Washington State
Department of Transporta ion

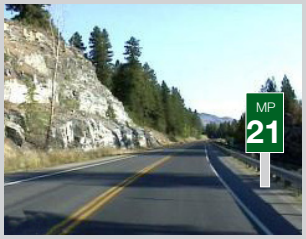
Measures, Markers and Mileposts

The Gray Notebook for the quarter ending
March 31, 2006

5 Year Anniversary Edition

WSDOT's quarterly report to the Governor and the
Washington State Transportation Commission
on transportation programs and department management

Douglas B. MacDonald
Secretary of Transportation



What Gets Measured, Gets Managed

This periodic report is prepared by WSDOT staff to track a variety of performance and accountability measures for review by the Transportation Commission and others. The content and format of this report is expected to develop over time. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification. The *Gray Notebook* is published quarterly in February, May, August, and November. For an online version of this or a previous edition of the *Gray Notebook*, visit www.wsdot.wa.gov/accountability.

Contributors *(Beige Pages)*	**WSDOT's Capital Delivery Programs**	Project Control and Reporting Office, Claudia Lindhal, Regional Program Managers
	Tacoma Narrows Bridge Project Update	Cheryl Benson
	Hood Canal Bridge Project Update	Becky Hixson
	Cross-Cutting Management Issues	John Anderson, Jennifer Brown, Aaron Butters, Marion Carey, Kevin Dayton, Mike Ellis, Dave Erickson, Dave Hamrick, Erik Jonson, Pat Morin, Larry Schofield, Sarah Schroder, Theresa Scott
Contributors *(White Pages)*	**Worker Safety**	Joel Amos, Cathy English, Kristina Kernan, Regional Safety Managers
	Workforce Level and Training	Dave Acree, Kathryn Lepome, Adrienne Sanders, Stewart Souders, Margarita Mendoza de Sugiyama, David Supensky
	Trucks, Freight, and Goods	Elizabeth Stratton, Paul Motoyoshi
	Safety Rest Areas	Penny Haeger, Thanh Nguyen, Rico Baroga, Aaron Butters, Judy Lorenzo, Pat Morin, Doug Pierce, Elizabeth Stratton, Anna Zaharris
	Aviation	Nisha Hanchinamani
	Highway Maintenance	Rico Baroga
	Incident Response	Diane McGuerty, Rick Phillips, Anna Yamada
	Travel Information	Jeremy Bertrand, Eldon Jacobson, Anna Yamada
	Washington State Ferries	David Burns, Bill Greene
	Rail: State-Supported Amtrak *Cascades* Service Washington Grain Train	Kirk Fredrickson, Carolyn Simmonds, Mike Rowswell
	Highlights of Program Activities	Ann Briggs
GNB Production	**Production Team**	Kimberly Howard, Katherine Boyd, Kristina Kernan, Lisa Manzer, Paul Motoyoshi, Eric Thomas
	Graphics	Steve Riddle, Connie Rus, Chris Zodrow
	Publishing & Distribution	Linda Pasta, Trudi Phillips, Dale Sturdevant, Deb Webb
	For Information Contact:	Daniela Bremmer, Director WSDOT Strategic Assessment Office 310 Maple Park Avenue SE PO Box 47374 Olympia, WA 98504-7374 Phone: 360-705-7953 E-mail: bremmed@wsdot.wa.gov

Measures, Markers and Mileposts

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Navigating the *Gray Notebook*

How is the *Gray Notebook* Organized?

Measures, Markers and Mileposts, also called the *Gray Notebook*, provides in-depth reviews of agency and transportation system performance. The report is organized into two main sections. The *Beige Pages* report on the delivery of the projects funded in the 2003 Transportation Funding Package, 2005 Transportation Funding Package, and Pre-Existing Funds. The *White Pages* describe key agency functions and provide regularly updated system and program performance information. The *Gray Notebook* is published quarterly in February, May, August and November. This current and all past editions are available on-line at www.wsdot.wa.gov/accountability/default.htm

A separate detailed navigation folio is available at www.wsdot.wa.gov/publications/folio/GNBFolio.pdf

Beige Pages

The *Beige Pages* is WSDOT's project delivery performance report on the Nickel, Transportation Partnership Account, and Pre-Exisiting Funds project programs. It contains detailed narrative project summaries and financial information supporting WSDOT's "no surprises" reporting focus. See page one for details.

White Pages

The *White Pages* contain three types of transportation system and agency program performance updates:

Annual Performance Topics

System performance updates are rotated over four quarters based on data availability and relevant data cycles. Annual updates provide in depth analysis of topics and associated issues. Examples include Pavement Condition, Congestion, and Bridge Condition.

Quarterly Performance Topics

Quarterly topics are featured in each edition as data is available more frequently. Quarterly topics include Worker Safety, Incident Response, Washington State Ferries, and Amtrak *Cascades*.

Special Topics

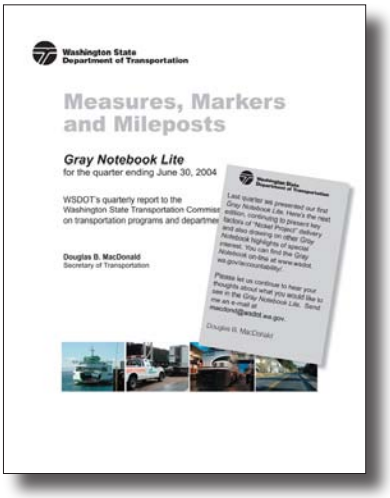
Selected Special Features and Program Highlights are provided in the back of each edition and focus on noteworthy items, special events and innovations.

Tracking *Business Directions'* Results

WSDOT's business plan, *Business Directions,* outlines the agency's strategic initiatives and associated activities. It reflects WSDOT's program and project delivery responsibilities with the goal of demonstrating the best possible return for taxpayers' dollars. The *Gray Notebook* complements the plan and tracks progress of the six key initiatives. For a copy of *Business Directions*, please visit www.wsdot.wa.gov/accountability/publications/2003-2007_Business_Directions.pdf

Gray Notebook Lite

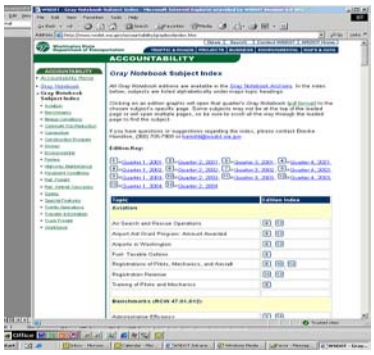
WSDOT publishes a quarterly excerpt of key performance topics and project delivery summaries from the *Gray Notebook*, called *Gray Notebook Lite*. *Lite* allows for a quick review and provides a short synopsis of selected topics. It is published as



a four page folio with a two page *Beige Page* summary insert and can be accessed at www.wsdot.wa.gov/accountability/graynotebook/Lite.pdf

How to Find Performance Information

The electronic subject index gives readers access to current and archived performance information. The comprehensive index is easy to use and instantly links to every performance measure published to date. Measures are organized alphabetically within program areas. A click on the subject topic and edition number provides a direct link to that page. A copy of the subject index is also provided in the back of each edition. To access the index electronically, visit www.wsdot.wa.gov/accountability/graybookindex.htm



Linking Measures to Strategic Objectives

The mission of WSDOT is to keep people and business moving by operating and improving the state's transportation systems vital to our taxpayers and communities.

Introduction

WSDOT's business plan is based on the policies, programs, and budgets adopted by the state Legislature, Governor, and Transportation Commission. WSDOT has important transportation system needs to meet through its day-to-day work to build and operate state highways, manage the ferry system, and implement legislative instructions and program mandates. Everything comes together, however, in the overriding need to demonstrate the best possible return for every dollar of taxpayer investments and legislative appropriation. The *Gray Notebook* reflects this direction for accountability, communicating performance results for all key agency programs and activities.

Priorities of Government & Government Management Accountability and Performance

"Priorities of Government" (POG) is the statewide approach used by the Governor to identify results as the basis for budget decision-making. This approach facilitates strategic thinking and uses performance evidence to make investment choices that maximize results. POG looks at all state activities and how these activities contribute to the framework for the ten statewide results that citizens expect. WSDOT's Government Management Accountability and Performance (GMAP) forums support the POG process by continuously evaluating and improving the effectiveness of POG activities and reporting its progress in the *Gray Notebook*. Of the ten POG results, WSDOT has partial influence over three. The agency's strategic plan (2003-07 Business Directions) supports the following three POG results:

- Improve economic vitality of business and individuals
- Improve statewide mobility of people, goods, information and energy
- Improve safety of people and property

WSDOT's Strategic Plan

WSDOT actively supports these three POG goals through the agency's six overarching initiatives (objectives) as defined in the agency's strategic plan (2003-07 Business Directions). By tracking the progress of WSDOT's initiatives through the reporting of key performance measures, the *Gray Notebook* connects WSDOT's initiatives with these statewide outcome goals. The table below shows the six WSDOT initiatives and key related performance measures, as well as where and how the results are reported. Some of the data is available annually, such as bridge and pavement conditions, while other data is available quarterly. The reporting cycles for the individual measures reflect this. Note that the first three initiatives are directly linked to the three POG goals, while initiatives four through six indirectly support the POG goals through the achievement of WSDOT's organizational goals.

Strategic Initiative	Performance Measure Key Measures Include	Description	Reporting Cycle	Last Report[1]
1. Plan and build (deliver) capital investment projects for our transportation systems in accordance with the instructions of the legislature.	Schedule, Scope and Budget Summary of Nickel and TPA Projects	Planned vs. actual results of scope, schedule and budget	Quarterly	pp. 3-4,
	Project Delivery Milestone Reporting	Compares planned delivery milestone dates against actual completion dates	Quarterly	pp. 17-18
	Highway Construction Program Advertisements	Planned vs. actual number of projects advertised	Quarterly	pp. 5-7
	Cash Flow on Highway Construction Projects	Planned vs. actual expenditures for preservation and improvement programs	Quarterly	p. 26
	Individual Contracts: Final Cost to Award Amount	Percent of final cost above or below award	Annual	GNB 18 p. 37
	Pavement Conditions	Percent of pavement in good or poor condition (by type)	Annual	GNB 20 p. 37
	Bridge Conditions	Percent of bridges in good, fair or poor condition	Annual	GNB 19 p. 50
	Ferry Life Cycle Preservation Performance	Planned projects versus actual systems/ structures preserved, change in cost rating	Quarterly	p. 66

[1]When no Gray Notebook edition is indicated above, the measure can be found in this edition of the Gray Notebook. Previous Gray Notebook editions are available in the Gray Notebook Subject Index at www.wsdot.wa.gov/accountability/graybookindex.htm. When viewing this report electronically, edition numbers are hyperlinked to the respective Gray Notebook article.

Linking Measures to Strategic Objectives

Strategic Initiative	Performance Measure Key Measures Include	Description	Reporting Cycle	Last Report[1]
2. Maintain and operate the transportation facilities and systems placed under the department's responsibility, making cost-effective use of the appropriations provided by the Legislature from citizens' taxes.	Maintenance Accountability Process (MAP) targets	Rating for 22 highway maintenance activities	Annual	GNB 19 p. 40
	On-Time Performance: Amtrak *Cascades* and Ferries	Percent of trips on-time: Ferries Percent of trips on-time: Amtrak *Cascades*	Quarterly Quarterly	p. 69 p. 64
3. Optimize the operational efficiency and safety of the transportation systems and facilities committed to WSDOT's charge.	Safety	Fatality rates (Bicyclist, pedestrian, vehicle) Before and After Collision Analysis for Safety Projects	Annual	GNB 20 pp. 54-55 pp. 45-47
	Incident Response Clearance	Number of responses and overall average clearance time	Quarterly	pp. 61-62
	Congestion: Peak Travel Times for Key Commute Routes	Percent of change in travel time performance for 20 Puget Sound Routes	Annual	GNB 19 p. 58
4. Report to the Transportation Commission, citizens, other officials and the legislature on achievements, shortcomings and challenges in WSDOT's performance.	Performance Reporting	*Gray Notebook*, web pages	Quarterly	
	No Surprises Reporting - Beige Pages	Reporting on capital program delivery	Quarterly	pp. 1-37
	End of Season Highway Construction Summary	Design, construction management, schedule and cost evaluation	Annual	GNB 20 p. 24
5. Support the State Transportation Commission in preparing proposed budgets and plans for transportation systems and facilities	Biennial and annual budget proposals	Submit to commission by deadline	Annual	Budget Report
6. Assure the capability and efficiency of WSDOT's workforce.	Workforce Training	Compliance ratings for 17 training courses	Quarterly	pp. 42-43
	Workforce Safety	Recordable injuries per 100 workers per calendar year	Quarterly	pp. 39-41

Transportation Benchmarks

In 2002, the Legislature passed RCW 47.01.012, instituting the transportation benchmarks recommended in 2000 by the Governor-appointed Blue Ribbon Commission on Transportation. The benchmarks require WSDOT to track data related to nine policy elements (see list below).

The benchmarks track transportation performance at a high level, reflecting social goals that are important to the health and safety of Washington State citizen, and to the efficiency of our state's transportation system. WSDOT does not have control over some of these benchmarks, for instance, the number of people who travel alone to work, or the number of miles they drive. However, the department can and does strive to offer people alternative methods to reach their destination. Similarly, WSDOT works in multiple ways to improve roadway, bridge, congestion, and safety conditions. The data is updated and published annually in the *Gray Notebook*.

- **Safety**
- **Roadway Pavement Condition**
- **Bridge Condition**
- **Non-Auto Share of Commute Trips**
- **Per Capita Vehicle Miles Traveled**
- **Administrative Efficiency**
- **Traffic Congestion and Driver Delay**
- **Transit Cost Efficiency**

Information regarding Benchmarks can be found at:

Gray Notebook Special Excerpt: Transportation Benchmarks 2005 Report: www.wsdot.wa.gov/accountability/benchmarks/default.htm

Annual Transportation Benchmarks Report: June 30, 2005 GNB, www.wsdot.wa.gov/accountability/Archives/graynotebookJun-05.pdf

Benchmarks Implementation Report: www.wsdot.wa.gov/accountability/benchmarks/BenchmarksImplementationReport.pdf

Project Reporting on the Capital Project Delivery Program

Introduction

WSDOT prepares information for legislators, state and local officials, interested citizens and the press on the progress of the capital delivery program, including the 2003 Transportation Funding Package, the 2005 Transportation Funding Package, and the Pre-Existing Funds Program. Much of the detailed information can be found on-line at the WSDOT website. The *Gray Notebook*, in these special *Beige Pages*, highlights each quarter's progress and reports on financial and other program management topics as well as detailed information on key projects.

The *Beige Pages* for this quarter are organized in the following manner:

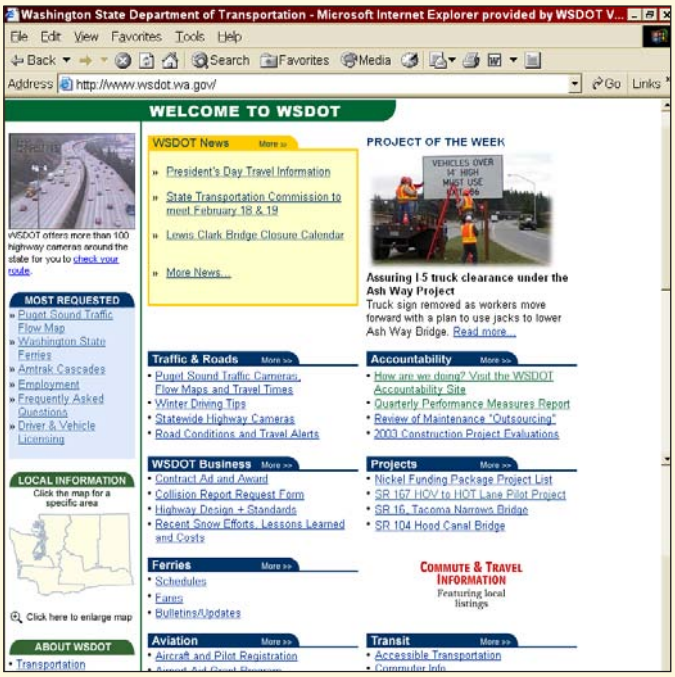
- Overview of the Three Capital Delivery Mandates
- 2003 and 2005 Transportation Funding Package Project Delivery
- Financial Information
- Pre-Existing Funds
- Special Project Updates
- Cross-Cutting Management Issues

We welcome suggestions and questions that can help us strengthen this project delivery and accountability reporting.

Overall, WSDOT's project reporting uses several different tools, including the *Gray Notebook*, 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.

Navigation to the Home Page and the Project Pages

The Home Page (shown below) has several links that allow access to the individual Project Pages. The Accountability navigation bar provides access to the on-line version of the *Gray Notebook* which provides some project "hot links." The Projects navigation bar provides direct links to several of the state's largest projects and access to WSDOT's Projects Page. The Projects Page can also be accessed from any WSDOT web page by clicking on the "projects" tab at the top of every page. WSDOT's home page can be found at www.wsdot.wa.gov/.

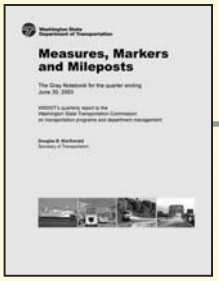


While WSDOT has developed user-friendly reports and front end applications to access project information on-line, it is important to note that the data used to generate these reports comes from antiquated legacy mainframe computer systems. Although the quality of the data is good, the time and effort needed to compile, verify and validate the data in these reports each quarter is considerable (in other words, these reports are the result of much manual input and effort, not the output of a modern project management information system).

This overall issue was addressed in two recently completed reports: one from the Joint Legislative Audit Review Committee titled, "Overview of Washington State Department of Transportation Capital Project Management" and a second report, commissioned by the Transportation Performance Audit Board, titled "Review of WSDOT's Use of Performance Measurement." In each of these reports, a key recommendation was made to conduct an assessment of the effectiveness of current information systems and options for addressing any deficiencies.

Project Reporting on the Capital Project Delivery Program

Project Information Roadmap



Home Page

Gray Notebook

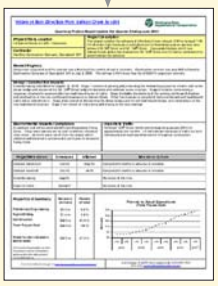
Project Pages

Project Pages report on all WSDOT capital delivery program projects. Project Pages provide detailed information updated regularly:

- Overall Project Vision
- Financial Table, Funding Components
- Roll-up Milestones
- Roll-up Cash Flow, Contact Information
- Maps and Links QPR
- Quarterly Project Reports

Quarterly Project Reports (QPRs) summarize quarterly activities:

- Highlights
- Milestones
- Status Description
- Problem Statement
- Risks and Challenges
- Project Costs/Cash Flow
- Contact Information



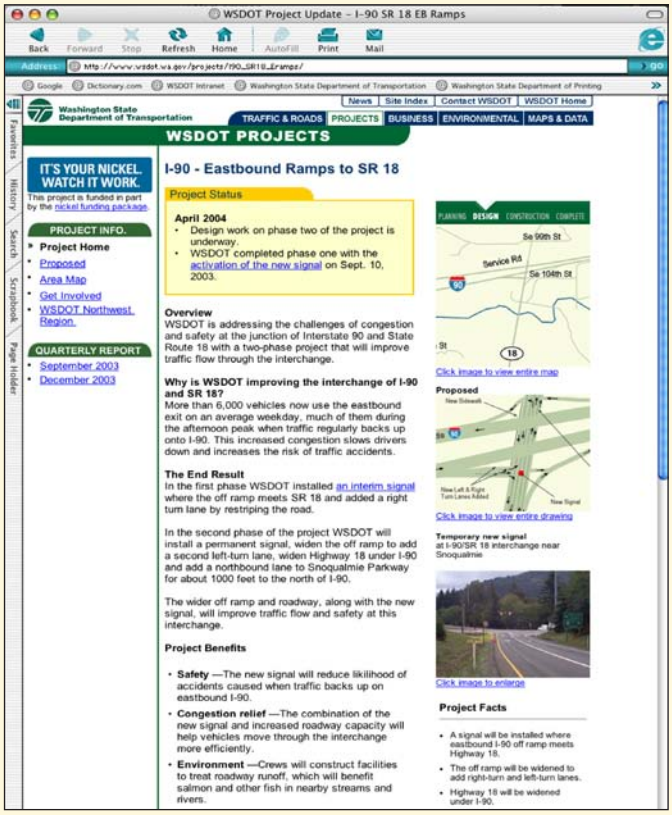
Project Pages

Project Pages contain information on all aspects of a specific project. An existing Project Page is shown below.

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.

The Quarterly Project Reports are accessible through a link on the Project Page.

Project Pages provide a summary of the project status to date and are updated regularly to the best of WSDOT's ability. Project Pages can be found at www.wsdot.wa.gov/projects/



WSDOT's Capital Project Delivery Programs

Executive Summary: Roll-Up of Performance Information

Each quarter WSDOT provides a detailed update on the delivery of the highway capital programs through the *Gray Notebook*, and via the web through the Project Pages and Quarterly Project Reports. As WSDOT's primary delivery report, the *Gray Notebook* includes the *Beige Pages* for the purpose of providing the current status of the Capital Improvement and Preservation Programs, major Pre-Existing Fund (PEF) projects, the projects funded by the 2003 5-cent gas tax (Nickel), and the 2005 9 1/2-cent gas tax (Transportation Partnership Account, TPA).

Since PEF projects are budgeted by program for improvement and preservation of the highway system, the delivery of the work included in the 923 PEF projects is reported by programmatically for six categories of work. By contrast, each of the 145 Nickel and 178 TPA projects funded in the 2005-07 biennium has a line item budget and is monitored and reported at the individual project level. Note that these numbers have been updated from the previous *Gray Notebook* based on the 2006 Supplemental Budget.

Performance Information *As of March 31, 2006, Dollars in Thousands*	**Nickel (2003)**	**Transportation Partnership Account (TPA, 2005)**	**Combined Nickel & TPA**	**Pre-Existing Funds**
Total Biennial Number of Projects (2005-07)	145	178	323	923
Total Biennial Program (2005-07)	$1,192,198	$409,727	$1,601,925	$1,061,010
Schedule, Scope and Budget Summary: Results of Completed Projects				
	See Pages 3-4	See Pages 3-4	See Pages 3-4	NA
Cumulative to Date, 2003 – March 31, 2006				
Total Completed	21	8	29	-
% Completed Early or On-Time	95%	100%	97%	-
% Completed Within Scope	100%	100%	100%	-
% Completed Under or On-Budget	90%	88%	90%	-
Current Legislative Expectation (Baseline)	$159,700	$3,895	$163,594	-
Current Estimated Cost to Complete (WSDOT)	$159,645	$3,971	$163,616	-
Biennium to Date, 2005-07				
Total Completed	8	8	16	172
% Completed Early or On-Time	100%	100%	100%	-
% Completed Within Scope	100%	100%	100%	-
% Completed Under or On-Budget	100%	88%	94%	-
Current Legislative Expectation (Baseline)	$107,707	$3,895	$111,601	$527,471
Current Estimated Cost to Complete (WSDOT)	$107,571	$3,971	$111,543	$527,873
Advertisement Record: Results of Projects Entering into the Construction Phase				
	See Pages 5-6	See Pages 5-6	See Pages 5-6	See Page 24
Biennium to Date, 2005-07				
Total Advertised	15	7	22	109
% Advertised Early or On-Time	60%	100%	76%	76%
Total Award Amounts to Date	$108,828 (3 pending bid or award)	$4,686 (1 pending bid or award)	$113,514 (4 pending bid or award)	NA
Advertisement Schedule for Projects in the Pipeline: Results of Projects Now Being Advertised for Construction or Planned to be Advertised				
	See Page 7	See Page 7	See Page 7	See Page 22 (graph)
April 1, 2006 through September 30, 2006				
Total in Pipeline	2	6	8	47
% On or Better than Schedule	100%	50%	63%	-

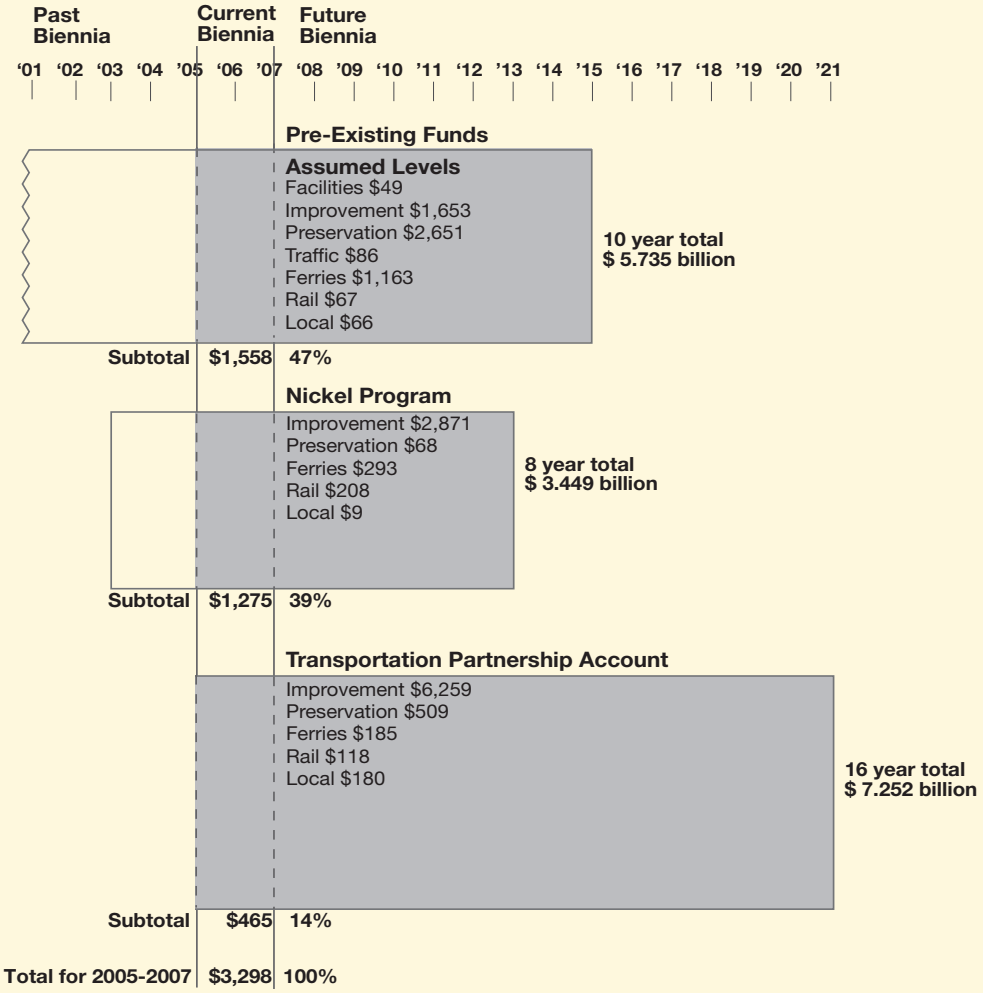
WSDOT's Capital Project Delivery Programs

Overview of WSDOT's Three Capital Project Delivery Mandates

WSDOT's Capital Program: Current and Future Biennium Outlook

2006 Supplemental Budget

Dollars in Millions



2005-07 Capital Delivery Program

The Department's 2005-07 capital program focuses on project and program delivery from all fund sources. WSDOT continues to move forward with the 10-year investment plan for the 2003 Transportation Funding Package as well as beginning the 16-year investment plan associated with the 2005 Transportation Funding Package.

In the 2005-07 biennium, based on the 2006 supplemental budget, capital funds total approximately $3.3 billion. Approximately $1.275 billion will be spent on projects associated with the 2003 Funding Package (Nickel), $465 million will be invested in projects from the 2005 Funding Package (Transportation Partnership Account), and $1.558 billion will be invested from pre-existing funding sources.

WSDOT's Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Twenty-Nine Projects Completed as of March 31, 2006

Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	On-Time Completed	Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete (WSDOT)	On-Budget**
Cumulative to Date							
2003-05 Biennium Summary See the *Gray Notebook* for quarter ending December 31, 2005 for project listing	13 Nickel	6 early 7 on-time	8 early 4 on-time 1 late	13	51,993	52,074	4 under, 7 on-budget, 2 over
Biennium to Date (2005-07)							
SR 161/234th St to 204th St E - Widening	Nickel	✓	Early	✓	17,231	17,231	✓
I-5/2nd Street Bridge - Replace Bridge	Nickel	✓	Early	✓	14,333	14,412	✓
I-90/Pines Rd to Sullivan Rd - Widen Roadway and Add Lanes	Nickel	Early	✓	✓	17,894	17,894	✓
I-90/Argonne Road to Pines Rd - Widen Roadway and Add Lanes	Nickel	Early	✓	✓	18,468	18,357	✓
SR 161/204th St to 176th St - Widening	Nickel	Late[1]	Early	✓	16,789	16,789	✓
I-90/Silica Road to East of Adams Rd - Median Cross Over Protection	TPA	Early	Early	✓	322	322	✓
I-90/SR 17 to Grant/Adams County Line - Median Cross Over Protection	TPA	Early	Early	✓	787	787	✓
U.S. 12/SR 124 to McNary Pool - Add Lanes	Nickel	✓	✓	✓	12,299	12,196	✓
SR 106/Skobob Creek - Fish Passage	Nickel	✓	✓	✓	1,777	1,777	✓
Current Quarter (Ending March 31, 2006)							
I-5/Blaine Vicinity - Median Cross Over Protection	TPA	✓	Early	✓	245	245	✓
SR 18/SE 304th to SR 516 - Median Cross Over Protection	TPA	Early	Early	✓	250	250	✓
SR 167/SR 410 to Pierce/King County Line - Median Cross Over Protection	TPA	Early	✓	✓	487	487	✓
SR 410/Traffic Ave to 166th Ave East - Median Cross Over Protection	TPA	Early	✓	✓	245	245	✓
I-5/300th St NW Vicinity to Anderson Rd Vicinity	TPA	Early	Early	✓	1,288	1,345	✓
SR 522/North Creek Vicinity to Bear Creek Vicinity	TPA	Early	Early	✓	271	290	Over 7%[2]
I-5/NE 175th St to NE 205th St - North-bound Auxiliary Lane	Nickel	✓	Early	✓	8,915	8,915	✓

NOTE: Table and footnotes continues on following page

*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.
**Based on cost at operationally complete stage; will be updated based on final contract close-out cost, to be reported in future quarters.

WSDOT's Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Twenty-Nine Projects Completed as of March 31, 2006 (Continued)

Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	On-Time Advertised	On-Time Completed	Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete (WSDOT)	On-Budget*
Totals Current Quarter (March 31, 2006)	100%	100%	100%	$11,701	$11,777	86%
1 Nickel Project	100%	100%	100%	$8,915	$8,915	100%
6 TPA Projects	100%	100%	100%	$2,786	$2,862	83%
Totals Biennium to Date (2005-07)	94%	100%	100%	$111,601	$111,543	94%
8 Nickel Projects	88%	100%	100%	$107,707	$107,571	100%
8 TPA Projects	100%	100%	100%	$3,895	$3,971	88%
Totals Cumulative to Date**	97%	97%	100%	$163,594	$163,616	90%
21 Nickel Projects	95%	95%	100%	$159,699	$159,645	90%
8 TPA Projects	100%	100%	100%	$3,895	$3,971	88%

Source: WSDOT Project Control and Reporting Office

*Based on cost at operationally complete stage; will be updated based on final contract close-out cost, to be reported in future quarters.
**No Transportation Partnership Account projects were complete prior to the 2005-07 biennium, therefore, cumulative to date totals are the same as biennium to date..

Definitions:

On-Time Advertised
The project was advertised within the quarter as planned based on the original Legislative expectation (2003-05 Nickel, 2005-07 TPA).

On-Time Completed
The project was operationally complete within the quarter as planned in the original Legislative expectation (2003-05 Nickel, 2005-07 TPA).

Within Scope
The project was completed within the specific functional intent of a project as last approved by the Legislature.

On-Budget
The project was within +/- five percent of the current Legislative expectation (baseline).
Section 603 of the 2006 Supplemental Budget provides the Director of the Office of Financial Management flexibility to balance Nickel and TPA funded project cost increases and decreases between projects, and to balance cash flow between biennia near biennial lines, as long as the adjustment does not impact the overall delivery of the program and does not involve changing the scope of any funded project.

Project Details:

[1] This project is the second stage of a two-stage project. The advertisement date has been delayed to better accommodate construction work and lessen impacts to the public.

[2] The necessary time required for traffic control on this cable median barrier project was underestimated by WSDOT.

WSDOT's Capital Project Delivery Programs

Advertisement Record

Forty-One Projects Now in Construction Phase as of March 31, 2006

Nickel Program and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
Cumulative to Date						
SR 104/Hood Canal Bridge East Half	TPA	✓	Feb-03	Kiewit-General	Jun-09	204,000
I-5/Salmon Creek to I-205 - Widening	Nickel	Early	May-03	Hamilton Construction	Jun-07	25,921
SR 527/132nd St SE to 112th St SE	Nickel	✓	Dec-03	KLB Construction, Inc.	Jun-06	15,631
U.S. 395, NSC - Francis Ave to Farwell Rd	Nickel	Late[1]	Jan-04	KLB Construction, Inc.	Mar-09	9,987
SR 16/I-5 to Tacoma Narrows Bridge - HOV	Nickel	Early	Mar-04	Tri-State Const., Inc.	May-07	47,295
SR 18/Covington Way to Maple Valley	Nickel	✓	Jul-04	Terra Dynamics, Inc.	Dec-07	3,071
SR 31/Metaline Falls to Int'l Border	Nickel	✓	Sep-04	M. A. Deatley	Oct-06	10,989
SR 161/Jovita Blvd to S 360th St	Nickel	✓	Sep-04	Tri-State Const., Inc.	Jan-07	16,300
I-5/SR 526 to Marine View Drive	Nickel	Early	Nov-04	Atkinson	Jun-09	184,993
SR 16/36th St to Olympic Dr NW - Core HOV	Nickel	Early	Nov-04	Woodworth	Dec-07	3,876
I-5/Pierce Co. Line to Tukwila I/C - HOV	Nickel	Early	Nov-04	Icon Materials	Dec-07	35,847
SR 240/I-182 to Richland Y - Add Lanes	Nickel	✓	Dec-04	Icon Materials	Oct-07	30,473
SR 240/Richland Y to Columbia Center I/C - Add Lanes	Nickel	✓	For construction efficiencies this project combined with the above			
SR 24/I-82 to Keys Road - Add Lanes	Nickel	Early	Feb-05	Max J. Kuney Company	Nov-06	33,964
I-5/S 48th to Pacific Avenue - Core HOV	Nickel	Early	Mar-05	Kiewit Pacific Co.	Dec-07	72,869
SR 9/SR 522 to 228th S SE - Widening	Nickel	Late[2]	May-05	Wilder	Jun-07	17,993
SR 9/228th St SE to 212th St SE (SR 524) Widen to Five Lanes, Stg 2	Nickel	Late[2]	For construction efficiencies this project combined with the above			
SR 7/SR 507 to SR 512 - Safety	Nickel	Late[3]	May-05	Scarsella Bros., Inc.	Oct-06	13,745
SR 99/Aurora Ave N Corridor Project	TPA	✓	Jun-05	City Of Shoreline	Dec-07	10,000
Biennium to Date (2005-07)						
I-5/SR 11 Vicinity to Weigh Station Vicinity	TPA	Early	Aug-05	Petersen Brothers, Inc.	Oct-07	3,508
I-5/SR 11 to 36th St - Median Cross Over Protection	TPA	Early	For construction efficiencies this project combined with the above			
I-5/SR 542 Vicinity to Bakerview Road	TPA	Early	For construction efficiencies this project combined with the above			
I-5/Main St to SR 548 - Median Cross Over Protection	TPA	Early	For construction efficiencies this project combined with the above			
SR 3/SR 303 I/C (Waaga Way) - New Ramp	Nickel	Late[2]	Aug-05	Scarsella Bros., Inc.	Nov-06	16,744
SR 202/Jct. 292nd Ave. SE	Nickel	Early	Sep-05	Transtech Electric, Inc.	Sep-06	293
SR 543/I-5 to Int'l Border	Nickel	Late[1]	Nov-05	Imco General Const., Inc.	Jun-08	28,315

WSDOT's Capital Project Delivery Programs

Advertisement Record

*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.

NOTE: Table and footnotes continues on following page.

Forty-One Projects Now in Construction Phase as of March 31, 2006 (continued)

Nickel Program and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
I-90/Potato Hill Bridge Bicycle and Pedestrian Bridge	TPA	✓	Nov-05	Weaver Const.	Dec-06	750
I-90/Moses Lake Area - Bridge Clearance	Nickel	✓	Nov-05	Weaver Const.	Dec-06	1,951
SR 9/Nooksack Rd Vic. to Cherry St	Nickel	Late[1]	Dec-05	Imco General Const., Inc.	Oct-07	8,999
SR 167/15th St SW to 15th St NW - HOV	Nickel	Late[4]	Dec-05	Icon Materials	Dec-07	27,849
U.S. 12/Attalia Vic. - Add Lanes	Nickel	✓	Dec-05	Award Pending	Dec-07	-
Quarter Ending March 31, 2006						
SR 516/208th and 209th Ave. SE	Nickel	Late[1, 2]	Jan-06	Road Const. NW, Inc.	Dec-06	678
SR 167/Ellingson Rd. I/C NB Off Ramp	Nickel	✓	Feb-06	Signal Electric Inc.	Mar-07	357
SR 202/244th Avenue NE Intersection	Nickel	✓	Feb-06	Tri-State Const.	Feb-07	463
SB Ramps at SR 11/Old Fairhaven Parkway	Nickel	✓	Feb-06	Wilder Const.	Mar-07	1,320
SR 270/Pullman to Idaho State Line - Widen Roadway and Add Lanes	Nickel	Late[5]	Mar-06	North Central Const.	Oct-07	18,090
I-90/EB Ramps to SR 18 - Signal	Nickel	Early	Mar-06	Award Pending	Apr-08	-
U.S. 12/Vicinity Montesano to Elma - Median Cross Over Protection	TPA	✓	Mar-06	Award Pending	Jun-07	-
I-5/SR 532 NB Interchange Ramps	Nickel	✓	Mar-06	Trimaxx Const.	Nov-07	3,769
I-5/52nd Ave W to SR 526-SB - Safety	Nickel	✓	Mar-06	Award Pending	Oct-06	-
I-205/Mill Plain SB Off Ramp Improvements	TPA	Early	Mar-06	Nutter Corp.	Oct-06	428

Totals Current Quarter (March 31, 2006)	**80%**	**$25,105**
8 Nickel Projects	**75%**	**$24,677**
2 TPA Project	**100%**	**$428**
Totals Biennium to Date	**73%**	**$113,514**
15 Nickel Projects	**60%**	**$108,828**
7 TPA Projects	**100%**	**$4,686**
Totals Cumulative to Date	**76%**	**$850,468**
32 Nickel Projects	**69%**	**$631,782**
9 TPA Projects	**100%**	**$218,686**

Project Details:

[1] Right-of-way acquisition delay

[2] Right-of-way and environmental permitting issues

[3] The Legislature requested the delay to coordinate with the local community

[4] Funding uncertainties caused the design of this project to sit on the shelf for many years. Additional time was needed for redesign and resubmitting environmental requirements.

[5] The advertisement of this project was delayed due to environmental permitting issues and the need for redesign to stay within budget after geological conditions, right-of-way cost increases, and Corps of Engineers mitigation negotiations.

WSDOT's Capital Project Delivery Programs

Advertisement Schedule and Budget

Eight Projects in Delivery Pipeline for April 1, 2006 through September 30, 2006

Nickel and Transportation Partnership Account (TPA) Projects Now Being Advertised for Construction or Planned to be Advertised
Dollars in Thousands

Project Description	Fund Type*	Original Planned Ad Date	Current Planned Ad Date	On Schedule	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete (WSDOT)
I-5/Ebey Slough Br Vic to Stillaguamish Riv Br Vic. - Median Cable Barrier	Nickel	May-06	May-06	✓	2,401	2,401
SR 99/S. 284th to S. 272nd St - HOV	Nickel	Dec-05	Apr-06	✓	15,393	15,725
SR 16/NW of Tacoma Narrows to SE of Burley/Olalla - Median Cross Over[1]	TPA	May-06	May-06	✓	923	967
SR 17/Pioneer Way to Stratford Road - Widen to Four Lanes	TPA	Oct-07	May-06	Advanced	16,112	16,245
I-90/Seattle to Mercer Island - Two Way Transit/HOV	TPA	Dec-04	Jul-06	Delayed[2]	50,445	49,540
U.S. 97/Kittitas, Chelan and Okanogan Counties - Roadside Safety Improvement	TPA	Apr-06	Apr-06	✓	1,000	1,002
SR 99/SR 599 to Holden Street - Median Cross Over Protection	TPA	Mar-06	Apr-06	Delayed[3]	380	508
SR 522/I-5 to I-405 - Multi-Modal Project	TPA	Nov-03	May-06	Delayed[4]	21,199	21,200
Total (April 1, 2006 - Sept. 30, 2006)				**63%**	**$107,854**	**$107,588**
2 Nickel Projects				**100%**	**$17,794**	**$18,126**
6 TPA Projects				**50%**	**$90,060**	**$89,462**

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 Details:

[1] A component of this project is currently under construction as reported in the previous *Gray Notebook.* An additional major component was held back for bundling with another project for construction efficiencies.

[2] The advertisement date for the I-90/Seattle to Mercer Island project was delayed from December 2004 to January 2006 to allow time for the issuance of the draft Environmental Impact Statement as reported in the Gray Notebook for quarter ending December 31, 2003. In addition, the advertisement date was delayed in July 2005 from January 2006 to July 2006 due to the final Environmental Impact Statement (EIS) and Record of Decision (ROD) delay associated with the endorsement of the chosen R8A design alternative, which adds a new HOV lane to the outer roadway of eastbound and westbound I-90 between Bellevue and Seattle, by the Transportation Commission and local agencies.

[3] This project was delayed one month to allow for additional time to address the City of Shoreline permit requirements.

[4] The advertisement of the SR 522/I-5 to I-405 Multi-Modal project has been delayed from November 2003 and is expected to occur in late Spring 2006. WSDOT has accommodated requests from local and state elected officials from the City of Lake Forest Park to coordinate this project with local improvement work in order to improve efficiencies and reduce traffic disruptions from construction. However, issues with right-of-way and access planning for local businesses could further delay an ad date that now is tentatively set for May 2006. The project remains on the "Watch List" because of a potential for right-of-way cost increases (see p. 13).

WSDOT's Capital Project Delivery Programs

Selected Construction Highlights

Highway Construction Program

Western Washington Cable Barrier
This project constructs 38 miles of cable guardrail in six different counties, across six different highways. The project will aid in preventing head-on collisions caused by drivers crossing the median and entering oncoming traffic. The contractor has installed over 22 miles of high-tension cable barrier along I-5, SR 410, SR 167, SR 16, SR 18, and SR 522. The contractor will continue to install high-tension cable barrier along the I-5 median in northern Skagit County and Whatcom County.

I-5, Pierce County Line to Tukwila – HOV
This project widens I-5 between South 320th Street and the Pierce County line by adding an HOV lane to relieve congestion. Construction began in Spring 2005. Traffic has shifted outward, away from the I-5 median between South 320th Street (Federal Way) and the Pierce County line. The contractor completed earthwork and drainage work in the median. Construction of bridge decks is continuing at the South 336th Street and SR 18 crossings. Retrofitting concrete pavement also began on northbound lanes. Paving is proceeding adjacent to the median and should continue through May or possibly June. Traffic will then be shifted toward the median; widening will begin on the outside of the roadway. Project completion is expected in June 2007.

I-5, Roanoke Vicinity Noise Walls, Stage 2
This project installs concrete noise walls on Boylston Avenue E. and Harvard Avenue E.; both walls are now constructed. Following a winter shutdown, work resumed this quarter on the irrigation system, roadside planting, installation of permanent signing, and a fire access door.

Yet to be finished: grinding the existing asphalt on-ramp to I-5 northbound at Harvard Avenue E.; paving, curb construction, and lane striping between E. Roanoke Street and E. Hamlin Street; and some isolated tree planting. The project is on schedule for completion in June 2006. Project cost is consistent with the 2006 Legislative Supplemental Budget.

SR 16/Olympic Drive to Union - HOV
This project constructs HOV Lanes on SR 16 from Olympic Drive (Gig Harbor) to Union Avenue (Tacoma). Currently, there are four travel lanes. Upon completion, there will be six lanes throughout the corridor, with additional lanes provided between the Union Avenue and 6th Avenue interchanges. Work is expected to be completed in Spring 2007.

The eastbound Snake Lake bridge widening is complete, except for the final modified concrete overlay, which is scheduled for Fall 2006. Between 19th Street and Snake Lake, the Hot Mix Asphalt for the eastbound lanes is complete, except for the final overlay. On March 20, 2006 eastbound traffic was shifted to the new alignment between 19th Street and Snake Lake.

Soldier piles have been installed for the 19th Street pedestrian tunnel and associated retaining walls. The 12th Street bridge and the approach slabs are complete. The deck for the 6th Avenue bridge was poured in March. Post tensioning is scheduled for the end of March. The falsework for the Pearl Street bridge is complete. All the piers and columns at this bridge are complete.

A Cost Reduction Incentive Proposal from the contractor was approved to change the traffic control on the project. This proposal is expected to save $100,000.

I-5, Salmon Creek to I-205 – Widening
This project widens two miles of I-5 from NE 99th Street to NE 134th Street, from two lanes in both directions to three lanes and an additional lane between interchanges. Traffic has been shifted onto the newly completed northbound bridge. The contractor is currently working on the construction of the new southbound bridge and is widening the southbound lanes. The estimated cost is $38.2 million. The contract remains on schedule and on budget, with completion expected in June 2007.

SR 31, Metaline Falls to International Border
This project constructs an all-weather highway to eliminate truck weight restrictions. This project is currently on winter shutdown and work is scheduled to resume May 2006. Prior to winter shutdown, the contractor completed clearing and grubbing, installed 60% of the drainage items, and completed over 95% of the roadway excavation and embankment work. The completed embankments were seeded and protected from erosion over the winter. The project continues within budget and remains on-schedule for completion in November 2006.

I-90, Moses Lake Area – Bridge Clearance &
I-90/Potato Hill Bridge Bicycle and Pedestrian Bridge
Weaver Construction Company, of La Grande, Oregon, was awarded this project in January 2006 for $2.7 million. Construction began in March and is scheduled for completion by the end of November 2006. The bridge is scheduled to be open to traffic by mid-September 2006.

SR 161, Jovita Blvd to S 360th Street
This project widens SR 161 (Enchanted Parkway) to five lanes, from Milton Way (Milton) to South 360th Street (Federal Way). More than 75% of the total project has been achieved as of February 2006. Crews have completed all roadway widening,

Selected Construction Highlights

all drainage work (including two retention ponds to capture and clean highway runoff), and installation of five new traffic signals. Most of the new sidewalks between Military Road and Milton Way are also constructed.

In addition, crews are putting the final touches on the retaining wall construction. Three very rain-sensitive tasks remain: construction of the concrete median, paving the top layer of asphalt throughout the project, and final striping. WSDOT expects to complete this in late summer, opening a wider, safer SR 161 to traffic, within budget and ahead of schedule.

I-205 Mill Plain SB Off-Ramp Improvements

This project widens the existing off-ramp to accommodate a second left turn lane. It is the first Transportation Partnership Account-funded construction project initiated in the Southwest Region. Identified as a high-accident location, this location will now have increased capacity and safety at the off-ramp. This project was awarded in March 2006 to Nutter Corporation, DBA Nutter Underground Utilities Co., Inc. of Vancouver, WA for $428,428. It is on schedule to begin construction in early Summer 2006, with completion scheduled in Fall 2006.

SR 240/I-182 to Richland Y – Add Lanes & SR 240, Richland Y to Columbia Center Interchange

This project constructs additional lanes on SR 240 between Richland and Kennewick, linking I-182 with the U.S. Department of Energy's Hanford site, the Columbia Center commercial areas, and east Kennewick's industrial zones.

Activities this quarter included the continued construction of two bridge structures: Richland Y bridge is nearing completion with the deck closure pour remaining, and the I-182 bridge deck was poured in December. During post tensioning, a tendon duct failed, causing concrete spalling at Pier 3 and delaying grouting of the tendons. The contractor submitted a corrective plan, which was reviewed and approved by WSDOT. Repair of the spalled concrete began in late March. It is scheduled to be completed and the tendons grouted by mid-April. Construction of Wall No. 1 continues, as well as construction of the new illumination and signal systems. The contractor discontinued excavation of the wetland mitigation site in December due to adverse weather. Excavation resumed in February, including work on the Super Span structure, Stage 1. Asphalt paving of the new westbound lanes began in early March. This project is on budget and ahead of schedule.

SR 270, Pullman to Idaho State Line

This project improves capacity and safety by widening SR 270 between Pullman and the Idaho state line from two lanes to four lanes, with a continuous center turn lane. All of the previously reported environmental permitting issues (see the *Gray Notebook* for quarter ending June 30, 2004, p. 22) were resolved and the project was advertised on March 6, 2006. The project was awarded on April 27, 2006 to North Central Construction, Inc. for $18 million.

U.S. 395, NSC – Frances Avenue to Farwell Road

This project constructs two lanes of the North Spokane Corridor between Frances Avenue and Farwell Road, and completes the grading between U.S. 2 and Wandermere. The project consists of four contracts. The first contract, Farwell Road Lowering, was completed last year, and the second contract, Gerlach to Wandermere Grading, is underway with anticipated completion in late Summer 2006. The third contract was advertised February 27, 2006 and bids were opened on April 19, 2006. Only one bid was received and it was significantly higher than the engineer's estimate. The Department has analyzed the bid and will re-advertise the project in May. The fourth contract, Francis Avenue to U.S. 2 – Grading and Paving, is scheduled for advertisement in October 2006.

SR 527, 132nd Street SE to 112th Street SE

This project will construct an additional lane in each direction from 132nd SE to 112th SE, with a two-way left-turn lane between Mill Creek and Everett. During the winter months, the contractor worked to complete construction of concrete traffic barriers and did other clean-up work.

SR 24/I-82 to Keys Road

The contractor, Max J. Kuney, has nearly completed the first stage of the I-82 interchange bridge and will shift traffic to the completed portion of the bridge in May. The foundation, column and cross beam work for the new Yakima River bridge is complete and 75% of the bridge beams (super girders) have been placed. The contractor is installing water and sewer lines to begin construction of Riverside Road, and the embankment for the new SR 24 roadway is nearing completion.

WSDOT's Capital Project Delivery Programs

Selected Construction Highlights

Other Capital Programs – Ferries

Catch-Up Preservation

The "Catch-Up Preservation" program addresses the backlog of deferred ferry system terminal preservation work, and facilitates the ferry system reaching the preservation performance standards established by the Legislature's Joint Task Force on Ferries.

The projects included in the 2003 Legislative Transportation Package are based on continuous assessment of preservation needs. The elements of this project include dolphins (a group of piles used for docking ferries) at Anacortes, Bremerton, Kingston, Lopez, Orcas, Shaw, Tahlequah, and Vashon; aprons at Anacortes, Bremerton, Lopez, and Point Defiance; trestle replacement at Lopez; transfer span retrofits at Point Defiance, Tahlequah and Vashon; and upland preservation at Orcas and Point Defiance.

Lopez Dolphin Replacement: Plans, Specifications and Estimates (PS&E) was scheduled to begin May 2005. Due to funding challenges and project management changes, the project's priority was downgraded in Summer 2005. Currently, the project team has completed 90% of drawings and specifications with an advertisement date planned for May 2006. Funding issues were resolved using savings in catch-up funds from the Tahlequah transfer span project.

Anacortes Dolphin Replacement: The Anacortes project replaces two existing dolphins on the left side of Slip No. 1, and adds an inner dolphin on the right side of Slip No. 2. Similar to Lopez, this project has recently completed 90% of drawings and specifications. The advertisement date is scheduled for early May 2006.

144-Auto Capacity Ferries (4)

In response to the Legislature's direction in the recent 2006 budget supplement, four (4) 144-auto capacity ferries will be built using a Design-Build partnership under a modified RFP, in accordance with RCW 47.60.810 - 822. The Technical Proposal phase will begin in July 2006, with the shipyard construction contract award in April 2007. (See the ferries report on p. 68 for more information.)

Projects that receive federal funding must be advertised on a nation-wide basis, so the legislative policy of "Built in Washington" precludes WSDOT from using federal funding to build the four new ferries. WSDOT is using federal participation in the new vessel acquisition to design and manufacture propulsion systems and diesel generators. The national procurement of long lead-time items, such as the propulsion systems, is pursued separately from the shipyard contract. This will enable WSDOT to keep the shipyard construction contract in Washington, and procure machinery eligible for federal funding. To date, WSDOT has secured $2.5 million in federal funding, and is seeking up to $25 million.

The first of four diesel generators has been delivered as part of a diesel generator contract, with the second set entering factory testing in April 2006. For the propulsion system contract, manufacturing of main diesel engines has started. Manufacturing of reduction gears will commence before Summer 2006.

"Watch List" Projects – Cost and Schedule Concerns (Updated Since December 31, 2005)

Highway Construction Program

U.S. 2/U.S. 97 Peshastin East – Interchange

This project will construct an interchange at the junction of U.S. 97 and U.S. 2 near Peshastin. Although currently on schedule for a Spring 2008 construction start, the WSDOT is watching this project for a potential cost increase. Due to zoning changes within the project limits and recent escalation of real estate values in the area WSDOT anticipates a potential increase in right of way cost of $2 to $3 million. WSDOT is evaluating the potential impacts to the project, and actions necessary to mitigate those impacts, if the increases become firm.

SR 4, Svenson's Curve – Realignment

The advertisement date has been deferred from January 2006 to April 2012. The project is on hold as the result of a recent court ruling against condemnation for an entire adjacent parcel needed as a construction waste site for an estimated 80,000 cubic yards of excess excavated soil material. The deferral is necessary to provide time for investigating alternate waste sites and determine right-of-way and construction cost impacts. It is projected that the right-of-way and construction costs will be higher as there are very limited options for other nearby potential waste sites. When final cost impacts are determined, WSDOT will ask for legislative direction on whether to proceed with the project.

I-5/SR 526 to Marine View Drive – HOV

This is a design-build project that will widen I-5 for the construction of northbound and southbound HOV lanes between SR 526 and the vicinity of Marine View Drive in Everett. The project also includes: north and southbound auxiliary lanes between 41st Street and U.S. 2; a new right-hand exit; widening or replacement of 21 bridges; noise walls at certain locations; and stormwater treatment facilities.

Approvals from BNSF Railway for Operations and Maintenance are needed at two locations for this project. The Design-Build contract stated that both agreements would be executed by September 30, 2005. Changes in staff and in agreement procedures at BNSF have resulted in delays to executing the agreements for both locations. For one location, the agreement was executed on January 25, 2006. To avoid schedule and budget impacts, the second agreement must be executed by April 1, 2006. (As of the day this *Gray Notebook* went to press, the contract had been executed on May 3, 2006.)

SR 9, 108th Street NE (Lauck Road)

This project is a partnership between WSDOT and Snohomish County to construct right-and left-turn lanes at the intersection of SR 9 and 108th Street NE (Lauck Road), north of Marysville. In the process of working out the agreement details, it was discovered that the wrong formula was used to determine the county's contribution for the project. This resulted in a funding shortfall. The shortfall for construction is approximately $150,000 and the shortfall for design is approximately $200,000. The shortfall for purchasing right-of-way is under review and will be available by the next quarterly report.

U.S. 12, Attalia Vicinity – Add Lanes

This project widens U.S. 12 to four lanes from Dodd Road to the Boise Cascade vicinity, and extends four lanes on U.S. 12 from SR 124 to Boise Cascade. This project has been advertised for construction bids, and the expected project cost is within the 2006 Supplemental Transportation Budget amount of $15 million. It remains on the "Watch List" due to 1) a potential delay that could impact the scheduled construction start, and 2) potential additional time to process agreements with two major railroad companies. At this time, it appears any delay will be minimal, and will not impact completing the construction on time. WSDOT will continue to monitor and provide follow-ups on the status.

SR 20, Quiet Cove Rd Vicinity to SR 20 Spur

As reported in the June 2005 *Gray Notebook*, this project will be constructed in two stages due to the time necessary to acquire right-of-way for Stage 2. Project costs are being monitored and construction costs have been updated to take into account increases in costs of materials and fuel. There is a concern that costs may exceed available funding.

WSDOT has identified additional areas that require rock blasting, triggering a need for a new detour roadway through the forested wetland south of Gibraltar Road. This is adding significant costs to the Stage 2 estimate. A cost estimate update will be provided in future *Gray Notebook* updates.

SR 20, Fredonia to I-5 – Widening

In the December 2005 *Gray Notebook*, WSDOT reported several high-risk commercial properties within the vicinity of the SR 20/I-5 interchange that may result in increased right-of-way acquisition costs. Recently, the right-of-way estimate was updated and indicates an additional $5 to $10 million is needed to acquire right-of-way for the project. Previously, WSDOT also reported a projected design funding shortfall due to additional costs associated with Access Hearing appeals, project staging, and a shift to another wetland mitigation site. The additional $2.2 million needed to complete the design phase as well as $5 million for right-of-way acquisition will be shifted from the Stage 2 construction phase funding.

"Watch List" Projects – Cost and Schedule Concerns

WSDOT held a Cost Risk Assessment in March 2006 to verify project costs. Depending on the outcome of the study, and if costs continue to rise, a portion of Stage 2 work may need to be deferred until additional project funding becomes available.

I-90 Two-Way Transit & HOV Operations

The I-90 Two Way Transit and HOV Operations project adds HOV lanes in both directions, and requires the existing lanes to be narrowed and shifted. WSDOT Materials Engineers have reviewed the impact of this shift on the existing concrete pavement. They recommend additional work to ensure the long-term service life of the pavement. This recommendation potentially affects WSDOT's ability to keep the project within budget, but there is no apparent impact to the schedule.

This section of I-90 was designed and built in the late 1980s and early 1990s when WSDOT did not use dowel bars between the lanes of concrete pavement. When the lanes are narrowed and shifted, there will be increased stress loadings on these joints that will shorten the life of the existing concrete pavement, unless remedial action is taken. The pavement design engineers are strongly recommending completing a dowel bar retrofit of this section of I-90 to strengthen the pavement and avoid premature failure.

The dowel bar retrofit work was not anticipated nor budgeted for in the original scope of work. It is estimated that the cost for retrofitting will be in the range of $350,000 per lane mile. This would increase the project cost by $10-14 million. Current WSDOT design policy is to install dowel bars in the joints between lanes for all new concrete pavements.

SR 99, S 284th to S 272nd St - HOV

This project builds an HOV-only lane in each direction for carpools, vanpools, and buses on SR 99 (north of Federal Way) between South 284th Street and South 272nd Street. The project is on track for advertisement in April 2006. Although planned to be completed by late June 2006, Puget Sound Energy's (PSE's) utility relocation work is progressing slower than anticipated. This project remains on the Watch List as long as the relocation work potentially affects the project schedule. A more detailed update will be provided next quarter.

SR 522/I-5 to SR 405 Multimodal Project

This project constructs pedestrian enhancements and a transit signal in the City of Lake Forest Park along SR 522 in the vicinity of NE 153rd Street. It also replaces the two-way left-turn lane with a raised median. WSDOT is cautiously optimistic that right-of-way will be delivered by the May 22, 2006 advertisement date. Due to higher settlement costs on several parcels, the final right-of-way costs are projected to be over current budget by $400,000-$900,000. WSDOT is also working to resolve some utility conflicts. This work will not affect the advertisement date but could impact the project completion date. WSDOT will continue to monitor utility progress and will set the open to traffic date prior to advertisement.

SR 522, Bothell – UW Campus Access

The ad date for this project, which constructs a new south access to the UW Bothell/Cascadia Community College Campus from I-405 and SR 522, has been delayed until November 2006. The project team must redesign the roadway to a higher elevation to avoid a high groundwater table. All work on the project was halted in 2003 due to funding restrictions, including preparation of the Geotechnical Report that would have identified the presence of groundwater. Design resumed in 2004; however, groundwater was overlooked until piezometers were installed in the proposed drainage pond in late 2005. An update on project costs will be provided next quarter that reflects necessary revisions to the construction estimate.

New Highway Construction Projects Added to the "Watch List" since December 31, 2005

SR 24/I-82 to Keys Road

The new projected cost for this Nickel project is $45 million, $4 million over the original estimate of $41 million. The projected overrun is attributed to 1) an increase in environmental demands on the project, 2) unresolved right-of-way purchases, and 3) constructability issues on various work operations. The added cost is not expected to affect the 'open to traffic' date. An update will be provided in next quarter's report.

SR 202, Preston-Fall City Road & SR 203

This project will construct a round-about at the intersection of SR 202 and SR 203. The pre-construction engineering cost for the project has increased by $155,000, due to the additional design effort required to avoid wetlands, floodplain impacts, and the Snoqualmie River Bridge. It has also been identified that a Hazardous Waste Study is required in order to confirm the storage tank from an old gas station has been removed.

In addition to an increase in the pre-construction engineering costs, the construction cost estimate for the project has also increased by $150,000. This is to accommodate higher asphalt prices, wetland buffer mitigation, and a new retaining wall required to avoid wetland and floodplain impacts. The right-of-way acquisition process may be delayed two to four months as the result of three complicated business relocations. The final right-of-way costs may exceed the authorized funds by $500,000 - $800,000.

"Watch List" Projects – Cost and Schedule Concerns

I-205 Mill Plain Exit (112th Connector) (Previously listed for different issue)
The advertisement date for this project, Stage 1 of the I-205 corridor improvement effort, has been delayed from April 2006 to Spring 2008 in order to complete a recently required Environmental Assessment (EA). The EA will include a new, adjacent project (Stage 2). This Nickel-funded project (Stage 1) overlaps with the new, adjacent TPA-funded project, I-205/ Mill Plain to NE 28th Street (Stage 2). Due to this overlap, a single EA document must be completed prior to beginning any construction. More analysis is necessary to determine project scope and cash flow adjustments. An update will be provided in next quarter's report.

I-405, 112th Ave SE to SE 8th Street (Bellevue)
This project constructs a new northbound auxiliary lane from 112th Avenue SE to I-90, a new northbound lane between I-90 and SE 8th Street, and a new southbound lane between Main Street (Bellevue) and I-90. Two issues place this project at risk for meeting schedule milestones: fish impacts and railroad impacts.

Endangered Species Act (ESA) compliance poses a high risk to all WSDOT projects with stormwater work. WSDOT must consult with the National Marine Fisheries Service (NMFS) on effects to salmon. NMFS and FHWA/WSDOT need an agreement on the criteria for evaluating stormwater effects. Until a state-wide policy agreement is reached, the project schedule is at risk. This threatens the Completion of the Environmental Assessment, FHWA's Finding of No Significant Impact (FONSI), and receipt of the Army Corps of Engineers' Section 404 permit.

Obtaining a Construction and Maintenance Agreement from the BNSF railroad may also delay the schedule. The railroad crosses over the I-405 southbound lanes and under the northbound lanes. The complexity of this crossing between I-90 and SE 8th, involving both bridge and tunnel work, has caused concern about WSDOT's ability to meet project advertisement and construction milestones.

The project milestones (Environmental Documentation December 2006, Advertisement December 2006, and Open to Traffic December 2009) are at risk, but they remain on schedule at this point in time.

SR 3/Belfair Bypass
The 2005 Transportation Budget included $15 million for preconstruction engineering to construct a bypass to SR 3, around the community of Belfair. This project has been added to the Watch List due to the uncertainty and risk regarding how much work has been accomplished to date; what, if any, work needs to be redone; and what additional work is necessary to complete the design. The project was originated by Mason County and was subsequently put on hold, leaving a partially-completed environmental document. An in-depth review of the pre-construction work previously accomplished is underway to determine 1) status of compliance with all necessary standards and regulations, 2) any potential budget impacts, and 3) an effective coordination process with Kitsap and Mason Counties while WSDOT proceeds with design. WSDOT will report progress of the review in the next *Gray Notebook*.

SR 9/SR 522 to 228th Street SE – Widening &
SR 9, 228th Street SE to 212th Street SE (SR 524)
This project widens two miles of a two-lane road to a four-lane divided highway on SR 9 (between SR 522), north of Woodinville, to just north of SR 524 (Maltby Road). This project is under construction. The right-of-way settlements on the parcels in condemnation have resulted in a $1-1.5 million right-of-way budget overrun.

Other Capital Programs – Rail

Cascade and Columbia River Upgrade
The $890,000 project would upgrade the light-duty tracks entering Oroville in Okanogan County to handle larger modern cars. The railroad resolved previously reported problems with chip car availability that threatened the need for the project. However, the rail company refused the loan in February 2006, but indicated that it may want to take out the loan in 2007, if conditions change. As the railroad has not rejected the loan at this time, WSDOT will continue to discuss the possibility of a future loan to the railroad and will make a recommendation on re-appropriation of the funds or deletion of the project by September 2006.

Palouse River & Coulee City Railroad Acquisition
The 2004 Legislature appropriated funds to purchase the CW Branch, also known as the Coulee City line, of the Palouse River and Coulee City (PCC) Railroad that is owned by Watco Companies, Inc. In September 2005, the owner withdrew the property from the sale, claiming that the scrap value of the railroad had increased substantially.

The 2006 Legislature modified the authorization to purchase the CW Branch by combining the previously allocated acquisition funds with the allocations for projects identified to rehabilitate the entire PCC Railroad, a project known as the PCC Cheney–Coulee City–Pullman Upgrades. It also authorized the forgiveness of a rehabilitation loan previously provided to Watco in exchange for good and valuable consideration. The

"Watch List" Projects – Cost and Schedule Concerns

total funds available for the purchase and rehabilitation are $28 million, starting in the 2003-05 biennium and spread over five biennia. The Legislature also directed the Office of Financial Management to enter into negotiations with Watco or take other action to acquire the branch, obtain the operating rights on the other branches, and renegotiate the existing operating lease. Negotiations are expected to begin in April 2006.

It is unknown whether the state can reach a voluntary agreement with Watco, or whether formal, adversarial proceedings will be needed before the Surface Transportation Board. Until the matters are resolved or an interim agreement reached, the purchase and projects will be delayed.

Geiger Spur Connection

The Legislature provided a total of $5.0 million to build a new rail connection to Spokane County's Airway Heights industrial park to replace the connection that currently passes through Fairchild Air Force Base. The project depends on the state's purchase of the CW Branch of the PCC Railroad, at least the portion needed to provide access to the BNSF Railroad Company main line in Cheney. The purchase fell through when the railroad owner, Watco Companies, Inc., withdrew the property from sale (see p. 13 for more information). The project also depends on approval by the Surface Transportation Board (STB), which could require an extensive environmental review process. Spokane County is awaiting finalization of the State's purchase and selection of an operator, before approaching the STB in order to minimize any STB concerns that might require such a review.

New Creston Livestock Feedmill (Lincoln County)

Lincoln County secured a tenant for a livestock feed mill just west of Creston. Continued operation of the feed mill depends on road and rail improvements that combine to provide needed transportation infrastructure. The project requires collaboration with the county; the Department of Community, Trade, and Economic Development, which provided a grant; the Lincoln County Public Development Authority, which received the grants including WSDOT's $30,000; WSDOT's Eastern Region; and the PCC Railroad. In September 2005 the owner of the railroad, Watco Companies, Inc., withdrew the CW line from possible purchase by the state and indicated its intention to abandon and scrap the line (see p. 13). The project is on hold until negotiations between the state and Watco conclude. Even if the railroad line remains operable, the Public Development Authority and the existing tenant are in a legal dispute that may result in the loss of the tenant.

Dayton Yard Rehabilitation – Port of Columbia County

The Seneca Green Giant asparagus cannery relocated away from Dayton several years ago, and put its plant up for sale. The Port of Columbia County located two prospective replacements to purchase the plant and begin operations. However, the operations required rail upgrades, so the Legislature provided $270,000 to assist with the necessary infrastructure. Subsequently, the Green Giant property was removed from the market, and the prospective operators lost any incentive to locate in the area. The Port has identified an alternative project that must be evaluated by WSDOT to determine whether it falls within the scope of the original authorization. It is uncertain at this time whether this is the case, and whether the alternative project can be completed by June 30, 2007.

Snohomish Riverfront Redevelopment

The City of Everett is pooling the state's $1.8 million federal and local funds to construct a bypass to an existing BNSF Railway line along the river. The goal is to remove the existing line along the portion of the riverfront so the property can be developed. The funds will be used to purchase the portion of the existing line to be bypassed until the new line is completed and operational, and to purchase materials to construct the new tracks. The project depends upon the city and BNSF completing a complex set of land swaps. The land swaps were delayed indefinitely from the scheduled December 2005 completion, when BNSF requested that the track profile be raised 18 inches. The city and BNSF are working through the issues, which include the possibility that the city will have to perform further environmental analysis that will delay the project further.

Everett - Delta Jct. Curve Realignments and Delta Yard Storage Tracks

This project will reduce travel times through the area and provide storage tracks to keep freight switching work off the main line. This will result in improved on-time reliability for trains traveling north of Seattle. The 2003 Funding Package provided $1 million in the 2003-05 biennium for pre-construction engineering on this project and $13 million in the 2005-07 biennium for construction.

Pre-construction engineering began in August 2003, but issues with scope design and wetlands have resulted in the engineering not being completed by the end of June. This left an estimated $700,000 in project funds unexpended in 2003-05, which was re-appropriated in the 2006 Supplemental Transportation Budget. The completion of engineering and environmental permitting will delay the construction by about 20 months.

"Watch List" Projects – Cost and Schedule Concerns

Swift Customs Facility Capacity Improvements, Blaine
This project, funded in the 2005 package at $3.0 million, will increase rail line capacity at the Swift Customs Facility and will ensure Amtrak Cascades schedule reliability. State funds will supplement a $3.0 million federal earmark. The Legislature assumes an additional $3.0 million in private/local/other funds that have not been secured. The project is spread over the next two biennia (2005-07 and 2007-09). BNSF is working to secure additional public funds from other sources, such as the Department of Homeland Security.

Pre-construction engineering began in December 2005, which will result in a phased construction plan to match the funds available while providing incremental improvements to rail and inspection operations. However, BNSF is now considering a modified plan, based on recent traffic modeling. The modified plan could delay completion of the pre-construction engineering and Right-of-Way purchases, delay the start of construction, and change the funds required for each. It is not known if this will delay the completion of construction, scheduled for June 2009.

Mukilteo Temporary Sounder Station
In late December 2005, WSDOT learned that the Sound Transit Board has decided that Sound Transit will not construct a temporary station and will complete the permanent Mukilteo Station in mid-2007. This decision makes this WSDOT project redundant and unnecessary. WSDOT recommends that this project be deleted.

Other Capital Programs – Ferries

For nearly ten years, the Washington Ferry System has been negotiating treaty fishing rights impacts with Puget Sound tribes for new terminal development. The proposed Edmonds Ferry Terminal at Point Edwards was the first location for which the Ferry System reached a settlement. The terms of the settlement agreement were first reached in Spring 2004, and the ferry system has been working with the four affected Tribes since that time to develop a mutually acceptable legal agreement. While it has been challenging to resolve differences between tribal (four Tribes) and State laws, the biggest obstacle is reaching agreement on the equitable distribution of the settlement among the Tribes. The Ferry System negotiated payment for impacts to Treaty fishing rights at Edmonds, but they are still in the process of working through negotiations for Mukilteo, Anacortes, Seattle, Port Townsend, Keystone, and Bainbridge Island. The process is complicated by the number of Tribes involved and different tribal concerns at each location. Unique to the negotiations at the Northern Puget Sound locations is the commonality between the Tribes at three locations the Suquamish, Tulalip, Lummi, and Swinomish all have Treaty fishing rights at Edmonds, Mukilteo, and Anacortes. The Ferry System is meeting with Army Corps of Engineers to continue to gain a deeper understanding of how to move forward on issues identified by the Tribes.

Anacortes Multimodal Terminal
In 1997, the ferry system completed a master plan design for a new Anacortes Multimodal Terminal. The project will replace the existing ferry terminal, which serves four different San Juan Island destinations and the Ferry System's international route to Sidney, B.C. Project elements over the next ten years include site circulation improvements; replacement and expansion of the terminal building; and relocation of the tie-up slips to deeper water. One of the relocated tie-up slips will also include a new access trestle capable of loading and unloading service vehicles. The design report for the tie-up element of the project was completed in August, 2004. Plans and specifications were completed in July, 2005.

This master-planned project is affected by Tribal concerns. Construction of the third tie-up slip project (originally planned for September, 2005) has been delayed to September, 2007, pending resolutions with the Tribes by Spring, 2007. Discussions with the Tribes on cultural and archaeological issues pertaining to Section 106 documentation are ongoing.

The Anacortes Multimodal Program will use the General Contractor Construction Manager (GCCM) delivery method for the terminal building construction. The GCCM contractor will assume the role of construction manager and responsibility for the constructability review of the design documents and, as necessary, function as the value engineer. The Ferry System selected the GCCM contractor and executed the pre-construction services contract. Thirty percent of the design documents were submitted in July, 2005 for the terminal building and the site circulation projects. The Ferry System rejected these documents because the July, 2005 design package exceeded the Anacortes program budget. Current estimates show these two projects exceeding their budgets. Extensive study by the ferry system has been undertaken to determine the reasons for these overrun projections. Activity this past quarter included approval of recommendations that will bring the project costs back under control, and review of the GCCM pre-construction services agreement to update labor costs and GCCM involvement in the project.

"Watch List" Projects – Cost and Schedule Concerns

New Ferry Projects Added to the "Watch List" since December 31, 2005

Bainbridge Island Trestle Improvement Project (Dock-Widening)

The project is an expansion of the existing dock to resolve operational deficiencies at the Bainbridge Island Ferry Terminal. The estimated 2006 construction budget is $9.5 million dollars. There are a number of issues arising on the Bainbridge Island capital projects with regard to the environmental planning and analyses. The City of Bainbridge Island has challenged the Ferry System's SEPA lead agency status, and has challenged the Determination of No Significant Impacts decision on the Eagle Harbor Maintenance Facility project. The Suquamish Tribe and the public have also raised concerns regarding the separate environmental analyses that have been done (or will be) for the Bainbridge Island projects.

The Ferry System recommends including the Dock-Widening project in the environmental review and documentation for the overall Bainbridge Island Terminal Improvement Project ($160 million) as a component of the current master planning phase. This action will result in an approximate 2-year delay for the Dock-Widening construction. Given nominal "real time" escalation of 6% per year, on $9.5 million the cost impact of escalation may be $1-1.5 million. The other elements of the overall program and the Dock-Widening will therefore be planned and analyzed within one master plan.

Mukilteo Multimodal Terminal

The Mukilteo Multimodal Terminal Project relocates the Ferry Terminal site and constructs a larger, multi-modal terminal facility. As a result, the Ferry System will be able to expand the throughput capacity of the terminal, provide customers with multi-modal travel options, and relieve local congestion. This new facility will have a dock with two slips, vehicle holding capacity for two boat loads, four toll booths with HOV priority, terminal building, an overhead pedestrian bridge that connects ferry, transit and rail, transit center, HOV priority staging area and by-pass lanes, bike facilities/staging, and pedestrian promenades.

Recent consensus by Ferries and the Federal Transit Administration (FTA) is that an Environmental Impact Statement (EIS) is necessary in order to more fully analyze all potential impacts and consider construction phasing. The Ferry System and FTA are striving to accelerate the design schedule in order to deliver the project on schedule. Construction is being phased in order to meet the current budget. The two (2) proposed alternatives present a phased construction process for the proposed parking structure, with a surface parking lot in the interim period. The Compact Alternative proposes a phased process for the second slip. These elements of the project may obtain funding through current grant applications and, if obtained, may be added back in to the scope.

Design will proceed for all elements. Currently, Port of Everett is stating that the ferry system will pay for property acquisition or lease. Right-of-Way was not an original phase in this project and is being added: private property needs to be acquired to construct the access road. Conveyance of Tank Farm property from Department of Air Force (DOAF) to the Port of Everett is currently underway. DOAF will release an Environmental Assessment for the conveyance Summer, 2006. The Ferry System, FTA, and DOAF are in direct contact regarding archaeological work for property. FTA reopened Section 106 consultation to include all Tribes that signed the Point Elliott Treaty. Further archaeological work is in process. The ferry system presented an offer to Tribes in connection to the Compact Alternative. WSDOT is currently developing a Memorandum of Agreement between project partners (Sound Transit, Port of Everett, City of Mukilteo, and NOAA) which will address property acquisition and shared costs. The project is on schedule for completion by August 2010.

WSDOT's Capital Project Delivery Programs

Project Delivery Summary Reports

Schedule Milestone Tracking for Nickel Projects

Milestone Results for all Nickel Projects with one or more Milestone Activity

Milestone	Number of Projects with this Milestone	Number of Scheduled Milestones Achieved	Number of Scheduled Milestones Not Achieved	Achievement Rate
Project Definition Complete				
Biennium to Date (2005-07)	4	3	1	75%
Cumulative to Date (2003 - Mar. 06)	46	43	3	93%
Begin Preliminary Engineering				
Biennium to Date (2005-07)	3	1	2	33%
Cumulative to Date (2003 - Mar. 06)	109	95	14	87%
Environmental Documentation Complete				
Biennium to Date (2005-07)	9	8	1	89%
Cumulative to Date (2003 - Mar. 06)	26	23	3	88%
Right of Way Certification				
Biennium to Date (2005-07)	4	1	3	25%
Cumulative to Date (2003 - Mar. 06)	18	11	7	61%
Advertisement Date				
Biennium to Date (2005-07)	15	9	6	60%
Cumulative to Date (2003 - Mar. 06)	54	43	11	80%
Operationally Complete				
Biennium to Date (2005-07)	8	8	0	100%
Cumulative to Date (2003 - Mar. 06)	21	20	1	95%

Source: WSDOT Project Control and Reporting Office

Baseline Data: Baseline milestone dates are derived from the original Legislative expectation (2003-05 budget). Advertise Project and Operationally Complete Milestones are considered on-time if completed within the scheduled baseline calendar quarter. All other milestones are reported as on-time if they are completed within +/- 6 weeks of baseline date

Milestone Definitions:

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. Preconstruction 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 Protection Act (NEPA) and the State Environmental Protection 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
This is 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
This is 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 Programs

Project Delivery Summary Reports

Schedule Milestone Tracking for Transportation Partnership Account (TPA) Projects

Milestone Results for all TPA Projects with one or more Milestone Activity

Milestone	Number of Projects with this Milestone	Number of Scheduled Milestones Achieved	Number of Scheduled Milestones Not Achieved	Achievement Rate
Project Definition Complete[1]				
Biennium to Date (2005-07)	39	27	12	69%
Cumulative to Date (2003 - Mar. 06)	54	40	14	74%
Begin Preliminary Engineering[1]				
Biennium to Date (2005-07)	109	33	76	30%
Cumulative to Date (2003 - Mar. 06)	153	75	78	49%
Environmental Documentation Complete				
Biennium to Date (2005-07)	11	10	1	91%
Cumulative to Date (2003 - Mar. 06)	16	15	1	94%
Right of Way Certification				
Biennium to Date (2005-07)	5	5	0	100%
Cumulative to Date (2003 - Mar. 06)	8	8	0	100%
Advertisement Date				
Biennium to Date (2005-07)	15	15	0	100%
Cumulative to Date (2003 - Mar. 06)	18	18	0	100%
Operationally Complete				
Biennium to Date (2005-07)	9	9	0	100%
Cumulative to Date (2003 - Mar. 06)	9	9	0	100%

Source: WSDOT Project Control and Reporting Office

[1] Project Definition and Begin Preliminary Engineering delays were due to Initiative 912. WSDOT is working to re-assess the schedule, budgets, and risk factors of each of the projects impacted by I-912. This assessment will be included as part of the 2007-09 budget/program development process.

Baseline Data: Baseline milestone dates are derived from the original Legislative expectation (2005-07 budget). Advertise Project and Operationally Complete Milestones are considered on-time if completed within the scheduled baseline calendar quarter. All other milestones are reported as on-time if they are completed within +/- 6 weeks of baseline date

Milestone Definitions:

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. Preconstruction 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 Protection Act (NEPA) and the State Environmental Protection 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
This is 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
This is 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 Programs

Paying for the Projects: Financial Information

2003 Transportation Funding Package

2003 Transportation Funding Package Highlights

Deposited into the Transportation 2003 (Nickel) Account (established by the 2003 Legislature)

- 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
- A $20 license plate number retention fee

Revenue Forecast Update

The following information incorporates the February 2006 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 extending from 2003 through 2013. Due to timing issues, the 2005 Legislature moved several preservation projects into the 2013-15 biennium. Both cumulative ten-year totals and individual biennial amounts are shown.

Current forecasted revenues include the most recent actual revenue collection data available as well as updated projections based on new and revised economic variables. Over the initial ten-year period (2003-13), gas tax receipt projections for the 2003 Transportation (Nickel) Account decreased slightly from the baseline forecast. The forecast for licenses, permits, and fees also show a slight decrease, causing a minor decrease in the ten-year outlook for the account.

In the Multimodal Account, projections for the vehicle sales tax are slightly higher than the baseline forecast, resulting in a slight increase in the ten-year outlook.

Forecasted revenues are still closely aligned with the legislative baseline projection for both accounts.

Bond Sales Plan for Authorizations Provided by the 2003 Transportation Funding Package

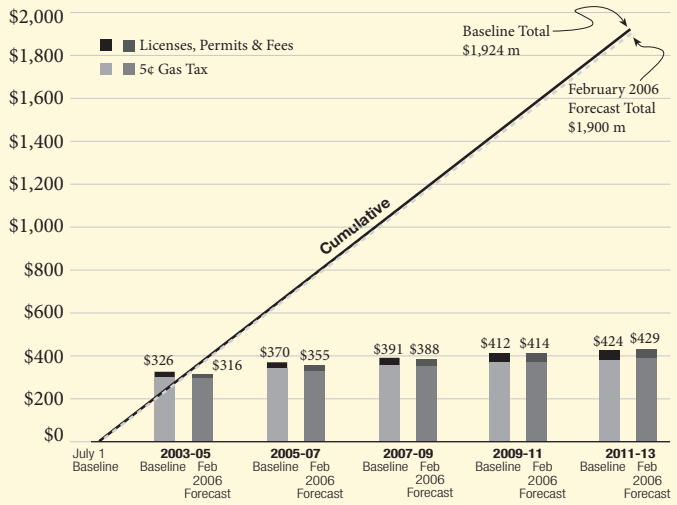
In addition to the new revenue sources, the 2003 Transportation Funding Package contained two new bond authorizations:

- Gas tax bonds: authorization of $2.6 billion
- State General Obligation (GO) bonds: authorization of $349.5 million

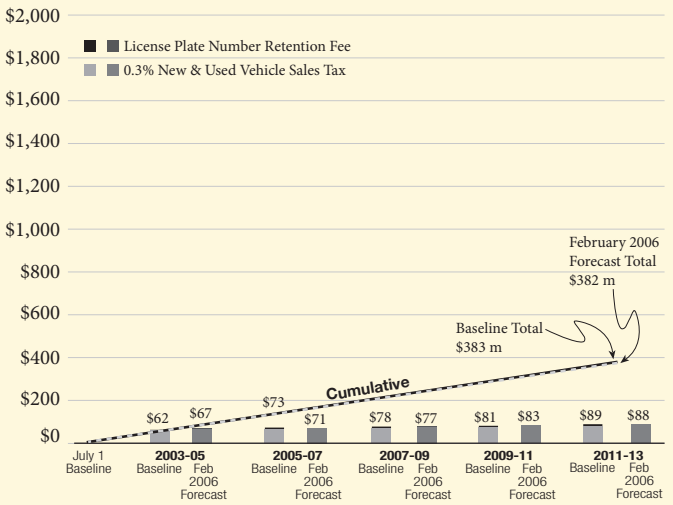
For the 2005-07 biennium the 2006 Legislature's Supplemental Budget appropriated $880 million in proceeds in gas tax bonds and $49.6 million from the state GO bonds. The current bond sale plan for this biennium is anticipated to be $845.3 million for the Nickel Account and $48.5 million for the Multimodal Account. The differences between the appropriated amounts of $880.0 million and $49.7 million, respectively, and the Bond Sales Plan are attributed to premiums received on prior bond sales.

For details on the current bond sale plan and detailed account information, please visit www.wsdot.wa.gov/finance

Transportation 2003 (Nickel) Account Revenue Forecast
March 2003 Legislative Baseline Compared to the February 2006 Transportation Revenue Forecast Council
Dollars in Millions



Multimodal Account (2003 Package) Revenue Forecast
March 2003 Legislative Baseline Compared to the February 2006 Transportation Revenue Forecast Council
Dollars in Millions



WSDOT's Capital Project Delivery Programs

Paying for the Projects: Financial Information

Transportation Partnership Program

2005 Transportation 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
- $30 for cars between 6,000 and 8,000

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)
- Identicards, Driver Permits and Agricultural Permits increased to $20 (previously $15)
- Commercial Driver License and Renewal increased to $30 (previously $20)
- License Reinstatement 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)

Revenue Forecast Update

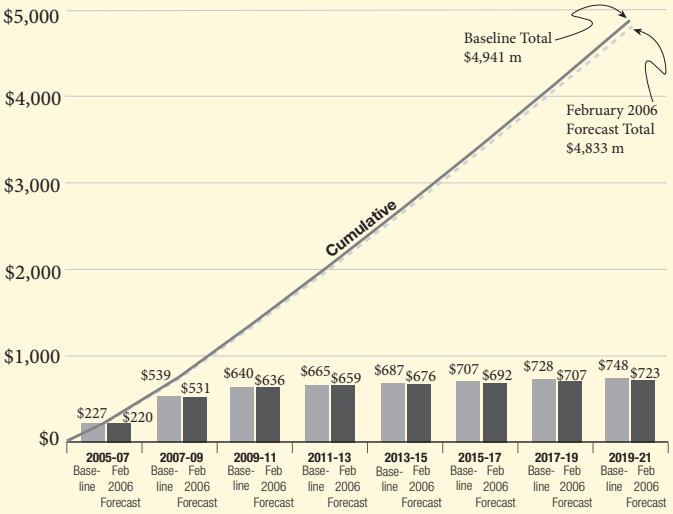
The following information incorporates the February 2006 gas tax forecast projections. The accompanying chart compares the current projected revenue forecast to the "baseline" forecast used in the budget making process when the 2005 Funding Package was adopted. The 2005 Funding Package was developed as a 16-year plan extending from 2005 through 2021.

The February 2006 forecast for gas tax receipts over the 16-year period has decreased slightly; however, forecasted revenues are still closely aligned with the legislative baseline projection.

Transportation Partnership Account Gas Tax Revenue Forecast

March 2005 Legislative Baseline Compared to the February 2006 Transportation Revenue Forecast Council

Dollars in Millions



Bond Sales Plan for Authorization Provided by the 2005 Funding Package

The 2005 Transportation Funding Package includes a new bond authorization of $5.1 billion over the 16-year period.

2005-2007 Biennium

For the 2005-07 biennium, the legislature appropriated $150 million in proceeds from the gas tax bonds. The current bond sale plan is anticipated to be $145.5 million this biennium. The difference between the appropriated amount of $150.0 million- and the Bond Sales Plan is attributed to premiums received on prior bond sales.

It should be noted that project construction was put on hold for most of the first fiscal year of the biennium, pending the outcome of Initiative 912, in the November 2005 election. Project construction is currently underway. A 10-year expenditure plan has been established and the 2015-21 biennia are under development.

For details on the current bond sale plan and detailed account information please visit www.wsdot.wa.gov/finance

Pre-Existing Funds: Programmatic Reporting

PEF Program Milestone Reporting

On April 6, 2006, the Transportation Performance Audit Board (TPAB) released a report to the Governor, House Transportation Committee, Senate Transportation Committee, and the Joint Legislative Transportation Committee. This report, *Washington State Department of Transportation Capital Project Delivery Reporting* outlines the effort by TPAB to convene a Transportation Working Group (TWG) to develop coherent instructions and requests regarding budget and schedule reporting of WSDOT's capital projects.

As reported in the last *Gray Notebook,* and in alignment with the TPAB report, future editions of the *Gray Notebook* will begin reporting on the progress of Pre-Existing Funds (PEF) projects by programmatic categories. The chart below shows the six programmatic categories that are planned to be reported and the number of projects associated with each category for this biennium.

Each category will be reported by the actual and forecasted amount for the following measures:

- Number of Projects Beginning Engineering
- Number of Projects Advertised for Bids
- Number of Projects "Operationally Complete"
- Program Cash Flow

During this quarter WSDOT made enhancements to the Project Management Systems to allow tracking of the PEF program by milestones in the Capital Project Management System (CPMS). WSDOT is currently in the process of inputting and validating the new data for accuracy.

Why is the Pre-Existing Funds Program reported differently than the Nickel and TPA Program?

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, the Pre-Existing Funds (PEF) fund programs to correct deficiencies defined by categories and subcategories at a program level. Funding is aligned to commitments to address set priorities such as number of miles paved per biennium. Each biennium, new PEF projects are programmed based on prioritized needs and available funds so the list of PEF projects changes each biennium.

Because Nickel and TPA projects were defined and budgeted at the project level from the beginning, milestones and other benchmark data to monitor individual project delivery were established and are available. However, since PEF projects have been historically funded programmatically, this type of data has not been collected and is not currently available. Future programs will collect benchmark project data such as the three milestones.

Pre-Existing Funds Projects for the 2005-07 Biennium

Dollars in Millions

Programmatic Categories*	# of Projects 2005-07	Total Sub-Program Estimate for These Projects	Average Project Size
Pavement Preservation	184	$219.0	$1.2
Bridges (Preservation/Replacement)	56	$68.1	$1.2
Slope Stabilization	17	$18.3	$1.1
Safety (roadside, rumble strips, median cross-over, etc.)	54	$61.2	$1.1
Environmental Retrofit (fish passage improvement, stormwater runoff)	14	$5.5	$0.4
Other Facilities (rest area, weight stations)	39	$146.7	$3.8
Total	**364**	**$518.8**	**$1.47 (Average)**

*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.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Programmatic Reporting

Advertisement Record: Ninety-Nine Projects Now in Construction as of March 31, 2006

Biennium to Date (2005-07)

The 2005-07 Highway Construction Program includes a commitment of 329 advertisements. Pre-Existing Funds (PEF) advertisements through the quarter ending March 31, 2006, were 93 of the planned 123, or 76% of the "planned" commitments for the first three quarters. In addition, four projects schedule for advertisement in future quarters of the biennium were advertised this quarter.

Current Quarter (January – March 31, 2006)

Of the 71 planned advertisements for the third quarter, 49 were advertised as scheduled, one was advertised earlier this biennium, 11 were delayed to later in the biennium, and six were deferred to a future biennium; four projects were deleted from the program. Therefore, a total of 50 of the 71 projects scheduled for the third quarter have been advertised and are now in the construction phase. Additionally, nine projects not scheduled for the third quarter were also advertised and are now in the construction phase.

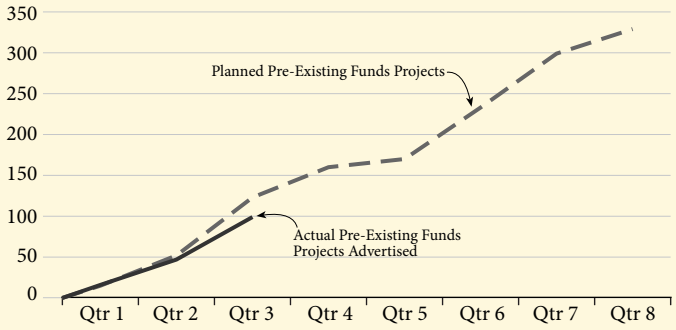
Highway Construction Program Advertisements

Pre-Existing Funds Projects

Planned vs. Actual Number of Projects Advertised

2005-2007 Biennium, Quarter 3 ending March 31, 2006

Project Count

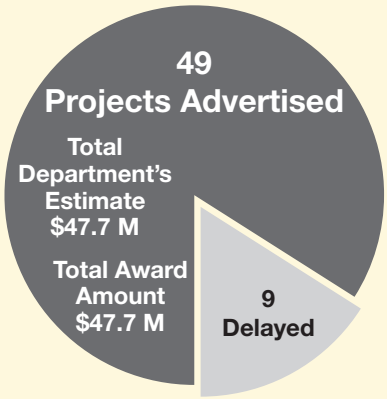


Source for all graphs: WSDOT Project Control and Reporting Office.

The table below summarizes the delivery status of PEF projects advertised during the third quarter of the 2005-07 biennium. This summary includes the safety improvement projects and project delivery accomplishments within this quarter.

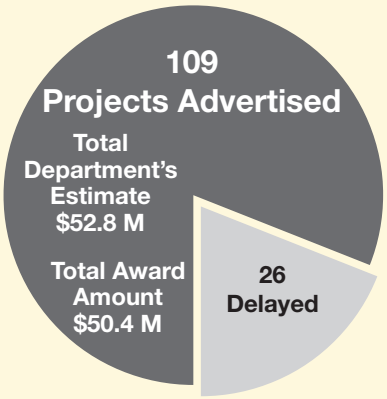
Pre-Existing Funds Projects: A Snapshot of Quarterly Progress and Total Biennial Progress to Date

End of Last Quarter
December 31, 2005



Projects Advertised	Projects Through Last Quarter	This Quarter's Progress	Biennium to Date Total
As Scheduled	35	49	84
Project Ads Early	3	1	4
*** Adjustment**	**5**	**0**	**5**
Total Advertised	**43**	**50**	**93**
Projects Delayed			
Within the biennium (delayed)	11	11	22
Out of the biennium (deferred)	3	6	9
*** Adjustment**	**-5**	**0**	**-5**
Total Delayed	**9**	**17**	**26**
Projects Deleted			
Projects Deleted	0	4	4
Total Deleted	**0**	**4**	**4**
Emergent Projects**	**6**	**3**	**9**
Advanced from future biennium	**0**	**1**	**1**
Early from within biennium	**1**	**5**	**6**

End of This Quarter
March 31, 2006



* The adjustments reflect projects planned for advertisement in previous quarters that have since been advertised. One reported delayed project was advertised late and three projects, unreported last quarter, were found to be advertised early.

** The *Gray Notebook* for the quarter ending September 30, 2005 and December 31, 2005, erroneously overlooked the reporting of emergent project advertisements. Three emergent projects were advertised in both quarters. Emergent projects address an emergency condition due to flooding, mudslides, rock fall, or other unforseen events (such as culvert failures and slope failures due to saturated conditions) that has caused failure of the roadway and closure to traffic, or that is at imminent failure and will cause failure of the roadway and closure to traffic.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program

Advertisement Record: Projects Advertised for this Quarter

January – March 31, 2006

Seventy-One PEF projects scheduled to be advertised for construction during the third quarter of the 2005-07 biennium.

Project Description	On-Time Advertised	Project Description	On-Time Advertised
I 5/Toutle Rd Safety Rest Area - Water System Rehab	✓	SR 224/Benton City to W Richland - Paving	✓
I-5/52nd Ave W to SR 526 - SB Paving	✓	SR 260/SR 17 to Kahlotus - Paving	✓
I-90/East Channel Bridge - Paint	✓	SR 410/Mud Lake Road to SR 12 - Paving	✓
SR 547/Frost Rd to Telegraph Rd Vic - BST	✓	SR 821/Selah Creek to Umtanum Rec. Site - Paving	✓
U.S. 2/Stevens Pass to Leavenworth - C/L Rumble Strips	✓	SR 21/Junction SR 260 to Vicinity U.S. 395 - 2006 Chip Seal	✓
SR 20/Twisp East - Fish Barrier	✓	I-82/Goose Gap Road I/C - Paving (Exit 104)	✓
I-5/McAllister Creek - Storm Water	✓	SR 26/Laurel Rd to Washtucna - 2006 Chip Seal	✓
SR 20/U.S. 101 to Discovery Road - Paving	✓	SR 26/Lacrosse Airport Rd to Dusty - 2006 Chip Seal	✓
U.S. 101/Simpson Ave Bridge - Mechanical	✓	SR 27/Vicinity Manring St to Mount Hope Rd	✓
U.S. 101/Brockdale Road to Skookum Creek - Paving	✓	I-90/Flora Road to Barker Road Test Section - Fog Seal Only	✓
SR 104/U.S. 101 to Hood Canal Bridge - Paving	✓	SR 127/Churchill to Dusty - Fog Seal Only - 2006 Chip Seal	✓
SR 112/1.76 Mile E of SR 113 Junction	✓	SR 211/Vicinity U.S. 2 to Junction SR 20 - Fog Seal Only	✓
SR 116/SR 19 to Indian Island - Paving	✓	SR 261/Snake River to Junction SR 260 - 2006 Chip Seal	✓
SR 119/Hoodsport to Lake Cushman - BST	✓	SR 261/Washtucna to Sutton Rd - 2006 Chip Seal	✓
SR 161/Lynch Creek Road to Northwest Trek Drive - Paving	✓	SR 271/Oakesdale to Junction U.S. 195 - 2006 Chip Seal	✓
SR 165/Carbonado to Jct SR 410 Paving	✓	SR 274/SR 27 to Idaho State Line - 2006 Chip Seal	✓
SR 512/104th Street E to SR 167 Overcrossing - Paving	✓	SR 278/Rockford to Idaho State Line - 2006 Chip Seal	✓
SR 14/2.2 Mi East of Bergen Rd - Rockfall	✓	SR 904/Vicinity Betz Rd to Junction I-90 - Fog Seal Only - 2006	✓
U.S. 97 Oregon S/L to Toppenish - Rumble Strips	✓	U.S. 97/Yakima C/L to Satus Creek - Paving	✓
SR 125/Walla Walla to SR 124 - Paving	✓	U.S. 97/ Kachess River Bridge - Deck Replacement	✓
SR 14/2.3 Mi East of Bergen Rd - Rockfall	✓	SR 307/Stottlemeyer Rd/Gunderson Rd - Signal	Early
SR 10/SR 970 to U.S. 97 - Paving	✓	I-5/S 320th S to I-405 - Profiled MMA Lane Striping[1]	Delay
U.S. 12/Stember Creek Vicinity - BST	✓	SR 410/288th Ave SE to Crystal Mountain Blvd[2]	Delay
SR 17/Mesa to Basin City Road - Paving	✓	SR 542/Baptist Camp Creek[3]	Delay
SR 22/SR 223 to Prosser - Paving	✓	SR 542/Hedrick Creek[4]	Delay
SR 24 Smith Road to SR 241 - Rumble Strips	✓	SR 548/Blaine Rd to Fleet Rd - BST[5]	Delay
I-82 Yakima to Prosser - Weather & Radio Stations	✓	U.S. 12/U.S. 101/SR 105/Aberdeen Signals - Major Electrical[6]	Delay
I-82/Prosser Vic - Weigh Trucks in Motion	✓	SR 3/SR 304 Off Ramp to SR 304 On Ramp Vic - Paving[7]	Delay
I-82/Yakitat Road I/C - Paving (Exit 93)	✓	SR 19/Oak Bay Road to Embody Road - BST[8]	Delay

Note: Table continues on following page.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program

Advertisement Record: Projects Advertised for this Quarter (continued)

January – March 31, 2006

Seventy-One PEF projects scheduled to be advertised for construction during the third quarter of the 2005-07 biennium

Project Description	On-Time Advertised	Project Description	On-Time Advertised
I-82/Yakima Vicinity Median Barrier[9]	Delay	SR 14/2.8 Mi E of L White Salmon Riv Br[16]	Deferred
I-182 Pasco Vicinity Median Barrier[10]	Delay	SR 24/SR 240 Vicinity - Paving	Deferred
I-5/Northwest Avenue (City of Bellingham Lead)[11]	Other Lead, Delay	SR 821/Burbank Creek Bridge - Scour[17]	Deleted
SR 906 Travelers Rest - Building Renovation[12]	Deferred	SR 9/Eaglefield Drive Vicinity - Paving[18]	Deleted
SR 542/High Creek - Fish Barrier Removal[13]	Deferred	SR 542/Toad Creek - Fish Barrier Removal[19]	Deleted
SR 104/1.2 Mile West of Hood Canal Br[14]	Deferred	U.S. 12 East Waitsburg Sidewalk[20]	Deleted
SR 25/Bossburg Rd to Canada - 2006 Chip Seal[15]	Deferred		
Total On-Time as Scheduled this Quarter			**70%**
Total On-Time as Scheduled Biennium to Date			**76%**

Source: WSDOT Project Control and Reporting Office

Project Details:

[1] This advertisement is being delayed three months from February 2006 to May 2006. Delaying the Ad date will better align the construction requirements specifications for methyl-methacrylate striping (a type of plastic used for striping on roadways) when the pavement surface temperature and ambient temperature needs to be at least 50 degrees for this night-time work so the striping adheres to the pavement. Hence, it will avoid a Contractor shut down until night-time temperatures are within specifications. The planned Operationally Complete date is being moved up to October 2006.

[2] This advertisement is being delayed one month from March 2006 to April 2006 to ensure all environmental processes are complete and permits are in-hand before advertising the project. This delay will not affect the planned Operationally Complete date.

[3] This advertisement is being delayed from March 2006 and the planned Operationally Complete date from December 2006 to December 31, 2007, in order to accommodate the environmental permit acquisition process. The project costs have increased due to additional roadside development items, traffic items, installation of a new culvert, and costs for environmental mitigation measures due to in-stream work.

[4] This advertisement is being delayed from March 2006 and the planned Operationally Complete date from December 2006, due to high project cost (approximately $2 million) and low benefit/cost ratio. Washington Department of Fish and Wildlife (WDFW) recommends delaying this project to the 2009-11 or 2011-13 biennium, but keep it on the 6-year list. The project will be re-scoped and Cost/Schedule will be re-evaluated for the 2007-09 biennium programming considerations. No revised dates have been selected yet.

[5] This advertisement is being delayed ten months from February 2006 to December 2006 since this work is being combined with two other BST conversion projects to provide a more efficient use of available staff and to reduce unit bid prices for the construction contract. This delay will move the planned Operationally Complete date out one year to March 2008.

[6] This advertisement is being delayed two months from March 2006 to May 2006 to provide additional time to coordinate with the City of Aberdeen on design details. The planned Operationally Complete date is being accelerated to December 2006.

[7] This advertisement is being delayed four months from March 2006 to July 2006. This project was delayed in order to be constructed with a nearby project to get better bid prices, unfortunately this project cannot wait. Additional time was required to separate the two projects again. The planned Operationally Complete date is being moved up to September 2006.

[8] This advertisement is being delayed from March 2006. In the 2007-09 biennium, when the rest of the route is scheduled for overlay, this short isolated section will receive overlay treatment too.

[9] This advertisement is being delayed seven months from March 2006 to October 2006 to provide additional design time needed to accommodate a requirement for existing median slopes of 6:1 or flatter. This delay will move the planned Operationally Complete date out one year to October 2007.

[10] This advertisement is being delayed seven months from March 2006 to October 2006 to provide additional design time needed to accommodate a requirement for existing median slopes of 6:1 or flatter. This delay will move the planned Operationally Complete date out one year to October 2007.

[11] This advertisement is being delayed 13 months from January 2006 to February 2007. The City of Bellingham lead on this project and the project schedule has been adjusted to match the City schedule. This delay will move the planned Operationally Complete date to December 2007.

[12] This advertisement is being deferred six years from February 2006 to February 2012 to provide for unanticipated higher priorities. Minor renovations were made last year to bring the facility to a maintainable level for the interim. The planned Operationally Complete date moves out to December 2012.

[13] This advertisement is being delayed from March 2006 and the planned Operationally Complete date from December 2006 due to high project cost (greater than $1 million) and a low benefit/cost ratio. WDFW recommended a bottomless culvert as an alternate solution. WDFW recommends delaying this project to the 2009-11 or 2011-13 biennium, but keep it on the 6-year list. The project will be re-scoped and Cost/Schedule will be re-evaluated for 2007-09 biennium programming consideration. No revised dates have been selected yet.

[14] This advertisement is being delayed almost three years from February 2006 to January 2009 in order to coincide with the closure of the Hood Canal Bridge for construction. This delay will move the planned Operationally Complete date to September 2009.

[15] This project has been deferred to the 2007-09 biennium in order to combine this project with the Border Crossing program.

[16] This advertisement is being delayed five years from January 2006 to January 2011. The high cost of this project in the Columbia River Gorge does not provide enough value to compete against other current needs. This delay moves the planned Operationally Complete date to December 2011.

[17] This project has been deferred to the 2009-11 biennium due to better than expected pavement conditions.

[18] This advertisement is being deleted from February 2006 and the planned Operationally Complete date from October 2006. The Bridge and Structures office determined that the project was not as critical and could be deferred at this time.

[19] This advertisement is being deleted from February 2006 and the planned Operationally Complete date from April 2007. It was determined that the section of roadway does not need to be paved this biennium. Adjacent sections of SR 9 are scheduled for paving in 2012 and by combining this small project with the larger ones better costs may be obtained.

[20] This project is re-prioritized by WDFW and is recommended to be "Deleted" from the 6-years plan list. This location does not rank high enough with Priority Index (PI) equal to 13.4 and WDFW has no projects on their 6-yr list with PI lower than 15.

[21] This advertisement has been deleted because the solution was not acceptable to the community.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Individual Reporting

Schedule Milestone Reporting

Six Pre-Existing Funds projects have been selected for individual project reporting on a quarterly basis. These projects have been selected due to the size and visibility of each project. The following table summarizes the three schedule milestones tracked for these six Pre-Existing Funded projects: Begin Preliminary Engineering, Advertisement Date, and Operationally Complete.

Six Individually Tracked Pre-Existing Funds Project Results through March 31, 2006
Dollars in Millions

	First Leg. Budget	Baseline: Current Leg. Approved	Scheduled Date to Begin Preliminary Engineering		Schedule Date for Advertisement		Schedule Date to be Operationally Complete
			Date	On-Time	Date	On-Time	
SR 28 - East End of George Sellar Bridge	$9.4 (2004)	$9.5 (2005)	May 2004	✓	Oct 2008	✓	Sept. 2010
SR 539 - Horton to Tenmile Road	$32.0 (2001-03)	$53.0 (2005)	Oct. 1990	✓	Feb 2007	✓	June 2009
SR 202 - SR 520 to Sahalee Way	$36.9 (2001-03)	$70.8 (2005)	May 1998	✓	Aug 2005	Late[1]	Dec 2008
U.S. 101 Purdy Creek Bridge Replacement	$6.0 (2004)	$11.2 (2005)	Aug 2004	Late[2]	Oct 2007	✓	Sept 2009
U.S. 2/Ebey Island Viaduct and Ebey Sl Br	$32.1 (2002)	$35.5 (2005)	Dec 2005	✓	Apr 2007	✓	Sept 2010
SR 303/Manette Br Bremerton Vic. - Br. Replacement	$25.5 (2002)	$25.5 (2005)	Sept 1996	✓	Mar 2008	Late[3]	Nov 2011

Future Reporting: Current WSDOT Estimate of Cost at Final Completion is the critical number toward which all modern project management is pointed. Today WSDOT engineers and program managers can only back into these values as best as possible without the management information systems that allow schedule and budgets to be used as the basis for value-earned management systems. WSDOT is considering ways to use estimating techniques to approximate these values until new management information systems are installed and project data is loaded.

Baseline Data: Baseline milestone dates are derived from the 2003 Legislative Transportation Budget. Advertisement Date and Operationally Complete milestones are considered on-time if completed within the scheduled baseline calendar quarter. The Begin Preliminary Engineering milestone is reported as on-time if completed within +/- 6 weeks of baseline date.

Milestone Definitions:

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

Advertisement Date
This is 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
This is 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.

Project Details:

[1] This project was delayed from the original 2005 Legislative Final advertisement date to address several environmental and permit issues.

[2] Preliminary Engineering for the Purdy Creek Bridge was late by one year due to passage of Referendum 51 that reduced program funding. Although the Preliminary Engineering began late, WSDOT has been able to maintain the original Advertisement and Operationally Complete dates.

[3] The project was selected for Value Engineering, to ensure that the public is receiving the best project possible for the investment at this location. Incorporating the results of the study has delayed the design and contract plan preparation, resulting in a delayed Advertisement date.

Pre-Existing Funds Program: Financial Information

Paying for the Projects: Financial Information

WSDOT submitted an expenditure plan to the Legislature for the third quarter of the biennium totaling approximately $334 million. As of March 31, 2006, actual expenditures totaled $249 million, leaving a variance of approximately $85 million or 25% from the biennium plan.

The 25% variance as of the end of the third quarter for the Highway Construction Program was divided between the Improvement and Preservation programs. The Preservation program planned cash flow was $187 million, and actual expenditures were $147 million. This was under plan by $40 million, contributing to approximately 12% of the current cash flow variance. The under-spending in the Preservation program was due to the extension of the selection process for Hood Canal Bridge alternate construction sites as a result of archeological discoveries at the originally planned construction site (see p. 42 of the December 31, 2004 *Gray Notebook* for more information). Additionally, closure of the bridge has been delayed until next biennium, which has delayed the need to lease a park and ride lot for the west side passenger-only ferry terminal until 2008.

The Improvement program planned cash flow was $147 million, and actual expenditures were $103 million. This was under plan by approximately $44 million, contributing to about 13% of the variance. The under spending in the Improvement program was primarily due to slower than expected expenditures for several projects, including:

SR 202/SR 520 to Sahalee Way – Widening

SR 240/I-182 to Richland Y – Add Lanes

SR 161/128th to 176th – Safety

SR 509/Miller/Walker Impervious Area Project

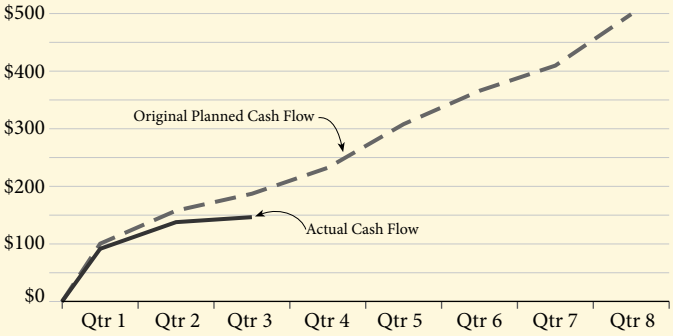
Preservation Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 3 ending March 31, 2006

Dollars in Millions



Note that the Original Planned Cash Flow depicts the 2006 Legislative Final Budget. A new book of project costs is currently being prepared that will allow plotting against the 2006 Legislative Supplemental budget.

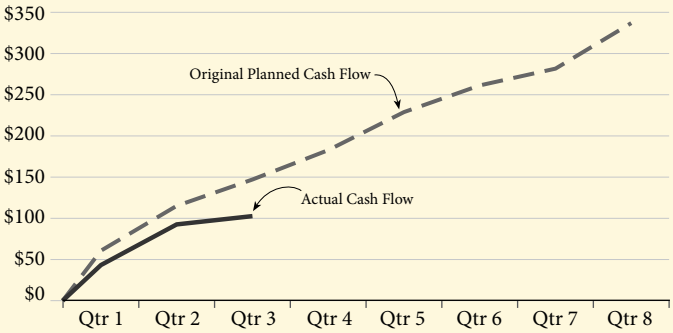
Improvement Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 3 ending March 31, 2006

Dollars in Millions



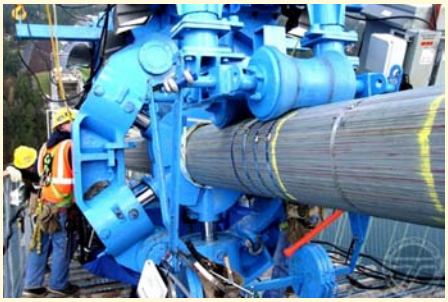
Special Report: Tacoma Narrows Bridge, Quarterly Update

New Bridge Construction

As of March 31, design-builder Tacoma Narrows Constructors (TNC) completed 77% of construction on the SR 16 Tacoma Narrows Bridge (TNB) project. During the quarter TNC finished spinning all 19 strands of the south cable and later compacted the cable into its final 20.5" diameter. To achieve the desired shape, TNC brought in four specialized compactors to compress the cable. Standing seven feet high, these 28,000-pound bright blue compactors use six hydraulic jaws to apply 10,000 pounds of pressure onto the wire strands to achieve the exact dimensions for the suspension cable. As the quarter closed, TNC finished placing the permanent cable bands and began hanging the suspender cables from the south main cable. The suspenders will eventually connect the main cable to the bridge deck.

The unused corroded wire that was discovered in November was replaced with wire that arrived from fabricators in South Korea, England, and China. The new wire allowed TNC to resume spinning the north cable on March 13. As of the end of March, TNC completed 13 of the 19 required strands on the north cable.

In South Korea, fabrication of the 46 bridge deck sections is 95% complete. The first 16 sections are scheduled to arrive on site in June, with two other shipments scheduled to arrive over the next four months.



One of four cable compactors used to compact the 19 strands of the south cable into one main suspension cable.

Roadway/Existing Bridge Retrofit Construction

Roadway activities this past quarter included completing landscaping and preparation for the upcoming paving season. Workers prepared mix designs, cleaned up the paving joints, and prepared for some transition zone paving work.

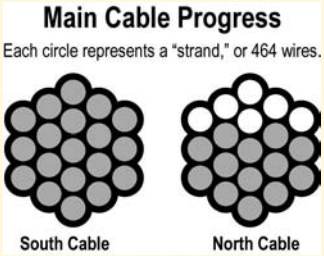
On March 7, WSDOT announced it would build a new on-ramp at 24th Street to eastbound SR 16. Since the new ramp is located after the toll plaza it will be restricted for use only by vehicles equipped with valid electronic tolling transponders. The ramp cost and associated modifications to the new bridge deck is expected to be about $7.5 million. This will be funded from unused contingency monies included in the projects original estimated cost of $849 million.

Tacoma Narrows Bridge Progress as of March 2006

Percent Complete

Design	99.9%
Construction	76.8%
Total	**78.4%**

Source: WSDOT Engineering and Regional Operations Division



Within each main suspension cable are 19 strands comprised of 464 individual wires–totaling 8,816 wires per suspension cable. In January, TNC finished spinning all 19 strands on the south main cable. By the end of March, TNC crews completed spinning 13 strands on the north main cable.

Seismic retrofit work on the existing bridge continued steadily this quarter. Upgrades to the lower wall and foundations in the east anchorage and upgrades to the existing towers and piers at the east approach span were completed. In February and March, crews installed steel jackets on the columns at the east approach span. These jackets were filled with grout for strengthening.

Early morning on March 27, while in the process of demobilizing from night work for seismic upgrades to the tower struts on the existing bridge, a 30-ton crane tipped over. Although no vehicles were involved and no one was injured, the bridge was closed for six and a half hours while WSDOT brought in another crane to assist in a delicate recovery operation as the crane's boom was extending out over the pedestrian railing. The crane's boom damaged the pedestrian railing, but did no damage to the key structural components to the bridge.

Toll Facility, Installation and Operations

In late January, the first of three major system tests occurred on the future electronic and manual toll collection system to be used on the new bridge. TransCore, the company hired by WSDOT to design, operate, and maintain toll collections, conducted tests for WSDOT management and staff at their San Diego facility. The tests were performed under test traffic conditions at a facility built to mimic the newly constructed SR 16 toll plaza. Testing included monitoring the performance of equipment that WSDOT will use for electronic toll collection and manual toll collection.

On February 1, WSDOT issued a Notice to Proceed (NTP) to TransCore for the Toll Systems Operation Agreement. This agreement allows TransCore to operate the tolling system on the TNB for five years.

Special Report: Hood Canal Bridge, Quarterly Update

Pontoon construction for the SR 104 Hood Canal Bridge East-Half Replacement Project began after site preparation efforts at Concrete Technology in Tacoma concluded at the end of February. As of March 31, 2006 the Hood Canal Bridge project is 17% complete.

Site Preparation

Pontoon construction site preparation concluded in February. Preparation included installing unused sheet pile walls from Port Angeles on the north and south sides of the Concrete Technology graving dock, backfilling around the graving dock between the sheet pile walls, installing two new bright red tower cranes, and placing "bond breaker", coated wood that keeps the pontoons from sticking to the graving dock, on the graving dock floor.

Looking down on Concrete Technology graving dock from the new tower crane.

Pontoon Mock-up Completed

Crews constructed a pontoon mock-up, which is a full-scale model, of a Hood Canal Bridge pontoon section during February and March. The process taught WSDOT and the contractor, Kiewit-General of Poulsbo (K-G), several important lessons that will improve construction methods used for the real pontoons. For example, crews evaluated material placement and identified the best concrete consistency needed. In addition, crews defined a preferred method for building construction joints and determined an acceptable placement, or pouring, rate for concrete.

Pontoon Construction Begins

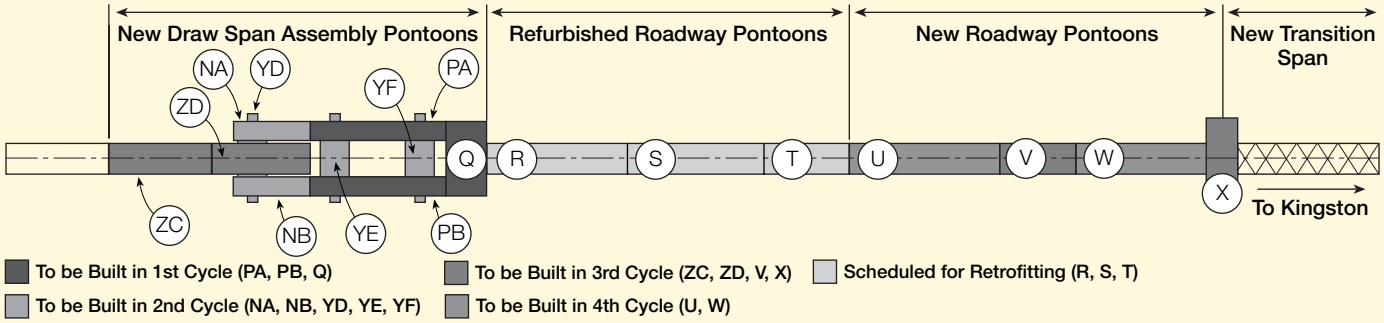
In early March, the new 80-foot tall tower crane picked up wood pontoon forms and placed the forms into the graving dock, marking the start of pontoon construction. Forms for the outside pontoon walls and the pontoon wall pre-fabricated rebar mats were installed.

Workers prepared materials prior to actual pontoon construction. Carpenters built the wood forms needed for the first three draw span section pontoons. Eleven fabrication beds were set up. Crews also finished five flat panel forms per day and a corner form every one to two days. Ironworkers bent and tied epoxy-coated rebar to create rebar "mats", which are sections needed for the pontoon floors, walls, and ceilings. Completing most of the work outside the graving dock makes the work inside the graving dock proceed faster and more smoothly.

WSDOT and K-G will construct all 14 new pontoons inside the 150-foot wide by 465-foot long Concrete Technology graving dock over four cycles. Three pontoons will be built in the first cycle, five in the second cycle, four in the third, and two in the fourth cycle (see pontoon construction cycle graphic below). The completed east-half pontoon roadway sections and fully assembled east-half draw span will be floated into place during the bridge closure in May and June 2009. Another three pontoons, built during the west-half bridge replacement in the early 1980s, will be retrofitted in Seattle. By the end of March, the east-half pontoon construction was 7% complete.

For more information visit www.hoodcanalbridge.com.

Schedule for Hood Canal Bridge Pontoon Construction Cycle



Cross-Cutting Management Issues

Program Management Information Systems

Recently, WSDOT completed the Critical Applications Modernization and Integration Strategy Project, undertaken as directed by a 2005-07 Legislative Proviso. Eclipse Solutions, a consulting firm, examined 11 core technology systems which provide WSDOT both direct support of capital projects and information necessary for the agency's accountability efforts. The study evaluated the systems from both a technical and business perspective, indicating how well they are fulfilling the agency's business needs.

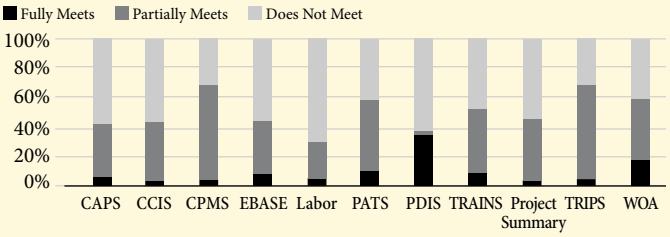
According to the study, none of the 11 critical applications met even 20% of the agency's current and future business and technical requirements (see the graph to the right). WSDOT is currently addressing the unmet needs through tremendous manual effort and use of multiple adhoc systems. Based on the study recommendations, WSDOT needs to replace all 11 critical applications to achieve significant, long-term improvements in transportation investment decision-making and day-to-day capital project, capital program, and financial management.

The study provided recommendations for a modernization strategy for system improvements or replacement. This strategy utilizes a phased approach to ensure WSDOT can effectively deliver a system replacement initiative of this magnitude. The timeline (see figure below) extends over three biennia with the first phase scheduled to begin in the 2005-07 biennium. Phase 1 will include a feasibility study and the establishment of the technical architectural foundation, both of which are essential for the subsequent phases.

The results of the Critical Applications Modernization and Integration Strategy were presented to the Office of Financial Management, Information Services Board, and the Washington State Legislative Transportation Committees in December 2005 and January 2006. A supplemental budget funding request for Phase 1, the feasibility study, was not successful in the appropriation process; therefore, WSDOT is currently considering other options to continue the momentum of the project until funding can be obtained.

Current State of Functionality Provided

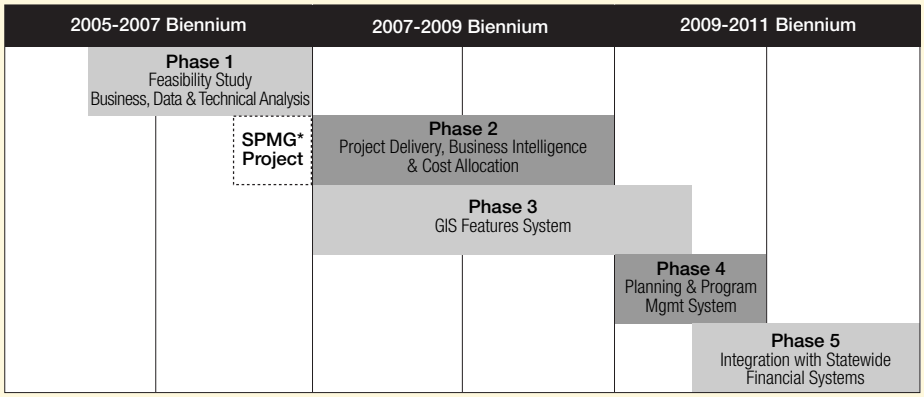
Percent of Requirements Met



Core Systems Included in the Assessment Study

Contract Administration and Payment System (CAPS)
Construction Contracts Information System (CCIS)
Capital Program Management System (CPMS)
Estimate and Bid Analysis System (EBASE)
Labor Collection and Distribution System/Payroll (Labor Payroll)
Priority Array Tracking System (PATS)
Project Delivery Information System (PDIS)
Transportation Reporting and Accounting Information System (TRAINS)
Project Summary (ProSum)
Transportation Information Planning and Support System (TRIPS)
Work Order Authorization System (WOA)

Critical Applications Migration Strategy



* The State-Wide Program Management Group (SPMG) Project will address a portion of the Project Delivery requirements of Phase 2, beginning in the 2005-2007 biennium.

Cross-Cutting Management Issues

Use of Consultants

From October 1, 2005 to March 31, 2006, the net totals of new consultant authorizations were $75,775,913 for on-call task order agreement projects and $32,897,815 for project specific agreement projects. The net increase in authorizations made this reporting period can be directly attributed to the 2005 Transportation Partnership Account (TPA). A wide array of projects received funds; similar to the last report, however, the bulk of new authorizations were directed towards a few specific projects. (See the table on the next page for more details.)

On-Call Task Order Consultant Agreements

Biannually, WSDOT assesses the types of work services that it consistently uses, such as preliminary engineering, traffic engineering, real estate appraisal and negotiation, land surveying, traffic engineering, and transportation studies. Based on the estimated need, the agency will advertise for predetermined categories of work and will initiate multiple On-Call Task Order agreements for each category. The regions determine if work can be completed using one of these On-Call Task Order agreements.

Forty-three Nickel projects received consultant authorizations from On-Call Task Order agreements during the period of October 1, 2005 to March 31, 2006. Authorizations totals were $35,127,543, which was provided to 50 prime consultant firms and 35 sub-consultant firms. Twenty-five TPA projects received consultant authorizations from On-Call Task Order agreements during the period of October 1, 2005 to March 31, 2006. Authorizations totals were $19,288,187, which was provided to 18 prime consultant firms and 45 sub-consultant firms. Pre-Existing Funds (PEF) On-Call consultant authorizations (excluding Nickel and TPA) for the same period were $21,360,183.

Project Specific Agreements/Supplements

Project Specific Agreements are typically for work that cannot be performed using the existing On-Call agreements described above. They are individually advertised by project. The second and third quarters of the 2005-07 biennium saw new authorizations for Project Specific Nickel agreements and/or supplements totaling $23,699,184. Six different prime consultants and 15 sub-consultants received authorizations from project specific Nickel agreements. New authorizations for Project Specific TPA agreements and/or supplements were $8,323,677. Four different prime consultants and 13 sub-consultants received authorizations from project specific TPA agreements. All PEF project specific consultant authorizations totaled $874,954.

Consultant Authorization Amounts for October 1, 2005 – March 31, 2006[1]

Dollars in Millions

	Nickel	TPA	PEF	Total
On-Call Task Order Consultant Agreements	$35.1	$19.3	$21.4	$75.8
Project Specific Agreements/Supplements	$23.7	$8.3	$0.9	$32.9
Totals	$58.8	$27.6	$22.3	$108.7

Source: WSDOT Consultant Services Office

[1] The General Engineering Consultant authorizations are not included in this table. Although WSDOT has entered into agreements with consultants to perform this work, actual authorizations are still pending as of the end of the quarter.

Selected General Engineering Consultant Agreements, October 1, 2005 - March 31, 2006

Project	Consultant
Alaskan Way Viaduct & Seawall Replacement Project	Hatch Mott MacDonald
I-90 Snoqualmie Pass East – Hyak to Keechelus Dam	URS Corporation
Northwest Region Mt. Baker Area	H.W. Lochner, Inc.
Northwest Region Mt. Sno-King Area	DMJM Harris, Inc.
SR 167 Extension	Carter & Burgess, Inc.
SR 167 Valley Freeway Corridor	Perteet, Inc.
SR 520 Bridge Replacement and HOV Project	HDR Engineering, Inc.
Tacoma/Pierce County HOV Program	CH2M Hill, Inc.

Source: WSDOT Consultant Services Office

General Engineering Consultant Agreements

Delivery of the WSDOT $15 billion program over the next 16 years has resulted in new agreements with consultant teams to provide additional project delivery expertise and support. General Engineering Consultants (GEC) have been contracted specifically to add support on eight high profile projects statewide (see chart above). In future reporting periods, these agreement authorizations will be included in the Project Specific Agreements/Supplements section above. The amount of money and the source funds for these projects will also be identified.

Cross-Cutting Management Issues

Significant On-Call Consultant Authorizations, October 1, 2005 - March 31, 2006

Dollars in Millions

Project	Fund Type	Consultant	Type of Work Authorized	Total $	Auth. Type
Alaskan Way Viaduct and Seawall Replacement	Nickel	Parsons Brinkerhoff Quade & Douglas, Inc.	Cost estimating, risk management, construction planning, draft EIS, technical reports, right of way plans, tunnel evaluation	$26.7	New
Columbia River Crossing Project	TPA	David Evans and Associates	Environmental, design and traffic engineering, develop funding structures, implementation strategies	$16.1	New
Bainbridge Island Ferry Terminal Improvement Project	TPA	KPFF Consulting Engineers	Project management, environmental planning, and design services	$2.3	New
Mukilteo Multimodal Project	Nickel	Moffatt & Nichol Engineers	Cost risk assessment, utility plans, foundation design, additional environmental	$2.3	Amend
SR 704 Cross Base Highway	Nickel	HDR Engineering, Inc.	Hydraulic report, preliminary design, and right-of-way plan.	$.02 $1.0	New Amend
SR 167 Extension	Nickel	David Evans and Associates	On-call construction services	$0.3	New

Source: WSDOT Consultant Services Office

Significant Authorizations for Project Specific Consultants, October 1, 2005 - March 31, 2006

Dollars in Millions

Project	Fund Type	Consultant	Work Description	Total $	No. of Subs	Amt for Subs	Auth. Type
I-405 General Engineering Consulting	Nickel	HNTB Corp.	Work for 11 projects in the I-405 Corridor Plan	$23.5	16	$1.5	Suppl
Keystone-Port Townsend Ferry Terminal Improvements	TPA	CH2M Hill	Preliminary design and environmental	$2.8	7	$0[1]	Suppl
I-5 Mellen Street to Grand Mound	TPA	David Evans and Associates	Preliminary engineering and right of way	$2.7	6	$1.8	Suppl

Source: WSDOT Consultant Services Office

Definitions:

"Fund Type" is based on the Legislative Leap List.
"New" authorizations represent task orders awarded to the listed consultant.
"Amended" ("Amend") authorizations represent additional work by the listed consultant. In the cases listed above, the task order began in a prior period.
"Supplemental" ("Suppl") authorizations represent additional scope, time and budget relative to the consultant efforts for project specific agreements listed above.
"Subs" are subcontractors to the prime contractor.

Project Details

[1] This project has not given any funds to subconsultants as of the end of this quarter.

Cross-Cutting Management Issues

Hot Mix Asphalt

WSDOT tracks both the projected and awarded amounts of Hot Mix Asphalt (HMA) for two reasons. First, the agency projects HMA amounts so that asphalt-producing contractors can better anticipate future HMA volumes. This helps these private contractors better manage their production and reduce their costs to deliver the HMA, and ultimately results in more competitive bidding and favorable prices by construction contractors on WSDOT projects. Secondly, WSDOT measures actual tons awarded as an indicator of the agency's estimating accuracy.

In October 2005, WSDOT forecasted that 1,213,985 tons of HMA would be awarded in construction contracts through September 2006. This forecast anticipated that during the six months from October 2005 through March 2006, 45 projects would be awarded with a combined total of 707,695 tons of HMA. At the end of March, the actual total is 38 projects awarded with 545,193 tons of HMA. Of this total, 27 are from Pre-Existing Funds (PEF) amounting to 374,443 tons, ten are Nickel projects amounting to 170,250 tons, and one is a Sound Transit project with 500 tons. There were no Transportation Partnership Account (TPA) projects with HMA awarded during this period. By the end of April, WSDOT anticipates that 240,991 more tons will be awarded (for a total of 786,184 tons), bringing the total awarded closely in line with the projected award of 745,336 tons.

Hot Mix Asphalt Forecast Decreases 32% for 2006

The 2006 forecast of 1,213,985 tons of HMA is a 32% decrease compared to the 2005 forecast of 1,779,826 tons. There were multiple reasons for this decrease.

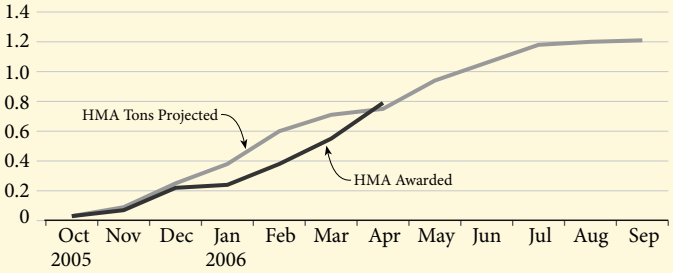
Biennial Scheduling. WSDOT put a higher percentage of its paving jobs on advertisement in the first year of the 2005-07 biennium.

Funding Reallocation. In a collaborative decision, WSDOT and the Legislature reduced the amount of money provided to the roadway preservation program in the 2005-07 biennium; this money was reallocated to WSDOT's safety program for cable median barriers. As a part of this reallocation, WSDOT has started using more chip seal pavement in place of asphalt for the road surfaces on lower volume roadways. This will help keep the backlog of paving needs down.

HMA Cost Increases. The price of HMA has increased from $33/ton in 2002 to $55/ton in the first quarter of 2006 (a 67% increase). This has decreased the amount of HMA that WSDOT can afford to purchase.

HMA tonnage will likely go back up in future years as the TPA projects begin construction.

Hot Mix Asphalt Tons Awarded
October 2005 - March 2006
Tons in Millions



Hot Mix Asphalt Pavement - Projected vs. Actual, 2002-2005
In Tons, October through September of each year[1]

Year	Projected	Actual	% Difference
2002	1,373,465[2]	1,364,021	-1%
2003	1,417,126	1,825,442	+29%[3]
2004	1,324,218	1,299,377	-2%
2005	1,779,826	1,685,394	-5%
2006	1,213,985	N/A	N/A

Source: WSDOT Construction Office

[1] Awarded tons are tracked from an October through September calendar year, providing a better measurement of the work schedule and better planning for the paving industry than the calendar year. Construction projects awarded in the fall typically do not begin work until the next year due to inclement weather conditions.
[2] The projection for 2002 was revised in March 2002 by the Transportation Commission following budget cuts.
[3] The 2003 "Nickel" Transportation Funding Package was passed after the projection was made for 2003. WSDOT subsequently awarded five projects from the Nickel funding package with a combined total of 315,285 tons of HMA.

Early evening paving in South Central Region on I-90. Note the lights on the equipment illuminating the area for night work.

Cross-Cutting Management Issues

Construction Costs Trends

WSDOT prepares its construction cost estimates using historical information about market conditions drawn from recent bids. Like other state transportation departments, WSDOT must extrapolate for the future based on past records, not from a crystal ball of future market conditions. WSDOT accumulates construction cost information into a Construction Cost Index (CCI) and compares that information against the experience of other states. WSDOT's Construction Cost Index is a composite of unit price information from low bids on seven of the most commonly used construction materials. These items reflect a composite cost for a completed item of work and include the costs of labor, equipment and materials. (See the gray box to the right for more information).

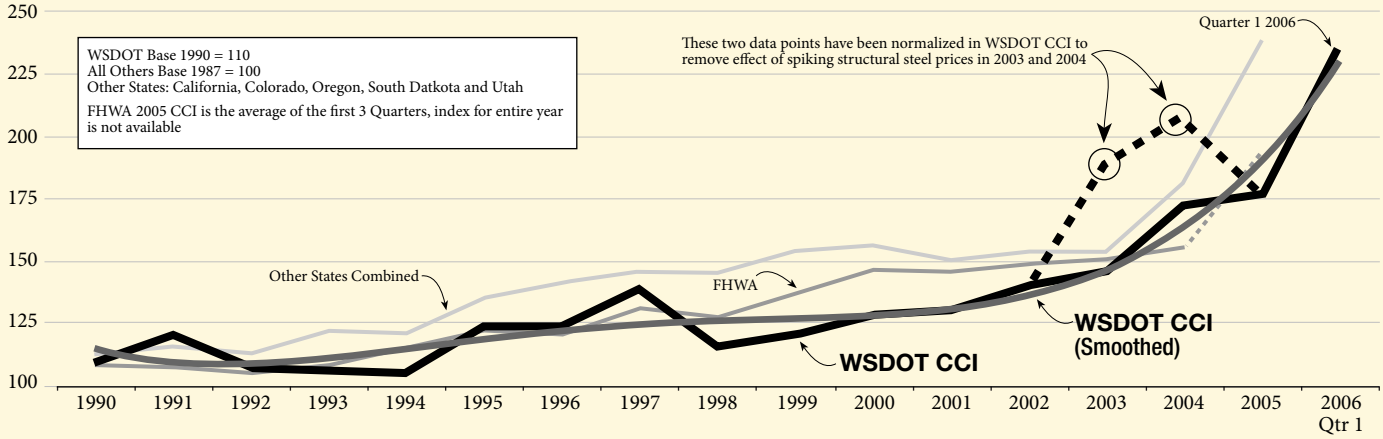
The graph below presents the past 16 years of CCI data for Washington State. This is plotted against the CCI of the Federal Highway Administration (FHWA), as well as a line representing the combined CCIs of several nearby states: California, Colorado, Oregon, South Dakota and Utah.

The following components (weighted as shown) are used to compute the CCI:

Concrete Pavement (3.2%)	Steel Reinforcing Bar (5.4%)
Crushed Surfacing (7.9%)	Structural Steel (6.9%)
Roadway Excavation (10.7%)	Hot Mix Asphalt (48.5%)
Structural Concrete (17.4%)	

For more information on what these materials are, see page 45 of the September 30, 2005 *Gray Notebook*.

Construction Cost Indices Washington State and Others



Source: WSDOT Construction Office

Construction Cost Index is up 33% for the First Quarter of 2006

WSDOT's construction cost index (CCI) has increased 33% in the first quarter of 2006 over the annual average for 2005, from 176 to 234. Of the seven materials WSDOT tracks in the CCI, Hot Mix Asphalt (HMA) comprises the majority, or 48.5%, of the index. Currently, HMA prices are up due to the rise in the cost of petroleum products. Hot Mix Asphalt costs are closely tied to oil costs: the asphalt used in HMA is made from crude oil, the machines that process the HMA run on oil and gas, and the trucks that haul and deliver the HMA require diesel.

But HMA alone does not account for the rise in the CCI, structural concrete showed an increase of 38% this quarter. The agreement this month between Mexico and the United States, wherein a duty cost of $3 per metric ton replaces the previous duty cost of $26 per metric ton, may help balance out the cost of cement over the course of 2006.

Cross-Cutting Management Issues

Construction Employment and Safety Information

Employment and Safety Data Now Combined

This section of the *Beige Pages* tracks the job site employment and safety records on the 2003 Transportation Funding Package ("Nickel") projects. Previously, employment and safety data were presented in two separate tables; for efficiency and space, the tables below will now report employment and safety data together. These new tables do not provide data for past quarters.

The employment figures represent a "snapshot" estimate of the average direct jobsite employment on each Nickel job over the course of the quarter. Meanwhile, all recordable injuries are listed for both WSDOT personnel and the contractors engaged by WSDOT to perform construction work. This information is combined into a single number that reflects the total number of recordable injuries per project per quarter. A recordable injury is any work-related illness or injury that results in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid.

Description of the New Layout

The first two tables provide typical Nickel projects by status, either ongoing or operationally complete. The operationally complete list includes projects that are operationally complete but still have some residual work (such as landscaping) that is employing people, or are operationally complete as of this quarter. The third list includes projects that are design-build: that is, one contractor both designs and builds the project. Most projects are designed within WSDOT and built by private contractors. The fourth table shows a wrap-up of all employment and safety data from the three preceding tables.

Workers mix cement at a work site at SR 16 over Snake Lake in Pierce County.

Some projects will move on and off the list based on whether there was work in the quarter. If no one worked this quarter, then the project will not be reported on for construction employment and safety data in this *Gray Notebook*.

This reporting is voluntary for the Association of General Contractors (AGC), the trade organization for construction contractors and WSDOT's partner in tracking this data. WSDOT will work with AGC to provide similar information for the 2005 Transportation Partnership Account (TPA) projects.

Employment and Safety Numbers for Ongoing Nickel Projects[1]

Project	Contractor	WSDOT Project Engineer	Number of Subcon-tractors	Employment Jan - Mar. 2006	Injuries Jan. - Mar. 2006
I-5, Pierce Co. Line to Tukwila I/C - HOV	Icon Materials	Stanley Eng	26	45	0
SR 9/228th St SE to 212th St SE (SR 524) - Widen to 5 lanes, Stg. 2	Wilder Construction Co.	John Chi	20	7	0
SR 9/SR 522 to 228th S SE - Widening	For construction efficiencies, this project combined with the above		-	-	-
SR 18, Covington Way to Maple Valley	Terra Dynamics, Inc.	Derek Case	4	9	0
SR 18, Maple Valley to Issaquah/Hobart Rd.	Atkinson Construction	Derek Case	43	33	0
SR 161, Jovita Blvd to S 360th St.	Tri-State Construction, Inc.	Messay Shiferaw	25	51	0
SR 527, 132nd St. SE to 112th St SE	KLB Construction	Marlin Lenssen	42	30	0
I-5/S 48th to Pacific Avenue - Core HOV	Kiewit Pacific Co.	Howard Diep	54	40	1
SR 7/SR 507 to SR 512 - Safety	Scarsella Bros., Inc.	Troy Cowan	13	3	0
SR 16/I-5 to Tacoma Narrows Bridge - HOV	Tri-State Construction, Inc.	Dave Ziegler	68	87	0
I-5/Salmon Creek to I-205 - Widening	Hamilton Construction	Casey Liles	71	39	0
SR 24/I-82 to Keys Road - Add Lanes	Max J. Kuney Co.	Paul Gonseth	39	49	0
SR 240/I-182 to Richland Y - Add Lanes	Icon Materials	Moe Davari	63	42	0
SR 240/Richland Y to Columbia Center I/C - Add Lanes	For construction efficiencies, this project combined with the above		-	-	-
SR 395, NSC-Francis Ave to Farwell Rd	KLB Construction	Robert Hilmes	22	38	1

Cross-Cutting Management Issues

Employment and Safety Numbers for Operationally Complete Nickel Projects[1]

Project	Contractor	WSDOT Project Engineer	Number of Subcon-tractors	Employment Jan - Mar. 2006	Injuries Jan. - Mar. 2006
I-5/NE 175th St. to NE 205th St. - North-bound Auxiliary Lane	Pacific Road & Bridge	Amir Ahmadi	18	15	0
I-5, 2nd Street Bridge Replacement	Mowat Construction Co.	Dave Crisman	33	4	1
I-5 Roanoke Noise Wall	Wilder Construction Co.	Stanley Eng	11	1	0

Employment and Safety Numbers for Design-Build Nickel Projects[1]

Project	Contractor	WSDOT Project Engineer	Number of Subcon-tractors	Employment Jan - Mar. 2006	Injuries Jan. - Mar. 2006
I-5/SR 526 to Marine View Drive - HOV	Atkinson CH2M Hill Joint Venture	Roland Benito	31	222	4
I-405/SR520 to SR 522	Kiewit Construction Co.	Brian Nielsen	17	22	0

Employment and Safety Numbers for All Nickel Projects - Totals[1]

	Number of Subcon-tractors	Employment Jan - Mar. 2006	Injuries Jan. - Mar. 2006
	600	737	7

Source: WSDOT Construction Office & WSDOT Project Control

[1]The number listed above includes all WSDOT recordable injuries and voluntary reports by construction contractors. Contractors are not required to describe the incident nature, severity, or follow-up actions. WSDOT cannot currently offer a more detailed analysis of construction site injury trends.

Environmental Documentation, Review, Permitting, and Compliance

Endangered Species Act Compliance

The Endangered Species Act (ESA) requires all projects with federal funds or permits to undergo consultation with the Services: the U.S. Fish and Wildlife Service (USFWS) and/or the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). WSDOT must evaluate the effects that a project will have on listed species. Projects with no effect on listed species do not need to undergo consultation projects that may affect listed species must undergo either informal or formal consultation.

Nickel Projects 2005–07 Biennium Construction Season

WSDOT has completed the consultation process on 13 of the 20 Nickel projects that have not yet gone to ad in the 05-07 biennium. One project (*I-5, 52nd Ave. W to SR 526-SB Safety*) is currently under review at the Services[1]. Of the six remaining projects, one will not need to undergo consultation, two will require informal consultation, one will require formal consultation, and two lack sufficient information at this time to determine if consultation will be required.

Nickel Projects 2007 and Beyond

WSDOT is completing the Biological Assessments on five of the Nickel projects that will go to ad in the 2007 biennium and beyond. Both the *I-205/Mill Plain Exit (112th Connector) Direct Ramp* and the *SR 522/Snohomish River Bridge to U.S. 2-Widening* projects have completed consultation.

Transportation Partnership Program Projects

Three project have completed the consultation process: *SR 99/SR599 to Holden Street- Median Crossover*, *SR 169/SE 291st St Vic. Safety*, and *SR 522 UWBCC Campus Access*. Two other projects have their biological assessments underway: *SR 3/SR 106 South Belfair Signal safety*, and *SR 542 Woburn to McLeod – Widening*.

Pre-Existing Funds Projects

A total of 41 projects have completed the consultation process, and 31 projects have their BAs underway. Two projects are currently under review at NOAA Fisheries[1]: *I-5/McAllister Creek Bridge* and *SR 262/ Potholes Reservoir- Shoulder Widening*. The SR 262 project is also in review with the USFWS.[1]

Ferry and Rail Projects

WSDOT has four ferry projects updating their consultations because of new species or critical habitat listing under ESA: *Keystone Wingwall Replacement*, *Bainbridge Island Trestle Preservation*, *Friday Harbor Preservation* and *Eagle Slip B*. These projects have been in consultation with both Services[1] since January of 2006. WSF is also updating the consultation with NOAA Fisheries on the *Anacortes 3rd slip* project and the process is not yet completed. WSDOT has completed consultation with USFWS[1] on the *Bainbridge Dock Widening* and *Lopez Island Dolphin Replacement*, but is still in formal consultation with NOAA Fisheries. The recent orca listing is a factor in the inability of the projects to complete consultation with NOAA (see below for more information). The *Eagle Harbor Building Maintenance* project has just started the consultation process. No rail projects have changed since the last update.

ESA Compliance Status for All Projects

Number of Projects

	2005-07 TPA Projects	2005-07 Nickel Projects	2007 and Beyond Nickel Projects	2005-07 PEF Projects
Projects under review at the Services[1]	0	1	0	2
Biological Assessment underway	2	3	5	31
Projects which lack sufficient information to start the Biological Assessment[2]	35	2	23	152
Consultation Not Required	0	1	0	0
Endangered Species Act review complete	3	13	2	41

[1] The Services are U.S. Fish and Wildlife (USFWS) and the National Oceanographic and Atmospheric Administration and Fisheries (NOAA Fisheries).
[2] This means that WSDOT does not yet have enough information regarding the design of the project to begin a biological assessment.

New Endangered Species Listings May Affect Project Delivery

Upcoming increases in the number of formal Endangered Species Act consultations will result in a backlog of projects at the Services[1], slowing down the consultation timelines for all projects. In January, NOAA Fisheries listed the Southern Resident Killer Whale (orca) as an endangered species. This listing will affect ferry and other project construction activities in Puget Sound. Formal guidance from the federal level is expected in April 2006, but early indications are that more restrictions on pile driving and other noisy activities in Puget Sound will occur. This may result in project delays and increased project delivery costs.

At the end of March 2006, NOAA Fisheries proposed Puget Sound Steelhead for listing. This listing is expected to go into effect in approximately 12 months, significantly affecting WSDOT's project delivery. First, all projects which have not completed construction prior to the effective date of the listing will have to analyze the effects of the project on steelhead. If there are potential effects, the project must confer with NOAA Fisheries. This analysis will be required for a number of Northwest and Olympic Regions, Washington State Ferries, and Urban Corridor projects. Secondly, steelhead spend several years rearing in freshwater before migrating out to sea. Therefore, many projects conducting inland freshwater work will have to undergo formal consultation due to unavoidable impacts to young steelhead.

Stormwater Analysis

The type of stormwater information that should be included with the Biological Assessment is still a major policy issue that is increasing the time to complete consultation. WSDOT has recently completed interim guidance for Biological Assessment authors on what stormwater information needs to be included in the Biological Assessment. This guidance has just been reviewed by the Services[1] and will be revised to incorporate their comments. The guidance is expected to be revised regularly as issues are resolved and additional scientific information becomes available. This guidance has been placed on the WSDOT environmental web site (see www.wsdot.wa.gov/environment/biology/docs/BA_InterimSWconsultation.pdf).

Consultant Qualification Program

WSDOT has implemented a new consultant qualification program designed to ensure that all consultants know how to write high-quality Biological Assessments for WSDOT. High-quality Biological Assessments should minimize the requests for additional information from the Services[1] that slow down the consultation process.

The biologist qualification process requires the author to have the appropriate education and experience; in addition, the author must attend a two-day training class, and receive a passing score on the exam. Authors must re-qualify on a biannual basis. The training provides the consultants with the latest information, policies, and guidance on how to write a quality biological assessment. WSDOT has developed a website to communicate policy and guidance changes to enable the consulting biologists to stay abreast of the changes in the consultation world. This quarter, WSDOT held the first training class and qualified 44 consultants to write Biological Assessments.

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Worker Safety: Quarterly Report

Recordable Injuries for WSDOT Workers

WSDOT Adopts New Worker Safety Reporting System and Benchmark

The Bureau of Labor Statistics (BLS) recently adopted the North American Industry Classification System (NAICS), in place of the Standard Industrial Classification (SIC) system, for its *Workplace Injuries and Illness Report*. NAICS is the first economic classification system for industries to be constructed based on a single economic concept. NAICS allows for the comparability of industry activities between Canada, Mexico, and the United States.

New Benchmark combines Highway Maintenance and Engineering workers.

WSDOT's industry code encompasses establishments primarily engaged in the construction of highways, streets, roads, airport runways, public sidewalks, and bridges. Under this new system, highway maintenance and engineering workers are combined into one reporting group: Highway, Street, and Bridge Construction. As reported in the previous *Gray Notebook* (p. 33), WSDOT used the SIC system to group activities and safety performance benchmarks. However, to align with current industry standards, activities will now be reported using NAICS.

Recordable Injury Rates 20% below Benchmark

The first quarter of 2006, recordable injury rates for Highway Maintenance and Engineering workers (Highway, Street, and Bridge workers) totaled 5.1 per 100 workers. This total is 1.3, or 20%, below the industry benchmark standard of 6.4.

Reporting Methods and Benchmarks Changes for Ferries

As WSDOT moves to NAICS, WSDOT's Ferry System works to identify appropriate reporting measures. The Ferry System operates a ship repair facility, urban transit system, and an inland water transportation system. These diverse activities make it difficult to identify relevant worker injury benchmarks. On the recommendation of BLS, the Ferry System will measure worker injuries under the NAICS code "Inland Water Transportation", which will now include all Ferry workers as opposed to only Ferry Vessel workers under SIC.

The first quarter of 2006, recordable injuries totaled 7.1 per 100 workers. This total is 2.2, or 45%, above the industry benchmark standard of 4.9.

Injuries by Type

WSDOT continues to track recordable injuries by type to enhance its ability to address these injury types through training and education. The table to the right entitled "Number of Worker Injuries by Type" shows type of injuries for WSDOT maintenance, highway engineering, and ferry workers. The first quarter, total recordable injuries were 73. This was 11 more than the preceding quarter. Strains/Sprains accounted for 56% of injuries this quarter.

- Maintenance workers incurred 37 injuries, 51% of all WSDOT injuries this quarter.
- Highway engineering workers had a total of 9 injuries this quarter, 12% of total injuries.

Highway Maintenance and Engineering Worker Injury Rate[1]

NAICS - OSHA recordable injuries per 100 workers[2]

	2005	2006
Quarter 1	4.8[3]	5.1
Quarter 2	4.5[3]	-
Quarter 3	7.2[3]	-
Quarter 4	5.6[3]	-
Quarterly Average	5.5[3]	5.1

2004 Benchmark 6.4
Source: WSDOT Safety Office

[1]NAICS defines this OSHA recordable injury rate category as, Highway, Street, and Bridge Construction Workers
[3]See following page for discussion on recaptured data

Ferry Worker Injury Rates[1]

NAICS - OSHA recordable injuries per 100 workers[2]

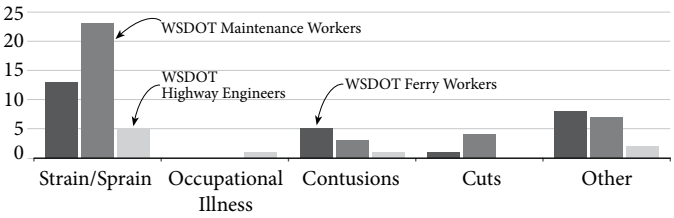
	2005	2006
Quarter 1	NA[3]	7.1
Quarter 2	NA[3]	-
Quarter 3	NA[3]	-
Quarter 4	NA[3]	-
Quarterly Average	NA[3]	7.1

2004 Benchmark 4.9
Source: WSDOT Safety Office

[1]NAICS defines this OSHA recordable injury rate category as, Inland Water Transportation.
[3]See following page for discussion on recaptured data.

Number of Worker Injuries by Type

January Through March 2006



Source: WSDOT Safety Office

[2]OSHA "Recordable Injuries and Illnesses" is a standard measure that includes all related deaths and work related illnesses and injuries which result in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid. The U.S. Bureau of Labor Statistics provides the selected 2004 national average benchmarks. One worker equals 2,000 hours per year.

Worker Safety Data for 2003-04 is Incomplete and Must be Withdrawn

In the fourth quarter of 2005, WSDOT reported that some Occupational Safety and Health Administration (OSHA) recordable restricted duty cases were overlooked in the *Gray Notebook* Worker Safety report between 2003-05 (p. 33). The failure to count restricted duty cases resulted in the *Gray Notebook* under-reporting of the OSHA recordable injury rate.

WSDOT attempted to recapture the uncounted injuries and correct the previously reported data. In the process of recapturing the uncounted cases, other questions arose concerning the accuracy of the data reported. For these reasons, WSDOT decided not to use the recaptured data for 2003-04. However, it was determined that the 2005 recaptured data appears to be reasonably complete and can be used for comparison purposes. As of January 2006 WSDOT has begun re-establishing a new baseline of recordable injury rates. The reexamination of the ferry data is currently underway and will be reported next quarter in the *Gray Notebook*.

Management Actions to Ensure Data Accuracy

WSDOT issued new guidelines and provided tools to all Regional Managers and Safety Managers that outline the criteria that must be used in determining OSHA recordable injury rates. WSDOT is also implementing tighter quality controls to ensure accidents meeting OSHA requirements are reported and included in performance reporting measures and holds Regional Managers accountable for tracking, reporting, and quality control of data. In addition, WSDOT enhanced training opportunities to address reporting requirements.

2005 Recaptured Data shows Increase in Injury Rates

The charts to the right show data previously reported in the *Gray Notebook* for 2005, as well as the newly 2005 recaptured data. The data indicates an overall increase of 42.5% for Highway Maintenance workers and a 20% increase in injury rates for Highway Engineering workers.

Highway Maintenance Workers

In the first quarter of 2005, the *Gray Notebook* reported 5.6 injuries for Highway Maintenance workers. After reevaluation of the data, actual recordable injuries were 8.3 per 100 workers, a 32.5% increase. The second quarter indicated a 20% increase, and the third quarter indicated a 35% increase in injury rates. The fourth quarter of 2005 showed a similar increase of 32% in reported recordable injuries compared to previous reports.

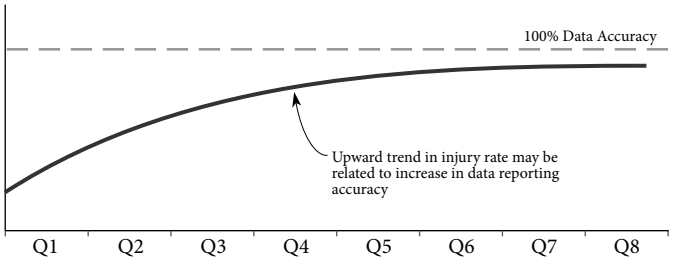
Highway Engineering Workers

There was a minimal injury rate increase for Highway Engineering workers. The first quarter of 2005 showed that actual injury rates were 2.4 per 100 workers, a 12.5% increase in injury rates. There was no increase for the second quarter, but there was a 17% increase in the third quarter. The fourth quarter showed a slightly higher increase of 26%.

Improvement of Data Collection Process

WSDOT implemented its new data collection process in January 2006. It is likely that this enhanced focus and process will lead to recordable injury rates which are slightly higher than the 2005 recaptured data. WSDOT may experience a continuous upward trend until 100% data accuracy occurs (see graph below). However, WSDOT maintains its goal that all injuries can be prevented.

Possible Injury Rate Data Trend
Conceptual Recordable Injury Rates

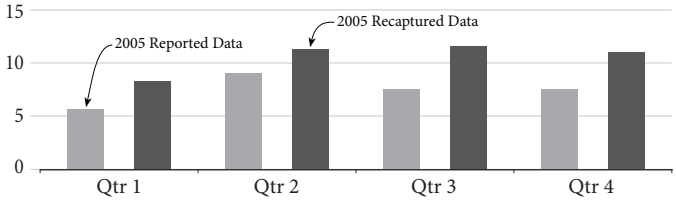


Source: Conceptual Only.

Note: Does not depict actual data or time; represents a conceptual trend.

2005 Highway Maintenance Workers: Comparison

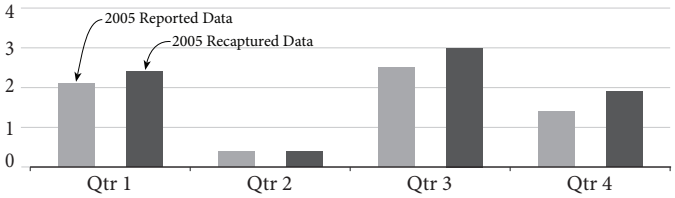
Injury Rates per 100 workers



Source: WSDOT Safety Office

2005 Highway Engineering Workers: Comparison

Injury rate per 100 workers



Source: WSDOT Safety Office

Worker Safety: Quarterly Report

Prevention Activities

Quarterly Regional Highlights

WSDOT continues to build strategies based on the "prevent all injuries" standard. WSDOT is committed to progressing toward a zero injury rate. The regions are creating safety programs to better address this objective. The development of new ideas and innovative practices is evident by the various regional activities. This report identifies three major issues impacting injury rates within the regions. These include soft tissue (muscle) injuries, safety prevention and planning, and safe driving.

Soft Tissue Injuries

Northwest Region

The Northwest Region experienced two additional injuries compared to the same quarter last year. The majority of accidents this quarter involve shoulder injuries while performing routine daily tasks, which appear to have a high incident rate. The Accident Review Board will develop and monitor a Prevention Action Plan proposed by supervisors to address injury rates. Injuries are tracked monthly to assess Prevention Action Plan use and published in a monthly regional newsletter. The newsletter will soon be available on the Northwest Region website.

Olympic Region

Soft tissue (muscle) injuries in the Olympic Region accounted for 56% of injuries in 2005. This appears to be the highest reported time-loss injury within the region. To address this, the Safety Office will increase internal training plans to include Proper Lifting as a core-training course. Over a third of these trainings are complete to date and the Olympic Region will continue to provide training within the region as a preventative measure.

Eastern Region

The Eastern Region is working to reduce and prevent the number of work-related back and shoulder injuries. The Eastern Region Safety Office and the maintenance trainer will determine if many of these injuries are preventable by proper lifting techniques or by proper use of personal protective equipment. The Safety Office plans to provide a Proper Lifting Refresher course to employees and is stressing the importance that two workers lift as a team. Following the training, the Eastern Region will monitor accident reports to determine if proper lifting techniques are used and to evaluate the effectiveness of the refresher course.

Safety Prevention and Planning

North Central Region

North Central Region adopted a new policy to conduct hazard assessments prior to work on tasks. The policy initiates two new forms to assist engineering and maintenance workers in documenting hazards, controls implemented, and a post-work evaluation. Trainings to aid workers in identifying, documenting, and assessing hazardous situations will occur through discussions at daily and monthly safety meetings. These forms assist North Central Region to track and evaluate controls implemented by workers for hazardous tasks.

South Central Region

Previously the South Central Region completed safety training for WSDOT construction inspectors irregularly. As a result, inspector knowledge of on-site safety issues is inconsistent. To address training needs, a four module training curriculum is being developed. The South Central Region completed the first two modules, a pilot class, and will start training all required employees in April. It is expected improved safety knowledge will lead to proactive initiatives by employees at worksites, resulting in decreased risk, accidents, and violations.

Washington State Ferries

Washington State Ferry employees use various cleaning supplies and reports show anecdotal evidence suggesting instances occurring when these chemicals were inadvertently combined, creating a potentially hazardous work environment. The Ferry System is working with Washington State Correctional Industries on a 90-day pilot project, testing the actual use of three cleaning products aboard two vessels of the fleet. The purpose of this pilot project is to measure the ease of use, effectiveness, cost, and overall safety of the cleaning chemicals. A questionnaire completed by janitorial employees will offer direct feedback on the products use. Following the pilot project, an evaluation of available data will be performed to determine possible changes to current practices. Testing began February 13, 2006 and will run through June 6, 2006.

Safe Driving

Southwest Region

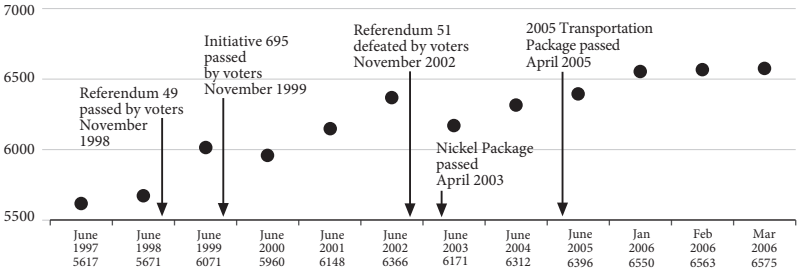
In 2005, the Southwest Region experienced eight vehicle accidents for Area 4 (Goldendale) Maintenance workers, the highest in 20 years. The Southwest Region will address this by having individuals complete the EverSafe™ Driver Training Program. In addition, crew members will develop a written safety plan focusing on vehicle accident prevention. The South West Region will monitor for improvements in vehicular and personal injuries and the use of safety plans by crews to determine if additional training is needed. For additional information on the EverSafe™ Driving Program, see the *Gray Notebook*, December 31, 2005 (p. 34).

Workforce Level and Training: Quarterly Update

WSDOT Workforce Level Statistics

One indicator of the agency's workforce size is the current number of permanent full-time employees on staff. The total number of full-time employees does not include permanent part-time employees, or seasonal and on-call workers. The chart to the right shows the total number of full-time employees at various points since the end of 1997, with significant mandates identified. The number of "FTE's" (full-time equivalents) will generally exceed the number of permanent full-time employees due to seasonal and part-time workers being funded from "FTE" allotments.

Number of Permanent Full-Time Employees at WSDOT



Source: WSDOT Office of Human Resources.

Required Training: All WSDOT Workers

This quarter a total of 1,875 workers attended trainings offered by WSDOT (this number includes all individuals attending one or more trainings this quarter). As of the end of quarter one of 2006, an average of 63% of WSDOT workers are in compliance with all training requirements listed below.

The Office of Equal Opportunities (OEO) revised its course offerings in June 2002. The courses are offered in three sections (Disability Awareness, Sexual Harassment/Discrimination, and Valuing Diversity). The "Ethical Standards" refresher requirement is every three years. "Security Awareness" and "Violence that Affects the Workplace" do not require a refresher course. The remaining three courses require refresher courses at the five-year mark, but have not been in existence long enough to require the five-year refresher. WSDOT's goal is to reach a compliance level of 90% for all required OEO courses.

Required Training for all WSDOT Workers

January 2006 - March 2006

Training Courses	Workers Requiring Training	Basic Training Completed to Date	Workers Needing Basic Training	Workers Needing Refresher Training	Completed Training Reporting Quarter	Total in Compliance	% in Compliance	% Change from Previous Quarter
Disability Awareness	7499	2195	5304	NA	460	2195	29%	6%
Ethical Standards	7499	7229	270	1295	668	5934	79%	-8%
Security Awareness	7499	6392	1107	NA	106	6395	85%	0%
Sexual Harassment/ Discrimination	7499	4335	3164	NA	303	4335	58%	3%
Valuing Diversity	7499	3370	4129	NA	293	3370	45%	13%
Violence that Affects the Workplace	7499	6045	1454	NA	45	6045	81%	0%

Source: WSDOT, Office of Human Resources, Staff Development

WSDOT's OEO has increased the number and capacity of the required "Diversity" classes at Headquarters, in most of the regions, and WSDOT's Ferry System to increase compliance. Some classes are open to 100-150 attendees. Attendance is not as good as it should be because some registered participants fail to attend and do not cancel in a timely fashion to allow other employees to register. Therefore, some courses are not filled to capacity. WSDOT will continue to track attendance, notify appropriate supervisors of the "no shows", and reinforce the role of supervisors to more actively manage accountability. WSDOT realizes it will not reach its compliance goals unless a more proactive role is taken by supervisors and an accountability process is implemented to address the "no show" rates within the Headquarters staff.

Workforce and Training: Quarterly Update

Required Training: Maintenance Workers

WSDOT's goal is to reach 90% compliance for statutorily required maintenance employee training. Reductions or increases in training levels is responsive to work and activities. Trainings are provided when workers are most available, generally during the Spring and Fall. As of March 31, 2006, an average of 80% of WSDOT maintenance workers have fulfilled the requirements for each of the courses listed below.

Statutorily Required Training for Maintenance Workers Statewide

January - March 2006

Safety Courses	Workers Requiring Training	Basic Training Completed to Date	Completed Basic Training Reporting Quarter	Workers Needing Basic Training	Completed Refresher Training Reporting Quarter	Workers Needing Refresher Training	Total in Compli-ance	% in Compli-ance: Statewide	% Change from Previous Quarter
Blood Bourne Pathogens	425	367	7	58	124	211	156	37%	3%
First Aid	1491	1404	21	87	104	186	1218	82%	0%
Hearing Conservation	1368	1304	17	64	398	241	1063	78%	-8%
Personal Protective Equip-ment	1403	1129	0	274	0	0	1129	80%	-4%
Fall Protection	742	616	4	126	0	0	616	83%	-1%
Flagging & Traffic Control	1141	1113	12	28	114	64	1049	92%	0%
Safe Driving - Eversafe™	1181	972	89	209	0	0	972	82%	3%
Maintenance Courses									
Drug Free Workplace	330	295	52	35	0	0	295	89%	6%
Forklift	1165	1039	23	126	0	0	1039	89%	0%
Hazardous Mat Awareness	857	787	25	70	101	102	685	80%	3%
Aerial Lift	166	151	7	15	0	0	151	91%	3%
Bucket Truck	402	327	33	75	0	0	327	81%	4%
Excavation, Trench & Shoring	389	287	0	102	0	0	287	74%	0%

Statutorily Required Training for Maintenance Workers by Region[1]

January - March 2006 (Total indicates percentage in compliance; Change indicates percent change from previous quarter)

	NWR		NC		OR		SWR		SCR		ER	
Safety Course	**Total**	**Change**	**Total**	**Change**	**Total**	**Change**	**Total**	**Change**	**Total**	**Change**	**Total**	**Change**
Blood Bourne Pathogens	12%	-5%	89%	+4%	4%	- 5%	80%	-17%	33%	-54%	11%	-74%
First Aid	75%	-1%	84%	+6%	85%	+1%	97%	+1%	78%	+2%	82%	- 1%
Hearing Conservation	78%	-13%	76%	+8%	78%	0%	75%	-21%	75%	- 1%	84%	-3%
Personal Protective Equipment	78%	0%	76%	+2%	62%	-2%	96%	0%	92%	-3%	88%	+4%
Fall Protection	74%	-1%	90%	0%	81%	+1%	96%	0%	88%	-2%	98%	0%
Flagging	89%	-2%	96%	-2%	90%	+4%	97%	+1%	88%	-5%	97%	+2%
Safe Driving - Eversafe™	84%	+9%	92%	+1%	100%	0%	55%	+9%	81%	-1%	90%	-5%
Maintenance Courses												
Drug Free Workplace	89%	+7%	75%	+1%	90%	+22%	92%	-1%	97%	+5%	89%	- 1%
Forklift	89%	-1%	88%	-3%	81%	+5%	96%	+2%	94%	+1%	92%	+1%
Haz Mat Awareness	87%	+6%	66%	-4%	9%	+7%	94%	+1%	85%	-2%	70%	-3%
Aerial Lift	76%	+12%	78%	0%	NA	NA	98%	-1%	86%	-2%	NA	NA
Bucket Truck	67%	+2%	91%	-1%	90%	+80%	98%	- 1%	87%	0%	100%	0%
Excavation, Trench & Shoring	79%	-1%	59%	+23%	57%	- 10%	93%	-4%	73%	0%	83%	0%

Source: WSDOT, Office of Human Resources, Staff Development

[1]NWR - Northwest Region; NCR - North Central Region; OR - Olympic Region; SWR - Southwest Region; SCR - South Central Region; ER - Eastern Region

Trucks, Goods and Freight: Annual Update

Freight Mobility Supports Washington's Economy

Viable truck, goods, and freight performance data is very limited. The proprietary nature of freight data, and difficulties obtaining this data, is a national challenge. WSDOT is reporting the following indicators as a proxy for more comprehensive freight data: truck volumes on four major highways by milepost; truck registrations (p. 45); gross business revenues for freight dependent industries p. 45); international container volumes at seaports (p. 46); freight rail cargo on mainline rail (p. 46); air cargo tonnage at three major airports (p. 46); and truck border traffic at border crossings (p. 46).

WSDOT is continually seeking to enhance available freight industry performance data through research, data analysis, and collaboration between public and private industries. Although freight data remains difficult to obtain, WSDOT continues efforts to improve the performance of the freight system.

Why Is Freight Growing?

Washington's businesses and households depend on the reliable movement of goods using trucks, ships, rail, and air transportation. Across all modes and systems, freight tonnage is growing, which reflects positive economic growth and development for Washington. Based on the most recent data released by FHWA, in 2002, over 243.5 million tons of freight worth nearly $142 billion moved on Washington's freight system using truck, rail, air, ocean vessel, and inland waterways. Trucks carried most of this freight, both by tonnage (78%), and value (62%).

The growth of freight is fueled by globalization, new competitive industry trends, and technological changes. Washington is especially affected by trends international trade as it is a gateway to growing Pacific Rim and North American trade. Reduced cycle times, and shifts by manufacturers and distributors to just-in-time inventory management is also increasing freight transportation and the importance of a reliable transportation system.

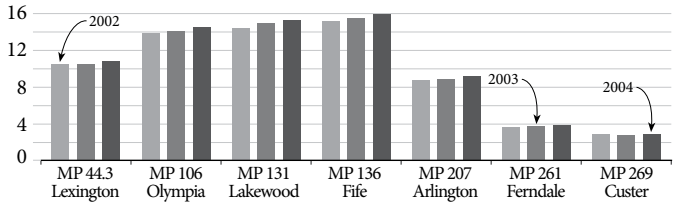
More Freight On Our Highways

Timely, reliable goods movement allows businesses to reduce manufacturing and inventory costs and to improve responsiveness to rapidly changing markets. As the demand for goods and services increases, so does the amount of truck traffic on the state's highways.

Truck volumes on four major highways in Washington show steady increases. The charts on this page show average daily truck traffic at specific mileposts on these highways. Showing truck volumes by milepost creates a unique profile by showing those locations with the greatest activity, as well as growth trends at these locations.

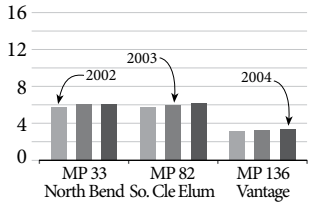
At all locations where truck data is located, there was growth in the number of trucks per day. For example, on I-5 near Olympia, annual daily truck traffic increased 5.9% from 13,800 trucks per day in 2002 to 14,518 trucks per day in 2004. On U.S. 97 near Wenatchee, the number of trucks increased 10.5% from 811 trucks per day in 2002 to 896 trucks per day in 2004.

Interstate 5 Average Daily Number of by Milepost
(South to North)
Numbers in Thousands



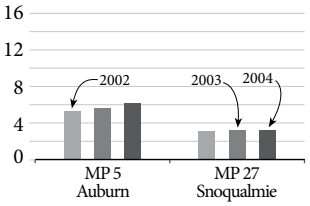
Source: WSDOT: Transportation Data Office.

Interstate 90 Average Daily Number of Trucks by Milepost
(East to West)
Numbers in Thousands



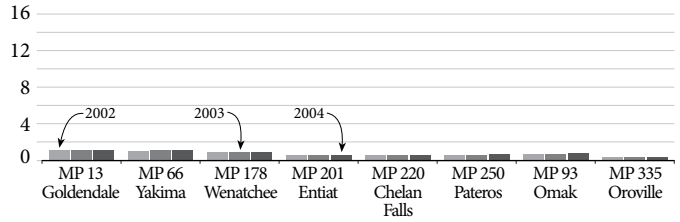
Source: WSDOT: Transportation Data Office.

SR 18 Average Daily Number of Trucks by Milepost
(South to North)
Numbers in Thousands



Source: WSDOT: Transportation Data Office.

U.S. 97 Average Daily Number of Trucks by Milepost
(South to North)
Numbers in Thousands



Source: WSDOT: Transportation Data Office.

Freight and the WTP: The Washington Transportation Plan Update (WTP) covers 2007-2026 and is currently in progress. It will include a 10-year investment proposal for statewide program and state projects, as well as proposals for policies that deal with all aspects of transportation. The WTP is updated every five years and addresses nine issues, including freight movement. To access the draft WTP Update Freight White Paper, see the WSDOT Freight Office web page: www.wsdot.wa.gov/freight/default.htm

Trucks, Goods and Freight: Annual Update

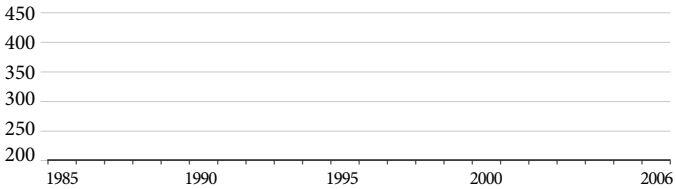
Commercial Trucks Registered in Washington State

Commercial trucks operating in Washington State must register and pay state taxes. The number of trucks registered for commercial use in Washington has generally decreased since 1985, from 402,875 in 1985 to 243,124 in 2004. This decrease leveled off in 2001, with the number of trucks registered in 2001 roughly equal to the estimated number of registrants in 2006.

Commercial Trucks Registered in Washington

All Weight Classes: Years 1985 to 2005 and 2006 Estimate

Vehicles in Thousands



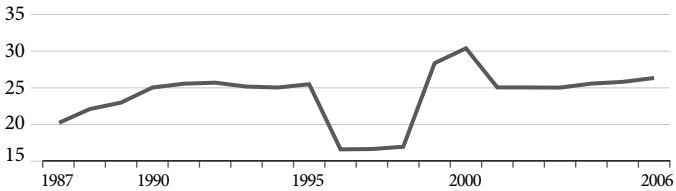
Source: WSDOT: Economic Analysis.

Trucks in interstate commerce must also register and pay state taxes based on weight and travel mileage. The number of interstate trucks prorated to Washington State shows an increase of 30% from 1987 to 2005, from an estimated 20,197 in 1987 to 25,812 in 2005.

Trucks in Interstate Use Prorated to Washington State (Estimate)

All Weight Classes: Years 1987 to 2005 and 2006 Estimate

Vehicles in Thousands



Source: WSDOT: Economic Analysis.

The number of trucks registered for use provides a limited view of trucking activity in the state. It does not reflect changes in the use and miles traveled for each individual truck.

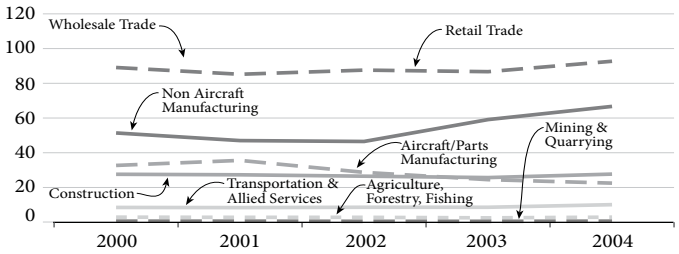
Freight-Dependent Industries Grow 2.0%

Between 2000 and 2004, total gross business revenues for freight-dependent industries (adjusted for inflation using 2000 as the baseline year) increased by 2.0% from $309.3 billion to $315.6 billion. A slight periodic decline is seen in most freight-dependent industries during this period, reflecting a general economic downturn around 2001. However, the overall gains show these industries slowly rebounding, and in 2004 business activity surpassed 2000 levels.

Gross Business Revenues for Freight-Dependent Industries

Washington State

Dollars in Billions (Adjusted for Inflation - Base Year 2000)



Source: Department of Revenue Washington State.

Total Gross Business Revenues for Freight-Dependent Industries

Washington State

Dollars in Billions (Adjusted for Inflation to 2000 dollars)

2000	2001	2002	2003	2004	% Change 2000-2004
$309.3	$296.5	$281.9	$287.7	$315.6	2.0%

Source: Department of Revenue Washington State

Trucks, Goods and Freight: Annual Update

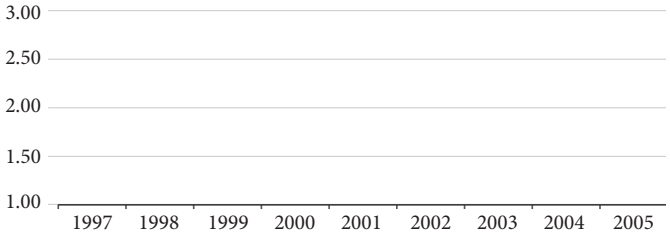
Freight at Washington's Borders and Gateways

All forms of freight experienced a dip in volume around 2001. However, data for the year 2004 shows freight volumes rebounding to at or above 2000 levels. The following indicators show these trends for international goods moving on Washington's transportation systems.

Over a Million More Containers

Seaport activity continues to increase in Washington; according to U.S. Army Corp of Engineers figures, the total tonnage of all freight moved by water through and within Washington State increased 5.5% from 2002 to 2003. More recent data from the U.S. Maritime Administration, encompassing only international containerized freight, reflect this growth: In 2000, Washington seaports handled 1.61 million international containers; by 2005 international container traffic grew 55.3%, to 2.5 million.[1] Washington's major container ports, the Port of Seattle Harbor and Port of Tacoma, reflected in the graph below, serve as gateways for containerized imports from the Pacific Rim and handle 99.9% of all international container traffic in the state. The 2004 Marine Cargo Forecast projected growth rates in international container volumes at Washington seaports of 4.6% per year from 2002 to 2025, almost tripling the 2002 volume by 2025. However, if the current average annual growth rate of 16% (from 2002 to 2004) continues, this tripling would actually occur by the end of 2008.

Waterborne Container Traffic
Port of Seattle Harbor and Port of Tacoma
Number of Containers (TEU's: Twenty Foot Equivalent Units) in Millions (Full and Empty, International and Domestic)

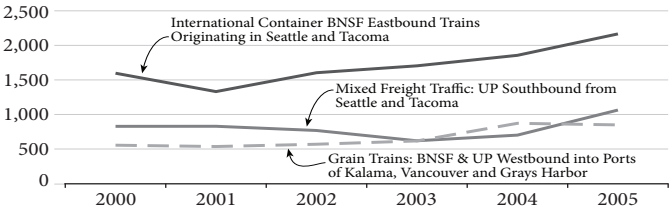


Source: U.S. Waterborne Foreign Container Trade by U.S. Custom Ports, 1997-2005. U.S. Department of Transportation Maritime Administration (MARAD).

Freight Rail Increases in 2005

Rail traffic is also growing across the state. An estimated 70% to 80% of the containerized imports transfer to rail near the ports, and are shipped east via rail lines through Washington to larger east coast consumer markets. The remaining containerized imports move by truck to local destinations. The following chart shows growth in these containers, and other major commodities, carried by mainline rail in Washington.

Freight Rail Growth through Washington
2000 - 2005
Annual Number of Trains

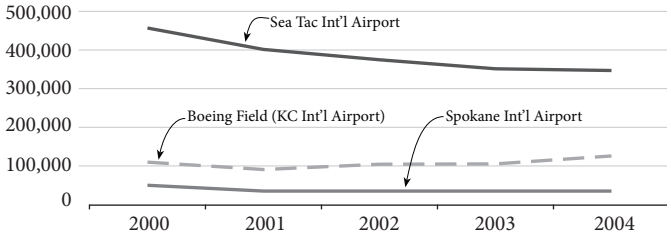


Source: Burlington Northern and Santa Fe Railway and Union Pacific Railroad. Assembled by WSDOT Office of Freight Strategy and Policy.

Air Cargo Freight Slowly Bouncing Back

In 2004, air cargo tonnage (includes both goods and mail) at Washington airports that report activity was 18% below 2000 levels. However, between 2003 and 2004, air cargo tonnage increased three percent from 492,000 tons to 508,000 tons, marking the first growth in air cargo since 1999. This tonnage also includes mail.

Air Cargo Volumes at Primary Air Cargo Airports in Washington
Metric Tons



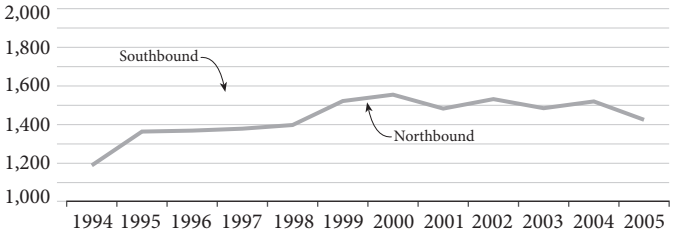
Source: *Regional Air Cargo Strategy*. Puget Sound Regional Council.

Slow Recovery of Truck Freight at Border

The number of southbound trucks crossing at Washington-Canadian border crossings has increased 33% from 1994 to 2004 (from 500,263 in 1994 to 667,000 in 2004). Cross border trade is growing steadily back from its drop in 2001, with a two percent growth rate in 2004. WSDOT currently has access to complete data for southbound trucks at all border crossings; data is not publicly available for northbound trucks at all border crossings.

At Western Washington border crossings, which handle over 85% of all cross border trade along Washington's northern border, total truck traffic has doubled since 1990. (See the graph below.) Complete data is available for northbound trucks at these three points. The number of trucks crossing at these points decreased slightly in 2005, but traffic is gradually returning to pre-2001 growth patterns.

Truck Border Traffic
(Blaine, Lynden and Sumas Crossings)
Average Daily Number of Trucks



Source: U.S. Customs and Border Protection, Statistics Canada. Data compiled by Whatcom Council of Governments.

[1] This number includes only full, foreign containers (2.5 million). Including domestic containers (.86 million), the number of TEUs rises to 3.2 million; including empty foreign containers (.85 million), the final total is 4.2 million TEUs.

Trucks, Goods and Freight: Annual Update

Severe Weather Closures on I-90 at Snoqualmie Pass

The I-90 corridor is Eastern Washington's lifeline to the marine ports and the Central Puget Sound market.

- Forty-three percent (16,676 per year) of all truck trips originating in Southeastern Washington deliver goods to Central Puget Sound using I-90.
- Sixteen percent (84,596 per year) of all trucks originating in Spokane head to Central Puget Sound on I-90.

Severe weather closures at Snoqualmie Pass remain a major concern in the freight community. In the past ten years, closures have ranged from a high of 494 hours (impacting 48 days) during the 96-97 winter to a low of 17 hours (impacting 11 days) during the 02-03 winter season. During the recent 05-06 winter season, Snoqualmie Pass was closed a total of 134 hours (impacting 30 days) due to severe weather and related incidents, not including rock fall. See the Highway Maintenance 2005-06 Post Winter Report on page 59 for more information on WSDOT's efforts to keep Snoqualmie Pass open.

Freight and Goods Transportation System: 2005 Update

WSDOT's Freight and Goods Transportation System (FGTS) ranks road segments by the tons of freight they carry. The FGTS is used to plan for needed freight projects and pavement preservation. It was last updated in Winter 2005.

T-1 and T-2 road segments (see gray box below) are designated as State Strategic Freight Corridors. Miles of state routes designated as T-1 and T-2 increased by two percent from 2003 to 2005. In all, slightly over 119 state route miles changed designation since the 2003 FGTS update, with a net gain of 64 miles to the T-1/T-2 set in 2005.

WSDOT is aware that truck gross tonnage data is not sufficient to present a comprehensive view of the state's freight system. Other planning documents and reports expand this analysis and can be accessed through the WSDOT Office of Freight Strategy and Policy, http://www.wsdot.wa.gov/freight/.

Through research, data analysis, and collaboration between public and private industry, WSDOT is expanding the understanding needed to explore the potential of freight transportation in Washington. Although freight data remains difficult to obtain, the following studies and activities contribute to WSDOT's efforts to improve the performance of the freight system. Please see the Office of Freight Strategy and Policy website at: www.wsdot.wa.gov/freight/default.htm

Segment Ranking: By Gross Annual Truck Tons Per Year

- T-1 more than 10 million tons per year
- T-2 4 million to 10 million tons per year
- T-3 300,000 to 4 million tons per year

Nickel, TPA, and Other Projects With Freight Benefits

The 2005 Transportation Partnership Account (TPA) contained several projects with specific freight benefits. In addition to general TPA projects with indirect freight benefits, the Legislature provided $541.1 million for 35 projects with specific benefits for freight mobility and economics. The Legislature also created the Freight Mobility Account, funded from various licences, permits and fees, to specifically fund projects with benefits. For the 2005-07 biennium, $12.0 million was provided to this account.

The 2003 Transportation Funding Package (Nickel Fund) also contains projects that are considered to have freight benefits because they are in an area that has a high volume of truck traffic, are near a port or international border, or make it easier for large or heavy trucks to maneuver more safely and efficiently.

For lists of specific Nickel and TPA freight-related projects for trucks, rail or ferries, please see WSDOT Freight Programs at www.wsdot.wa.gov/freight/default.htm

Freight Info: Measuring Travel Time in Freight-Significant Corridors:

In 2002, the Federal Highway Administration (FHWA) began a partnership with the American Transportation Research Institute (ATRI) to better understand how the national surface transportation network is accommodating the demand for timely and reliable movement of freight. The resulting study monitored average travel times on five freight-significant corridors (I-5, I-10, I-45, I-65, and I-70).

ATRI used the data to compute average travel rates, a Travel Time Index (TTI), and a Buffer Index (BI). TTI is a measure of reliability, and is the ratio of observed average travel time to free flow travel time (estimated at 60 mph). BI is a measure of reliability and variability and is an expression of how much extra time that needs to be allowed to account for variations in the system.

Applying BI data to a freight flow scenario, a commercial vehicle operator moving goods from San Diego, CA to Blaine, WA (at the U.S.-Canada border), would have to add approximately six hours of buffer time to ensure with 95% confidence that the driver would arrive on time. Still to come is a report on the use of technologies such as electronic toll collection and weigh-in-motion equipment to supplement GPS measurement. If the more comprehensive data for this study is ready by the Fall, WSDOT intends to include it in the September 30, 2006 *Gray Notebook* congestion report.

Asset Management: Safety Rest Areas Annual Update

Program Overview

Washington's safety rest areas provide the opportunity for travelers to rest and take much-needed breaks to ensure alertness and safety during long trips. Access to safety parking areas is especially important for commercial truck drivers using the "sleeper berth provision": Effective October 1, 2005, federal hours-of-service rules require eight consecutive hours in the sleeper berth, plus two consecutive hours either in the sleeper berth, off duty, or any combination of the two. This annual report provides an update on WSDOT's safety rest areas, covering topics such as visitor data, service performance measures, the annual condition report, the 2005-2007 capital investment program and the commercial truck parking study.

WSDOT uses three methods to measure customer service performance: Level of Service (p. 49), an annual Customer Satisfaction Survey (p. 49), and an ongoing and year-round Customer Comments Card program (p. 51). Also, WSDOT performs biennial assessments of safety rest area building and site condition assessments to determine deficiencies (p. 50). These processes provide WSDOT with important information with which to evaluate and improve the maintenance and operations of rest area facilities.

21.3 Million Safety Rest Area Visitors in 2005

Since the last *Gray Notebook* report in March 31, 2005, WSDOT has implemented a new estimation methodology to more accurately determine the number of rest area visitors. The old methodology estimated the number of visitors based on a set percentage of passing cars (the percentage was unique to each rest area based on a 1987 study). The new methodology is based on water consumption at the safety rest areas. A WSDOT study found, on average, that 73% of safety rest area visitors use the restroom facilities and each visitor uses 3.5 gallons of water. This includes toilet flushing, hand washing, and water fountain usage. WSDOT used this methodology for the first time in 2005; this will become the baseline for future years.

Now, WSDOT can more accurately determine the number of visitors to a rest area, as well as the true "pull rate": the percent of passing cars that stop at the rest area. The pull rate supports the highway safety need for these facilities in rural areas where there is limited or no service. A good example is the Nason Creek Safety Rest Area, located on U.S. 2 near the Coles Corner, west of Leavenworth: 17% of the highway travelers stop at this location.

Based on these new calculations, an estimated 21.3 million people visited Washington's safety rest areas in 2005. The I-5 Toutle River Safety Rest Areas in Cowlitz County were the most visited, with over 3.6 million visitors in 2005, and a pull-rate of 12.15%.

Safety Rest Area Visitor Data
2005[1]

Safety Rest Area (State Route)	County	Annual Use (Visitors)	Percent of Passing Vehicles that Stop
27 Interstate			
Gee Creek[2] (5)	Clark	1,056,598	2.07%
Toutle River[2] (5)	Cowlitz	3,623,522	12.15%
Scatter Creek (5)	Thurston	1,010,494	5.30%
Maytown (5)	Thurston	827,888	4.05%
SeaTac (5)	King	940,098	1.48%
Silver Lake (5)	Snohomish	534,028	0.92%
Smokey Point[2] (5)	Snohomish	1,016,917	1.79%
Bow Hill[2] (5)	Skagit	1,862,779	6.10%
Custer[2] (5)	Whatcom	1,207,341	6.70%
Selah Creek[2] (82)	Yakima	576,964	5.20%
Prosser (82)	Benton	715,475	6.45%
Indian John Hill[2] (90)	Kittitas	1,771,965	11.61%
Ryegrass[2] (90)	Kittitas	797,103	8.21%
Winchester[2] (90)	Grant	491,987	6.45%
Schrag[2] (90)	Adams	1,204,693	17.37%
Sprague Lake[2] (90)	Lincoln	1,512,761	12.83%
Interstate Totals		**19,150,615**	**6.79%**
15 Non-Interstate			
Nason Creek (2)	Chelan	438,911	17.11%
Telford (2)	Lincoln	275,311	16.54%
Elma (8)	Grays Harbor	401,459	6.43%
Bevin Lake (12)	Lewis	146,218	7.81%
Alopwa Summit[2] (12)	Garfield	N/A	N/A
Chamberlain Lake (14)	Klickitat	134,487	6.46%
Blue Lake[3] (17)	Grant	18,904	1.43%
Keller Ferry (21)	Lincoln	N/A	N/A
Vernita (24)	Benton	128,992	5.31%
Hatton Coulee (26)	Adams	62,484	5.30%
Quincy Valley (28)	Grant	110,145	2.44%
Horn School (195)	Whitman	124,925	4.09%
Dismal Nitch[3] (formerly Megler) (401)	Pacific	182,996	10.15%
Forest Learning Ctr.[3] (504)	Cowlitz	131,496	21.30%
Non-Interstate Totals		**2,156,328**	**8.70%**
Total Safety Rest Areas = 42		**21,306,943**	**7.61%**

Source: WSDOT Maintenance & Operations Division, Facilities Office

[1] At some safety rest areas, water use data was not available for particular months (due to equipment malfunction, for instance). In these cases, WSDOT used historical water date for the missing months to calculate the visitor data. Actual gallons per restroom user varies by site due to type/age of fixture and flow setting.
[2] These rest areas have two facilities, one on each side of the road. For this table, the annual use numbers have been combined and the pull rate averaged for the two sites.
[3] These rest areas have seasonal closures.

Asset Management: Safety Rest Areas Annual Update

Customer Service Performance Measures

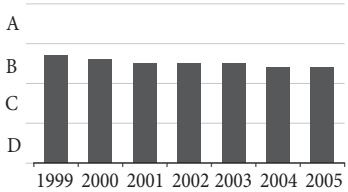
Safety Rest Area Service Rating Holds Steady at "B"

The Maintenance Accountability Process (MAP) measures and communicates outcomes of highway maintenance activities, including those at safety rest areas. It links strategic planning, the budget, and maintenance service delivery. For more information on the MAP process in general, see the December 31, 2005 *Gray Notebook* (p. 40).

As part of the MAP process, WSDOT inspects all safety rest areas semiannually to determine the Level of Service (LOS) that WSDOT delivered. Levels of Service are based primarily on operational aspects of the safety rest areas, and are only based in small part on facilities condition. (For more information on the condition of Safety Rest Areas facilities, see p. 50). Based on the MAP criteria, WSDOT has maintained interstate safety rest areas at a rating of "good condition" (LOS B) since 1999. The safety rest area is in good condition if all features (such as soap dispensers or RV dump stations) are in working order, landscaping is trimmed, and only a small amount of litter, weeds, or minor defects in sidewalks or parking areas may be present.

Rest Area Service Level Trends for All Rest Areas

Service Level

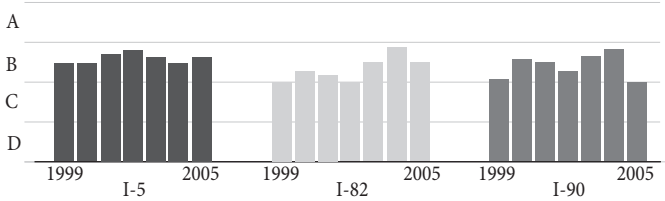


Source: WSDOT Maintenance and Operations Division

From 2004 to 2005, the rest areas on I-90 dropped from a B+ level of service (an all-time high) to a B-. As part of the agency's drought response plan (see September 2005 *Gray Notebook,* p. 76), lawn watering was restricted. This allowed the lawns at these rest areas to brown and impacted the LOS ratings for the sites.

Rest Area Service Level Trends for Interstate Rest Areas on I-5, I-90 and I-82

Service Level



Source: WSDOT Maintenance and Operations Division.

Summer 2005 Customer Satisfaction Survey

In Summer 2005, WSDOT conducted Safety Rest Area customer satisfaction surveys measuring public use, cleanliness and overall public satisfaction levels at these facilities. This built on a previous study from 2004. The 2005 surveys were conducted at randomly selected safety rest areas between the hours of 10:00 am and 4:00 pm.

Safety Rest Area Customer Satisfaction Survey

	2004	2005
	N = 309	*N = 1,247*
What is the main reason for stopping at the Safety Rest Area?		
Restroom	73%	68%
Rest	10%	22%
Picnic	5%	3%
Information	5%	6%
Other	0	<1%
Rate the cleanliness of the restroom facilities.		
Good	63%	67%
Average	34%	32%
Poor	3%	<1%
Rate your overall experience at this Safety Rest Area.		
Good	77%	82%
Average	22%	18%
Poor	1%	<1%

Source: WSDOT Maintenance & Operations Division, Facilities Office

N = sample size of the survey.

Costs for Safety Rest Areas Average 31 Cents per Visitor in 2005

In 2005, it cost Washington State approximately $0.31 per visitor to maintain, operate, and preserve safety rest area facilities at the current level of service. For the 2003-05 (actual) and 2005-07 (planned) biennia, maintenance, operation, and preservation costs at Safety Rest Areas average about $6.5M per year. With 21,306,943 visitors to Washington State Safety Rest Areas in 2005, this works out to about $0.31 per visitor in 2005. By contrast, according to figures from the Federal Highway Administration, the cost to society per each fatal collision is $3.9 million, and $325,000 per each disabling injury collision.

Asset Management: Safety Rest Areas Annual Update

Safety Rest Area Preservation

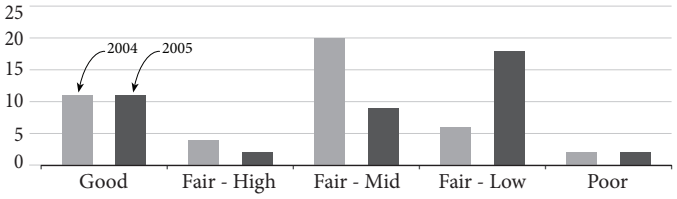
Safety Rest Area Condition Report for 2005 Indicates Deterioration of Facilities

In 2005, WSDOT performed the second round of Safety Rest Areas building and site condition assessments to determine the facilities deficiencies. This is a biannual process to help with prioritization of renovation and replacement projects. Prior to this report, the assessment was annual; WSDOT changed to a biannual assessment process to better align with the budget development process. The next assessment will be in 2007.

The results of the condition assessment are 11 Safety Rest Areas in Good condition, two Safety Rest Areas rated Fair-High, nine Safety Rest Areas rated Fair-Mid, 18 Safety Rest Areas rated Fair-Low, and two Safety Rest areas rated Poor. Thirteen facilities moved from a Fair-Mid rating to a Fair-Low. This significant difference reflects refinements of the assessment process as well as deterioration in the facilities.

Rest Area Condition Assessment Summary 2004 - 2005

Number of Safety Rest Areas

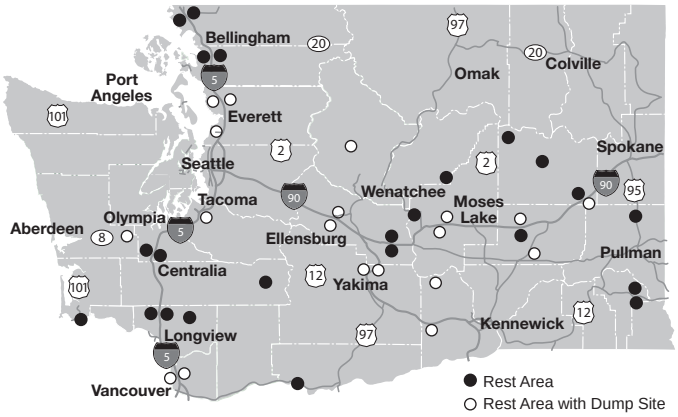


Source: 2005 Safety Rest Area Condition Assessment.

The current condition assessment process identified $20 million in estimated costs to correct site and building deficiencies at Safety Rest Areas, which is an increase of $8.5 million from the previous year. These estimated costs include $2 million in water system deficiencies, $5 million in sewer system deficiencies, $9 million in site deficiencies, and $4 million in building deficiencies.

Washington State Safety Rest Areas 101

WSDOT's safety rest area program began in 1967, and most of Washington's safety rest areas were built under a federal program in the late 1960's. Currently, WSDOT owns, operates, and maintains 42 safety rest areas (27 on interstate highways and 15 on non-interstate highways). Safety rest area facilities encompass 555.5 acres, 83 buildings, 29 on-site public drinking water systems, 36 on-site sewage treatment/pretreatment systems, and 19 recreational vehicle dump stations. All facilities are ADA accessible and have permanent restroom buildings, separate truck/RV and passenger car parking, and picnic areas.



WSDOT expects that more repair and rehabilitation projects will be required due to the age of the facilities and increasing traveler demand. The highest priority in addressing deficiencies is the life, health and safety of the traveling public.

Safety Rest Area Conditions Rating Scale

Good. Facility is new construction and/or meets current standards.

Fair-High. Facility meets current standards and/or is in adequate condition with minimal component deficiencies

Fair-Mid. Facility is functional, and is in adequate condition with minor component deficiencies.

Fair-Low. Facility has multiple system deficiencies.

Poor. Facility is at or beyond its service life, with multiple major deficiencies.

Future Initiatives

WSDOT is in the process of developing classifications for Washington's safety rest areas based on several criteria such as highway traffic volumes, highway type, and services provided. This will include defining amenities, facilities, and parking availability for the different rest areas throughout the highways system. The new system will have two benefits. First, it will provide the traveling public with defined standards for each safety rest area classification, so visitors will know what to expect at each location. Secondly, the new classification system will enable WSDOT to better quantify current and future needs for each safety rest area. More information will be provided in the next Safety Rest Area update in the *Gray Notebook* for March 31, 2007.

Asset Management: Safety Rest Areas Annual Update

Safety Rest Area Special Studies

Rest Areas Comment Card Program

In Summer 2004, WSDOT instituted the Comment Card Program at all Safety Rest Areas to get feedback from the public on the overall operations at these facilities. As of March 2006, WSDOT has received 1,104 comment cards from visitors. Of the 1,104 cards received, 489 commented on the level of cleanliness of the restrooms, 94 voiced opinions on the Free Coffee Program, 62 were on the topic of vending machines, and 459 referenced other safety rest area issues (good and bad).

The comments and suggestions from the public were categorized into high and low priority needs. Comments and suggestions that dealt with security and/or user comfort levels were assigned a high priority, whereas aesthetic issues were assigned low priority. Given current budget constraints, only the high priority needs were addressed.

Customer Input Leads to Safer Safety Rest Areas

In response to numerous complaints of illegal activities at safety rest areas along the I-5 corridor through the Comment Card Program, WSDOT and the Washington State Patrol (WSP) partnered on implementation of the Crime Prevention Through Environmental Design (CPTED) program to improve safety for safety rest area visitors. The following changes resulted:

I-5 Bow Hill NB/SB, I-5 Custer NB/SB, and I-5 Smokey Point NB/SB Safety Rest Areas

WSDOT installed fences to deter visitors from entering the surrounding wooded areas. The agency also relocated the traveler information kiosk at Smokey Point NB Safety Rest Area to provide better visibility of the parking area for the Free Coffee Program volunteers.

I-5 Sea-Tac Safety Rest Area

The South King County WSP Office increased their presence and addressed nighttime security concerns. WSDOT remodeled an existing storage building to operate as a WSP mini-office, creating a constant WSP presence. Work is currently underway to explore the installation security cameras to reduce illegal activities. The partnership between WSDOT and WSP has created positive changes that include decreases in loitering, solicitation, and threats to citizen safety and WSDOT property.

14% Truck Parking Shortage in Washington

Drive Washington's interstate highways and you will see a demand for commercial truck parking. The Federal Highway Administration's (FHWA's) study of Adequacy of Commercial Truck Parking (June 2002) reported a 14% shortage of truck parking in Washington. WSDOT followed up with its own study identifying locations on the interstate system with inadequate truck parking, future freight trends, and strategies to manage the shortage (see the table below).

Key Findings of WSDOT Commercial Truck Parking Study (December 2005)

Limitation	Location
Corridors with truck parking shortages	I-5 NB between Oregon and Olympia I-5 NB/SB between Olympia and Marysville/ Arlington I-90 WB between Vantage and Seattle
Safety Rest Areas which have truck parking demands that consistently exceed their capacity	I-5 NB - Scatter Creek I-5 SB - Maytown I-5 NB - Gee Creek I-5 NB - Smokey Point I-90 WB - Sprague Lake
Commercial truck stops which are at capacity	I-90 EB – Flying J Travel Plaza (Ellensburg) I-90 WB – Pilot Travel Center (Ellensburg) I-90 WB – Broadway Flying J Travel Plaza (Spokane) I-82 EB – Horse Heaven Hills Travel Plaza (Prosser) I-82 EB – Gear Jammers Truck Plaza (Prosser)

Source: WSDOT Commercial Truck Parking Study - Final Report (December 2005)

In 2005, federal regulations changed to require commercial truck drivers to get a full, uninterrupted eight-hour sleep once the maximum number of driving hours is reached. As a result, truck parking demand at commercial truck stops and WSDOT safety rest areas is expected to increase where legal truck parking is currently insufficient. A shortage of truck parking contributes to driver fatigue and illegal parking on ramps and along highways, both of which can cause accidents.

Partly due to parking shortages, illegal truck parking occurs along the entire stretch of I-5, with 34 to 104 illegally parked trucks per night; on I-90 between Vantage and Seattle, 39 to 90 trucks park illegally every night. As of 2006, WSDOT provides 392 truck/RV parking spaces at safety rest areas across the state. At Scatter Creek (I-5, Thurston County), WSDOT is planning 15 to 25 additional parking spaces for trucks/RVs. WSDOT is accounting for additional truck parking spaces in its 20-year facilities plan at the Safety Rest Areas with identified shortages.

Asset Management: Safety Rest Areas Annual Update

Safety Rest Area Capital Investment Program 2005-2007: Preservation

Safety Rest Area Prioritization

The safety rest area program is a statewide managed program. WSDOT identifies deficiencies biennially through a condition assessment process. Major rehabilitation needs and minor projects are identified and prioritized based on the benefits returned to the transportation user. Projects are identified in three categories: utility (sewer, water, electrical), building, and site. The table below shows the Safety Rest Area Preservation Program Goals for the next 10-20 years.

Safety Rest Area Preservation Program Goals

Program Elements	Priority Level	Program Goal for Percentage of Spending
Utility (Sewer, Water, Electrical) Systems		**40%**
Replace, refurbish, and rehabilitate systems with failures and to meet regulatory requirements.	A	
Replace, refurbish, rehabilitate systems to eliminate potential failures, extend service life, and minimize future maintenance and operational costs.	B	
Buildings		**50%**
Replace, refurbish, and rehabilitate building components to meet regulatory requirements.	A	
Refurbish/rehabilitate building components to extend the service life and minimize future maintenance and operational costs.	B	
Replace existing buildings that have reached their economic service life based on renovation, maintenance and operation costs, and replacement value.	C	
Site		**10%**
Replace, refurbish, and rehabilitate site components and systems (parking, lighting, landscape, and sidewalk) to meet regulatory requirements.	A	
Refurbish/rehabilitate site to meet peak demand, improve site security and safety, and minimize future maintenance and operational costs.	B	

Source: WSDOT Maintenance & Operations Division, Facilities Office

Rest Areas Preservation Program

Major Rehabilitation

Major rehabilitation projects involve major reconstruction or the replacement of systems or components that have reached the end of their useful life. In the last report, I-5 Gee Creek Safety Rest Area was undergoing rehabilitation of its sewer system, and I-90 Indian John Hill Safety Rest Area was having its RV dump station winterized. Both projects are now complete and fully operational.

I-90 Ryegrass Safety Rest Area – Water System Rehabilitation
This project, expected to be completed during Fall 2006, will provide a water storage tank to balance peak demand and emergency backup power for the well pump during power outages.

SR 401 Dismal Nitch Safety Rest Area – Master Plan
The Dismal Nitch Safety Rest Area (formerly the Megler Safety Rest Area) is expected to be complete in Spring 2006. It will provide a conceptual master plan to aid in future development for the facility as a WSDOT safety rest area and as a unit of the Lewis and Clark National and State Historic Park. A multi agency team, including WSDOT, Washington State Historical Society, and the National Park Service, developed this master plan. This project was funded with Federal Enhancement, state, and private funds. (See p. 53 for a drawing of the new site)

I-90 Winchester Safety Rest Area – RV Paving
The RV paving was completed during Fall 2005. It provided new pavement for recreational vehicle parking at the RV dump station and reduced traffic congestion within the safety rest area.

Minor Capital and Emergent Needs

Below are examples of minor Safety Rest Area projects completed in 2005. Generally, these projects are less than $50,000 in value, address emergent conditions not identified prior to the biennium, and are performed by WSDOT crews.

I-5 Smokey Point NB/SB Safety Rest Area – Minor Building Renovation

I-90 Sprague Lake EB/WB Safety Rest Area – Minor Building Repairs

I-90 Schrag EB/WB Safety Rest Area – Minor Building Repairs

Asset Management: Safety Rest Areas Annual Update

Safety Rest Area Capital Investment Program 2005-2007: Improvements

Rest Areas Improvement Program

WSDOT strives to prioritize facility additions to its Safety Rest Area program based on locations where accidents due to fatigue are occurring, and where no nearby rest facilities (public or otherwise) are present. Sleepy driving and inattentive driving are two of the leading causes for car accidents in Washington State, together accounting for 20% of all fatal accidents from 1993 to 2001.[1] Unfocused drivers are a danger to themselves, their passengers, and other drivers. Safety Rest Areas offer an opportunity for sleepy and inattentive drivers to get off the road and rest along highways that otherwise have no good stopping points such as all-night restaurants. When possible, WSDOT seeks to partner with local communities to share the costs of building new safety rest areas.

This is an update on the three new Safety Rest Areas first discussed in the March 2005 *Gray Notebook* (p. 41). WSDOT anticipates including the construction phase for the second two projects, *U.S. 101 NE Peninsula Safety Rest Area* and *SR 7 Elbe Safety Rest Area,* in its 2007-09 Highway Construction Budget Request.

U.S. 2 Iron Goat Interpretive Site – New Facility

This new Safety Rest Area facility near the City of Skykomish is planned for advertisement in May 2006 and is expected to open to the public in Fall 2006. When complete, this facility will provide seasonal travelers with modest restroom facilities, access to trails, and interpretation of historical and natural features unique to this location. This new facility is funded with a National Scenic Byway Grant, state funds, a private donation, and volunteer labor.

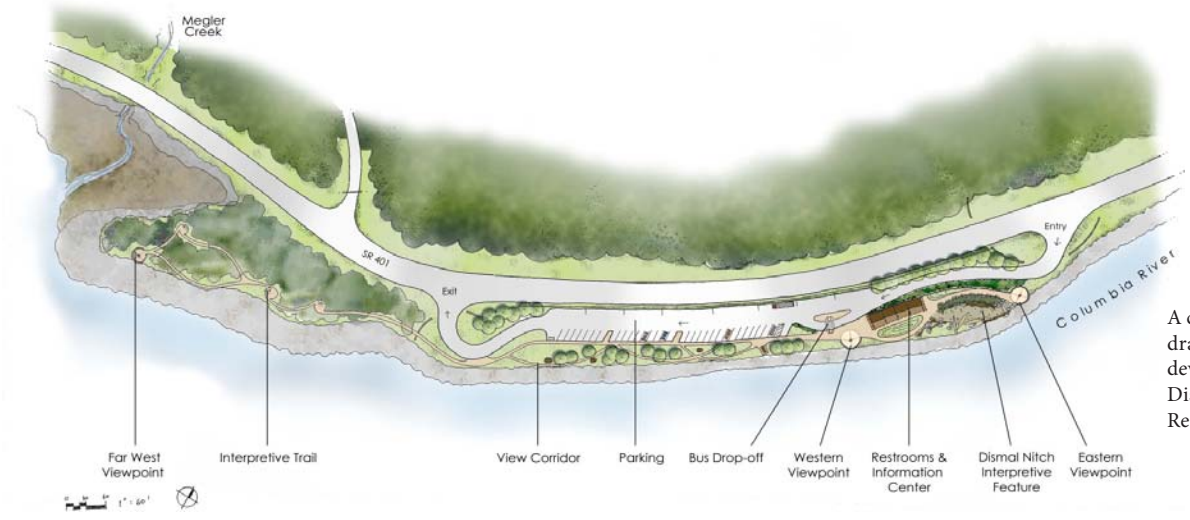
U.S. 101 NE Peninsula Safety Rest Area – New Facility

A construction bid for a new Safety Rest Area facility near the City of Sequim is anticipated to be advertised in Summer 2008, and the facility will be open to the public in Fall 2009. Construction on this project was pushed back due to a funding reallocation within WSDOT's safety program. A Safety Rest Area in this location will reduce the number of accidents due to sleepy or inattentive drivers. When complete, this facility will provide year-round access to public restrooms, picnic and pet areas, free coffee, a recreational vehicle dump station, and interpretation of historical and natural features. This project is funded with a combination of federal and state funds.

SR 7 Elbe Safety Rest Area – New Facility

A construction bid for a new Safety Rest Area facility is anticipated be advertised in Summer 2008. The facility is planned to be open to the public in Fall 2009 near the Town of Elbe. Construction on this project was pushed back due to a funding reallocation within WSDOT's safety program. When complete, this rest area will provide year-round access to public restrooms, picnic and pet areas, and interpretation of historical and natural features unique to this location. This project is funded with a combination of federal and state funds.

[1] For more information on inattentive and sleepy drivers, visit www.wsdot.wa.gov/planning/wtp/datalibrary/Safety/InattentiveandSleepy.htm



A conceptual drawing of the future development of the Dismal Nitch Safety Rest Area.

Aviation: Annual Update

Aviation provides a critical link to the local, state, and national transportation system. With 139 public-use airports, the state's aviation system efficiently connects people to goods and services across municipal, state, and international boundaries. WSDOT is responsible for preserving the aviation system through airport aid grants, land-use planning, air search and rescue, and maintaining 16 back country emergency airports. The following performance measurement data is included in this update on the key components of WSDOT's programs:

- Pavement Condition Index Rating
- Aircraft Registrations
- Airport Land Use Compatibility Assistance

Airport Pavement Management System

Excluding the four large commercial airports (SeaTac, Spokane, Bellingham, and Pasco), Washington's airport system consists of nearly 112 million square feet of pavement, including runways, taxiways, and aprons (the paved strip in front of and around airport hangars and terminal buildings). As this system ages, the upkeep of existing pavement will increase safety and minimize the long term cost of maintenance and construction (see table to the right for pavement projects). WSDOT uses the Pavement Condition Index (PCI), which calculates distresses such as cracking, patching, rutting, waves, sags, and humps to measure the quality and improvement of the airport pavements (for more information on PCI, see the June 30, 2005 *Gray Notebook*, p. 72).

2002 – 2005 Pavement Condition Improvement

Average Pavement Condition Index (PCI) Rating (out of 100), Target = 78

Pavement Type	2002	2005	Change
Overall System	73.12	77.39	+4.27
Runways	76.09	80.22	+4.13
Taxiways	72.34	77.17	+4.83
Aprons	71.07	74.58	+3.51

Source: WSDOT Aviation Program

Using the PCI, WSDOT maintains a statewide airport pavement management system (APMS) which assesses the relative condition of pavements for selected Washington airports in the Washington State Airport System Plan and the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems. The APMS is a tool to provide the State, the airports, and the FAA with pavement and analytic information to identify pavement-related needs, to optimize the selection of projects and treatments over a multi-year period, and to evaluate long-term impacts of decisions made regarding the Washington airport pavement infrastructure.

Airport Pavement Improvements

Since 2002 WSDOT has made pavement maintenance a priority by dedicating efforts toward educating airport sponsors and decision makers to plan for future paving needs. In the table below, results of the 2005 APMS reveal the overall quality of the pavement system improved an average of four points from 73.12 in 2002 to 77.39 in 2005. In 2005 WSDOT reconstructed

Airport Pavement Projects

2005–07 Biennium

Airport	Project Description	Completion Status
2005 Projects		
Anderson Field: City of Brewster	Runway Reconstruction	✓
Grand Coulee Dam Airport: Grant County Port District No. 7	Runway Reconstruction	✓
Tonasket Municipal Airport: City of Tonasket	Taxiway Reconstruction	✓
Willapa Harbor Airport: Port of Willapa Harbor	Runway Reconstruction	✓
2006 Projects		
Pangborn Memorial Airport: Ports of Chelan & Douglas Counties	Runway Shift & Safety Area Improvements	July-06
Chehalis-Centralia Airport: Chehalis-Centralia Airport Board	Taxilane Construction & Reconstruction	Aug-06
Lind Airport: Town of Lind	Runway Reconstruction	Aug-06
Sanderson Field: Port of Shelton	Apron Rehabilitation	Aug-06
Port of Whitman Business Air Center: Port of Whitman County	Taxiway Re-design	Sept-06
Willapa Harbor Airport: Port of Willapa Harbor	Overlay & Widen Taxiway & Connectors, Overlay Apron	Sept-06
Deer Park Municipal Airport: City of Deer Park	Taxilane Construction	Oct-06
2007 Projects		
Ocean Shores Municipal Airport: City of Ocean Shores	Runway Widening & Extension/Parallel Taxiway Construction	Aug-07
Kelso-Longview Regional Airport: City of Kelso	Taxilane Construction	Sept-07
Ephrata Municipal Airport: Grant County Port District No. 9	Runway Reconstruction & Taxiway Connector Construction. Glider Runway Construction	Oct-07
Rosalia Municipal Airport: Town of Rosalia	Runway Reconstruction	Dec-07

Source: WSDOT Aviation Program

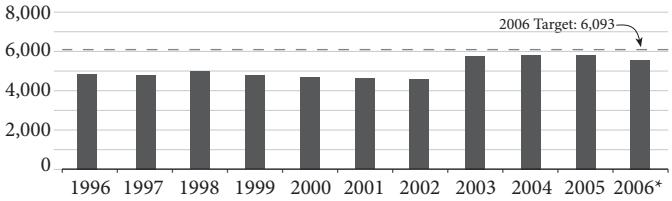
four major runways and taxiways (see table below left), bringing each of their PCIs up to 100 and helping to increase the PCI for the entire system.

The APMS is updated on a three year cycle; the next APMS analysis will be completed in 2008. WSDOT's goal is to maintain an overall airport system PCI above 78 points. WSDOT will continue to make pavement preservation and improvements a priority through the Local Airport Aid Grant Program, airport planning, and education of airport sponsors. The table on the previous page shows pavement projects slated for the 2005–07 biennium funded in part with Local Airport Aid Grant funds, which targets 65% its funds towards pavement improvements including runways, taxiways, and aprons. WSDOT will continue to report on the status of these pavement projects annually.

Aircraft Registration Program

State law requires that all airworthy general aviation aircraft be registered with WSDOT. Registration fees directly support airport preservation, maintenance and improvement programs, as well as search and rescue operations. Previous articles included performance data on pilot registrations however in 2005 the Legislature eliminated state pilot and mechanic registration fees in order to find a more efficient way to fund aviation programs.

Number of Aircraft Registrations 1996 - 2006



* Number reflects registration-collected year to date.
Source: WSDOT Aviation.

More Aircraft Registered

Over the last ten years, WSDOT slowly increased aircraft registration numbers, especially following the 2003 introduction of an online registration and payment system.

WDOT's goal is to increase the previous year aircraft registrations by five percent. Based on the collection of 5,803 registrations in 2005, WSDOT's goal is to increase registrations to 6,093 in 2006. Currently, there are approximately 372 aircraft that are not registered.

In 2003, state law changed to include penalties for late registrations. WSDOT informs aircraft owners of the registration deadlines by mailing two reminder letters prior to issuing penalties. The division also contacts individuals via email or telephone, as a final reminder before issuing penalties. Aircraft registration is due by January of every year. As a result, the number of penalty letters sent to aircraft owners showed a decrease from 373 in 2005 to 358 in 2006.

Since November 2005, WSDOT has stepped up efforts to ensure the registration database is updated and accurate. By sending letters to every aircraft owner in the registration database, as well as to those that are new to the FAA database, WSDOT determined the status of their aircraft and urged individuals to either file an exemption or register with WSDOT.

Local Airport Aid Grant Program

Each year WSDOT provides crucial financial assistance to many of the state's 139 public airports through its Local Airport Aid Grant Program. The program is funded by an 11-cent fee per gallon on aviation fuel. Any municipality, port district, or federally recognized tribe that owns an open, public use airport can apply. The maximum amount WSDOT can award to an individual sponsor in a single grant is $250,000. WSDOT requires a minimum local match of five percent. Under the Local Airport Aid Grant criteria, requesting airport sponsors must define projects that are specific to pavement, safety, maintenance, security, or planning.

In 2005, WSDOT awarded $1.2 million in state grants to 24 general aviation airports in Washington. The grants were distributed across the state, with most of the money directed toward airport pavement and safety projects. WSDOT's program also leveraged $3.4 million in federal funds for general aviation airports that are part of the National Plan of Integrated Airport Systems (NPIAS). See table on the following page for more detail.

New Project Delivery Performance Measure

WSDOT will measure performance of the Local Airport Aid Grant Program by tracking on-time and on-budget project delivery. WSDOT selected five focus projects for individual project reporting (see bottom table on following page) and will work with airport sponsors to develop project milestones. These focus projects have been selected due to the size and visibility of each project. Future editions of the *Gray Notebook* will report the actual and planned results on the following milestones for the five projects:

- Start of Preliminary Engineering – Phase 1
- Bid Advertisement Date – Phase 2
- Operationally Complete – Phase 3
- Completed On-Budget

WSDOT Aviation: Annual Update

2005 Local Airport Aid Grant Program

Type of Projects	# of Projects	Local Funds	State Airport Aid Funds	Federal Funds	% of Total	Project Total
Pavement	7	$828,595	$751,228	$995,000	45.12%	$2,574,823
Safety	8	$212,427	$333,882	$2,407,039	51.75%	$2,953,348
Maintenance, Planning & Other	5	$18,249	$115,469	$0	2.34%	$133,718
Security	1	$7,240	$28,960	$0	0.63%	$36,200
Runway Safety	3	$240	$7,500	$0	0.15%	$8,620
Total	**24**	**$1,067,631**	**$1,237,039**	**$3,402,039**	**100%**	**$5,706,709**

Source: WSDOT Aviation Program

Selected Focus Projects for 2005—2007 Biennium Performance Analysis

Phase 1: Begin Preliminary Engineering, Phase 2: Bid Advertisement Date, Phase 3: Operationally Complete

	Phase 1		Phase 2		Phase 3		Total Project Amount		Estimated Airport Aid
Airport - Project Description	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Funds**
Sanderson Field: Port of Shelton – Aircraft Apron Rehabilitation, Windcone Replacement and Segmented Circle Improvements	Mar 2005	Mar 2005	April 2006	April 2006	Sept 2006		$373,602		$9,340
Lind Airport: Town of Lind – Runway Reconstruction	Feb 2006	Feb 2006	July 2006		Dec 2006		$287,500		$273,750
Vista Field: Port of Kennewick - Runway Crack Seal, Slurry Seal, and Repaint Markings	Dec 2005	Dec 2005	June 2006		July 2006		$190,027		$171,024
Chehalis-Centralia: Chehalis Centralia Airport Board – Rehabilitate and Construct Taxi lanes, Install Automated Weather Observation System (AWOS)	Feb 2005	Feb 2005	Mar 2006	Mar 2006	July 2006		$860,585		$21,515
Thun Field: Pierce County – Install AWOS, Clear Obstructions and Acquire Property for Taxiway Clearance	Feb 2005	Feb 2005	June 2006		Dec 2006		$1,260,560		$31,514
Total							**$2,972,274**		**$507,143**

Source: WSDOT Aviation Program

WSDOT Aviation: Annual Update

Airport Land Use Compatibility Program

Over the last 50 years, the geographic size and the nature of urban development have undergone tremendous changes. This affects the ability of airports to meet future air transportation needs. Most airports were originally located in remote areas or areas located several miles from urban centers; these once- remote airports are now experiencing increasing pressure from population growth and the expansion of metropolitan areas. Incompatible development near and around airports (such as schools, large retail centers or high density residential development) are major challenges facing aviation land use.

In 1996, the Washington State Legislature passed amendments to the Growth Management Act (GMA) to require local governments to protect public-use airports. The law requires all towns, cities, and counties to adopt comprehensive plan policies and to implement regulations to discourage incompatible land uses adjacent to public use airports. The law also directs WSDOT to provide local communities with assistance to comply with the law.

The objectives of WSDOT's Airport Land Use Compatibility Program is to:

- Preserve transportation infrastructure
- Promote quality of life
- Plan for future needs

These efforts are resulting in proactive land use protection programs for 65 of Washington State's 139 public-use airports. Statewide, 32 towns and cities and 19 counties have adopted, or are currently working with WSDOT to adopt, comprehensive plan policies and development regulations.

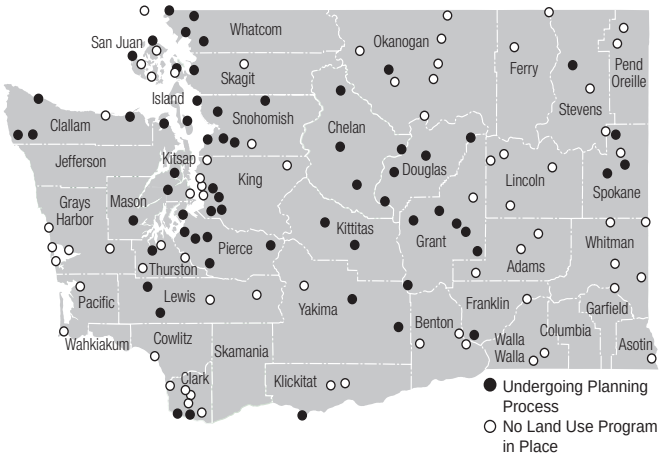
Technical Assistance Program Outreach

WSDOT staff provides local communities with assistance in drafting appropriate comprehensive plan goals, policies, and regulations consistent with the requirements of the GMA. Full adoption of comprehensive policies and regulations follows a public process that can take from six months to as much as three years, depending on the jurisdiction.

Assistance includes providing background information and other resources, reviewing working drafts, and providing formal comment. Milestones in the process include the release of a draft (usually for review by the planning commission, city council or county commission, and public comment) followed by adoption of a final document. This effort has resulted in increasing the number and types of milestones reached by the program from 2003 to 2005 (see table to the right).

2005 Airport Land Use Compatibility Program

Public-use airports supported by towns, cities and counties working to adopt and maintain land use protections through comprehensive plan policies and implementing regulations



Airport Land Use Compatibility Technical Assistance Program Milestones

Number of Jurisdictions per Year with Milestone Achieved

	2003	2004	2005	2006-07 Goals
Program Introduction Meeting/Workshop	5	1	6	20
Draft Comprehensive Plan Policies	6	3	10	15
Adopted Comprehensive Plan Policies	5	3	7	12
Draft Development Regulations	3	4	7	15
Adopted Development Regulations	3	4	4	10

Source: WSDOT Aviation Program

Highway Maintenance: Annual Update

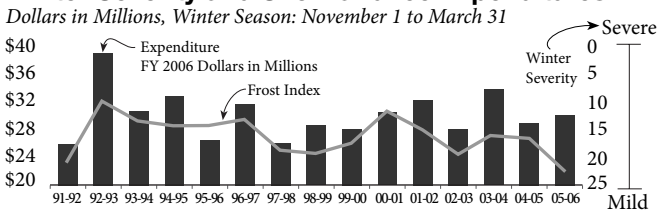
2005-2006 Post Winter Report

While the numbers of average temperatures and precipitation totals are adding up to a statewide winter that is not out of the ordinary compared to winters past, a few extraordinary events made it feel far from routine. Two major rock fall incidents on I-90, one solid month of record-breaking rainfall in western Washington, and greater-than-average mountain snowfall have given WSDOT crews and the traveling public some challenging obstacles to overcome.

Snow and ice control expenditures in the maintenance program are related to the severity of the winter. While this past winter was characterized by some unique weather events, the frost index shows that across the state, Washington had a milder-than-average winter. The frost index is a winter severity rating based on daily temperature information gathered from 29 weather stations around Washington State. Rising costs of deicers, their increased utilization to provide better road conditions, and higher resource deployment in mountain passes pushed winter maintenance costs higher compared to the milder-than-average winter severity rating. A lower numerical rating means more sub-freezing temperatures (along with the associated snow and ice) while a higher numerical rating means less sub-freezing temperatures.

Winter Severity and Snow and Ice Expenditures

Dollars in Millions, Winter Season: November 1 to March 31



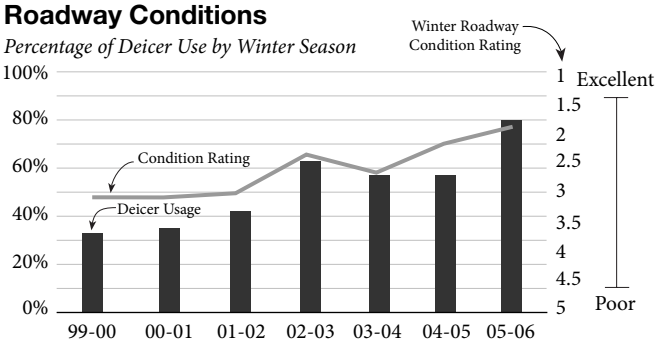
Source: WSDOT Maintenance.

Improving Winter Road Conditions

One of the best strategies to keep roadways clear and safe is to prevent snow and ice from accumulating and bonding to the pavement. WSDOT does this by applying deicing agents. Liquid or solid deicer chemicals stop ice crystals from bonding with the road surface, thereby preventing frost, black ice, and compact snow. While deicer agents are not a cure-all for hazardous winter road conditions, they are an increasingly important alternative to plow-and-sand techniques traditionally used by highway maintenance crews.

Statewide Deicer Use and Winter Roadway Conditions

Percentage of Deicer Use by Winter Season



Source: WSDOT Maintenance.

Evaluating Roadway Conditions

Through March 31st, maintenance crews documented 22,147 road treatments to help improve winter road conditions statewide. Maintenance crews used deicers during 17,676 (80%) of these treatments, and sand on the remaining 4,471 treatments. A higher percentage of deicer use leads to better road conditions. This in turn leads to improved safety, fewer road closures, and reduced need for studded tires.

WSDOT measures its snow and ice control performance by assessing the travel conditions at random locations throughout the state highway system during winter. Through weekly field surveys at these locations, road conditions are evaluated and rated on a scale of one (road conditions with best traction) to five (road conditions with least traction). Over the last few years, increased deicer use and improved techniques have correlated to a higher level of service for snow and ice control.

Above-Average Mountain Snowfall

Mountain pass highways experienced above-average levels of snowfall this winter which required creative solutions, such as shifting resources and traffic flow management.

Shifting Resources

Due to limited resources, WSDOT maintenance moves personnel and snowplows to different places in extreme winter conditions. This season, WSDOT relied on this tactic more than ever before. Resources are typically shifted from the lowlands to the mountains in advance of snowstorms that are projected to dump six or more inches in less than a 12-hour period. Shifting resources can provide mountain passes with as many as 20 additional snowplows. This allows for more frequent deicer applications and more effective snowplow runs, with up to five plows operating in tandem.

Traffic Flow Management

One of the biggest risks during heavy snowfall at Snoqualmie Pass is multiple-vehicle accidents caused by traffic bunching up behind slowed cars or trucks. A single spinout under these conditions can easily lead to a chain-reaction pileup, requiring the pass to be closed for extended periods. To reduce the risk of pass closures during severe weather, WSDOT adapted a new process from California to regulate the number of vehicles crossing a mountain pass in a given time, called Traffic Flow Management (TFM). TFM involves the temporary reduction of lanes available to traffic at a point below the Snoqualmie Pass summit, with traffic released from the lane restriction in

a way that naturally spaces out vehicle flow over the pass. This minimizes the chance of large scale accidents and aids in snow removal.

Incident Response Program

WSDOT's Incident Response (IR) Program got its start in the urban areas of the Central Puget Sound region where IR vehicles could quickly respond to accidents to help clear roads and keep traffic moving. The IR program has since moved up into the mountain passes. The North Central region provides an IR truck during the winter months to help motorists on Stevens Pass. Due to large amounts of truck traffic using Snoqualmie Pass, WSDOT teamed up with the Washington Trucking Association to provide a specially-outfitted truck to help push trucks up and over the summit during tough, winter road conditions. Dubbed IRXtreme, this truck has a special bumper for pushing large trucks and is loaded with weights and chains to gain traction in the worst of road conditions. In one day this winter, IRXtreme pushed 26 big rigs up the eastbound steep grade just below Snoqualmie Summit. (For additional information on the Incident Response Program, see p. 61.)

Avalanche Control

Heavy snowfall in the mountains followed by rain or warm weather increases avalanche hazards. WSDOT oversees a comprehensive program to control when and how the unstable snow pack above the roadway is brought down. This year WSDOT performed 87 avalanche control missions to decrease the hazard of avalanches for travelers and reduce the duration of winter highway closures. Avalanche control teams are stationed at Hyak near the summit of Snoqualmie Pass on I-90 and at Berne Camp near the summit of Stevens Pass on U.S. 2. This work is best completed proactively when snow is becoming unstable, and completed during non-peak traffic hours.

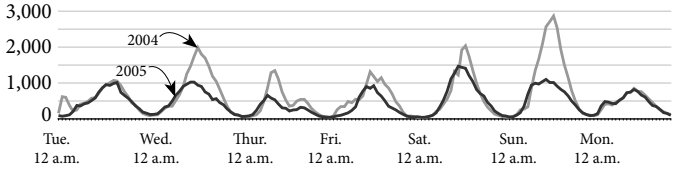
Rockfalls on I-90

Two major rockfalls in September and November 2005 on Snoqualmie Pass made keeping the pass open especially difficult for crews this season. Maintenance staff provided the initial response by clearing fallen rock from the roadway. WSDOT hired contractors on an emergency basis to stabilize the roadside slope that still presented a hazard to motorists. Next, crews established traffic controls to maximize travel mobility and workzone safety, and also set up portable cameras connected to the WSDOT website to provide round-the-clock images of the workzone and nearby traffic conditions.

WSDOT joined forces with the Washington State Patrol and the Governor's office to ask motorists not to travel Washington's main eastwest freeway through the Cascades over the Thanksgiving Day holiday. WSDOT staffed a communications crew at the Hyak Shed throughout the weekend to assist the media. Radio and television stations received hourly updates and, as shown in the chart below, the message resonated with the public, as traffic volumes were down from 2004. While the chart below shows traffic volumes during Thanksgiving week in 2004 and 2005 for westbound Snoqualmie pass, eastbound Snoqualmie pass showed similar results.

Snoqualmie Pass Westbound

Traffic Volumes, Thanksgiving Week



Source: WSDOT Maintenance.

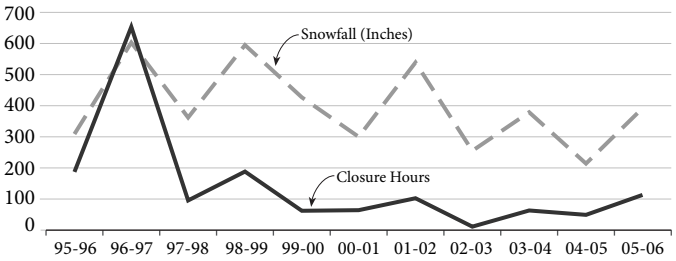
Keeping Snoqualmie Pass Open

I-90 over Snoqualmie Pass, which experiences both heavy automobile and truck traffic, presents maintenance crews with unique challenges. Its elevation is high enough to assure significant snowfall amounts (400 inches per year), but low enough that the snow is usually the hard-to-handle, heavy, and wet variety of snow. Because Snoqualmie Pass is the main east-west Interstate highway over the Cascades, the impact of pass closures is significant (see Trucks, Freights, and Goods on p. 46 for more information). The chart below presents a record of closures and snowfall affecting Snoqualmie Pass over the last decade.

Snoqualmie Pass Winter Closure Hours

Interstate 90 Winter Seasons, 1995 to 2006

Accumulated Annual Hours and Inches of Snowfall



Source: WSDOT Maintenance.

This past winter's snowfall on Snoqualmie Pass was nearly 50 inches above average and pass closure times were up compared to last year's low-snow winter. In the 2005-2006 winter season, Snoqualmie Pass was closed for 134 hours, compared to 49 hours in the 2004-2005 winter season. A new traffic management concept, called Traffic Flow Management (TFM), was implemented at Snoqualmie Pass this year to keep closure times as low as possible.

Highway Maintenance: Annual Update

Record Rainfall Impacts Roads

Precipitation levels peaked throughout western Washington for a few weeks in December and January. Olympia experienced the third wettest January ever, and broke the record for consecutive rainfall with 34 days. Statewide, the rains resulted in 92 slides on state highways. The photos and descriptions below highlight the impact of heavy rains on WSDOT's maintenance crews as mud and debris must be cleared and roadways repaired.

SR 107, Near Montesano in Grays Harbor County

Severe roadway damage from heavy rains forced the closure of this section of roadway on December 29. Sections of the highway surface cracked and buckled, and the roadway slid horizontally as much as 25 feet. Once the slope stabilized, crews established a temporary gravel road so traffic could get through once again. The road was reopened by Friday, January 13. WSDOT placed road signs directing motorists to reduce speed to 35 mph in both directions of SR 107 leading up to the slide area. A lighted stop sign was installed at each end of the gravel section. After stopping, motorists could proceed at 10 mph through the section. WSDOT did not have to place load restrictions on the gravel road.

Buckling of the roadway surface on SR 107.

SR 20, East of Concrete in Skagit County

WSDOT closed the road January 10 when more than 10 dump truck loads of mud and debris slid off the hillside and onto the road. Crews were able to open all lanes of SR 20 east of Concrete on January 11.

WSDOT crews clear trees, mud and debris on SR 20 east of Concrete in Skagit County.

SR 9 near Acme (East of Bellingham) in Whatcom County

WSDOT closed all lanes of SR 9 north of Doran Road on Friday, February 3 after saturated soil beneath the road moved, causing the road to sink, opening a 300-foot long crack. The same thing was happening to the south, but on a smaller scale. Repairs addressed the underlying structure of the roadway. WSDOT crews reopened SR 9 to traffic February 28, after nearly four weeks of emergency work and total road closures. Crews worked seven days a week to complete the project and good weather contributed in helping to finish early.

SR 9 in Whatcom County just south of Acme. The road is shifting and sinking. There is a 300-foot long crack in the road.

SR 105 at Washaway Beach in Pacific County

SR 105 was closed to traffic when eight feet of embankment was eroded by unusually high tides and stormy weather on December 20. Repairs were completed and the road was re-opened for traffic on January 29.

SR 105 Washaway Beach, washes away.

For more information on the 2005-2006 winter season see the WSDOT Maintenance folio, *A Season of Innovation, October 2005 - March 2006* at www.wsdot.wa.gov/maintenance/pdf/WinterFolio_Web.pdf

Incident Response: Quarterly Update

Program Trends

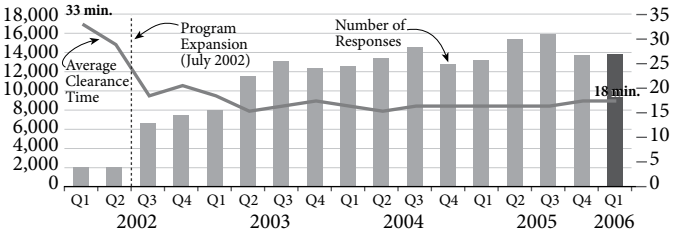
Number of Responses Inching Up

During the first quarter of 2006, WSDOT's Incident Response teams made 13,816 responses. This represented an increase of 111 responses over the previous quarter, and a 3.8% increase from the 13,209 responses for the same period last year.

The average clearance time of 18 minutes for this quarter is also holding steady - the previous quarter's time was also 18 minutes.

Number of Responses and Overall Average Clearance Time

January 2002 - March 2006



Source: WSDOT Incident Response Tracking System.

Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, number of responses by IRT are shown. From Q3-2003, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total.

Service Actions Taken for Non-Collision[1]

	January	February	March
Traffic Control	583	507	505
Provided Fuel	383	306	397
Changed Flat Tire	280	289	331
Minor Repair	205	203	219
Pushed Vehicle	235	202	206
Towed Vehicle	64	58	80
Cleared Debris	268	321	339
Other Actions	1,381	1,375	1,457

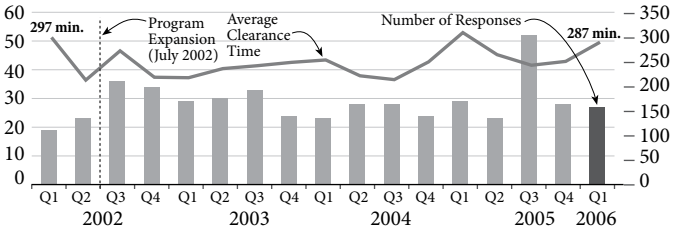
[1]Most common service actions only - exclude various miscellaneous actions taken. Multiple actions may be taken for each response.

83% of Incidents Are Non-Collision

Of the 13,816 total responses, 11,410 (83%) were to assist non-collision incidents. Incidents involving collisions accounted for 1,688 (12%) of all responses. Disabled vehicles consisted of more than half of the responses (7,455 or 54%). Abandoned vehicles resulted in 2,474 (15%) responses followed by incidents that involved removing blocking debris (1,025 or 8%).

Responses to Fatality Collisions

January 2002 - March 2006



Source: WSDOT Incident Response Tracking System.

Incident Response Types

January to March 2006

Primary Reason	January	February	March
Fatality Collisions	3	13	11
Injury Collisions	118	117	154
Non- injury Collisions	457	387	428
Disabled Vehicles	2,496	2,367	2,592
Abandoned Vehicles	845	760	869
Debris	322	343	360
Other	155	141	160
Supplemental Reason [2]	**January**	**February**	**March**
Fire	12	14	15
Hazardous Materials	18	12	5
Other Contacts	166	156	164

[2]Suppplemental Reasons are in addition to or as a result of Primary Incident Types.

Major Incidents Average 287 Minutes to Clear

This quarter, 243 (1.7%) of all incidents took 90 minutes or longer to clear. These are major incidents whose impact on traffic is much larger than the more frequently occurring minor collisions and incidents. Of these, each of the 27 fatality collisions this quarter took over 90 minutes to clear. The average clearance time for fatality collisions was 287 minutes this quarter - more than three times the goal of 90 minutes, and higher than the 240 minutes reported the previous quarter. Average clearance times will tend to vary from quarter to quarter because the type of incidents can vary greatly. In the next *Gray Notebook,* an update will be reported on the high number of responses to fatal collisions that occurred last summer in Quarter 3 (see *Gray Notebook*, September 30, 2005, p. 73).

Incident Response: Quarterly Update

93% of Incidents Cleared Under 90 Minutes

In WSDOT's experience, incidents lasting less than 15 minutes and up to 90 minutes comprise the bulk of responses (up to 93%). Although severe incidents are in this category, such as hazardous spills (32), injuries (300), and fires (32), the majority are less severe in nature and include assisting disabled vehicles (7,455 or 54% of the total number of responses), or abandoned vehicles (2,474 or 18%). When only property damage was involved, incidents were cleared within 45 minutes, and comprised 80% of responses. Only 3% of the property damage incidents lasted longer than 90 minutes.

Incidents by Clearance Times

Clearance Times	Number of Incidents	% of Total
Incidents Lasting 90 Minutes or Longer	243	1.8%
Incidents Lasting 15 to 90 Minutes	4,953	35.8%
Incidents Lasting Less Than 15 Minutes	7,902	57.2%
Incidents Responded to but Unable to Locate	718	5.2%
Total Number of Responses This Quarter	**13,816**	**100%**

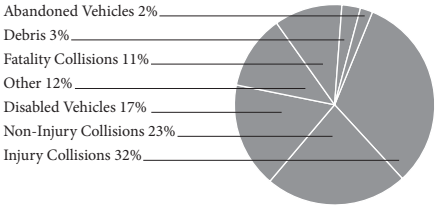
Roving Patrol Units First On the Scene

Ninety-nine percent of all responses by WSDOT's Incident Response Program were made by the program's roving patrol units. Twenty-eight percent of all responses were reported independently to WSP communication centers, which then dispatched the closest roving Incident Response units to the incident. Seventy-one percent of all responses were either initiated by the affected parties, or discovered during roving. Less than 1% (112) of the total responses resulted from calls for assistance to major incidents occurring outside normal roving hours.

Note: 718 responses counted as Unable-To-Locate (UTL). When UTLs are included, the total number of responses this quarter is 13,816.

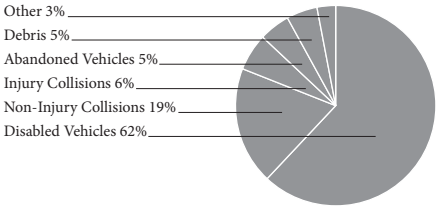
Incidents Lasting 90 Minutes and Longer (243)

There were 3 Fires and 12 Hazardous Materials involved incidents in addition to or as a result of above incidents.



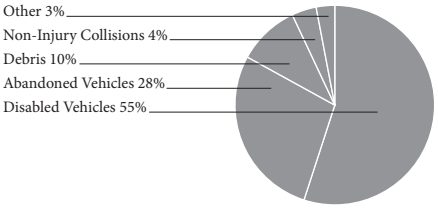
Incidents Lasting 15 to 90 Minutes (4,953)

There were 29 Fires and 20 Hazardous Materials involved incidents in addition to or as a result of above incidents.



Incidents Lasting Less Than 15 Minutes (7,902)

There were 3 Fires and 2 Hazardous Materials involved incidents in addition to or as a result of above incidents.



Travel Information: Quarterly Report

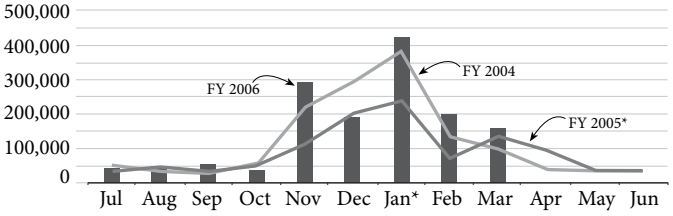
The 5-1-1 Travel Information hotline provides a variety of information affecting travel. This information includes updates on current traffic conditions, incidents, construction activities, mountain pass conditions, and weather conditions. Information can also be obtained on ferry, transit, airline, and railroad service.

5-1-1 Call Volumes Increase Nearly 50%

The 5-1-1 Travel Information hotline received a total of 779,756 calls the first quarter of 2006. This total reflects all the calls made to 5-1-1, 1-800-695-ROAD, and 206-DOT-HIWY. The number of all calls received the previous quarter was 521,833. This is an increase from last quarter of 49.4%, attributable to growing familiarity with the system, and the need for winter and commuter traffic information.

Total Calls to Travel Information*

(5-1-1, 1-800-695-ROAD, 206-DOT-HWY)
3-Year Trend: FY 2004-FY2006



Source: BCMS, Traffic Office.

* Starting January 2005, 1-800-ROAD and 206-DOT-HWY numbers connect directly to 5-1-1, and the call counts are reported in 5-1-1 call total.

5-1-1 Mountain Pass Information

The severity of winter weather and its effect on roadway conditions will spur a greater number of calls to the Travel Information hotline. The busy season for mountain pass information extends from November through April. Call counts normally peak in January, when the weather is most severe.

System Capacity and Enhancements

Large call volumes can constrain the capability of the 5-1-1 system. In December 2005, WSDOT made important enhancements to increase peak call capacity and provide easier access. These improvements last quarter increased service capacity to customers (for additional information, see the *Gray Notebook*, December 31, 2005, p. 43).

In January of 2006, the WSDOT Ferry System installed a new customer information system in Seattle for the Ferry System This system will work as a back-up to the 5-1-1 hotline to assure access in the event of an earthquake, or other natural disaster.

On the WEB

WSDOT's travel information website provides real-time road and weather conditions to the traveling public. On-line information includes roadway incidents, construction event updates, mountain pass information, and weather information.

Site Growth Hits All Time High

The first quarter of 2006 averaged four million daily page views. It is the first time the site averaged four million daily page views for three consecutive months. This is a 67% increase compared to the same period last year. The first quarter average in 2005 was 2.4 million daily page views. The rate and depth of snowfall in the passes impacts how much the site is used.

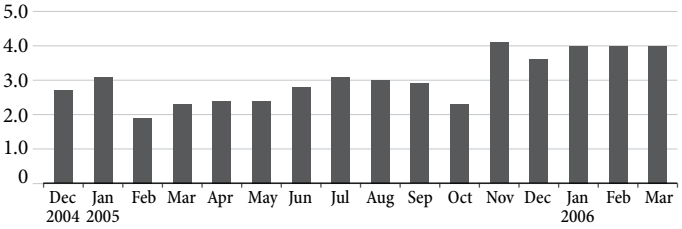
Skyrocketing Growth Since 2004

The growth of WSDOT's travel information website is skyrocketing. In 2005, the website received 1.1 billion page views. This is a 41% increase compared to the previous year total of 735 million, and a 77% increase over the 2003 total of 522 million.

This success is requiring WSDOT to make significant infrastructure changes. Bandwidth, or the amount of data that can be sent from one computer to another, suffers during periods of high use. Twice this quarter, WSDOT had to make infrastructure changes to enable customers to access and use WSDOT's web pages.

Website Usage

Average Daily Page Views: December 2004 to March 2006
In Millions



Source: WSDOT Communication Office

Note: A page view is counted each time a visitor views a webpage on WSDOT's website. Each time a page is refreshed in a user's browser, a page view is recorded. Pages are comprised of numerous files. Every image in a page is a separate file. When visitors look at a page, they may see numerous images, graphics, pictures, etc., generating multiple hits by a user. For example, a page with 10 pictures will generate 11 hits (10 pictures and one for the html file). This is the reason WSDOT tracks page views and not hits.

Expanded Vancouver/Portland Traffic Site

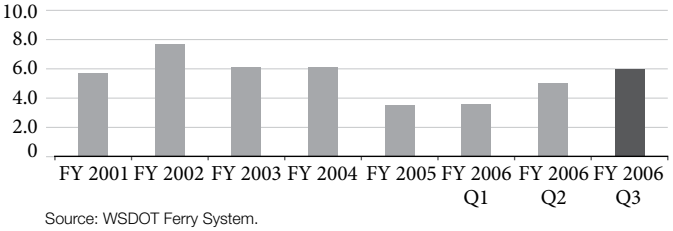
WSDOT and the Oregon Department of Transportation (ODOT) partner to provide access to traffic cameras, travel alerts, and traffic flow maps from a single website to drivers on both sides of the Columbia River. The existing Vancouver area traveler information website now includes traffic impacts and closures on major Vancouver city streets and Clark County roads, as well as, state highways and interstates. The new site can be accessed at www.wsdot.wa.gov/traffic/vancouver.

Washington State Ferries: Quarterly Report

Customer Feedback

In the third quarter of Fiscal Year (FY) 2006, WSDOT's Ferry System completed approximately 39,000 trips. There were 5.4 million riders this quarter, and a total of 307 complaints. This quarter, complaints per 100,000 customers were 6.0, a 20% increase from the preceding quarter and an 80% increase from the same period last year. Fiscal Year 2006 third quarter includes the months of January 2006 through March 2006.

Total Number of Complaints per 100,000 Customers

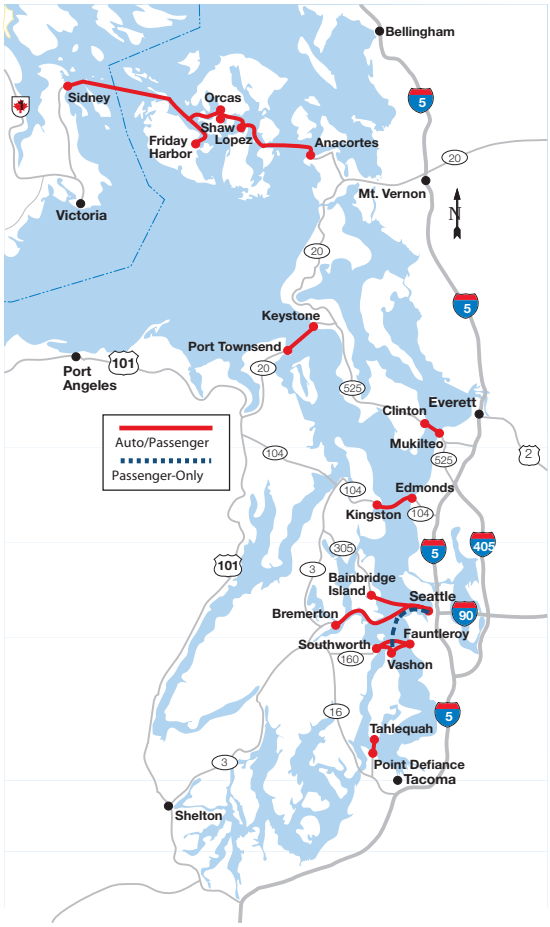


Source: WSDOT Ferry System.

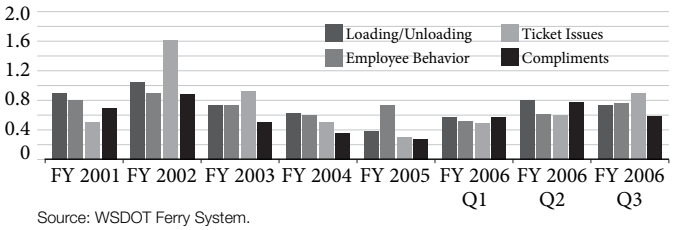
A total of 46 complaints about ticketing issues were received this quarter compared to 33 total complaints last quarter. This represents 0.9 complaints per 100,000 customers. When compared to the same period last year, complaints in this category are up 156%. Although ticket issue complaints steadily increased over the last four quarters, they are not attributable to one route in particular and indicate no consistent pattern. The Ferry System experienced 37 complaints about loading/unloading issues, or 0.7 complaints per 100,000 customers. This is an 11% decrease (improvement) from the preceding quarter and a 54% increase (an increase of 13 complaints) from the same period last year. Nearly one-third of all complaints in this category are from the busy Fauntleroy-Vashon-Southworth route. Customer compliments for the third quarter of FY 2006 are down 30% (0.57 per 100,000) from the preceding quarter.

Trip Reliability

In the third quarter of FY 2006, there were 38,930 scheduled trips. Of these trips, 373 were cancelled; however, 116 make-up trips were made. The resulting number of completed trips totals 38,673. Total completed trips is the actual trips after deducting net cancellations and adding make-up trips (38,930 – 373 + 116 = 38,673). The chart on the following page shows a system-wide average reliability index. Using this index, the Ferry System cancels an average of 2.6 ferry trips during the course of a year for a commuter who travels 200 days per year and makes 400 trips annually. This equates to an average of



Common Complaints per 100,000 Customers



Source: WSDOT Ferry System.

Washington State Ferries: Quarterly Report

four trips per thousand riders. This is a 63% decline in performance compared to the preceding quarter and a 100% decline from the same period last year. This decrease in trip reliability is related to a planned closure at the Point Defiance-Tahlequah terminals over the President's Day weekend (102 trips were cancelled during the closure [27% of all cancellations]). This closure enabled the Ferry System to replace the hydraulic and control systems that operate the moveable bridges, which will increase reliability, safety, and standardization requirements at both the Point Defiance and Tahlequah terminals. The job was completed on-time and on-budget.

On March 31, a 1/4 inch hole was discovered in the oily bilge tank of the Issaquah. The tank was immediately isolated to prevent oil spillage, and the vessel was taken out of service. Temporary repairs were made by divers. That same evening, the tank was emptied and cleaned, and a welder placed a steel doubler plate over the hole. The vessel was returned to service the next day. Permanent repairs will be completed during an upcoming dry-dock scheduled in April. A total of 49 trips were impacted as a result of this repair.

On-Time Performance

This quarter, on-time trip performance totaled 37,950 trips and represents the total number of trips captured by the automated on-time monitoring system. In the third quarter of FY 2006, the average delay was 6% lower (2.9 minutes) than the preceding quarter (3.1 minutes). Ninety-four percent of trips sailed

Average Missed Trips per Commuter

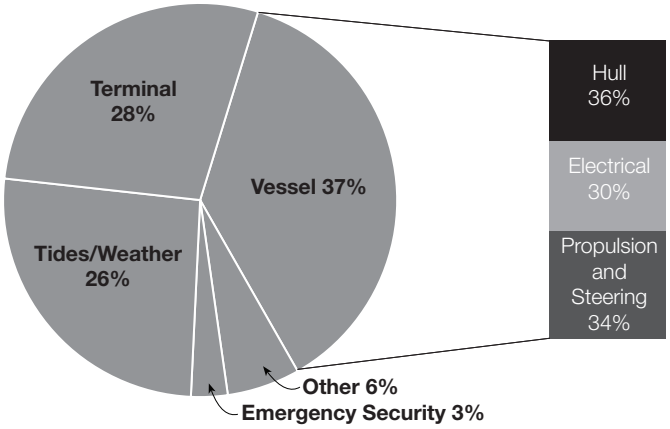
FY 2001	1.6
FY 2002	2.3
FY 2003	1.7
FY 2004	2.2
FY 2005	1.5
FY 2006 Qtr 3	2.6
FY 2006 Qtr 3[1]	1.9

[1] Without Keystone-Pt. Townsend

A total of 86 trips for the Port Townsend-Keystone route were cancelled due to the weather and/or tides. In fact, excluding trips lost to tidal conditions at Keystone, WSF completed 99.5% of all trips and had a reliability index of 1.9, per legislation direction. WSF continues to study alternatives and in harbor options at Keystone.

Most Common Trip Cancellations

Third Quarter, Fiscal Year 2006



On-Time Performance

	Third Quarter FY 2005 Jan - March 2005			Third Quarter FY 2006 Jan - March 2006		
Ferries	Number of Trips	Percent of Trips Within 10 Minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time	Number of Trips	Percent of Trips Within 10 Minutes of Schedule	All Trips Average Delay From Scheduled Sailing Time
San Juan Domestic	6,011	84%	4.1 Minutes	5,943	89%	2.8 Minutes
International Route	24	96%	3.0 Minutes	14	100%	0.7 Minutes
Edmonds-Kingston	4,493	96%	3.0 Minutes	4,500	96%	3.0 Minutes
Pass-Only Seattle-Vashon	988	99%	1.7 Minutes	369	99%	2.1 Minutes
Fauntleroy-Vashon-Southworth	9,526	94%	3.2 Minutes	9,560	93%	3.4 Minutes
Keystone-Port Townsend	1,720	89%	3.9 Minutes	1,717	88%	4.5 Minutes
Mukilteo-Clinton	6,421	99%	1.9 Minutes	6,421	99%	2.0 Minutes
Pt. Defiance-Tahlequah	3,040	97%	2.7 Minutes	2,952	98%	2.6 Minutes
Seattle-Bainbridge Island	4,046	96%	3.2 Minutes	3,976	95%	3.5 Minutes
Seattle-Bremerton	2,475	98%	2.4 Minutes	2,498	98%	2.6 Minutes
Total	38,744	94%	3.0 Minutes	37,950	94%	2.9 Minutes

Source: WSDOT Ferry System

on-time, which is a slight increase from the preceding quarter (93%). A trip sailing on-time will be within 10 minutes of its published sailing schedule.

The table at the bottom of the previous page compares on-time performance across the system for the third quarters of FY 2005 and FY 2006. Comparing these quarters, the average delay time improved slightly from a 3.0 minute delay to a 2.9 minute delay per departure. The average percentage of trips sailing on-time remained the same in both quarters (94%).

Ferries Life Cycle Preservation Performance

The Ferry System plans to replace or refurbish 76 Category One systems and 82 Category Two systems during the 2005-07 biennium. Through the end of the third quarter of FY 2006, 17 Category One systems and 17 Category Two systems have either been refurbished or replaced.

Explanation of Key Terms

Systems Preserved - This measure focuses on performance of work planned and work delivered. The work measured is the number of terminal and vessel systems refurbished or replaced.

Life Cycle Rating - A life cycle rating is a percentage calculated by dividing the number of system structures weighted by their costs that are within their life cycle by the total inventory of systems weighted by costs. This measure focuses on program performance. It reflects the favorable impact of the organization's work achieved, offset by the unfavorable impacts of deferred preservation backlogs and on-going deterioration of the infrastructure.

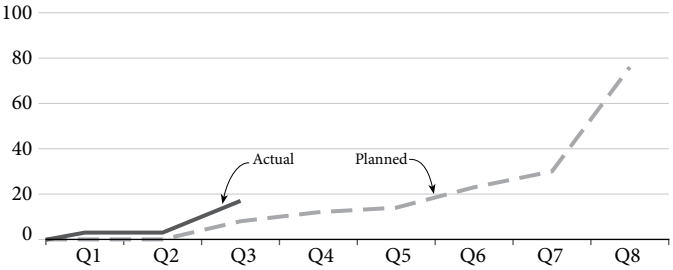
In January 2001, the Legislature's Joint Task Force on Ferries recommended that WSDOT work toward the objective of achieving a life cycle rating for Category One systems between 90% and 100% and for Category Two systems between 60% and 80%. The Task Force set FY 2011 as the target year for achieving this objective.

Category One systems are those designated by regulatory agencies as "vital" to the protection of people, the environment, and infrastructure. Included are those vessel and terminal systems necessary to start, keep in motion, stop, land, and unload a vessel.

Category Two systems are all other terminal and vessel systems.

Category One Terminal and Vessel Preservation Performance

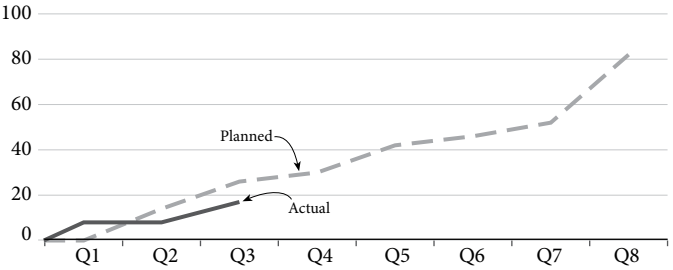
Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
Third Quarter, 2005-2007 Biennium



Source: WSDOT Ferry System.

Category Two Terminal and Vessel Preservation Performance

Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
Third Quarter, 2005-2007 Biennium



Source: WSDOT Ferry System.

Washington State Ferries: Quarterly Report

The work plan addresses backlogs in the system that are past due, as well as on-going deterioration of remaining systems. It measures the impacts and investments by life cycle ratings. Based on the level of investment improvements authorized by the 2005 Legislature, the life cycle rating of Category One terminal and vessel systems is projected to increase from 80% to 81% from the beginning to the end of the biennium. Category Two system life-cycles are projected to increase from 51% to 52% this biennium.

Capital Expenditure Performance

WSDOT makes capital investments in the Ferry System through the WSF Construction Program. This program preserves existing terminals and builds new ferry terminals and vessels. The resulting infrastructure gives the Ferry System the physical capability to deliver responsible and reliable marine transportation services to riders.

At the end of March 2006, a total of $73.1 million has been spent for the 2005-07 biennium on capital investments. The total expenditures planned through March 2006 were $83.7 million. Currently, the Ferry System is $10.1 million under its planned expenditures.

Vessel Construction Biennium-To-Date

Vessel construction biennium-to-date activities are under spending the plan by $7.4 million. Variances from the plan by vessel is in excess of $750,000, and include the following: new auto ferry construction ($5.9 million under plan), Walla Walla ($3.1 million over plan), Kitsap ($1.9 million under plan), Stealth ($1.7 million under plan), Rhododendron ($1.7 million under plan), Chelan ($1.1 million under plan), and Klahowya ($0.8 million under plan).

Terminal Construction Biennium-To-Date

Terminal construction activities are under spending the plan by $2.0 million. Variances in excess of $750,000 include the following: Anacortes ($13.5 million under plan), Friday Harbor ($4.4 million under plan), Bainbridge ($2.6 million over plan), Keystone ($0.9 million under plan), and Kingstone ($0.8 million over plan).

Emergency Repair Biennium-To-Date

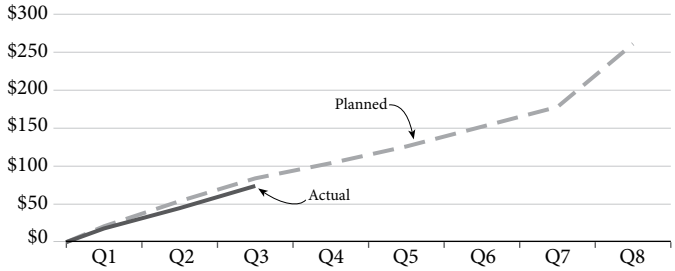
Emergency repair activities are under spending the biennium-to-date plan by $1.1 million.

Ridership and Revenues

Ridership fiscal year to date is slightly lower than the forecasted plan by 0.6%, or roughly 100,000 passengers. However, ridership levels are virtually the same compared to the same quarter last year. Passenger only ridership on the Vashon-Seattle ferry route is lower than the same period last year, totalling 28,000 passengers. Under direction from the Legislature, WSF reduced service in September and now offers passenger-only service to Vashon Island during morning and afternoon commutes.

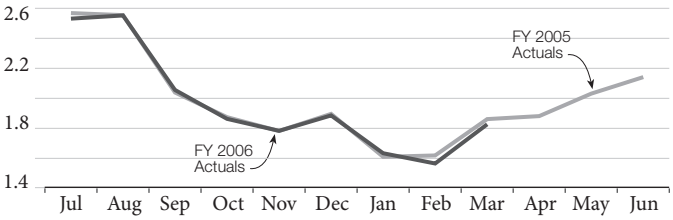
Fiscal year to date, the Ferry system has received nearly $4.2 million, or 4.3% more in fair revenue than the same period last year. When compared to the forecasted plan, revenues are slightly behind. Total revenues received fiscal year to date are $100.6 million, or $158,000 (0.2%) below plan.

Construction Program Expenditures
Washington State Ferry System
Third Quarter, 2005-2007 Biennium
Cumulative Dollars in Millions
Authorized vs. Actual



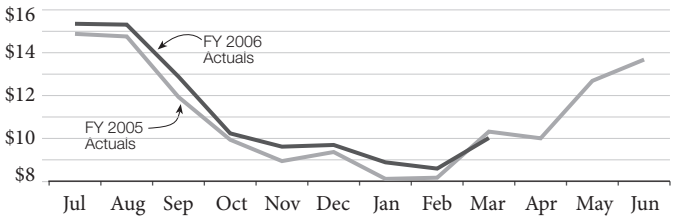
Source: WSDOT Ferry System.

Ridership by Month
In Millions



Source: WSDOT Ferry System.

Farebox Revenues by Month
Dollars in Millions



Source: WSDOT Ferry System.

Washington State Ferries: Quarterly Report

Fleet Condition Biannual Update

Beginning in 1999, the Ferry System changed its construction cycle on vessels to more frequent, smaller, incremental shipyard periods. Under this new strategy, vessel construction and shipyard times are reduced. The result is a fleet in better overall condition than the 30-year major preservation approach previously used.

As soon as a vessel completes construction, the deterioration cycle begins. However, preservation investments offset this deterioration rate. WSDOT's Ferry System plans vessel maintenance and preservation work years in advance utilizing the "Lifecycle Model" for its preservation activities. Vessel parts are classified into two categories – "vital" or "other". Vital parts are those designated by the U.S. Coast Guard as vital to the protection of people, the environment, and the vessel. "Other" parts of the vessel may be important, but not "vital". Every piece of equipment and every part has its own defined lifecycle, which is closely tracked and scheduled to be replaced or preserved according to its lifecycle schedule.

The chart to the right shows the date built and the impact of preservation investments on vessels for the Ferry System's vehicle-passenger ferries. Utilizing the "Life Cycle Model", when the Ferry System replaces a system on a vessel, that part of the vessel carries a later construction date than the rest of the vessel and the age of the vessel is recalculated to account for the new parts. A vessel's adjusted-preservation-date is the average date of the system preservation activities, weighted by its replacement or refurbishment costs (for additional discussion on this topic, see p. 66).

New Vessel Construction

The 2006 Legislature approved the design and construction of four new vehicle-passenger vessels. The new vessels will replace four Steel Electric Class ferries built in the 1920's that have reached the end of their useful life: Klickitat, Illahee, Qunault, and the Nisqually. The picture below is a depiction of what the new vessels will look like. The first replacement vessel is scheduled for delivery in 2009.

These new vessels will be fuel efficient, add needed passenger and vehicle capacity to the fleet, and enable the Ferry System to meet projected ridership growth, service demands, and route-specific needs.

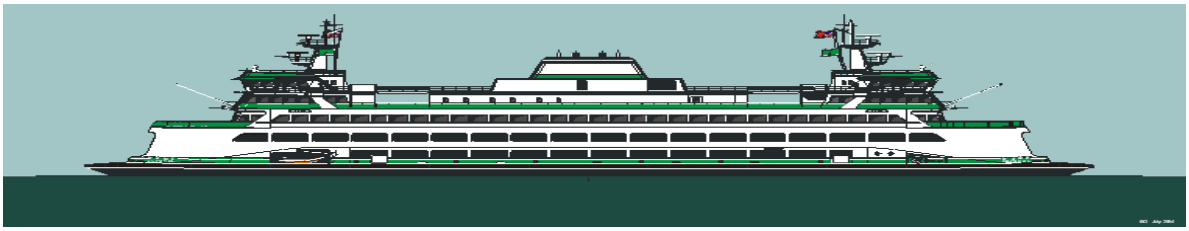
The new vessels will be more user friendly. Improvements include gradual ramp inclines to the upper car decks, elevators and other ADA enhancements, and wider center lanes to increase truck carrying capacity. Existing and anticipated route needs on the Seattle - Bremerton, Mukilteo - Clinton, Fauntleroy-Vashon-Southworth, Port Townsend-Keystone, Point Defiance-Tahlequah and the San Juan Islands will be met with these new vessels.

Adjusted Preservation Date - Fleet Condition

Active Vessels	Original Date Built	Adjusted Preservation Date[1]
Hyak	1967	1982
Evergreen State	1954	1990
Klickitat	1927	1990
Quinault	1927	1991
Chelan	1981	1991
Rhododendron	1947	1992
Elwha	1967	1992
Illahee	1927	1993
Issaquah	1979	1993
Walla Walla	1972	1994
Kitsap	1980	1995
Sealth	1982	1996
Kittitas	1980	1996
Cathlamet	1981	1997
Tillikum	1959	1997
Klahowya	1958	1997
Kaleetan	1967	1998
Tacoma	1997	1998
Puyallup	1998	1999
Wenatchee	1998	1999
Yakima	1967	2000
Spokane	1972	2000
Average	**1968**	**1994**

Source: WSDOT Ferry System

[1] A vessel's adjusted-preservation-date is the average date of the system preservation activities, weighted by its replacement or refurbishment costs.



Source: WSDOT Ferry System

Rail: Quarterly Update

State-Supported Amtrak *Cascades*

Ridership

Ridership on state-supported Amtrak *Cascades* trains totaled 77,334 for the first quarter of 2006. This represents a 10.3% decline over the first quarter of 2005. The cancellation of 113 state-sponsored train trips in January and February, mainly due to mudslides along the rail corridor, was the primary cause of this ridership decline.

Mudslides occurred between Tacoma and Olympia (seven events), Ballard and Everett (12 events), and near White Rock, British Columbia (one event). This was a total of 20 mudslides in the first quarter of 2006. Each mudslide triggers a mandatory 48-hour service cancellation so that BNSF Railway crews can clear the tracks and ensure that the rail line is safe for passenger trains.

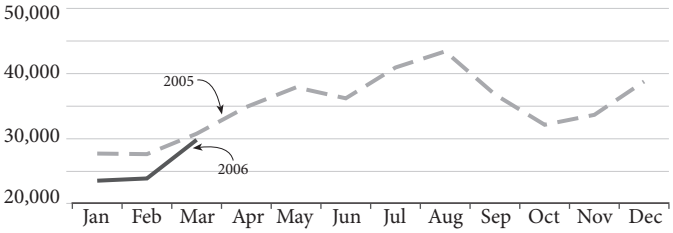
When mudslides occur, Amtrak notifies its station agents so they can inform waiting passengers. Amtrak also posts bulletins on its website and alerts its national call centers so travelers are made aware of the service cancellations. If time permits, call center agents attempt to contact travelers with reservations to inform them of the service disruption.

After a mudslide, motor coaches are dispatched to Amtrak stations to ensure that rail passengers get to their destinations despite the cancellation of rail service. Motor coach riders are counted in the monthly ridership totals, but some travelers choose to cancel their trips and receive refunds from Amtrak instead of taking the coach.

Heavy rainfall in western Washington lead to numerous mudslides along the BNSF Railway main line, including this slide near Everett. Photo courtesy of *The Everett Herald*.

State Supported Amtrak *Cascades* Monthly Ridership

Number of Passengers



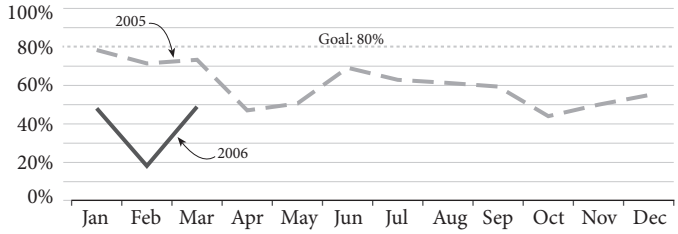
Source: Amtrak and WSDOT Rail Office
Note: Five train sets provide eight daily trips. WSDOT owns three of the five train sets.

All Time Low On-Time Performance

The first quarter of 2006 on-time performance average was 39.5% for the state-supported Amtrak *Cascades*. This compares to 74.4% for the first quarter of 2005. The primary cause of delays was freight train interference due to limited rail line capacity. February's monthly average was 18.2% on-time, establishing an all-time low for Amtrak *Cascades*. On-time performance did improve somewhat in March to 49%, but this is well below WSDOT and Amtrak's goal of at least 80% on-time. The BNSF Railway is responsible for managing all rail traffic on the corridor between Portland, Seattle, Bellingham, and Vancouver, BC. WSDOT and Amtrak asked the BNSF Railway to work to correct this poor on-time performance. It is uncertain if this request will result in any significant improvement in Amtrak *Cascades* on-time performance for the foreseeable future.

State Supported Amtrak *Cascades* On-Time Performance

Number of Passengers



Source: Amtrak and WSDOT Rail 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.

State-Supported Amtrak *Cascades* and Washington Grain Train

Customer Satisfaction Index Dips

Amtrak's Customer Satisfaction Index (CSI) is based on surveys of riders using the service. The scores represent three-month rolling averages. The overall CSI goal for Amtrak *Cascades* is 91 (out of 100) or better. In the most recent survey period, the CSI total score was 84. This score was six points lower than the same period in 2005. The service characteristic with the greatest decline was on-time performance, scoring only 69 points, which was 15 points lower than the same period in 2005. Of the 19 service characteristics the survey assesses, there was only one (cleanliness of the train windows, at 83 points) with a slight improvement over the preceding year. All other service characteristics saw declines, which is unusual. This suggests that the precipitous decline in Amtrak *Cascades* on-time performance over the past several months is having an impact on customer perceptions of all aspects of the service, even in those service areas where the scores are consistently high.

Service Expansion Preparations

In July 2006, Amtrak and WSDOT will add a fourth daily round-trip Amtrak *Cascades* train between Seattle and Portland. WSDOT and Amtrak began preparing for this major program milestone in the first quarter of 2006. Several station events are being planned to celebrate the introduction of the new mid-day service. The next edition of the *Gray Notebook* will provide an update on these and other special events to commemorate launch of the new service.

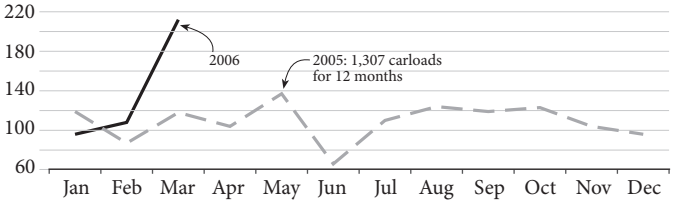
Demand for Grain Train Cars Remains High

WSDOT started the Washington Grain Train to help alleviate a shortage of grain cars. The Port of Walla Walla and WSDOT own 89 grain cars which collect wheat and barley to move to market. Peak demand periods for rail grain cars are export-driven and seasonal.

The first quarter is a time with relatively low demand. Additionally, in a cost savings move, managers of a shortline railroad that normally uses Grain Train cars decided to eliminate all rail operations on one of its branches and to drastically reduce operations on another of its branches. Despite these factors, the state's grain cars continue to be well used. Carloads for the first quarter increased 28% over the first quarter 2005, from 324 to 416 grain cars. Demand for Grain Train cars should remain high for the foreseeable future.

Washington Grain Train Carloads

Carloads per month 2006 vs. 2005



Source: WSDOT Rail Office

Note: The Washington Grain Train is a financially self-sustaining transportation program that supports the state's agricultural community while helping short line railroads maintain a sufficient customer base for long-term financial viability.

Highlights of Program Activities

Project Starts, Completions, or Updates

SR 20 Deception Pass

WSDOT began work to prevent rock slides and subsequent road closures on SR 20 near Deception Pass on January 17. Contractor crews removed loose rocks and trees, and inserted rock bolts into steep rock faces next to the highway to help stabilize hillsides south of the Deception Pass bridges. Work finished in February.

SR 107 Montesano

Heavy rains caused WSDOT to close a 300-foot section of SR 107 in both directions, three miles south of Montesano. The highway moved 25 feet to the north, towards the Chehalis River. Crews reopened the highway to two-way traffic on January 13 after removing buckled and cracked asphalt and building a temporary gravel road across the 300-foot section.

SR 508 Onalaska

WSDOT re-opened SR 508 in Lewis County on January 20 after repairing damage from heavy rains. The highway closed on January 13 due to severe roadway settlement at milepost 7 near Hyak Road in Onalaska. During the emergency closure, contract crews stabilized the roadway. WSDOT temporarily opened the roadway, while monitoring for further settling. The roadway was repaved due to damage.

SR 291 Spokane

A section of SR 291 in south Stevens County washed out on January 14, requiring WSDOT to close the highway. High stream flows eroded two 30-inch culverts, destroying fill material that supports the pavement. At Sunset Bay, between Willow Bay and Tum Tum, about 20 feet of roadway was totally undermined by the water and unsafe for travel. Crews working under an emergency contract repaired the washout. Work started on January 21 and was completed on January 30.

Stream flows erode two 30-inch culverts on SR 291 in south Stevens County

SR 167 Sumner

Crews began installing 4.5 miles of cable guardrail on SR 167 in Sumner on January 17. The new cable guardrail in the median of SR 167 between SR 410 and the Pierce/King County line will help prevent crossover and head-on collisions. This work is part of a larger $8.8 million project to install approximately 70 miles of cable guardrail in eight counties, on nine separate highways across Washington. For more details, visit www.wsdot.wa.gov/projects/cablebarrier

SR 4 Stella

Three contractors began work February 8 to reopen SR 4 near the town of Stella, following a February 4 closure due to rock slides. Crews began work to scale the loose rock above the roadway. The impacted section of the highway was at milepost 50 near Bunker Hill.

SR 16 Gig Harbor

On February 8, crews began installing three miles of new cable guardrail in the median of SR 16 to help prevent crossover and head-on accidents. Work between the Tacoma Narrows Bridge and Burley-Olalla Road took about two weeks to finish.

SR 20 Newhalem

WSDOT reopened both lanes of SR 20 east of Newhalem on February 17 for the first time since November 2003 when a massive rock slide cut loose and smashed into the road. WSDOT and contractor Wilder Construction put the finishing touches on an $11 million rock-catching ditch next to the highway to help protect the road and drivers from the unstable hillside above. The final paving work will be done when warmer weather returns. For more detailed information about the project and photos, visit www.wsdot.wa.gov/projects/sr20/rockslideditch/

SR 20 Whidbey Island

Crews started work the week of February 13 in preparation for a project on SR 20 north of Oak Harbor, between Troxell Road and Cornet Bay Road. The $9.2 million project will widen lanes and roadway shoulders, add turn lanes in a number of locations, and build storm water treatment facilities. This is one of seven projects to improve safety along the SR 20 corridor on Whidbey Island between Coupeville and Deception Pass. This project, along with two others currently underway on Whidbey Island, will be completed by Fall 2006. For more specific information about this project, visit www.wsdot.wa.gov/Projects/SR20/TroxellToCornetBay/

Highlights of Program Activities

SR 520 Seattle

In the aftermath of the February 4 windstorm, WSDOT inspectors determined the steel assembly on the SR 520 floating bridge needed to be replaced. The assembly supports a guide roller under one corner of the east drawspan. The assembly was replaced the weekend of February 25-26. Crews used a 40-ton crane and a 20-ton boom truck to remove and replace the damaged piece. Work progressed smoothly and crews were able to work quickly, reopening the bridge 15 hours ahead of original estimates.

SR 26 Royal City

On February 21, WSDOT began a possible six-week closure on SR 26 for an emergency highway repair project near Royal City in Grant County. A culvert located about two miles south of the I-90 Vantage Bridge failed last Fall. This created a 15-foot-diameter sinkhole that undermined the roadway and required closure of the outside truck-climbing lane. The culvert is at the bottom of a 35-foot embankment, and replacing it requires reconstructing approximately 250 feet of roadway. For more information, visit www.wsdot.wa.gov/Regions/NorthCentral/projects/SR26/SandHollowCulvertRepair/

SR 522 Bothell

Crews began work in late February installing nearly two miles of new cable guardrail in the median of SR 522 in Bothell. The new cable guardrail just west of I-405 to Northeast 195th Street will help prevent head-on collisions caused by drivers crossing the median and entering oncoming traffic.

SR 9 Acme

WSDOT crews reopened SR 9 near Acme on February 28, after nearly four weeks of emergency work and road closures. They finished almost a week ahead of schedule. WSDOT closed all lanes of SR 9 on February 3, after saturated soil beneath the road moved, causing the road to sink and develop a 300-foot long crack. The same thing was happening to the south, but on a smaller scale. Crews dug out a section of highway 300 feet long by 20 feet deep and another section 100 feet long by 20 feet deep. They removed 10,000 cubic yards of saturated soil and debris, replacing it with almost 9,000 tons of rock and 900 tons of asphalt.

I-5 Mount Vernon

On February 27, crews began installing new cable guardrail to help prevent crossover and head-on collisions along ten miles of I-5 from 300th Street Northwest in Snohomish County to Anderson Road in Skagit County.

I-5 Tacoma

Roadway settlement on March 1 at the southbound I-5 exit ramp to SR 16 in Tacoma caused WSDOT to close the three exit lanes and build a temporary ramp to provide access to 38th Street and SR 16. The lanes were reopened on March 4 after WSDOT and contractor crews simultaneously constructed a berm below the freeway and repaired the I-5 pavement. Construction work at this site is part of a $78 million HOV project that ultimately builds a series of walls and a hillside, and widens I-5 to provide additional access to SR 16.

U.S. 97A Entiat

WSDOT closed the Knapps Hill tunnel, north of Entiat, from February 6 to April 12. Crews re-lined the 70-year-old tunnel to reinforce the timbers inside the tunnel by building a stronger concrete shell. This is the third phase of a four-stage construction plan. The project stages will reduce the impact on the tourist and agricultural industries in North Central Washington. For more information, visit www.wsdot.wa.gov/Regions/NorthCetral/projects/US97A_ChelanTunnel3/

U.S. 97A
Knapps Tunnel

SR 18, Maple Valley

Crews working for WSDOT reopened 244th Avenue SE on the south side of SR 18 on March 3. The road was closed since last August between Southeast 208th Street and Southeast 216th Street while crews removed two culverts and built a bridge over Taylor Creek. The new bridge will improve passage for salmon. The bridge is part of a WSDOT project to relieve congestion and improve safety on SR 18 between Maple Valley and Issaquah Hobart Road. For more information, visit www.wsdot.wa.gov/Projects/SR18/AuburntoI90/MValley_IHobart

Highlights of Program Activities

SR 530 Darrington

Crews began installing a series of horizontal drains on the SR 530 landslide on Skaglund Hill west of Darrington on March 6. Thousands of feet of drainage pipe were placed to pull water out of the supersaturated hillside. WSDOT crews noticed cracks developing in the roadway after a series of storms in early February. Further investigation revealed water from the saturated hillside was undermining the highway and could compromise the integrity of the road. For more information, visit www.wsdot.wa.gov/Projects/SR530/Landslide/

U.S. 97 Omak

Bridge deck repairs started in March for this 1964 bridge just south of Omak. Crews will remove a layer of the bridge deck and add a new concrete surface, as well as replace expansion joints for a smoother ride.

Ferries

WSF Begins Limited Launch of Electronic Ticketing System

The week of January 23, WSF began a limited launch of its new electronic fare system on the Keystone – Port Townsend ferry route. This live test of the system allows WSF and its contractors to work out kinks before introducing it throughout the ferry system. The new *Wave2Go* system offers customers more convenience. It features bar-coded tickets and cards that are redeemed by a scanner at the vehicle tollbooth or by a handheld scanner for walk-on passengers. This system will enable WSF to effectively control funds. To find out more about *Wave2Go*, visit www.wsdot.wa.gov/ferries/, e-mail wave2go@wsdot.wa.gov, or call WSF Customer Service at 1-888-808-7977.

Public Meetings held on Tariff Policy Committee Recommendations

WSF staff and members of the Tariff Policy Committee began collecting public comment on the 2006 Tariff proposal, developed by the Policy Committee. The Committee is comprised of ferry riders, legislators, and transit operators. At the direction of the Washington State Transportation Commission, eight meetings were held from February 15 through March 1 to gather public comment on the proposal. The Transportation Commission held a public hearing on March 23 in Seattle to take formal testimony concerning the proposal, review customer comments that have been gathered throughout the process, and make decisions based on the Tariff Policy Committee's amended recommendations.

Point Defiance/Tahlequah Terminal gets an Upgrade

Terminal maintenance took place at the Point Defiance/Tahlequah Ferry Terminal (South Vashon) over the President's Day holiday. Workers replaced the hydraulic systems and control systems that operate the movable bridges. The upgrade meets reliability and safety needs, as well as standardizes the control systems at both the Point Defiance and Tahlequah terminals. (For additional information, see p. 10)

Improved Online Travel Information

New Traffic Cameras in Snohomish County

WSDOT turned on two new traffic cameras at the intersection of SR 9 and U.S. 2 in Snohomish County which show north and southbound views of the road. These cameras are the first of many that will be installed to cover the once rural route. Snohomish County drivers can also look forward to four new cameras on U.S. 2 in Monroe at the intersections of SR 522, Kelsey Street, Lewis Street/Chain Lake Road, and Main Street/Old Owen Road. Additionally, there will be two more cameras on SR 522 at the Fales Road/Echo Lake Road intersection. These cameras should be working by late Spring or early Summer 2006.

New Cameras Provide View of Tri-Cities Traffic

WSDOT installed three new cameras in the Tri-Cities area to help travelers see current road and weather conditions. These cameras are in addition to the camera on U.S. 395 Blue Bridge. To see the highways through the new cameras visit the following websites:

- SR 240 near Steptoe, www.wsdot.wa.gov/traffic/sccam.aspx?cam=8082,
- I-82 near Coffin Road, www.wsdot.wa.gov/traffic/sccam.aspx?cam=8077,
- and the Junction of SR 24 and SR 241, www.wsdot.wa.gov/traffic/default.aspx?cam=8081.

Public Transit

WSDOT and Sound Transit opened a new I-5 HOV Interchange and Transit Center in Federal Way. On February 10, 2005, crews were setting girders for the new bridge over southbound I-5 at South 317th Street in Federal Way. One year later, carpools, vanpools, and buses began using the bridge and new HOV ramps to enter and leave the center lanes on I-5 without needing to merge through other lanes of traffic. WSDOT and Sound Transit celebrated the opening of the new HOV interchange and Sound Transit's new Federal Way Transit Center on February 6. WSDOT constructed a new roundabout at South 317th to help manage traffic between the HOV inter-

change and the transit center. WSDOT also improved existing I-5 pavement in the project area, and built a one-mile extension of the northbound HOV lane between South 320th Street and Military Road. For more detailed information about this project, visit www.wsdot.wa.gov/Projects/I5/S317th_DirectAccess/

Announcements and Events

Consultant Support added for Project Delivery

WSDOT announced the results of an unprecedented selection of engineering consulting firms to assist in the delivery of some of the most significant highway construction projects in the state. Many projects from around the state were added to WSDOT's already significant responsibilities by the 2005 revenue package, which voters upheld last November. Firms from across the country and the region competed for the assignments. Each of the winning firms will be designated as the General Engineering Consultant to a specific major project.

Duties will differ from project to project, but will generally include planning, design, and program management responsibilities. In every case, the consultant teams will integrate their own efforts with engineering and other staff professionals at WSDOT. In all cases, WSDOT will retain overall "strong owner" project responsibility, following a model that has proven success in effective budget, schedule control, and performance on major public works contracts. More detailed information can be found at www.wsdot.wa.gov/Projects/Funding/2005/Engineering

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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.

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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 (including Puget Sound area traffic, mountain pass reports, highway closures, ferry schedules, and more). Call the WSDOT statewide toll-free number: 1-800-695-ROAD. In the Seattle area: (206) DOT-HIWY [368-4499].

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

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