

NCHRP 20-68A
US Domestic Scan Program
Scan 07-01

Best Practices
In
Project Delivery Management

Scan Team Members

- **James C. McMinimee, P.E., Utah DOT-AASHTO Co-Chair**
- **Shari Schaftlein, FHWA-FHWA Co-Chair**
- **Sidonia S. Detmer, PMP, Virginia DOT**
- **Mark C. Lester, P.E., South Carolina DOT**

Scan Team Members-cont.

- Gerard F. Mroczka, P.E., Indiana DOT
- David B. Nichols, P.E., Missouri DOT
- Joyce N. Taylor, P.E., Maine DOT
- Alan T. Teikari, P.E., FHWA
- Connie Yew, P.E., FHWA
- Thomas R. Warne, P.E., Subject Matter Expert

About This Scan

- **First-ever Domestic Scan**
- **Aggregated 10 topics into this scan**
- **Narrowed project management into four focus areas**
- **Sought practices that had measureable results**
- **Sought practices that resulted in on-time and on-budget performance**

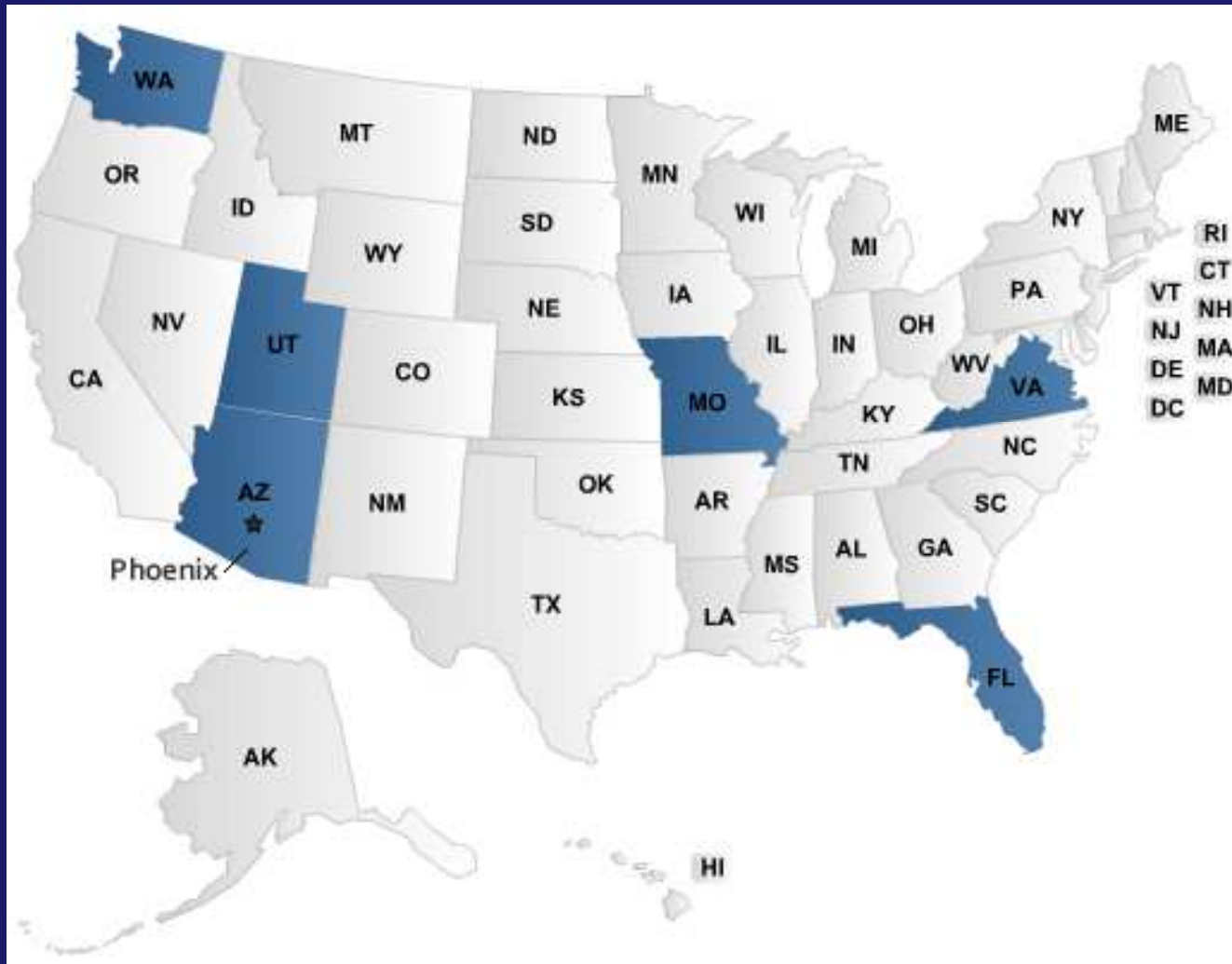
Four Focus Areas

- **Project Management**
- **Performance Measures**
- **Contracting Practices**
- **Community Invovlement**

Agencies Visited

- **Arizona Department of Transportation**
- **City of Phoenix**
- **Florida Department of Transportation**
- **Missouri Department of Transportation**
- **Utah Department of Transportation**
- **Virginia Department of Transportation**
- **Washington Department of Transportation**

Best Practices in Project Delivery Management



February 22-March 3, 2009

Findings and Best Practices



Project Management

- **Project Manager Structure**
 - Training provided
 - Certification not always required
 - Use of consultants
 - Defined roles and responsibilities
 - Centralized and decentralized models
 - Good “hand offs” during the process
 - Accountability for performance

Project Management

- **Shared Leadership**
 - Leaders drove accountability
 - Organizational silos were reduced or eliminated
 - Metrics were used to improve performance-not just to measure
 - Leaders worked at all levels with third parties

Project Management

- **Risk Management**
 - **WSDOT's Cost Estimate Validation Process (CEVP)**
 - **Contracting methods chosen to reduce risk (e.g. CMGC)**
 - **Addressing NEPA prior to STIP inclusion**
 - **Missouri's Practical Design**

Project Management

- **Use of Consultants**
 - Levels ranged from 25 to over 80%
 - Utah's streamlined selection process
 - Florida's use of consultant PMs
 - Where high use was noted-evaluation systems were in place
 - DOTs are concerned with maintaining core competencies of their staff

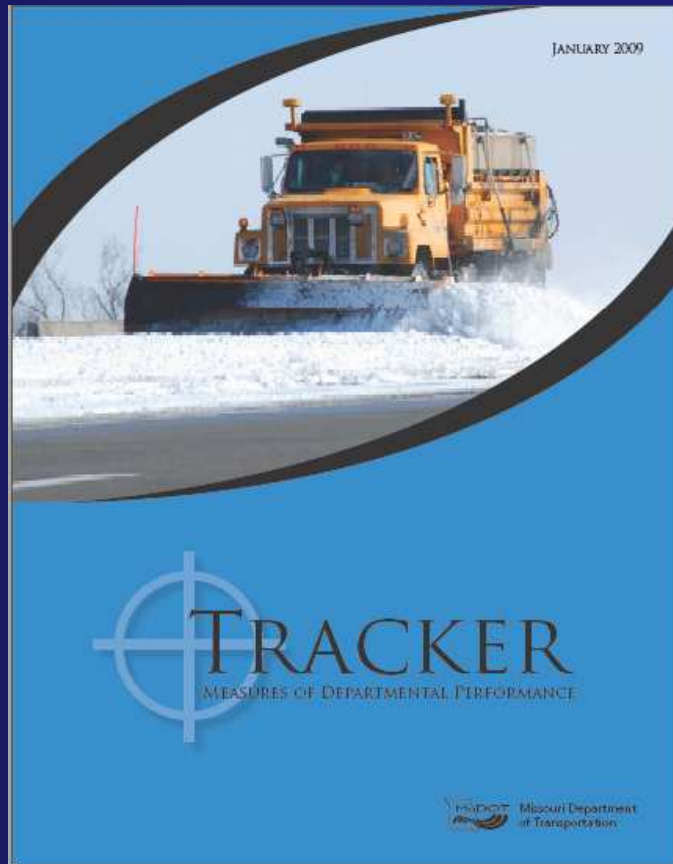
Project Management

- **GIS and Data Management Systems**
 - States leveraged GIS and data to expedite and improve project delivery
 - WSDOT's MAP Team enhances third party interaction and permitting
 - Effective use of visualization tools
 - FDOT's ETDM program improves permitting and relationships

Performance Measurement

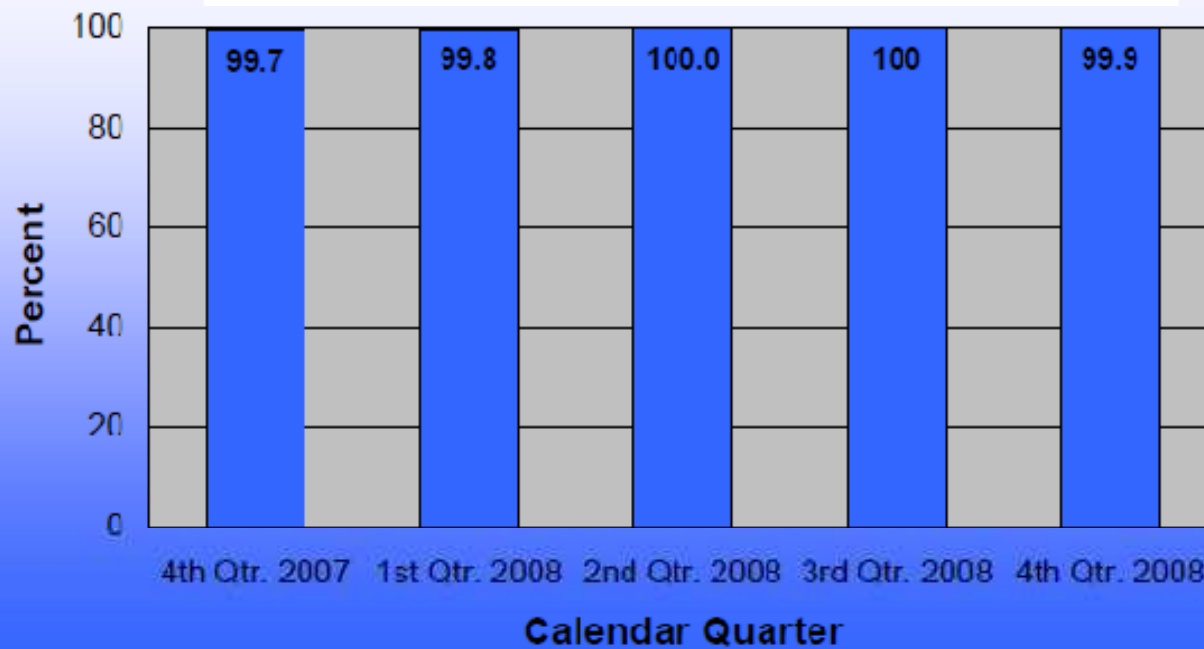
- **Performance Measurement Systems**
 - What gets measured gets done
 - Ease of use both internally and externally were key
 - Transparency was most evident in Missouri, Virginia and Washington
 - UDOT's ePM reduced duplicative data entry to support their system

Missouri DOT's Tracker System



- 100 measures
- 18 tangible results
- Published quarterly
- Involves senior and mid-level management

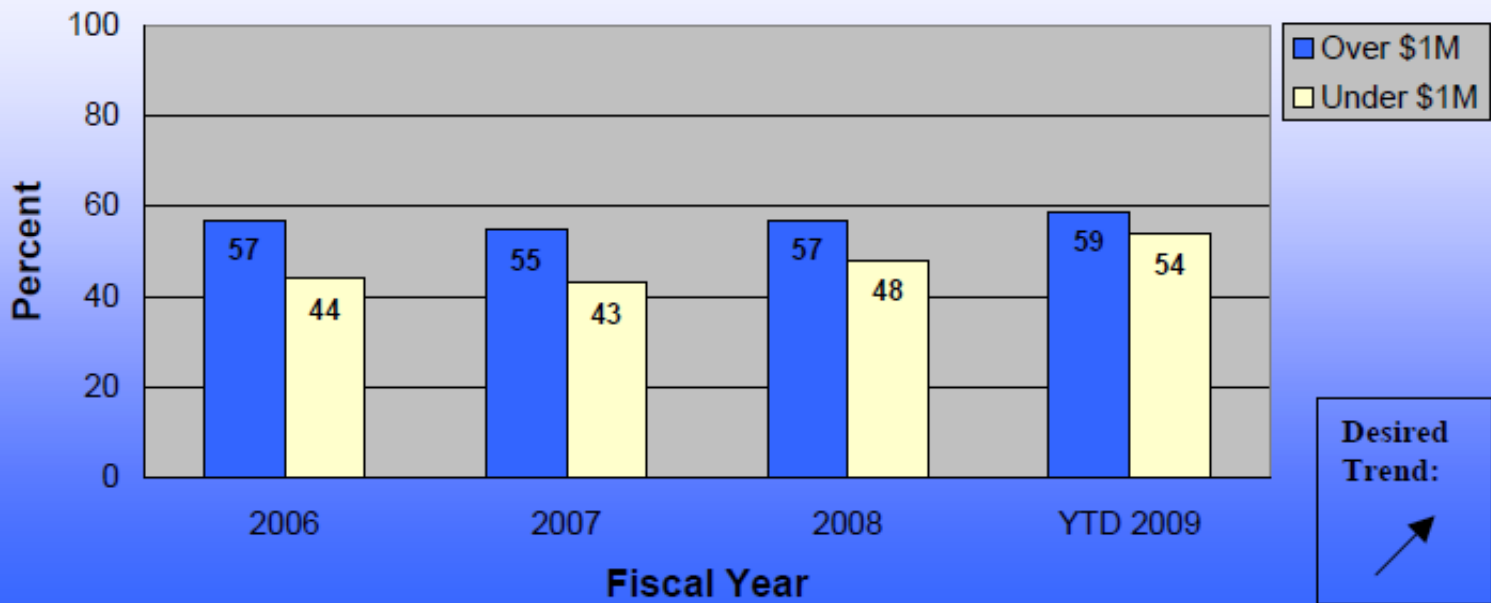
Percent of Documented Customer Requests Responded to Within 24 Hours



Desired
Trend:



Percent of Projects Completed within Programmed Amount



VDOT's Dashboard

Virginia.gov Online Services | Commonwealth Sites | Help | Governor Search Virginia.gov GO

VDOT Virginia Department of Transportation

Performance Safety Condition Projects Citizen Survey Finances Management

HOME HELP QUICK START FEEDBACK

VDOT Managed Local Government Projects PPTA/Design Build Projects

Project Development Project Delivery District Watchlist CQIP Malcolm T. Kerley, P.E. Chief Engineer

Project Delivery

Project Search

District: Counties Residencies Cities Road System: All Road Systems Date Range: Current FY Show More Filters

All Districts All Counties All Road Systems

On Time: 99%
(FY2009 Target: 76%)

	Active	Completed	Total
R	2	1	3
Y	2	0	2
G	248	87	335
Total	252	88	340

On Budget: 84%
(FY2009 Target: 85%)

	Active	Completed	Total
R	9	7	16
Y	27	12	39
G	216	69	285
Total	252	88	340

Environmental Compliance
Cumulative Statewide Average: 99.2%

Financial Disclaimer: The dollar costs shown in the Construction On-Budget section represent most of the cost of the project. However, the final payment to a contractor may not be known at this time, and there may be incidental costs, such as fuel adjustments, incentive payments, and material allowances, which are not included. Also, the extent of any potential claims may not be known at the time a project is completed, and are not included in the calculations.

Dashboard v3.0 © Copyright 2007 Virginia Department of Transportation. All Rights Reserved. Updated: 08/26/2008 5:31 AM

Governor's Scorecard 511 Virginia

VDOT's Dashboard Attributes

- **Ease of use and public transparency**
- **Demands accountability for performance**
- **Manage the projects not the data**
- **Defining the business rules is critical**
- **“Real time” updates of information**
- **Every “dial” has a champion**

Contracting Practices

- States had extensive experience with innovative delivery tools
- Each agency used the tools available (e.g. CMGC, DB, CM at R) based on legislative authority
- Agencies cited fewer claims, better cost control, improved schedules when using these practices

Contracting Practices-cont.

- **SEP-14 was used to implement new practices**
- **Agencies have managed federal-aid to implement innovations or reduce regulatory impacts on their programs**

Community Involvement

- **Early and continuous involvement**
 - Brand management can be done at the agency or corridor level
 - WSDOT tells the news whether good or bad
 - Formal and informal public surveys are used-Utah has years of data available

Community Involvement-cont.

- **Early and continuous involvement-cont.**
 - NEPA was recognized as necessary. States found ways to leverage the process
 - Good planning and effective integration of public involvement with STIP/TIP processes works well
 - PMs who work directly with third parties and public were more effective

Community Involvement

- **External relationships are important**
 - States worked hard to cultivate and honor external relationships
 - Florida's ETDM initiative integrates stakeholders and resource agencies
 - WSDOT's MAP Team co-locates resource agencies and agency personnel for more efficient decision-making

Implementation

- **Implementation strategies include:**
 - **Publication in professional journals (e.g. Public Roads, Governing, TR News, etc.)**
 - **Presentations at AASHTO, TRB, and other association or trade meetings**
 - **Use of contemporary media such as YouTube**

Implementation-cont.

- **Implementation strategies-cont.**
 - Host Webinars for selected groups
 - Share and implement findings with groups like LTAP, TIG, etc.
 - In-reach at FHWA

NCHRP 20-68A
US Domestic Scan Program
Scan 07-01

Best Practices
In
Project Delivery Management

Welcome, Sidonia Detmer !

 **My Home**
 **Expired Estimate/Over Budget**
 **Dashboard Status**
 **Dashboard Feedback**
 **PD-1 Approval**
 **Behind Schedule**

District
 Residency
 Jurisdiction

All Districts

Project Manager:

Weddle, Zachary

Route UPC

Behind Schedule: 6 Activities found



***Projects with Behind Schedule Activities*

Project Manager	Code	UPC	Description	Planned Start	Actual Start	Planned Finish	Actual Finish
Zachary.Weddle	57S	14798	RIGHT OF WAY STAKEOUT SURVEY	8/1/2002	8/1/2002	12/8/2006	
Zachary.Weddle	70S	14798	UTILITY STAKEOUT SURVEY	8/1/2002	8/1/2002	12/8/2006	
Zachary.Weddle	72	14798	PREPARE FOR ADV	9/6/2006	9/6/2006	12/15/2006	
Zachary.Weddle	79	71288	CN AUTH OR ADV FUNDING REVIEW	2/8/2008	3/10/2008	8/9/2008	
Zachary.Weddle	71C	86540	PAC CONSTRUCTABILITY REVIEW	2/11/2009		2/27/2009	
Zachary.Weddle	22	86540	SCOPE PROJECT	11/3/2008	10/22/2008	1/30/2009	

PIN/Project Status

Master PIN Project

PIN FI Net Program

PIN **Project Number** FI Net Program Amendments Old Funding

Master PIN

Master PIN

Description:

PIN

PIN Advertisement Date

Description Contract Award Date

Status Effective Date Closed Date

Final Voucher Date

Project Delivery Information

Include in PDL Category

PIN Will Advertise Qtr Year

Construction will begin

Project Delivery Method

Consultant

Project Mgr

Design Eng

Resident Eng

Consultant

Select the Project

Record: 1/1 ... List of Valu... <OSC>

UDOT's ePM

Work Schedule

For Period Beginning 02/23/2009

Mgmt Unit: 1207 R1 DESIGN TEAM

Project Mgr: All Project Managers

PIN:
PIN Description:
Project Manager:

Scheduled

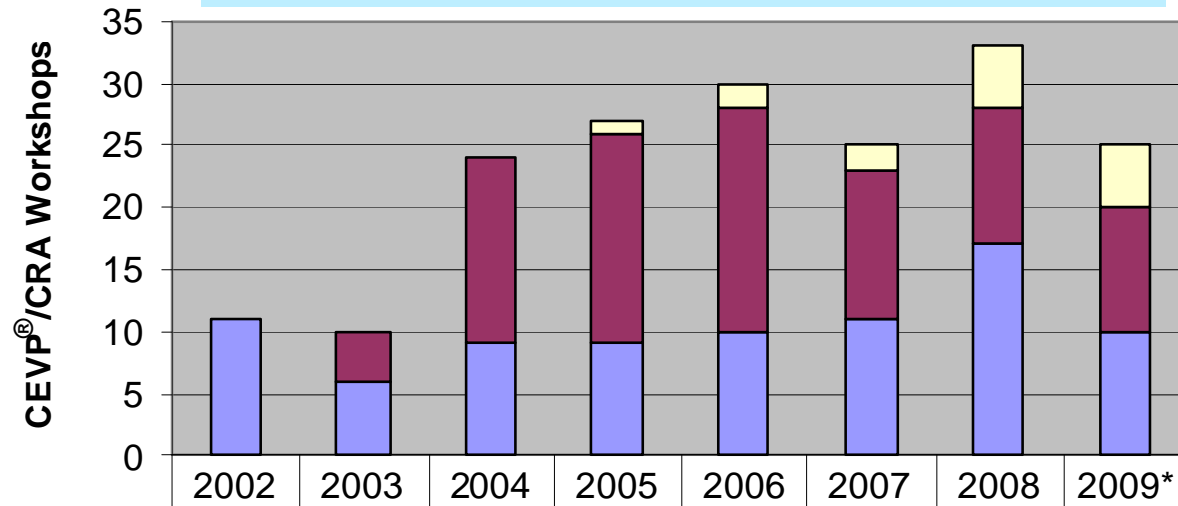
		PIN	Activity Code and Description	Actual Start Date	Planned End Date	Hours to Work this Period	Negotiated Hours for Act	Mgmt. Unit Charged	Total Hours Charged
In Progress Schedule		2578	38D - DESIGN PH. PUB. INVOLVE.	06/14/2007	02/27/2009	8	30	22.5	28.5
	*	2578	85P - ASSEMBLE FINAL PLAN SET	09/10/2008	02/27/2009	14	120	106.0	186.0
		7556	01M - INITIATE PROJECT	01/26/2009	03/16/2009	4	4	1.0	1.0
		7524	19V - HOLD PROJECT IDENTIFICATION MEETING	02/10/2009	03/06/2009	39	40	3.0	6.0
	*	6461	88D - FINLIZE DESIGN STUDY REPT	02/11/2009	02/24/2009	10	10		
	*	6461	31D - PREP/REQST DESIGN EXCEPT	02/11/2009	02/27/2009	40	40		

Print Current

Print UpComing

		PIN	Activity Code and Description	Early Start Date	Late Start Date	Planned Start Date	Negotiated Hours for Act	Mgmt. Unit Charged	Total Hours Charged
Planned Schedule		2578	701 - APPROVAL DESIGN EXCEPTION	02/23/2009	02/23/2009	02/23/2009	3.0		
	*	6461	73D - REV SIGNLIGHTING PLANS	02/23/2009	02/23/2009	02/23/2009	10.0		
	*	7524	11R - DEVELOP PROJECT DESIGN CRITERIA (PDC)	02/23/2009	02/23/2009	02/23/2009	10.0	7.5	7.5
	*	7524	17R - ASSESS MULTI-MODAL NEEDS	02/23/2009	02/27/2009	02/23/2009	8.0		
		6856	90P - ADVERTISE PROJECT	02/27/2009	02/27/2009	02/27/2009	4.0		
		6068	21L - 60% REVIEW	02/27/2009	02/27/2009	02/27/2009	4.0		

WSDOT Experience and History



□ CRA/VE	0	0	0	1	2	2	5	5
■ CRA	0	4	15	17	18	12	11	10
■ CEVP	11	6	9	9	10	11	17	10

TOTAL 11 10 24 27 30 25 33 25

*Forecast number of workshops in 2009 is between 20 and 30


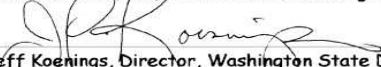
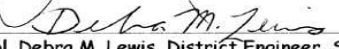



We, the Washington State Departments of Ecology, Fish and Wildlife, Transportation, the United States Army Corps of Engineers, and King County do believe that by working together, in the same location on the same projects, permit and regulatory decision-making for state transportation projects will be improved for all.

Accordingly, we commit to launching this first Multi-Agency Permitting Team (MAP Team) at the Department of Ecology's Northwest Regional Office on this 14th day of October, 2003; and, in so doing, further commit to empowering this first MAP Team with the responsibility to uphold and embrace the public call for:

- ✓ Governmental cooperation, collaboration, creativity, and team work;
- ✓ Streamlined permitting and regulatory decision-making;
- ✓ Effective environmental protection and impact mitigation; and
- ✓ Efficient delivery of transportation improvement projects that balance and are accountable to community, economic, and environmental values.

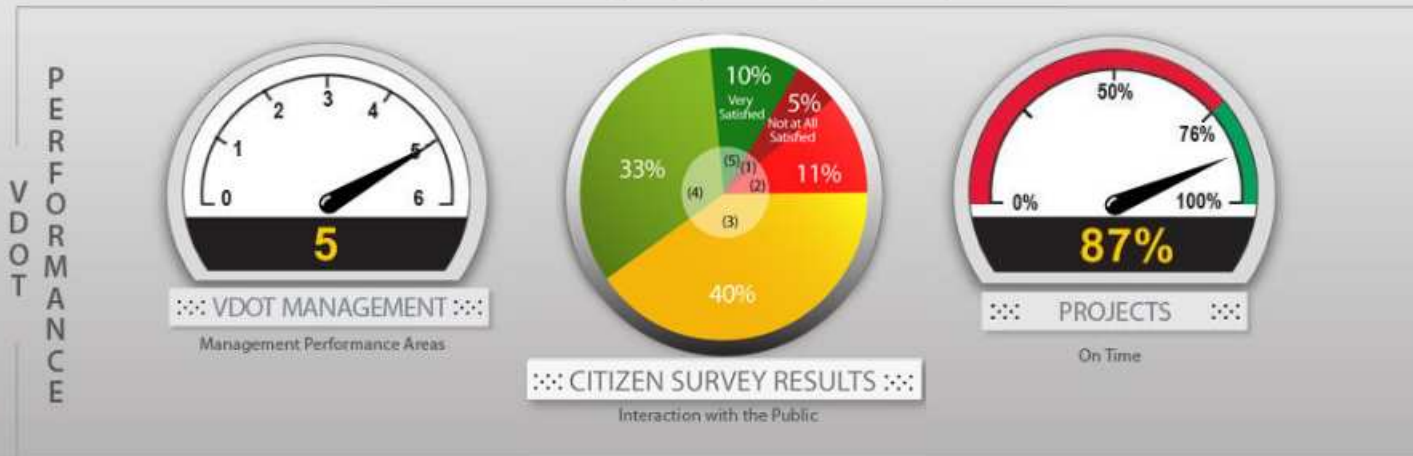
With our signatures, we enthusiastically declare "open for business" this first MAP Team, pledge our full support, and commit to continuing to work together to achieve the transportation and environmental protection goals that are vitally important to all citizens of the State of Washington.

	10/14/03
Doug MacDonal, Secretary, Washington State Department of Transportation	Date
	10/14/03
Linda Hoffman, Interim-Director, Washington State Department of Ecology	Date
	10/14/03
Jeff Koenigs, Director, Washington State Department of Fish and Wildlife	Date
	1/05/04
Col. Debra M. Lewis, District Engineer, Seattle District, U.S. Army Corps of Engineers (Acting pursuant to its streamlining activities under Transportation Equity Act for 21 st Century)	Date
	11-2-04
Stephanie Warden, Director, King County Department of Development and Environmental Services	Date



Performance Safety Condition Projects Citizen Survey Finances Management

Commonwealth Transportation Commissioner
David S. Ekern, P. E.





Malcolm T. Kerley, P.E.
Chief Engineer

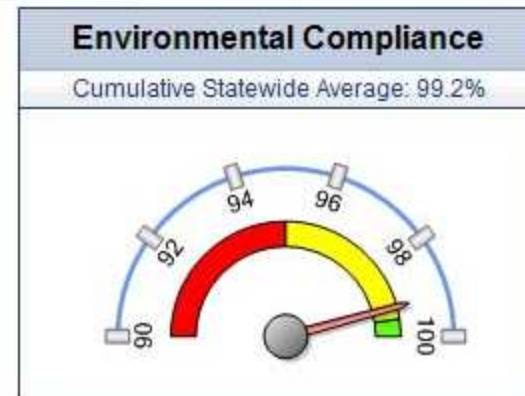
Project Delivery

Project Search

District: Counties Residencies Cities Road System: Date Range:
 All Districts All Counties All Road Systems Current FY Show More Filters

On Time: 99%			
(FY2009 Target: 76%)			
	Active	Completed	Total
R	2	1	3
Y	2	0	2
G	248	87	335
Total	252	88	340

On Budget: 84%			
(FY2009 Target: 85%)			
	Active	Completed	Total
R	9	7	16
Y	27	12	39
G	216	69	285
Total	252	88	340



Financial Disclaimer: The dollar costs shown in the Construction On-Budget section represent most of the cost of the project. However, the final payment to a contractor may not be known at this time, and there may be incidental costs, such as fuel adjustments, incentive payments, and material allowances, which are not included. Also, the extent of any potential claims may not be known at the time a project is completed, and are not included in the calculations.



Washington State
Department of Transportation

The Gray Notebook

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

Paula J. Hammond, P. E.
Secretary of Transportation



GNB 32

Quarter ending
December 31,
2008

published
February 27, 2009

In this edition

Annual Reports

Highway Safety
Asset Management:
Pavement Conditions
Highway Maintenance
Environmental
Programs:
Erosion Control,
Compliance,
Construction Site
Water Quality

Quarterly Reports

Incident Response
Rail
Ferries
Capital Projects
Workforce

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



Search **WSDOT Projects**

text size: T T T

[E-mail updates](#)



[American Recovery and Reinvestment Act](#)

Project Information

- [Program Home](#)
- [Program Map](#)
- [Project List](#)
- [Public Involvement](#)
- [HOV Lanes and More](#)
- [Increasing Safety](#)
- [Reducing Congestion](#)
- [Environmental Protection](#)
- [Tribal Impacts](#)



[Recovery.gov](#)

I-5 / SR 16 Tacoma/Pierce County HOV Program

Project Status

May 2009

The Tacoma/Pierce County HOV Program has received \$70 million from the [American Recovery and Reinvestment Act](#).

Of that \$70 million, \$62.2 million will be used to construct HOV lanes from [Port of Tacoma Road to the King County Line](#), supporting an estimated 350 jobs.

The remaining \$7.8 million will be used to accelerate preliminary engineering on the [I-5/SR 16 Eastbound Nalley Valley](#) project, which is scheduled to go to construction in 2011.

Welcome to the Tacoma/Pierce County HOV Program home page. The Tacoma/Pierce County HOV Program is a series of projects that build 70 high-occupancy-vehicle (HOV) lane miles on I-5, SR 16 and SR 167 in Pierce County.

From this page, you can navigate to numerous individual projects that make up the program. Some projects are complete, some under construction, others in design and some are unfunded.

Through 2016, six funded projects will be designed and constructed in Tacoma from the Nalley Valley to the King County line.

[Real-time highway conditions through Tacoma](#) are also available.

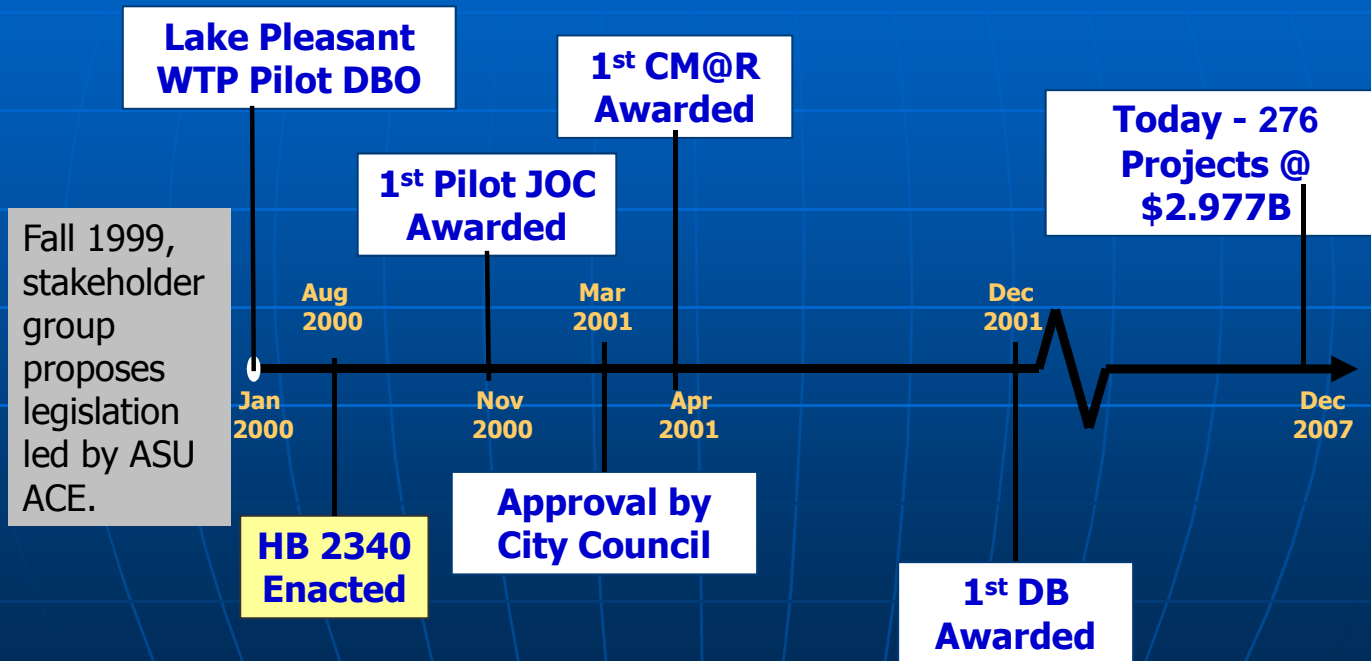


[View entire map.](#) The Tacoma/Pierce County HOV Program is a series of projects that will provide operational improvements on I-5, SR 16 and SR 167. Click on the map to view the project area and a list of the projects.



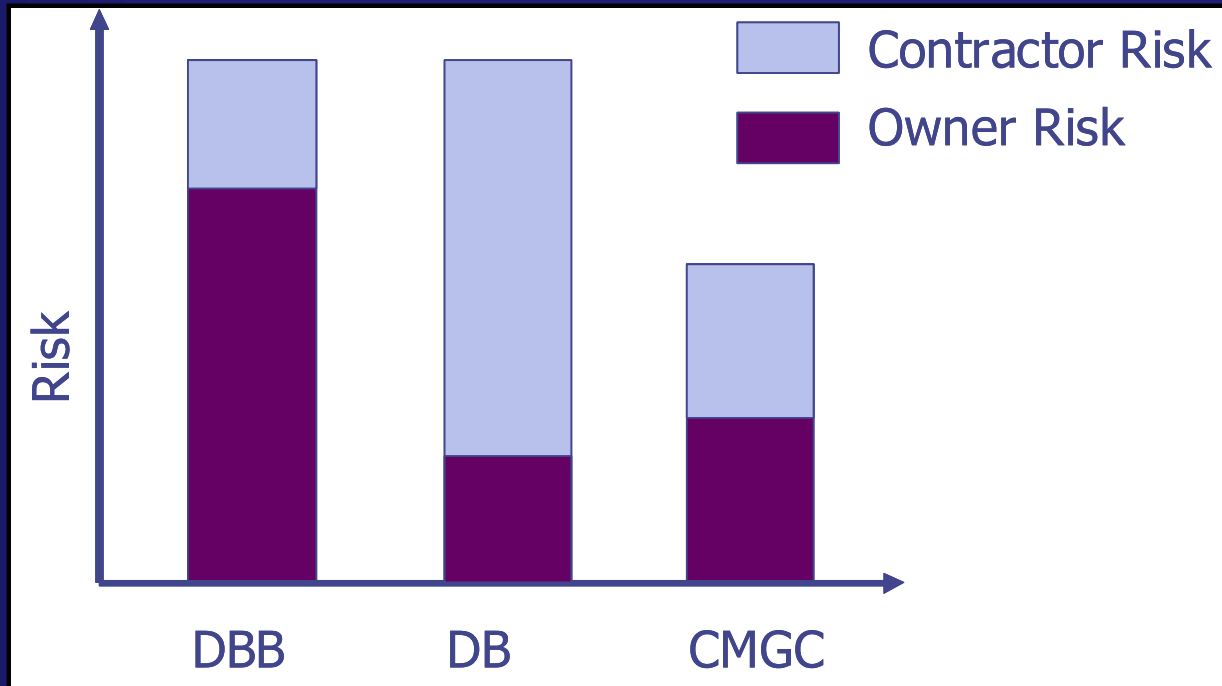
[Nalley Valley Viaduct after the new westbound structure is completed.](#)

Implementation Timeline



Overview of Capital Construction

City of Phoenix Project Delivery



UDOT Risk Allocation



MoDOT Customer Satisfaction