Method of Delivery Review

Creating a sustainable engineering and technical workforce at WSDOT for the 21st century

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Overview

• Where we’ve been
  – How we deliver engineering and technical services
  – Workforce sizing
  – Consultant utilization
  – Innovation and efficiency efforts

• Where we are
  – Engineering and technical staffing levels
  – Reducing WSDOT’s workforce

• Where we’re heading
  – Lessons learned and current challenges
  – Different business model for the future

• What we will always be
  – Strong stewards for protecting state owned assets and expenditures
  – Responsible for transportation operations and investments
WSDOT is a Matrix Organization
Delivering Engineering and Technical Services

Engineering and technical workforce split between centralized functions and decentralized functions:

- **Centralized functions** are those typically done in a headquarters office
  - Nature of work - policy, protocol, strategic initiatives, budget development, program oversight, performance measurement and reporting
  - Economies of scale - repetitive or specialized work, materials lab, some design and environmental work

- **Decentralized functions** are those typically done in a region or field office
  - Design work
  - Construction contract administration, oversight, inspection, quality assurance
  - Operations
  - Project delivery
  - Local and geographic knowledge and expertise
Considerations That Drive Workforce Sizing

Program Considerations
• Highway construction program size
• On-going stability (reliability) of program
• Project scopes, schedules and budgets (location)
• Workforce availability, expertise and location
• Selected project delivery method
Considerations That Drive Workforce Sizing

Legal considerations
• Collective bargaining laws
  - State employees have rights to historical/traditional bargaining unit work
• Union Agreements
• Budget limitations
  - Budget provisos
Historical Consultant Utilization

• WSDOT historically self-performs majority of engineering work
  – Split of design work - 75% in house, 25% consultant
  – Split of construction management and inspection – 99% in house, 1% consultant

• Factors affecting use of consultants
  – Business Philosophy
    ▪ Historically, state workforce self-performs work and consultants are used to address “peak workloads” or needs for specialty expertise
  – State workforce knowledge, skills, ability and availability
  – Consultant expertise and availability
  – Scope, schedule and budget for projects
  – Collective bargaining laws
    ▪ State employees have rights to historical/traditional bargaining unit work
New Funding Created a Need For New Approaches

• Program size and schedules exceeded capacity of state to self-perform all work
• WSDOT focused on “strong owner” role
• Design split of 46% in house, 54% consultant (PE expenditures)
  – Varied by location and project
  – Puget Sound mega-projects typically much higher consultant use
Innovations Implemented

• Workforce balancing - Internal workforce sharing statewide across regional and functional boundaries
• Responsiveness - General engineering consultants (GEC)
• More alternative contracting - Design-build, $A$ (cost) + $B$ (time) bidding, fixed priced, variable scope contracts
• Risk identification and management - Cost risk analysis and CEVP
• Environmental Permit Streamlining - Multi-agency permitting process
• Greater focus on performance contracting - Contract incentives and damages
• More job bundling - Combining of multiple projects into one contract to lower public impacts or costs and gain administrative efficiencies
Current Efficiency Efforts

• Strategic planning and initiatives
  – Low-cost solutions
  – Technology solutions
  – Process improvements

• Overhead reductions
  – Reducing $65 million in 09-11 and 11-13 in administrative and overhead costs throughout agency

• On-going programs
  – Value engineering
  – Cost reduction inventive proposals (CRIP)
  – Construction contract partnering
  – Materials and methods research and development
WSDOT Highway Construction Program

All funds from the 2003 and 2005 gas tax increases are committed.

2011 Governor-proposed budget request - program total with select mega-projects highlighted

74% of highway program dollars are contracted to the private sector.

$6 B of the $15.5 B in Nickel and TPA will be delivered through our design-build program.

54% of the design effort for Nickel and TPA was delivered by consultants.

Documented basic preservation, safety, and environmental needs for next 10 years, $5.5 billion ($1.5 B is unfunded)

Source: WSDOT Capital Program Development and Management Office
Engineering and Technical Staffing Levels

- No new revenue future
- Overall program size and composition drives need for smaller workforce
  - Phase of work
  - Amount of work
- Managing transition is challenging
  - Deliver the program
  - Future uncertain

2011 Agency budget request (November update)
– Highway Construction Program

Program Expenditures and Workforce Projection
Includes the improvement and preservation programs with two exceptions: Excludes expenditures for the Tacoma Narrows Bridge and expenditures in the improvement program reimbursed by Sound Transit.

![Graph showing total dollars and workforce projection over bienniums from 1999-2025.](image_url)
Reducing WSDOT’s Workforce

Employees at all levels of organization will be affected

• Basic approach:
  – About 200 employees per year on average, each year for four years
  – Program reductions and changes drive who, where and when
  – Predictable layoff cycle - annually
  – Seniority driven
  – At-risk letters for fall 2011 reduction
    ▪ Some RIF’s have already occurred, others are scheduled

• RIF avoidance tools
  – “Normal” attrition
  – Voluntary Separation Program incentives
  – Employee resource center
Engineering and Technical Staffing Reductions

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Total Reductions:
- NW 40%
- NC 55%
- OL 25%
- SW 23%
- SC 33%
- EA 43%
- 520 12%
- AWV 28%

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What We Have Learned

- Workforce management during large program increases/decreases are challenging and disruptive. In hindsight:
  - Very successful delivery of large capital program (Nickel and TPA)
  - Workforce was grown to “appropriate level” based on key assumptions
    - Many of our assumptions were correct
    - Even so, difficult to plan 10 year workforce with so many variables
      - Attrition rates/retirements did not occur given the economy
      - Prop 1 failed (Puget Sound Regional Transportation District)
  - Level of current staffing not sustainable over time (even with new revenue)
Our Challenge

• What changes to our business model and authorizing environment are necessary to make the transition to a “core workforce?”

• WSDOT should transform to reduce the need to significantly expand and contract as program levels ebb and flow over time.

• Secretary Hammond requested agency team to conduct a comprehensive review of our current business practices related to engineering and technical services

Key goal:

*Building on our recent experiences and lessons learned, develop and implement a different business model and staff at the “core workforce” level for WSDOT engineering and technical support staff.*
Method of Delivery Review

- Team formed
- Meeting regularly
- Updated business model (work process) guiding questions
  - Can some work be eliminated? What work?
  - Can some work be shifted to others? What work can be consolidated?
  - If work is shifted is risk shifted as well? How do we best assign risk?
  - Is some work better completed in a centralized, regionalized, or decentralized manner?
Assumptions

• Our business and delivery model will be different
• WSDOT engineering and technical services core workforce is sized at a level supported by long-term preservation and safety program levels
• Cap of 2000 FTE’s by end of 2015 for programs: Improvement (I) and Preservation (P); reduction of approximately 800 FTE’s based on current law budget
• Impacts to multiple budget programs
• More work will be done by the private sector
• Planning for three potential future scenarios:
  1. New revenue
  2. No new revenue – current law
  3. Less revenue
• WSDOT maintains all federal certifications and retains eligibility for receipt of federal funds
Desired Future

- WSDOT delivers high quality projects on time and on budget.
- WSDOT fosters a work environment that encourages open communication and promotes positive employee morale.
- WSDOT managers strategically maintain the right balance between contracted work and self performed work in order to keep a nimble, flexible, and right-sized workforce while always maintaining a “strong owner” role to protect the public’s assets and past, current, and future investments.
- WSDOT is a leader in the design and construction of transportation projects.
- WSDOT employees have a career path that provides a variety of opportunities – WSDOT is an employer of choice.
- WSDOT employees have the education, experience and training necessary to perform work or effectively administer others contracted to perform work.
Desired Future, continued

- WSDOT managers strategically maintain the engineering and technical workforce at sustainable levels and avoid costly and disruptive staffing level fluctuations.
- WSDOT managers and employees value the engineering and technical services provided by the private sector and are committed to building and maintaining strong partnerships to effectively deliver transportation projects.
- WSDOT processes and procedures are quick and responsive to rapidly changing construction program levels. WSDOT’s overhead is the minimum necessary to ensure appropriate compliance with federal, state and local regulations.
- WSDOT processes and procedures support appropriate risk-taking and facilitate timely and creative problem identification and resolution.
Developing a Different Method of Delivery

Structure

• WSDOT’s basic matrix structure (HQ and regions) is beneficial
  - OneDot alignment

• Need to retain region structure
  - Provides the necessary local access to and administration of WSDOT activities across all lines of business and should be maintained regardless of engineering staff level changes
  - Promotes strong owner
  - Supports preservation, maintenance, and operations focus
Developing a Different Method of Delivery
continued

Staffing and resources

• Target overall engineering levels at or near projected 10 year sustainable levels (approximately 2000 FTE’s) even if new revenue is provided, +/- 10%
• Consolidate support services for efficiencies
• Centralize needed specialized expertise
• Establish more flexible engineering and technical staff positions that shift from “doing” to “overseeing” work during times of larger programs.
Developing a Different Method of Delivery

Consultant use and contracting

• Expand use of alternative contracting methods during times of larger programs
  – Up to 75% in preliminary engineering
  – Expand consultant utilization into construction management

• Continue to work closely with industry to identify innovative contracting approaches
  – Design Build on smaller projects
  – Expanded emphasis for performance specifications and expectations

• Shift quality control and assurance to contractors or third party; implement robust quality verification program
Developing a Different Method of Delivery

continued

Next steps
• Process
  – In progress