Alaskan Way Viaduct & Seawall Replacement Program

Seattle City Council

January 18, 2011

U.S. Department of Transportation Federal Highway Administration

WSDOT

King County

Port of Seattle

City of Seattle

Managing Cost and Risk

- Project budget accounts for inflation and risk.
- Agencies and project benefit from outside expertise.
- Design-build contracting.
- Managing construction risk.
- Understanding the construction area.
- Program oversight.

State Project Delivery
2010 Cost Estimate

State Projects	2010 Cost Estimate ($ in millions)
S. Holgate Street to S. King Street Viaduct Replacement (South End)	$483 million
S. King Street to Roy Street Viaduct Replacement (Central – proposed bored tunnel)	$1,960 million
Central Waterfront Viaduct Removal and New Alaskan Way	$290 million
Central Waterfront Construction Mitigation	$30 million
Other Moving Forward Projects	$181 million
Prior Environmental Impact Statements, Right of Way and Design Costs	$164 million
Total	**$3,108 million**

Strategic Technical Advisory Team

- Governor's 2006 Expert Review Panel recommended WSDOT draw on national experts to provide program management and technical oversight, support and advice for project implementation.
- Eight members with 80 additional experts who can be called upon.
- Assisted WSDOT with:
  - Qualifying teams.
  - Technical expertise.
  - RFP evaluation.
  - Special exercises such as Cost Estimate Validation Process (CEVP).

Independent Cost Review Process

- **Process:** Enhanced CEVP based on extensive cost and risk workshops and value engineering, which includes outside subject matter experts.
- **Oversight:** Independent tunnel construction and cost experts reviewed and validated cost estimate, funding plan and assignment and management of risks (required by Legislature).
  - Dick Sage, Sound Transit construction manager.
  - Donald Hilton, independent consultant.
  - Robert Goodfellow, Black & Veatch director of tunneling.
- **Outcome:** Updated cost estimate submitted to Washington State Legislature in 2010. Risk management plan incorporated into request for proposals for design-build contractor.

Risk Issues

- **Soils:**
  - Mitigated: Boring program and contractual requirements.
  - Assigned/shared risk: Expected interventions and contingency funds.
  - Incentives: Contractor receives 75 percent of remaining contingency fund.
- **Deformation:**
  - Mitigated: Analysis of soils and buildings, discussions with property owners and contractual requirements.
  - Assigned/shared risk: Assignment for expected risk and contingency funds.
  - Incentives: Contractor receives 75 percent of remaining contingency fund.

Managing Cost and Risk

- Project management
- Partnering
- Alignment
- Change management / issue resolution
- Disputes resolution
- Risk management
- Industry outreach
- Third party outreach

WSDOT used the design-build model to build the Tacoma Narrows Bridge.

Design-Build Contract Development

- SR 99 Bored Tunnel Alternative Design-Build Project contract developed with guidance from Strategic Technical Advisory Team.
  - Identified, allocated and shared risks, and incorporated incentives.
  - Early partnering with contractor.
  - Two-step RFP process.
  - Structured management approach for success.
  - Construction review board and task forces.

Bored Tunnel Costs

SR 99 Bored tunnel costs	Cost ($ in millions)
Design-build contract price limit	$1,090 million
Design-build contract – allowance for inflation	$110 million
Design-build contract – allowance for bonding and insurance	$100 million
Transfer of scope from south access contract	$50 million
WSDOT-controlled risk pool (during construction)	$205 million
Engineering, right of way, and north and south portal roadway connections	$455 million
City reimbursement for utility relocation	($50 million)
Total	**$1,960 million**

The design-build contract signed Jan. 6 includes the amounts highlighted in gray. Included in the design-build contract is utility work which will be reimbursed by the City of Seattle.

WSDOT-Managed Risk Pool

- $205 million for WSDOT-controlled risk pool. Items could include:
  - Deformation mitigation and repair.
  - Shared contingency.
  - Schedule acceleration incentive.
  - Other unknown risks such as:
    - Third party approvals.
    - Unknown contaminated materials.

City-State Agreements Protect City's Interests

- Proposed bored tunnel project is in a dense urban environment with impacts to City traffic, noise, urban design, existing City infrastructure and private property.
- Streets and sidewalks constructed as part of project at the north and south portals ultimately will be owned and operated by the City.
- City is responsible for utility relocations at north and south tunnel portals and will own and operate utilities relocated as part of project.
- Provisions for State's responsibility for infrastructure protection and remedying damage if it occurs.

Utilities Coordination

- Significant policy agreement and core responsibilities in State and SCL / SPU agreements:
  - State will identify utility relocation plan with City participation.
  - State will perform portions of utility relocation work to City design and construction standards with City reimbursement.
  - State will implement portions of SPU and SCL utility relocation obligations with City authorization and reimbursement.

Previous South Portal Design Concept

Updated South Portal Design Concept

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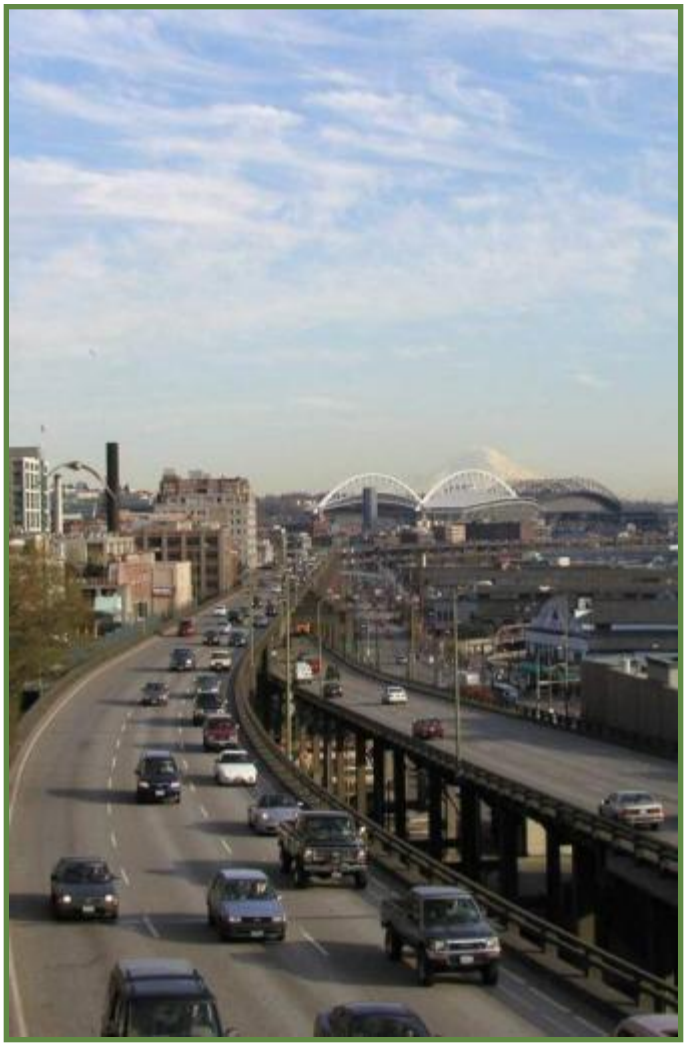

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