 40% of WSDOT asphalt roads are “lower volume” (average daily traffic of 5,000 or less). This temporary strategy stretches the funds available for pavement preservation over more road miles, but will not reduce the backlog of pavement rehabilitation needs over the long run.

### Evaluating future risk: Good roads cost less

Although the current condition of Washington State pavements is good, the looming backlog of rehabilitation and reconstruction needs for asphalt and concrete pavements provides a significant future risk for the state’s roadways. As pavement condition deteriorates, it causes more damage to the underlying pavement structure. That is why pavement conditions are carefully monitored and rehabilitations are scheduled when the lowest life-cycle cost can be realized.

### WSDOT assists Washington cities in reporting on the conditions of city-owned pavements

In April 2003, the Legislature established planning and efficiency goals for the state and local transportation network. Among other provisions, the legislation requires cities to report pavement condition data for their arterial and collector streets each biennium.

WSDOT helps cities in the analysis and reporting of pavement condition. To assist small cities (population under 25,000), WSDOT uses its automated data collection van to survey federally classified arterials and collectors. The 39 cities in the state with populations over 25,000 collect their own data and submit them to WSDOT to be included in the analysis.

Results from the 2008 Washington’s City Arterials Condition Report show that of the 3,176 centerline miles surveyed, 79% of the city-owned arterial and collector roadways are in fair to excellent condition, with the remaining 21% in poor to failed condition. The 2010 Washington’s City Arterials Condition Report will be released in January 2011.

The 2008 report can be found at: [http://www.wsdot.wa.gov/NR/rdonlyres/F65F6840-1CEF-468A-A32A-ADA9C454EE73/0/2008\\_Pavement\\_Report.PDF](http://www.wsdot.wa.gov/NR/rdonlyres/F65F6840-1CEF-468A-A32A-ADA9C454EE73/0/2008_Pavement_Report.PDF)

If needed repairs are deferred too long, then the costs to rebuild the pavement structure are much higher, and the opportunity to capture the lowest life-cycle cost is lost. These higher costs then result in fewer miles being rehabilitated, causing more pavements to deteriorate, resulting in a downward spiral of decreasing road quality and increasing pavement costs. It is true that “good roads cost less.”

Many factors influence the long-term funding for Washington State’s pavement preservation program. This involves state revenues, federal transportation programs, legislative appropriations, and uncontrollable factors such as the effects of construction cost inflation and natural disasters. The result over the last 10 years has been to reduce the real funding by half (in terms of constant dollars). This trend, along with the forecasted budgets over the next few years, is illustrated in the figure on page 14. The ARRA stimulus provided some relief, but it is minor in comparison to the 10 year trend.

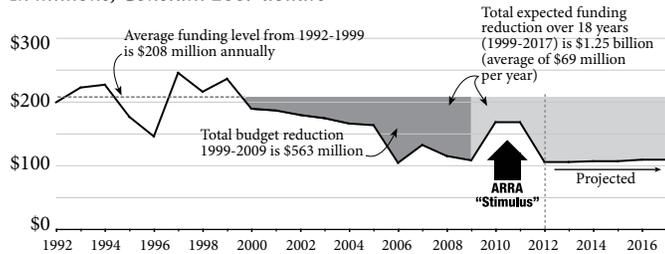
As described earlier in this report, by examining the average life of typical pavements, one can easily calculate the long-term annual costs for the different pavement types. For asphalt pavements this number is estimated to be \$160 million a year,

# Asset Management: Pavement Conditions Annual Report

## Pavement Smoothness

### Pavement preservation funding, fiscal years 1992-2008

In millions; Constant 2007 dollars



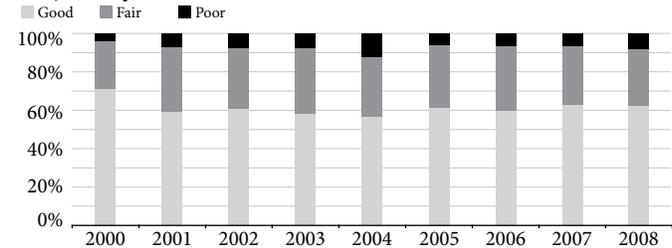
Data Source: WSDOT Materials Lab.

for BST pavements it is \$25 million a year, and for concrete pavements it is \$150 million a year. The total of \$335 million a year is the investment required to maintain a “steady-state” of rehabilitation of those pavements that reach the end of their life every year. However, as the figure above shows, future projected funding levels are only \$100 million annually, which leads to a quickly growing backlog and increased future risk of poor quality roads and additional pavement damage.

### WSDOT roadways with good or fair smoothness carry more than 92% of total statewide VMT

Future reporting requirements from the Federal Highway Administration (FHWA) will include the combination of Vehicle Miles Traveled (VMT) data with the International Roughness Index (IRI), a measure of pavement smoothness. This is a reasonable statistic, since it indicates the importance of providing smooth roads where the most traffic is. In general, more than 62% of VMT have “good” smoothness and roughly 8% have “poor” smoothness on WSDOT managed roadways.

### Percentage of total vehicle miles traveled at good, fair, and poor levels of IRI



Data Source: WSDOT Materials Lab.

### National comparative performance measures for pavement: challenges and opportunities

Recently, there has been increased interest in establishing national performance standards for pavements and other areas of transportation. National performance standards first require national measurement standards. These measurement standards must ensure that the same populations are being measured (and reported), that the same measurement tools – the precision and accuracy of which have been standardized – are employed, and that standardized test methods are applied. At present, such standards do not exist on a national level for various areas of transportation, including pavement, and considerable work would be required to establish them.

### Pavement performance standards must focus on structural and functional pavement performance

One proposal is to make the International Roughness Index (IRI), which addresses ride quality, the primary measure of comparative pavement performance. Although IRI is a sound measure for evaluating functional pavement performance, it alone does not capture a complete picture of pavement condition, particularly in terms of structural condition. A structural adequacy measure, such as Present Serviceability (PSR) or Remaining Service Life (RSL), should also be used to provide a more comprehensive assessment of pavement performance.

### National measurement standards are needed before performance standards can be developed

One important challenge in crafting comparative performance measures for pavement between states is that agencies differ in the structural and functional performance metrics they use. Although IRI is a widely accepted measure, not all state agencies measure IRI in exactly the same way. Simply using different equipment to collect data and applying different protocols regarding which portions of the highway to include in the measurements can produce serious discrepancies in the data pool. Furthermore, states vary in the percentage of rural to urban areas, climatic conditions, traffic loading, and other issues that affect the ability of analysts to compare like-to-like accurately. The same issues that surround IRI also affect pavement structural condition measurements and standards.

WSDOT supports efforts for national comparative performance standards for pavements, providing a set of national measurement standards are developed that adequately examine both the structural and functional performance of pavements. WSDOT agrees that the development of strategies consistent with national goals should be the direction of this effort. A national performance measure or measures should be established by the states depending on their situation. States could then measure, against their own framework, and determine if improvements are being made within their system.

# Asset Management: Pavement Conditions Annual Report

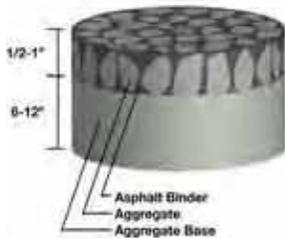
## Basic Pavement Types and Ratings Summary

### Pavement types

#### Chip Seals or Bituminous Surface Treatments (BST)

Asphalt is sprayed on the road surface and covered with a layer of rock chips, creating a flexible surface. As the asphalt cools it becomes solid. Chip seals are appropriate for lower volume roads. Chip seal roads are typically rural and have six to eight years of performance life. It is often cost effective to combine small projects into larger, regional projects.

##### Chip seal pavements

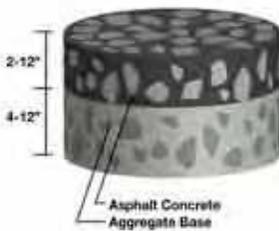


Example of chip seal roadway surface.

#### Asphalt Pavements

Asphalt is a flexible pavement, mostly used on roads with moderate to high traffic volumes. In Western Washington, the average asphalt pavement life is 16.5 years; in Eastern Washington it is 11.3 years due to climatic effects. The state average is 14.7 years.

##### Asphalt pavements

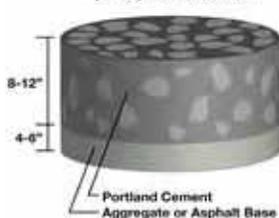


Example of asphalt roadway surface.

#### Concrete Pavements

Newly constructed concrete pavements are designed for a 50 year life. Concrete is a "rigid" paving material, typically placed on heavily traveled interstates, principal arterials, and intersections.

##### Concrete pavements



Example of concrete roadway surface.

### Pavement ratings

WSDOT uses a combination of pavement ratings shown below to determine when pavements are due for rehabilitation, based on Lowest Life Cycle Cost (LLCC) management.

#### Pavement Structural Condition (PSC)

A pavement will develop structural deficiencies for two reasons: truck traffic and cold weather. The PSC is a measure based on distress, such as cracking and patching, which relates to the pavement's ability to carry loads. PSC ranges from 100 (best condition) to 0 (worst condition). A

roadway should be considered for rehabilitation when it falls within the PSC range of 40 to 60.



PSC example.

#### Rutting

Rutting is caused by heavy truck traffic or studded tire wear. Ruts deeper than 1/2 inch have the potential to hold water, increasing the risk of hydroplaning for high-speed traffic. A roadway should be rehabilitated when the rut depth is greater than 1/3 inch.



Rutting example.

#### Roughness

The International Roughness Index (IRI) is a procedure to measure pavement ride. A full-sized van, with a laser-measuring device mounted on the front bumper, measures the roughness of the pavement. A roadway should be rehabilitated when the IRI value is between 170 and 220 inches per mile.



Roughness example

### WSDOT uses a technologically advanced approach to collect pavement condition data

WSDOT is one of a few states to perform its pavement condition survey using an automated pavement condition vehicle on 100% of the surveyed lane. This allows WSDOT to complete an evaluation of all state highways. WSDOT's vehicle travels at highway speeds and collects data through the use of high-resolution digital imaging to determine the amount of cracking and patching, pavement roughness and rutting annually on all state highways.

# Highway Maintenance Annual Report

## Maintenance Accountability Process

### MAP Highlights

65% of highway maintenance targets were achieved in 2009.

The total maintenance backlog is estimated at \$85 million, with \$16.8 million currently funded.

### Maintenance targets achieved: 2009 vs. planned

Level of Service (LOS) by asset condition

	Funded level	2009 results
Movable & Floating Bridge Operations	B+	A+
Traffic Signal System Operations	C	C
Snow & Ice Control Operations	A-	A-
Keller Ferry Operations	B	B
Urban Tunnel Systems Operations	B	B+
Structural Bridge Repair	C	F
Regulatory/Warning Sign Maintenance	C+	D+
Slope Repairs	B	B
Intelligent Transportation Systems	B-	A-
Maintain Catch Basins & Inlets	D+	C
Pavement Patching & Repair	C+	C+
Bridge Deck Repair	C	C+
Guardrail Maintenance	B+	B+
Pavement Striping Maintenance	C	C-
Raised/Depressed Pavement Markers	B	C-
Control of Vegetation Obstructions	D+	C
Rest Area Operations	B	B-
Sweeping and Cleaning	B+	A
Maintain Ditches	B	B
Highway Lighting Systems	C+	B+
Guidepost Maintenance	D	D
Maintain Culverts	D+	D-
Pavement Marking Maintenance	C	C
Noxious Weed Control	B	B
Shoulder Maintenance	B-	C+
Guide Sign Maintenance	B-	C+
Maintain Detention/Retention Basins	C	C
Bridge Cleaning & Painting	C	B
Nuisance Vegetation Control	B-	D+
Landscape Maintenance	D+	D
Litter Pickup	D	F+
<b>Percent of targets achieved</b>		<b>65%</b>

Data Source: WSDOT Maintenance Office.

Note: The thirty-one maintenance activities are in prioritized order.

In previous editions of the *Gray Notebook*, performance reporting for the Maintenance Accountability Process (MAP) has focused on the condition of highway system assets in terms of levels of service (*asset condition*), as it relates to 31 maintenance activities. In addition to the *asset condition* LOS metric (a lagging indicator) reported to date, MAP reporting will now include an additional metric called *task completion*, introduced on p. 17. This particular metric measures the percentage of needed tasks completed each year (a leading indicator) and is an effective way to determine backlogs for individual maintenance activities. To find out more about MAP, go to <http://www.wsdot.wa.gov/maintenance/mgmt/accountability.htm>.

### MAP asset condition performance measure

This performance measure focuses on the condition of highway system assets. If assets have few deficiencies, this indicates that the maintenance program is well-funded and is adequately maintaining highway infrastructure. If assets show many deficiencies, this is an indicator that the maintenance program is unable to adequately take care of highway infrastructure. This could be due to multiple contributing factors including funding levels due to unexpected material cost increases, asset inventory additions, unusual or severe weather patterns, or specific management decisions to balance work between various targets. It can also be an indicator that the preservation program is not keeping up with asset replacement needs.

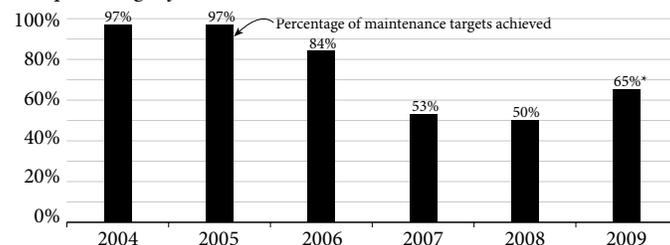
Using traffic signals as an example, the asset condition performance measure is the number of malfunctions per signal system per year. This information is put into a Level of Service rating that ranges from “A” (good condition) to “F” (poor condition). Since 2004, MAP’s asset condition performance measures have shown a gradual decline. This is the result of the growing backlog of essential maintenance.

### 65% of highway maintenance targets achieved in 2009

Twenty of the 31 biennial MAP targets, or 65% were achieved in 2009 compared to 16 or 50% in 2008. The MAP targets were adjusted in 2009, to align performance expectations with the changed buying power of the maintenance budget (hence the increase in the percentage of targets achieved is a reflection of lowering the targets, not an increase in maintenance activities or budgets). Without the adjustment, 12, or 39%, of the MAP targets were met for 2009. The difference between targets and actual delivery has continued to widen, as system additions, cost increases, and environmental requirements have increased the cost of maintaining the highway system.

### Statewide maintenance targets achieved

As a percentage of total, 2004 - 2009



Data Source: WSDOT Maintenance Office.

\*Data note: Targets are adjusted biennially based on funding levels, 2009 represents a mid-biennial adjustment.

## Highway Maintenance Backlog

### MAP task completion metric tracks backlog

In 2007, the State Auditor reviewed WSDOT's highway maintenance program. While the audit provided high marks for overall program management and performance measurement, it singled out the growing backlog of essential maintenance on Washington's highway system. This backlog has been created from recent increases in the expansion of the highway system, inflationary cost increases, and the maintenance budget not keeping up with these increasing costs of program delivery. The audit report recommended that the backlog be identified for various maintenance tasks and be used as the basis for budget requests to obtain funds to address the backlog.

### Total projected investment in maintenance backlog

*Dollars in millions, 2009 - 2011 currently funded\**

2009 - 2011	\$16.8
2011 - 2013	\$24.1
2013 - 2015	\$22.7
2015 - 2017	\$12.3
2017 - 2019	\$9.0
<b>Total</b>	<b>\$85.0</b>

Data Source: WSDOT Maintenance Office.

\*Note: Planned investments after the 2009 - 2011 biennium are not currently funded. Dollar figures are rounded.

This type of performance measure is simply the percentage of needed tasks completed during each year. If the maintenance program is not funded to complete all tasks defined in a basic maintenance program, the difference between what should be completed and what did get completed is termed the maintenance backlog. The number and types of tasks that should be completed in a basic maintenance program for each highway system asset, is defined in the annual workplan.

### Estimated cost of backlog for selected maintenance tasks for the 2009 - 2011 biennium

*By task, dollars in millions*

Activity	Biennial goal: percent of required tasks, as funded	Estimated cost
Signals	69%	\$4.0
ITS	57%	\$3.0
Structural bridge	49%	\$1.5
Pavement patching & crack sealing	79%	\$4.0
Culverts	85%	\$1.5
Cable guardrail	100%	\$0.7
Regulatory signs	100%	\$0.9
Raised/recessed pavement markers	100%	\$1.2
<b>Total</b>		<b>\$16.8</b>

Data Source: WSDOT Maintenance Office.

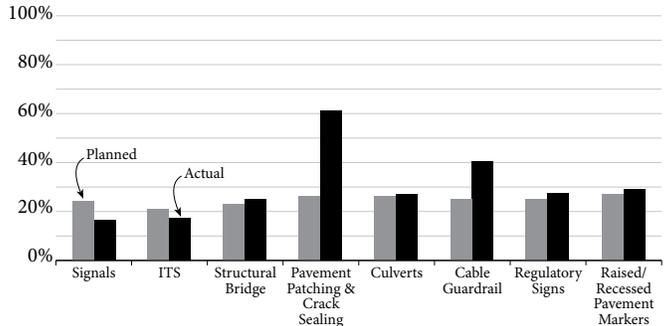
### First steps taken to address maintenance backlog

For the 2009-11 biennium, \$16.8 million was provided to begin catching up with the maintenance backlog. Detailed plans have been developed to increase maintenance work. Progress in implementing this first installment of the plan to catch up with the entire \$85 million in maintenance backlog will be tracked quarterly. The increased maintenance work will contribute to improved condition of the highway infrastructure as noted below. Resulting improvements in infrastructure are projected to become apparent during the 2010 MAP field condition assessment.

Of the maintenance tasks selected for the 2009 - 2011 biennium, to date, WSDOT is meeting or exceeding planned completion levels in six of eight activities which include: structural bridge, pavement patching and crack sealing, culverts, cable guardrail, regulatory signs, and raised/recessed pavement markers.

### Biennial maintenance task completion: planned vs. actual

*Percentage of tasks complete as of Q2 FY 2010*



Data Source: WSDOT Maintenance Office.

Note: Data is cumulative for the first two quarters of FY 2010.



Maintenance crews clear fallen trees from SR 3 in WSDOT's Olympic Region.

# Highway Maintenance Annual Report

## Task Completion and Asset Condition

### Future maintenance performance reporting to include task completion metric along with the asset condition metric

The 1996 MAP study recommended that WSDOT use both *task completion* and *asset condition* performance measures to help manage and deliver the highway maintenance program. While the two performance measures focus on different parts of the maintenance program, they complement each other in several ways and working together, they serve as bookends on overall program delivery. Task completion measures will be the primary tool used to measure program performance and develop performance-based budgets. Asset condition performance measures will serve as a quality assurance tool used to verify or support changes in the task completion measures. Completion of high levels of needed maintenance work contribute to good asset condition. Completion of low levels of needed maintenance work contribute to poorer asset condition. Additional detail is listed in the table below.

### Future performance reports for maintenance

As basic maintenance schedules and maintenance backlogs are defined for various maintenance tasks in future biennia, annual reports will display both sets of data on a single table.

This will show the reader, for each type of highway system asset, the percentage of basic maintenance tasks being completed, and the related condition of that asset.

### Future performance reporting style for maintenance

*CY 2009 data, example*

	Task Completion (% of tasks completed)	Asset Condition (MAP LOS)
Signals	44%	C
Movable/Floating Bridges	82%	A+

Data Source: WSDOT Maintenance Office.

Note: Data is for selected MAP assets, information for all MAP assets is not available at this time.

### MAP program wins international award



In early January, the MAP program received international recognition, joining eleven projects from eight different countries around the world winning a 2009 Global Road Achievement Award from the International Road Federation (IRF).

### MAP Performance Measures: Activity Completion and Feature Condition

Concept	Task completion	Asset condition
How are program investments and results related?	There is a direct relationship between program investment and work tasks completed.	There is a partial relationship between program investment and the condition of highway assets. While maintenance work has a significant bearing on deficiencies related to highway assets, WSDOT's construction program funding has significant influence on asset condition.
What is the elapsed time between program investment and results?	There are immediate results. As the program budget is altered, workplans are revised and the adjusted rate of work completion commences. This type of performance measure can be viewed as a "leading indicator" or predictor of how effectively the maintenance program is being delivered.	The results are long term. When program budgets are reduced or do not keep up with needed tasks, deterioration of assets can take several years to be realized. When program budgets are increased, funds go to maintaining routine inspections and preventive maintenance to maximize asset lifecycles. This does not typically show dramatic reduction in deficiencies, rather it is realized as a consistent showing of few deficiencies over time. This type of performance measure can be viewed as a "lagging indicator" as it identifies a need for changes, to the "leading indicator" of task completion.
How is the performance measure use for budget requests?	Task completion is the primary performance measure used to develop and implement budget requests.	Asset condition, a secondary measure for developing budget requests and is used as a quality assurance tool to verify the results of task completion measures or show that changes in task completion schedules should be made. If maintenance completes 100% of basic maintenance and asset condition shows no deficiencies, the task completion schedule is considered adequate to keep features in good shape. If maintenance completes 100% of basic maintenance and asset condition shows significant deficiencies, the task completion schedule needs improvement or the construction program needs to replace assets that have gone beyond their useful lifespan.

Data Source: WSDOT Maintenance Office.

# Mobility (Congestion Relief)

## Statewide policy goal:

To improve the predictable movement of goods and people throughout the state.

## WSDOT's business goal:

To move people, goods, and services reliably, safely, and efficiently, by adding infrastructure capacity strategically, operating transportation systems efficiently, and managing demand effectively.



### In this section

Travel Time Trends Semi-Annual Report	20
Incident Response Quarterly Update	24
Washington State Ferries Quarterly Update	27
Rail: Amtrak Cascades Quarterly Update	31

### See also

Bike & Pedestrian Safety Annual Report	5
Special Report: Federal Recovery Act-funded Projects	42
Quarterly Report on Capital Projects (Beige Pages)	49
New Ferry Construction	79

### Earlier mobility-related articles

Congestion Report, GNB 35
Freight/CVISN, GNB 33
Travel Times Six Month Update, GNB 34
Commuter Options, GNB 33
Traveler Information, GNB 33

# Travel Time Trends Semi-Annual Report

## Travel Time Trends on Major Central Puget Sound Freeways

### Travel Trends Timeline: 2008-2009

July-December 2008:  
♦ Economic conditions deteriorate in the central Puget Sound.  
♦ Travel times improved between 1 and 7 minutes on 15 of 18 key commutes, with 3 unchanged compared to the second half of 2007.  
♦ Peak period volumes declined; discretionary travel continued to drop.

January-June 2009:  
♦ Compared to the same time period in 2008, travel times continued to improve on 13 of 18 surveyed commutes.  
♦ Changes to peak period and daily volumes mixed—some up and some down.

July-December 2009:  
♦ Compared to the same time period in 2008, travel times improved on eight of the surveyed commutes.  
♦ Tukwila to Bellevue morning commute improved by 13 minutes in part due to the completion of a new auxiliary lane on I-405.  
♦ Changes to peak period volumes show increases on 12 of 18 commute routes since the 2008 economic downturn.  
♦ Daily volumes increased on all 18 routes during the second half of 2009 as compared to the same time period in 2008.

This analysis is performed twice a year to provide up-to-date information on the nature of travel trends in the central Puget Sound during a time of changing regional economic conditions. In addition, the ongoing delivery of congestion relief projects under WSDOT's *Moving Washington* program to fight congestion has made a difference. Specifically, this analysis focuses on a sample of 18 key commute routes across the central Puget Sound region. These results supplement the annual Congestion Report, which takes a more comprehensive look at congestion trends in the central Puget Sound and around the state; the next annual Congestion Report will be published as part of the September 30, 2010, *Gray Notebook*.

This travel trends analysis compares traffic conditions in the second six months of 2009 to the same time periods in 2007 and 2008. These time periods represent distinctly different economic conditions and trends in the Seattle area. The second half of 2007 had the lowest area unemployment since the late 1990s, and relatively stable gas prices. The second six months of 2008 saw gas prices hit record highs in July and then decline as a result of the severe economic recession that hit Washington hard during the second half of the year. As economic conditions worsened, the unemployment rate in the Seattle-Bellevue-Everett urban area rose from just above 4% in July 2008 to about 9% in July 2009, with rates fluctuating between 8.4% and 9.0% during the second half of 2009. Other background conditions may have also changed as a result of construction or other factors during this time period.

### Highlights of travel time trends during July-December 2009 include:

**2009 vs. 2007: When comparing the second half of 2009 to the same time period in 2007 (when the economy was relatively strong), travel times improved on 14 of the 18 surveyed commute routes, with improvements ranging from one minute to 15 minutes.**

**2009 vs. 2008: Comparing July-December 2009 to the same time period in 2008 shows more mixed results, with some routes faster and about half unchanged or slower. This may indicate that the economy's downturn has slowed but has not yet returned to the relatively strong conditions of 2007.**

**WSDOT congestion relief projects are making a difference. The largest improvements in travel times were seen on I-405—Tukwila to Bellevue AM commute (13 minutes) and Bellevue to Tukwila PM commute (5 minutes)—which benefitted from the completion of a series of congestion relief projects in 2009.**

♦ **Changes in travel times were mixed on the surveyed commutes when comparing the second half of 2009 to the same time period in 2008, with most seeing relatively small changes.**

♦ Eight of the surveyed routes (50% of the routes with data available to make the comparison) showed faster peak period travel times ranging from one minute to 13 minutes.

♦ Three commutes showed no change in travel times, while five commutes saw travel times increase from between one minute and 3 minutes. The two commute routes traveling on westbound I-90 did not have comparable travel time data available for 2008 due to construction.

♦ **Peak period volume changes on the 18 commute routes were also mixed during the second half of 2009 as compared to the second half of 2008.**

♦ Four of the routes showed drops of between 1.5% and 5.8%, with two other commutes showing no change. The twelve other surveyed routes saw volumes increase from between 0.4% and 32.5%.

♦ The 32.5% increase was on the I-405 Tukwila to Bellevue morning commute which can be accounted for by increased efficiency due to the completion of the new auxiliary lane mentioned above.

### Travel time changes mixed during the second half of 2009 as compared to the same time period in 2008, with eight commutes having faster travel times

A review of the distribution of travel time changes during the second halves of 2007, 2008, and 2009 suggests that the general pattern of reduced travel times that was seen in the second six months of 2008 vs. 2007 was leveling off in 2009. The 2009 vs. 2008 year-over-year changes

# Travel Time Trends Semi-Annual Report

## July-December 2009: Travel times improved on eight of the surveyed commute routes

### Comparing changes in average travel times and volumes during peak periods: July-December 2007-2008-2009<sup>1</sup>

		Average travel time in minutes					Peak volume change		Daily volume change	
		2007	2008	2009	2009 vs. 2007	2009 vs. 2008	2009 vs. 2007	2009 vs. 2008	2009 vs. 2007	2009 vs. 2008
<b>Peak direction – Morning commutes</b>										
I-5	Federal Way-Seattle	42	35	31	-11	-4	+7.5%	+4.7%	+1.6%	+4.6%
I-5	Everett-Seattle	41	36	35	-6	-1	+4.8%	+2.7%	-0.8%	+2.6%
I-405	Everett-Bellevue	42	37	36	-6	-1	-1.8%	0%	-2.4%	+2.6%
I-405	Tukwila – Bellevue	35	33	20	-15	-13	+31.7%	+32.5%	+6.0%	+9.5%
SR 167	Auburn – Renton <sup>2</sup>	17	14	14	-3	0	+15.6%	+8.8%	+6.0%	+4.8%
I-90	Bellevue – Seattle <sup>3</sup>	14	—*	12	-2	—*	-4.1%	-1.5%	-4.4%	+0.2%
SR 520	Bellevue – Seattle	14	13	14	0	+1	-2.3%	0%	-1.7%	+1.4%
I-90	Seattle – Bellevue <sup>3</sup>	14	14	12	-2	-2	-11.3%	-5.8%	-5.2%	+0.5%
SR 520	Seattle – Bellevue	16	15	15	-1	0	-5.7%	-2.3%	-2.1%	+2.0%
<b>Peak direction – Evening commutes</b>										
I-5	Seattle- Federal Way	31	29	28	-3	-1	+3.7%	+3.1%	+0.9%	+4.9%
I-5	Seattle - Everett	38	34	37	-1	+3	-4.0%	-3.5%	-2.5%	+1.9%
I-405	Bellevue - Everett	41	35	36	-5	+1	+7.8%	+3.5%	+0.7%	+2.8%
I-405	Bellevue - Tukwila	31	31	26	-5	-5	+3.1%	+5.0%	+0.4%	+4.6%
SR 167	Renton - Auburn <sup>2</sup>	16	14	13	-3	-1	+4.2%	+1.8%	-2.5%	+4.4%
I-90	Bellevue - Seattle <sup>3</sup>	22	—*	17	-5	—*	-3.0%	+0.4%	-4.4%	+0.2%
SR 520	Bellevue - Seattle	23	21	23	0	+2	-0.7%	+1.2%	-1.7%	+1.4%
I-90	Seattle - Bellevue <sup>3</sup>	13	13	13	0	0	-0.7%	+1.9%	-5.2%	+0.5%
SR 520	Seattle - Bellevue	16	16	17	+1	+1	+0.7%	+2.5%	-2.1%	+2.0%

Source: Washington State Transportation Center (TRAC).

<sup>1</sup> Travel time and volume data for weekdays only; peak periods are 6-9 AM and 3-7 PM.

<sup>2</sup> General purpose lane volumes only, HOV lane volumes not included.

<sup>3</sup> I-90 comparisons for 2009 vs. 2008 are based on August-December data, July 2009 data not available due to construction on the Homer Hadley Bridge.

\* 2008 data not available for WB I-90 due to construction.

showed a mixture of results, though in most cases the changes were small. The results showed that ten trips had small travel time changes of no more than one minute up or down in the second half of 2009 versus the same period in 2008; three additional trips showed larger year-over-year changes, but when compared to the first half of 2009 the amount of the change was no more than a minute up or down. Three other trips had a change in travel time in 2009 vs. 2008 of two minutes or more. Overall, eight routes saw travel times improve by between 1 and 13 minutes, three were relatively unchanged, and five showed worsening in travel times between 1 and 3 minutes. The travel time trends during the second half of 2009 were similar to those seen in the first six months of the year, when a year-over-year review showed that 14 of the 18 trips showed small or no changes in travel time. The second half results are somewhat more varied than that, but still tend toward small changes for the most part.

### Tukwila to Bellevue AM commute improves by 13 minutes

The most notable exception was the trip from Tukwila to Bellevue via I-405 (AM), which showed a year-over-year average travel time savings of about 13 minutes during the AM peak period. As noted in the previous six-month report, data suggest that a significant contributing factor was the completion of a supplementary lane near the I-90 interchange that opened in January 2009. This project is discussed in greater detail on p. 23.

Another noticeable drop in average peak period travel time was seen on the Bellevue to Tukwila trip via I-405 (PM), which showed about a 5-minute drop in travel time in the second half of 2009. This continues the pattern toward shorter travel times on this route that was observed in the first half of 2009. Travel time improvements coincides with the completion of several I-405 corridor improvement projects, including two that resulted in an additional GP lane on strategic segments of the trip, including

# Travel Time Trends Semi-Annual Report

## Peak Period and Daily Volumes/Driving Forces

the first few miles of the trip between downtown Bellevue and the I-90 interchange, and the segment between SR 167 and the I-5 interchange in Tukwila. Several I-405 projects were just completed in the latter part of the year, so this trip will be monitored during the coming year to evaluate the longer-term impacts of these capacity improvement efforts.

Of the five trips that showed increases in travel times, the largest change was on the Seattle to Everett (PM) route, which showed a year-over-year travel time change of more than +2 minutes. On that trip, there appeared to be a larger number of days with higher-than-average travel times (versus a small number of extreme outlier days); year-over-year travel time changes were 3 to 4 minutes higher at the 80th, 90th, and 95th percentile levels. Nevertheless, even with this increase, the 2009 average peak period travel time is still lower than the route's average PM peak period travel time in 2007.

### Comparing 2009 to 2007: Travel times faster on 14 of the 18 surveyed commute routes

Looking over a two-year period for all the trips (second half of 2009 vs. second half of 2007), nearly every analyzed trip continues to show a net drop in average peak period travel time; 14 of the 18 trips showed an estimated travel time reduction of one or more minutes, while three trips showed no net change; only one trip showed a higher travel time over that period of time.

### Peak period volumes increase on 12 of the 18 commute routes, 2009 vs. 2008

A year ago, in a comparison of average peak period volumes in the second half of 2008 vs. 2007, 12 of 18 locations showed a reduction in vehicle volumes; in a comparison of volumes six months ago for the first half of 2009 vs. 2008, the pattern began to moderate, with half of the locations showing a volume drop and the other half showing volume growth. The vehicle volume pattern observed at spot locations in the second half of 2009 vs. 2008 suggests a continuation of this gradual pattern over the past year, with 12 of the 18 locations showing higher year-over-year volumes in the peak period. Please note that the degree of volume percentage growth in the second half of 2009 is somewhat tempered by the fact that the comparison is relative to the second half of 2008, a time period that saw nearly universal drops in volume as economic conditions changed.

The most significant change in volume was observed at a location on I-405 between Tukwila and Bellevue (northbound AM), which continued to show high volume growth during the peak period. The first half of 2009 showed a nearly 29% year-over-year growth in AM peak period volume at that location, and the second half of 2009 continued that pattern

with over 32% growth. (The data suggest that these changes are connected to the opening of a supplementary lane in early 2009, as noted in the travel time discussion). A spot location on the Auburn to Renton northbound AM route on SR 167 saw over 8% growth in GP volume, although when all lanes (GP and HOT lane) are counted together, the growth is slightly less than 6%. Average peak period year-over-year volume changes at other locations varied from -5.8% to +5.0%.

### Daily volumes show increases in the later half of 2009

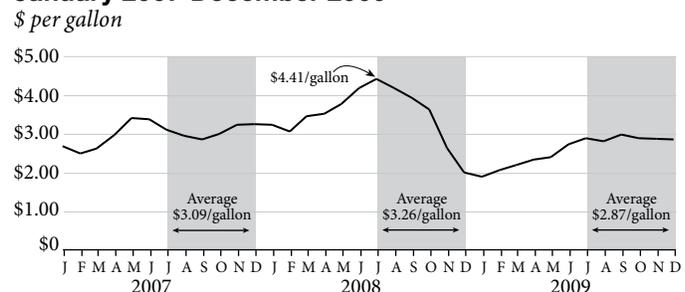
The daily vehicle volume patterns observed at the spot locations during the second half of 2009 show a general pattern of volume increase year-over-year with all 18 locations showing at least slight volume growth. This is a somewhat stronger pattern than that observed during the first half of the year. As with the peak period volumes, the daily volume comparison is relative to the second half of 2008, a time period when volumes were dropping at most locations. This should be considered when evaluating the significance of the year-over-year daily volume change.

Just as with the first half of 2009, the second half of the year saw the most significant daily volume growth occurring at a spot location on the northbound Tukwila to Bellevue route via I-405 (AM), which was influenced by the capacity expansion project near the I-90 interchange. Volumes there grew by 9.5%. Volume changes at other locations ranged from +0.2% to +4.9%.

### Driving forces of travel trends during the second half of 2009

**Gas prices:** The second half of 2008 showed markedly higher gas prices in Washington State than either the preceding or following year. The second half of 2008 began with the culmination of a multi-year upward trend in gas prices, reaching a statewide peak of \$4.41 per gallon in July 2008. This was quickly followed by a significant drop in prices to a nearly four-year low near \$2.00 per gallon by the end of the 2008. In the first part of 2009, prices resumed a gradual upward pattern, and in the

### Average gas prices in Washington State January 2007-December 2009



Data Source: Energy Information Administration.

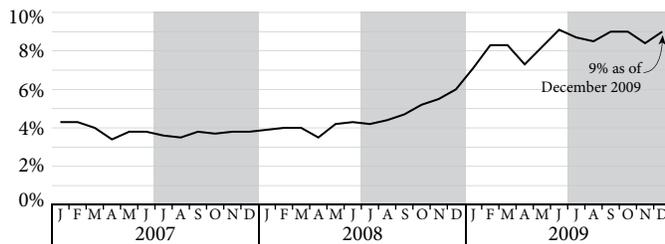
## Driving Forces of Travel Time Trends/I-405 Widening Project

second half of 2009, average gas prices have fluctuated between \$2.75 and \$3.00 per gallon. It is likely that the high gas prices in 2008 depressed some travel, especially daily volumes, which have been rebounding in 2008. However, the stronger effect on peak period volumes is coming from employment trends.

**Employment:** The second half of 2007 had the lowest area unemployment since the late 1990s, ranging between 3-4%. Beginning in the middle of 2008 the average unemployment rate in the Seattle-Everett-Bellevue area began a sharp rise that continued throughout the second half of that year, reaching 7.1% by January 2009. This trend continued in the first half of 2009, with the rate reaching 9.1% by mid-2009. The second half of 2009 saw a leveling off of that pattern, with rates fluctuating between 8.4% and 9.0% during that time. This sharp rise in the unemployment rate in 2008 and 2009 has depressed peak period volumes.

### Seattle-Bellevue-Everett area unemployment rate

January 2007-December 2009



Data Source: U.S. Bureau of Labor Statistics.

### Case study: I-405 South Bellevue widening project improves travel times substantially during the morning peak period

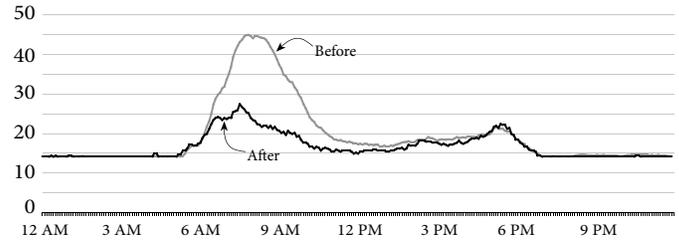
The I-405 South Bellevue Widening Project, also known as the 112th Avenue SE to SE 8th Street Project, helps relieve congestion at one of the worst I-405 bottlenecks, the drive in and out of Bellevue. Construction began in July 2007 to add a northbound lane from 112th Ave SE to I-90 and add a lane in both directions from I-90 to SE 8th St. This project also includes widening the existing bridge over Coal Creek Pkwy in the northbound direction, widening the bridge over SE 8th in the southbound direction and removing the Wilburton Tunnel. The southern section was opened in January 2009 and the northern section was completed in September 2009.

The new northbound auxiliary lane from 112th Ave SE to I-90 was opened to traffic on January 16, 2009. The graph to the upper right shows the average travel time on weekdays (Tuesday-Thursday) from Tukwila to Bellevue before and after the phase was completed.

The peak morning commute in 2008 was roughly 45 minutes from 7:30 AM-8:30 AM. After the new lane was opened to traffic,

### I-405 auxiliary lane project: before and after Tukwila to Bellevue average commute times

Time in minutes, Tuesday-Thursday



Data Source: WSDOT Northwest Region.

that peak morning commute was reduced to less than 30 minutes. These numbers do not correspond directly with the data in the table on page 21 because this case study looks at a more limited time period in 2009 and uses different methodology whereby this case study looks at travel times for Tuesday-Thursday, while the travel time trends analysis looks at Monday-Friday.

The new lane changed the number of lanes between 112th Ave SE and Coal Creek Parkway from three to four and from Coal Creek Parkway to I-90 from four to five lanes. The increase in the number of lanes resulted in an increase of capacity.

Before the new lane was opened, hourly volume during the morning peak reached just over 5,000 vehicles. When congestion built up, vehicle speeds slowed resulting in lower throughput for the rest of the morning. The new lane alleviated congestion at the bottleneck resulting in an increase in throughput of about 1600 vehicles during the peak period.

Along this 1.95 mile corridor there is an average collision rate of 53 collisions per year, with 25% of them occurring on weekdays between 6:00 AM and 10:00 AM. The additional lane decreases congestion which should help to decrease the number of collisions in the future.

### Moving Washington: WSDOT's balanced program to fight congestion

Effective transportation is critical to maintaining our economy, environment, and quality of life. Moving Washington is the WSDOT's vision of investments and priorities for the next 10 years. It includes a balanced strategy that integrates new capacity, efficiencies, and commute options to address congestion and improve the performance of our state's transportation system.



# Incident Response Quarterly Update

## Incident Response Program Statewide

### Incident Response Program Highlights

In Q4, 2009, the IR Team cleared 10,163 incidents with an average clearance time of 13.7 minutes.

WSDOT and WSP meet the Governor's annual GMAP target for 90+ minute incidents.

The mission of WSDOT's Incident Response (IR) program is to safely and quickly clear traffic incidents on state highways. Quick clearance minimizes congestion and dangerous traffic blockages that can lead to secondary collisions. IR roving units, which operate during peak traffic periods, also offer a variety of free assistance that reduces motorists' exposure to risk, such as providing fuel and jump starts, changing flat tires, and moving blocking vehicles safely off the roadway. IR units are trained and equipped to assist Washington State Patrol (WSP) troopers at collisions and other traffic emergencies. Available for call out 24 hours a day, seven days a week, IR units assist WSP with traffic control, mobile communications, clean-up, and other incident clearance functions as needed during major incidents. More information on the IR program can be found at [www.wsdot.wa.gov/Operations/IncidentResponse/](http://www.wsdot.wa.gov/Operations/IncidentResponse/).

### Annual average clearance time and total incidents responded to by the IR program†

Calendar years 2003-2009

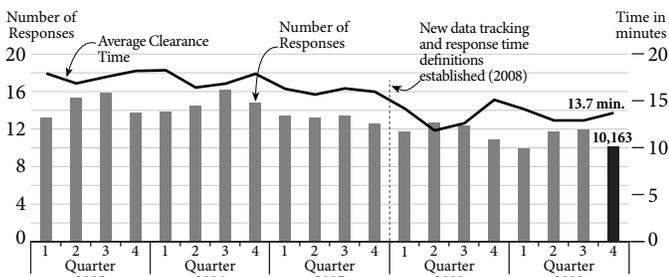
Year	Avg clearance time (min)	Total # of incidents
2003	18.0	44,945
2004	17.1	53,199
2005	17.6	58,150
2006	17.3	59,274
2007	16.1	52,536
2008	13.4	47,579
2009	13.4	43,786

Data Source: WSDOT Traffic Office.

### Number of responses and overall average clearance time†

January 1, 2005 - December 31, 2009

Number of responses in thousands, clearance times in minutes



Data Source: Washington Incident Response Tracking System, WSDOT Traffic Office.

†Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, the number of responses by IRT are shown. From Q3 2003 to Q2 2007, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total. From Q1 2002 to Q4 2007, Average Clearance Times do not include "Unable-to-Locate" (UTL) responses in calculation. Average number of responses does include UTLs, because this represents work performed on behalf of the Incident Response Program. In Q1 2008, WSDOT's Incident Response Program moved to a new database system and began calculating average clearance time in a different way. This accounts for the apparent decrease in the average clearance time value.

In Q4, 2009, WSDOT's Incident Response Team cleared 10,163 incidents with an average clearance time of 13.7 minutes. This clearance time is up 6.0% from last quarter's clearance time of 12.9 minutes, and down 9.2% from 15.1 minutes in the same quarter of 2008. The number of incidents responded to in Q4 is down 14.9% from last quarter's 11,941\* incidents, and down 5.9% from the 10,803 incidents attended in Q4, 2008.

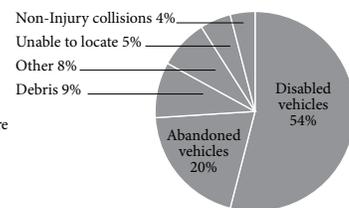
\*Note: In the September 30, 2009 *Gray Notebook* the total number of incidents responded to was incorrectly reported as 11,943 for Q3 CY2009. There were 11,941 incidents responded to during Q3 CY 2009.

### Number and percentage of responses by category

Q4, October 1 - December 31, 2009; 10,163 total incidents

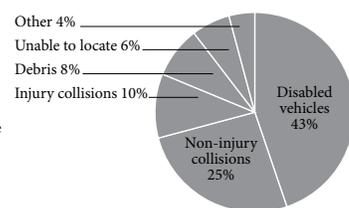
#### Incidents Lasting Less Than 15 Minutes (7,526)

Fatality, Injury and Police Activity were less than 1% (not shown). There were 15 Fires and no Hazardous Materials events involved incidents in addition to or as a result of above incidents. 14 incidents involved WSDOT property damage, and 422 were located in work zones.



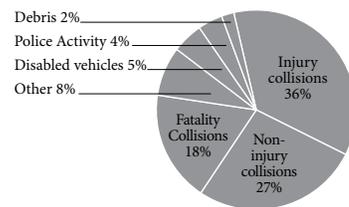
#### Incidents Lasting 15 to 90 Minutes, (2,495)

Police Activity and Fatality collisions were less than 1% (not shown). There were 69 Fire, and 9 Hazardous Materials involved incidents in addition to or as a result of above incidents. 125 incidents involved WSDOT property damage, and 187 were located in work zones.



#### Incidents Lasting 90 Minutes and Longer (142)

There were 14 Hazardous Materials and 13 Fire involved incidents in addition to or as a result of above incidents. 44 incidents involved WSDOT property damage, and 15 were located in work zones.



Data Source: WSDOT Traffic Office and Washington State Patrol

## Fatality Incidents / Over-90-Minute Incidents

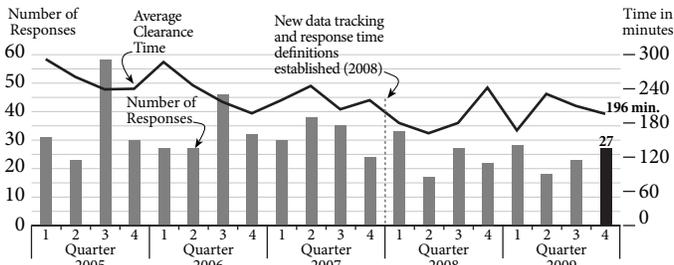
The number of incidents that IR teams have responded to has declined over 26% from a high of 59,274 in 2006 to a low of 43,786 in 2009. Between 2006-2009 several factors have hit the program hard, contributing to the downward trend currently being experienced: loss of supplemental IR responders from Washington State Patrol cadets and contract tow companies; the elevation in fuel prices has raised the cost of doing business; and fluctuations in VMT may have reduced the number of total incidents occurring on the road. Factors affecting response numbers are in a constant state of flux and current trends are now being assessed in depth and will be published in the March 31, 2010, edition of the *Gray Notebook*.

### Fatality incident clearance times decrease

In Q4, Incident Response (IR) units responded to 27 fatality incidents across the state. The average clearance time for these incidents was 196 minutes, down 7.0% from the Q3 average of 210 minutes. This value reflects a decrease in fatality clearance times from highs in Q2 and Q3 of 2009, and Q4 of 2008.

### Number of responses and average clearance time of fatality collisions

January 2005-December 2009



Data Source: Washington Incident Tracking System, WSDOT Traffic Office.  
 Note: In Q1 2008, WSDOT's Incident Response Program moved to a new database system and began calculating average clearance time in a different way. This accounts for the apparent decrease in the average clearance time value.

### WSDOT and WSP achieve annual GMAP target

In 2008, Governor Gregoire challenged WSP and WSDOT to repeat their 2007 successful performance in reducing the duration of serious blocking incidents on nine key congested corridors. For 2009, the two agencies made the GMAP goal of 155 minutes, with the average annual duration for GMAP incidents coming in at 154 minutes. In 2008, the target was missed by one minute (156 minutes).

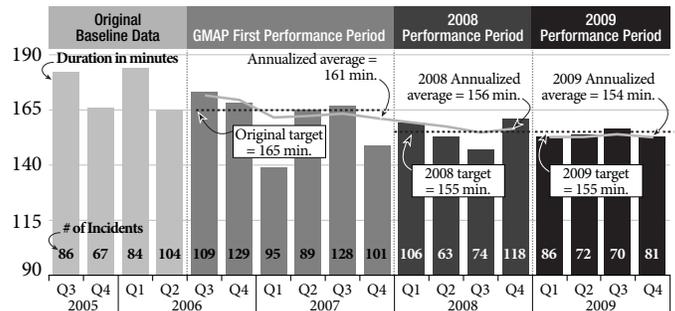
#### Annual roll-up of GMAP incident response data

Average Duration and Number of Incidents on the 9 key congested routes

All 90+ minute incidents	2006	2007	2008	2009
Number of incidents	425	413	360	309
Avg duration in minutes	172	156	156	154

Source: WSDOT Traffic Office and Washington State Patrol

### WSDOT and WSP achieve Governor's goal for clearing 90+ minute incidents on the 9 key routes July 2005-December 2009



Data Source: Washington State Patrol and WSDOT Traffic Office.

### For 90+ minute blocking incidents Q4 2009 average duration was 153 minutes, with one extraordinary incident

During the fourth quarter of 2009, 70 over-90-minute road blocking incidents occurred on the nine key routes, producing an average duration of 153 minutes for the quarter. The quarter experienced one extraordinary (6+ hour) blocking incident. The incident occurred on I-5 at milepost 76 on December 11th at 4:15 in the morning. Two commercial motor vehicles collided, destroying the semis and trailers and severely injuring both drivers. This was a Major Incident Tow (MIT) event (see discussion on p. 26 for more information about this program) so two class C tows were required to remove the vehicles and trailers; the incident also included a hazardous materials spill requiring Department of Ecology response. WSP and WSDOT are tracking fatality and commercial-motor-vehicle involved incidents and will report more fully on them in an upcoming edition of the *Gray Notebook*.

### 90+ minute blocking incident types that impact performance on the nine key congested corridors

	2006	2007	2008	2009
<b>Extraordinary Incidents: 90+ minute blocking incidents</b>				
Extraordinary (6+ hour) incidents	22	12	13	6
Avg duration without 6+ hr. incidents	155	146	146	146
<b>Fatality incidents: 90+ minute blocking incidents</b>				
Number of fatality incidents	42	34	32	28
% of all incidents that were fatalities	9.9%	8.2%	8.9%	9.1%
Avg duration of fatality incidents	246	225	219	216
<b>Commercial Motor Vehicles (CMVs): 90+ minute blocking incidents</b>				
Number involving CMVs	176	179	155	92
% of all incidents that involved CMVs	41.3%	43.6%	43.3%	29.5%
Avg duration of CMV incidents	195	168	172	181

Source: WSDOT Traffic Office and Washington State Patrol  
 Note: Categories are not mutually exclusive.

# Incident Response Quarterly Update

## Major Incident Tow

### Major Incident Tow Pilot Project

The Major Incident Tow (MIT) Program is an incentive tow program whose purpose is to reduce clearance times associated with incidents involving heavy trucks or vehicles (over 26,000 GVW). By quickly clearing heavy vehicle blockages, MIT reduces traveler delay and eliminates the likelihood of secondary collisions which often occur in the long queues that form behind lengthy incidents.

WSDOT and WSP jointly implemented the MIT as a pilot program for the 2007-09 Biennium, after studying a successful model - the Rapid Incident Scene Clearance Program in Florida. MIT initially covered major freight corridors in King, Pierce and Snohomish counties, and the funding provided for about 40 activations a year.

Under the MIT program, contracted tow companies are eligible for a \$2500 bonus payment when responding to and clearing heavy truck or vehicle involved incidents. To earn the incentive payment contract towers must respond to the scene in under 30 minutes and remove blockages from the roadway in less than 90 minutes.

During the 2007-09 biennium, there were 34 activations, one cancellation, and three activations that received no payment because the tow company was not able to clear the blockage in less than 90 minutes. If the call was cancelled en route, a cancellation fee of \$600 was paid to the tow company. In all, WSDOT paid out \$79,581 to qualified MIT towing contractors.

Although there is only a small dataset to examine, it appears that the program is improving clearance times and speeding up the recovery of wrecks. Before MIT, comparable incidents (that would have qualified for MIT) showed an average road blockage time of 181 minutes; after MIT was deployed, average blockage times dropped to 170 minutes for successful activations.

The program was re-funded for one year in the 2009-2011 biennium. To date in the new biennium, activations have averaged 2.5 a month, up from 1.4 in the pilot period. WSDOT believes this upward trend in activations shows that the learning curve is shrinking while the agencies become more proficient at knowing when to activate MIT. Florida experienced a similar learning curve in its program.

### Clearance times before and after MIT implementation

Data Definitions	Dates	Time from Tow Company Notification until Wreckage is Removed (in minutes)	Road Blockage Duration (in minutes)
Before Data: One year prior to MIT pilot program	July 2006 – June 2007	133	181
After Data: MIT pilot program, all incidents	July 2007 – June 2009	130	207
After Data: MIT pilot program, successful incidents (met 90 minute goal)	July 2007 – June 2009	106	170

Data Sources: The "Before" data is taken from the CAD logs, using incidents in King, Pierce, and Snohomish Counties from July 2006 through June 2007. These incidents all involved disabled heavy trucks or buses (from collisions or otherwise), class "C" tows, and tow companies currently under MIT contract. The "After" data is taken from the MIT pilot program, and is based on WSP CAD data.



The photo sequence above shows the MIT program in action: **Photo 1** shows a class S-1 tow truck preparing to move the fully loaded, rolled-over semi. **Photo 2** shows the tow using cables to pull the truck from the middle of the interchange towards the side of the road. **Photo 3** shows the semi fully removed from the road. The interchange is once again open to traffic, and crews can begin unloading the cargo in a safer environment.

# Washington State Ferries Quarterly Update

## Ridership and Farebox Revenue

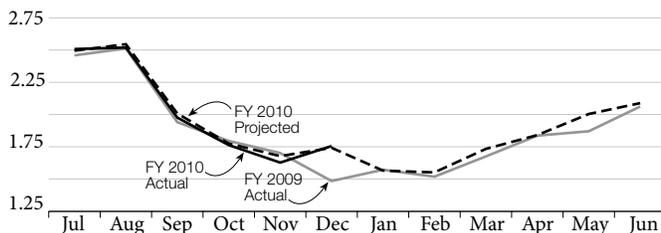
Washington State Ferries (WSF) serves as both an extension of the state's highway system and as a regional mass-transit provider. It provides a critical link to communities separated by water or longer driving distances, and is essential to the movement of goods and people in the Puget Sound region. It is the largest operating auto-ferry fleet in the world, carrying almost 10 million vehicles and 23 million ferry passengers each year.

### Ridership levels remain below projected levels

For the second fiscal quarter of FY 2010 (October 1 – December 31), 5.1 million people traveled on the ferry system. For the second fiscal quarter, WSF ridership was 0.9% below projected levels, or 49,000 fewer riders than projected. The gap in projected and actual ridership varied during the quarter, with fewer riders than projected in October and November (62,000 fewer riders for both months) and more riders than projected in December (13,000 more riders). As compared to the same quarter one year ago, WSF ridership this quarter was 3.3% higher, an increase of 165,000 riders. Ridership figures show a mixed picture, with more ridership than

### Ferries ridership by month

Actual ridership for FY 2010\* vs. planned ridership for FY 2010 and actual ridership for FY 2009, ridership in millions



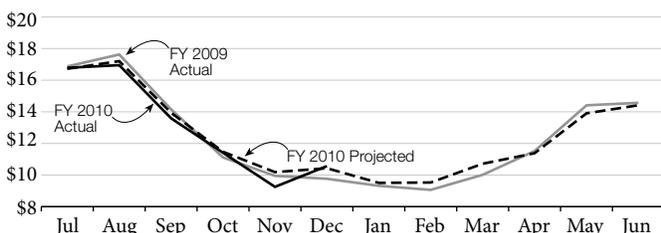
Data Source: WSDOT Ferry System.  
\* Data Note: Ridership for FY 2010 is from July 1 - December 31, 2009.

### Farebox revenue remains below projections

For the second fiscal quarter, WSF farebox revenue was \$31,234,568. This is 2.7% below projected levels for the quarter, or \$856,758 less than expected (\$32,091,326). As compared

### Ferries farebox revenues by month

Actual revenues for FY 2010\* vs. planned revenues for FY 2010 and actual revenues for FY 2009, dollars in millions



Data Source: WSDOT Ferry System.  
\* Data Note: Farebox revenue for FY 2010 is from July 1 - December 31, 2009.

a year ago but remaining below projected levels. It is likely ridership will continue to lag behind projected levels until the economy is growing at a sustained level and the public elects for more discretionary travel, including ferry travel.

to the same quarter one year ago, WSF farebox revenue was 6.9% higher. As with ridership, it is expected farebox revenue will continue to lag behind projected levels until the economy improves.

### Washington State Ferries Highlights:

Ridership for the second fiscal quarter was 0.9% below projected levels, but 3.3% higher from 2008.

Farebox revenue was 2.7% below projections, but 6.9% higher compared with the same fiscal quarter in 2008.

Customer complaints decreased for the second straight quarter to an average of 2.4 per 100,000 riders.

The average number of missed trips per year was 3.3 per commuter.

WSF completed 99.2% of scheduled trips for the quarter, a slight decrease in performance as compared to the previous quarter.

The average system-wide on-time performance was 93.4% for the quarter, exceeding the department's goal.

The average system-wide sailing delay decreased to 2.9 minutes for the quarter, an improvement of 2.1 minutes over the previous quarter.

See also Worker Safety (pp. 2-5) and New Ferry Construction (pp. 79).

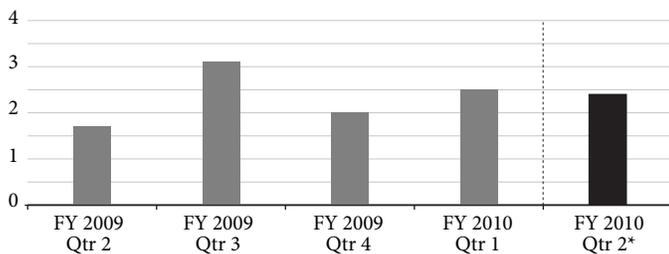
# Washington State Ferries Quarterly Update

## Customer Feedback

### Customer complaint rate decreases slightly over previous quarter

During the second fiscal quarter, the rate of complaints decreased from the previous quarter by an average of 0.1 complaints (2.5 complaints), to 2.4 complaints per 100,000 riders. This is a quarter-to-quarter decrease of 3.5%. As compared to one year prior, complaints were 0.7 more per 100,000 passengers (1.7 per 100,000 passengers in second quarter of FY 2009).

### Average number of complaints per 100,000 customers FY 2009 Quarter 2 - FY 2010 Quarter 2

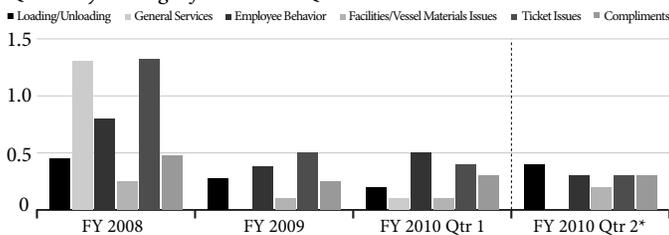


Data Source: WSDOT Ferry System.  
\* Data Note: Designates current (fiscal) reporting quarter.

For the six major areas of customer feedback (see the bar chart below), only two areas saw an increase in complaint rates: loading/unloading of ferries and facilities/vessel material issues. There was a decline in the rates for ticketing issues and employee behavior, and no complaints under general services. WSF also received 0.3 compliments per 100,000 riders during the quarter

### Common complaints per 100,000 customers

Annual averages for FY 2007 - 2009,  
Quarterly Averages for FY 2010 Quarters 1 & 2



Data Source: WSDOT Ferry System.  
\* Data Note: Designates current (fiscal) reporting quarter.

### WSF's customer feedback methodology

WSF monitors customer complaints, comments, and compliments in order to evaluate its service within 32 categories. The department uses a quality ratio to measure the number of service complaints per 100,000 customers. This measure is used to make accurate performance comparisons over time and to compare against other transportation service providers.

### WSDOT awards contract to construct next set of 64-car vessels for Port Townsend - Keystone

On October 13, WSDOT announced that it had accepted a bid from Todd Pacific Shipyards to construct two additional 64-car ferries to compliment the first 64-car vessel currently under construction, the M/V *Chetzemoka*. This vessel class is intended to replace the retired Steel Electric vessel class of ferries, which serviced the Port Townsend - Keystone and San Juan Islands routes. The vessel class is based on a pre-existing design for the Steamship Authority's Island Home class which operates off of Cape Cod, MA. Since the Island Home was designed in Washington State, it allows for expedited delivery of new vessels under Washington state law requiring in-state design and construction of state ferry vessels (RCW 47.56.780).

WSDOT and Todd Pacific Shipyards estimate that the 64-vessel class, now designated the Kwa-di Tabil vessel class, will sustain 400 ship-building jobs in the Puget Sound as construction moves from the M/V *Chetzemoka* to the second and third 64-class vessels. The contract calls for a 20 month timeline for construction of each vessel. The second ferry is expected to be delivered in Spring 2011, and the third ferry is expected to be delivered in Winter 2012. The contract also provides WSDOT the option of calling for a third vessel, the fourth 'new' vessel, to be constructed after completion of the remaining 64-car vessels if funds allow. That vessel may be either a 64-car ferry or a 144-car ferry.

In October, the Washington State Transportation Commission formally named the first 64-car ferry the M/V *Chetzemoka* after the S'Klallam Chief of the same name. This former tribal chief was historically noted for greeting and befriending the first non-natives that settled in the Port Townsend area in the 1850s. The name is in keeping with Puget Sound ferry traditions that use local tribes' names and terms to designate vessels. The Transportation Commission has begun to accept solicitations for the future vessel names for the remaining 64-class ferries.

For more information about the 64-car ferry construction program including the M/V *Chetzemoka*, see pp. 79 of the *Gray Notebook* or visit the project page online at: <http://www.wsdot.wa.gov/Projects/Ferries/64CarFerries/>.

# Washington State Ferries Quarterly Update

## Service Reliability

### Missed trip reliability average decreases over same quarter one year ago

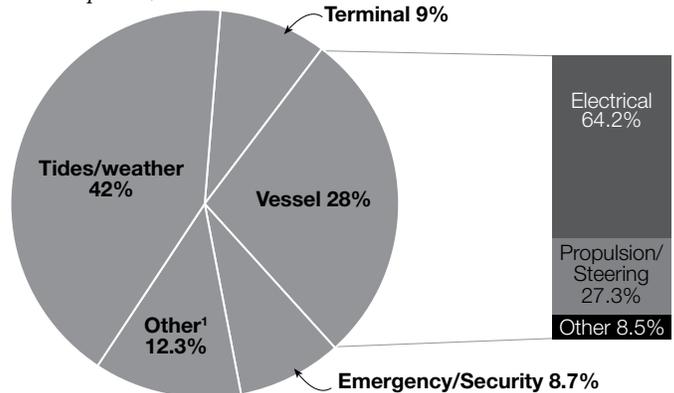
The 'missed trip reliability' average for the second quarter was 3.3 missed trips a year. Compared to the previous quarter, there were 0.3 more missed trips a year than the 3.0 missed trips a year, from first quarter of FY 2010. As compared to same quarter one year ago, there were 1.2 more missed trips this quarter than during the second quarter of FY 2009 (2.1 missed trips one year ago).

WSF's missed trip index measures trip reliability averages, and is annualized based on quarterly data, assuming 400 trips a year for each commuter. In the second quarter of FY 2010, 40,902 regular service sailing trips were scheduled. Of those trips, 379 were cancelled and 45 were replaced, resulting in a total of 40,568 during the quarter (40,902 scheduled – 379 cancelled trips + 45 replacement trips = 40,568 net trips).

The ferry system had a 99.2% overall service reliability rating for the quarter. Two issues affected performance during the quarter. The replacement of a large landing aide at the Vashon ferry terminal in November was the main cause of trip cancellations on the Fauntleroy-Vashon-Southworth ferry route (known as the "triangle route") during the quarter. Aggravated tidal conditions and weather affected the Port Townsend-Keystone route and accounted for many trip cancellations. Cancellations on this route are also due to the size of the M/V

### Reasons for trip cancellations

Second quarter, FY 2010



Data Source: WSDOT Ferry System.

<sup>1</sup> Forty seven trips categorized as "Other" did not fit established trip cancellation categories. Twenty two cancellations occurred on the Fauntleroy-Vashon-Southworth ferry route in order to maintain ferry schedules during peak loading times and for related issues. Another six cancellations occurred on the same route and involved dispatch issues with the crewing of the M/V *Tillikum*.

*Steilacoom II* ferry which is smaller than the Steel Electric class of ferries that formerly served this route. This route's strong tidal conditions and difficult weather conditions (heavy fog and wind) can overcome the operational abilities of the M/V *Steilacoom II*.

The M/V *Steilacoom II* is scheduled to be leased for use on this route through FY 2010 when the first 64-car ferry, the M/V *Chetzemoka* is scheduled to be delivered for service.

### Washington State Ferries missed-trip reliability comparison

Route	Second quarter, fiscal year 2009			Second quarter, fiscal year 2010		
	Number of missed trips <sup>5</sup>	Missed trip index (average) <sup>2</sup>	Overall reliability average <sup>3</sup>	Number of missed trips <sup>5</sup>	Missed trip index (average) <sup>2</sup>	Overall reliability average <sup>3</sup>
San Juan (Domestic)	8	0.47	99.88%	19	1.14	99.71%
Anacortes-Sidney, B.C. (International)	0	0.00	100.00%	0	0.00	100.00%
Edmonds - Kingston	42	3.66	99.09%	2	0.17	99.96%
Fauntleroy - Vashon - Southworth	21	0.81	99.79%	90	3.51	99.13%
Keystone - Port Townsend	116	26.42	93.80%	188	45.52	89.78%
Mukilteo - Clinton	5	0.30	99.25%	20	1.20	99.70%
Pt. Defiance - Tahlequah	17	2.19	99.45%	2	0.22	99.85%
Seattle - Bainbridge Island	0	0.00	100.00%	3	0.29	99.93%
Seattle - Bremerton	0	0.00	100.00%	10	1.46	99.64%
<b>Total</b>	<b>209<sup>4</sup></b>	<b>2.08<sup>4</sup></b>	<b>99.48%<sup>4</sup></b>	<b>334</b>	<b>3.29</b>	<b>99.18%</b>

Data Source: WSDOT Ferry System.

<sup>1</sup>Number of missed trips' is the difference (net) between the number of cancelled trips and the number of replaced trips.

<sup>2</sup>'Missed trip index' is based on the number of missed trips per year for one commuter making 400 trips per year, including a departure and return trip on the same day, or 200 days per year. In previous editions of the *Gray Notebook*, this measure was referred to as the 'trip reliability index'.

<sup>3</sup>The overall reliability average is calculated by dividing the recorded number of net trips (scheduled trips - cancelled trips + make-up trips) divided by the number of scheduled trips.

<sup>4</sup>The Seattle-Vashon passenger-only route is no longer operated by WSF as required by RCW 47.60.658. The route is now operated by the King County Ferry District. All trip statistics for missed-trip reliability from the second quarter of fiscal year 2009 have been revised and do not include this route in the system wide averages reported above.

# Washington State Ferries Quarterly Update

## Service Reliability

### On-time performance decreases slightly compared with same quarter one year ago

WSF's system-wide on-time performance for the second fiscal quarter increased by 9.2%, compared to the previous quarter, with 93% of trips being on-time. As compared to the same quarter one year ago, on-time performance was lower by 2% (93% of trips on time this past quarter versus 95% of trips on time for the same quarter in FY 2009). In terms of sailing delay, the average sailing delay decreased from 5.0 minutes for the first quarter of FY 2010 to 2.9 minutes of delay for the second quarter of FY 2010, an improvement of 2.1 minutes. As compared to the same quarter one year prior, the average sailing delay increased by 0.1 minutes (2.9 minutes of delay this quarter versus 2.8 minutes of delay for the same quarter in FY 2009).

A trip is considered delayed when a vessel does not leave the terminal within 10 minutes of the scheduled departure time. The average delay is the quarterly average of delay after 10 minutes from the scheduled departure time. WSF calculates

its on-time performance rating using an automated tracking system on each of its vessels that records when a vessel leaves the dock. If a vessel is recorded as leaving the dock within 10 minutes of the scheduled departure time, then the trip is considered 'on time'.

WSF's on-time performance rating is calculated on the number of trips recorded by its automated tracking system; however, marine and atmospheric conditions may prevent all trips from being detected when a vessel leaves a terminal. This quarter's system-wide on-time performance rating and average sailing delay includes completed trips on the Port Townsend-Key-stone route. A change in the technology that records vessel location allows for this route to be included in on-time performance measures. Until the first quarter of FY 2010, it had not been possible to report the data for this route for the five previous quarters. Both on-time performance and sailing delay improved on this route as compared to the previous quarter.

### Washington State Ferries on-time performance comparison

Route	Second quarter fiscal year 2009			Second quarter, fiscal year 2010		
	Number of actual trips <sup>1</sup>	Percentage of trips on-time <sup>2</sup>	Average delay from scheduled sailing time	Number of actual trips <sup>1</sup>	Percentage of trips on-time <sup>2</sup>	Average delay from scheduled sailing time
San Juan Islands (Domestic)	6,525	92.4%	3.0 minutes	6,626	92.3%	2.6 minutes
Anacortes-Sidney, B.C. (International)	180	80.6%	6.5 minutes	184	89.7%	3.5 minutes
Edmonds-Kingston	4,528	92.7%	3.6 minutes	4,608	91.2%	3.6 minutes
Fauntleroy-Vashon-Southworth	10,341	96.7%	3.0 minutes	10,161	92.1%	3.3 minutes
Keystone-Port Townsend	N/A <sup>3</sup>	N/A <sup>3</sup>	N/A <sup>3</sup>	1,626	92.8%	2.7 minutes
Mukilteo-Clinton	6,450	98.3%	2.3 minutes	6,606	97.5%	1.9 minutes
Pt. Defiance-Tahlequah	2,057	93.5%	3.7 minutes	3,604	91.1%	4.3 minutes
Seattle-Bainbridge Island	4,135	97.7%	1.5 minutes	4,147	95.8%	1.7 minutes
Seattle-Bremerton	2,511	96.9%	3.1 minutes	2,699	95.0%	2.8 minutes
<b>TOTAL</b>	<b>36,727<sup>4</sup></b>	<b>95.2%<sup>4</sup></b>	<b>2.8 minutes</b>	<b>40,261</b>	<b>93.4%</b>	<b>2.9 minutes</b>

Data Source: WSDOT Ferry System.

<sup>1</sup> Number of Actual Trips represents trips detected by the Automated Tracking System. It does not count all completed trips during the quarter, nor all trips counted are 'On-Time'.

<sup>2</sup> A trip is counted as 'on-time' if it departs within 10 minutes of the scheduled sailing time.

<sup>3</sup> On-time performance was not recorded for this route during the second quarter of fiscal year 2009.

<sup>4</sup> The Seattle-Vashon passenger-only route is no longer operated by WSF as required by RCW 47.60.658. The route is now operated by the King County Ferry District. All trip statistics for on-time performance from the second quarter of fiscal year 2009 have been revised and do not include this route in the system wide averages reported above.

## State-Supported Amtrak Cascades

Washington is one of 13 states to provide operating funds to Amtrak for intercity passenger rail service. Amtrak *Cascades* train operations span 466 miles of rail between Eugene, Oregon and Vancouver, B.C. Amtrak uses five European-designed, Talgo trains for daily operations. Three are owned by Washington State, and the other two are owned by Amtrak.

Amtrak *Cascades* service is jointly funded by Amtrak and the states of Washington and Oregon. Amtrak funds one round trip between Portland and Seattle, Oregon funds two round trips between Eugene and Portland, and Washington funds two round trips between Seattle and Portland, one round trip between Portland and Vancouver, B.C., and one round trip between Seattle and Vancouver, B.C. The table below shows ridership proportional to funding entity.

### Amtrak Cascades by funding entity

*Ridership by funding entity*

Funding partner	2007	2008	2009
Washington	457,501	521,603	523,808
Oregon	106,757	125,438	109,802
Amtrak	112,507	127,490	128,000
<b>Total ridership</b>	<b>676,765</b>	<b>774,531</b>	<b>761,610</b>

Data Source: WSDOT State Rail and Marine Office.

Note: Washington-funded trains: Amtrak *Cascades* 501, 506 507 (Seattle/Portland), 508, 510, 513, 516, and 517. Oregon-funded trains: Amtrak *Cascades* 500, 504, 507, and 509 between Portland and Eugene. Amtrak-funded trains: Amtrak *Cascades* 500 and 509 between Seattle and Portland.

### Amtrak Cascades fourth quarter ridership sets new record, up 12% from 2008

State-supported Amtrak *Cascades* service demonstrated record growth in ridership during the quarter. Ridership was 200,942 for the fourth quarter of 2009, which represents a 12% increase compared to the fourth quarter of 2008.

### Average on-time performance up 12.9% from 2008

On-time performance for Amtrak *Cascades* trains was 74.5% for the quarter. This represents an increase of 7.9% when compared to the same period in 2008. On-time performance averaged 12.9% higher in 2009 over 2008 all year. The on-time performance goal for Amtrak *Cascades* trains is 80%.



Amtrak Cascades at the new Stanwood Station. See page 32.

### Rail Performance Highlights

Amtrak *Cascades* ridership set a new record in Q4 2009 and is up 12% compared to Q4 of 2008.

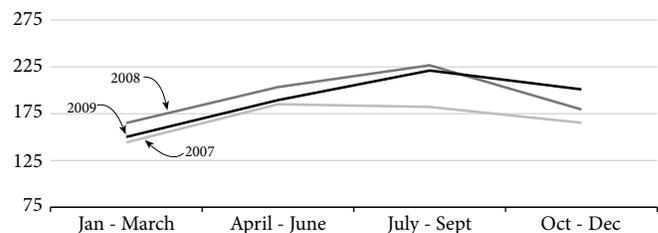
On-time performance for the quarter was up 7.9% and for the year was up 12.9% compared to 2008.

Farebox recovery remained stable for Federal fiscal year 2009 compared to Federal fiscal year 2008.

For information on Recovery Act high-speed rail funding, see p. 44.

### State-supported Amtrak Cascades quarterly ridership

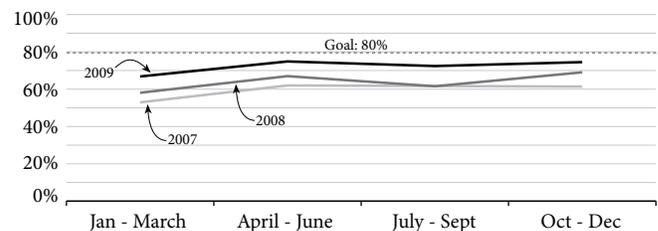
*Number of passengers per quarter, calendar year 2007-2009  
Riders in thousands*



Data Source: Amtrak and WSDOT State Rail and Marine Office.

### State-supported Amtrak Cascades on-time performance

*Percent of trains on time, 2007-2009*



Data Source: Amtrak and WSDOT State Rail and Marine Office.

The on-time performance goal for Amtrak *Cascades* is 80% or better. A train is considered on-time if it arrives at its final destination within 10 minutes or less of the scheduled arrival time.

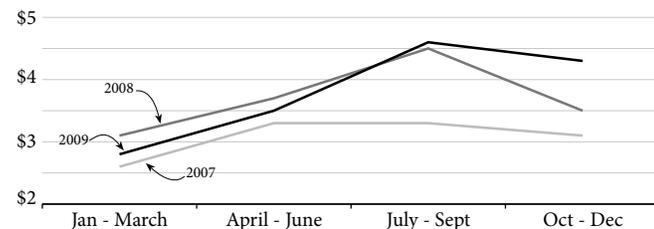
# Rail

## Quarterly Update

### State-Supported Amtrak Cascades

#### State-supported Amtrak Cascades ticket revenues by quarter

Dollars in millions, 2007 - 2009



Data Source: Amtrak and WSDOT State Rail and Marine Office.

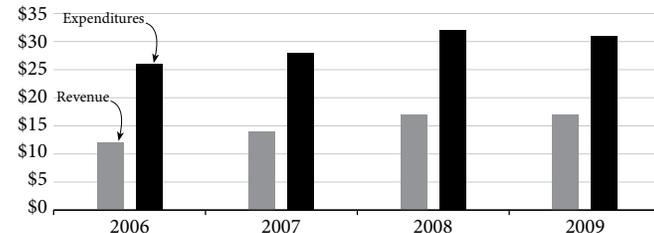
#### Amtrak Cascades ticket revenue up 22.9%

During the fourth quarter, ticket revenues for Amtrak Cascades trains were up 22.9 percent, when compared to the same period in 2008. The record ridership for the quarter explains the ticket revenue increase.

#### State-supported Amtrak Cascades farebox recovery

Federal FY 2006 - 2009

Dollars in millions



Data Source: WSDOT State Rail and Marine Office.

#### Farebox recovery: virtually no change from 2008

Farebox recovery measures the percentage of total operating costs offset by operating revenues. This measure helps reveal how well trains are performing financially, the level of public subsidy that is required to keep the trains in operation, and highlights areas where WSDOT and Amtrak should take action to improve ridership, revenues, and reduce costs.

In Federal Fiscal Year (FFY) 2009, state-supported Amtrak Cascades trains had a farebox recovery of 54.17%, virtually unchanged compared to the 54.24% farebox recovery in FFY 2008. Cascades operating costs totaled \$31.2 million in FFY 2009, which was 2.2% lower than the previous year. Operating revenues were approximately \$16.9 million for FFY 2009, a slight increase over the previous year.

Total taxpayer subsidy for Washington's portion of Amtrak Cascades trains was \$14.3 million in FFY 2009, a slight decrease of 0.3% over the previous year.

#### Two new Amtrak stations opened in fall 2009

##### Leavenworth station

September saw the opening of the new \$1.4 million Icicle Station, financed by partners including the City of Leavenworth, Chelan County, the Port of Chelan County, and state and federal funding sources. It marked the return of regular passenger rail service to Leavenworth after more than 50 years. The passenger stop was eliminated in the early 1950s, when the town was just a declining mill community.

The new station is just part of the first phase of construction. Parking, lighting, and landscaping will follow, with phase two involving a larger, semi-enclosed passenger shelter.

##### Stanwood station

In November, WSDOT opened a new train station located on the northeast corner of 271st Street NW and 84th Avenue NW, in Stanwood, giving residents of the Stanwood-Camano Island area access to Amtrak Cascades intercity passenger trains.

The Legislature provided WSDOT with \$5 million to construct the new train station platform. Construction started in April 2009; the station was completed in November, on time and under budget. This project adds another transportation option for the Stanwood/Camano Island community, helping reduce congestion on SR 532 and I-5, while supporting the area's tourism industry.

#### Amtrak Cascades 2010 Olympics strategy

WSDOT anticipates strong demand for Amtrak Cascades service during the 2010 Olympics. To meet demand and capitalize on potential revenue, WSDOT and Amtrak have made adjustments to the reservations and ticketing for this time period by:

- Selling only the highest fare on northbound trains to Vancouver, B.C.
- Selling a very limited number of seats at lower fares.
- Holding more seats for higher value Vancouver, B.C. traffic from Seattle
- Restricting the number of seats available from cities north of Seattle on northbound trains.
- Applying more restrictive group policies.
- Constantly monitoring bookings and adjusting fare strategies.

To date, Amtrak Cascades trains during the 2010 Olympics are filling well ahead of usual booking curve and are nearly half full. This is above average, considering 80% of Amtrak Cascades reservations are made two weeks before the travel date.

# Environment

**Statewide policy goal:**

To enhance Washington’s quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.

**WSDOT’s business goal:**

To protect and restore the environment while improving and maintaining Washington’s transportation system.



**In this section**

Fish Passage Barriers	34
Environmental Compliance	37
Environmental Documentation	37

**See also**

Quarterly Report on Capital Projects (Beige Pages)	49
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**Earlier environment-related articles**

- Stormwater Treatment Facilities, GNB 32
- Erosion Control, GNB 32
- Construction Site Water Quality, GNB 32
- Wetlands Preservation Annual Report, GNB 33
- Endangered Species Act Annual Report, GNB 33
- Special Report: NEPA, GNB 33
- Special Report: Climate Change, GNB 34
- Programmatic Permits, GNB 34

# Fish Passage Barriers Annual Report

## Program Overview

### Fish Passage Barrier Highlights

Since 1991, WSDOT and the Washington Department of Fish and Wildlife (WDFW) have worked to identify fish passage barriers on the state highway system.

Barriers that will result in significant habitat gain for affected species are selected first for future corrections.

WSDOT and WDFW have identified 1,462 barriers that require correction.

Since *Gray Notebook 30*, WSDOT has corrected an additional 20 barriers for a total of 236 corrections since 1990.

Eight barriers are scheduled to be corrected during the 2010 construction season.



Before and After pictures of a barrier correction on SR 532 over Bruce Creek near Maple Falls. The 4-foot round culvert (left) was replaced with a 15-foot wide box culvert (right)

Since 1991, WSDOT and the Washington Department of Fish and Wildlife (WDFW) have continued to work cooperatively to correct fish passage barriers on streams that flow under the state highway system.

WSDOT is committed to doing its part for the environment by removing barriers to fish habitat. WSDOT's strategy is to continue correcting barriers as part of highway construction projects where the department has in-stream work; and to spend money provided by the Legislature for stand-alone projects that are high priority.

### How stand-alone culverts are fixed

High priority stand alone barriers are 'pre-scoped' for a correction by a WDFW biologist and engineer. Then, WSDOT and WDFW conduct a joint field visit and finalize the pre-scope of the potential project. WSDOT prepares a cost estimate that is put into a request for funding by the Legislature. Once funded, the project will typically follow the timelines for project advertisement and construction, and will need to accommodate the appropriate in-stream work window periods for the protection of fish life. For more information on these processes, see the 'Making of a Project' Special Report in the *Gray Notebook 32* (pp. 108 – 111).

### New culverts are designed for improved fish passage

When a fish passage barrier is identified and scheduled for correction, WSDOT works with WDFW to pick the best alternative for correcting the fish passage problem. Culvert designs are based on the latest edition of WDFW's *Design of Road Culverts for Fish Passage* manual. This manual provides a variety of culvert correction options. The goal is to select a design that maximizes fish passage for the species found in a effected stream and can be successfully constructed at that particular location. WSDOT and WDFW, where feasible, prefer to use a type of design called "stream simulation" to correct a culvert barrier. This design method best mimics the natural conditions that previously occurred in the streambed location prior to the existing culvert being placed.

These new culverts designed to simulate natural streambeds are constructed wider than the existing stream channel width and sloped at a similar gradient as the existing natural stream.

The expanded use of stream simulation culverts is based on the principle that if fish can migrate through the natural channel, they can also migrate through a man-made culvert that simulates the natural channel.

### Inventory of barriers

The statewide inventory of culverts with barriers on the state's 7,045 mile highways system was completed during the fall of 2007. A total of 6,469 crossings were examined by WDFW and of those, 1,462 WSDOT-owned fish passage barriers with the potential of significant habitat gain (if corrected) have been identified as needing modification or replacement. To date, WSDOT has completed 236 fish passage projects, thus improving access to approximately 755 miles of potential upstream habitat. Since the last report in *Gray Notebook 30*, 20 fish passage projects were completed in 2008 and 2009.

## Completed Fish Passage Construction

### Completed fish passage construction projects in 2008 and 2009

*For 2008*

Project location	Project funding	Description of project's corrective action(s)
SR 539 north of Bellingham	PEF <sup>1</sup>	Replaced a 4-foot wide box culvert with a 16-foot wide box culvert on Deer Creek
SR 539 north of Bellingham	PEF <sup>1</sup>	Replaced a 2-foot wide culvert with a 6-foot wide box culvert at an unnamed tributary to Baker Creek
SR 524 north of Bothell	Nickel <sup>2</sup>	Replaced a 1.5-foot diameter round culvert with a 14.5-foot wide culvert at Filbert Creek
SR 20 north of Deception Pass	PEF <sup>1</sup> , Nickel <sup>2</sup>	Replaced a 4-foot round culvert with a 144-foot bridge at Meadow Creek.
I-5 south of Ridgefield	Nickel <sup>2</sup>	Replaced a 4-foot culvert with a 11-foot culvert at an unnamed tributary to Gee Creek
SR 96 northeast of Mill Creek	FHWA <sup>3</sup>	Replaced a 4-foot box culvert with a 10-foot box culvert at an unnamed tributary to the Snohomish River. Roadway and culvert were both destroyed in December 2008 flooding, replaced by emergency repairs
SR 542 east of Maple Falls	PEF <sup>1</sup> , Nickel <sup>2</sup>	A single round 6-foot culvert was removed and not replaced from a right-of-way access at an unnamed tributary to Boulder Creek
SR 9 near Arlington	Nickel <sup>2</sup>	A single round 1.5 foot culvert was replaced with a 6-foot box at Kackman Creek.

*For 2009*

Project location	Project funding	Description of project's corrective action(s)
SR 542 east of Maple Falls	PEF <sup>1</sup> , TPA <sup>4</sup>	Replaced a 4-foot culvert with a 15-foot wide box culvert at Bruce Creek
SR 542 east of Maple Falls	PEF <sup>1</sup>	Replaced a 1.5-foot culvert with a 4-foot culvert at Baptist Camp Creek
SR 122 near Mayfield Lake	PEF <sup>1</sup>	Replaced a 3-foot round culvert with a 12-foot box culvert at an unnamed tributary to Mayfield Lake
SR 104 west of the Hood Canal Bridge	PEF <sup>1</sup>	Replaced a 2.5-foot round culvert with a 12-foot box culvert at unnamed tributary to Squamish Harbor
SR 106 just west of Union	PEF <sup>1</sup>	Replaced a 2-foot round culvert with a 12-foot box culvert at unnamed tributary to the Skokomish River
SR 900 east of Issaquah	Nickel <sup>2</sup>	Replaced a 2.5-foot round culvert with a 16-foot box culvert at Tibbetts Creek
SR 900 east of Issaquah	Nickel <sup>2</sup>	Replaced a 2.5-foot round culvert with a 16-foot box culvert at Claypit Creek
SR 531 southwest of Arlington	PEF <sup>1</sup>	Replaced a 2-foot round temporary culvert with a 16-foot box culvert at Cougar Creek
SR 101 near Grays Harbor	PEF <sup>1</sup> , TPA <sup>4</sup>	Replaced a 4-foot round culvert with a 16-foot box culvert at Mosquito Creek
SR 16 north of Purdy	PEF <sup>1</sup> , Nickel <sup>2</sup>	Replaced an undersized 3-foot culvert with a 6-foot box culvert on an unnamed tributary to Burley Creek at milepost 20.06
SR 16 north of Purdy	PEF <sup>1</sup> , Nickel <sup>2</sup>	Replaced an undersized 3-foot culvert with a 6-foot box culvert on an unnamed tributary to Burley Creek at milepost 20.28
I-5 south of Chehalis	Nickel <sup>2</sup>	Installed four downstream grade control structures to backwater a culvert on Berwick Creek and improve fish passage

Data Source: WSDOT Environmental Services.

<sup>1</sup> Projects funded by the Pre-Existing Funds Program I

<sup>2</sup> Combined with a 2003 Nickel-funded safety enhancement

<sup>3</sup> Project was funded by emergency repair funds provided by the Federal Highway Administration

<sup>4</sup> Combined with a 2005 Transportation Partnership Account project

# Fish Passage Barriers

## Annual Report

### Planned Corrective Construction

#### Fish passage barrier corrections planned for construction in 2010

Project location	Project funding	Description of project's corrective action(s)
SR 167 near Renton	FHWA <sup>1</sup> , PEF <sup>2</sup> , TPA <sup>3</sup>	Replace a 3-foot culvert with a 13-foot wide structure at Panther Creek
SR 305 south of Poulsbo	PEF <sup>2</sup>	Replace a 3-foot culvert with a 12-foot wide culvert at Bjorgen Creek
SR 305 south of Poulsbo	PEF <sup>2</sup> , TPA <sup>3</sup>	Replace two 3-foot culverts with a 10-foot wide culvert at an unnamed tributary to Liberty Bay
SR 532 northwest of Arlington	TPA <sup>3</sup>	Install downstream grade controls to backwater culvert and improve fish passage at an unnamed tributary to Pilchuck Creek
SR 542 east of Deming	FHWA <sup>1</sup> , PEF <sup>2</sup>	Replace temporary 4-foot culvert with a 15-foot wide structure at an unnamed tributary to the Nooksack River
SR 542 east of Maple Falls	PEF <sup>2</sup>	Replace a 5-foot culvert with a small bridge at Chain-up Creek
US 101 near Fort Columbia State Park	SRFB <sup>4</sup> , BPA <sup>5</sup>	Replace a 2-foot culvert with a 12-foot wide culvert
I-5 near Grand Mound	TPA <sup>3</sup>	Replace a 3-foot culvert with a 12-foot wide culvert

Data Source: WSDOT Environmental Services.

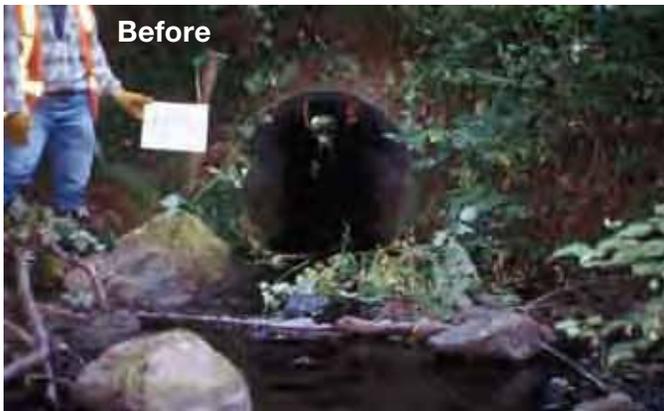
<sup>1</sup> Projects funded by the Federal Highway Administration

<sup>2</sup> Projects funded by the Pre-Existing Funds program

<sup>3</sup> Projects funded by the 2005 Transportation Partnership Account program

<sup>4</sup> Projects funded by the Salmon Recovery Fund Board

<sup>5</sup> Projects funded by the Bonneville Power Administration



*Before: A round, 4-foot culvert at Meadow Creek on SR 20 at milepost 44.74 near Deception Pass was a fish passage barrier because of the slope of the culvert.*



*After: A new bridge at Meadow Creek was constructed by WSDOT in 2008 with the cooperation of the Samish Indian Nation and Skagit County. The finished product improves fish access upstream for chum and coho salmon, steelhead, and sea-run and resident cutthroat trout.*

# Environmental Compliance Annual Report

WSDOT is committed to complying with environmental regulations and protecting the environment. WSDOT also works closely with regulatory agencies to achieve full compliance with environmental commitments on all projects and activities. Internally, WSDOT tracks its compliance with environmental regulations and permits for construction, maintenance, and ferry activities to measure agency performance. This article analyzes WSDOT's compliance in 2009 in comparison to previous years.

## More reportable events and formal violations in 2009

To analyze how well WSDOT complies with environmental regulations, the department not only examines occasions when a regulatory agency issued a formal violation or fine, but also tracks and reports on compliance issues that are categorized as 'reportable events'. Reportable events arise when WSDOT or its contractors failed to act as required by a permit or an environmental regulation; activities that result in violating a permit must also be reported to the regulatory authority. Not all reportable events will result in formal violations. If a reportable event is later deemed a formal violation, the regulatory agency may send a written warning, corrective action notice, or in rare cases, issue a monetary fine.

In 2009, WSDOT recorded 113 reportable events, 18 more than in 2008. State, regional, and county agencies issued 19 formal violations to WSDOT in 2009, eight more than in 2008. Of the 19 formal violations, the Washington State Department of Ecology issued 15 correction notices for violating permit conditions. The remaining four violations involved failing to file a Forest Practice Application before clearing 2.8 acres; failing to submit wastewater quality data and failure to obtain approval before discharging to a public sewer; burning vegetation during a burn ban; and failing to provide notice before a demolition project. WSDOT's contractor paid the \$1,500 monetary penalty for actions associated with the demolition project.

## Breakdown of reportable events in 2009

Water quality remains WSDOT's biggest compliance concern. In 2009, 89 reportable events involved water quality issues, specifically for high turbidity (water clarity affected by sediments) and pH (when fluctuating hydrogen levels cause water to become more acidic (lower on the pH scale) or more alkaline (higher)). In seven incidents, WSDOT's contractors spilled oil, fuel, and other equipment fluids, potentially affecting natural resources. In addition, WSDOT did not follow proper notification procedures to regulatory agencies prior to starting work in accordance with permit conditions on seven occasions. In five projects, WSDOT's contractors impacted wetlands, and, on four other projects, placed unauthorized materials in sensitive areas. WSDOT exceeded air quality conformance standards in one incident by burning vegetation. The data collected over the past five years shows a similar proportion of the types of reportable events that occurred in 2009.

### Environmental Compliance Highlights:

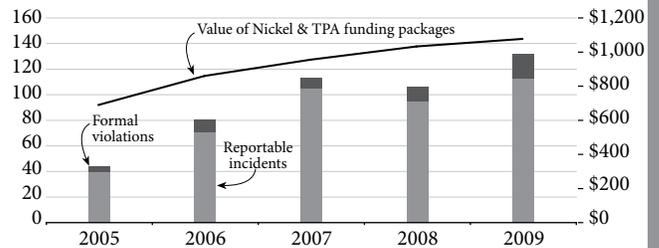
Both non-compliance events and violations are small compared with the 450,000 activities and 186 projects WSDOT completed in 2009.

The number of reportable events increased to 113 in 2009, 18 more than in 2008.

The number of formal violations increased to 19 in 2009, from 11 in 2008.

## Environmental compliance events recorded annually vs. the value of the capital project delivery program, 2005 - 2009

Number of reportable compliance events and formal violations vs. annual value of the 2003 Nickel and 2005 Transportation Partnership Account's (combined) budgeted construction projects<sup>1</sup>



Data Sources: WSDOT Environmental Services Office, Capital Program Development & Management Office.

<sup>1</sup> 2008 Dollars, in millions.

Data Note: For information regarding the Pre-Existing Funds Program, see pp. 88-91.

There were no fines or stop-work orders for work that occurred in 2009. One of WSDOT's contractors was issued a fine.

# Environmental Compliance Annual Report

## Reportable Events and Formal Violations

### Formal violations increase in 2009

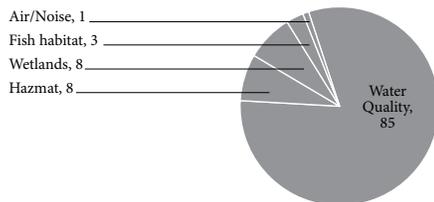
In 2009, The Washington State Department of Ecology (ECY) issued WSDOT more formal violations than in years past. In 2009 ECY implemented a new ticketing program that allows its field inspectors to issue “corrections required” notices at construction sites. These formal warnings give WSDOT and its contractors 10 days to correct the problem. If the problem is not corrected within 10 days, ECY can issue fines or a stop-work order, which may affect project costs and schedule. WSDOT considered these 12 notices to be formal violations. In every instance where WSDOT was issued a notice, the department implemented corrective actions within the allotted 10 day period to reduce impacts to the affected resources and avoided costly stop-work orders. No fines were issued to WSDOT as a result of any corrections notices.

### WSDOT’s reportable events by category

2007-2009

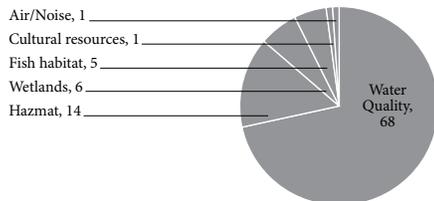
#### 2007

105 reportable events



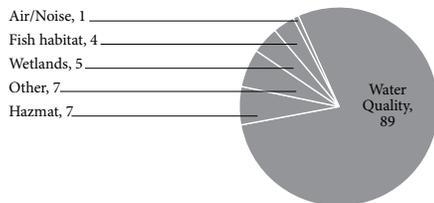
#### 2008

95 reportable events



#### 2009

113 reportable events



Data Source: WSDOT Environmental Services Office.

### Environmental compliance strong even with numerous department activities

Even with heightened awareness, better planning, and better training, the sizable number of capital projects, maintenance activities, and ferry sailings create thousands of potential opportunities for reportable events or formal violations. In 2009, the Department delivered 186 capital construction projects with funds worth over \$2.03 billion (see pp. 50-60 for the 2003 Nickel and 2005 Transportation Partnership Account-funding programs and pp. 88-91 for the Pre-Existing Funds program). WSDOT staff also accomplished more than 285,000 separate maintenance activities (see pp. 16-18 for more information) and completed more than 164,000 ferry sailings (see pp. 27-30 for more information) in 2009.

### WSDOT adapting its practices to meet current and future challenges

WSDOT received more formal violations in 2009 because of the overall number of construction projects and Ecology’s use of a new enforcement tool. In response to this trend, WSDOT is reinforcing its training efforts to help the department’s inspectors recognize potential compliance problems, and to raise their awareness of environmental compliance. WSDOT will be providing more than 40 environmental training opportunities across the state between January and June of 2010. Topics include construction compliance, environmental commitment tracking, wetlands, cultural resources, spill plan review, and temporary erosion and sediment control. Training will place emphasis on lessons learned and non-compliance issues that occurred during the 2009 construction season. WSDOT is also upgrading its internal database for tracking environmental compliance (see pp. 64 of *Gray Notebook 28*).

# National Environmental Policy Act Documentation Annual Report

All proposed WSDOT projects that involve federal funds, federal permits, and/or action on federal lands must comply with the National Environmental Policy Act (NEPA). NEPA requires an analysis of a proposed project's effects on both the natural and built environment. An environmental impact statement (EIS) is prepared if there is potential for significant effects and an environmental assessment (EA) is prepared when the significance of impacts is unknown.

WSDOT prepares all NEPA documentation according to federal laws and regulations, and then submits them to the appropriate federal reviewing authority when completed, usually the Federal Highway Administration (FHWA). NEPA requires the examination and avoidance of potential impacts to the social and natural environment when the federal government considers approval of proposed transportation projects. Such investigations and documentations can take a considerable amount of time and resources to complete. FHWA reported that in 2001, the national average was 54 months (4.5 years) to complete an EIS and 18 months (1.5 years) to complete an EA. Both FHWA and WSDOT recognize that project delivery schedules and budgets could benefit from reduced NEPA documentation processing times. In October 2003, FHWA established a national goal of reducing the median processing time for EISs to 36 months (3 years) and EAs to 12 months (1 year) by 2007. WSDOT, like many transportation organizations, worked to adopt these measures as its own and manage its NEPA workloads against the federal timelines. WSDOT had mixed success in meeting the timeline goals (see pp. 36 of *Gray Notebook 32* for more information).

## WSDOT continues to evaluate documentation timelines

WSDOT and FHWA have begun to reconsider whether firm timeline goals are the best way to measure the quality and the performance of NEPA documentation. Factors such as project complexity, availability of funding, and available federal personnel to review documentation affected the duration of NEPA documentation timelines between 2003 and 2007, sometimes to the detriment of agency efforts (such as WSDOT's efforts) to meet the 36 and 12 month goals for EIS and EA documentation, respectively.

FHWA and WSDOT are each independently considering alternative performance measures that can be used to more effectively evaluate the performance of completing NEPA documentation and its impact on project delivery. While reduced average timelines are useful in expediting a project from concept to completion, they are not effective metrics for evaluating the qualitative aspects necessary to ensure that NEPA documentation, or as importantly, the project, will be successful.

## WSDOT's remains committed to ensuring quality documentation

In addition to measuring timelines, WSDOT ensures that its environmental documentation fully supports federal lead agency decision-making as well as the department's decisions under the State Environmental Policy Act. WSDOT is committed to involving public and agency stakeholders to make sure that they are satisfied their views have been heard and that they are engaged with the NEPA process and the final outcome. Also, WSDOT continues to ensure that all NEPA documents are robust from a legal perspective so they can withstand legal challenges, should they arise.

### Environmental Documentation Highlights:

For 2009, WSDOT received four decisions for its Environmental Assessments (EAs), signifying the end of the NEPA documentation process for these projects.

There were no final decisions given for any active Environmental Impact Statements (EISs) in 2009.

In the 2007-2009 biennium, 98% of WSDOT projects were covered by the Federal Highway Administration's list of categorical exclusions under NEPA.

Only 2% of projects required formal NEPA documentation, either as an EA or EIS.

### Number of projects by environmental documentation type

Total number of WSDOT project-level categorical exclusions, active EISs, or active EAs in the 2007-2009 biennium

Environmental Impact Statements (3)

Environmental Assessments (11)

Categorical Exclusions (814)

Data Source: WSDOT Environmental Services Office.

# National Environmental Policy Act Documentation Annual Report

## Duration of Documentation

### Evaluating WSDOT's NEPA documentation timelines

FHWA has yet to formally declare which performance measures it prefers transportation organizations apply in place of the average timeline measures used from 2003 -2007. There are indications that FHWA will develop measures for evaluating NEPA documentation under the new directive of "Every Day Counts," which focuses on reducing the time necessary to develop and complete projects to minimize costs.

WSDOT has documented several best practices and common problems that occur during the NEPA documentation process, and has worked to improve the process for developing future EAs and EISs. WSDOT still tracks the duration of completed NEPA documents, shown in the tables below. WSDOT is unable to draw any detailed conclusions based on this limited data set, but does see a trend of declining average durations for both EAs and EISs.

Tracking processing times has helped WSDOT to develop and implement improvements such as concurrent reviews, quality assurance tools, and training. FHWA and the other U.S. Department of Transportation agencies continue to track the time it takes to complete NEPA. However, the focus has shifted from the time needed to complete the NEPA stage towards broader performance measures that seek to expedite project delivery, from planning to construction.

WSDOT continues to track the duration of the NEPA process. In 2010, the department will publish several major project NEPA documents:

- Supplemental draft EISs for SR 520 - I-5 to Medina Bridge Replacement (January 2010),
- Draft EIS SR 520 Pontoon Construction Project (Spring 2010),
- Second Supplemental draft EIS for Alaskan Way Viaduct and Seawall replacement (Fall 2010), and
- Final EIS for I-5 Columbia River Crossing (Summer 2010).

### Number of environmental assessments completed\* by year

*By duration of processing time, 2003 - 2009*

Completion time in months	2003	2004	2005	2006	2007	2008	2009
0-12							1
13-24		1	2	1	1	2	1
25-36	1	2	1	5	1	1	1
37-48	2	1		4	1	1	
49-60	1	1					
61-72		1	1			1	1
73-84				1			
83-96							
97-108						1	

### Number of environmental impact statements completed\* by year

*By duration of processing time, 2002 - 2009*

Completion time in months	2002	2003	2004	2005	2006	2007	2008	2009
12-24								
25-36	1		2					
37-48			1					
49-60								
61-72								
73-96						1		
97-108						1	1	

Data source: WSDOT Environmental Services.

\*Data note: "Completed" indicates that a 'Record of Decision' or 'Finding of No Significant Impact' has been received from the Federal Highway Administration, and is considered complete for federal reporting purposes.

# Stewardship

## Statewide policy goal:

To continuously improve the quality, effectiveness, and efficiency of the transportation system.

## WSDOT's business goal:

To enhance WSDOT's management and accountability processes and systems to support making the right decisions, delivering the right projects, and operating the system efficiently and effectively in order to achieve the greatest benefit from the resources entrusted to us by the public.



### In this section

Federal Recovery Act-funded Projects	42
Quarterly Update on Capital Projects (Beige Pages)	49
Completed Project Wrap Ups	67
<i>Special reports:</i>	
Project Spotlight: SW Washington I-5 Expansion & Improvement Program	77
New Ferry Construction Tacoma/Pierce County	79
HOV Lanes	80
Watch List	81
PEF Reporting	88
Cross-cutting Management Issues:	
Construction Cost	
Trends	92
Utilities	94
Right-of-way	96
Workforce Level & Training	
Quarterly Update	97
Project Reporting	
Rollup	100
Highlights	110
<b>See also</b>	
Worker Safety	2

# Special Report on Federal Recovery Act-funded Projects

## Recovery Act-funded projects overview

### Recovery Act Highlights

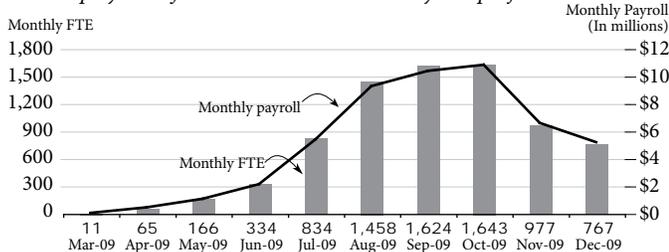
198 state and local highway projects receiving Recovery Act funds have been identified and certified by Governor Gregoire as of December 31, 2009.

88 Recovery Act projects were completed as of December 31, 2009.

In January 2010, the state received \$590 million to improve high speed intercity passenger rail service.

### Recovery Act employment

Total employment for State and Local Recovery Act projects\*



\* Due to the nature of construction work and firms working on multiple ARRA projects, a count of the number of employees may include double counting (employees working on multiple projects) and cannot be used as a "head count" of individual employees. Federal guidelines direct states to report full time equivalents (FTE) employed by state and local Recovery Act projects. WSDOT calculated these numbers based on a standard 2,080 hour work year which is equivalent to 173 hours each month.

Employees have worked over 1,362,000 hours on stimulus-funded projects as of December 31, 2009, earning almost \$51.9 million in payroll.

For additional information on Recovery Act-funded projects please visit <http://www.wsdot.wa.gov/funding/stimulus>

WSDOT and local governments continue to use American Recovery and Reinvestment Act (Recovery Act) funds to improve the transportation system and create and retain jobs. Washington grant recipients have completed 88 projects receiving Recovery Act highway funds and are advancing more to construction.

The state received \$492 million for highway projects and \$179 million for transit investments following the passage of the \$787 billion Recovery Act on February 17, 2009. By the end of the quarter, 198 individual projects were certified to receive highway stimulus funds, 181 were advertised, and 170 were awarded to contractors or are under way.

Between October 1 and December 31, 2009, WSDOT and local governments completed 41 Recovery Act highway projects, including 10 state projects and 31 local projects. The projects improved preservation of state and local roads, expanded access for pedestrians and bicyclists, and installed rumble strips and cable median barrier devices on state highways to improve safety.

In January 2010, Washington State received \$590 million in federal Recovery Act funds for High Speed Intercity Passenger Rail. These funds will improve on-time reliability and travel speeds while reducing rail congestion and travel times.

The Recovery Act requires states to advance projects quickly to stimulate the economy. Washington met the June 30, 2009 deadline to obligate 50% of federal highway stimulus funds and has a plan in place to obligate 100% of funds by the March 2, 2010 deadline.

### Favorable bids allow WSDOT to fund more projects

Favorable bids reduced costs on the original Recovery Act projects enough to allow WSDOT and local governments to build more highway projects than first expected. WSDOT and local governments are using Recovery Act funds for 32 additional projects valued at about \$86 million.

Recovery Act highway projects have provided more than 1.36 million hours of employment and \$51.9 million in payroll, including \$22.8 million in the last quarter. Workers have earned an average of \$38 an hour on state and local projects.

### Recovery Act employment

Monthly data from July to December 2009; Totals reflect calendar year 2009; dollars in millions

	July	August	September	October	November	December	Total
Labor hours	144,308	252,125	280,927	284,192	168,955	132,704	1,362,759
Payroll value	\$5.4	\$9.3	\$10.4	\$10.9	\$6.7	\$5.3	\$51.9
Monthly FTE*	834	1,458	1,624	1,643	977	767	-
Individuals paid with Recovery Act funds	3,413	5,433	6,638	6,400	4,694	3,608	-

Data Source: Monthly Recovery Act employment data is collected from contractors, subcontractors, and WSDOT then uploaded to the FHWA Recovery Act Data System (RADS). Hours and payroll reflect combined state and local data.

\* Note: The number of full time monthly equivalent (FTE) jobs is computed based on a 2,080 hour work-year. More employment information is available on-line at [www.wsdot.wa.gov/funding/stimulus/measuredemployment](http://www.wsdot.wa.gov/funding/stimulus/measuredemployment).

# Special Report on Federal Recovery Act-funded Projects

## Recovery Act Progress Summary

### Recovery Act-funded highway projects through December 31, 2009

Number of projects by jurisdiction; dollars in millions

Project information	State	Local	Total	Notes
Individual highway projects	40	158	198	State projects specified in the Legislative Evaluation & Accountability Program (LEAP) list. Five state and 12 local projects were added to the list and received federal approval. Six other local projects are no longer receiving funds.
Certified by Governor	40	158	198	Governor must certify that projects were reviewed and represent an appropriate investment of taxpayer dollars. Including the two safety buckets separated below, 200 projects have been certified.
Projects advertised	36	145	181	
Contracts awarded/Under construction	33	137	170	
Projects completed	20	68	88	This is an increase from 47 reported complete as of September 30, 2009.
Financial information	State	Local	Total	Notes
Recovery Act dollars provided	\$340	\$152.1	\$492.1	\$4 million in state enhancement funds provided to locals. While WSDOT controls \$340 million, the total obligation authority is \$344 million.
Recovery Act dollars obligated to date	\$267	\$143.5	\$410.5	Obligated dollars represent projects approved by the federal government with an executed project agreement. The state met the requirement to obligate 50% of funds by June 29, 2009. All dollars must be obligated by March 2, 2010. As of January 29, 2010, \$477.5 million had been obligated.
Total cost of obligated projects	\$816	\$846	\$1,662	Also includes non-Recovery Act leveraged fund sources; represents total project funds positioned to enter the economy.

Data Sources: WSDOT Capital Program Development & Management Office, Highways and Local Programs Office. Data as of December 31, 2009.

Note: Project totals are cumulative, so advertised projects include projects awarded and completed, and projects awarded include projects completed.

### Recovery Act-funded state highway 'bucket' projects through December 31, 2009

Number of bucket projects by type; dollars in millions

	Rumble strips	Cable median barrier	Total
Project status			
Certified by Governor	28	13	41
Projects advertised	26	7	33
Contracts awarded / Under construction	17	7	24
Projects completed	15	2	17
Financial information			
Funds available for buckets	\$3.1	\$9.2	\$12.3
Recovery Act dollars obligated	\$2.8	\$6.2	\$9.5
Total cost of obligated projects	\$2.8	\$11.5	\$14.3

Data Sources: WSDOT Capital Program Delivery & Management Office.

### Recovery Act project definitions and notes

**Tier 1** Priority shovel-ready projects selected for Recovery Act funding.

**Tier 2** The projects originally selected for funding with Recovery Act surplus funds and/or additional Recovery Act funds.

**Tier 3** Additional projects identified in December 2009 to receive surplus Recovery Act funds.

**Bucket projects** State projects using Recovery Act funds to address programmatic safety priorities statewide.

**Obligated funds** An obligation is a commitment—the Federal government's promise to pay the State for the Federal share of a project's eligible cost. This commitment occurs when the project is approved and the project agreement is executed. Obligated funds are considered "used" even though no cash is transferred.

**Obligation plan:** WSDOT's plan to obligate 100% by March 2, 2010 is updated regularly online. The latest changes are available at [www.wsdot.wa.gov/funding/stimulus/newsletter](http://www.wsdot.wa.gov/funding/stimulus/newsletter).

# Special Report on Federal Recovery Act-funded Projects

## Recovery Act News: High Speed Rail, Tier 3 projects

### WSDOT received \$590 million for high speed rail

In January, WSDOT received \$590 million in Recovery Act funds for the Pacific Northwest Corridor. The projects funded by these grants will improve on-time performance as well as speed and reliability between the Columbia River and Canadian border. The projects will bring considerable benefits to the region including energy savings and congestion reduction, transportation options, job creation, environmental, and economic benefits.

The corridor is one of 11 federally designated high-speed rail corridors and qualifies for grants under the President's High-Speed Intercity Passenger Rail program. The Recovery Act included \$8 billion for the new program, which represents a significant federal investment in the nation's passenger rail transportation network.

### Grants add service and fund new capital projects

The Federal Rail Administration announced the projects funded by the grant will add two daily roundtrips between Seattle and Portland, for a total of six. Other projects will include building bypass tracks to allow for increased frequency and multiple upgrades to the track and signal systems. Safety improvements will include grade separations, positive train control, and seismic retrofits to King Street Station in Seattle.

Oregon also received \$8 million for projects to improve rail service, including upgrades at Portland's Union Station as well as engineering and environmental work for track and signaling projects.

WSDOT applied for more than \$1.3 billion in stimulus funds for the Pacific Northwest Rail Corridor on August 24 and

October 2, 2009. WSDOT's proposal included a list of 26 capital rail projects that qualify for federal funding. The Federal Rail Administration received widespread interest in the grant program and delayed the first announcements until this winter. For \$8 billion in available funds, the agency received requests for approximately \$57 billion from 34 states. More information on the program and grant awards is available at [www.wsdot.wa.gov/funding/stimulus/passengerrail.htm](http://www.wsdot.wa.gov/funding/stimulus/passengerrail.htm).

Washington will apply for more federal funding for the rail program this year from the \$2.5 billion set aside for high speed rail in the federal transportation appropriations bill approved in December 2009.

Nearly \$1 billion in capital and operating funds has been invested in high speed intercity passenger rail in the Pacific Northwest Rail Corridor since 1994.

### Low bids helped advance additional projects

Lower construction bids have generated enough surplus funds to allow WSDOT to build seven more highway projects funded by the Recovery Act than first expected.

Earlier in 2009, the Federal Highway Administration provided \$492 million in Recovery Act funding for state and local highway projects in Washington State, \$340 million for state projects, and \$152 million for local city and county projects. Gov. Gregoire and the Legislature identified 34 state highway projects, plus a second tier list of projects, to receive funding.

By mid-July, favorable contractor bids, on average 29% below Engineer's Estimates, enabled WSDOT to apply federal stimulus funds to the Tier 2 list of projects. At that time, WSDOT identified seven additional Tier 3 projects that could be ready to advertise for contractor bids within 120 days, on or before March 1, 2010. These Tier 3 projects will receive \$12.3 million in stimulus funding.

- US 195/Idaho State Line to Colton – Paving (\$2,600,000)
- SR 503/1 mile east of Rock Creek Bridge to Fredrickson Rd – Paving (\$3,440,000)
- SR 14/I-5 to SE 164th Ave. Interchange – Paving (\$2,160,000)
- US 97/ Orondo Northward – Paving – Chip Seal (\$1,120,000)
- US 97/Okanogan to Riverside – Chip Seal (\$1,440,000)
- US 97/Pateros South – Chip Seal (\$560,000)
- SR 26/Royal City East – Chip Seal (\$960,000)



Washington State received \$590 million to improve rail service on the Pacific Northwest Corridor. The grants include funds to provide six daily roundtrips on Amtrak Cascades between Seattle and Portland.

# Special Report on Federal Recovery Act-funded Projects

## Completed Project Summaries

Between October 1 and December 31, WSDOT completed 10 Recovery Act highway projects. The following summaries describe the projects' costs, benefits, and performance. The employment data is reported as of December 31, 2009, and though the projects are operationally complete, additional

close-out work may take place. The number of employees is a best estimate of monthly employment, but, it is not an exact count and may include double-counting.

More information can be found at the WSDOT stimulus webpage: [www.wsdot.wa.gov/funding/stimulus/](http://www.wsdot.wa.gov/funding/stimulus/).

### ***US 97/Centerville Rd to Bickelton Rd & Satus Pass (Klickitat)***

This project paved about 23 miles of US 97 near Goldendale, extending the life of the highway.

*Project benefits:* The project will restore the pavement and rejuvenate the road surface on a major north-south highway.

*Highlights and challenges:* The successful low bid by Granite Northwest, Inc. was 2.4% below the Engineer's Estimate.

*Reported employment:* An estimated total of 138 employees worked 16,345 hours on this project and earned over \$708,000 in payroll.

*Budget performance:* This project was completed for about \$3.72 million, close to the original 2009 approved budget of \$3.92 million.

*Schedule performance:* This project was completed on October 5.



### ***US 2/Monroe City Limit to Sultan – Overlay (Snohomish)***

This project paved about five miles of US 2 between Monroe and Sultan to extend the life of the highway, and installed new centerline and shoulder rumble strips and pavement markings.

*Project benefits:* Years of use and recent harsh weather had caused signs of deterioration and cracking. This project's completion will help restore the pavement and rejuvenate the road surface.

*Highlights and challenges:* The successful low bid by Lakeside Industries, Inc. was 36% below the Engineer's Estimate.

*Reported employment:* An estimated total of 150 employees worked 11,650 hours on this project and earned over \$447,000 in payroll.

*Budget performance:* This project was completed for approximately \$1.99 million, below the original 2009 approved budget of \$4.7 million. Surplus funds help fund additional projects.



*Crews ground shoulder and centerline rumble strips on US 2.*

*Schedule performance:* This project was completed on October 5, 2009.

### ***US 2/Jct SR 211 to Newport – Paving (Pend Oreille)***

This project paved about 13 miles of US 2 between the Junction of SR 211 to Newport.

*Project benefits:* The project will restore the pavement and rejuvenate the road surface on the busy east-west highway.

*Highlights and challenges:* The successful low bid by Inland Asphalt Company was 19% below the Engineer's Estimate.

*Reported employment:* An estimated total of 224 employees

worked 26,436 hours on this project and earned over \$857,000 in payroll.

*Budget performance:* This project was completed for approximately \$6.17 million, below the original 2009 approved budget of \$8.04 million.

*Schedule performance:* This project was completed on October 6.



# Special Report on Federal Recovery Act-funded Projects

## Completed Project Summaries

### ***I-90/Moses Lake – Paving (Grant)***

This project paved more than five miles of I-90 near Moses Lake, extending the life of the highway.

**Project benefits:** The project will restore the pavement and rejuvenate the road surface on the state’s busiest east-west highway.

**Highlights and challenges:** This was the first WSDOT Tier 2 project completed. It received surplus Recovery Act funds due to low bids on other projects. The successful low bid by Central Washington Asphalt was 12% below the Engineer’s Estimate.

**Reported employment:** An estimated total of 124 employees worked 15,434 hours on this project and earned over \$542,000 in payroll.

**Budget performance:** This project was completed for approximately \$4.24 million, below the original 2009 approved budget of \$5 million.

**Schedule performance:** The project was completed on October 10.



### ***SR 17/Grant County Airport North – Paving (Grant)*** ***SR 282/Ephrata South – Paving (Grant)***

These projects paved eight miles of SR 17 from the Grant County Airport in Moses Lake to the junction with SR 282, and five miles of SR 282 to the junction with SR 28 in Ephrata.

**Project benefits:** Together, the project paved all 13 miles of highway between Moses Lake and Ephrata, extending the life and increasing the weight carrying capacity of the highway.

**Highlights and challenges:** These two projects, as well as a 2005 Transportation Partnership Account project to build passing lanes on SR 17, were combined for efficiencies. The successful low bid by Granite Northwest, Inc. was 22% below the Engineer’s Estimate.

**Reported employment:** An estimated total of 170 employees worked 29,825 hours on this project and earned about \$1.1 million in payroll.

**Budget performance:** This project was completed for approximately \$6.21 million, below the original 2009 approved budget of \$8.75 million.

**Schedule performance:** These projects were completed on October 16.



Crews completed three Grant County projects in October, including two receiving Recovery Act funds.

### ***US 395/Loon Lake to Immel Road – Paving (Stevens)***

This project resurfaced about 22 miles of US 395 in Stevens County with hot mix asphalt.

**Project benefits:** The new layer of asphalt protects and preserves the underlying roadway, extending the life of the highway.

**Highlights and challenges:** The successful low bid by Central Washington Asphalt was 18% below the Engineer’s Estimate.

**Reported employment:** An estimated total of 196 employees

worked 26,922 hours on this project and earned over \$925,000 in payroll.

**Budget performance:** This project was completed winning for approximately \$6.76 million, below the original 2009 approved budget of \$9.29 million.

**Schedule performance:** The project was completed on November 2.



# Special Report on Federal Recovery Act-funded Projects

## Completed Project Summaries

### ***I-90/Snoqualmie Summit to Hyak WB – Dowel Bar (Kittitas)***

This project rehabilitated concrete pavement on three miles of I-90 in Kittitas county.

**Project benefits:** This project strengthened concrete pavement in the right lanes east of Snoqualmie Summit that was settling due to wear and age, extending the life of the highway by installing dowel bars in the wheel paths between panels. The project also replaced severely cracked panels and grinded the surface.

**Highlights and challenges:** This project was constructed starting after Labor Day to avoid traffic disruptions during the busy summer holiday season. The successful low bid by Vetch Construction LLC was 25% below the Engineer's Estimate.

**Reported employment:** An estimated total of 108 employees worked 17,935 hours on this project and earned over \$652,000 in payroll.

**Budget performance:** This project was completed for approximately \$4.06 million, below the original 2009 approved budget of \$5.13 million.



WSDOT and Vetch construction crews paved I-90 near Snoqualmie Summit.

**Schedule performance:** The project was completed on October 26.

### ***I-82/Granger to W Grandview WB – Dowel Bar Retrofit/Concrete Rehab (Yakima)***

This project rehabilitated concrete pavement over a nearly 15-mile stretch of I-82 between Granger and West Grandview.

**Project benefits:** This project strengthened pavement in the west-bound right lane and extended its service life by installing dowel bars in the wheel paths between each concrete panel. The project also replaced severely cracked panels and grinded the surface.

**Highlights and challenges:** The successful low bid by Granite Northwest Inc. was 40% below the Engineer's Estimate. This is the first of two projects on I-82 between Granger and Grandview to be completed with stimulus funds. The second was advertised in January 2010.

**Reported employment:** An estimated total of 237 employees worked 38,170 hours on this project and earned over \$1.51 million in payroll.

**Budget performance:** This project was completed for approximately \$7.25 million, below the original 2009 approved budget of \$11.66 million

**Schedule performance:** The project was completed on October 28.



Granite NW Inc. crews place concrete over dowel bar slots on I-82 near Sunnyside.

# Special Report on Federal Recovery Act-funded Projects

## Completed Project Summaries

### *I-5/North Kelso to Castle Rock – Stage 2 – Concrete Rehab (Cowlitz)*

This project replaced about 180 concrete panels and paved the northbound lanes of I-5 between North Kelso and Castle Rock. The project combined stimulus funds with pre-existing funds to improve a 14-mile section of I-5.

*Project benefits:* The project strengthened and preserved the roadway by allowing I-5 to continue handling heavy commuter and freight traffic.

*Highlights and challenges:* The project combined stimulus funds with pre-existing funds to expand the scope of the work. The successful low bid by Granite Northwest Inc was about 15% below the Engineer’s Estimate.

*Reported employment:* An estimated total of 268 employees worked 57,125 hours on this project and earned about \$2.22 million in payroll.

*Budget performance:* This project was completed for approximately \$7.85 million, below the original 2009 approved budget of \$9.68 million.

*Schedule performance:* The project was completed on November 24.

**Map: I/5 North Kelso to Castle Rock – Stage 2**



### **Recovery Act local highway projects completed between October 1, 2009 and December 31, 2009**

City of Dayton – Dayton Avenue Overlay  
 Toppenish – S. Toppenish Ave and Washington Ave Improvements  
 Harrah – Harrah Road Improvements  
 College Place – Whitman Drive Multi Use Path  
 Spokane County – 5 Mile + Strong Rd. Project 2  
 Stanwood – 68th Road Realignment and School Safety Improvement  
 Chelan County – North Road Improvement  
 Pacific County – Sandridge Road Overlay and signalization  
 City of Dayton – West Dayton Street Beautification

Tumwater – Capital Boulevard Sidewalks  
 Prosser – Sheridan Avenue Improvements  
 Omak – Okoma Dr./SR 215 Sidewalks  
 Yakima – Nob Hill Boulevard Overlay  
 Wapato – Camas Overlay  
 Kittitas County – Yakima River Canyon Center Phase 1  
 Franklin County – R 170 Landslide Phase 1  
 Whatcom County – Scott Ditch Bridge  
 Klickitat County – South Columbus Overlay  
 Klickitat County – Bickleton Highway Overlay  
 Benton City – 7th Street  
 Union Gap – North Rudkin and Main/Ahtanum Rd Intersection Overlay

Asotin County – Scenic Way Overlay  
 Grant County – Fairgrounds Path  
 Kettle Falls – Kettle Falls Pedestrian Improvements  
 Kittitas County – Guardrail Project  
 Sunnyside – Yakima Valley Highway at Lincoln Intersection  
 Selah – Speyers Road  
 Tulalip Tribe – 116th/34th Ave NE Fish Passage Culvert  
 Poulsbo – Viking Avenue Phase 2  
 Forks – Bogachiel Way  
 Tenino – Sussex Avenue Street Illumination

# WSDOT's Capital Project Delivery Program

## Highway Construction: Nickel and TPA Project Delivery Performance Overview

Since 2003, WSDOT has delivered a total of 240 Nickel and Transportation Partnership Account (TPA) projects for \$3.675 billion, on target with the Legislative budget expectation. The Beige Pages report the agency's project delivery performance against the most recent Legislative baseline (for the quarter reported, this is the 2009-2011 budget).

### WSDOT delivers 24 projects in the second quarter of FY 2010

The 24 projects – five Nickel-funded and 19 through the Transportation Partnership Account – delivered in the quarter ending December 31, 2009, brings the cumulative number of projects delivered in the biennia to 48. Eighty percent of Nickel projects, and 84% of TPA projects were completed on time, a decline for the Nickel program and an improvement for the TPA program. The percentage of projects completed within budget improved for a combined average of 96%, with 80% of the Nickel program and 100% of the TPA program delivered within budget. WSDOT's cumulative capital program delivery performance for the biennia remained steady at 83% of projects delivered both on time and on budget through the second quarter of FY 2010.

### On-time and on-budget performance for individual projects remained steady

For the 240 highway projects completed from 2003 through December 31, 2009, changes from the previous quarter are:

- On-time delivery performance remained steady at 88%;
- On-budget performance improved slightly to 88%;
- On-time and on-budget project delivery performance remained steady at 78%.

### 54 Nickel and TPA projects under construction or advertised for construction

This quarter, 13 new projects were advertised for construction. Two projects advertised earlier than scheduled, one project was advertised late, and the remaining 10 were on time. Nine projects are pending contract award amount, but the remaining four projects have been awarded for a cumulative construction contract total of \$3.57 million.

### 22 projects, totaling an estimated \$745 million at completion, are set to advertise by June 30, 2010

Two significantly sized projects have budgets over \$100 million, 10 projects have budgets of \$25 million to \$100 million, and the remaining 10 are below \$25 million. Two projects were advanced, 14 are on their original schedule, and six were delayed.

### New Gray Notebook project delivery reporting addresses original funding packages

The tables on pages 50 and 51 introduce a new component to WSDOT's reports on the progress of its capital projects. They present a status report of the 2003 and 2005 LEAP (*Legislative Evaluation & Accountability Program*) lists, and include all budget items including pre-construction and environmental studies that were included in the original funding packages.

The Project Status table shows where all listed projects stand against the original schedules; the Budget Update table reflects planned and actual expenditures against the original budget plan. Both tables break out the program by highways, ferries, and rail projects.

Beige Pages reporting will continue to evolve over the next two quarters as WSDOT refines its reporting and management process using new automated project reporting tools.

### Project Delivery Highlights for Nickel and TPA combined

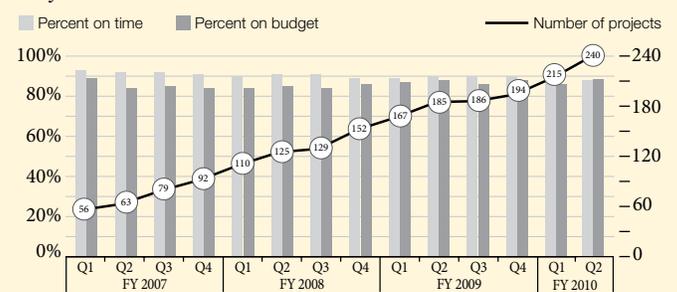
Both Nickel and TPA programs are 100% on or under their total legislative baseline of \$3.675 billion to date.

88% of all Nickel and TPA projects combined were completed early or on time, unchanged from last quarter's results.

88% of Nickel and TPA projects combined are under or on budget, a one percent improvement over last quarter.

Combined on-time and on-budget delivery performance remained steady at 78% for both Nickel and TPA projects.

### Cumulative performance of Nickel and TPA projects As of December 31, 2009



Data Source: WSDOT Project Control and Reporting.

A full list of all 2003 and 2005 LEAP list budget items and their current status is shown in the tables on pages 100-108.

# WSDOT's Capital Project Delivery Program

## Original 2003 and 2005 Transportation Funding Packages (Nickel & TPA) Performance Dashboard

### New performance dashboards

Each quarter, WSDOT provides a detailed update on the delivery of the highway capital programs in the *Gray Notebook* and on the web (at [www.wsdot.wa.gov](http://www.wsdot.wa.gov)) through the Project Pages and Quarterly Project Reports.

This edition of the *Gray Notebook* contains the first of a series of project reporting changes. The new dashboards below and on page 51 provide a status report on how WSDOT is delivering the program compared to the original Legislative intent as presented in the 2003 and 2005 LEAP (Legislative Evaluation & Accountability Program) lists. These dashboards include all

budget items including preconstruction and environmental studies that were included in the original funding packages.

The first two columns in the first table show the total number of projects and the percentage of those projects that are complete, under way, scheduled to start in the future, or affected by a Legislatively approved change of project scope.

The second table presents a budget update showing original planned budgets and the current plan or actual expenditure.

In both tables, the next sets of columns break out the program by category: highways, ferries, and rail.

### Project status: Original 2003 Transportation Funding Package (Nickel)

Status as of December 31, 2009

Project number and phase	Total program		Highways		Ferries		Rail	
	Number of projects	Percent of program						
<b>Total number of projects</b>	<b>156</b>		<b>127</b>		<b>5</b>		<b>24</b>	
Completed projects	105	66%	93	73%	1	20%	9	38%
Total projects under way	43	27%	34	27%	3	60%	6	25%
<i>In preconstruction phase</i>	22		20		2		0	
<i>In construction phase</i>	21		14		1		6	
Projects starting in the future	3	2%	0	0%	0	0%	3	13%
Projects deferred, or deleted from program	7	4%	0	0%	1	20%	6	25%
Number of Legislatively approved scope changes	20	13%	18	14%	0	0%	2	8%
Preconstruction starts within 6 months	0		0		0		0	
Construction starts within 6 months	3		3		0		0	

Data source: WSDOT Capital Program Development & Management.

### Budget update: Original 2003 Transportation Funding Package (Nickel)

Status as of December 31, 2009; Dollars in thousands

	Total program		Highways		Ferries		Rail	
	Budget	Percent of total	Budget	Percent of program	Budget	Percent of program	Budget	Percent of program
<b>Total original Legislative planned budget</b>	<b>\$3,887,483</b>		<b>\$3,380,124</b>		<b>\$297,851</b>		<b>\$209,508</b>	
Original plan, 2003 through 2007-09 biennium	\$2,462,750	63%	\$2,102,667	62%	\$219,285	74%	\$128,798	61%
Actual expenditures, 2003 through 2007-09 biennium	\$2,641,045	68%	\$2,469,953	73%	\$80,904	27%	\$90,188	43%
Original plan through 2009-11 biennium	\$3,290,038	84%	\$2,813,701	83%	\$293,919	99%	\$170,418	81%
Current plan through 2009-11 biennium	\$3,468,215	89%	\$3,219,554	95%	\$132,787	45%	\$115,874	55%
Actual expenditures, 2003 through December 31, 2009	\$2,851,374	73%	\$2,661,629	79%	\$80,967	27%	\$96,778	46%

Data source: WSDOT Capital Program Development & Management.

Note: Expenditures are Nickel funds only.

# WSDOT's Capital Project Delivery Program

## Original 2003 and 2005 Transportation Funding Packages (Nickel & TPA) Performance Dashboard

### Project status: Original 2005 Transportation Partnership Account (TPA)

Status as of December 31, 2009

Project number and phase	Total program		Highways		Ferries		Rail	
	Number of projects	Percent of program						
<b>Total number of projects</b>	<b>274</b>		<b>229</b>		<b>4</b>		<b>15</b>	
Completed projects	122	45%	116	51%	0	0%	6	40%
Total projects under way	107	39%	101	44%	1	25%	5	33%
<i>In preconstruction phase</i>	57		55		1		1	
<i>In construction phase</i>	50		46		0		4	
Projects starting in the future	8	3%	4	2%	1	25%	3	20%
Projects deferred, or deleted from program	11	4%	8	3%	2	50%	1	7%
Number of Legislatively approved scope changes	23	8%	23	10%	0	0%	0	0%
Preconstruction starts within 6 months	0		0		0		0	
Construction starts within 6 months	0		12		0		0	

Data source: WSDOT Capital Program Development & Management.

### Budget update: Original 2005 Transportation Partnership Account (TPA)

Status as of December 31, 2009; Dollars in thousands

	Total program		Highways		Ferries		Rail	
	Budget	Percent of total	Budget	Percent of program	Budget	Percent of program	Budget	Percent of program
<b>Total original Legislative planned budget</b>	<b>\$7,102,978</b>		<b>\$6,678,468</b>		<b>\$185,410</b>		<b>\$118,250</b>	
Original plan, 2005 through 2007-09 biennium	\$2,317,455	33%	\$2,224,451	33%	\$1,940	1%	\$48,414	41%
Actual expenditures, 2005 through 2007-09 biennium	\$1,336,628	19%	\$1,296,476	19%	–	0%	\$40,152	34%
Original plan through 2009-11 biennium	\$4,102,512	58%	\$3,886,331	58%	\$81,701	44%	\$74,930	63%
Current plan through 2009-11 biennium	\$3,246,697	46%	\$3,113,009	47%	\$67,234	36%	\$66,454	56%
Actual expenditures, 2005 through December 31, 2009	\$1,742,926	25%	\$1,660,758	25%	\$31,006	17%	\$51,162	43%

Data source: WSDOT Capital Program Development & Management.

Note: Expenditures are TPA funds only.

#### Definitions

**Completed projects** Projects operationally complete, open to traffic.

**Projects under way** Funded projects that have begun preconstruction or construction activities.

**Projects in preconstruction phase** Projects in a 'pre-construction phase' have been funded and have commenced active work, such as environmental studies, design work, right-of-way purchase, preliminary engineering, and other activities that take place before ground-breaking.

**Projects in construction** All activities from ground-breaking to completion.

**Projects starting in the future** Projects funded but not yet in a construction or preconstruction phase.

**Projects deferred or deleted** Projects deferred beyond the 16-year program window or deleted from the program with Legislative approval.

#### Note

The column headed 'Percent of program' shows the percentage of each category represented by the raw number. For example, the Ferries columns show that of the five projects listed in the Nickel package, one has been completed, representing 20% of the total Ferries program; three Ferries projects are under way, representing 60% of the total program; and one Ferries project has been deferred or deleted, representing the remaining 20% of the total program.

# WSDOT's Capital Project Delivery Programs

## Paying for the Projects: 2003 Transportation Funding Package (Nickel) financial information

### Revenue forecast update

The following information incorporates the November 2009 transportation revenue forecast projections. The accompanying charts compare the current projected revenue forecast to the baseline forecast used in the budget making process when the 2003 Funding Package was adopted.

The 2003 Funding Package was developed as a ten-year plan from 2003 through 2013. Due to timing and funding issues, the 2007 Legislature moved projects beyond 2013. Both cumulative ten-year totals and individual biennial amounts are shown in the chart below.

Current forecasted revenues include the most recent actual revenue collection data available as well as updated projections based on new and revised economic variables.

The November 2009 forecast for gas tax receipts and licenses, permits, and fees for the Transportation 2003 (Nickel) Account is lower than the baseline forecast for the ten-year outlook by 10.6%. This reduction is due to continued lower gasoline consumption. Because Washington State's gas tax is based on

### 2003 Transportation Funding Package highlights

#### Deposited into the Transportation 2003 (Nickel) Account

- 5¢ increase to the gas tax
- 15% increase in the gross weight fees on trucks

#### Deposited into the Multimodal Account (established in 2000)

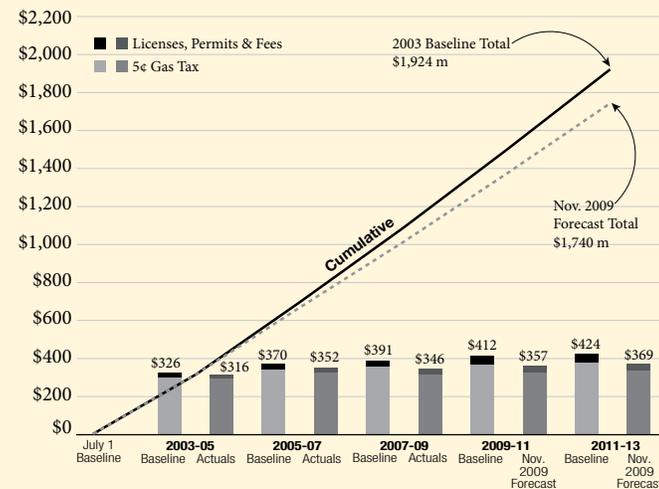
- An additional 0.3% sales tax on new and used vehicles
- \$20 license plate number retention

gallonage rather than price, reduced consumption results in reduced revenues.

Multimodal Account projections for the vehicle sales tax are lower than the baseline forecast resulting in a decrease of 14.8% in the ten-year outlook. This decrease is primarily due to the decline in vehicle sales.

### Transportation 2003 (Nickel) account revenue forecast

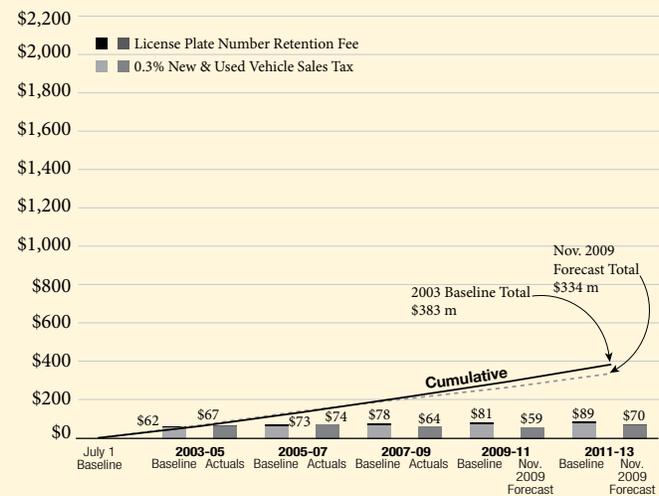
March 2003 Legislative baseline compared to the November 2009 Transportation Revenue Forecast Council  
Dollars in millions



Numbers may not add due to rounding.  
Data source: WSDOT Financial Planning.

### Multimodal Account (2003 Package) revenue forecast

March 2003 Legislative baseline compared to the November 2009 Transportation Revenue Forecast Council  
Dollars in millions



Numbers may not add due to rounding.  
Data source: WSDOT Financial Planning.

## Paying for the Projects: 2005 Transportation Partnership Account (TPA) financial information

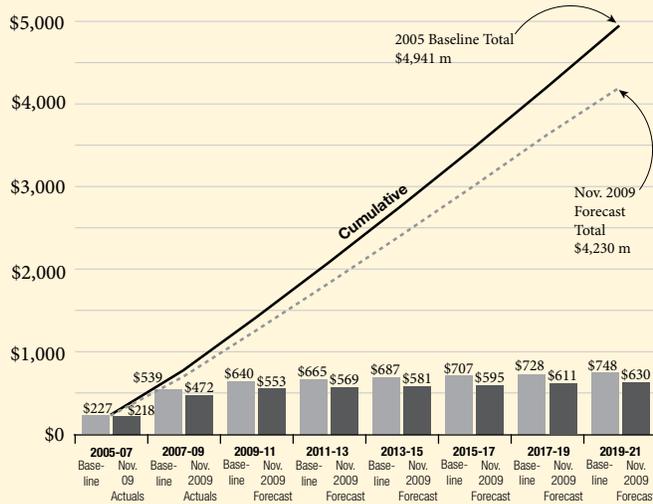
### Revenue forecast update

The accompanying chart compares the current November 2009 revenue forecast to the baseline forecast used in the budget making process when the 2005 Funding Package was adopted. The 2005 Funding Package was developed as a 16-year plan extending from 2005 through 2021.

The November 2009 forecast for gas tax receipts over the 16-year period decreased by 16.8% from the baseline forecast. This reduction is due to continued lower gasoline consumption. Because Washington State's gas tax is based on gallonage rather than price, reduced consumption results in reduced revenues.

### Transportation Partnership Account (TPA) gas tax revenue forecast

March 2005 Legislative baseline compared to the November 2009 Transportation Revenue Forecast Council  
Dollars in millions



Numbers may not add due to rounding.  
Data source: WSDOT Financial Planning.

### 2005 Transportation Funding Package revenue sources

- 9.5¢ increase to the gas tax phased in over four years.
  - 3.0¢ in July 2005
  - 3.0¢ in July 2006
  - 2.0¢ in July 2007
  - 1.5¢ in July 2008
- New vehicle weight fees on passenger cars.
  - \$10 for cars under 4,000 pounds
  - \$20 for cars between 4,000 and 6,000 pounds
  - \$30 for cars between 6,000 and 8,000 pounds
- Increased combined license fees for light trucks
  - \$10 for trucks under 4,000 pounds
  - \$20 for trucks between 4,000 and 6,000 pounds
  - \$30 for trucks between 6,000 and 8,000 pounds
- Farm vehicles are exempt from the increase
- A \$75 fee for all motor homes
- Fee increases to various driver's license services
  - Original and Renewal License Application increased to \$20 (previously \$10)
  - Identicals, Driver Permits and Agricultural Permits increased to \$20 (previously \$15)
  - Commercial Driver License and Renewal increased to \$30 (previously \$20)
  - License Reinstatement Fee Increased to \$75 (previously \$20)
- DUI Hearing increased to \$200 (previously \$100)
- Fee increases to various license plate charges
  - Reflectorized Plate Fee increased to \$2 per plate (previously 50¢)
  - Replacement Plates increased to \$10 (previously \$3).

# WSDOT's Capital Project Delivery Program

## Current 2009 Legislative Transportation Budget Performance Dashboard: Highways

Unlike the previous dashboards, the following dashboards (below and on page 55) generally do not include planning studies or projects that do not have a construction phase.

Pre-Existing Funds (PEF) projects are budgeted by program for the improvement and preservation of the highway system, and the delivery of the work is reported programmatically in six categories.

### Highway construction performance dashboard

As of December 31, 2009; Dollars in thousands

	Nickel (2003)	TPA (2005)	Combined Nickel & TPA	Pre-Existing Funds (PEF)
<b>Total number of projects</b>	<b>151</b>	<b>240</b>	<b>391</b>	<b>500</b>
<b>Schedule, Scope, and Budget Summary:</b> Results of completed projects				
Cumulative to date, 2003 – December 31, 2009	For Nickel and TPA details, see pages 56-58		See pages 88-91	
Total cumulative number of projects completed	121	119	240	
% Completed early or on time	89%	86%	88%	
% Completed within scope	100%	100%	100%	
% Completed under or on budget	89%	86%	88%	
% Completed on time and on budget	82%	74%	78%	
Baseline estimated cost at completion	\$2,346,946	\$1,349,936	\$3,696,882	
<b>Current estimated cost at completion</b>	<b>\$2,329,962</b>	<b>\$1,345,546</b>	<b>\$3,675,508</b>	
% of total program over or under budget	0.7% Under	0.3% Under	0.6% Under	
<b>Biennium to date, 2009-11</b>				
<b>Total number of projects completed in 2009-11</b>	<b>11</b>	<b>37</b>	<b>48</b>	<b>112</b>
% Completed early or on time	91%	81%	83%	-
% Completed within scope	100%	100%	100%	-
% Completed under or on budget	91%	92%	92%	-
% Completed on time and on budget	91%	78%	81%	-
Baseline estimated cost at completion	\$595,886	\$575,270	\$1,171,156	\$329,212
Current estimated cost at completion	\$573,170	\$540,451	\$1,113,621	\$285,501
<b>Advertisement Record: Results of projects entering into the construction phase or under construction</b>				
Cumulative to date, 2003 – December 31, 2009	For Nickel and TPA details, see pages 59-62		See pages 88-91	
<b>Total number of projects in construction phase</b>	<b>11</b>	<b>43</b>	<b>54</b>	<b>N/A</b>
% Advertised early or on time	73%	86%	83%	-
Total award amounts to date	\$413,439	\$429,125	\$842,564	-
<b>Biennium to date, 2009-11</b>				
<b>Total advertised</b>	<b>1</b>	<b>16</b>	<b>17</b>	<b>19</b>
% Advertised early or on time	100%	94%	94%	53%
Total award amounts to date	\$143	\$30,479	\$30,622	N/A
<b>Advertisement Schedule for projects in the pipeline:</b> Results of projects now being advertised for construction or planned to be advertised				
January 1, 2010 through June 30, 2010	For Nickel and TPA details, see pages 63-64		See pages 88-91	
<b>Total projects being advertised for construction bids</b>	<b>5</b>	<b>17</b>	<b>22</b>	<b>33</b>
% on or better than schedule	80%	71%	73%	-

Data Source: WSDOT Project Control & Reporting. \* per 2005-2007 Transportation Budget, Section 603.

# WSDOT's Capital Project Delivery Program

## Current 2009 Legislative Transportation Budget Performance Dashboard: Rail and Ferries

A total of eight Nickel and six Transportation Partnership Account (TPA) rail construction projects have been delivered on time and on budget as of December 31, 2009 for \$56.6 million. Eight projects (five Nickel-funded, three TPA-funded) in construction have total award amounts of \$36.7 million. No rail projects are planned to advertise before June 30, 2010.

To date, Ferries has completed three construction projects using Nickel funding, and three TPA-funded contracts (see note\* below) have been awarded for \$244 million. Additional Ferries construction projects are not planned for advertisement in this biennium. The award of a fourth ferry is pending, depending on future availability of funds..

### Rail construction performance dashboard

*As of December 31, 2009; dollars in thousands*

	Nickel (2003)	Transportation Partnership Account	Combined Nickel & TPA
<b>Schedule, scope and budget summary:</b> completed projects			
Cumulative to date, 2003 – December 31, 2009	8	6	14
% Completed early or on time	100%	100%	100%
% Completed within scope	100%	100%	100%
% Completed under or on budget	100%	100%	100%
% Completed on time and on budget	100%	100%	100%
Baseline estimated cost at completion	\$30,710	\$25,965	\$56,675
Current estimated cost at completion	\$30,710	\$25,965	\$56,675
% of total program on or under budget	0.0%Over	0.0%Over	0.0%Over
<b>Advertisement record:</b> projects under construction or entering construction phase			
Biennium to date, 2009-11			
Total advertised	5	3	8
% Advertised early or on time	100%	100%	100%
Total award amounts to date	\$27,996	\$8,728	\$36,724
<b>Advertisement schedule:</b> projects now being advertised or planned to advertise			
January 1, 2010 through June 30, 2010			
Total being advertised for construction	0	0	0
% On schedule or earlier	N/A	N/A	N/A

### Ferries construction performance dashboard

*As of December 31, 2009; dollars in thousands*

	Nickel (2003)	Transportation Partnership Account	Combined Nickel & TPA
<b>Schedule, scope and budget summary:</b> completed projects			
Cumulative to date, 2003 – December 31, 2009	3	0	3
% Completed early or on time	100%	0%	100%
% Completed within scope	100%	0%	100%
% Completed under or on budget	100%	0%	100%
% Completed on time and on budget	100%	0%	100%
Baseline estimated cost at completion	\$10,712	\$0	\$10,712
Current estimated cost at completion	\$10,712	\$0	\$10,712
% of total program on or under budget	0.0% Over	0.0% Over	0.0% Over
<b>Advertisement record:</b> projects under construction or entering construction phase			
Cumulative to date, 2003 – December 31, 2009			
Total advertised	0	3	3
% Advertised early or on time	0%	100%	100%
Total award amounts to date	\$0	\$224,835	\$224,835*

Data Source: WSDOT Project Control and Reporting Office.

\* Note: The advertisement record includes the contract for the "144 Auto class ferry" furnished equipment. This already-purchased equipment has been accepted and currently is in storage: it will be installed during future, at-present unfunded, ship construction. The overall contract remains open to negotiate the training and installation of the equipment. The advertisement record also includes two contracts in the "64 Auto class ferry" vessel program: the first contract covers building the first ship, the second contract covers building the second and third vessels.

# WSDOT's Capital Project Delivery Program

## Schedule, Scope and Budget Summary

### Biennial summary of all projects completed 2003-2009

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

	Fund type	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost	On budget	Completed on time, on budget
<b>Cumulative to date</b>								
2003-2005 Biennium summary See <i>Gray Notebook</i> for quarter ending September 30, 2005, for project listing	19 Nickel	4 early 15 on time	6 early 13 on time	19	\$118,575	\$118,450	9 under 8 on budget 2 over	17 on time and on budget
May be accessed at <a href="http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm">http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm</a> .								
2005-2007 Biennium summary See <i>Gray Notebook</i> for quarter ending June 30, 2007, for project listing	50 Nickel 23 TPA	20 early 48 on time 5 late	49 early 16 on time 8 late	73	\$650,986	\$652,896	27 under 33 on budget 13 over	53 on time and on budget
May be accessed at <a href="http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm">http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm</a> .								
2007-2009 Biennium summary See <i>Gray Notebook</i> for quarter ending June 30, 2009, for project listing	42 Nickel 60 TPA	18 early 62 on time 22 late	45 early 43 on time 14 late	102	\$1,764,364	\$1,769,732	52 under 38 on budget 12 over	80 on time and on budget
May be accessed at <a href="http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm">http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm</a> .								
To view projects completed in the first quarter of the 2009-2011 biennium, please see <i>Gray Notebook 35</i> for the quarter ending September 30, 2009. May be accessed at <a href="http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm">http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm</a> .								

### Projects completed as of December 31, 2009

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project Description	Fund type	Original appropriation & year	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost at completion	On budget	Completed on time and on budget
<b>Current quarter</b>									
SR 26/Othello vicinity – Install lighting (Adams, Grant)	TPA	\$170 2005	Early	√	√	\$262	\$144	Under	√
Advertisement date was advanced to construct a portion of this project as a part of a larger PEF program for construction efficiencies.									
SR 240/Beloit Rd to Kingsgate Way – Widen roadway (Benton)	TPA	\$14,500 2005	√	√	√	\$12,622	\$9,898	Under	√
US 395/Columbia Dr to SR 240 – Rebuild interchange (Benton)	TPA	\$17,500 2005	√	√	√	\$15,974	\$15,709	√	√
SR 112/Neah Bay to Sekiu – Roadside safety improvements (Clallam)	TPA	\$10,373 2005	√	Late	√	\$10,373	\$6,872	Under	
This project was split into two stages. Stage 1 was correctly reported as completed in the December 2008 <i>Gray Notebook 32</i> . Stage 2 work, which required right-of-way acquisitions, permits, and environmental mitigation steps, completed late on November 10, 2009.									
I-205/Mill Plain exit (112th Connector) – Build ramp (Clark)	Nickel	\$13,531 2003	Early	√	√	\$12,750	\$11,133	Under	√
I-205/Mill Plain Interchange to NE 18th St – Stage 1 (Clark)	TPA	\$11,088 2007	Early	√	√	\$10,836	\$8,752	Under	√
US 2/S of Orondo – Add passing lane (Douglas)	TPA	\$2,550 2005	Late	Late	√	\$3,512	\$2,740	Under	
This project was incorrectly reported as complete in the quarter ending September 30, 2009, in <i>Gray Notebook 35</i> . It actually finished one month late; it advertised one month late due to delays in obtaining environmental permitting and right-of-way.									

# WSDOT's Capital Project Delivery Program

## Schedule, Scope and Budget Summary

### Projects completed as of December 31, 2009

*Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands*

Project Description	Fund type	Original appropriation & year	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost at completion	On budget	Completed on time and on budget
US 101/Mosquito Creek Tributary to North River – Fish barrier (Grays Harbor)	TPA	\$1,255 2005	√	Late	√	\$1,455	\$1,520	√	
The construction estimate was increased due to the cost of shoring and excavation work that was underestimated.									
I-5/Boeing Access Rd vicinity to King/Snohomish county line – Pavement repair (King)	Nickel	\$21,000 2007	√	√	√	\$21,000	\$15,091	Under	√
SR 167/S 180th St to I-405 – Southbound widening (King)	TPA	\$50,000 2005	Early	Early	√	\$19,048	\$18,991	√	√
This project was combined with two other projects (indicated with * below) for construction efficiencies. The current estimated costs at completion are shown for each individual project									
* I-405/SR 181 to SR 167 – Widening (King)	TPA	\$135,840 2005	Early	Early	√	\$143,246	\$143,771	√	√
• I-405/I-5 to SR 169 Stage 1 – Widening (King)									
• I-405/Springbrook Creek Wetland and Habitat Mitigation Bank (King)									
* I-405/I-5 to SR 181 – Widening (King)	TPA	\$30,000 2005	Early	Early	√	\$22,381	\$22,613	√	√
I-405/NE 10th St – Bridge crossing (King)	TPA	\$67,000 2005	Early	√	√	\$63,901	\$64,100	√	√
• I-405/NE 10th St Bridge Crossing (King)									
• I-405/NE 10th St Bridge Crossing Stage 2 (King)									
SR 16/Burley-Olalla Interchange – Build interchange (Kitsap)	Nickel	\$15,320 2003	Late	√	√	\$24,399	\$24,256	√	√
A two-week delay to advertisement allowed time to address continuing design review issues including temporary erosion control and utility boring designs.									
SR 160/SR 16 to Longlake Rd vicinity – Widening (Kitsap)	Nickel	\$5,182 2003	√	Late	√	\$8,957	\$10,166	Over	
The operationally complete date was delayed from 5/18/09 to 8/30/09; the earlier schedule (January 2009 advertisement date and May 2009 construction start date) was not feasible. Project cost increased due to the inclusion of local funds and inflation.									
I-5/Fisher Creek vicinity – Stormwater drainage improvements (Skagit)	TPA	\$248 2005	√	Early	√	\$319	\$298	Under	√
SR 92, SR 520, SR 530, and SR 534 – Roadside safety improvements (Snohomish)	TPA	\$1,000 2005	√	√	√	\$1,000	\$402	Under	√
I-5/172nd St NE (SR 531) Interchange – Rebuild interchange (Snohomish)	TPA	\$13,348 2005	√	Early	√	\$46,790	\$37,263	Under	√
SR 9/SR 96 to Marsh Rd – Add lanes and improve intersections (Snohomish)	TPA	\$123,000 2005	√	Early	√	\$34,227	\$29,912	Under	√
This project was combined with two other projects (indicated with † below) for construction efficiencies. The current estimated costs at completion are shown for each individual project									
† SR 9/176th St SE vicinity to SR 96 – Add signal and turn lanes (Snohomish)	Nickel	\$5,950 2003	√	Early	√	\$6,231	\$3,999	Under	√
† SR 9/Marsh Rd intersection – Safety improvements (Snohomish)	TPA	\$4,000 2005	√	Early	√	\$9,419	\$6,804	Under	√
I-5/Chuckanut Creek vicinity – Stormwater drainage improvements (Whatcom)	TPA	\$947 2005	√	Early	√	\$1,282	\$561	Under	√
I-5/Padden Creek vicinity – Stormwater drainage improvements (Whatcom)	TPA	\$431 2005	√	Early	√	\$584	\$268	Under	√
I-5/Squalicum Creek vicinity – Stormwater drainage improvements (Whatcom)	TPA	\$360 2005	√	Early	√	\$470	\$194	Under	√

# WSDOT's Capital Project Delivery Program

## Schedule, Scope and Budget Summary

### Biennial project completion totals, 2009-2011

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

	Percent on time advertised	Percent on time completed	Percent within scope	Current Legislative expectation baseline	Current estimated cost at completion	Percent within budget	Percent on time and on budget
<b>Totals current quarter (December 31, 2009)*</b>	92%	83%	100%	\$471,038	\$435,457	96%	83%
5 Nickel projects	80%	80%	100%	\$73,337	\$64,645	80%	80%
19 TPA projects	95%	84%	100%	\$397,701	\$370,812	100%	84%
<b>Totals biennium to date (2009-11)</b>	79%	83%	100%	\$1,171,156	\$1,113,621	92%	81%
11 Nickel projects	82%	91%	100%	\$595,886	\$573,170	91%	91%
37 TPA projects	78%	81%	100%	\$575,270	\$540,451	92%	78%
<b>Totals cumulative to date**</b>	85%	88%	100%	\$3,696,882	\$3,675,508	88%	78%
121 Nickel projects	85%	89%	100%	\$2,346,946	\$2,329,962	89%	82%
119 TPA projects	84%	86%	100%	\$1,349,936	\$1,345,546	86%	74%

Source: WSDOT Project Control and Reporting Office.

\* Note: This count includes one project, US 2/S of Orondo – Add passing lane, which was incorrectly reported as complete last quarter.

\*\* Note: Dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.

# WSDOT's Capital Project Delivery Program

## Advertisement Record

### 54 Projects in construction phase as of December 31, 2009

*Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands*

Project description	Fund type*	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
<b>Cumulative to date</b>						
SR 17/Othello vicinity to Soap Lake vicinity – Install lighting (Adams, Grant)	TPA	Early	Dec-07	Central Washington Asphalt, Inc.	Aug-10	\$5,134
Advertisement date was advanced to construct a portion of this project as a part of a larger PEF program for construction efficiencies. This project was combined with SR 26/Othello vicinity–Install lighting (Adams) for construction efficiencies; that project is now completed.						
SR 285/George Sellar Bridge – Additional eastbound lane (Chelan, Douglas)	TPA	Late	Jan-09	Max J. Kuney Company	Mar-11	\$12,885
Advertisement date was delayed one month to address additional bridge analysis, design, and detailing requirements and to purchase railroad easements.						
I-5/SR 501 Ridgefield Interchange – Rebuild interchange (Clark)	TPA	Early	Jun-09	Tapani Underground, Inc.	Nov-11	\$15,795
This project was identified to receive \$10M in Federal Recovery Act stimulus funding.						
SR 503/Gabriel Rd intersection (Clark)	TPA	√	Oct-07	State Forces	Nov-10	\$20
Presence of potential hazardous waste site raised construction costs to a point exceeding the projected benefits of building the right turn lane. Project scope reduced to low-cost operational enhancements during the 2007 legislative session.						
SR 4/Climbing lane to Coal Creek Rd vicinity – Upgrade guardrail (Cowlitz, Wahkiakum)	Nickel	√	May-09	Lakeside Industries	Jan-10	\$6,499
The operationally complete date has been delayed one month, to 1/31/10, due to guardrail work still to be done.						
SR 900/SE 78th St vicinity to I-90 vicinity – Widening and HOV (King)	Nickel	√	May-08	Icon Materials, A Division of CPM Development Corp.	Jan-10	\$19,354
Central King to South Snohomish Bridges – Seismic (King, Snohomish)	TPA	√	Jul-08	Granite Northwest, Inc. dba Wilder	Mar-10	\$6,734
I-90/I-5 to 12th Ave S – Seismic retrofit (King)	TPA	√	Oct-08	PCL Construction Services, Inc.	Jun-10	\$5,703
SR 11, SR 525, and SR 900 – Roadside safety improvements (King, Snohomish, Skagit)	TPA	√	Feb-08	Coral Construction Company	Jul-10	\$1,463
I-405/SR 167 to SR 169 – Northbound widening (King)	TPA	√	Oct-08	I-405 Corridor Design Builders	Dec-10	\$83,599
I-405/SR 167 to SR 169 – Add new southbound lane (King)	Nickel	√	<i>Combined with the project above for construction efficiencies.</i>			
I-405/SR 515 – New interchange (King)	TPA	√	<i>Combined with the project above for construction efficiencies.</i>			
I-90/Eastside bridges – Seismic (King)	TPA	√	Oct-08	Imco General Construction, Inc.	Sep-11	\$5,999
SR 520/W Lake Sammamish Parkway to SR 202, Stage 3 – Widening (King)	Nickel	Late	Jan-07	Tri-State Construction, Inc.	Sep-11	\$9,988
The advertisement for the flyover ramp portion of this project was delayed to January 2007 due to stormwater and wetland design changes. The flyover ramp is currently open to traffic and the widening portion of the project was advertised in October 2008.						
I-405/NE 8th St to SR 520 braided ramps – Interchange improvements (King)	TPA	√	Mar-09	Guy F. Atkinson Construction, Llc	Dec-12	\$107,500
I-5/5th Ave NE to NE 92nd St – Noise wall (King)	TPA	√	Feb-08	Wilder Construction Co.	Aug-10	\$3,315
SR 519/ I-90 to SR 99 Intermodal Access Project – Interchange improvements (King)	Nickel	√	Jun-08	Kiewit Pacific Co.	Jun-10	\$66,969
I-90/Snoqualmie Pass East – Hyak to Keechelus Dam – Corridor improvement (Kittitas)	TPA	Early	Feb-09	Klb Construction, Inc.	Oct-15	\$3,298
SR 142/Roadside safety – Roadside improvements (Klickitat)	TPA	Early	Mar-08		Oct-10	
Cost increase includes pooled funds from other roadside safety projects to address high benefit locations.						

# WSDOT's Capital Project Delivery Program

## Advertisement Record

### 54 Projects in construction phase as of December 31, 2009

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type*	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
I-5/Port of Tacoma Rd to King County line – Add HOV lanes (Pierce)	Nickel	Late	Jun-09	Tri-State Construction, Inc.	Nov-11	\$31,015
Advertisement date was delayed due to design challenges associated with stormwater and floodplain management; a formal consultation with US Fish & Wildlife Service and National Oceanic & Atmospheric Administration (NOAA) was required. Inflation factor applied in early July 2008 added \$6.6M to project cost estimate. This project has received Federal Recovery Act stimulus funds.						
I-5/Ardena Road Bridge – Upgrade bridge rail (Pierce)	Nickel	Late	Combined with the project above for construction efficiencies.			
I-5/SR 16 Interchange – Rebuild Interchange (Pierce)	TPA	√	Jul-08	Guy F. Atkinson Construction, Llc	Dec-11	\$119,925
Advertisement delay is to address current Nickel fund cash flow needs. There is no change to the operationally complete date from this action.						
SR 20 and SR 530 – Roadside safety improvements (Snohomish, Skagit)	TPA	√	Feb-09	Coral Construction Company	May-10	\$521
I-405/NE 195th St to SR 527 – Northbound widening (Snohomish, King)	TPA	Early	May-09	Kiewit Pacific Co	Jun-10	\$19,263
SR 9/Lake Stevens Way to 20th St SE – Improve intersection (Snohomish)	TPA	√	Apr-08		Jun-10	
This is a WSDOT project administered by Snohomish County in order to coordinate more effectively with locally managed projects, and improve cost and construction efficiency.						
SR 532/270th St NW to 72nd Ave NW – Improve safety (Snohomish)	TPA	Late	Oct-08	Parsons/Kuney Joint Venture	Dec-10	\$50,416
This is a design-build project. Advertisement date was delayed to allow additional time to acquire environmental permits and right-of-way parcels.						
SR 532/64th Ave NW to 12th Ave NW – Improve safety (Snohomish)	TPA	Early	Combined with the project above for construction efficiencies.			
SR 532/General Mark W. Clark Memorial Bridge – Improve safety (Snohomish)	TPA	Early	Combined with the project above for construction efficiencies.			
SR 532/General Mark W. Clark Memorial Bridge – Replace bridge (Snohomish)	TPA	Early	Combined with the project above for construction efficiencies.			
SR 532/Sunrise Blvd to Davis Slough – Improve safety (Island, Snohomish)	TPA	Early	Combined with the project above for construction efficiencies.			
US 395/North Spokane Corridor – US 2 to Wandermere and US 2 Lowering – New alignment (Spokane)	Nickel	√	Aug-08		May-11	
• NSC – US 2 to Wandermere vicinity (Spokane)	Nickel		May-09	Graham Construction & Management, Inc.	May-11	\$37,541
• US 395/NSC – US 2 Lowering (Spokane)	Nickel		Aug-08	Graham Construction & Management, Inc.	May-11	\$42,849
I-5/Grand Mound to Maytown Stage One – Add lanes (Thurston)	Nickel	√	Dec-07	Scarsella Bros., Inc.	Jun-10	\$61,495
US 12/Frenchtown vicinity to Walla Walla – Add lanes (Walla Walla)	TPA	√	Dec-07	Apollo, Inc	Jul-10	\$33,733
Due to harsh winter and numerous unworkable days this projects Operationally Complete date has been moved out.						
SR 539/Tenmile Road to SR 546 – Widening (Whatcom)	Nickel	√	Dec-07	Max J. Kuney Company	Feb-10	\$53,987

# WSDOT's Capital Project Delivery Program

## Advertisement Record

### 54 Projects in construction phase as of December 31, 2009

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type*	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
SR 542/Nooksack River – Redirect river and realign roadway (Whatcom)	TPA	Late	Jan-09	Tapani Underground, Inc.	Oct-11	\$395
Advertisement date delay due to additional time needed to reach a settlement on a privately owned right-of-way parcel that is required for the project. The project was advertised in May 2008 and then pulled from ad. Right-of-way certification requirements were not met prior to bid opening. Advertisement was rescheduled for January 2009 to keep the in-water construction work within the July 1 to September 30 fish passage window.						
US 12/Tieton River west crossing – Replace bridge (Yakima)	TPA	Late	Apr-09	Scarsella Bros, Inc.	Oct-10	\$6,547
The scheduled advertisement date was delayed due to the extended time obtaining the Joint Aquatic Resource permit from the county and local agencies.						
US 12/Tieton River East Crossing – Replace bridge (Yakima)	TPA	Late	<i>Combined with the project above for construction efficiencies.</i>			
The scheduled advertisement date was delayed due to the extended time obtaining the Joint Aquatic Resource permit from the county and local agencies.						
<b>Biennium to date (2009-11)</b>						
I-5/SR 432 Talley Way Interchanges – Rebuild interchanges (Cowlitz)	TPA	√	Sep-09	Northwest Construction, Inc.	Dec-11	\$20,529
SR 28/Jct US 2 and US 97 to 9th St, Stage 1 – New alignment (Douglas)	TPA	√	Sep-09	Selland Construction, Inc	Oct-12	\$735
One phase of a multi-phase project was incorrectly identified as late. The advertisement date was advanced so that construction on the irrigation canal could take place during the 2009/2010 winter season while the irrigation water is shut off.						
I-5/Ship Canal Bridge – Noise Mitigation Study (King)	TPA	√	Dec-09		Aug-10	
The design recommended by the acoustic Expert Review Panel (ERP) called for additional work by the team of acoustical and structural engineers, including preparing an updated design scope, final noise modeling, structural capacity analysis, and final design. Because of the delay in finalizing a design concept, the advertisement date was delayed from April 2009 to December 2009.						
US 2/N Glen-Elk Chattaroy Rd Intersection – Intersection improvements (Spokane)	TPA	√	Aug-09	Inland Asphalt Company	Sep-10	\$379
<b>Quarter ending December 31, 2009</b>						
SR 26/W of Othello – Add passing lane (Adams)	TPA	Early	Dec-09		Oct-10	
SR 150/W of Chelan – Install lighting (Chelan)	TPA	√	Oct-09	Mccandlish Electric, Inc.	Aug-10	\$164
SR 971/S Lakeshore Rd – Install lighting (Chelan)	TPA	√	Oct-09	Mccandlish Electric, Inc.	Aug-10	
Advertisement date delayed one year as part of the 2009-11 Transportation budget addressing current budget constraints.						
SR 203/Corridor safety improvements – King County (King)	TPA	√	Nov-09	Tri-State Construction, Inc.	Oct-10	\$2,969
I-90/Two Way Transit – Transit and HOV improvements – Stage 2 & 3 (King)	TPA	Early	Dec-09		Jul-14	
SR 410/214th Ave E to 234th – Add lanes (Pierce)	TPA	Late	Dec-09		Sep-10	
The advertisement and operationally complete dates have been delayed to allow time for continued environmental compliance issues. Right-of-way plans were revised for new pond sites, which required restarting the cultural resources process.						
SR 11/I-5 Interchange-Josh Wilson Rd – Rebuild interchange (Skagit)	TPA	√	Nov-09		Dec-10	
SR 203/Corridor Safety Improvements – Snohomish County (Snohomish)	TPA	√	Nov-09	Tri-State Construction, Inc.	Oct-10	
SR 27/Pine Creek Bridge – Replace bridge (Whitman)	TPA	√	Oct-09		Nov-10	
SR 241/Dry Creek Bridge – Replace bridge (Yakima)	TPA	√	Nov-09	Apollo, Inc.	Nov-10	\$299
SR 823/Selah vicinity – Re-route highway (Yakima)	TPA	√	Dec-09		Jun-11	

# WSDOT's Capital Project Delivery Program

## Advertisement Record

### 54 Projects in construction phase as of December 31, 2009

*Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands*

Project description	Fund type*	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
I-82/Valley Mall Blvd Interchange – Rebuild interchange (Yakima)	TPA	√	Nov-09		Oct-11	
SR 22/I-82 to Toppenish – Safety improvements (Yakima)	Nickel	√	Oct-09	Steele Trucking, Inc.	Nov-11	\$143

The completion date for the second stage of this project has been delayed one year due to work that could not be performed inside the irrigation window.

### Advertisement Record summary

*Dollars in thousands*

	Percent on time advertised	Award amount
<b>Totals current quarter (December 31, 2009)</b>	<b>92%</b>	<b>\$8,979</b>
1 Nickel project	100%	\$143
12 TPA projects	92%	\$8,836
<b>Totals biennium to date (2009-11)</b>	<b>94%</b>	<b>\$30,622</b>
1 Nickel project	100%	\$143
16 TPA projects	94%	\$30,479
<b>Totals cumulative to date (Projects under way)</b>	<b>83%</b>	<b>\$842,564</b>
11 Nickel projects	73%	\$413,439
43 TPA projects	86%	\$429,125

Source: WSDOT Capital Program Development & Management Office.

\* As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.

# WSDOT's Capital Project Delivery Program

## Projects To Be Advertised

### 22 Projects in delivery pipeline for January 1, 2010, through June 30, 2010

Nickel and Transportation Partnership Account (TPA) projects now being advertised for construction or planned to be advertised, costs estimated at completion, dollars in thousands

Project description	Fund type*	Original planned ad date	Current planned ad date	On schedule	Baseline estimated cost at completion	Current estimated cost at completion
SR 503/Lewisville Park vicinity – Add climbing lane (Clark)	TPA	Jan-10	Jan-10	√	\$8,511	\$7,744
SR 500/St Johns Blvd – Build interchange (Clark)	TPA	Apr-10	Apr-10	√	\$57,599	\$57,328
SR 14/Camas Washougal – Add lanes and build interchange (Clark)	TPA	Apr-10	Apr-10	√	\$57,000	\$57,095
US 97/S of Chelan Falls – Add passing lane (Douglas)	TPA	Feb-16	Feb-10	Advanced	\$1,571	\$1,570
SR 99/SR 518 interchange bridge crossing – Seismic retrofit (King)	TPA	Apr-09	Jan-10	Delayed	\$1,381	\$1,381
This WSDOT project is tied to the Sea-Tac Airport Rental Parking Facility project administered by the Port of Seattle. Port of Seattle was unable to secure funding for this project and WSDOT's advertisement date was delayed. Funding has been secured and the project is now scheduled to advertise March 2010.						
SR 169, SR 410, SR 525, SR 900 and SR 520 – Roadside safety improvements (King)	TPA	Feb-10	Feb-10	√	\$200	\$1,200
SR 520/I-405 vicinity – Seismic retrofit (King)	TPA	Mar-10	Mar-10	√	\$5,655	\$5,353
I-5/SR 161/SR 18 – Interchange improvements – Phase 1 (King)	TPA	Oct-09	Mar-10	Delayed	\$109,216	\$109,335
This project now contains design elements from the unfunded Phase 2 of the overall project. The Phase 1 advertisement date has been delayed to March 2010 to reduce the probability of exceeding biennial funding; the delay will also allow time for WSDOT to address design elements and work with Puget Sound Energy regarding the recently approved addition of a flyover section.						
SR 303/Port Washington Narrows Bridge – Upgrade bridge rail (Kitsap)	Nickel	Mar-10	Mar-10	√	\$1,573	\$1,422
SR 305/Unnamed tributary to Liberty Bay – Fish barrier removal (Kitsap)	TPA	Mar-09	Apr-10	Delayed	\$1,984	\$2,586
The advertisement date was delayed while WSDOT redesigned the proposed construction method to use boring rather than open trenching						
US 97/Blewett Pass – Passing lane (Kittitas)	TPA	Nov-09	May-10	Delayed	\$2,509	\$2,261
The advertisement date has been delayed for two reasons: endangered spotted owls were discovered in the project area and a longer NEPA environmental process than planned will be required, and WSDOT needed additional time to process easements with the U. S. Forest Service.						
SR 161/24th St east to Jovita – Add lanes (Pierce)	Nickel	Oct-09	Apr-10	Delayed	\$34,267	\$37,402
The advertisement date has been delayed to obtain a new wetland mitigation site because the original location was determined to be unsuitable.						
SR 9/Lundeen Parkway to SR 92 – Add lanes and improve intersections (Snohomish)	TPA	Jan-10	Mar-10	√	\$39,149	\$36,375
I-5/196th St (SR 524) interchange – Build ramps (Snohomish)	TPA	Feb-10	Mar-10	√	\$59,491	\$52,194
SR 529/Ebey Slough Bridge – Replace bridge (Snohomish)	TPA	Mar-10	Mar-10	√	\$46,964	\$49,508
SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)	Nickel	Jan-16	Apr-10	Advanced	\$182,405	\$182,405
This project may be constructed along with two associated projects; WSDOT will provide more information upon award of contracts.						
I-5/Blakeslee Junction railroad crossing to Grand Mound interchange – Add lanes (Thurston, Lewis)	TPA	Feb-10	Feb-10	√	\$60,921	\$46,049
I-5/Grand Mound to Maytown Stage Two – Replace interchange (Thurston)	Nickel	Apr-10	Jun-10	√	\$45,184	\$40,793
I-5/Capitol Blvd Bridge – Upgrade bridge rail (Thurston)	Nickel	Mar-10	Mar-10	√	\$319	\$295

# WSDOT's Capital Project Delivery Program

## Projects To Be Advertised

### 22 Projects in delivery pipeline for January 1, 2010, through June 30, 2010

*Nickel and Transportation Partnership Account (TPA) projects now being advertised for construction or planned to be advertised, costs estimated at completion, dollars in thousands*

Project description	Fund type*	Original planned ad date	Current planned ad date	On schedule	Baseline estimated cost at completion	Current estimated cost at completion
US 12/SR 124 intersection – Build interchange (Walla Walla) The advertisement date has been delayed four months, and the operationally complete date three months, due to difficulties obtaining a land exchange agreement with the US Department of Fish and Wildlife.	TPA	Oct-09	Feb-10	Delayed	\$29,490	\$24,015
I-5/36th St vicinity to SR 542 vicinity – Ramp reconstruction (Whatcom)	TPA	Apr-10	May-10	√	\$27,298	\$27,298

### Projects to be advertised summary

	Percent advertised on schedule	Baseline estimated cost at completion	Current estimated cost at completion
<b>Total (January 1, 2010, through June 30, 2010)</b>	73%	\$774,772	\$745,645
5 Nickel projects	80%	\$263,748	\$262,317
17 TPA projects	71%	\$511,023	\$483,328

Source: WSDOT Project Control and Reporting Office.

\* As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.

## Project Milestones: Nickel Projects

### Schedule milestone tracking for Nickel projects

Schedule milestone results for all Nickel projects with one or more milestone activities

Milestone	Scheduled milestones to date	Scheduled milestones achieved to date	Scheduled milestones not achieved	Scheduled achievement rate**	Milestones achieved ahead of schedule
<b>Project definition complete</b>					
Biennium to date (2009-11)	0	1	0	0%	0
Cumulative to date	140	148	0	106%	8
<b>Begin preliminary engineering</b>					
Biennium to date (2009-11)	3	2	1	67%	0
Cumulative to date	147	151	1	103%	5
<b>Environmental documentation complete</b>					
Biennium to date (2009-11)	4	4	1	100%	0
Cumulative to date	140	139	3	99%	2
<b>Right-of-way certification</b>					
Biennium to date (2009-11)	2	0	2	0%	0
Cumulative to date	76	78	2	103%	4
<b>Advertisement date*</b>					
Biennium to date (2009-11)	3	1	2	33%	0
Cumulative to date	130	131	2	101%	3
<b>Operationally complete</b>					
Biennium to date (2009-11)	19	11	3	58%	1
Cumulative to date	118	121	3	103%	6

Source: WSDOT Project Control and Reporting Office.

\* Advertisement date includes projects that went to ad and completed in the same quarter.

\*\* Achievement rate may be higher than 100% where the actual number of milestones achieved exceed the number of scheduled milestones. This occurs when milestones are achieved ahead of their scheduled dates.

#### Project definition complete

Project definition is the preliminary picture of what a project will achieve and generally how it will do so. It includes deficiencies being addressed, the purpose for a project, location, and project information to the best available level. It is not a true project scope (that requires design effort) but it does support the very first preliminary cost estimate.

#### Begin preliminary engineering

A project schedule usually has two general phases, the pre-construction phase and the construction phase. Pre-construction involves design, right-of-way, and environmental activities. Beginning the preliminary engineering marks the start of the project design and is usually the first capital spending activity in the delivery process.

#### Environmental documentation complete

The National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA) require that an appropriate level of environmental assessment be prepared for almost all WSDOT projects. Depending on the project, these can take the form of an Environmental Impact Statement (EIS) or another document of lesser scale. These

assessments end in the issuance of a Record of Decision (ROD) or other summary document. This milestone is the date that WSDOT will have finished and submitted to the appropriate regulatory agencies, the documentation for the ROD and/or issuance of permits.

#### Right-of-way certification

Often WSDOT projects require the acquisition of right of way or property rights. The right-of-way certification marks the point in time that right-of-way acquisition requirements are met and the process is complete for advertisement.

#### Advertisement date

The date that WSDOT schedules to publicly advertise a project for bids from contractors. When a project is advertised, it has a completed set of plans and specifications, along with a construction cost estimate.

#### Operationally complete

The date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

# WSDOT's Capital Project Delivery Program

## Project Milestones: Transportation Partnership Account (TPA) Projects

### Schedule milestone tracking for TPA projects

Schedule milestone results for all TPA projects with one or more milestone activities

Milestone	Scheduled milestones to date	Scheduled milestones achieved to date	Scheduled milestones not achieved	Scheduled achievement rate**	Milestones achieved ahead of schedule
<b>Project definition complete</b>					
Biennium to date (2009-11)	2	9	0	450%	0
Cumulative to date	210	224	4	107%	18
<b>Begin preliminary engineering</b>					
Biennium to date (2009-11)	15	7	3	47%	0
Cumulative to date	216	224	4	104%	12
<b>Environmental documentation complete</b>					
Biennium to date (2009-11)	10	17	2	170%	2
Cumulative to date	188	181	14	96%	7
<b>Right-of-way certification</b>					
Biennium to date (2009-11)	19	25	5	132%	4
Cumulative to date	117	113	15	97%	11
<b>Advertisement date*</b>					
Biennium to date (2009-11)	22	18	4	82%	3
Cumulative to date	167	161	10	96%	4
<b>Operationally complete</b>					
Biennium to date (2009-11)	26	36	4	138%	11
Cumulative to date	106	115	6	108%	15

Source: WSDOT Project Control and Reporting Office.

\* Advertisement date includes projects that went to ad and completed in the same quarter.

\*\* Achievement rate may be higher than 100% where the actual number of milestones achieved exceed the number of scheduled milestones. This occurs when milestones are achieved ahead of their scheduled dates.

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The date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

## Completed Projects: Delivering performance and system benefits

Between October 1 and December 31, 2009, WSDOT completed 23 projects that rebuilt bridges, improved safety features, installed illumination, restored pavement, and increased capacity. Each of these projects improved travel by making roads safer, trips faster and more reliable, and helping the environment and the economy. Each project also faced unique challenges in being delivered both on time and on budget.

Building upon the principles of Performance Journalism and Accountability, WSDOT publishes a brief report on each project completed in a quarter, organized by county. These close-out summaries are intended to provide a better sense of the project delivery process, WSDOT's efforts to use tax dollars as efficiently as possible, and the benefits citizens can expect to see from completed projects.

Project delivery performance reporting regarding budget and schedule is measured against last approved budgets in accordance with criteria established by the Legislature; for this quarter, it is the 2009 supplemental budget. This report includes the original project appropriation from the 2003 and 2005 budgets to explain changes in project budgets over time. The graph offers a visualization of the fluctuations in a project's cost from year to year. The scale of the graph starts at various intervals to show the dollar range in greater detail.

More information on completed projects is available online at <http://www.wsdot.wa.gov/projects>. For completed Recovery Act projects, see page 42. For construction cost trends information, see page 92.

### SR 26/ Othello vicinity – Install lighting (Adams, Grant)

This project installed streetlights at two busy intersections west of Othello used by agricultural, commuter, and residential traffic.

*Project's benefits:* The work will improve safety by reducing the risk of night-time collisions at two locations.

*Project's highlights or challenges:* While under construction, project costs rose because the price of components of the illumination systems increased.

*Budget performance:* Despite the increase in cost of illumination materials, this project was completed for \$144,800, which is \$113,300 less than the last Legislative expectation and \$25,200 less than the original estimated cost.

*Schedule performance:* The project was completed in October, on schedule.



This project installed streetlights at two intersections on SR 26 near Othello.



### SR 240/Beloit Rd to Kingsgate Way – Widen roadway (Benton)

This project widened 18 miles of narrow two-lane roadway and shoulders on SR 240 from Beloit Road to Kingsgate Way, near Richland.

*Project's benefits:* This heavily traveled section of SR 240 is a main route for Hanford commuters and large trucks hauling freight. The route has been the site of serious collisions, causing five serious injuries and seven deaths in the past six years. The improvements should reduce the number of accidents by providing a wider shoulder recovery area in the event of unsafe passing attempts in congested traffic.

*Project's highlights or challenges:* This project was initially budgeted to construct 7.5 miles of northbound and southbound passing lanes. After further review, it was determined widening the roadway for 18 miles was a more cost effective solution.

*Budget performance:* The project cost \$9.9 million at completion, \$2.7 million below the last approved budget and \$4.6 million below the original FY 2005 budget. The design change, use of chip seal pavement, and a bid 7.5 % below the Engineer's Estimate lowered the project costs.

*Schedule performance:* This project was completed in November, on schedule.



# WSDOT's Capital Project Delivery Program

## Completed Projects: Delivering performance and system benefits

### US 395/Columbia Dr to SR 240 – Rebuild interchange (Benton)

This project reconfigured the US 395 / SR 240 interchange south of the “Blue Bridge” in Kennewick to rebuild lanes and construct roundabouts on Columbia Drive

*Project's benefits:* This project improves safety by reducing backups south of the Blue Bridge; reduces congestion and merge-conflicts at both ends of the bridge; and promotes traffic efficiency on the primary travel route between Pasco and Kennewick.

*Project's highlights or challenges:* WSDOT refined the project design and eliminated the need for right of way property acquisition, reducing costs. WSDOT developed a roundabout guide to communicate the project to the public.

*Budget performance:* This project cost \$15.7 million at completion, \$265,450 below the last approved budget and \$1.3 million below the original FY 2005 budget. The project benefited from a bid 8% and \$1 million below the Engineer's Estimate.

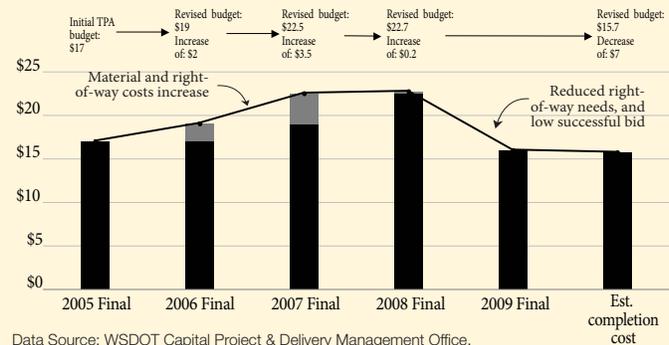
*Schedule performance:* The project was operationally complete on November 30, 2009, on time with the last approved schedule.



This project replaced the interchange at US 395/SR 240, south of the “Blue Bridge” in Kennewick.

### US 395/Columbia Dr to SR 240 – Rebuild interchange (Benton)

Annual project budget from conception to estimated cost at completion  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.



### SR 112/Neah Bay to Sekiu – Roadside safety improvements (Clallam)

This project installed advanced signing, guardrail, and drainage structures; flattened slopes; removed roadside hazards; and relocated utilities on a 61-mile stretch of SR 112.

*Project's benefits:* The project's improvements were designed to reduce the severity and frequency of run-off-the-road collisions. One section of roadway was identified as a high accident corridor. Two locations were deemed high accident locations.

*Project's highlights or challenges:* This is one of three projects to improve roadside safety on this stretch of highway. See the December 31, 2009 *Gray Notebook* for the description of the two earlier projects.

*Budget performance:* This project cost \$6.9 million at completion, \$3.5 million below its last approved and original FY 2005 \$10.4 million budget. The project benefited from a bid almost 30% below the Engineer's Estimate.

*Schedule performance:* This project's operationally complete date was delayed one year to allow this project to be combined with another project in the vicinity. It was completed on November 10, 2009, nearly a year behind of the last approved schedule, on October 30, 2009.



This project installed safety improvements, including guardrail on a 61-mile stretch of SR 112 in Clallam County.

## Completed Projects: Delivering performance and system benefits

### *I-205/Mill Plain exit (112th Connector) – Build ramp (Clark)*

This project, in partnership with the City of Vancouver, constructed off-ramps at three major intersections: the northbound I-205 off-ramp to westbound Mill Plain Boulevard, the direct connection from the northbound I-205 off-ramp to NE 112th Avenue, and a new ramp at the intersection of Mill Plain Boulevard and NE Chkalov Drive.

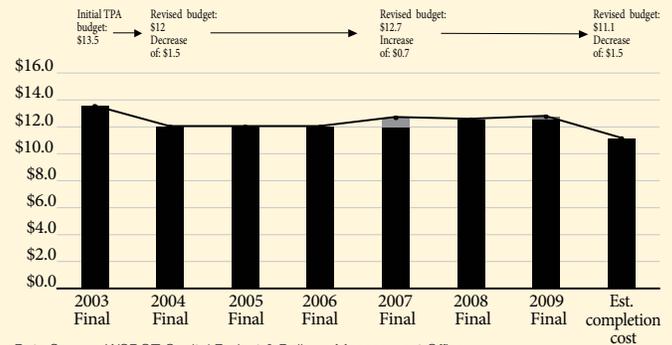
*Project's benefits:* The construction will reduce rear-end accidents and delays at the intersections, and reduce congestion and traffic back-ups during peak travel times. Safety and mobility will be improved.

*Project's highlights or challenges:* This project was combined with the I-205/Mill Plain Interchange to NE 18th St – Stage 1 project for efficiencies. Both projects benefitted from a favorable bid more than 15% below the Engineer's Estimate.

*Budget performance:* This project cost \$11.1 million at completion, \$1.6 million below its last approved budget and \$2.4 million below its original FY 2003 budget.

### **I-205/Mill Plain Exit – Build Ramp (Clark)**

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.

*Schedule performance:* The project was completed in December 2009, on schedule.



### *I-205/Mill Plain interchange to NE 18th St – Stage 1 (Clark)*

This project was constructed in partnership with the City of Vancouver. It included a new I-205 northbound off-ramp to Mill Plain Boulevard; a new northbound I-205 off-ramp to NE 18th Street; and a new southbound on-ramp at NE 18th Street to I-205, including a new 1,100-foot bridge. In addition, the project widened the NE 18th Street Bridge and extended the NE 9th Street Bridge.

*Project's benefits:* This project will improve safety and mobility in the east Clark County area. The improvements on this project will reduce congestion and traffic back-ups, eliminate some of the weaving problems between exits, and reduce rear-end accidents on Mill Plain Boulevard.

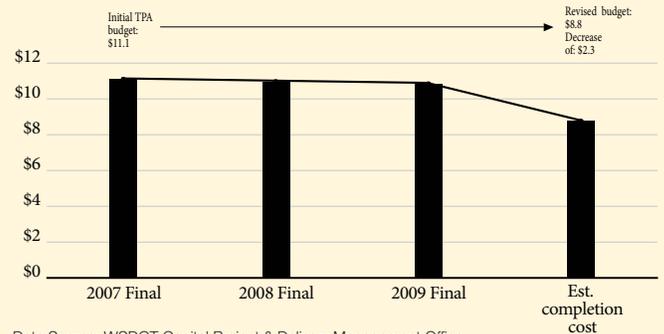
*Budget performance:* This project cost \$8.75 million at completion, \$2.1 million below the last approved budget and \$2.3 million below the original FY 2005 budget.

*Schedule performance:* This project was completed in December 2009, on schedule.



### **I-205/Mill Plain Interchange to NE 18th St – Stage 1 (Clark)**

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.



*New, 110-foot-long girders are set on the new 112th Connector bridge during construction in June 2009.*

# WSDOT's Capital Project Delivery Program

## Completed Projects: Delivering performance and system benefits

### US 101/Mosquito Creek tributary to North River – Fish barrier (Grays Harbor)

This project used shoring and excavation work to eliminate restriction on a fish passage.

*Project's benefits:* Movement of fish was being restricted by an old drainage structure in Mosquito Creek. This project removed the barrier to fish passage.

*Project's highlights or challenges:* This project benefited from a successful low bid 16% below the Engineer's Estimate.

*Budget performance:* The project cost \$1.5 million at completion, \$65,000 above the last approved budget. The budget increased due to new estimates of the cost of shoring and excavation, and higher materials costs.

*Schedule performance:* This project was complete in October 2009, on schedule.



This project removed a fish passage barrier in the Mosquito Creek Tributary under US 101 in Grays Harbor County.

### I-5/Boeing Access Rd vicinity to King/Snohomish county line – Pavement repair (King)

This project, an interim measure, repaired and replaced 440 concrete panels on northbound and southbound I-5 between the Boeing Access Road in South Seattle and the King/Snohomish county line, and in the I-5 express lanes.

*Project's benefits:* Heavy traffic use compounded the deterioration of concrete pavement panels that were also overdue for replacement. Now that the pavement is repaired, drivers will notice a smoother ride and better traction, which improves safety. The project also extended the life of the pavement until adequate funding can be secured to repave I-5.

*Project's highlights or challenges:* This was one of several concrete rehabilitation projects funded in the FY 2007 budget out of an original \$134.3 million Nickel project for concrete rehabilitation on I-5 in Pierce, King, and Snohomish counties.

*Budget performance:* This project cost \$15.1 million at completion, \$5.9 million below its approved \$21 million budget. The project was delivered under budget due in part to a successful low bid of about \$9.9 million, 37% below the Engineer's Estimate of about \$15.7 million.

*Schedule performance:* This project was completed on December 14, 2009, on schedule.

### I-5/Boeing Access Rd vicinity to King/Snohomish county line – Pavement repair (King)

Annual project budget from conception to estimated cost at completion  
Dollars in millions



This project repaired and replaced about 440 concrete panels on I-5 in King County.

## Completed Projects: Delivering performance and system benefits

### I-405/SR 181 to SR 167 – Widening (King)

### I-405/I-5 to SR 181 – Widening (King)

### SR 167/S 180th St to I-405 – Southbound widening

These projects are part of WSDOT's broader corridor program for improving I-405 around I-5, SR 169, and SR 167. Project elements were combined for construction efficiencies; work included adding a new northbound lane on I-405 to SR 167 and connecting the southbound High Occupancy Vehicle (HOV) lane on SR 167 to I-405.

**Project's benefits:** Both interstate and state roads in the area of I-405's intersection with I-5 are highly congested. The projects should reduce congestion and increase safety by reducing traffic weaves.

**Project's highlights or challenges:** With such extensive work, a key challenge was to combine components to increase cost efficiencies while minimizing disruption. The projects included the creation of a 130-acre wetland mitigation bank, the Springbrook Creek Wetland & Habitat Mitigation Bank. Completed

in June 2009, it was Washington's first bank in an urban area to be created with a state and local partnership agreement.

**I-405/SR 181 to SR 167 budget performance:** This project cost \$143.8 million at completion, \$525,000 above the last approved budget and \$8 million above the original FY 2003 budget. The project was awarded at \$4 million, 5% over the Engineer's Estimate.

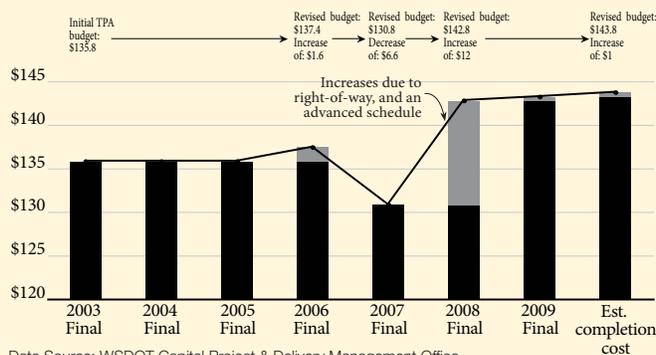
**I-405/I-5 to SR 181 budget performance:** This project cost \$22.6 million at completion, \$232,000 above the last approved budget but \$7.4 million below the FY 2005 approved budget.

**SR 167/S 180th St to I-405 budget performance:** This project cost \$19 million at completion, \$56,000 below the last approved budget, and \$31 million below the FY 2005 original budget. Funds from the project were moved to help pay for other corridor projects in FY 2007.

**Schedule performance:** All projects were completed in December 2009, on schedule.

### I-405/SR 181 to SR 167 – Widening (King)

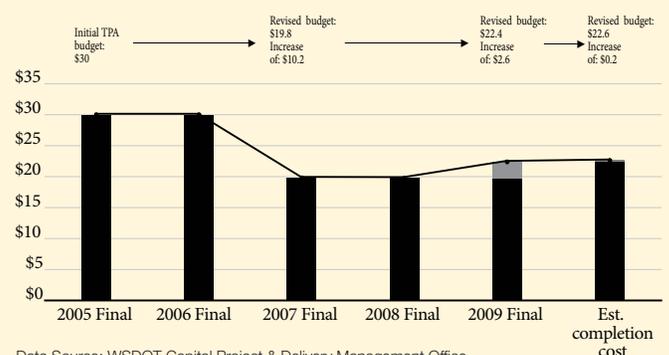
Annual project budget from conception to estimated cost at completion  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.

### I-405/I-5 to SR 181 – Widening (King)

Annual project budget from conception to estimated cost at completion  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.



A wheelchair accessible boardwalk opens up the new Springbrook Creek wetland mitigation bank for all visitors.



Crews opened a new lane to traffic on I-405 between I-5 and SR 167 on Dec. 11, 2009.

# WSDOT's Capital Project Delivery Program

## Completed Projects: Delivering performance and system benefits

### *I-405/NE 10th Street – Bridge Crossing (King)*

This project, in partnership with the City of Bellevue, constructed a new freeway bridge at NE 10th Street in Bellevue. The bridge extends over I-405 between 112th Avenue NE and 116th Avenue NE.

*Project's benefits:* It is highly congested in the vicinity of the I-405 on-and off-ramps in downtown Bellevue. The bridge is intended to reduce congestion and accidents at the NE 8th Street interchange, improve emergency vehicle access to the medical district, and provide a better option for pedestrians. It will save motorists time, allowing travel directly across I-405 at NE 10th Street, instead of re-routing via NE 8th Street. Additionally, the project built a new stormwater treatment facility to accommodate this and future projects..

*Project's highlights or challenges:* The bridge will serve as an anchor for ramps connecting downtown Bellevue directly to SR 520 as part of the ongoing I-405 Bellevue Braids project.

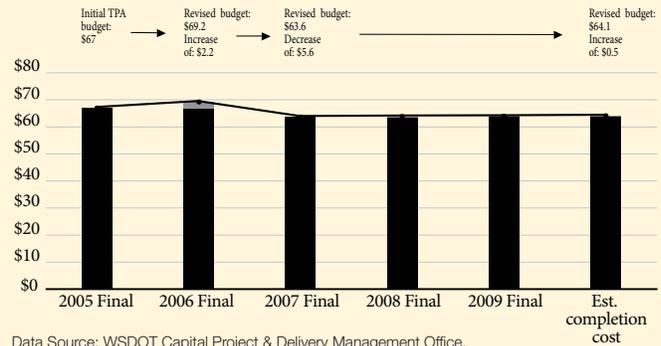
*Budget performance:* This project cost \$64.1 million at completion, \$200,000 above the last approved budget, and \$2.9 million below the FY 2005 original budget. The earlier decrease was a result of lower than anticipated right-of-way costs.

*Schedule performance:* This project was completed in November 2009, on schedule.



### **I-405/NE 10th Street – Bridge crossing (King)**

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.



This project, shown under construction, built a new bridge over I-405 in Bellevue at NE 10th Street.

### *SR 160/SR 16 to Longlake Rd vicinity – Widening (Kitsap)*

This project widened shoulders, flattened slopes, and added turn lanes on a half-mile section of roadway.

*Project's benefits:* This project is intended to reduce the frequency and severity of collisions on a High Collision Corridor and reduce accidents at a pedestrian risk location.

*Project's highlights or challenges:* The successful low bid was \$3.15 million, 27% below the Engineer's Estimate of \$4.3 million. The project received \$2 million from the local sewer utility company to cover the cost of additional work.

*Budget performance:* This project cost \$10.2 million, \$1.2 million above the last approved budget and \$5 million above the original FY 2003 budget. The budget increased due to the added local funds, material cost inflation, increase for engineering, and \$2 million increase for right-of-way costs.

*Schedule performance:* The project was completed in October



This project flattened slopes and widened shoulders at a pedestrian risk location near a school.

2009, one quarter behind the last approved budget. The project was delayed due to utility relocation and a contractor working on a WSDOT project for the first time.

## Completed Projects: Delivering performance and system benefits

### SR 16/Burley-Olalla Interchange – Build interchange (Kitsap)

This project removed the intersection on SR 16 at the Burley-Olalla Road and constructed a diamond interchange. The project built bridges over Burley Olalla Road and new on- and off-ramps from SR 16.

*Project's benefits:* The SR 16/Burley-Olalla Road intersection was the last at-grade intersection on SR 16, and was the site of a high number of collisions. This project is intended to reduce both the frequency and severity of collisions.

*Project's highlights or challenges:* The low successful bid was \$16.3 million, \$2.7 million, or 14% below the Engineer's Estimate of \$19 million.

*Budget performance:* This project cost \$24.3 million, \$142,000 below the last approved budget, and \$9 million above the FY 2005 original budget. The project cost increased due to material cost escalation, increased right of way, wetland mitigation, and a fish passage barrier requiring removal.

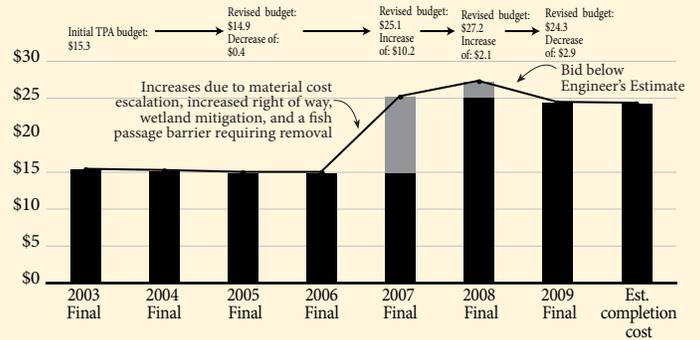
*Schedule performance:* This project was completed in October, 2009. The project was accelerated by two years in part because of keen local interest in finding a safety solution.



Early stages of construction for the new SR 16 overpass.

### SR 16/Burley-Olalla Interchange (Kitsap)

Annual project budget from conception to estimated cost at completion  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.



This project replaced the SR 16 interchange at Burley Olalla Road with a diamond interchange, and built bridges over the roadway.

# WSDOT's Capital Project Delivery Program

## Completed Projects: Delivering performance and system benefits

*SR 9/176th St SE vicinity to SR 96 – Add signal and turn lanes (Snohomish)*

*SR 9/Marsh Rd Intersection – Safety improvements*

*SR 9/SR 96 to Marsh Rd – Add lanes and improve intersections*

These projects constructed four new, wide general purpose lanes and three left-turn lanes; built new intersections; and installed new cameras and traffic signals. The new signals share information to synchronize lights and keep traffic moving smoothly. Several drainage features were added to alleviate erosion and treat water runoff.

*Project's benefits:* This is a high collision stretch of road, mainly due to congestion. These projects are intended to reduce collisions and left-turn accidents, as well as smooth the flow of traffic and prevent backups at intersections.

*Project's highlights or challenges:* These three projects were combined for construction efficiencies. The project budget initially increased for the SR9/Marsh Road intersection because of the costs in relocating the intersection and developing a new road alignment, wetland mitigation, stormwater treatment, and floodplain issues. This budget increase was offset by savings achieved on the SR 9/SR 96 to Marsh Road project.

*Budget performance for SR 9/176th St:* This project cost \$4 million at completion, \$2.2 million below the last approved budget and \$1.95 million below the FY 2003 original budget.

*Budget performance for SR 9/Marsh Rd Intersection:* This project cost \$6.8 million at completion, \$2.6 million below the last approved budget and \$2.8 million above the FY 2005 original budget.

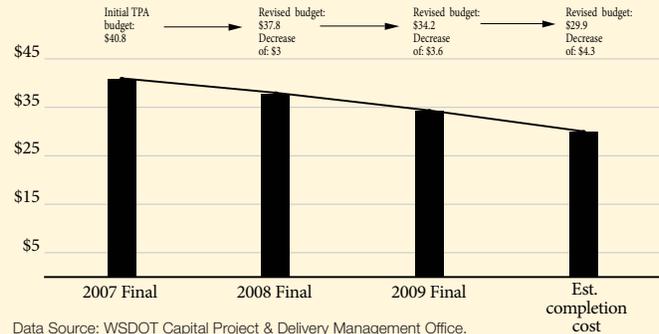
*Budget performance for SR 9/SR 96 to Marsh Rd:* This project cost \$29.9 million at completion, \$4.3 million below the last approved budget and \$10.9 million below the original FY 2007 budget. The original FY 2005 budget included \$123 million for the SR 9 corridor, which was divided into six separate projects to widen portions of the SR 9 corridor and improve several intersections.

*Schedule performance:* This project was completed in December 2009, one quarter ahead of the last Legislative expectation.



### SR 9/SR 96 to Marsh Rd – Add lanes and improve intersections (Snohomish)

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



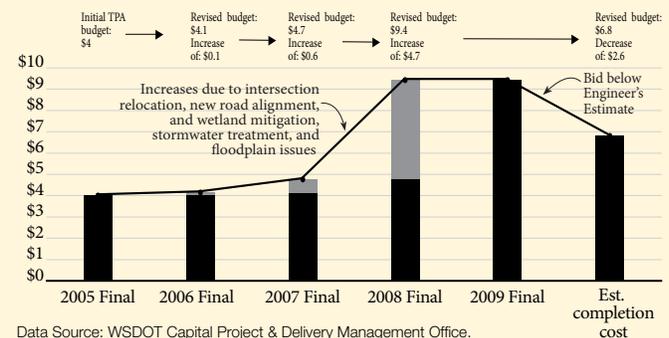
Data Source: WSDOT Capital Project & Delivery Management Office.



These projects widened SR 9 in Snohomish County, added turn lanes, and improved busy intersections.

### SR 9/Marsh Rd intersection – Safety improvements

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



Data Source: WSDOT Capital Project & Delivery Management Office.

## Completed Projects: Delivering performance and system benefits

### *I-5/172nd St NE (SR 531 Smokey Point) Interchange – Rebuild Interchange (Snohomish)*

This project widened and realigned ramps at this interchange, added turn lanes and bicycle lanes. It also widened several other ramps to improve traffic flow to and from I-5.

*Project's benefits:* This project will reduce congestion caused by severe back-ups on and around the bridge at peak commute times. Safety is improved during merging and exiting the freeway by bringing the ramps up to current safety standards. Improved drainage for highway stormwater runoff enhances water quality in the area.

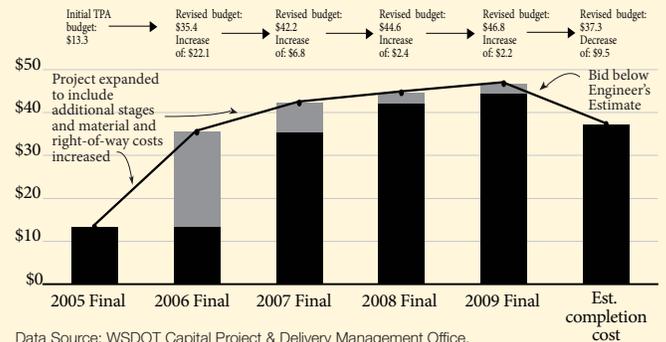
*Project's highlights or challenges:* The project design and right-of-way costs escalated when affected property was reclassified to urban use. After budget increases, the successful low bid was about \$13 million, 39% below the Engineer's Estimate of \$21.4 million. As a result of the low bid and other cost savings, about \$10 million in surplus Transportation Partnership Account funds were removed from the project in September.

*Budget performance:* This project cost \$37.3 million at completion, \$9.5 million below the last approved budget due to a low bid and other savings. The original FY 2005 budget of \$13.2 million was expanded in FY 2006 to include additional stages of the project and increased due to the above right-of-way costs and increases in material costs for steel, concrete, and asphalt.

*Schedule performance:* This project was completed on November 13, 2009, one year ahead of the last Legislative expectation for completion.

### **I-5/172nd St NE Interchange (SR 531 Smokey Point) – Rebuild interchange (Snohomish)**

*Annual project budget from conception to estimated cost at completion*  
Dollars in millions



Crews paved the interchange at I-5 and 172nd St NE in Snohomish County.

### **SR 530, and SR 534 – Roadside safety improvements** (Snohomish and Skagit)

This project installed guardrail, and centerline and shoulder rumble strips; painted centerline striping; upgraded mailbox supports, and made other improvements to enhance safety.

*Project's benefits:* The project will reduce the severity of run-off-the-road accidents on these routes.

*Project's highlights or challenges:* WSDOT will analyze collision data over time for highway projects with roadside safety components.

*Budget performance:* This project cost \$402,000 equal to the last approved budget.

*Schedule performance:* This project was completed in December 2009, on schedule.



Crews place guardrail on two highways in Snohomish and Skagit counties.

# WSDOT's Capital Project Delivery Program

## Completed Projects: Delivering performance and system benefits

*I-5/Fisher Creek vicinity – Stormwater drainage improvements (Skagit)*

*I-5/Chuckanut Creek vicinity – Stormwater drainage improvements (Whatcom)*

*I-5/Squalicum Creek vicinity – Stormwater drainage improvements (Whatcom)*

*I-5/Padden Creek vicinity – Stormwater drainage improvements (Whatcom)*

These projects improved water quality at four creeks along I-5 in Whatcom and Skagit Counties.

*Project's benefits:* Fisher, Chuckanut, and Squalicum Creeks have been identified as having poor water quality. I-5 runoff discharged into the four creeks, either directly from the roadway, or through roadside ditches. The projects installed the recommended water treatment systems to improve the quality of highway runoff entering the four creeks. The channel of Padden Creek has been severely eroding over the past several years. The project installed rock check dams to reduce stream bed erosion and improve water quality.

*Project's highlights or challenges:* Materials costs for stormwater treatment initially increased the project costs. The four projects were combined for efficiencies and benefited from a favorable bid of \$398,014, 48% below the Engineer's Estimate of \$767,932.

*Fisher Creek budget performance:* The project cost \$298,000 at completion, about \$21,500 below the last approved budget and \$50,000 above the FY 2005 original budget.

*Chuckanut Creek budget performance:* The project cost \$560,600 at completion, \$722,000 below the last approved budget and \$387,000 below the original FY 2005 budget.

*Padden Creek budget performance:* The project cost \$268,400 at completion, about \$315,600 below the last approved budget and \$163,000 below the FY 2005 original budget.

*Squalicum Creek budget performance:* The project cost \$194,000 at completion, \$276,500 below the last approved budget and \$166,600 below the FY 2005 original budget.

*Schedule performance:* These projects were completed in October 2009, on schedule.



### I-5 Water quality retrofit projects



The maps above show the four I-5 Water quality retrofit projects. The large map shows the three Whatcom County projects, from top: Squalicum Creek, Padden Creek, and Chuckanut Creek. The Fisher Creek project to the south in Skagit County is in the inset map.



These I-5 stormwater projects help treat stormwater in Whatcom and Skagit Counties, including this project on I-5 near Padden Creek.

## Southwest Washington I-5 Expansion and Improvement Program

Washington's I-5 is the state's main north-south travel corridor through the Puget Sound region and southwest Washington. I-5 links Washington with the rest of the west coast, as well as Canada and Mexico. For this reason, I-5 has become one of the most important trade and freight corridors in the U.S.; averaging 10,000 - 33,000 freight trucks daily. It is also a vital mobility link for western Washington communities, and a catalyst for regional growth.

WSDOT began planning and constructing the I-5 corridor in the 1950s, and completed all sections from the Canadian border in Blaine to the Columbia River in Vancouver by 1981. Almost immediately after all sections of entire I-5 was opened to traffic, WSDOT began making modifications to select corridors, including general purpose and HOV lane additions, seismic retrofits, and safety modifications.

### Legislature identifies need for expansion of I-5 corridor in Thurston and Lewis counties

The south Thurston/north Lewis County I-5 corridor is one of the last segments of I-5 that remains largely unchanged since its original opening in 1967. This 20 mile stretch of I-5 is only two lanes in each direction, with limited shoulders and several out-dated collector/distributor lanes for connecting intersecting roads. When originally opened, the corridor had an average daily volume of 16,000 vehicles: in 2009, it carried more than 80,000 vehicles a day. In the 42 years since its opening to traffic, both counties have seen their populations increase dramatically: Lewis County grew by 70% between 1967 and 2009, and Thurston County by 258%. During this period, both counties saw increasing freight demand as a result of the liberalization of trade policies (North American Free Trade Agreement of 1991) and the development of more sophisticated local port facilities in both counties.

To address the needs of the communities in both counties, as well as local and regional freight mobility, the Legislature incorporated several projects as part of the 2003 Nickel and 2005 Transportation Partnership Account (TPA) gas tax packages. Approximately \$400 million is expected to be allocated to five major projects over a ten year construction period to help widen I-5 and redesign major connections, flyovers, bridges, and safety rest areas that support the interstate.

### New reporting will highlight quarterly progress on projects

Like the Tacoma/Pierce County HOV program (see page 80), this 'mega project' will be completed through different projects, and some in more than one stage. Currently, there are five projects: one is operationally complete, one is currently under construction, and three are in the design or advertising process. This quarterly article will highlight accomplishments and activities that occur within the respective projects, and report on the progress towards operational completion.

### Southwest Washington I-5 corridor improvements highlights

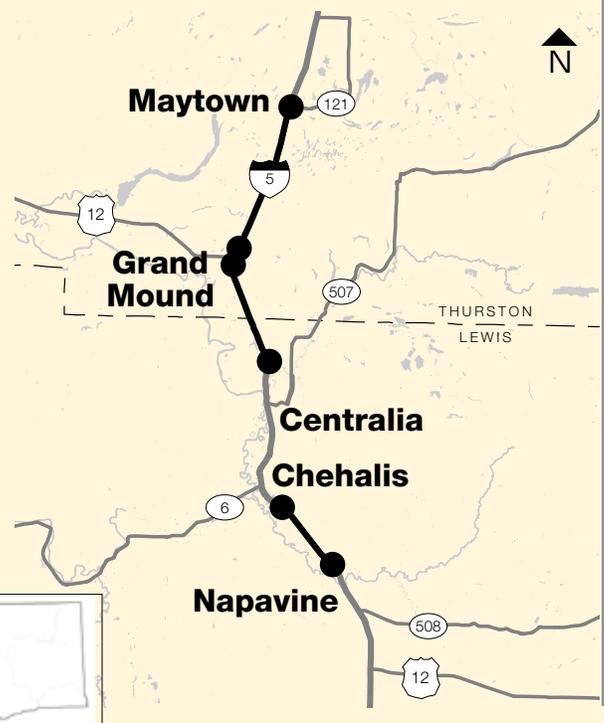
There are five large projects valued at approximately \$400 million that make up the corridor enhancements.

The first major project, I-5 Rush Road to 13th Street, was opened to traffic in June 2009.

The next major project to be open to traffic is the I-5 Grand Mound to Maytown Stage 1 project.

Both projects add an additional lane for traffic in both directions of I-5 in their respective vicinities.

Three I-5 corridor improvement projects



<sup>1</sup> Based on the Washington State Office of Financial Management's 2007 'Medium' Growth Management Projections.

# WSDOT's Capital Project Delivery Programs

## Southwest Washington I-5 Expansion and Improvement Program

### Completed projects

#### *I-5 Rush Road to 13th Street (Lewis)*

The first project on this corridor was advertised in March 2007 and was operationally complete by June 2009. The \$51 million project constructed a third lane in both directions through the vicinity of Chehalis, extended on- and off-ramps, and constructed a new flyover bridge and interchange on LaBree Road to support freight traffic at the Port of Chehalis. Freight travel times in the vicinity were reduced by seven minutes as a result.



Above: Traffic travels below the new LaBree Road flyover as it spans the expanded I-5 on the Rush Road to 13th Street corridor.

### Under construction

#### *I-5 Grand Mound to Maytown – Add Lanes, Stage 1 (Thurston)*

This \$90 million project will construct an additional lane in both directions of I-5, from the communities of Ground Mound in Thurston County to Maytown in Lewis County. Near the counties' borders, the corridor will retain an existing truck-climbing lane. The project also funds the connection of the safety rest area septic system at Ground Mound to Thurston County's sewer system. The project was advertised in December 2007 and should be operationally complete by summer 2010.

### In preliminary engineering phases

#### *I-5 Ground Mound to Maytown – New Interchange, Stage 2 (Thurston)*

The Stage 2 project will construct a new flyover for US 12 to accommodate the expanded I-5. By constructing the flyover off-site, construction time will be reduced from 20 to 14 months; existing traffic on US 12 and I-5 will experience fewer weeks of delay at installation. WSDOT will install new ITS devices, including traffic cameras, variable message signs, and fiber optic lines for traffic management. New traffic signals for US 12 traffic merging on and off of I-5 will be included, a benefit to increasing freight and automotive traffic in the corridor. The project will also smooth out a curve on I-5 at the terminus of the Stage 1 project. The \$45 million project is in the design phase, and construction is expected to begin in late 2010.

#### *I-5 Blakeslee Junction to Grand Mound (Thurston & Lewis)*

This project will widen I-5 from two lanes to three lanes for approximately four miles in both directions just south of the *I-5 Ground Mound to Maytown Stage 1* project currently under-way. This project was advertised in December 2009 and is expected to begin construction in 2010, with an operationally complete date of 2011.

#### *I-5 Mellen Street to Blakeslee Junction (Lewis)*

This project will construct new collector-distributor lanes in the Centralia vicinity, eliminating the existing merging conditions on I-5. A new bridge over I-5 south of Mellen Street will be constructed as well. The project is currently in the design phase and is scheduled to go to construction in 2012, with an operationally complete date of 2014.



Above: The excavation site along I-5 near Grand Mound was affectionately deemed 'The Big Cut' by the construction crew because of the amount of dirt that was removed from the site.

## Special Report: New Ferry Construction

WSDOT is moving forward to build new ferries to replace its aging fleet. WSDOT has been without a state-owned ferry to serve the challenging Port Townsend/Keystone route since November 2007. The narrow, shallow Keystone Harbor prevents the use of a larger ferry, but the new 64-car ferry design is very maneuverable for its size and should reduce the number of weather cancellations to ensure safe, reliable ferry service.

The contract to construct the first 64-car ferry for \$65.5 million was awarded to Todd Pacific Shipyards in December 2008. The vessel, named *Chetzemoka* by the Washington State Transportation Commission on October 20, 2009, is on an 18-month construction timeline; it is scheduled for completion in summer 2010.

In October 2009, WSDOT awarded a \$114.1 million contract to Todd Pacific Shipyards for two additional 64-car ferries. The second and third vessels are scheduled to be delivered and go into service in 2011 and 2012. The contract includes an option to construct a fourth vessel, which WSDOT must exercise no later than May 31, 2011. If sufficient funding is available at that time, WSDOT will pursue the construction of a 144-car ferry instead of a fourth smaller ferry.

### Construction processes and next steps

Todd completed construction of the *Chetzemoka's* hull in November 2009. The curtain plate sections (sides of the vessel) were delivered by barge from Everett Shipyard and attached to the hull. Major machinery pieces installed in October and November include the main engines, generators, boilers and fire pumps.

Shipyard crews at Todd Pacific Shipyards and Nichols Brothers continued outfitting the vessel in December, which includes installing piping, wiring, windows, doors, lighting, foundations for furniture and paneling, and fire fighting equipment.

The completed hull was rolled out of the construction building onto a drydock in mid-January 2010. Sections of the vessel's superstructure arrived by barge from Nichols Brother's Shipyard on Whidbey Island; they were lifted into place by a floating crane. Next, crews will install shafting and rudders, and paint the entire vessel. The *Chetzemoka* will be moved to Everett Shipyard in spring 2010 for final outfitting, testing, and sea trials.

WSDOT issued a Notice to Proceed to Todd on November 9, 2009 for the second and third 64-car ferries. Todd is working on design issues and pre-ordering long-lead-time materials for these new vessels.

*The stern portion of the newly named Chetzemoka, under construction at Todd Pacific Shipyards.*

### Project Highlights

The Washington State Transportation Commission named the first new 64-car ferry *Chetzemoka* on October 20.

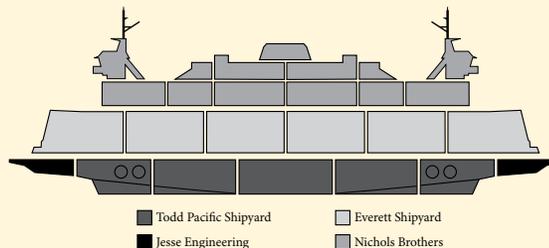
WSDOT awarded a \$114.1 million contract to Todd Pacific Shipyards on October 13 to construct two more 64-car ferries, in addition to the *Chetzemoka*.

Construction highlights this quarter:

- October: Installed hull ends and placed generators and main engines.
- November: Completed hull construction.
- December: Installed system components and prepared vessel for drydock.

For more information:  
[www.wsdot.wa.gov/Projects/Ferries/64CarFerries](http://www.wsdot.wa.gov/Projects/Ferries/64CarFerries).

**Washington State Ferries**  
**New 64-auto ferry**  
*Vessel assembly information map*



# WSDOT's Capital Project Delivery Programs

## Special Report: Tacoma Pierce County HOV Program Quarterly Update

### I-5/SR 16: Westbound Nalley Valley construction progresses

The \$184 million I-5/SR 16: *Westbound Nalley Valley* construction project in Tacoma reached a significant milestone in the last quarter of 2009, when a temporary eastbound bridge across the Nalley Valley was completed and opened to eastbound traffic. Moving traffic onto the temporary structure allowed crews to demolish and reconstruct sections of SR 16 and complete work at the SR 16/Sprague interchange.

Crews have drilled 58 of 84 shafts, built 34 of 84 columns, and completed five of 33 bridge caps. They completed the first two – of 107 – segments for the bridge connecting northbound I-5 to westbound SR 16, and completed work on a retaining wall. Working with the HOV design office, the team has revised the Scott Pierson pedestrian path and slope grading, eliminating the need to build two retaining walls. Additional project savings were realized by working with the contractor to modify the bridge girders.

The design and construction offices are working together to address conflicts in elevation, drainage structures, and bridge plans. The focus is on correcting the designs while minimizing time and budget impacts to the project.

### I-5: Port of Tacoma Road to King County Line – HOV construction under way

This project continues to move forward rapidly, as I-5 traffic lanes remain narrowed to 11 feet each to provide a construction zone in the median. The median bridge deck over Wapato Creek has been poured, the first of three within the project limits; crews will soon pour a second deck over Hylebos Creek. All pile driving is complete in the highway median, with final pile driving will scheduled for spring. Crews are also preparing to pave initial lifts of hot mix asphalt in the highway median, by excavating, building barriers, and installing drainage. The project, which widens a three-mile stretch of I-5 to accommodate a northbound and a southbound I-5 HOV lane through Fife, is scheduled for completion in late 2011.

### Delays to the I-5: M Street to Portland Avenue – HOV segment

The I-5: *M Street to Portland Avenue – HOV* project will be shelved for about a year in early 2010 due to changes in the HOV program's biennial spending plan. Most of the team will transition to the I-5: *Portland Avenue to Port of Tacoma Road – Northbound HOV* project.

### Design work continues on I-5: Portland Avenue to Port of Tacoma Road – Northbound HOV

Design work on this project is moving forward at a rapid pace. Sections of work are being packaged separately so construction on some portions can begin early while reducing construction risks and maximizing resources. Substantial progress on environmental issues was made this quarter, including arriving at a final Memorandum of Agreement (MOA) between WSDOT and the Puyallup Tribe of Indians, Corps of Engineers, Federal Highway Administration (FHWA), and the Department of Archaeology and Historic Preservation. With the MOA and Endangered Species Act (ESA) consultation complete, all National Environmental Policy Act (NEPA) requirements for the program's Tacoma projects have been met. The final draft Finding of Non Significant Impact is at FHWA for final review and approval.

### Project Highlights

Construction on the \$184 million I-5/SR 16: *Westbound Nalley Valley* project continued. The temporary eastbound bridge across Nalley Valley is now complete and open to traffic.

Construction on the I-5 *Port of Tacoma Road to King County Line - HOV* project is under way, with the first of three bridge decks poured and all pile driving in the highway median now complete.

Design work on the I-5: *M Street to Portland Avenue - HOV* project has been delayed for a year.

For more information:  
<http://www.wsdot.wa.gov/projects/PiercecountyHOV/>  
or  
[www.tacomatraffic.com](http://www.tacomatraffic.com).



Eastbound SR 16 traffic (on far left) traveling on the newly-opened temporary eastbound roadway.

## Watch List: Projects with schedule or budget concerns

WSDOT is committed to frequent and accurate “no surprises” reporting of project performance, emphasizing rigorous analysis while communicating in plain language, unencumbered by jargon or insider terminology. As part of that commitment, WSDOT regularly addresses issues that do, or potentially could, affect a project’s schedule and budget: they are outlined here in the Watch List. When these issues are resolved, which may take more than one quarter, the project is removed from the Watch List. If new issues arise, an update to the project will be provided in the Update to Watch List section.

The gray box below describes some of the common problems that may affect the successful progress of a project from design through completion; they are listed in the order in which WSDOT might face them, starting in the earliest planning stages and concluding with actual construction.

The summary on page 82 lists projects currently facing schedule or budget concerns with a reference to these overarching descriptions; a more detailed description of the precise problem or its resolution appears on the following pages. Still more information is presented on the individual project pages on the WSDOT website at [www.wsdot.wa.gov/projects](http://www.wsdot.wa.gov/projects). Projects paid for through Pre-Existing Funds are discussed on pages 88-91.

It is important to note that while the number of projects appearing on the Watch List has grown over time, so have the number of projects under way (we report on the project whether it is under construction or in planning and design phases). By tracking problem projects more closely on the Watch List, WSDOT can keep all its stakeholders informed while evaluating possible solutions.

### Environmental

**Archaeological:** Unexpected finds may require additional time for careful excavation.

**Reviews & approvals:** Completing state and federally required environmental studies may take longer than anticipated, may reveal unexpected problems with the project location, or prompt the involvement of community or other agencies.

**Fish passage barrier:** Many factors must be taken into account to design and construct ‘best practice’ water conduits, including negotiating with resource agencies and tribes to develop appropriate designs to ensure fish can pass through.

**Geological:** Studies may reveal unsuitable soil conditions for construction on the proposed route.

**Mitigation:** Minimizing harm to wetlands and other natural features may involve many other factors from design through construction.

**Permitting:** New information about a project site or changes in design can lead to the reworking of permits, causing delay or additional expense.

### Coordination

**Local concerns:** Concerns raised by local communities may require additional design work which, if not resolved, might result in litigation expenses.

**Inter-agency issues:** Project may require more collaboration with local jurisdictions, or may require inter-local agreements, such as Memoranda of Understanding (MOUs) or Memoranda of Agreement (MOAs).

**Tribal government issues:** Consultation with tribes as required by Centennial Accord and specific treaties. Where treaty rights are affected, there may be financial settlements unanticipated in the original project budget.

### Design

**Alternatives:** Design alternatives may require unanticipated revision as the result of environmental analyses and/or public input.

**Design disputes:** Communities or other entities may challenge design concepts, requiring additional time spent in design.

**Design element changes:** Project parameters may change, requiring changes to designs in progress or under construction.

**Team turnover:** Changes in staff may delay progress as new team members are brought up to speed on the project.

### Utilities

**Agreements with other jurisdictions:** Agreements may take longer to obtain than anticipated.

**Utility relocations:** Moving power, water, gas, or other utility lines may be more complex than originally expected.

### Right-of-Way

**Design changes:** Project revisions that may require additional land.

**Land acquisition:** Negotiations with landowners regarding purchase of property may take longer than anticipated.

**Land appreciation:** Property value increases that exceed projections.

**Land use designation changes:** Land previously zoned as farmland may have been converted to industrial or commercial use, raising the purchase price.

### Construction

**Contractor issues:** Disputes with contractors or disagreements over contract parameters may delay construction at any point in the job.

**Cost increase of materials:** Unit costs may increase beyond the set budget due to fluctuations in the marketplace or a failure to estimate costs properly at the design phase.

**Materials procurement:** Unexpected demand or lack of availability of raw materials required for construction.

**Site problems:** Discovery of contaminated (hazardous) soils or similar unforeseen issues after construction has begun.

**Timing problems:** Delays at design or right of way may mean work schedules conflict with events such as fish spawning season.

**Weather:** Weather unsuitable for construction work will temporarily halt the project.

### Litigation

At any point, a problem may escalate if one or more of the parties decides to file a lawsuit.

# WSDOT's Capital Project Delivery Programs

## Watch List: Projects with schedule or budget concerns

### Watch List summary

*Projects with budget and/or schedule concerns*

Added to Watch List	Project type	Watch List issue
SR 14/Camas Washougal – Add lanes and build interchange (Clark)	Highway	Environmental: geological, permitting; Right-of-way: land acquisition; Utilities
I-5/Rush Road to 13th Street – Add lanes (Lewis)	Highway	Construction: cost increase of materials
SR 539/Tenmile Rd to SR 546 – Widening (Whatcom)	Highway	Construction: site problems
<b>Updates to Watch List</b>		
SR 9/Pilchuck Creek – Replace Bridge (Snohomish)	Highway	Design: design element changes
US 12/SR 124 Intersection – Build Interchange (Walla Walla)	Highway	Right-of-Way: land acquisition; Environmental: reviews & approvals, mitigation
SR 542/Nooksack River – Redirect river and realign roadway (Whatcom)	Highway	Environmental: reviews & approvals, permitting; Design: utilities
SR 823/Selah vicinity – Reroute highway (Yakima)	Highway	Right-of-way: land acquisition
Stanwood –New station, siding upgrade (Snohomish)	Rail	Environmental: permitting, archaeological
<b>Pending action by Legislature or other agencies</b>		
SR 99/Spokane Street Bridge – Replace bridge approach (King)	Highway	Coordination: inter-agency issues
SR 161/24th St E to Jovita – Add lanes (Pierce)	Highway	Environmental: mitigation
SR 530/Sauk River Bank Erosion – Realign roadway (Skagit)	Highway	Design: alternatives
• SR 530/Sauk River (Site #2) – Stabilize river bank (Skagit)		
SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)	Highway	Design: alternatives
SR 529/Ebey Slough Bridge – Replace bridge (Snohomish)	Highway	Environmental: mitigation; Construction: cost increase of materials
<b>Removed from Watch List</b>		
SR 285/West end of George Sellar Bridge – Intersection improvements (Chelan)	Highway	Design: alternatives; Coordination: local concerns
US 101/Hoh River (Site #2) – Stabilize slope (Jefferson)	Highway	Environmental: erosion control; Design: redesign
US 12/Frenchtown Vicinity to Walla Walla – Add Lanes (Walla Walla)	Highway	Construction: weather
SR 22/I-82 to Toppenish – Safety Improvements (Yakima)	Highway	Construction: timing problems

Source: Capital Programs Development & Management, WSDOT Regions.

## Watch List: Projects with schedule or budget concerns

### Added to Watch List

#### ***SR 539/Ten Mile Road to Badger Road — Widening (Whatcom)***

This project, budgeted for \$106.7 million, will construct one additional lane in each direction from Ten Mile Road to SR 546 near Lynden to reduce congestion and improve safety.

The project is on budget, and construction is 80% complete: 2.5 miles of the four-mile project, including three of four planned roundabouts, was completed in early December 2009. However, the scheduled completion date for the remainder of the project has been delayed from October 2009 to January 2010. Two problems, both involving bridge design and construction, caused the delay.

The HPS steel specified for the Nooksack Bridge was not available, and construction was delayed for about three months while WSDOT sourced a suitable alternative. The delay in working on the steel trusses consequently delayed concrete and asphalt work into winter months, when unsuitably cold or wet weather conditions frequently prevent such work from proceeding.

Work on the Fish Trap Creek Bridge, already constrained by a short construction window, was slowed by unexpectedly poor soil conditions encountered when construction began on the east half of the bridge. Instead of the 40-foot piles already installed on the west half of the bridge, the east half required 100-foot deep piles. The delay in sourcing the 100-foot piles and additional welding work needed to install them has in turn delayed the final paving work.

WSDOT opened the highway to traffic in time for the February 2010 Winter Olympics in Vancouver, B.C., but paving, painting, and landscaping work remain outstanding. An update will be provided in the next *Gray Notebook*.

#### ***I-5/Rush Road to 13th Street – Add lanes (Lewis)***

This project, budgeted for \$53 million, will improve a 3.7 mile section of I-5 from Rush Road to 13th Street in Lewis County. By constructing an additional lane in each direction and a new interchange at LaBree Road, the project will reduce congestion and improve traffic flow.

The project is operationally complete; the budget is at risk. Currently, additional funding of \$420,000 is required to cover project costs not previously accounted for. These costs are due to deferred contract items, pending change orders, changes to a city sewer line, contract item costs greater than originally estimated, and additional construction engineering.

In addition, WSDOT is evaluating cost adjustments for completed bid items. Some were completed at under 75% of planned quantities, and some at over 125% of planned quantities. The evaluation process can take several months to complete and may result in further additional costs to the project. Once the final amount is determined, any additional payments, if required, will be made this biennium.

More information will be provided as it becomes available.

#### ***SR 14/Camas Washougal – Add lanes & build interchange (Clark)***

This project, budgeted for \$57 million, is intended to improve safety and relieve congestion on SR 14 from 6th Avenue to east of Union Street (SR 500). The project will widen SR 14 to four lanes from Lady Island through 2nd Avenue, with a split diamond interchange at Union and 2nd Avenue. A median barrier will be placed on the West Camas Slough Bridge.

The project is in the design phase; the schedule is at risk. The timelines for environmental permitting, right-of-way acquisition, and utility agreements may cause the project to miss the scheduled advertisement date in April 2010 (reported erroneously in the September 2009 *Gray Notebook* 35 as January 2010) by a month or two. If advertisement is delayed to late May or June, it is likely the allowable time to work in the water to avoid fish migration for 2010 will be missed for work on the East Camas Slough Bridge. A one-year delay for that portion of the project could require a transfer of about \$3.5 million of expenditures from the 2009-11 biennium to the 2013-15 biennium.

WSDOT is working to minimize these impacts and keep the project on schedule.

### Updates to Watch List

#### ***SR 9/Pilchuck Creek — Replace bridge (Snohomish)***

This project, budgeted for \$6.2 million, will replace the existing 17-foot-wide bridge over Pilchuck Creek with a wider bridge meeting current design standards. Although rated 'structurally deficient,' the bridge is safe to cross.

About 10% of the project's design phase has been completed; it is scheduled for advertisement in January 2012. As reported in the September 2009 *Gray Notebook* 35, during the design refinement process, WSDOT evaluated two design proposals in depth during a Value Engineering (VE) review workshop completed on December 17, 2009. Both alternatives are estimated to cost significantly more than the current budget, which did not allow for the costs of realigning the road. WSDOT is currently assessing the outcome of the VE recommendation.

# WSDOT's Capital Project Delivery Programs

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## Watch List: Projects with schedule or budget concerns

### ***SR 542/Nooksack River — Redirect river and realign roadway (Whatcom)***

Related projects:

SR 542/Warnick Bluff Site

SR 542/Bruce & Baptist Creeks

SR 542/CED, E. Church Mt Rd

SR 542/Gallup Creek Bridge Replacement

This project, budgeted for \$16.6 million, will address seasonal erosion, slope changes, and flooding on Mount Baker Highway (SR 542) along the Nooksack River, by either realigning SR 542 further from the river or diverting the river away from the road.

The two projects reported as under construction in the September 2009 *Gray Notebook 35* (Bruce Creek and Warnick Bluff) are now operationally completed, in September and October respectively. The East Church Mountain Road project is now being advertised, and remains on schedule.

Design work on the fourth contract, to replace the existing Gallup Creek Bridge with a new bridge ten feet higher over the river, is 90% complete. The advertisement date is now delayed by another month, from January 2010 to February 2010, to allow time to obtain the necessary environmental permits. The project is still expected to be completed on schedule in fall 2011.

Several previously delayed project elements have moved forward. The hydraulic data needed for the bridge design has been provided, and the two remaining parcels of right-of-way are expected to be acquired in winter 2010.

The local water district responsible for relocating the waterline on the existing bridge has hired a consultant to prepare needed relocation plans, but the district has yet to secure the funding necessary to move the line. WSDOT continues to coordinate work plans with the water district.

### ***US 12/SR 124 Intersection – Build interchange (Walla Walla)***

This project, budgeted for \$29.5 million, will build a new interchange and bridge to replace two existing intersections. Removing the signal-controlled intersections will improve safety, reduce congestion, and enhance the area's economic vitality.

The project is in the design phase; the schedule continues to be at risk. The pending land exchange with U.S. Fish and Wildlife Service (USFWS), to accommodate project impacts to the McNary National Wildlife Refuge (described in the June 2009 *Gray Notebook 34*), has not yet been completed. WSDOT continues to work with USFWS to complete the land exchange by the new advertisement date of February 2010.

Once the land exchange is completed successfully, construction should begin in spring 2010. The project is anticipated to be open to traffic in fall 2011, three months later than originally scheduled.

### ***SR 823/Selah vicinity – Re-route highway (Yakima)***

This project, budgeted for \$11.6 million, will make improvements and provide an alternate route for traffic and commercial trucks around the downtown Selah business district to relieve congestion during peak commuting times.

This project is in the design phase; the schedule is at risk. As reported in the September 2009 *Gray Notebook 35*, WSDOT is purchasing twelve more right-of-way parcels than the original estimated, including one parcel to be acquired by the City of Selah. To date, WSDOT has acquired more than 75 % of the needed parcels.

WSDOT met the December 21, 2009, advertisement date after changing the order of work in the contract plans. Improvements will be constructed at Railroad Avenue and the SR 823/Fremont Ave intersection first, with work on the other sections of SR 823 beginning after the remaining right-of-way acquisitions have been completed.

If right-of-way acquisition proceeds as planned, WSDOT expects to open the project to traffic on schedule in summer 2011.

## **Rail updates to Watch List**

### ***Stanwood — New station, siding upgrade (Snohomish)***

These two projects in Stanwood, budgeted for \$21 million, will construct a new train platform to serve Amtrak *Cascades* passengers, and upgrade and extend the siding to allow modern-length freight trains to use it.

The siding upgrade project is being constructed in two stages: first, rehabilitating the track and signals of the existing siding to improve speeds, and second, extending the siding 13,000 feet past 102nd Street, which also involves closing Logan Road crossing. Stage 1 is complete; the schedule and budget for Stage 2 are at risk.

As reported in previous *Gray Notebooks*, proceeding with the siding extension has depended on:

1. Approval from the Washington Utilities and Transportation Commission to close Logan Road. The WUTC approved closure, and no challenges were received during the 20-day comment period ending November 20.
2. Issuance of 401 and 404 wetland permits from the Washington State Department of Ecology and the U.S. Army

## Watch List: Projects with schedule or budget concerns

Corps of Engineers (US ACE), respectively. These permits are still pending approval.

3. The outcome of a cultural resources survey conducted by US ACE.

Although that survey was initially completed by the US ACE in January 2009 without finding any cultural resources in the project area, the Stillaguamish Tribe has indicated to US ACE that some of the project locations need further investigation. The resolution of the matter between the Tribe and US ACE is currently pending. Delays in either permitting process could delay the project and increase the project cost.

The new Stanwood station project was completed within budget on November 11, 2009; Amtrak *Cascades* service began on November 21, 2009. A total of \$1.1 million was requested to be re-appropriated into the 2009-11 biennium to account for delays in the construction phase due to the discovery of contaminated soil on the project site. The request is included in the Governor's 2010 budget request to the Legislature.

### Projects on hold pending further information

#### **SR 99/Spokane St Bridge — Replace bridge approach (King)**

This project, budgeted for \$13.7 million, will replace the southernmost section of the Spokane Street Bridge. The timber piles, supporting about 450 feet of concrete bridge deck are nearing the end of their useful life and should be replaced; the type of replacement support structure is not yet finalized.

The project is in the design phase. Though within budget, the schedule risk reported in the September 2009 *Gray Notebook 35* has been realized. To accommodate the Port of Seattle's request to include construction of the requested access road, WSDOT must delay the advertisement date from January 2011 to September 2011, to allow for additional ground investigations and to design the bridge over the access road. The operationally complete date will also be delayed, to September 2013 from December 2012, as a result.

The added access road will increase the project cost, but WSDOT expects it will be mitigated by a grant from the Freight Mobility Strategic Investment Board (FMSIB). The Port's FMSIB grant application to cover the additional design and construction costs is included in the Governor's 2010 budget request to the Legislature.

More information will be provided when it becomes available, closer to the current advertisement date.

#### **SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)**

This project, currently budgeted for \$182.4 million, will widen SR 522 to a four-lane highway by constructing two new lanes and five new bridges. When completed, it will improve motorist safety and reduce congestion by doubling the traffic capacity of the old two-lane roadway.

The project is roughly half-way through the design and preliminary engineering phase; the budget and schedule continue to be at risk. A detailed discussion of budget and design issues appeared in the September 2009 *Gray Notebook 35*.

As noted in *GNB 35*, the schedule is at risk due to a change in the river's flow near the Snohomish River Bridge, which placed the as-designed location of a bridge pier in the water. WSDOT must modify its design and resubmit any necessary environmental permit applications. The permitting process is expected to take eight months; if the process takes longer than eight months, it could delay the December 2010 advertisement date.

A new schedule risk has developed that also relates to in-water construction work. The Washington Department of Fish & Wildlife's revised guidelines (*Gold & Fish*, April 2009) restrict the in-water work window for this portion of the Snohomish River to two weeks (August 1-15) from the previously allowed eight weeks (July 1-August 31). WSDOT will submit a request to WDFW to allow 12 weeks' work in the first year of construction, and eleven weeks in the second year.

More information will be provided when it becomes available.

#### **SR 529/Ebey Slough Bridge — Replace bridge (Snohomish)**

This project, budgeted for \$47.0 million, will replace the old Ebey Slough Bridge with a new bridge that will meet current design standards.

The project is in the design phase; both the project's budget and schedule are at risk. As reported in the September 2009 *Gray Notebook 35*, estimated costs rose by \$2.5 million to \$49.5 million (including inflation and \$2 million for wetland mitigation). The \$2.5 million increase is included in the 2010 Governor's budget request to the Legislature.

The schedule continues to be at risk. Acquiring environmental permits is a risk to the March 2010 advertisement date. Also, as reported in the September 2009 *Gray Notebook 35*, the schedule is at risk until the Environment Impact Statement (EIS) for the Snohomish County wetland mitigation site is formally approved this spring.

# WSDOT's Capital Project Delivery Programs

## Watch List: Projects with schedule or budget concerns

### ***SR 530/Sauk River Bank Erosion – Realign roadway (Skagit)***

Related projects:

(153035G) SR 530/Sauk River (Site #2) – Stabilize river bank

This project on the Sauk River, where erosion threatened SR 530, was scheduled in two stages. Stage 1 realigns the highway away from the river; Stage 2 (SR 530/Sauk River Site #2) stabilizes and restores the riverbank and fish habitat by removing remnants of past emergency repairs. The Stage 2 project is already operationally complete and on budget.

The budget and schedule for Stage 1 are at risk. The current estimated cost is about \$8.0 million, which is about \$4.3 million over budget.

As reported in the September 2009 *Gray Notebook 35*, the project's advertisement and completion dates were delayed while WSDOT conducted a corridor study on the Sauk River's interaction with SR 530. The study was completed and is now in review. As part of the 2009 Transportation Budget, the Legislature approved the schedule changes but postponed the decision on the budget request, pending the outcome of the corridor study. The \$4.3 million funding shortfall is included in the Governor's 2010 budget request to the Legislature.

More information will be provided when it becomes available, closer to the current advertisement date.

### ***SR161/24th St east to Jovita – Add lanes (Pierce)***

This project, currently budgeted for \$34 million, will improve mobility in a busy section of SR 161 in the City of Edgewood. WSDOT will widen the roadway to five lanes (including a two-way left-turn lane), add a new traffic signal at 16th Street East, and work with the City of Edgewood's proposed enhancements. When completed, it will reduce congestion and allow safer, more efficient movement of people and vehicles.

The project is in the design phase; the budget and schedule remain at risk. As reported in the September 2009 *Gray Notebook 35*, the advertisement date has been delayed six months, from October 2009 to April 2010, to allow time to locate a new wetland mitigation site.

Several other issues reported in the June 2009 *Gray Notebook 34*, (right-of-way condemnations, utility relocation and street enhancements negotiations) still have potential to impact the new April 2010 advertisement date.

More information will be provided when it becomes available, closer to the current advertisement date.

## Removed from Watch List

### ***SR 285/West end of George Sellar Bridge – Intersection improvement (Chelan)***

This project, budgeted for \$18.5 million by the 2009 Legislature, will modify the intersection of SR 285 and Mission Street, a major traffic bottleneck. The project will increase the flow through the intersection, reducing travel time and congestion-related collisions on SR 285 and the local road network.

As the September 2009 *Gray Notebook 35* reported, this project faced both budget and schedule risks. WSDOT estimated right-of-way costs for the project would increase to \$13 million, \$7.7 million more than the budget allocation of \$5.3 million. After coordination with the public, City of Wenatchee, and the Wenatchee Valley Transportation Council, a new design alternative was developed and implemented to mitigate rising right-of-way costs. The new design alternative changed some of the traffic patterns and alleviated public concerns with the original alternative.

By using the new design, the total right-of-way cost can be reduced by \$2.6 million. The cheaper right-of-way cost is offset by two increases in expenditures: \$800,000 for additional design work and \$3.1 million in construction, for a net increase of \$1.3 million above the project's approved budget.

To allow time for completing modifications for the new design, both the advertisement and the operationally complete dates were delayed seven months, from October 2011 to April 2012 and November 2012 to June 2013, respectively. All changes have been approved and the project is on track to meet the newly approved schedule and budget.

### ***US 101/Hoh River (Site #2) – Stabilize slope (Jefferson)***

This project, currently budgeted for \$9.6 million, will stabilize the Hoh River bank to prevent the loss of US 101 roadway to erosion. Engineered log jams will be installed in the Hoh River adjacent to US 101 to stabilize the bank.

This project is in the design phase. As reported in the September 2009 *Gray Notebook 35*, WSDOT is now preparing an Adaptive Management Plan (an inter-agency plan to cooperatively address environmental issues) for the engineered log jams. This plan will allow the Biological Assessments to be completed and submitted to NOAA Fisheries and US Fish and Wildlife. Plan preparation, formal consultation, and the permit process will delay the advertisement date to January 2011.

## Watch List: Projects with schedule or budget concerns

### ***US 12/Frenchtown Vicinity to Walla Walla – Add lanes (Walla Walla)***

This project, currently budgeted for \$59.5 million, is the fourth of six construction phases to widen US 12 between SR 124 and the City of Walla Walla. When completed, the project will improve safety by separating opposing lanes of traffic and add traffic capacity.

This project is in its second year of construction. As reported in the September 2009 *Gray Notebook 35*, the contractor continued paving work as long as weather permitted, which was through November 2009. About half the paving work remains to be done, and the final layer of asphalt will be laid in spring 2010.

This new section of US 12 is still expected to be open to traffic in July 2010, nine months later than originally planned.

### ***SR 22/I-82 to Toppenish – Safety improvements (Yakima)***

Budgeted for \$5.4 million, this project will increase safety on SR 22 from the Yakima River Slough Bridge to downtown Toppenish. Project components include widening shoulders and flattening roadside slopes, upgrading guardrail, adding sidewalks, and improving intersections.

This project is in the design phase. As reported in the September 2009 *Gray Notebook 35*, WSDOT has split the project into two consecutive contracts. The first contract has been awarded to Steel Trucking Inc. at 28% under the engineer's estimate; it covers work that must be done while irrigation water is turned off for the winter, and is scheduled to be completed in spring 2010.

The second contract will widen the roadway and construct other improvements after all irrigation-structure work is completed. WSDOT will advertise the second contract in October 2010, to be operationally complete in November 2011, also one year later than originally planned.

# WSDOT's Capital Project Delivery Programs

## Pre-Existing Funds (PEF) Programmatic Reporting

The Pre-Existing Funds (PEF) program funds a wide variety of capital projects to improve the safety, functionality, and longevity of the state highway system. Unlike Nickel and Transportation Partnership Account (TPA) projects, which are fixed lists of projects set by the Legislature and funded with a line item budget for each individual project, PEF projects are funded at the program level. Funding is aligned to commitments to address set priorities such as preserving pavement each biennium. Each biennium, new PEF projects are programmed based on prioritized needs and available funds, and the list of PEF projects changes each biennium.

Examples of PEF projects include: pavement preservation and repaving, bridge repairs and replacement, slope stabilization, safety projects such as cable median barriers and rumble strips, environmental retrofit to improve fish passage and stormwater management, and preservation of facilities associated with the highway system such as rest areas.

### PEF performance is reported at two levels

#### Six individually tracked projects

Six projects are reported individually due to their size or significance (see below and the following pages for schedule and budget information on these projects).

#### All other projects

WSDOT reports on:

- Achievement of project milestones by type of project, see page 89.
- Actual versus planned cash flow for the overall PEF program, see page 90.
- Before & After results for selected types of projects such as highway safety. (For examples, please see *Gray Notebook 34* for information on highway safety, pp. 5-11, and highway corridor safety, pp. 12-14).

### Six individually tracked Pre-Existing Funds (PEF) projects: results through December 31, 2009

Dollars in millions

Project description	First legislative budget & year	Baseline current legislative approved & year	Scheduled date to begin preliminary engineering		Scheduled date for advertisement		Scheduled date be operationally complete	
			Date	On time	Date	On time	Date	On time
US 2/Ebey Island Viaduct and Ebey Slough Bridge (Snohomish)*	\$32.1 2002	\$6.2 2007	Dec-98	√	Nov-00	√	Dec-03	
• US 2/50th Avenue SE vicinity to SR 204 vicinity – Bridge rehabilitation		\$10.8 2007	Jul-06	√	Feb-07	√	Sep-07 complete	√
• US 2/43rd Ave SE vicinity to 50th Ave SE vicinity – Bridge rehabilitation		\$26.7 2009	Jan-09	√	Aug-10		Dec-11	√ Early
SR 202/SR 520 to Sahalee Way – Widening (King)	\$36.9 2001-03	\$82.7 2009	May-98	√	Aug-05	√	Feb-08	√ Early
SR 539/Horton Road to Tenmile Road – Widen to Five Lanes (Whatcom)	\$32.0 2001-03	\$66.3 2009	Oct-90	√	Jan-07	√	Nov-08	√
SR 28/E End of the George Sellar Bridge – Construct bypass (Douglas)	\$9.4 2004	\$29.3 2009	May-04	√	May-10	Early	Dec-11	
The project advertised early but the construction phase has been delayed to balance the financial plan for the 2009-11 biennium budget process.								
US 101/Purdy Creek Bridge – Replace bridge (Mason)	\$6.0 2004	\$13.3 2009	Aug-04	√	May-08	Late	Aug-09	√ Early
Advertisement delayed due to additional design needed to bring plans up to WSDOT Standards when they were returned from the consultant, but construction was completed one month earlier than the scheduled September 2009.								
SR 303/Manette Bridge Bremerton vicinity – Replace bridge (Kitsap)	\$25.5 2002	\$88.7 2009	Sep-96	√	Mar-10	√	Jun-13	

Construction phase has been delayed to balance the financial plan for the 2009-11 biennium budget process. The project cost estimate has increased to accommodate environmental requirements and cost escalation of material above normal inflation.

Data source: WSDOT Capital Program Development & Management.

\* This project was listed with incorrect budget and schedule information in the last *Gray Notebook 35*.

# WSDOT's Capital Project Delivery Programs

## Pre-Existing Funds (PEF) Projects: Milestones, Advertisement terms

### Milestone tracking for programmatic Pre-Existing Funds (PEF) projects

Number of projects with these milestones, 2009-11 biennium to date (December 31, 2009); dollars in millions

Programmatic categories*	Begin engineering		Advertised for bids		Operationally complete		Expenditures	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Pavement preservation	11	16	6	4	64	71	\$197	\$135
Bridges (preservation/replacement)	2	0	2	1	16	14	\$26	\$17
Slope stabilization	2	2	3	5	7	6	\$11	\$13
Safety (roadside, rumble strips, median cross-over, etc.)	5	5	5	7	13	10	\$37	\$17
Environmental retrofit (fish passage improvement, stormwater runoff)	0	0	0	0	5	4	\$7	\$3
Other facilities (rest area, weigh stations, etc.)	1	0	4	2	8	7	\$52	\$19
<b>Totals</b>	<b>21</b>	<b>23</b>	<b>20</b>	<b>19</b>	<b>113</b>	<b>112</b>	<b>\$330</b>	<b>\$204</b>

Data Source: WSDOT Capital Program Development & Management Office.

\* While elements of one or more categories may be included in some of the projects (such as a bridge preservation project that improves safety), every project has been assigned to one primary category for reporting purposes.

### A glossary of PEF advertisement terms

#### Advertisement date

The date that WSDOT schedules to publicly advertise a project for bids from contractors. When a project is advertised, it has a completed set of plans and specifications, along with a construction cost estimate.

A √ mark in the Advertisement record indicates that a project advertised on time within the quarter.

#### Advanced

A project from a future quarter which has been advertised in the current quarter.

#### Early

Project with an ad date originally scheduled for the current quarter but occurred in an earlier quarter.

#### Late

A project that was advertised in the period being reported but which missed the original ad date.

#### Emergent

A new project that addresses unexpected needs such as emergency landslide repair.

*Projects which were not advertised on schedule fall into three categories:*

#### Delayed

A project that has not yet been advertised and which has had the ad date moved out of the quarter being reported to another quarter within the biennium.

#### Deferred

A project not yet advertised and which has had the ad date moved out of the quarter being reported to a future biennium.

#### Deleted

A project that, upon review or due to changing circumstances, is no longer required or has been addressed by another project.

# WSDOT's Capital Project Delivery Programs

## Pre-Existing Funds (PEF) Projects: Advertisement and financial overviews

### 19 PEF projects advertised as of December 31, 2009

The 2009-11 Highway Construction Program includes a commitment to advertise 97 Pre-Existing Funds (PEF) projects in the current biennium. Nineteen projects were advertised through the second quarter ending December 31, 2009.

Of the 14 planned PEF advertisements scheduled for this quarter, six was advertised as scheduled. Three were delayed to later in this biennium, none were deferred to a future biennium, and none were deleted. In addition, one project advanced from a later quarter and five projects delayed from a previous quarter were advertised in the quarter; no emergent projects were advertised.

### Pre-Existing Funds projects: Biennial progress

July 1, 2009 through December 31, 2009; Dollars in millions

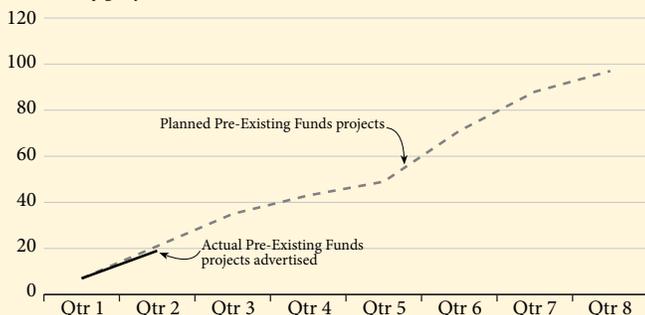
WSDOT total award estimate*:	\$21.3
<b>Actual total award amount*:</b>	<b>\$18.8</b>
<b>Projects advertised (see page 86 for definitions)</b>	
As scheduled	7
Early	3
Late	7
Emergent	2
<b>Total projects advertised through December 31, 2009</b>	<b>19</b>
Projects delayed (delayed within the biennium)	6
Projects deferred (delayed out of the biennium)	0
Projects deleted	1

Data Source: WSDOT Capital Program Development & Management.

\* In cases where WSDOT's estimate and award amounts contain multiple sources, the PEF reported amount is a calculated percentage based on the contract total value. PEF projects may have Nickel and TPA funding not reported in this section.

### Pre-Existing Funds projects construction program

Planned vs. actual number of projects advertised  
2009-2011 biennium, quarter ending December 31, 2009



Source: WSDOT Capital Program Development & Management.

### Paying for the Projects: Financial Information

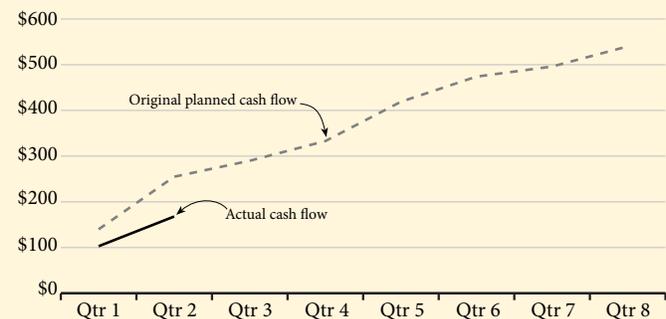
WSDOT submitted an expenditure plan to the Legislature for the second quarter of the biennium totaling approximately \$330 million. As of December 31, 2009, actual expenditures totaled \$204 million, a variance of about \$127 million, or 38%, from the biennium plan. The variance for the Highway Construction Program was divided between the Improvement and Preservation programs.

The Preservation Program planned cash flow was \$255 million, and actual expenditures were \$186 million. This was \$87 million under plan, or 34%.

The Improvement Program planned cash flow was \$75 million, and actual expenditures were \$36 million. This was approximately \$39 million under plan, or 52%.

### Pre-Existing Funds preservation program cash flow

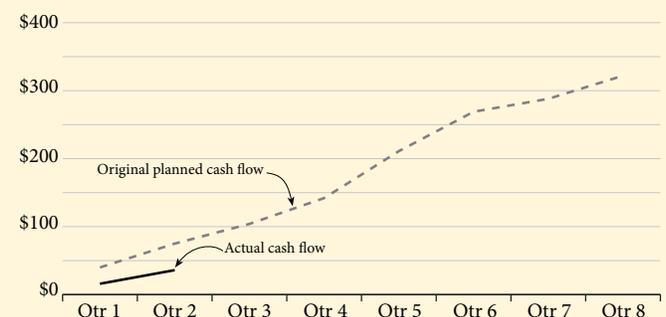
Planned vs. actual expenditures  
2009-2011 biennium, quarter ending December 31, 2009  
Dollars in millions



Source: WSDOT Capital Program Development & Management.

### Pre-Existing Funds improvement program cash flow

Planned vs. actual expenditures  
2009-2011 biennium, quarter ending December 31, 2009  
Dollars in millions



Source: WSDOT Capital Program Development & Management.

# WSDOT's Capital Project Delivery Programs

## Pre-Existing Funds (PEF) Projects: Advertisement record

### Pre-Existing Funds (PEF) projects scheduled for advertisement or advertised this quarter

October 1 – December 31, 2009

Project description	Advertised as scheduled
North Central Region – Guardrail update	Early
US 2/Stevens Pass Summit – Pedestrian safety	√
I-5/Reverse Express Lane to/from SR 522 – Safety	√
I-5/Blaine Exit – Interchange improvements	√
I-5/Thorn Lane to 47th Ave SW – Median barrier replacement	Advanced
I-5/Todd Rd to Kelso weigh station vicinity – Paving Project combined with adjacent Tier 2 ARRA project for efficiency	Late
I-5/Kalama River Rd vicinity to SR 432 – Safety improvements Combined with ARRA project safety work on adjacent segment, and delayed six months to allow for environmental permitting.	√
I-5/Koontz Rd to Chamber Way vicinity – Safety Combined with ARRA project safety work on adjacent segment, and delayed six months to allow for environmental permitting.	Late
US 12/Naches vicinity – Paving	Early
US 12/Naches to PP&L spillway – Paving	Early
SR 14/ 1.5 miles east of Bergen Rd – Rockfall mitigation Advertisement date delayed to allow time for acquisition of right-of-way from the U.S. Forest Service.	Late
SR 14/West of White Salmon – Rockfall stabilization	Late
SR 28/E Wenatchee to Rock Island – Pave Project delayed to allow for additional design time needed to develop the passing lane added to the project	Delayed
I-90/Bellevue Way interchange ramps – Paving Advertisement date was delayed due to an existing heavy construction season with no weekend closures available for this project; project saw increased costs to construct at night.	√
I-90/Sunset interchange modifications – Modify facility to full access interchange Advertisement date was delayed because design changed from wall contraction to fill slope construction in order to limit required permits and manage costs.	Delayed
I-90/Moses Lake – Paving Project advanced as part of the American Recovery and Reinvestment Act.	Early
I-90/Spokane Port of Entry – Weigh station relocation Advertisement date was initially delayed to allow time to obtain a shoreline permit for the development of the new site. An additional nine-month delay resulted from a request from Spokane County to redesign a water flow system one month before the rescheduled ad date.	Late
US 97/Oroville area – Pedestrian improvement	Early
US 97A/Rocky Reach Dam vicinity – Slope stabilization	√
SR 282/Ephrata – Safety Advertisement was delayed because no construction funding was available.	Delayed

Data Source: WSDOT Capital Project Development and Management.

For definitions of PEF advertisement terms, please see page 86.

# Cross Cutting Management Issues

## Construction Cost Trends

### Construction Cost Trends Highlights

WSDOT's Construction Cost Index (CCI) decreased 7.4% in 2009, the first annual price decrease since 1998, but is 72% higher than in 2001.

WSDOT received an average of 5.1 bids on projects let in 2009, up from an average of 4.4 bids in 2008 and 3.5 bids in 2007.

### Components that make up WSDOT's CCI

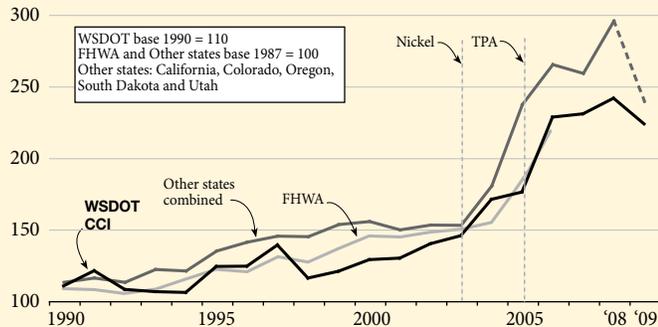
By material and corresponding weight as a percentage

Hot mix asphalt	48.5%
Structural concrete	17.4%
Roadway excavation	10.7%
Crushed surfacing	7.9%
Structural steel	6.9%
Steel reinforcing bar	5.4%
Concrete pavement	3.2%

Data Source: WSDOT Construction Office.

### Construction Cost Indices Washington state, FHWA, and selected western states

1990 - 2009



Data Sources: WSDOT 2009 index is for calendar year 2009. FHWA index discontinued in 2007.

Other states 2009 data is the average of California, Colorado, and Utah data for quarters 1, 2, and 3 of 2009 and Oregon and South Dakota data for quarters 1 and 2 of 2009.

Note: 2003 and 2004 WSDOT CCI data points are adjusted to correct for spiking bid prices on structural steel.

In 2009, WSDOT received some relief from rising construction costs, as economic conditions reduced overall demand for construction materials and services. With less competing work available, more contractors bid on WSDOT jobs. Reduced demand and large inventories of certain products led to better prices for construction materials and activities.

Although prices dropped slightly between 2008 and 2009, it is important to note that this decrease does not significantly relieve the pressure that cost inflation has put on WSDOT's construction program over the past six years. Current prices are still much higher than they were when many of the projects currently being awarded and constructed were budgeted.

WSDOT tracks construction cost information and calculates a Construction Cost Index (CCI) based on low bids for seven work activities that commonly occur on highway construction projects. The bids for these seven activities include the cost of all material, labor, and equipment associated with the activity, as well as the overhead and profit contractors include in their bids. Each of the seven items has a different weight in WSDOT's CCI. The weighted index provides an inflation rate for WSDOT's highway construction program as

a whole, so activities associated with current resurfacing, road construction, or bridge construction are represented in the index at the same level that they have been historically represented in WSDOT's construction program.

### WSDOT's Construction Cost Index decreased 7.4% in 2009, but is up 72% since 2001

WSDOT's CCI decreased in 2009 for the first time since 1998, dropping 7.4%. From 1990 through 2001, the CCI remained fairly steady, increasing an average of 1.5% each year. This low and predictable inflation rate made it easier for WSDOT to accurately estimate the cost of planned projects in the 1990s. From 2002 through 2009, the CCI has increased an average of 7% per year. In total, construction costs as represented by the CCI are 72% higher today than they were at the end of 2001.

The volatility of recent price increases has made it more difficult for WSDOT to deliver its highway construction program. Funds for many of the projects being built today were appropriated to anticipated budgets in 2003 or 2005 when the Nickel and Transportation Partnership Account (TPA) funding packages were approved. The inflation rates used in 2003 and 2005 to estimate the future cost to construct these projects did not accurately account for the actual cost increases experienced. Recent cost increases for construction materials have simply been too volatile to be accurately predicted.

## Construction Cost Trends

The short-term trend of reduced year-over-year prices has had a positive effect on WSDOT's delivery of Recovery Act projects. Construction costs have decreased since these projects were first budgeted and many bids have come in low, allowing WSDOT to construct more projects than originally planned. However, the Recovery Act represents a relatively small number of the projects WSDOT is constructing and projects budgeted earlier have cost more than initially budgeted.



### Price trends for individual materials and activities

Three items heavily influenced the outcome of the CCI in 2009: structural steel, roadway excavation, and steel rebar. Lower prices for structural steel and steel rebar were responsible for most of the drop registered in the CCI, with structural steel prices dropping 48% and rebar prices dropping 38%. This sharp drop in steel prices is a result of demand factors related to a spike in steel prices recorded before the economic downturn. The price of roadway excavation also decreased 24% in 2009, due to a combination of lower fuel prices and an increase in the number of firms seeking earth-moving work.

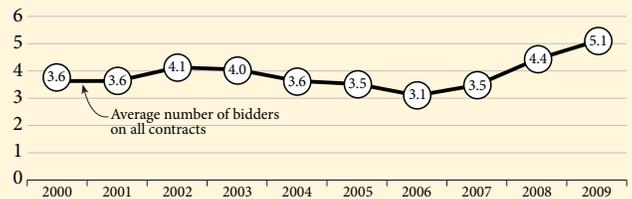
The price of Hot Mix Asphalt (HMA) rose 2%, which kept the CCI from experiencing a larger decrease. The small increase in HMA prices was a relief from recent steep price escalations, as HMA prices have more than doubled since 2001, rising an average of 10% annually. For more information on recent HMA price trends, see the June 30, 2009, *Gray Notebook*, p. 107.

### Average number of bids per project rises to 5.1 in 2009

As recently as 2007, WSDOT received fewer bids for its projects because fewer construction firms were interested in such work. That is no longer the case, as WSDOT received an average of 5.1 bids on projects in 2009, up from 4.4 bids in 2008. In 2006, the average number of bids for WSDOT projects was just 3.1. At that time, WSDOT was competing with large public and

private sector building programs to attract a contractor's interest. Now that there is less work available elsewhere, more contractors are bidding on WSDOT projects.

### Average number of bidders per WSDOT contract, 2000-2009



Data Source: WSDOT Construction Office.

WSDOT actively works to maximize competition for its construction projects by strategically opening bids on construction projects almost every week of the year. Some states open bids once a month, once a quarter, or even just once a year. Preparing a bid for a project is a time-consuming task for a contractor and each contractor's workload limits how many bids they can prepare simultaneously. By bid letting throughout the year, WSDOT avoids overlapping bids for many projects that one contractor may want to bid on, maximizing the number of contractors that have time to submit a proposal.

### New electronic bidding system introduced

WSDOT implemented electronic (internet) bidding in the fourth quarter of 2009. Contractor participation is strong, and growing. WSDOT now receives approximately 20-30% of bids electronically for Headquarters advertised projects. Contractors have indicated that electronic bidding enhances their ability to make last minute refinements to their bid proposals and nearly instant electronic bid submission often eliminates the need for "bid runners" to deliver the physical proposal documents to the bid opening location in Olympia.

### Future construction cost trends

WSDOT expects that the favorable prices and increased competition experienced in the 2009 highway construction program will persist into 2010. While WSDOT looks forward to another year of similar conditions, it is important to note that the above average inflation has been experienced since 2002. This year's decrease in the CCI does not dull the impact inflation has had on WSDOT's highway construction program.

# Cross Cutting Management Issues

## Utilities

### Utilities Highlights

From July 1, 2009 to December 31, 2009, 21 Nickel and TPA funded projects were advertised. Four had moderate risks of potential delay due to required utilities work. None of these projects had high risks of potential delays. WSDOT has worked proactively to mitigate these risks.

Some WSDOT projects present challenges in coordinating construction with existing utilities. Utilities such as water, electricity, sewer, storm drains, telephones, cable, and internet locations often need to be incorporated into project design, and sometimes even relocated. WSDOT's goal is to use active planning to avoid utility-related conflicts and delays.

When existing utilities are in the way of highway construction projects, affected utility companies are given reasonable time to design and relocate facilities. In order to deliver construction projects on-time, risk levels related to utilities are assigned to individual projects to better prioritize WSDOT's coordination between engineers, contractors, and utilities groups.

WSDOT tracks utility risks for all Nickel, TPA and PEF projects. Twenty-one Nickel and TPA projects with utility impacts were advertised between July 1, 2009 and December 31, 2009. Of these projects, 17 were assigned the lowest utilities risk, Risk Level 1, compared to 22 in the previous six months. The remaining four projects were assigned a Risk Level 2. The three risk levels are described in the table below.

### Utilities risk levels for advertised Nickel and TPA projects

Level	Description	Jan-June 2009	July-Dec 2009
1	<b>Low</b> – Utilities have been relocated, and/or are clear of construction.	22	17
2	<b>Moderate</b> – Utility companies are actively pursuing relocation and the department has assurances the utilities will be clear by the date bids are opened.	1	4
3	<b>High</b> – Utilities have not been relocated, and will not be relocated by the bid opening date that has been cited in the contract provisions. The department has assurance that the utility company will be able to meet the date stipulated on the contract.	6	0
<b>Total</b>		<b>29</b>	<b>21</b>

Data Source: WSDOT Utilities Office.

### Background information about the four Level 2 Utilities Risk projects

#### SR 28/ US 2/97 – Intersection Improvements – Box Culvert Installation (Risk Level 2)

This project provides necessary improvements to the SR 28 and US 2/97 intersection to allow for the Douglas County Eastmont extension tie-in as well as increasing the number of lanes on each leg of the intersection. It also includes a box culvert installation and pavement upgrade to Portland cement concrete. The Risk Level 2 resulted from the utility impacts being addressed late in the schedule due to a temporary roundabout that was added late in the design schedule. The relocation of the utilities in conflict is scheduled to be done by January of 2010, well in advance of the March 2010 construction start.

#### SR 26/ W. of Othello Add Passing Lane (Risk Level 2)

This Safety Improvement/Collision Reduction project will construct a passing lane on SR 26 just West of Othello. The completed project will result in a safer and more efficient roadway. The addition of a passing lane will reduce the number of collisions and increase mobility on this section of SR 26. The Risk Level 2 utility conflict is the result of a telecommunication line in conflict with the cut slope for the widening. The schedule for removal of the line is January 2010, well in advance of the March 2010 construction start.

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## Utilities

### ***SR 99 -Alaskan Way Viaduct – Replacement South Holgate St to S King St - Stage 2 (Risk Level 2)***

WSDOT will replace the viaduct's south end, between S. Holgate and S. King streets, with a new side-by-side roadway that has wider lanes, meets current earthquake standards and improves mobility for people and goods in the south of downtown area. The project had several outstanding utility agreements with the City at the time of advertisement. The Utility Agreements have been executed and are in place for the anticipated March 2010 construction start date.

### ***I-5 - SR 11 Interchange and Josh Wilson Road Realignment (Risk Level 2)***

WSDOT will rebuild the northbound I-5 on and off-ramps, and replace the traffic lights with roundabouts at the Josh Wilson Road and Old Highway 99 intersections. These changes will improve safety and relieve congestion at the I-5, Chuckanut interchange in Burlington. There is property disposition that needs to be resolved and Real Estate Services is processing the Quit Claim deed that must be issued to the Samish Water district in exchange for their current easement right. Property disposition should be resolved by February having no effect on the project, which has a March 2010 construction start date.

# Cross-Cutting Management Issues

## Right-of-Way

### Right-of-Way Highlights

75% of right-of-way certifications were completed on-time in the last six months of 2009.

Before a project is advertised for bidding, WSDOT must certify that all rights necessary to construct, operate, and maintain the project have been acquired. WSDOT's business practices regarding acquiring real estate are strictly guided by state and federal regulations. These include: Title 8 and Title 47 RCW, Title 468 WAC, 23 and 49 CFR, and Title 23 USC: the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended). WSDOT's goal is to deliver 100% on-time certification for all projects.

Sixteen projects with a right-of-way phase were scheduled to be certified between July 1 and December 31, 2009. Of the 16 projects, 12 were certified on-time and four were delayed:

- Two certification dates were adjusted due to nesting owls and wetlands,
- One certification date was delayed due to a plan revision,
- One certification date was delayed because property acquisitions with U.S. Fish & Wildlife and the U.S. Army Corps of Engineers had not been completed.

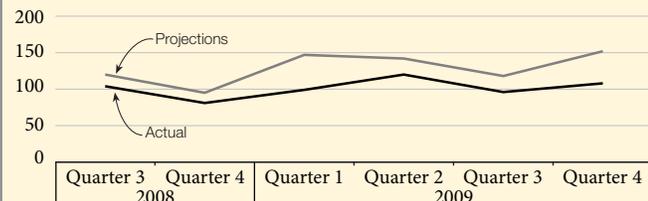
### On-time right-of-way certification results

	Jul-Dec 2008	Jan-Jun 2009	Jul-Dec 2009
Number of projects with a right-of-way phase	24	15	16
Number of projects with a right-of-way certification related delay	0	0	4
Number of projects delayed due to Real Estate Services right-of-way activity management	0	0	0
Percent of projects with a right-of-way phase that had an on-time certification	100%	100%	75%

Data source: WSDOT Real Estate Services.

### Acquisitions for all Nickel, TPA and PEF projects

July 1, 2008 - December 31, 2009, actuals vs. projections



Data Source: WSDOT Real Estate Services.

### Condemnations for all Nickel, TPA and PEF projects

January 1, 2005 - December 31, 2009 actuals vs. 2010 projections



Data Source: WSDOT Real Estate Services.

### Acquisition trends

There were 423 total parcel acquisitions for the calendar year of 2009, compared with 389 parcel acquisitions for the calendar year of 2008. There were 204 parcel acquisitions in the last six months of 2009, compared with 185 in the last six months of 2008.

Though a declining trend was established in 2007 and projected to continue, a major contributor to the increase in acquisitions in 2009 can be attributed to the North Spokane Corridor project in Eastern Region. WSDOT acquired 79 full parcel acquisitions from willing sellers in advance of construction funding, an unusual opportunity. Without these acquisitions, the department would have experienced a 12% decline in acquisitions for 2009.

### Right-of-way condemnations

Right-of-way condemnation involves legal action to acquire property by operation of law. Of the 18 open condemnation cases, four are new cases opened in the last six months of 2009. There have been five Judgment and Decrees issued in the last six months of 2009. There were 20 for the entire year of 2009.

# Workforce Level and Training

This quarter, WSDOT employed 7,229 permanent full-time employees, one fewer employee than the previous quarter ending September 30, 2009. WSDOT employed 49 more permanent employees on December 31, 2009, than one year previously due to non-permanent Ferries Division staff attaining permanent status earlier in 2009. The chart below shows the number of full-time employees since June 30, 2001. The total number of full-time equivalencies (FTEs) will generally exceed the number of permanent full-time employees, as seasonal, permanent, part-time, and non-permanent/on-call workers are all funded from FTE allocations. For information on consultant use, see the September 30, 2009 *Gray Notebook* 35.

## Workforce Level and Training Highlights

WSDOT employed 49 more full-time permanent employees on December 31, 2009, than at the same time in 2008.

## Workforce training compliance improved this quarter

Training compliance for the courses required for all employees continues to increase, with overall compliance better than the quarter ending in September 2009. Courses with a refresher requirement are likely to show high and low variances; additional training sessions are needed to maintain a high percentage of compliance. The graphs on page 98 show the mandatory diversity and policy training compliance over the last six quarters.

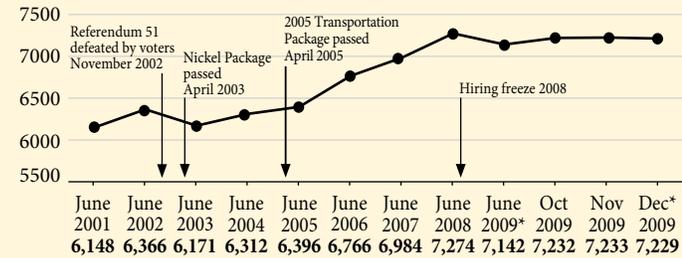
## Mandatory diversity training compliance

The Office of Equal Opportunity increased compliance for all three mandatory diversity courses: diversity, sexual harassment/discrimination, and disability awareness. WSDOT met the agency's 90% compliance goal for both valuing diversity (90%) and disability awareness (91%). Sexual harassment/discrimination training compliance increased from 77% to 84% this quarter.

WSDOT has made a concerted effort to improve sorting capabilities in the database that tracks compliance in required training for sexual harassment/discrimination issues. The improved function can identify and then notify all supervisors of one or more employees

## Number of permanent full-time employees

From June 2001 to December 2009



Data Source: Dept. of Personnel Data Warehouse, HRMS, WSDOT and the ferry system payroll.

\* From June to September 2009 there were between 42 and 63 non employees being coded as employees for settlement purposes. Those non-employees are not included in the graph.

A mandatory information security training course was added in 2009.

WSDOT met the statewide performance goal for three courses in December.

## Required training: All WSDOT workers

Training course	Workers requiring training	Basic training completed to date	Workers needing basic training	Workers needing refresher training	Completed training reporting quarter	Total in compliance	Percent in compliance
Disability awareness	7,774	7,158	616	134	411	7,024	90%
Ethical standards	7,774	7,533	241	1,397	333	6,136	79%
Information security*	7,774	4,506	3,268	0	305	4,506	58%
Security awareness	7,774	6,643	1,131	N/A	83	6,643	85%
Sexual harassment/discrimination	7,774	7,205	569	678	601	6,527	84%
Valuing diversity	7,774	7,195	579	221	429	6,974	90%
Violence that affects the workplace	7,774	6,958	816	N/A	134	6,958	90%

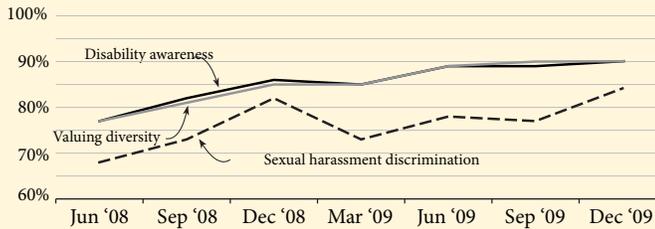
Data Source: WSDOT Office of Human Resources, Staff Development.

\*Information security was added in 2009 and will have an annual refresher requirement.

# Workforce Level and Training

## Mandatory training compliance

### Mandatory diversity training for all WSDOT workers By percentage of employees in compliance



Data Source: WSDOT Human Resources Office, Staff Development.

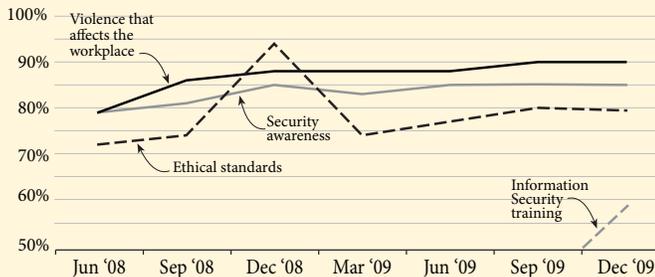
when their three-year refresher training compliance requirement is due. Compliance also improved because WSDOT conducted 22 training sessions during the quarter, concentrating efforts on the regions most in need of training and ensuring greater attendance.

Spurred by recent budget constraints and the need for cost efficiency, WSDOT has changed the way it delivers training statewide. One eight-hour classroom session now delivers three modules of training which previously took 12 hours. The three-in-one class is now mandatory for new employees.

### New mandatory policy training course covers IT

WSDOT recently developed a new policy training course to comply with the requirement prescribed by Information Services Board Policy No. 401-S3 and state law establishing information technology security standards. The information security training is now mandatory for all WSDOT employees with an annual refresher. Compliance is currently 59% and is expected to grow as more employees become aware of the new course requirement.

### Mandatory policy training for all WSDOT workers By percentage of employees in compliance



Data Source: WSDOT Human Resources Office, Staff Development.

Compliance for courses in security awareness and violence that affects the workplace remained constant, at or near the 90% goal. Ethical standards has dropped to 79% due to the number of employees requiring refresher training. However, 97% of WSDOT employees have taken the basic course.

### Training requirements changing for two courses

Refresher training for valuing diversity and disability awareness will now be replaced with quarterly newsletters distributed to all employees. WSDOT continues to require new employees to take all three modules within the first six months of employment. Regional managers will be able to request additional diversity trainings as needed. These diversity training program changes give employees more frequent, updated, diversity information on relevant subjects, while reducing the costs associated with travel and other training expenses.

### Compliance with statutorily required maintenance and safety training decreases

Statutorily required maintenance and safety training compliance for WSDOT employees was 81% this quarter, a 1% decrease from last quarter. The safety training compliance was 81% on December 31, 2009, a 1% decrease from December 31, 2008, while the maintenance training compliance was 81%, also a 1% decrease from the prior quarter. The graph below shows employee safety and maintenance training compliance between June 30, 2008, and December 31, 2009.

WSDOT's goal is to reach 90% compliance for statutorily required maintenance and safety employee training. Compliance is annually highest in the fall when more employees are available for training. Supervisors and trainers balance maintenance workloads to ensure training occurs continually while maintaining roadways safely.

### Maintenance and safety training compliance June 30, 2008 to December 31, 2009



Data Source: WSDOT Office of Human Resources, Staff Development.

## Mandatory safety and maintenance training compliance

WSDOT tracks statutorily required training compliance for its maintenance workers by region. The table to the right documents each region's compliance with all the courses listed as a single measure. For the fourth quarter, two regions, Eastern and Southwest, met the 90% goal for safety and maintenance training compliance. Training compliance increased in one regions, decreased in four regions, and remained steady in two regions during the fourth calendar quarter of 2009.

The table below shows the year-end compliance for WSDOT maintenance workers with each safety and maintenance training course.

### Required training for maintenance employees by WSDOT region

Region	Current quarter percent in compliance	Percent change from last quarter	Last biennium (2007-09) average	Goal met
Northwest	72%	-2%	76%	
North Central	85%	-1%	81%	
Olympic	84%	0%	78%	
Southwest	96%	1%	94%	√
South Central	84%	-4%	84%	
Eastern	90%	-4%	92%	√

Data Source: WSDOT Office of Human Resources, Staff Development.

### Statutorily required training

Quarter ending Dec. 31, 2009

Course title	Total people requiring training	Total people complying	% complying current quarter	Current biennium average
Aerial Lift	177	153	86%	91%
Bucket Truck	343	269	78%	80%
Confined Space Entry	560	431	77%	81%
Drug & Alcohol Certification	1,274	1,178	92%	92%
Drug-free Workplace	333	308	92%	91%
Electrical Safety Awareness	444	371	84%	71%
Excavation, Trenching & Shoring	504	410	81%	82%
Fall Protection	731	649	89%	86%
Forklift	1,087	945	87%	87%
Hazard Communications	1,427	1,282	90%	90%
Lockout/Tag Out	765	652	85%	84%
Personal Protective Equipment	1,402	1,207	86%	86%
Proper Lifting	1,461	1,228	84%	82%
Supervisor Return to Work	203	167	82%	77%
Blood-borne Pathogens <sup>1</sup>	559	335	60%	61%
Fire Extinguisher <sup>1</sup>	1,402	803	57%	69%
Hazardous Materials Awareness <sup>1</sup>	845	649	77%	78%
Hearing Conservation <sup>1</sup>	1,359	1,170	86%	82%
Lead Exposure Control <sup>1</sup>	110	44	40%	34%
Railway Work Certification <sup>1</sup>	3	0	0%	71%
Respirator Protection <sup>1</sup>	182	72	40%	36%
Emissions Certification <sup>2</sup>	75	19	25%	62%
First Aid <sup>3</sup>	1,487	1,272	86%	83%
Flagging & Traffic Control <sup>3</sup>	1,174	1,045	89%	91%
Total	17,078	14,244	83%	81%

Data source: WSDOT Office of Human Resources, Staff Development.

<sup>1</sup> Refresher training required annually. <sup>2</sup> Refresher training required every two years. <sup>3</sup> Refresher training required every three years.

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

The tables on the following pages are a comprehensive listing of all projects that appeared on the original 2003 (Transportation Funding Package, also called Nickel) and 2005 (Transportation Funding Partnership, also called TPA). They are organized to group projects by their progress through construction milestones.

Future WSDOT project status reports may refer to these master lists, but to conserve space in subsequent *Gray Notebook* editions, the list will only be available on line at <http://www.wsdot.wa.gov/accountability/>

For more information about WSDOT's new project status reporting dashboards, please see pages 47-51.

### 2003 Original LEAP (Legislative Evaluation and Accountability Program) list: Summary

At December 31, 2009

	Projects already started			Other projects			Projects starting in the future		
	Completed	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes	Pre-construction starts within 6 months	Construction starts within 6 months
<b>Total highway construction program</b>	95	32	20	12	0	0	18	0	3
<b>Ferries program</b>	1	2	2	1	0	1	0	0	0
<b>Rail program</b>	9	6	0	6	3	6	2	0	0

Data source: WSDOT Capital Program Development & Management Office.

### 2003 Original LEAP list: Projects started or deferred

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
<b>Highway construction program</b>	32	20	12	0	0	18
Statewide guard rail retrofit This 'bucket' funds guard rail retrofit projects across the state.	√		√			
Statewide bridge rail retrofit This 'bucket' funds bridge rail retrofit projects across the state.	√		√			
I-5 Boeing Access Rd to Northgate Corridor EIS	√	√				
SR 9/212th St SE to 176th St SE	√	√				
SR 18/Issaquah/Hobart Rd to Tigergate	√	√				
SR 18/Tigergate to I-90 – Widening	√	√				
Alaskan Way Viaduct – Design and early right-of-way	√	√				
SR 99/Aurora Ave N – Corridor project	√		√			√
I-405/SR 520 to SR 522	√		√			√
SR 520 project design	√	√				
SR 520/W Lake Sammamish Pkwy to SR 202	√		√			
SR 539/Tenmile Rd to international boundary	√		√			
I-5/Port of Tacoma Rd to King Co line	√		√			
I-5/Grand Mound to Maytown, widening	√		√			
SR 16 Nalley Valley viaduct	√		√			
Us 101/Dawley Rd vicinity to Blyn Hwy	√	√				

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

**2003 Original LEAP list: Projects started or deferred, continued**

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
Us 101/Gardiner vicinity – Truck lane	√	√				
US 101/Corriea Rd vicinity to Zaccardo Rd	√	√				
SR 167/SR 509 to I-5 – New freeway	√	√				√
SR 167/I-5 to SR 161 – New freeway	√	√				√
SR 167/I-5 to SR 161 – New freeway	√	√				√
SR 410/214th Ave E to 234th – Widening	√		√			
I-5/NE 134th St interchange (I-5/I-205)	√	√				
I-5/Chehalis River flood control	√	√				√
SR 502/Widening from I-5 to Battle Ground	√	√				
Walla Walla to Wallula planning study	√	√				
US 12/Old Naches Highway interchange	√	√				
SR 22/I-82 to McDonald Rd	√		√			√
North Spokane Corridor – US 2 to Wandermere & US 2 – Lowering	√		√			
Concrete rehabilitation on I-5 in Pierce, King, and Snohomish counties	√		√			
<b>Ferries program</b>	2	2	1	0	1	0
Anacortes multimodal terminal					√	
Catch-up preservation			√			
Mukelteo multimodal terminal	√	√				
Third replacement auto-passenger ferry	√	√				
<b>Rail program</b>	6	0	6	3	6	2
Ballard double track & crossover					√	
Blue Mtn. RR Wallula-Walla Walla upgrade					√	
Cascade & Columbia River - 286k upgrade					√	
Connell feed lot loop track				√		
High speed crossovers – Ketron					√	
Kelso-Martin Bluff – 3rd mainline				√		
Mt. Vernon siding upgrade				√		
Pa jct to Delta jct. – Speed increase	√		√			
Port of Columbia Co. Dayton upgrades					√	
Port of Columbia RR improvements	√		√			√
PR&CC Cheney Coulee 286k upgrade	√		√			√
Pt Defiance (Lakeview) bypass	√		√			
Rural elevator track expansion					√	
Stanwood siding upgrades	√		√			
Vancouver rail project incl 39th Bridge	√		√			

Data source: WSDOT Capital Program Development & Management Office.

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

### 2003 Original LEAP list: Projects starting in the future

At December 31, 2009

	Projects already started			Projects starting in the future	
	Under way	In pre-construction phases	In construction phase	Pre-construction starts within 6 months	Construction starts within 6 months
<b>Highway construction program</b>	<b>32</b>	<b>20</b>	<b>12</b>	<b>0</b>	<b>3</b>
I-5/SR 161 Interchange & SR 18 Interchange	√	√			√
SR 522/Snohomish River Bridge to US 2	√	√			√
SR 161/36th to Jovita – Widening	√	√			√
<b>Ferries program</b>				<b>0</b>	<b>0</b>
<b>Rail program</b>				<b>0</b>	<b>0</b>

Data source: WSDOT Capital Program Development & Management Office

### 2003 Original LEAP list: Completed projects

At December 31, 2009

#### Highway program

Pickle Farm Rd/Gunn Rd	SR 99/S 284th to S 272nd St – HOV	US 2/Dryden – Signal
I-5/NE 175th St to NE 205th St – NB lane	SR 99/S 138th St vicinity to north of S 130th St	I-90/Moses Lake area – Bridge clearance
I-5/52nd Ave west to SR 526 – SB safety	Alaskan Way Viaduct – EIS	US 97A/Entiat Park entrance – Turn lanes
I-5/SR 526 to Marine View Drive	Alaskan Way Viaduct – Right-of-way	SR 3/SR 303 Interchange (Waaga Way) – New ramp
I-5/SR 532 northbound interchange ramps	SR 161/Jovita Blvd to S 360th St	I-5 core HOV – S 48th to Pacific Ave
I-5/2nd St Bridge – Replace bridge	NB ramps to Ellingson Rd	SR 7/SR 507 to SR 512 – Safety
SB ramps at SR 11/Old Fairhaven Parkway	SR 167 – Corridor study	Burley Olalla interchange
I-5/Bakerview Rd to Nooksack River Br 5/828w	SR 167/15th St SW to 15th St NW – HOV	SR 16 HOV improvements between Olympic Drive and Union Ave
I-5/Pierce Co. line to Tukwila Interchange – HOV	SR 202/244th Ave NE intersection	US 101/Blyn vicinity – Passing lanes
SR 9/SR 522 to 228th St SE – Widening	SR 202/jct 292nd Ave SE	SR 106/Skobob creek – Fish passage
SR 9/212th St SE vicinity to SR 96 – Safety	SR 202/Preston – Fall City Rd & SR 203	SR 112/Hoko-Ozette Rd – Safety
SR 9/228th St SE to 212th St SE (SR 524)	SR 203/NE 124th/Novelty Rd vicinity	SR 160/SR 16 to Longlake Rd vicinity
SR 9/SR 528 intersection – Signal	I-405/West Valley Highway to Maple Valley Highway	SR 161/SR 167 eastbound ramp – Safety
SR 9/108th St NE (Lauck Rd)	I-405/SE 8th to I-90 (South Bellevue)	SR 161/204th Street to 176th Street
SR 9/Schloman Rd to 256th St E	SR 509 design & critical right-of-way	SR 304/SR 3 to Bremerton Ferry Terminal
SR 9/252nd St NE vicinity – Rechannelize	SR 516/208th and 209th Ave SE	SR 161/234th Street to 204th Street E
SR 9/268th St intersection	SR 519 intermodal access project	Crossbase highway place holder
SR 9/Nooksack Rd vicinity to Cherry St	SR 520 EIS	SR 4/Svensen's Curve – Realignment
SR 18/Maple Valley to Issaquah/Hobart Rd	SR 520 early right-of-way	I-5/Lexington access
SR 20/Ducken Rd to Rosario Rd	SR 522/I-5 to SR 405 Multi-modal project	I-5/ Rush Rd to 13th St
SR 20/Quiet Cove Rd vicinity to SR 20 spur	Bothell – UW campus access	I-5/Salmon Creek to I-205 – widening
SR 20/Fredonia to I-5 – Widening	SR 527/132nd St SE to 112th St SE	I-5/SR 502 interchange
I-90/Seattle to Mercer Island	SR 543/I-5 to international boundary	I-205/Mill Plain exit (112th connector)
I-90/Eastbound ramps to SR 18 – Signal	SR 900/SE 78th St vicinity to I-90 vicinity	SR 500/NE 112th Ave – Interchange
I-90/EB ramps to SR 202 – Roundabout	US 2/97 Peshastin East – Interchange	US 12/SR 124 to McNary pool – Add lanes
		US 12/Attalia vicinity to US 730 – Add lanes

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

### 2003 Original LEAP list: Completed projects, *continued*

At December 31, 2009

US 12/Attalia vicinity – Add lanes	North Spokane Corridor – Francis Ave to Farwell Rd	<b>Rail program</b> Bellingham GP area upgrades Geiger spur connection High speed crossovers – Centennial High speed crossovers – Tenino High speed crossovers – Titlow Palouse River & Coulee City RR acquisition Purchase Oregon trainset Tacoma rmdrr Morton line repairs phase 2 TS&W Yakama sawmill traffic upgrades  Data source: WSDOT Capital Program Development & Management Office
SR 24/I-82 to Keys Rd	SR 31/Metaline Falls to international border	
I-90/Cle Elum River Br 90/134 n-s	I-90/Pines Rd to Sullivan Rd – Widen	
I-90/Highline Canal to Elk Heights	I-90/Argonne Rd to Pines Rd – Widen	
I-90/Ryegrass Summit to Vantage	I-90/Geiger Rd to US 2 – Median barrier	
SR 124/east junction SR 12 – Reconstruction	I-90/Sullivan to state line – Median barrier	
I-182/US 395 Interchange – Roadside safety	SR 270/Pullman to Idaho state line	
SR 240/I-182 to Richland Y – Add lanes	Noise wall in Seattle	
SR 240/Richland Y to Columbia Center Interchange	<b>Ferries program</b>	
US 395/Kennewick variable message sign	Edmonds multimodal terminal	

### 2005 Original LEAP (Legislative Evaluation and Accountability Program) list: Summary

At December 31, 2009

	Projects already started			Other projects			Projects starting in the future		
	Completed	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes	Pre-construction starts within 6 months	Construction starts within 6 months
<b>Total highway construction program</b>	115	102	55	47	4	8	23	0	12
<b>Ferries program</b>	0	1	1	0	1	2	0	0	0
<b>Rail program</b>	6	5	4	1	3	1	1	0	0

Data source: WSDOT Capital Program Development & Management Office.

### 2005 Original LEAP list: Projects started or deleted/ deferred

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
<b>Highway construction program</b>	102	55	47	4	8	23
US 2/Wenatchee River Bridge	√	√				
US 2/Chiwaukum Creek	√	√				
SR 6/Willapa Rover-Lilly Wheaton	√	√				
SR 6/Rock Creek (6/103)	√	√				
SR 6/Rock Creek (6/102)	√	√				
SR 9/Pilchuck Creek	√	√				
SR 11, SR 525 and SR 900 – Roadside safety improvements	√				√	
SR 20 and SR 530 – Roadside safety improvements	√				√	
US 101, Hoh River (Site #2)	√	√				
SR 101/Middle Nemah River Bridge	√	√				
SR 105/Smith Creek	√	√				

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

2005 Original LEAP list: Projects started or deleted/ deferred, *continued*

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
SR 105/North River	√	√				√
SR 109 Moclips River					√	
SR 142 – Roadside safety improvements	√		√			
SR 195/Spring Flat Creek					√	
SR 203 and SR 522 – Roadside safety improvements	√		√			
SR 241/ Dry Creek Bridge	√		√			√
SR 290/Spokane River				√		
SR 410, White River					√	
SR 532/Gen Mark W Clark Mem Bridge	√		√			
SR 99/Spokane Street Oc Timber	√	√				
I-5/SR 11 Interchange/ Josh Wilson Rd Realignment	√		√			
I-5/5th Ave NE to NE 92nd St – Noise wall	√		√			
I-5 /SR 525 interchange – New ramp Phase 1					√	
I-5 Ship Canal Bridge Noise Mitigation	√		√			
SR 9 / Marsh Rd – Intersection improvements	√		√			
I-90/Seattle to Mercer Island – Two way Transit/HOV	√		√			
I-90/Eastgate to 465th Corridor Study	√	√				
SR 99 / Aurora Ave Improvements – Phase 2	√		√			√
SR 9 Corridor Improvements	√		√			
SR 203/Tolt Hill Rd NE vicinity – Passing shoulder	√		√			√
SR 203/268th to Ne Big Rock – Passing shoulder	√		√			
I-205 / Mill Plain Interchange to Ne 28th Street	√	√				
Sr530/Sauk River Ced Bank Erosion	√	√				
SR 532 – I-5 Corridor Improvements	√		√			
SR 532/Pilchuck Creek Tributary	√	√				
Nooksack	√		√			
SR 542/Everson Goshen Rd vicinity to SR 9 vicinity – Passing shoulder	√	√				
US 2/East Wenatchee North – Access control purchase	√	√				
SR 17/ Intersection illumination	√	√				
SR 17/ Adams county line – Access control purchase	√	√				
SR 20/Winthrop Area – Bike path	√	√				
SR 26/ West of Othello – Passing lane	√		√			
SR 28/Junction US 2/97 to 9th Street – Stage 1	√		√			
SR 28/East Wenatchee – Access Control Purchase				√		
US 97/ Blewett Pass – Passing lane	√	√				
US 97/ South of Chelan Falls – Passing lane	√	√				

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

### 2005 Original LEAP list: Projects started or deleted/ deferred, *continued*

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
SR 150/ Intersection illumination	√		√			
SR 243/ Intersection illumination	√	√				
SR 285/George Sellar Bridge – Additional eastbound lane	√		√			
Sr285/West end of The George Sellar Bridge – Intersection improvement	√	√				
SR 971/ Intersection Illumination	√		√			
SR 3/Belfair Bypass – New alignment					√	
SR 3/Fairmont Ave to Goldsborough Cr. Bridge – Safety					√	
SR 3 / Belfair Area Improvements	√	√				√
I-5/SR 16 and SR 167/Tacoma HOV Improvements	√		√			
US 101/Lynch Road – Interchange	√		√			
SR 161/Clear Lake North Rd to Tanwax Creek – Realign roadway				√		
SR 167/New freeway	√	√				
SR 302/Creviston to Purdy vicinity – Widen roadway	√	√				
SR 302/Establish new corridor	√	√				√
SR 410/214th Ave E to 234th – Widening	√		√			
SR 510/Yelm Loop – New alignment	√		√			√
Columbia River Crossing/ Vancouver Environmental Impact Study	√	√				
Woodland Industrial Area	√	√				
SR 101/Bone River	√	√				
I-5 SR 432 Talley Way Interchanges	√		√			
Sr501/ Ridgefield Interchange	√		√			√
Sr502/Widening From I-5 to Battle Ground – Design and right-of-way	√	√				√
SR 503/SR 500 Intersection improvements	√	√				
SR 503/ Gabriel Rd. Intersection	√		√			√
US 12 Mcdonald Road to Walla Walla – Add lanes	√		√			√
US 12/Tieton River West Crossing	√		√			
US 12/Tieton River East Crossing	√		√			
I-82/Valley Mall Blvd – Interchange improvements	√		√			
I-90 Snoqualmie Pass East – Hyak to Keechelus Dam	√		√			
North Spokane Corridor	√	√				
US 2/North Glen-Elk Chattaroy Road	√		√			
SR 27/Pine Creek Bridge – Bridge Replacement	√		√			
SR 99 – Alaskan Way Viaduct & Seawall replacement project	√		√			
SR 167 – SR 410 to 15th St SW – HOV	√	√				

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

2005 Original LEAP list: Projects started or deleted/ deferred, *continued*

At December 31, 2009

	Projects already started			Other projects		
	Under way	In pre-construction phases	In construction phase	Starting outside this biennium?	Deferred/ Deleted	Scope changes
I-405 / SR 167 to SR 169	√		√			
I-405 / SR 515 Interchange improvements	√		√			
I-405 / 44th St to 112th Ave					√	
I-405 / NE 8th St to SR 520 – Braided crossing	√		√			
I-405 / Ne 124th St to SR 522	√	√				
I-405 / Ne 132nd St Interchange	√	√				
I-405 / 195th St to SR 527	√		√			
SR 509/ I-5 – Freight & Congestion Relief Project (Low)	√	√				
SR 520 – Bridge Replacement & Hov Project	√		√			
Abernathy Bridge				√		
Orting Bridge For Kids	√	√				
Fish Passage Barriers	√		√			
Thurston Noise Wall	√	√				
SR 162 Puyallup River Bridge	√	√				
Park & Ride Placeholder – Gas tax funded	√	√				
Park and Ride Development	√	√				
Chuckanut Park and Ride	√	√				√
Bridge seismic retrofit – High Risk Zone	√		√			
Bridge seismic retrofit – Moderate Risk Zone	√		√			
Eastern Wa Freight Corridor Study					√	
West Olympia Access Study	√	√				
Wenas Corridor/SR 823 Improvements	√		√			
<b>Ferries program</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	
Fauntleroy Ferry Terminal Preservation					√	
Port Townsend Ferry Terminal Improvements					√	
Fauntleroy Ferry Terminal Preservation				√		
Construct Replacement Auto Passenger Ferry 4	√	√				
<b>Rail Program</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
High speed crossovers – Chehalis Jct.				√		
High speed crossovers – Newakum				√		
King Street Station Track Improvements	√	√				
Cascades Trainsets Overhaul	√	√				
Pt Defiance (Lakewood) Bypass Phase1	√	√				
Mukilteo Temporary Sounder Station					√	
Bellingham Waterfront Restoration Project	√	√				
Wheeler to Soap Lake Rail Line Engineering	√		√			
Chehalis Jct to Blakesly Jct Via Centralia PS&P/TRMW				√		√

Data source: WSDOT Capital Program Development & Management Office.

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

### 2005 Original LEAP list: Projects starting in the future

At December 31, 2009

	Projects already started			Projects starting in the future	
	Under way	In pre-construction phases	In construction phase	Pre-construction starts within 6 months	Construction starts within 6 months
<b>Highway construction program</b>	<b>102</b>	<b>55</b>	<b>47</b>	<b>0</b>	<b>12</b>
SR 169, SR 410, SR 525, SR 900 and SR 520 – Roadside safety improvements	√	√			√
<b>Ferries program</b>				<b>0</b>	<b>0</b>
<b>Rail program</b>				<b>0</b>	<b>0</b>

Data source: WSDOT Capital Program Development & Management Office.

### 2005 Original LEAP list: 115 Completed projects

At December 31, 2009

State highways in Adams and Franklin counties – Roadside safety improvements	SR 7 Lewis County – Roadside safety improvements	SR 410 / Traffic Ave to 166th Ave E- Median cross-over protection
State highways in East Clallam, Jefferson, Kitsap and Mason counties – Roadside safety improvements	SR 9, SR 11 and SR 20 – Roadside safety improvements	SR 410 and SR 164 – Roadside safety improvements
State highways in East Yakima county – Roadside safety improvements	US 12 Waitsburg to Asotin – Roadside safety improvements	SR 432 – Roadside safety improvements
State highways in Grays Harbor, East Jefferson and Clallam counties – Roadside safety improvements	SR 14 Benton County – Roadside safety improvements	SR 515/Se 182nd Street to Se 176th Street vicinity
State highways in Lincoln county – Roadside safety improvements	SR 20 & SR 525 – Roadside safety improvements	SR 530 Sauk River (Site #2)
State highways in North Stevens and Ferry counties – Roadside safety improvements	SR 26 – Roadside safety improvements	SR 542 and SR 547 – Roadside safety improvements
State highways in Pierce and Thurston counties – Roadside safety improvements	I-90/SR 17 to Grant/Adams county line – Median cross-over protection	US 2/Fern Bluff Road vicinity to Sultan Startup Raod vicinity
State highways in Spokane, Stevens and Pend Oreille counties – Roadside safety improvements	I-90/Silica Road to East of Adams Road – Median cross-over protection	US 2/10th St inter-section vicinity
State highways in West Yakima county – Roadside safety improvements	SR 92, SR 520, SR 530 and SR 534 – Roadside safety improvements	I-5/South Seattle – Northbound Viaduct
State highways in Whitman and South Spokane counties – Roadside safety improvements	US 97 Kittitas, Chelan and Okanogan Counties – Roadside safety improvements	I-5/Boston to Shelby, southbound I-5, westside
US 2 & SR 92 – Roadside safety improvements	US 97 Klickitat County – Roadside safety improvements	I-5/Fischer Creek vicinity
US 2 – Roadside safety improvements	SR 99 /SR 599 to Holden Street – Median cross-over protection	I-5/300th St NW vicinity to Anderson Rd vicinity
SR 4 and SR 401 – Roadside safety improvements	US 101/Mt Walker Northbound & southbound Passing/Truck Lane	I-5/SR 11 vicinity to weigh station vicinity
I-5 /SR 11 to 36th Street – Median cross-over protection	SR 112, Hoko/Pysht Rivers	I-5/Southbound Viaduct, South Seattle vicinity - Special bridge repair
I-5 /Main Street to SR 548 – Median cross-over protection	SR 112 – Roadside safety improvements	I-5/Chuckanut Creek vicinity
	SR 16 /NW of Tacoma Narrows to SE of Burley/Olalla – Median cross-over protection	I-5/Padden Creek vicinity
	SR 167/SR 410 to Pierce/King county line – Median cross-over protection	I-5/36th St vicinity to SR 542 vicinity
	SR 169/Se 228th Street vicinity – Safety	I-5/Squalicum Creek vicinity
	SR 410 Rattlesnake Creek	I-5/Dakota Creek vicinity
		I-5 / 41st St interchange improvements
		I-5 / 172st St (SR 531 Smokey Point) Interchange Improvements
		I-5 / 116th Street Interchange

# WSDOT's Capital Project Delivery Programs

## Project Status for All Projects on the Original 2003 and 2005 LEAP (Legislative Evaluation and Accountability Program) Lists

### 2005 Original LEAP list: 115 Completed projects, *continued*

At December 31, 2009

SR 20/ Sharpes Corner vicinity – Interchange	US 12/Vicinity Montesano to Elma – Median Cross Over	I-90/Harvard Road Pedestrian Overcrossing
SR 20/Thompson Rd	US 101/SR 3 On-Ramp to US 101 Northbound – New Ramp	SR 902 Medical Lk Interchange
SR 99/Duwamish River/First Ave S. Bridge – New Southbound Bridge	US 101/W Fork Hoquiam River Bridge – Replacement	I-5 At 272nd Interchange Reconstruction
SR 99 N of Lincoln Way Sidewalks	US 101/W Fork Hoquiam River Bridge – Replacement	SR 167 – Hot Lane Pilot Project
SR 169/ SE 416th – Channelize Intersection	SR 101 / Mp 341 to vicinity Lilliwaup	I-405 / I-5 to SR 181
SR 169/140th Way Se	SR 104/Hood Canal Bridge East Half	SR 167 / I-405 to Se 180th St
SR 202/Sahalee to Duthie Corridor Study	SR 112/Neah Bay to Seiku – Roadside Safety Improvements	I-405 / 112th Ave to I-90
SR 509/518 – Interchange	SR 307 / SR 104 Safety Corridor Study	I-405 / Ne 10th St Overcrossing
SR 522/I-5 to I-405 Multi-Modal Project	SR 704/Cross Base Highway – New Alignment	SR 518/Seatac Airport to I-5/I-405 Interchange
SR 522/UWBCC Campus Access	SR 6/So. Fork Chehalis River Bridge- Replacement	SR 169 @ 516 (Four Corners
SR 522/North Creek vicinity to Bear Creek vicinity	SR 14/Lieser Rd Interchange – Ramp Signalization	US 12, Naches River
SR 531/Lakewood Schools – Sidewalks	I-205/Mill Plain southbound Off Ramp Improvement	SR 18 /Se 304th to SR 516 – Median cross-over protection
SR 542 Woburn to Mcleod – Widening to four lanes	SR 500/I-205 Interchange Improvements	I-90 Potato Hill Bridge Bicycle and Pedstrian Bridge
SR 542/Boulder Cr. Br. – Replace bridge	SR 502/10th Ave. to 72nd Ave. – Safety	SR 17 Widening
US 2/Wenatchee – Pedestrian Trail Connection	US 12/Yakima – 40th. Avenue Interchange Improvements	SR 534 Access Point Decision Report
US 2/South of Orondo – Passing lane	SR 24/SR 241 to Cold Creek Rd – Added Lanes	Rail program completed projects
SR 17/ North of Moses Lake – Passing lane	SR 240/ 11 Miles South of SR 24 to Snively Rd	Swift Customs Facility/Blain & White Rock Siding
SR 17/Pioneer Way to Stratford Road – Widen to Four Lane	US 395/Columbia Drive to SR 240 Interchange	Stanwood Commuter Rail Station
SR 26/ Intersection Illumination	SR 823 Goodlander to Harrison Road Sidewalk Completion	Snohomish Riverfront Redevelopment (Rail)
US 97/Brewster – Pedestrian Lighting	US 2/Colbert Road Intersection Improvements	Cosmopolis Bypass Port of Grays Harbor
SR 3/Jct US 101 to Mill Creek – Widen Roadway		Port of Pasco Intermodal Facility Improvements
SR 3/Imperial Way to Sunnyslope – Safety		Geiger Spur Connection
SR 3/SR 106 South Belfair Signal – Safety		SR 9 / Marsh Rd – Intersection improvements
US 12/Clemons Rd vic. – Intersection Improvements		

Data source: WSDOT Capital Program Development & Management Office

# Highlights of Program Activities

## For the quarter ending December 31, 2009

### Project starts, updates or completions

#### Project starts

##### *I-5 & SR 501 Ridgefield (Clark)*

Drilling shafts for the foundations of supporting piers is the first step in the process of building a bridge from the ground up. In December, crews started drilling shafts deep into the middle of I-5 near Ridgefield that will one day support a new SR 501 bridge; when those shafts are finished, crews drill additional shafts to support the bridge abutments on each side of the interstate.

Like the SR 502 interchange bridge a few miles to the south, the new SR 501 bridge will be built with prestressed, precast concrete girders. Manufactured at a concrete yard in Tacoma, they are ready to install as soon as they arrive at the construction site. Prefab girders provide a better quality product, speeding up the process by minimizing the work crews have to do over I-5, and reducing delays and distractions to drivers. After all the girders are set, crews will form the bridge deck, install rebar reinforcement mats, and pour concrete to finish the bridge. The wider, safer rebuilt interchange is expected to be complete in late 2011 or early 2012.



Crews are drilling in the I-5 median where the support column for the new SR 501 bridge will go.

##### *I-405 NE 195th to SR 527 - Northbound Auxiliary Lane, Bothell (King)*

Work began in October on an auxiliary lane for northbound I-405 in Bothell from NE 195th Street to SR 527, one of the

area's worst bottlenecks. The \$19.3 million project – funded by the 2009 American Recovery and Reinvestment Act (Recovery Act) – addresses improved access to the Canyon Park park-and-ride in Bothell as well as chronic afternoon congestion from Bellevue to Bothell as drivers leave and enter the University of Washington Bothell campus and the business parks at NE 195th Street. This new lane could increase speeds by 25 to 30 mph during the afternoon peak-travel period. Most of the work will be done during the day and behind a concrete barrier. The new lane is scheduled for completion by June 2010.

##### *Centerline rumble strips – Eastern Washington*

Contractor crews working for WSDOT began construction on a safety project in eastern Washington aimed at reducing crossover collisions. The project will grind centerline rumble strips on total of 86 miles of state highways in Spokane, Stevens, and Whitman counties. Routes affected include US 195 from just north of Colfax to Rosalia, on US 395 from Loon Lake to Colville in Stevens County, and the full length of SR 902 (except inside the City of Medical Lake). The addition of Recovery Act funding allowed WSDOT to add an additional 18 miles to the project on US 195.



Crews are using this machine on US 195 near Colfax to cut rumble strips into the highway centerline. About 3 to 4 miles can be completed per day.

##### *I-405 – NE 8th St to SR 520 Braided Ramps – Interchange improvements (King)*

On December 11, crews broke ground on the Bellevue Braids, named for the interlacing roadway strands that will resemble braids from the air. This \$107.5 million project will relieve severe congestion between Bellevue and Redmond, building

# Highlights of Program Activities

## For the quarter ending December 31, 2009

new multi-level “braided” ramps to separate vehicles entering and exiting northbound I-405 between NE 8th Street and SR 520 in Bellevue, and adding a bypass lane for I-405 traffic headed eastbound to SR 520. A new ramp from the NE 10th Street overpass will give drivers direct access to SR 520 from downtown Bellevue. The project received \$30 million in Recovery Act funds to advance the schedule.

When complete in 2012, project improvements should:

- Reduce back-ups on the highest volume ramp on the I-405 corridor from northbound I-405 to eastbound SR 520;
- Improve traffic flow on eastbound SR 520 near the 124th Avenue NE ramp, leading in to the Northup business district in Bellevue;
- Reduce congestion on NE 8th Street, improving local access, and traffic flow in downtown Bellevue; and
- Enhance local pedestrian and bicycle access with a new, longer, wider NE 12th Street bridge.

### Project updates

#### **SR 520/W Lake Sammamish Parkway to SR 202 (King)**

Contractor crews rebuilt the upper half of the eastbound SR 520 off-ramp to West Lake Sammamish Parkway, removing a large curve. The weekend-long ramp work is a milestone in this two-year project because it marks the point at which work begins to shift to the west end of the 1.2-mile project over sensitive waterways. WSDOT is rebuilding the ramps at SR 520/West Lake Sammamish Parkway to improve safety and traffic flow. This work is part of an \$89 million project to add a carpool lane and merge lane in each direction of SR 520 between SR 202 and West Lake Sammamish Parkway.

#### **SR 410 Nile Valley Landslide (Yakima)**

In late November, WSDOT crews shifted traffic onto a new SR 410 detour road, and Yakima County engineers diverted the Naches River into a new river channel around the Nile Valley landslide that occurred on October 11, 2009. This work was part of the recovery and restoration of the SR 410 transportation corridor and the Naches River. The new 4,000-foot-long SR 410 detour moves the roadway away from the river channel and landslide, following the western edge of the Nile Valley. Yakima County diverted the river into a new channel away from the base of the landslide on November 16, to minimize erosion at the toe of the slide and to give winter high waters a safer outlet. The U.S. Fish and Wildlife Service (USFWS) coordinated a stranded fish removal effort in collaboration with fish biologists from nine other agencies and groups. The fish

removal teams used several techniques to safely catch fish stranded in the old river channel and release them back into unobstructed waters.



*The new, winter-durable, detour through the Nile Valley.*

#### **SR 539/Tenmile Road to SR 546 - Widening (Whatcom)**

WSDOT opened another new roundabout on the Guide Meridian (SR 539) between Bellingham and Lynden. Crews opened the roundabout at the intersection of Wiser Lake Road on October 21, helping to improve safety. Crews have also reopened access to and from West Wiser Lake Road at the intersection. Access had been closed since early September. This is the third in a series of four roundabouts that are part of a larger \$106.7 million project that will transform Guide Meridian into a safer and less congested four-lane divided highway from Ten Mile Road to Lynden.

### Project completions

#### **SR 16/Burley-Olalla Interchange - Build Interchange (Kitsap)**

WSDOT and contractor Ceccanti, Inc. open the new SR 16 interchange at Burley Olalla Road on October 7. The \$24 million project eliminated the last at-grade intersection on SR 16 and dramatically improves access to and from the highway. Crews completed the interchange more than nine months ahead of schedule and \$1.2 million under budget. The new interchange, which adds new bridges to carry traffic over Burley Olalla Road, accommodates future SR 16 expansion. Approximately 42,000 drivers use SR 16 through Burley Olalla each day. The project

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## For the quarter ending December 31, 2009

also enhances the environment by rechanneling two streams and installing wider culverts for improved fish passage.

### ***I-90/Urban Ramp Project - Safety Improvements (Spokane)***

Work on the I-90 Spokane-area rut repair and ramp resurfacing project was complete in early November. Project work included smoothing the concrete by grinding from Division Street to the Hamilton Interchange. From Hamilton to Custer Street (near Havana) the concrete was resurfaced with an asphalt overlay. In addition, a majority of the on and off ramps between the Geiger Interchange and the Sullivan Road were resurfaced, a number of the freeway signs were replaced, and some sections of guardrail were upgraded. As part of this project, some short sections of adjacent city streets were also paved.

### ***I-205/Mill Plain Exit (112th Connector) - Build Ramp (Clark)***

After nearly 18 months of construction, WSDOT delivered a direct connection between northbound I-205 and NE 112th Avenue. The connector was opened following a ribbon cutting celebration on October 12. A \$26 million partnership project with the City of Vancouver, the new 112th Connector will relieve congestion and improve safety on the I-205 ramp and Mill Plain Boulevard by allowing drivers exiting I-205 to bypass the busy intersection at Mill Plain and connect directly to NE 112th Avenue. This project is part of strategic improvements to the I-205 freeway ramp network that have been in the planning stages for many years.

## **Ferries**

### **WSDOT Ferries Division receives \$2.3 million federal grant to improve vessel engine efficiency and air quality**

Washington State Ferries (WSF) received a \$2.3 million grant after participating in a national competition for the Federal Highway Administration's Ferry Boat Discretionary funding program. This grant, plus existing funding, will be used to upgrade diesel engines throughout the fleet to burn less lubrication oil and produce fewer harmful emissions. WSF also recently received a \$2.1 million federal grant as part of the Puget Sound Regional Council Surface Transportation Program/Congestion Mitigation Air Quality 2009 regional competition.

Since 2003 WSF has been taking steps to reduce fleet diesel emissions while improving fuel conservation. The ferry system is one of the largest users of diesel fuel in the Puget Sound region, at about 17 million gallons annually. The diesel engine retrofit project will help improve efficiency, leading to improved air quality.

### **First new 64-car ferry named *Chetzemoka***

The Washington State Transportation Commission (WSTC) named the first new 64-car ferry *Chetzemoka*, after the S'Klallam Chief Chetzemoka, at their October 20 meeting. Chief Chetzemoka greeted and befriended the first non-natives to settle in Port Townsend in the 1850s. His great-great-grandson, Les Prince, attended the WSTC meeting in support of the proposal. The Port Townsend community suggested the name for this ferry which will serve the Port Townsend/Key-stone route beginning in 2010.

## **Rail**

### **WSDOT completes Stanwood Station project bringing passenger rail service back to community**

Passenger rail service returned to the community of Stanwood/Camano Island for the first time in 38 years, thanks to a new rail station completed by the WSDOT and Amtrak. This new station allows Amtrak *Cascades* train service to make two morning and two evening stops daily in Stanwood.

Not only does the new stop give the community of Stanwood/Camano Island access to Amtrak *Cascades* intercity passenger rail service, which means more travel options to Portland, Seattle, and Vancouver, BC, but it provides Olympics-bound travelers another option to board. The \$5 million project in downtown Stanwood was funded by the state of Washington.

## **Traveler information and safety**

### **New low-light cameras added on I-90 Snoqualmie Pass**

WSDOT and Signal Electric Crews, Inc., of Kent finished installing eight low-light traffic cameras on I-90 west of Snoqualmie Summit (milepost 46.8) to Cle Elum (milepost 84.6). The new traffic cameras are equipped with infrared illuminators to provide around-the-clock views of highway conditions. The public can view these cameras from the mountain pass condition web page or WSDOT's statewide traveler information page. "Not only will WSDOT crews have a better idea of conditions on the roadway at night, drivers can also plan their evening trips based on the travel and weather conditions they see from the cameras and other information on our web site," said Rick Gifford, WSDOT Traffic Engineer.

### **US 97 Oroville border crossing traffic cameras come on line**

The newest additions to the traffic camera images available on WSDOT website are located at the US-Canada border crossing near Oroville in Okanogan County. Demand for US 97 border-

# Highlights of Program Activities

## For the quarter ending December 31, 2009

crossing cameras has grown as both freight and tourism traffic has increased in the Lake Osoyoos-Oroville corridor, but the traffic volumes anticipated for the 2010 Olympics in February prioritized the project for funding now. Two electronic message signs were installed about five miles south of the border on US 97, both north and south of Oroville. The traffic monitoring system can track the time a vehicle takes to get from one measured point to the next, automatically displaying that time on the signs in Oroville. There are four traffic cameras: two at the border crossing, and two more a mile south of the border. The \$250,000 camera, sensor, and sign installation was funded by a federal mobility and safety grant.



State, local and transit officials celebrated the expansion of the I-5 Martin Way Park & Ride lot in Lacey.

### Public transportation

#### Grand opening ceremony held at enhanced Park & Ride lot in Lacey

State and local officials joined transit representatives to celebrate the expansion of the most-used park and ride lot in Thurston County. On September 30, representatives of WSDOT, Intercity Transit, and the City of Lacey held a ribbon-cutting ceremony at the Martin Way Park and Ride project. The facility, located on Martin Way next to I-5 at exit 109 in Lacey, received a much-needed facelift: the number of parking stalls more than doubled to 318 spaces for bus, carpool, and vanpool users. Additional improvements include a new transit island with bus shelters and information kiosk, sidewalks and pedestrian access, lighting, security cameras, and environmentally sustainable landscaping. The total project cost is \$2.79 million, which includes the value of the state DOT property (\$906,000)

used for expansion. The construction was funded through a state Regional Mobility Grant of \$1.259 million and a local match of \$630,000 from Intercity Transit. The lot is served by both Intercity Transit and Pierce Transit commuter express service, connecting Olympia and Lacey with destinations in Lakewood, downtown Tacoma, Tacoma Mall and the Tacoma Dome Station.

### Aviation

#### WSDOT Aviation moves to Arlington Airport

After almost seven years at the Smokey Point Gateway Center, WSDOT's Aviation division moved its offices to the Arlington Airport, where it will share office space with the City of Arlington. The new office will be closer to Aviation's customer base, and have better access to the state-owned aircraft and flight line. The new office opened for business on December 17. WSDOT Aviation's new address is: WSDOT Aviation, 18204 59th Drive NE, Suite B, Arlington, WA 98223.

### Announcements, awards, and events

#### Cayuse and Chinook passes closed for the season

WSDOT closed Chinook and Cayuse passes for the season on Sunday, November 8, after reviewing a snowy forecast and assessing the avalanche risk. The SR 410 Chinook Pass closure points are at Morse Creek (five miles east of the summit) and at Crystal Mountain Boulevard (eight miles northwest of the summit). Access to the Crystal Mountain Ski Resort from SR 410 remains open. WSDOT and Mount Rainier National Park staff also agreed to close SR 123 (Cayuse Pass) for the season. SR 123 is closed within Mount Rainier National Park from the 4,675-foot Cayuse Pass summit at the junction of SR 410 and SR 123 to Steven Canyon Road.

#### SR 504 closed for winter season at Hummocks Trail

WSDOT closed SR 504 (Spirit Lake Highway) on November 24, from Hummocks Trail east to the Loowit viewpoint (mile posts 45 to 51). The closure will remain in place for the rest of the winter season. Coldwater Lake will be accessible as weather conditions permit.

WSDOT closes this portion of SR 504 every winter due to hazardous snow and ice conditions and avalanche risk. This year's closure came about two weeks earlier than in 2008. SR 504 will be reopened in the spring after it is determined that no more significant snowfall will occur.

# Gray Notebook Subject Index

Calendar year	Edition number / date (WA State Fiscal Year & Quarter)			
2001	1 / Mar 31, 2001 (FY01 Q3)	2 / June 30, 2001 (FY01 Q4)	3 / Sept 30, 2001 (FY02 Q1)	4 / Dec 31, 2001 (FY02 Q2)
2002	5 / Mar 31, 2002 (FY02 Q3)	6 / June 30, 2002 (FY02 Q4)	7 / Sept 30, 2002 (FY03 Q1)	8 / Dec 31, 2002 (FY03 Q2)
2003	9 / Mar 31, 2003 (FY03 Q3)	10 / June 30, 2003 (FY03 Q4)	11 / Sept 30, 2003 (FY04 Q1)	12 / Dec 31, 2003 (FY04 Q2)
2004	13 / Mar 31, 2004 (FY04 Q3)	14 / June 30, 2004 (FY04 Q4)	15 / Sept 30, 2004 (FY05 Q1)	16 / Dec 31, 2004 (FY05 Q2)
2005	17 / Mar 31, 2005 (FY05 Q3)	18 / June 30, 2005 (FY05 Q4)	19 / Sept 30, 2005 (FY06 Q1)	20 / Dec 31, 2005 (FY06 Q2)
2006	21 / Mar 31, 2006 (FY06 Q3)	22 / June 30, 2006 (FY06 Q4)	23 / Sept 30, 2006 (FY07 Q1)	24 / Dec 31, 2006 (FY07 Q2)
2007	25 / Mar 31, 2007 (FY07 Q3)	26 / June 30, 2007 (FY07 Q4)	27 / Sept 30, 2007 (FY08 Q1)	28 / Dec 31, 2007 (FY08 Q2)
2008	29 / Mar 31, 2008 (FY08 Q3)	30 / June 30, 2008 (FY08 Q4)	31 / Sept 30, 2008 (FY09 Q1)	32 / Dec 31, 2008 (FY09 Q2)
2009	33 / Mar 31, 2009 (FY09 Q3)	34 / June 30, 2009 (FY09 Q4)	35 / Sept 30, 2009 (FY10 Q1)	36 / Dec 31, 2009 (FY10 Q2)

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<b>Topic</b>	<b>Edition</b>
<b>Aviation</b>	
Air Cargo.....	25, 29, 33
Air Search and Rescue .....	6, 13, 17, 26, 29, 33
Airport Aid Grant Program: Amount Awarded .....	6, 13, 17, 21, 25, 29, 33,
Airport Land Use Compatibility and Technical Assistance.....	21,25, 29
Airport Pavement Conditions .....	17, 21, 25, 29, 33
Airports in Washington.....	6, 13, 17
Aviation System Planning.....	17
Fuel: Taxable Gallons.....	6
Project Delivery.....	21, 25, 29, 33
Registrations of Pilots, Mechanics or Aircraft.....	6, 10, 13, 17, 21, 25, 29, 33
Registration Revenue.....	10, 13, 17
Training of Pilots and Mechanics.....	6
<b>Benchmarks (RCW 47.01.012)</b>	
Administrative Efficiency .....	9, 14, 18, 22
Bridge Condition Goal .....	14, 18, 22
Non-Auto Share Commute Trips Goal .....	14, 18, 22
Pavement Goal .....	14, 18, 22
Transit Efficiency.....	9, 14, 18, 22
Safety Goal .....	14, 18, 22
Vehicle Miles Traveled (VMT) per Capita .....	9, 14, 18, 22
<b>Bridge Conditions on State Highways</b>	
Age of WSDOT Bridges .....	4
Bridge Ratings (FHWA): Structurally Deficient and Functionally Obsolete .....	4, 26, 30, 34
Bridge Condition Ratings and Safety .....	26, 30, 34
Bridge Condition Ratings: State Comparison .....	8, 30
Bridge Replacements .....	19, 23, 26, 30, 34
Bridge Structural Condition Ratings.....	11, 15, 19, 22, 23, 26, 30, 34
Deck Condition Rating.....	26
Deck Protection Program: Overview.....	4, 8, 11, 15, 23, 26, 30, 34
Deck Protection Projects: Planned vs. Actual Projects .....	4, 5, 8, 11, 15, 23, 26, 30, 34
Hood Canal Bridge Update.....	11-35
Inspection Program .....	4, 11, 15, 19, 23, 26
Inventory of WSDOT Bridges .....	4, 5, 8, 11, 15, 19, 23, 26, 30, 34
Movable Bridge Repair .....	19, 26, 30
Preservation Program Results .....	11, 15, 19
Rehabilitation and Replacement Project Schedule .....	4, 11, 15, 19, 23, 26, 30, 34
Repairs .....	19, 23, 26, 30, 34
Risk Reduction .....	19, 23, 26, 30, 34
Scour Mitigation.....	4, 11, 15, 19, 23, 26, 30, 34

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at  
[www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Seismic Retrofit Program</b>	
1990-2020 Status .....	4, 8, 22, 23, 30
Planned vs. Actual Projects.....	4, 5, 8, 11, 15, 23, 26, 30, 34
Risk Reduction.....	19, 23, 26, 30, 34
Top 10 Priority Bridges.....	4, 8
Transportation Partnership Account Bridges .....	26, 34
Steel Bridge Painting .....	4, 5, 8, 11, 15, 26, 30, 34
Tacoma Narrows Bridge Update.....	8-28
<b>Commute Options</b>	
City Case Studies .....	19, 35*
Commute Mode Share Trends .....	4, 6, 7, 13
Commute Option Strategies .....	15, 19, 33
<b>Commute Trip Reduction</b>	
Award for the Commute Trip Reduction Program.....	6, 11
Commute Trip Reduction Efficiency Act .....	27
Commuting Trends at CTR Work Sites and Work Sites in General.....	4, 19, 22, 23, 27
CTR Task Force Report: Biennial Results.....	4, 13
Effectiveness of CTR Program (Biennial Results).....	4
Growth Transportation & Efficiency Centers (GTECs).....	27, 31, 33, 35*
Drive Alone .....	6, 7, 20, 23, 27, 33, 35*
Employer Participation, Investment, and Benefits .....	2, 35*
Gasoline Consumption and Prices.....	7, 35
Grant Programs .....	20, 23, 26
<b>Park and Ride Lots</b>	
Eastgate Park and Ride Expansion .....	9
Lot Security.....	5
Occupancy Rates: Central Puget Sound.....	4, 14, 23
Occupancy Rates: King County .....	3, 5-14, 23, 27
Puget Sound System .....	8
Transit .....	33, 35*
<b>Vanpools</b>	
Number of Vanpools in Washington State.....	27, 33
Vanpool Investments .....	15, 23, 27, 33
Vanpool Operation in the Puget Sound Region.....	2-15, 23, 27, 33
Vanpooling Share of Daily Puget Sound Area VMT .....	2, 15
Van Share Trends.....	8, 9, 11, 12, 15, 33
<b>Congestion on State Highways</b>	
Accidents on Interstate 405: 2001 and 2002 .....	9
Automated License Plate Recognition Technology.....	23, 31
Benchmark Policy Goals for Congestion: Analysis.....	5
Case Studies: Before and After Results.....	15, 19, 23, 27, 31, 35*
<b>Comparisons of Conditions</b>	
2002-2003 .....	15
2003-2005 .....	23
2004-2006 .....	27
2005-2007 .....	31
2006-2008.....	35*
Six Month Reports .....	31, 33, 34, 36
Congestion Measurement Principles .....	5, 6, 19, 23, 27, 31, 35
Congestion Monitoring .....	19, 23, 27, 31, 33, 35*, 36
Construction Management .....	35*
Cost of Delay .....	15, 23, 27, 31, 35*
Cross-Border (US/Canada) Traffic Volumes.....	35
Distribution of Traffic Between Freeways and Arterials .....	9, 35*
Earlier Congestion Measurement Efforts: .....	9

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Congestion on State Highways</b>	
Employment in the Puget Sound Region .....	9, 31, 33, 35*, 36
Highway Improvements Have Reduced Congestion .....	9, 3, 35*, 36
<b>HOV Lane Performance</b>	
Person Throughput .....	19, 23, 27, 31, 35*
Lane Miles Added to the System.....	35*
Travel Time Performance by Corridor.....	35*
Induction Loop Detectors .....	5
Intelligent Transportation Systems in Washington State.....	5, 22, 31, 35*
Lost Throughput Efficiency .....	19, 23, 27, 31, 35*
<b>Measuring Delay</b>	
By Time of Day .....	2, 5
By Route .....	19, 23, 27, 31, 35*
Distribution Statewide (in 3-D).....	23, 27, 31, 35*
Peak Travel Times by Route.....	15, 19, 23, 27, 31, 33, 35*, 36
Percentage of Weekdays with Average Speeds 35 MPH or Below (Severe Congestion) .....	19, 23, 27, 31, 35*
Sources of Congestion .....	15, 19, 23, 27
Texas Transportation Institute's Urban Mobility Report.....	27, 35*
<b>Tolling</b>	
Affecting Congestion.....	27, 35*
High Occupancy Tolling .....	35*
Travel Times for Electronic <i>Good to Go!</i> Lanes .....	27, 35*
Volume of Users .....	27, 35*
Traffic Speeds.....	9, 27, 35*
<b>Travel Times</b>	
Before and After Results of Capacity Additions, Projects.....	27, 31, 35*, 36
Before and After Results of System Efficiencies.....	27, 31, 35*
Performance by Corridor.....	19, 23, 27, 31, 33-35*, 36
Reliability (95% Confidence Interval) by Corridor .....	6, 9, 15, 27, 31, 35*
Travel Time to Work Comparison: State and County Rankings .....	5
With and Without Incidents .....	6, 33
<b>Vehicle Miles Traveled</b>	
By Corridor.....	35*
Statewide .....	35*
Trends and related affects.....	33, 34, 35*, 36
<b>Volume</b>	
By Corridor.....	5, 9, 31, 35*
Statewide .....	35*
Trends from 1993-2002.....	9
<b>Construction Program for State Highways – see also Project Reporting</b>	
Advertisements Process .....	13
Advertisements by Subprogram: Planned, Actual & Deferred.....	4, 5
CIPP Value of Advertised & Deferred Projects by Subprogram.....	4, 5
Construction Program Cash Flow: Planned vs. Actual Expenditures.....	4-19, 23-34
Construction Program Delivery: Planned vs. Actual Advertisements .....	1-19, 23-34
Contracts Awarded: Award Amount to Engineer's Estimate .....	6, 10, 14, 18, 22, 26, 30, 34
Contracts Completed: Final Cost to Award Amount .....	6, 10, 14, 18, 22, 26, 30, 34
Contracts Completed: Final Cost to Engineer's Estimate.....	6, 10, 14, 18, 22, 26, 30, 34
End-of-Season Highway Construction Project Evaluations.....	12, 16, 20, 24, 28
FHWA Federal Performance Report Card.....	12
Hot Mix Asphalt Awards .....	3, 5, 7, 9, 11, 13, 15, 17, 19, 21-23, 25-27, 29-33, 35
Lane Miles Added to State Highway System .....	2, 13, 23, 32
Rising Cost of Construction Materials .....	15, 19, 23, 25-30, 32, 34
Safety Construction Program: Planned vs. Actual Advertisements.....	3, 6-17, 19

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Major projects special reports</b>	
Hood Canal Bridge Update .....	11-35
Southwest Washington I-5 Corridor Improvement Programs.....	36
Tacoma/Pierce County HOV I-5 Lane Additions .....	25-36
Tacoma Narrows Bridge Update .....	8-30
<b>Design</b>	
Age Related Safety Issues .....	10
Cable Median Barrier Installation: Before and After Collision Data.....	12, 20, 30, 34
Driving Speeds on State Highways.....	4, 23, 27
Guardrail Retrofit Program .....	11, 24, 28
Roundabout Installation: Before and After Collision and Injury Data .....	12, 22, 26
Value Engineering .....	6, 10, 32
<b>Environmental Stewardship</b>	
Agencies Approve Projects.....	18, 25
<b>Climate Change</b>	
Air Quality.....	22, 26, 31, 34, 35
Diesel, Particulate Matter .....	17, 26, 31
Green House Gas(es), Emissions .....	34
Mitigation Strategies.....	34
Compost Use.....	7
Congestion Mitigation Measures .....	26, 33
Construction Site Erosion and Runoff Protection.....	4, 6, 9, 12, 16, 28, 32
<b>Chronic Riverbank Erosion</b>	
Hoh River .....	15
Sauk River, SR 530 .....	32
Ecology Embankment Pollutant Removal .....	8, 28
Endangered Species Act .....	23, 27-33
Environmental Compliance .....	9, 12, 16, 18, 20, 23, 24, 25, 28, 32, 36
Environmental Management Systems Update .....	20, 24, 28
Erosion Control Preparedness.....	20, 24, 28, 32
Fish Passage Barriers .....	4, 13, 17, 22, 26, 30, 36
GIS Workbench .....	14
Hazardous Materials Removal .....	15
Herbicide Usage Trends .....	5, 8, 12, 16, 24
<b>National Environmental Policy Act</b>	
Environmental Assessments .....	18, 28, 32, 36
Environmental Impact Statement Concurrence Request Approval Rate .....	13
Environmental Impact Statement Processing Time .....	9, 13, 28, 32, 36
Issues, policies, and research .....	33, 36
<b>Noise</b>	
Barriers & Walls .....	22, 26, 31, 35
Impact .....	23, 26, 31
Retrofits.....	35
Quieter Pavement Testing .....	22, 24, 26, 28, 31
Operational Improvements.....	22
Organic Recycling Award for WSDOT .....	12
Programmatic Permits .....	13, 17, 22, 26, 30, 33, 34
Recycling Aluminum Signs.....	7
Stormwater Treatment Facilities .....	12, 16, 20, 24, 28, 32
Violations .....	9, 12, 16, 24, 28, 32
Water Quality Impacts .....	16, 20, 24, 28, 32
Wetland Internship .....	14

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook Subject Index

<i>Topic</i>	<i>Edition</i>
Wetland Replacement (Mitigation) Monitoring.....	5, 9, 12, 14, 16, 20, 24, 25, 28, 33
Wildlife Crossings .....	18
<b>Ferries (WSF)</b>	
<b>Capital Performance</b>	
Capital Expenditure Performance: Actual vs. Authorized .....	19, 20, 21, 23-26
Capital Expenditure Performance: Planned vs. Actual .....	4-18, 21-26, 29-34
Capital Project Delivery Executive Summary: Ferries .....	24-36
New Vessel Construction .....	32-36
Customer Comments .....	3-35
Environmental Stewardship .....	26, 31, 34, 35
<b>Farebox Recovery and Revenue</b>	
Comparison of WSF to Other Auto Ferries and Transit.....	4, 5
Electronic Fare System and Smart Card .....	17, 25, 26, 27, 34
Farebox Recovery Rate .....	5, 12, 16
Farebox Revenues by Month .....	3-14, 16-36
<b>Life Cycle Preservation Performance</b>	
Terminals: Condition Ratings.....	35
Vessels: Condition Ratings.....	35
Vessels: Planned vs. Actual.....	12-33, 35
Operating Costs Comparison: WSF to Other Ferry Systems .....	3
<b>Service Reliability</b>	
On-Time Performance.....	3-365
Fleet Condition: Ferry Ages by Class of Vessels.....	13, 21
Terminal and Vessel Incidents .....	26, 29
Trip Planner .....	17, 18
Trip Reliability Index and Trip Cancellation Causes.....	3-36
Trip Completion and On Time Performance Comparison to WA Transit Services .....	25
State Audit Findings and Response.....	27
Ridership by Month .....	3-24, 29-36
<b>GPS at WSDOT</b>	
Tour the State Highway system - SR view Development of the “Smart Map” .....	13
<b>Maintenance of State Highways</b>	
Anti-Litter Campaign Update .....	5, 11
<b>Capital Facilities</b>	
Age.....	34
Americans with Disabilities Act (ADA).....	26, 30
Benchmarks .....	18, 22, 26, 30
Backlog of Maintenance and Replacement.....	22, 34
Capital Facilities Construction Projects .....	18, 22, 26, 30, 34
Environmental Stewardship, Sustainability .....	18, 22, 26, 30, 34
Facility Conditions, Ratings, and Trends.....	18, 22, 26, 30, 34
Locations of Facilities .....	34
Preventative Maintenance .....	18, 22, 26, 30, 34
Cooperative Maintenance Partnerships with Counties and Cities.....	25
Costs of State Highway Maintenance .....	4, 16, 25
Culvert Management System .....	27
Customer Satisfaction with WSDOT Highway Maintenance Activities.....	3
Debris Pusher Maintenance Attachment .....	6
Emergency Operations Centers.....	27, 33
Facilities .....	19, 22, 26, 30
Facilities Condition Rating.....	18, 22, 26, 30
Guidepost Driver.....	11
Herbicide Usage Trends .....	5, 8, 12, 16, 24, 28, 32
Highway Sign Bridges: Planned vs. Actual Repairs .....	3, 4, 6, 8
Highway Signs: Number of Maintenance Actions .....	6, 8

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Maintenance on State Highways</b> .....	
Integrated Vegetation Management .....	5, 12, 16, 20, 24, 28, 32
Landscape .....	19
Litter Removal from State Highways .....	5, 6, 8, 11, 15
Litter Violations Issued by WA State Patrol .....	23
<b>Maintenance Accountability Process (MAP)</b>	
Achievement of Biennial Maintenance Targets .....	3, 4, 8, 12, 16, 24, 28, 32, 36
Estimated Costs of Maintenance Backlog .....	36
Percentage of Maintenance Backlog .....	28, 32, 36
Percentage of Targets Achieved .....	24, 28, 32, 36
<b>Pavement Striping</b>	
Achieving Straight Pavement Stripes .....	6
Planned vs. Actual Miles Painted .....	3, 4, 6, 8
Winter Field Test .....	18
Road Kill on State Highways .....	5, 23
<b>Safety Rest Areas</b>	
Safety Rest Area Condition Report .....	21, 25, 29, 33
Safety Rest Area Improvement Program .....	21, 25, 29, 33
Safety Rest Area Locations and Amenities .....	9, 13, 17, 19, 33
Safety Rest Area Level of Service .....	17, 21, 25, 29, 33
Safety Rest Area Preservation .....	17, 21, 25, 29, 33
Safety Rest Area Survey .....	9, 17, 21, 25, 29, 33
Safety Rest Area Truck Parking and Security .....	17, 21, 25, 29, 33
Safety Rest Area Visitors .....	21, 25, 29, 33
Safety Rest Areas Wireless Internet Access .....	19, 25, 29
Stormwater Treatment Facilities .....	31
Suspender Cable Painting .....	23
Sustainability Initiatives and Programs .....	26, 30
Traffic Signals: Annual Energy Costs and Incandescent Bulb Conversion .....	3
Vortex Generators .....	5
Water Conservation .....	19
West Nile Virus .....	16
<b>Winter maintenance articles</b>	
Anti-Icer Evaluation .....	17, 18, 21, 25, 29, 33
Automated Anti-Icing Systems .....	7
Avalanche Control .....	15, 21, 29, 33
Global Positioning Satellite Use for Snow and Ice Control .....	13
Living Snow Fence on SR 25 .....	9
Mountain Pass Highway Closures .....	7, 9, 17, 21, 25, 29, 33
Salt Pilot Project .....	7, 10, 17, 18
Snow and Ice Control Operations .....	4, 7
Snow and Ice Expenditures .....	17, 21, 25, 29, 33
Survey on Pass Travel Conditions and Anti-Icer Use .....	2, 13, 17
Tools for Winter Driving .....	17, 25, 29
Trucks to Get Through the Winter .....	17
Winter Overtime Hours and Snowfall Amount .....	7, 9
Winter Roadway Condition Level of Service and Anti-Icer Chemicals .....	9, 13, 17, 21, 25, 29, 33
Winter Severity and Snow and Ice Expenditures .....	4, 9, 13, 17, 21, 25, 29, 33
<b>Pavement Conditions on State Highways</b>	
<b>Pavement Conditions:</b>	
Bridge Condition by Deck Area .....	26
Pavement Condition Trends .....	4, 8, 12, 16, 20, 22, 24, 28, 32, 36
Pavement Ratings .....	20, 24, 28, 32, 36
Pavement Smoothness Rankings by State .....	4, 8, 12, 16, 20, 24, 28, 32
Various Pavement Types .....	2, 32, 36

\*Note: Some performance measures for *Gray Notebook 35* are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Pavement Conditions on State Highways</b> .....	
<b>Pavement Types:</b>	
Chip Seal Pavements .....	28, 32, 36
Concrete Pavement.....	16, 36
Portland Cement Concrete Pavement.....	16, 28, 32, 36
Selecting Pavement Types .....	16, 36
Quieter Pavement.....	35
<b>Repair and Rehabilitation</b>	
Concrete Pavement Lane Miles by Age and Dowel Bar Retrofit Status.....	12
“Due” Pavement Rehabilitation Needs .....	4, 8, 28, 32, 36
Pavement Lane Miles, Annual Vehicle Miles Traveled, and Programmed Dollars .....	12, 16, 32, 36
<b>Program Activities Highlights</b>	
Project Starts, Completions, Updates .....	20, 21, 23-36
Highlights.....	20, 21, 23-36
<b>Project Reporting (Beige Pages) – see also Construction program for state highways</b>	
Capital Project Delivery: Executive Summary .....	26-36
Capital Project Delivery: Executive Summary, Rail and Ferries .....	24-36
Completed Projects Wrap-Up.....	31-36
Construction Cost.....	20-36
Construction Employment Information.....	20, 21, 22, 23, 24, 25, 26, 27, 33-36
Construction Safety Information .....	20, 21
Consultant Usage .....	12-14, 16, 18, 19, 21, 23, 25, 27, 29, 31, 33, 35
Current Project Highlights and Accomplishments.....	10-19, 21-36
Environmental Documentation, Review, Permitting and Compliance.....	20, 24-33
<b>Financial Information</b> .....	10-19, 21-36
2009 American Recovery and Reinvestment Act funds .....	33, 36
Transportation 2003 (Nickel) Account .....	20-36
Multimodal Account .....	20-36
Transportation Partnership Account.....	20-36
Pre-Existing Funds (PEF).....	20-36
Hot Mix Asphalt .....	21, 23-27, 29, 30, 32, 33, 35
Nickel Program: 2003 Transportation Funding Package.....	20-36
Overview of WSDOT’s Three Capital Project Delivery Mandates .....	20-29
Partnership Program: 2005 Transportation Funding Package .....	20-36
Planned vs Actual Number of Projects.....	20-36
Pre-Existing Funds Projects.....	20-29, 31-36
Program Management Information .....	10-36
Project Delivery.....	11-36
<b>Recovery Act Projects</b>	
Local Projects Advertised and Awarded .....	33, 35
Local Projects Completed .....	33, 35
Jobs and other Economic Estimates.....	33, 35
State Projects Advertised and Awarded.....	33, 35
State Projects Completed .....	33, 35
Right of Way Risks.....	20, 22, 24, 26, 28, 30, 32, 34
Roll-Up of Performance Information .....	20-35
<b>Special Project Reports</b>	
I-405 Congestion Relief Project(s) .....	31
I-5 Everett HOV Lane project .....	30
Hood Canal Bridge.....	20-35
New Vessel Construction for WSF .....	32-36
Southwest Washington I-5 Corridor Improvement Programs.....	36
Tacoma Narrows Bridge.....	20-30
Tacoma/Pierce County HOV program .....	25-36
US 12 Corridor from Walla Walla to Tri-Cities .....	32

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Project Reporting (Beige Pages) – see also Construction program for state highways</b>	
US 395 North Spokane Corridor.....	34
US/Canadian Border Crossing Project Improvements .....	35
Utilities .....	20, 22, 24, 26, 28, 30, 32, 34, 36
<b>Rail: Freight</b>	
Economic Trends.....	18, 31, 35
Freight Rail Study.....	18, 25
<b>Grain Train Car Demand</b>	
Carloads.....	5-9, 11-33, 35
Grains.....	26, 28, 33, 35
Produce & Fruit .....	5, 8, 35
Grain Train Route Map .....	5, 9, 29
Palouse River Coulee City Railroad: State Acquisition .....	24
<b>Rail: State-Supported Amtrak Cascades Service</b>	
Amtrak’s Outlook: Financial and Programmatic.....	5, 6, 7, 9, 10, 17, 18
Canadian Service.....	25, 35
Capital Improvement Program and WSDOT Service Goals .....	2, 26, 30-32, 35
Capital Project Delivery Executive Summary: Rail.....	24-32
Customer Satisfaction .....	2-4, 7, 9, 12, 14, 16, 21, 23-27
<b>Farebox Recovery and Revenue</b>	
Recovery Percentage by Train.....	4, 8, 12, 16, 20, 24, 28, 32
Analysis of Farebox Revenue .....	35, 36
Internet Reservations and Automated Ticketing .....	6
Investment in Intercity Rail Comparison.....	5
New Crossovers and additional service.....	18, 31
On-Time Performance .....	2-36
Operating Costs.....	4
Passenger Trips by Station .....	6, 20
Rail Plus Program .....	15, 16, 19, 20
Revenue by Month.....	27
<b>Ridership</b>	
by Funding Entity.....	25-36
by Month .....	2-36
by Year .....	20, 24
by Year: Long-Term Trends .....	2, 4, 8, 12, 16
Patterns by Segment (Seats Sold).....	3
Route Map: Amtrak in Washington .....	6, 31
Schools on Trains .....	18
Station Update.....	11, 13, 14, 15, 16, 17, 22, 31, 36
Vehicles Diverted Annually from I-5 by Cascades .....	2
<b>Safety on State Highways – see also Worker safety</b>	
Age-Related Safety Issues.....	10
Alcohol-Related Fatalities: State Comparison.....	7
Alcohol-Related Fatality Rate.....	12, 22
Before and After Collision Data for Highway Safety Improvement Projects.....	12, 16, 20, 24, 26, 27, 28, 33-35
Before and After Collision Data: Cable Median Barrier Installations .....	12, 20, 24, 30, 34
<b>Corridor Safety Program</b>	
Active and Completed Projects.....	27, 34
Before & After Results .....	8, 19, 23, 27, 34
Case Studies.....	27, 34
Fatal and Disabling Collisions.....	27, 34
Driving Speeds on State Highways.....	4, 23, 27
Fatal and Disabling Collisions: Circumstances and Type .....	8, 27

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Safety on State Highways</b>	
Fatal and Disabling Collisions: at Intersections .....	9
Fatal and Disabling Crashes and VMT, Percent Change.....	3, 7, 11, 16, 22, 26, 30
Fatal and Disabling Accident Rates by County .....	22, 26, 30
Fatalities and Fatality Rates in Washington .....	13, 16, 22, 26, 30, 34
Fatalities by Gender and Age Group .....	10, 27
Fatalities per Capita by State .....	13, 22, 26, 34
Fatality Rates: State Highways, All State Public Roads & U.S. ....	3, 7, 11, 16
<b>Roadside Safety Features</b>	
Guardrail .....	11, 24, 28, 35
Other .....	20, 24
Rumble Strips .....	14, 18, 26, 30, 34, 35
Roundabouts .....	12, 18, 22, 27
Wildlife Crossings.....	18
<b>High Accident Corridors</b>	
Locations by Region.....	4
Locations Statewide.....	3, 15, 20
Top Ten .....	20
Intermediate Driver's License Program .....	13
Low Accident Locations and Corridors in Cities Over 22,500.....	20
<b>Low Cost Safety Enhancement Program</b>	
Before and After Analysis .....	20, 26
Planned vs. Actual Projects.....	3, 4, 5
Sample Projects.....	4, 6
<b>Motorcycles</b>	
Fatalities and Injuries .....	23, 27
Safety.....	23, 27
<b>Safety and bicyclists</b>	
Bicycle and Pedestrian Safety: Federal Benchmark.....	9
Bicyclist Fatality Locations and Relatable Actions .....	28, 32, 36
Bicyclist Fatality Rates: State Comparison .....	9, 20, 24, 28, 32, 34, 36
<b>Safety and pedestrians</b>	
Bicycle and Pedestrian Safety: Federal Benchmark.....	9
Demographics of Pedestrian Risk .....	20, 36
Pedestrian Factors in Vehicle/Pedestrian Collisions .....	8, 28, 32, 36
Pedestrian Fatality Rates by State.....	8, 16, 20, 24, 28, 32, 36
Pedestrian Safety in Washington.....	16, 32, 36
Safe Routes to Schools Grant Program Status .....	9, 12
Photo Enforcement.....	16
Safety Construction Program: Planned vs. Actual Project Advertisements.....	3, 6-13, 15-17
Washington State Safety Data .....	13
Safety Laws: Booster Seats and Mandatory Seat Belts.....	5
<b>Seatbelt Use</b>	
State Comparison .....	7, 11, 22, 26, 30, 34
By Type of Road .....	26, 30, 34
<b>Safety Rest Areas</b>	
Level of Service Trends .....	13, 17, 21, 25, 29, 33
Locations and Amenities.....	9, 13, 17, 21, 25, 29, 33
Preservation: Capital Investment Program 2003-05.....	13, 17, 21, 29, 33
Program Information .....	13, 17, 21, 25, 29, 33
Survey .....	9, 17, 21, 25, 29, 33
Truck Parking and Security .....	17, 21, 25, 33
Usage.....	13, 17, 21, 25, 29, 33
Strategic Highway Safety Plan: <i>Target Zero</i> .....	34
Speeding Enforcement .....	23

\*Note: Some performance measures for *Gray Notebook 35* are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Special Features</b>	
2 Dots 2 Safety .....	23
Ecosystem Initiative Award .....	23
Eruption Watch .....	15
Guardrail Sign Mount.....	15
Legislative Changes to Statewide Transportation Performance Reporting .....	26
Making of a Project.....	32
Overweight and Oversize Permit.....	16
Performance Audits and Reviews .....	16
Photo Enforcement .....	16
Portable Incident Screens.....	20, 22
“Smart Map” Development .....	13
Tour the State Highway System with WSDOT’s SR view.....	13
Traffic Signal Operations .....	17
Using Plain English at WSDOT .....	17
Water Conservation Activities .....	17
West Nile Virus.....	15
<b>Traffic Operations on State Highways</b>	
Blocking Disabled Vehicles and Debris - Trends.....	15, 35
FHWA Self-Assessment.....	9
<b>Incident Response Program</b>	
Governor’s Strategic Action Plan for Incident Response.....	25-36
History of Incidence Response.....	16
Incidents On I-5- Everett to Seatac .....	15
A Day in the Life of IR .....	19
Anatomy of a 90-Minute Incident .....	18
Anatomy of an Extraordinary (6 hours +) Incident.....	27, 34
Average Duration of Over 90 Minute Incidents by Route .....	26, 27, 28, 36
Average Duration of Over 90 Minute Incidents on I-90.....	26
Calls Responded to by Region.....	2
Clearance Times .....	2-5, 8-14, 16-36
Commercial Motor Vehicle .....	27-29, 33, 34
Customer Comments.....	8
Economic Analysis .....	10
Extraordinary (6 hours +) Incidents.....	26-34, 36
Instant Tow Program .....	27, 28, 29, 36
Non-Collision Response Types .....	8-14, 19-36
Program Activities on Urban Commute Routes.....	15
Program: Construction Zone Traffic Management.....	19
Program: Types of Responses .....	9-14, 17-29
Roving Units Compared to Response by Called-Out Units .....	13, 14, 18
Service Actions Taken .....	7, 10-14, 18, 22-36
Teams Go to the Olympics.....	5
Teams: Location and Type .....	7
Then and Now .....	16
Time line.....	6
Times .....	2, 3, 4, 5
Total Number of Responses by Month .....	7-13, 15-18
Total Number of Responses by Quarter .....	19-23, 25-36
Incidents with Clearance Times Over 90 Minutes.....	6-14, 16, 18-36
Injury Collisions in Over 90 Minute Blocking Incidents .....	25, 26
Joint Operations Policy Statement between WSDOT and Washington State Patrol.....	5, 17
Number of Responses to Incidents.....	18, 20, 23-36
Operational Efficiency Program Strategies.....	2, 29

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook Subject Index

<b>Topic</b>	<b>Edition</b>
<b>Traffic Operations on State Highways</b>	
Over 90 Minute Blocking Incidents by Type .....	25
Over 90 Minute Fatality and Non-Fatality Incidents on 9 Key Corridors .....	26
Over 90 Minute Accidents by Duration Period.....	28
Overall Average Clearance Time .....	20-36
Response Modes.....	16
Responses to Fatality Collisions.....	20-36
Roving Coverage .....	16, 18, 35
Service Patrols Contacts .....	3, 4
Spokane Interstate 90 Peak Hour Roving Service Patrol Pilot.....	5
Traffic Incident Management Self Assessment .....	17
Training & Recruiting Incident Responders .....	16, 29
Induction Loop Detectors .....	5
Intelligent Transportation Systems in Washington State.....	5, 27, 31, 35*
<b>Transportation Research</b>	
Case Studies .....	34
Funding and Value of Research Projects, Activities .....	34
Number of Research Activities.....	34
Number of Research Projects: Planned vs. Actual.....	34
<b>Travel Information</b>	
Award for Traveler Information Web Site.....	11
Calls to 1-800-695-ROAD and 511 .....	7-14, 18-24, 26, 28, 30, 33
Camera Views.....	7, 8
Other web-based tools (blog, YouTube, Twitter, podcasting, RSS, mobile internet) .....	26, 33
Evaluation Survey .....	10
Three-Year Milestones .....	22
Traveler Information Services Overview .....	7, 26, 30
Types of Information Requested to 511 .....	18, 20, 23, 24, 26, 28, 30
Web site Daily Usage .....	7-14, 18-26, 28, 30, 33
Web site Feedback .....	8, 9
<b>Trucks, Goods, and Freight</b>	
Air Cargo Forecast.....	25, 29, 33
Automatic De-icers Help Keep Truckers Safe.....	16
CVISN - Commercial Vehicle Information Systems and Networks.....	15, 26, 29, 33
Cross Border Truck Volumes .....	6, 10, 16, 21, 25, 29, 33
Freight Industry Survey .....	16, 33
Freight Routes and Border Crossings in Washington .....	6, 10, 16, 21, 25, 29, 33
Freight Shipments To, From, and Within Washington.....	10
Impediments to Truck Shipping: Bridges with Posted Weight Restrictions.....	6
Intelligent Transportation Systems Use for Trucks .....	6, 10
Managing Over-Sized Truck Loads.....	6
Marine Cargo Forecast .....	16, 21, 25, 29, 33
Osoyoos/Oroville Border Facts .....	10
Over dimensional Trucking Permits.....	6, 16
Projects with Freight Benefits.....	10, 16, 21, 25, 29, 32-35
Revenue Prorated to Washington for Trucks in Interstate Use .....	6, 10, 16, 21, 25, 29
Road Segment Ranking.....	16, 29
Severe Weather Closures .....	16, 21, 25, 29, 33
Supply Chain Performance.....	25
Truck Registrations in Washington.....	6, 21, 25, 29, 33
Truck Share of Total Daily Vehicle Volumes.....	6

\*Note: Some performance measures for *Gray Notebook* 35 are featured in the stand-alone Congestion Annual Report, available online at [www.wsdot.wa.gov/accountability/congestion](http://www.wsdot.wa.gov/accountability/congestion)

# Gray Notebook

## Subject Index

<i>Topic</i>	<i>Edition</i>
<b>Worker Safety</b>	
Accident Prevention Activities.....	14-21, 23-36
<b>Hearing Loss</b>	
Focus Areas .....	26, 27, 28, 31, 33-36
Rate of Injury .....	35, 36
<b>OSHA-Recordable Injuries</b>	
Administrative Staff .....	35, 36
Annualized Rate .....	22-36
By Type of Injury.....	28-34
Engineering and Maintenance Workers.....	1-21, 23-36
Ferry System Workers.....	2-21, 23-36
Fiscal-Year-to-Date.....	23-33
Quarterly Rate.....	22-27
WSDOT Regions and Ferry System .....	22-36
North American Association of Transportation Safety and Health Officials Meeting.....	3
<b>Sprains &amp; Strains</b>	
Focus Area.....	26, 27, 28, 31, 33-36
Rate of Injury .....	35, 36
WSDOT Safety Stand-Down.....	26, 27, 28, 31, 33-36
<b>Workforce Levels and Training</b>	
Driver Safety Training.....	26, 27
Highway Maintenance Workers Safety Training .....	5-13, 16-36
<b>Required Training</b>	
For all WSDOT Employees .....	7-36
For Human Resources Personnel .....	35, 36
For Maintenance Workers by Region .....	20-36
Workforce Levels .....	5-36

Corrections to this revised edition from the version published on November 20, 2009, include:

<i>page</i>	<i>change</i>	<i>date revised</i>
14	Typographical error corrected; text reading ‘between 2005 and 2007’ should have read ‘between 2006 and 2008.’ Affects two sections of table Travel Times Analysis: High Demand Puget Sound Commute Routes: 95% reliable travel times and Duration of congested period.	12/7/2009

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## Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation at (360) 705-7097. Persons who are deaf or hard of hearing may call Access Washington State Telecommunications Relay Service by dialing 7-1-1 and asking to be connected to (360) 705-7097.

### Civil Rights Act of 1964, Title VI Statement to Public

Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

### Other WSDOT information available

The Washington State Department of Transportation has a vast amount of traveler information available. Current traffic and weather information is available by dialing 5-1-1 from most phones. This automated telephone system provides information on:

- Puget Sound traffic conditions
- Statewide construction impacts
- Statewide incident information
- Mountain pass conditions
- Weather information
- State ferry system information, and
- Phone numbers for transit, passenger rail, airlines and travel information systems in adjacent states and for British Columbia.

For additional information about highway traffic flow and cameras, ferry routes and schedules, Amtrak *Cascades* rail, and other transportation operations, as well as WSDOT programs and projects, visit [www.wsdot.wa.gov](http://www.wsdot.wa.gov).

For this or a previous edition of the *Gray Notebook*, visit [www.wsdot.wa.gov/accountability](http://www.wsdot.wa.gov/accountability).

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