Alaskan Way Viaduct & Seawall Replacement Project

and

SR 520 Bridge Replacement and HOV Project

Washington State Department of Transportation

Program Management Overview

- State of transportation in Washington
- What we learned from other large projects across the country
- How WSDOT is managing projects statewide
- How these two projects are being managed

Program Management Overview

State of transportation in Washington

The Crisis Was Real

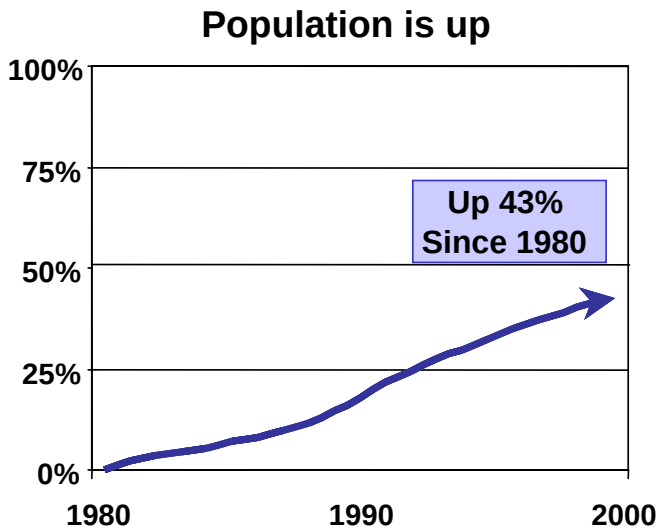
Since 1995, Washington State capital outlays for highways (including ferries) as reported by USDOT have been in freefall relative to other states.

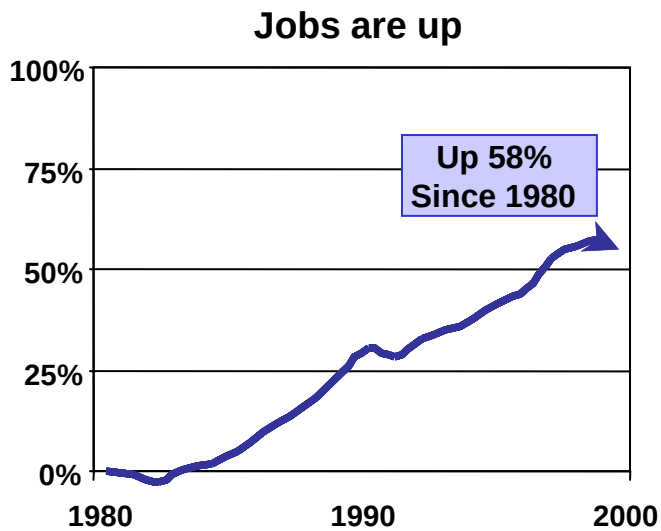
Meanwhile, in 2001, Washington ranks 22nd best in maintenance cost per lane mile and 21st in administrative costs as a % of capital and maintenance outlay.

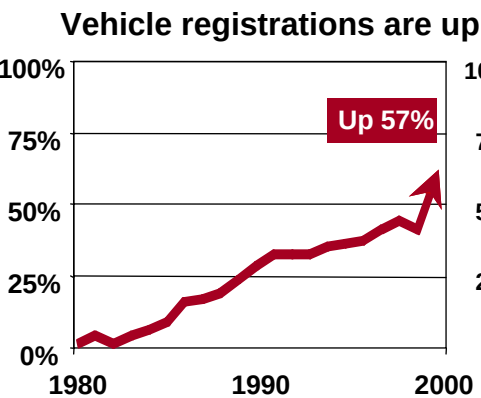
1995	20th
1996	25th
1997	27th
1998	38th
1999	42nd
2000	45nd
2001	46th
2002	48th
2003	48th
2004	49th

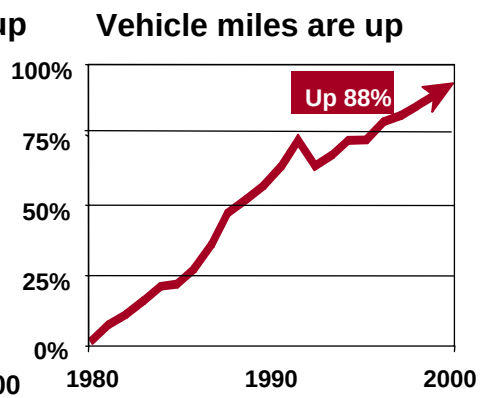
- In 2001 WSDOT spent **$120** per person on highway system capital investment.
- National median was **$169**
- Washington was **71%** of the median.

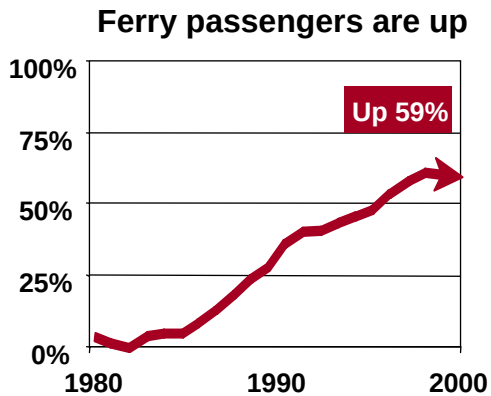
The gap between transportation needs and capital investments was clearly documented

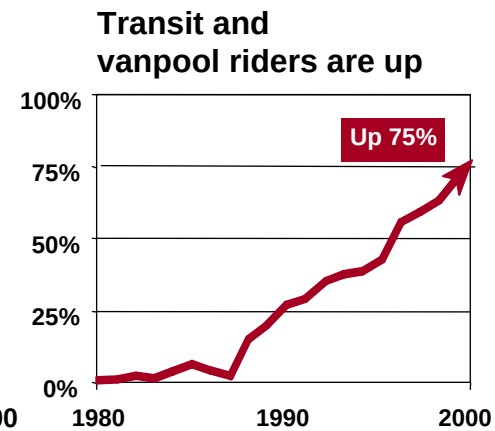




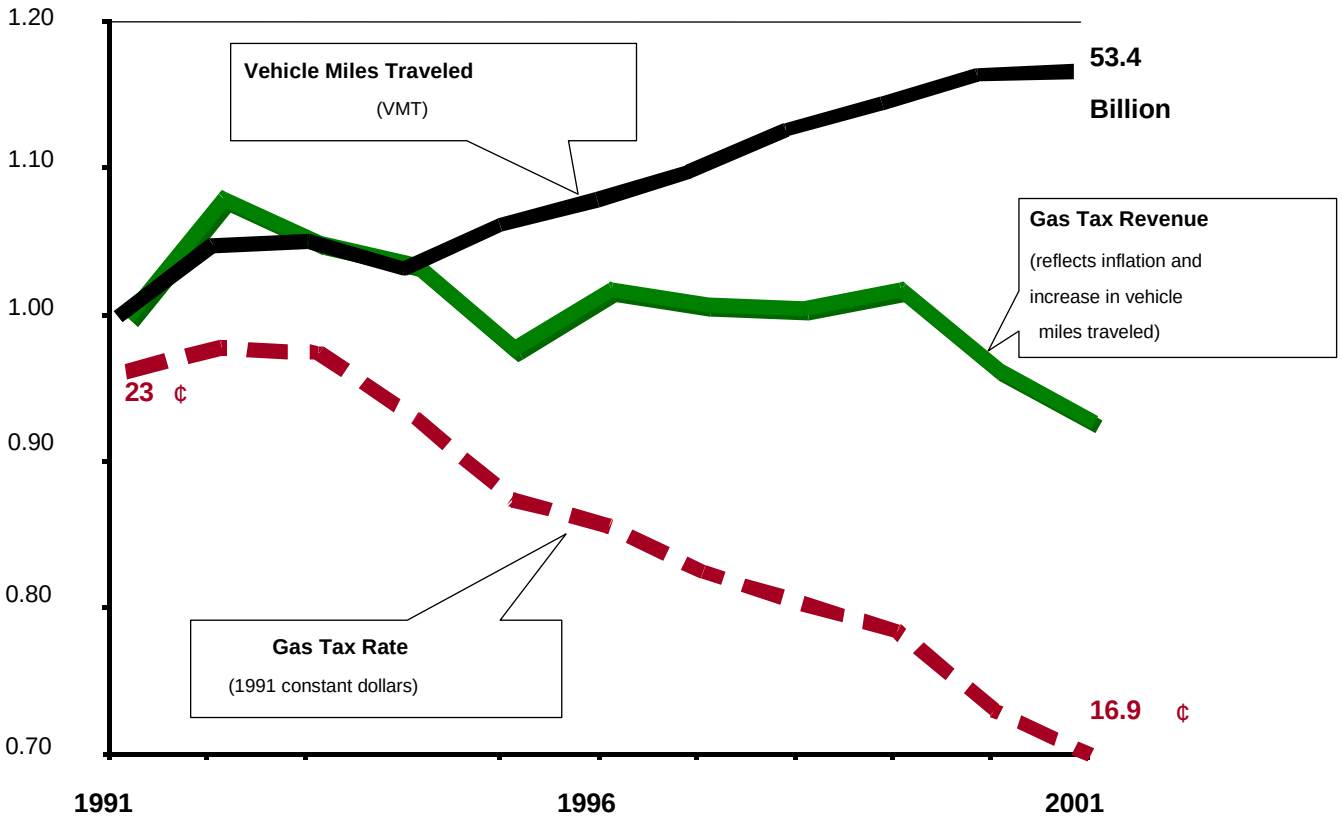






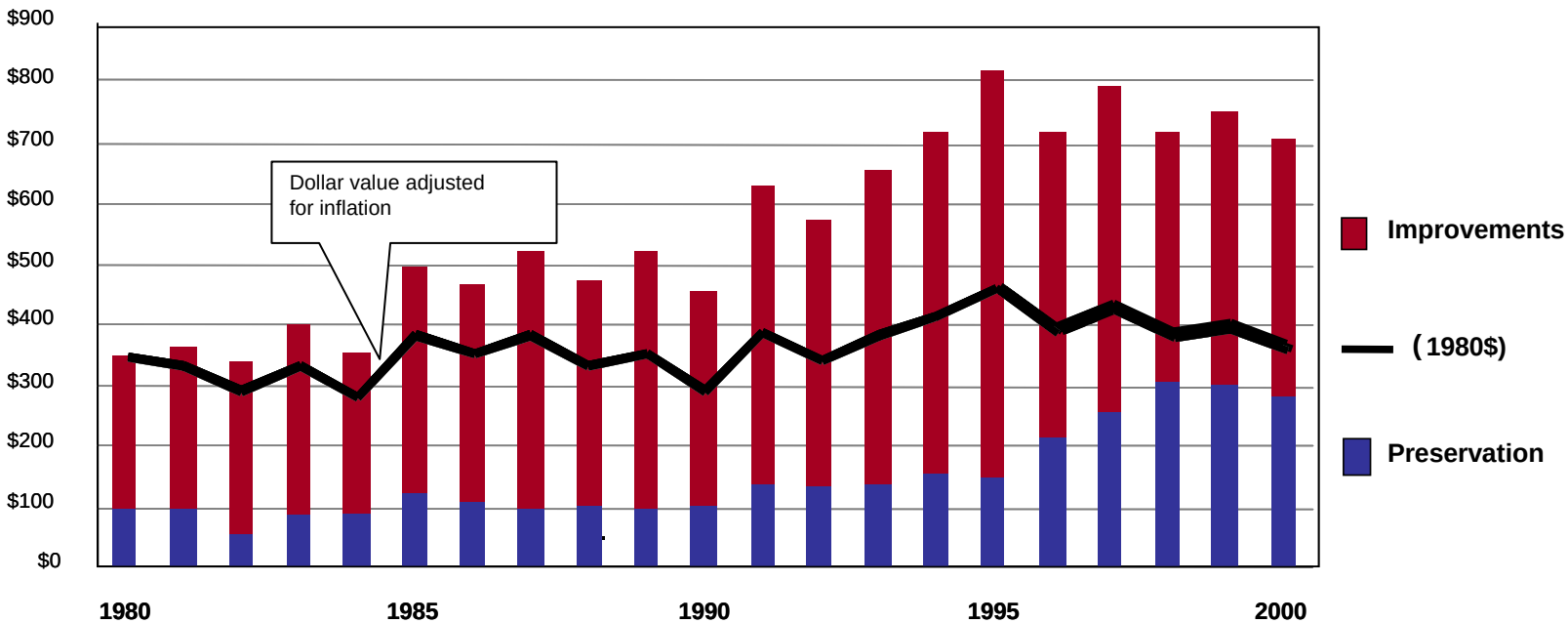


The gas tax had lost to inflation…



Gas tax revenues and the gas tax rate were converted to 1991 constant dollars using the Federal Highway Administration's composite cost index for federal aid highway construction.

And the state's overall capital investment in transportation had been stagnant



In 2003, state made significant investments in transportation

- State Legislature invested $3.9 billion in 158 projects over a ten year period
  - Highway improvements: $3.2 billion, 125 projects
  - Highway preservation: $145 million, 2 projects
  - Washington State Ferries: $298 million, 5 projects
  - Freight mobility and economic: $12 million, 2 projects
  - Multi-modal improvements: $210 million, 24 projects

In 2005, state again made investments in transportation

- State Legislature invested $7.1 billion in 274 projects over a 16 year period
  - At-risk structures: $2.98 billion, 30 projects
  - Safety investments: $279 million, 106 projects
  - Choke points and congestion: $2.95 billion, 69 projects
  - Multi-modal improvements: $94.8 million, 8 projects
  - Environmental: $108 million, 21 projects
  - Freight mobility and economic: $542 million, 35 projects

Funding for Alaskan Way Viaduct and SR 520 Projects

- 2003 Nickel Package
  - Alaskan Way Viaduct: $177 million
  - SR 520: $52 million

- 2005 Transportation Tax Package
  - Alaskan Way Viaduct: $2 billion
  - SR 520: $500 million

2006 Legislative Actions

- Expert Review Panel
  - Alaskan Way Viaduct and Seawall Replacement and SR 520 Replacement projects
  - Report due September 1, 2006
- Advisory public process in Seattle for the Alaskan Way Viaduct Project
  - Public hearings followed by a City Council ordinance or a public vote in November 2006
- Regional Transportation Investment District and Sound Transit Phase 2

Regional Transportation Investment District

- Authorized by the State Legislature to recommend to voters in King, Pierce, and Snohomish counties specific types and levels of taxes or user fees
- Will go to voters in November 2007 and is dependent on Sound Transit Phase 2 approval
- Alaskan Way Viaduct: $800 million
- SR 520: $800 million, however, in 2006, the Legislature directed RTID to fully fund project
  - *“full project funding for seismic safety and corridor connectivity on state route number 520 between Interstate 5 and Interstate 405”*

Program Management Overview

What we learned from other large projects across the country

Lessons Learned From Projects Around the Country

- Boston, Massachusetts
  - Central Artery/Tunnel Project
  - Route 3 North Design-Build
- Columbia, South Carolina
  - “27 in 7” Program
  - Construction Resource and Management Program
  - Conway Bypass Design-Build
- Denver, Colorado
  - Southeast Corridor LRT & Highway Expansion (TREX)
- San Diego, California
  - I-15 Managed Lanes

Lessons Learned from Projects Around the Country

- Los Angeles, California
  - –CALTRANS District 7 Project Management
  - –HOV Lane Operations and Freeway-to-Freeway
  - –TCA Toll Road Operations (Orange County)
  - –SR 91 Managed Lanes
- Salt Lake City, Utah
  - –I-15 Design-Build
- Phoenix, Arizona
  - –US 60 Design-Build
  - –Maricopa Association of Governments Regional Freeway Program

What Did We Learn?
Program Management

- Owner needs to play a strong role; only the owner can be the owner
- Make sure the project is defined well enough before it is handed to the private sector
- Provide the contract oversight necessary to manage the project before someone else decides you need it
- Get IA/QA/QC roles and responsibilities figured out early

What Did We Learn? Program Management

- Install some controls so that design-build doesn’t become build-design
- Project teams should be linked to Headquarters by technical units

What Did We Learn?
Team Organization

- Co-location, co-location, and co-location
- Use integrated team approach
- Make sure internal team communications are established early in the project
- Hand-pick the team – be open minded

What Did We Learn? Contracting

- Appropriateness of design-build varies depending on project complexity: Less complex are better design-build candidates
- Need NEPA in hand before you begin design-build project
- Establish goals up front – decide what was important for design-build to accomplish – and then design the procurement
- Focus on performance-based specifications
- Bring in the expertise you need to do it right

What Did We Learn?
Decision Making

- Don’t let schedule and politics drive you to bad decisions
- Develop a high-level strategic game plan to deliver the project in the context of changing ‘real world’ factors
- A someone or small group of someone’s need to put the project’s success at the top of their priority list
- Surface policy issues early – establish a decision-making process that responds in a timely manner

What Did We Learn?
Risk Management

- Share the risk appropriately
- Adopt risk sharing philosophy early

What Did We Learn?
Design Management

- Do preliminary design to about 15-20%
- Develop a baseline design and stick with it

What Did We Learn? Construction Management

- Manage expectations for traffic management during construction
- Estimate your commitment costs before you make them

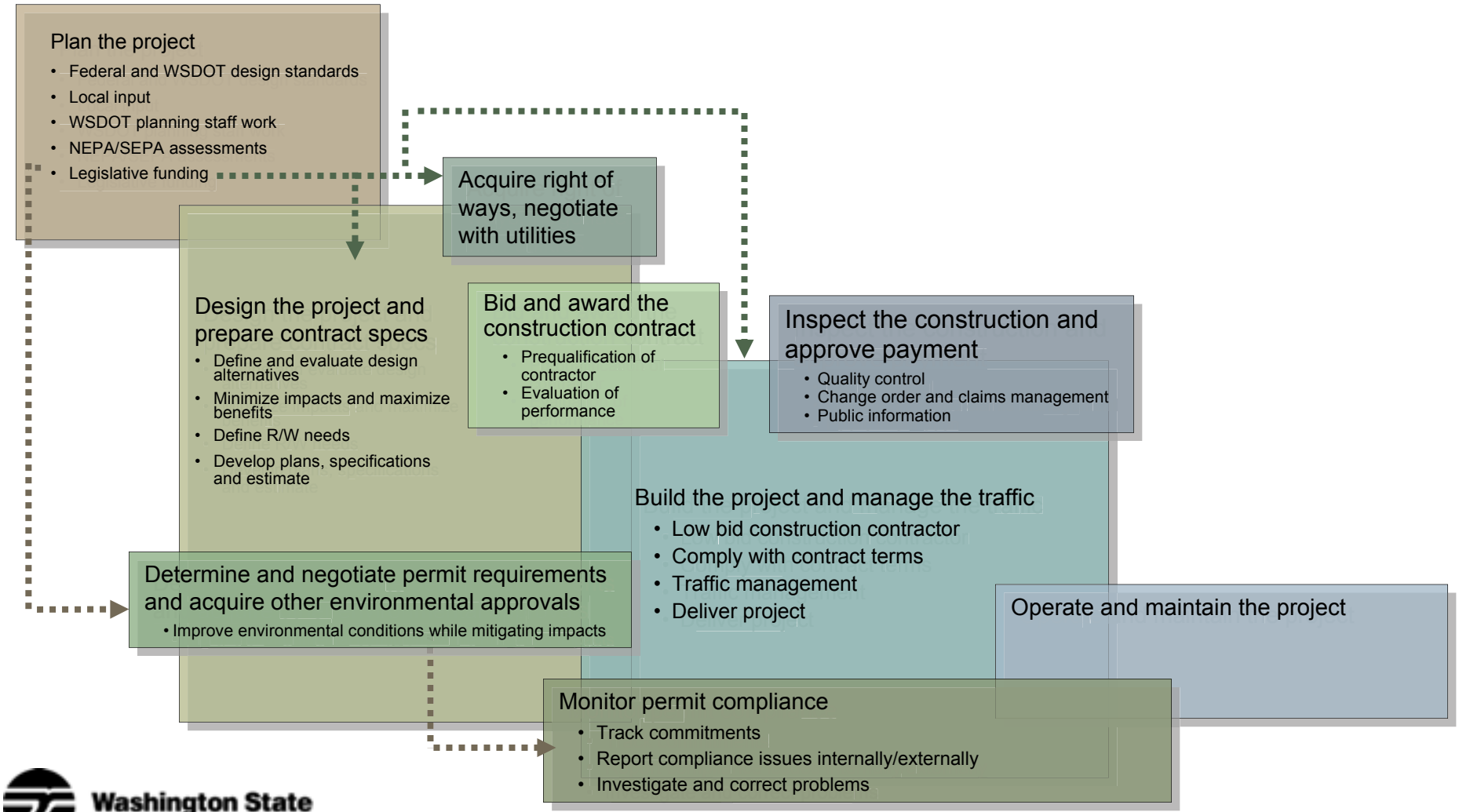
Program Management Overview

How WSDOT is managing projects

External Factors Influencing Large Transportation Projects

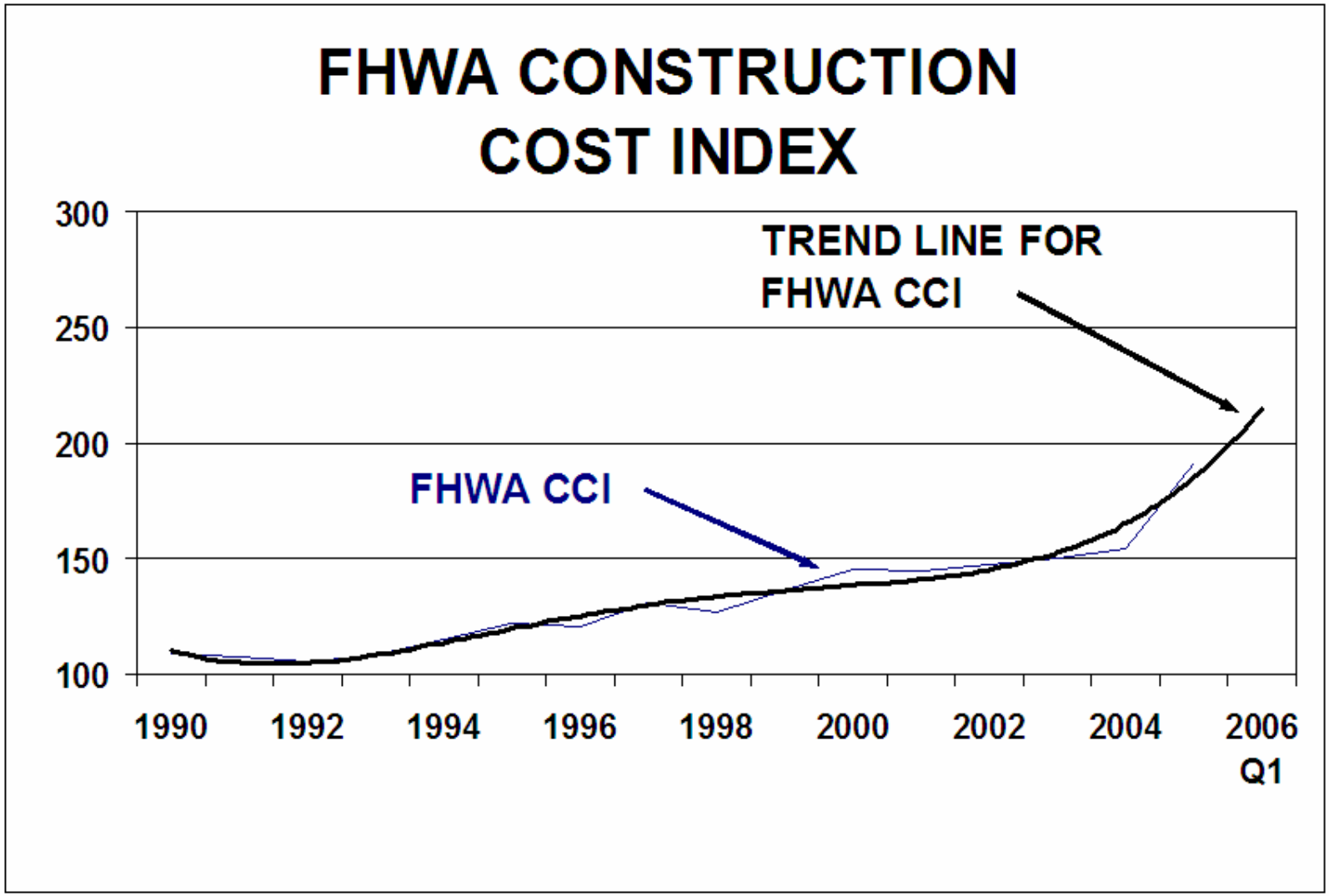
- Building the capacity to fund these projects through the creation of additional regional and local revenue sources
- Maintaining discipline in decision-making
- Managing risks as circumstances change over the next decade of work, such as inflation
- Managing engineering, environmental and regulatory risks

External Factors: Maintaining Discipline in Decision-Making

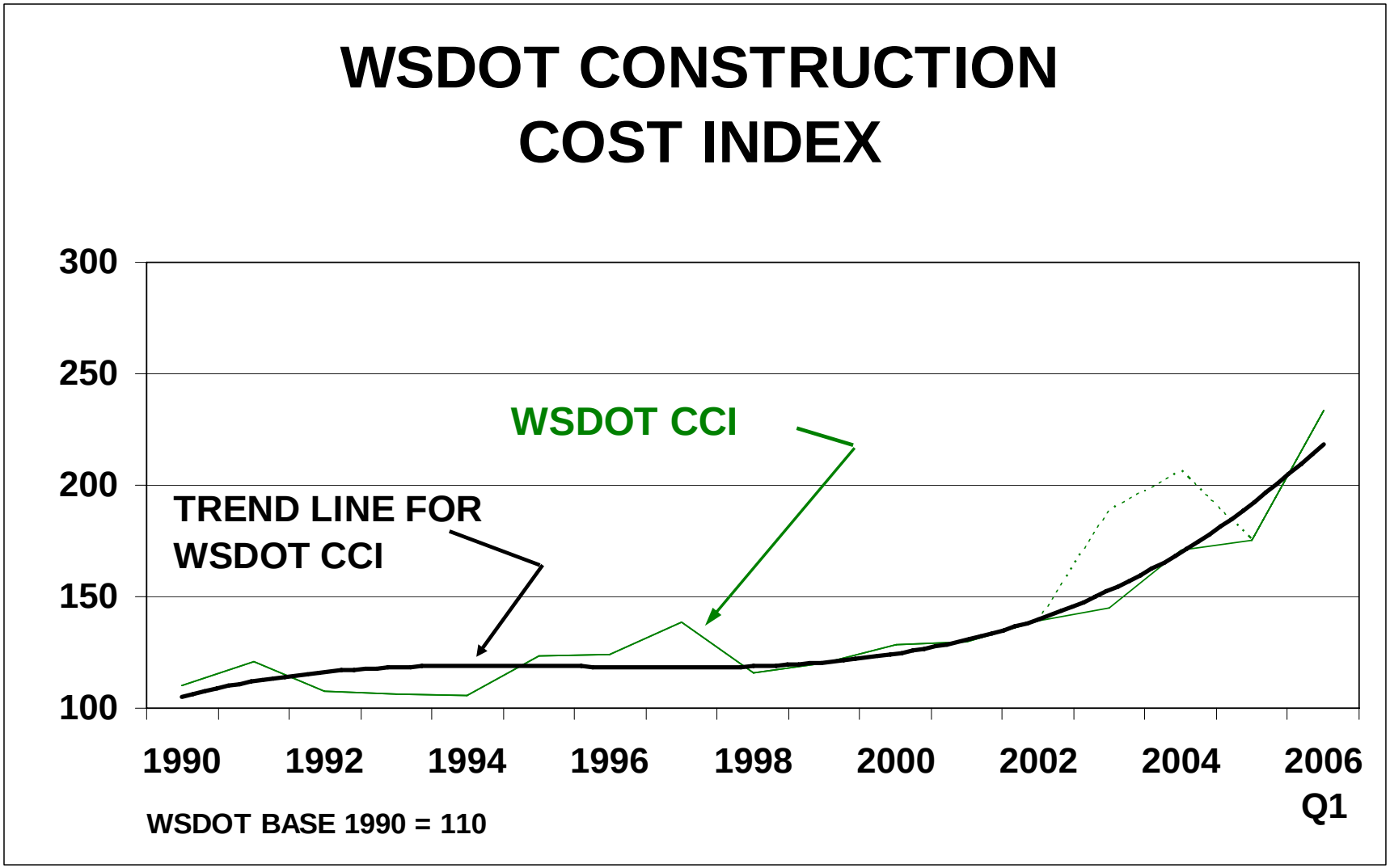


Washington State Department of Transportation

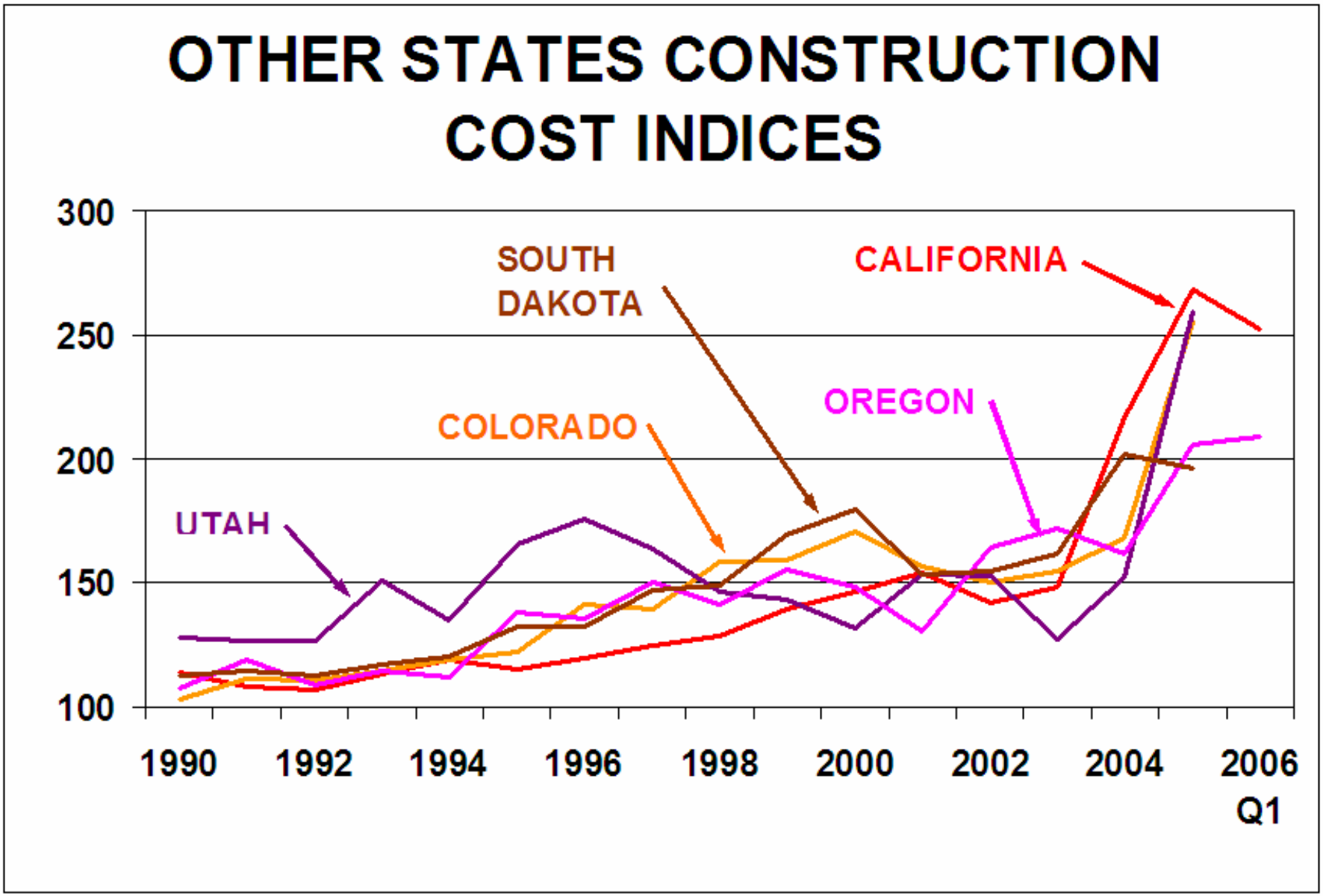
External Factors: Changing Circumstances



External Factors: Changing Circumstances



External Factors: Changing Circumstances



External Factors: Managing Environmental Risks

- Endangered species act consultation
- Tribal fishing rights
- Permitting in-water projects
- Potential to find cultural resources

External Factors: Managing Engineering and Technical Risks

- Labor shortage
- Pontoon construction site selection
- Earthquake or wind storms causes additional damage to bridges

WSDOT Management: Statewide Program Management Contract

- Creating a state-wide program management system
  - Project management, control and reporting
  - High-level program delivery strategic plan

WSDOT Management: Tools in Place to Manage Project Schedule and Costs

- Primavera
- PRISM Cost Manager
- Earned value
- Value engineering
- Project review and reporting

WSDOT Management: Construction

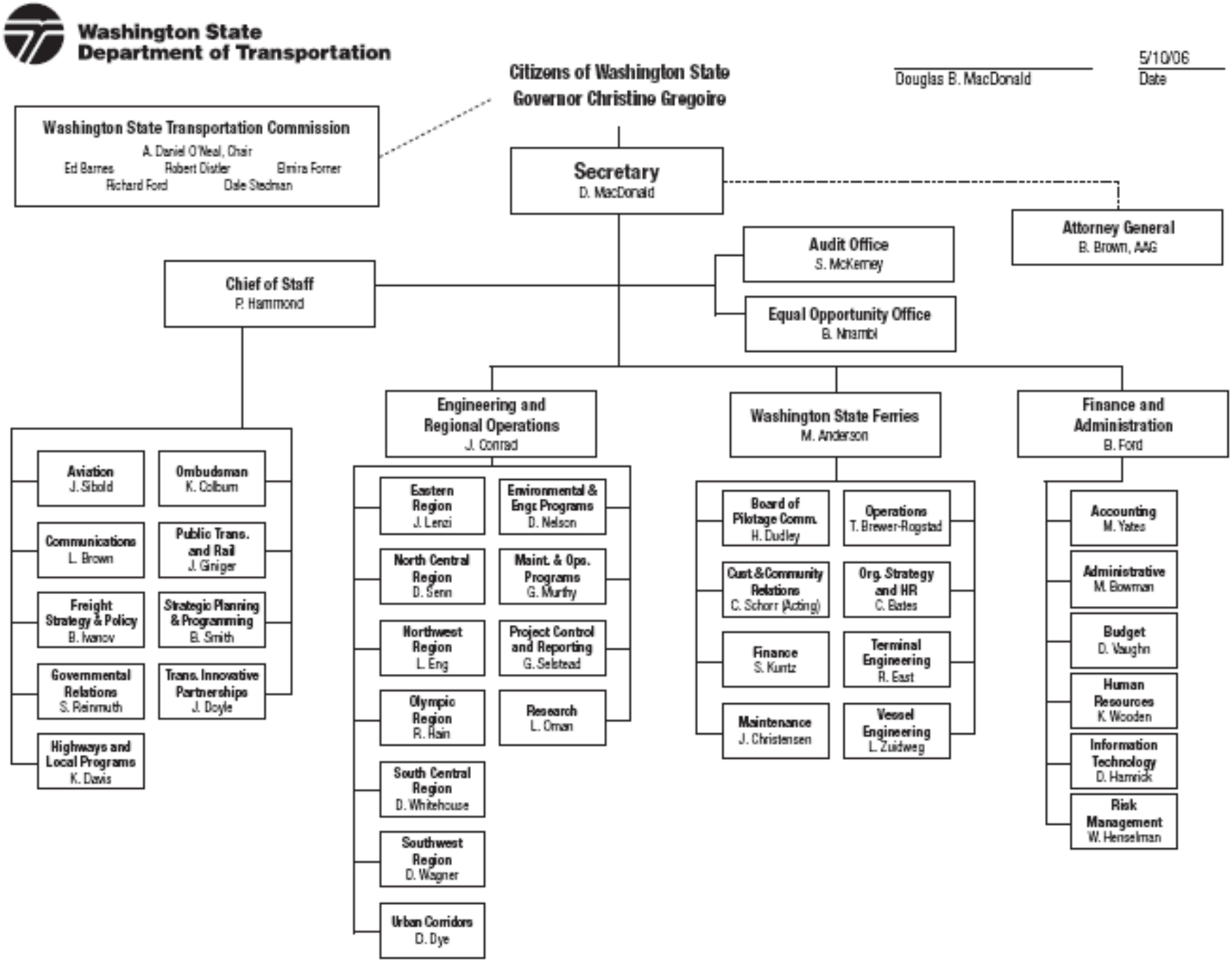
- Variables to be considered:
  - Size of contract
  - Risk assignment
  - Geography
  - Interfaces
  - Major work element
  - Permits

WSDOT Management: Construction

- Construction methods considered to date
  - Design-bid-build
  - Design/build
  - General contractor/construction management

Program Management Overview

How these two projects are being managed


Washington State
Department of Transportation
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Governor Christine Gregoire
Douglas B. MacDonald
5/10/06
Date
Washington State Transportation Commission
A. Daniel O'Neal, Chair
Ed Barnes
Robert Distler
Elmira Forner
Richard Ford
Dale Stedman
Secretary
D. MacDonald
Attorney General
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Audit Office
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B. Ivanov
Strategic Planning & Programming
B. Smith
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S. Reinmuth
Trans. Innovative Partnerships
J. Doyle
Highways and Local Programs
K. Davis
Engineering and Regional Operations
J. Conrad
Eastern Region
J. Lenzi
Environmental & Engr. Programs
D. Nelson
North Central Region
D. Senn
Maint. & Ops. Programs
G. Murthy
Northwest Region
L. Eng
Project Control and Reporting
G. Selstead
Olympic Region
R. Hain
Research
L. Oman
South Central Region
D. Whitehouse
Southwest Region
D. Wagner
Urban Corridors
D. Dye
Washington State Ferries
M. Anderson
Board of Pilotage Comm.
H. Dudley
Operations
T. Brewer-Rogstad
Cust. & Community Relations
C. Schorr (Acting)
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L. Zuidweg
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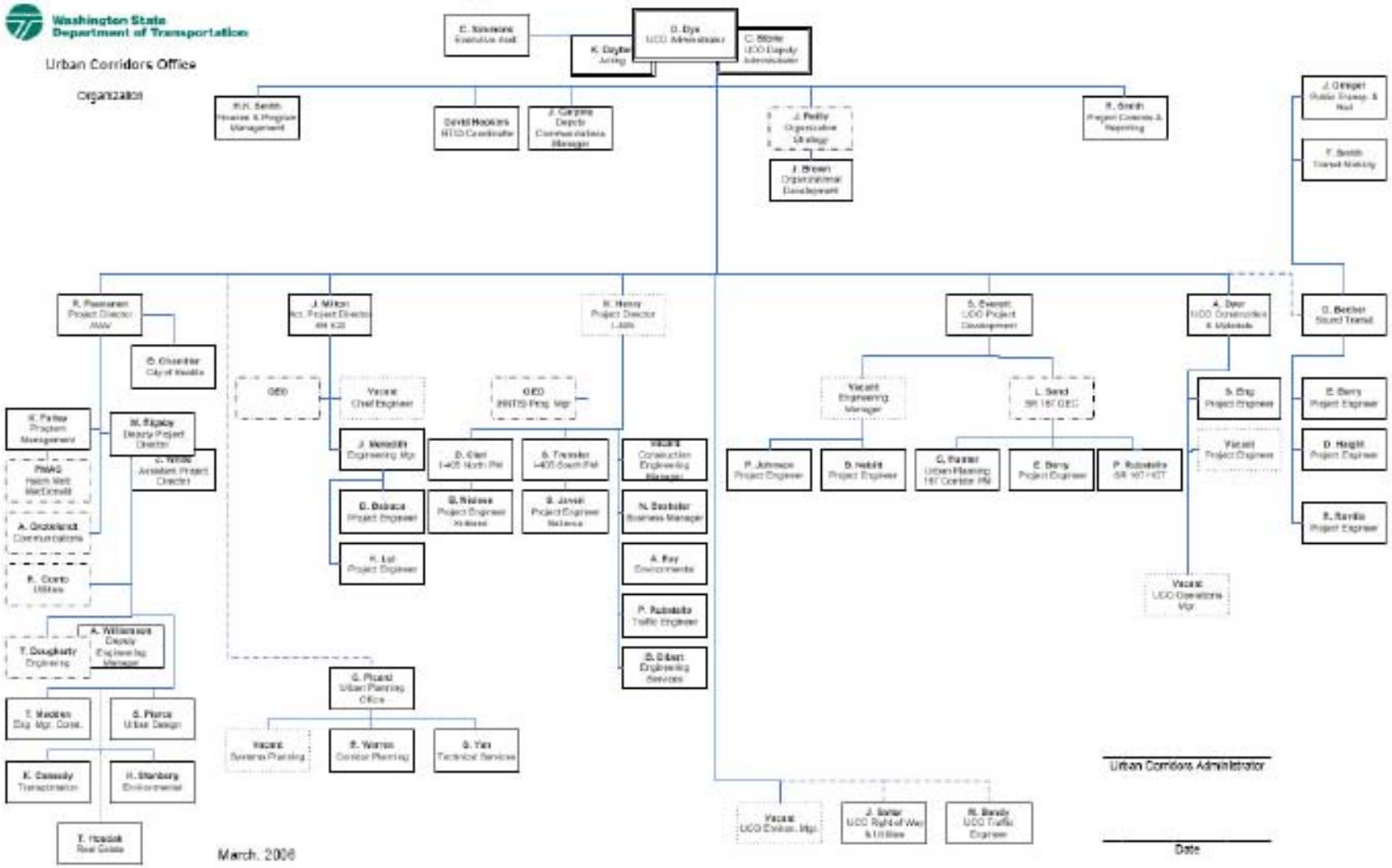
B. Ford
Accounting
M. Yates
Administrative
M. Bowman
Budget
D. Vaughn
Human Resources
K. Wooden
Information Technology
D. Hamrick
Risk Management
W. Henselman

UCO Organization- Overview



Responsibilities - Statewide Program Management Group

1. Expenditure Plans
   - Monthly Oversight Committees
   - Scope, Schedule, Budget controls & reporting
   - Statewide and region program delivery
   - Recovery strategies
2. HQ & Region staffing
   - PC&R
   - NWR
   - OR
   - SWR
   - UCO
   - Co-located
3. Training
   - Systems
   - MPD
   - Reporting
4. Software Systems
   - WSDOT legacy system review
   - Corporate application of P3E/C, Prism, Expedition, etc.
   - System upgrades
5. Performance Reporting
6. Finance Strategies

Responsibilities - Regional / UCO Program Management

1. UCO Delivery Plan
   - Master scope, schedule, budget (baseline, variances, earned value, cost to complete)
   - Workforce summary
   - Resource loading for support office
   - Management plans
   - Delivery goals
   - 10 year strategic elements
2. Performance Reporting
   - Monthly reports
   - Trend analysis
   - Quarterly reporting
   - Performance audits
   - Re-aging
3. Issues Management
   - Early identification
   - Issues tracking and resolution
   - Claims management
4. Program support
   - Risk management
   - Configuration Management
   - Contract Review & Assistance

Responsibilities, Project Management

1. Business Plan
   - Scope, schedule, budget
   - Decision making
   - Roles and responsibilities
2. Performance Reporting
3. Change Management
   - Cost containment
4. Issues Management
   - Claims management
5. Program Support
   - Risk Management
   - CEVP
   - VE
6. QA
7. Resource Management
   - Co-located
   - External
   - Support
8. Document Controls

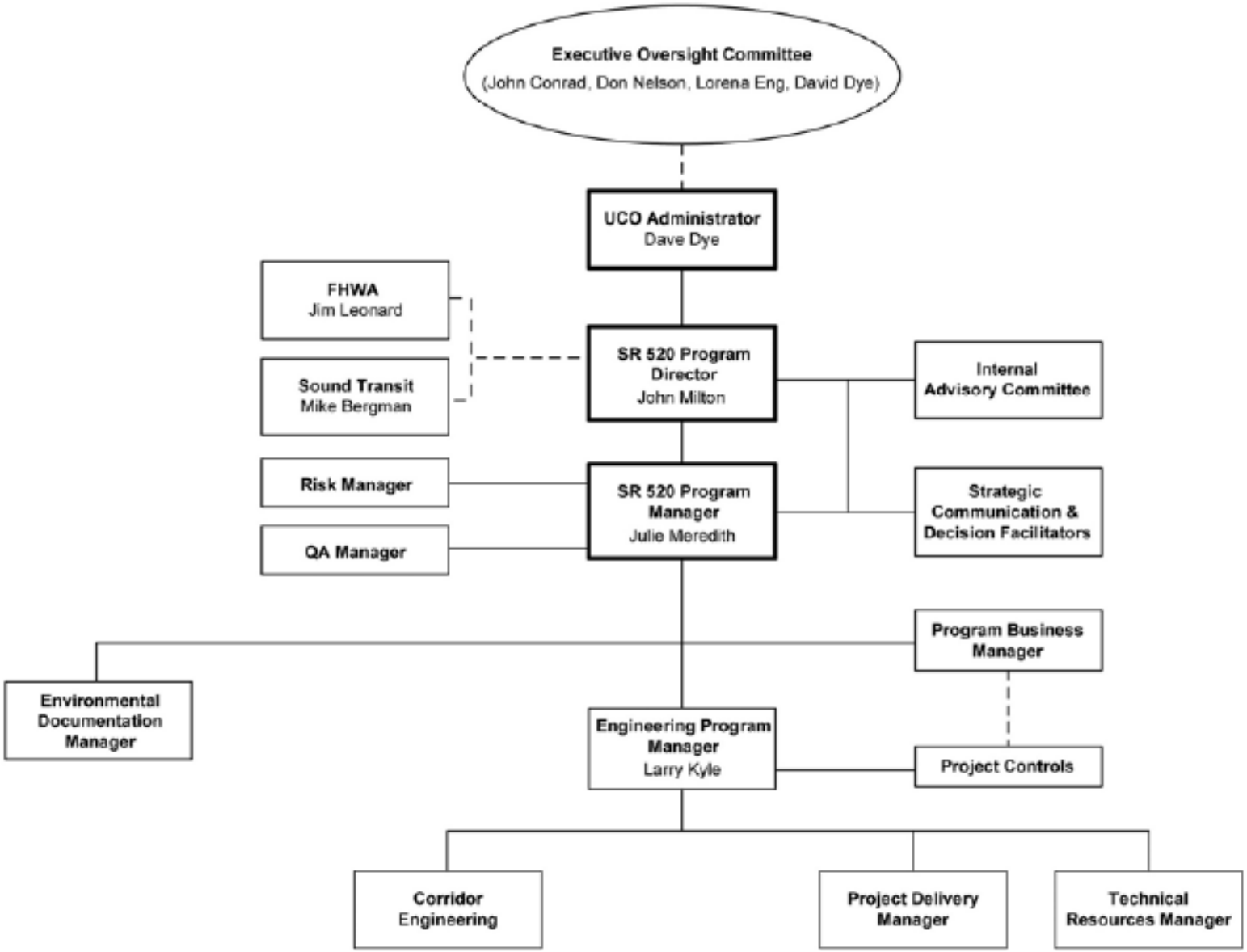
SR 520 Project Management: Team Overview

- Selected a GEC contractor in early 2006
- Teams organized by matrix, to include:
  - Environmental Impact Statement team
  - Design team
  - Support groups
  - Business group
- Project engineer from one team can manage tasks from another team
- Two-way communication ongoing between consultant and WSDOT

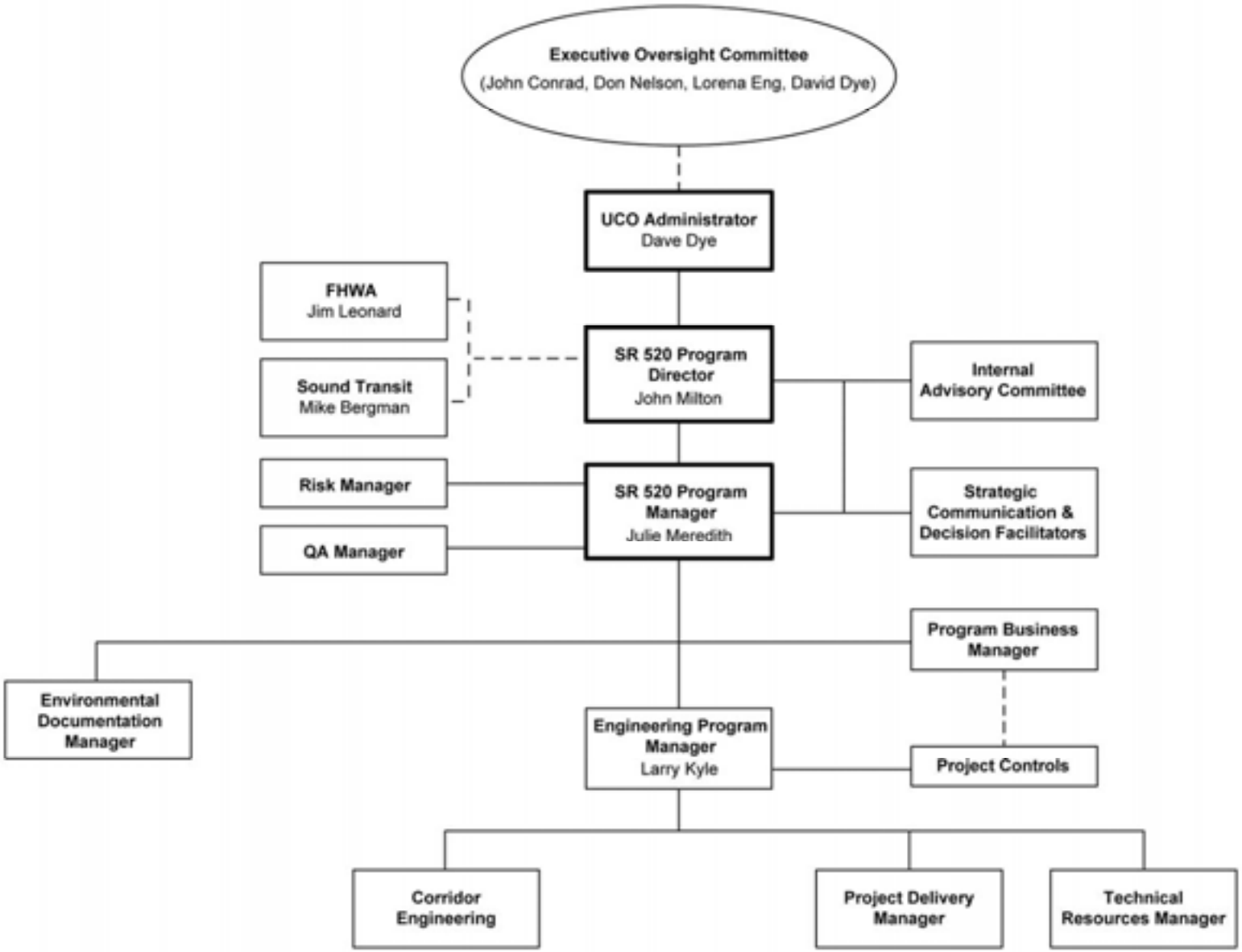
SR 520 Project Management: Business Group Details

- Business group includes project controls, contracts, and agreements
- Sophisticated software is utilized for scheduling, financials, and document control
- Schedule monitoring is scalable
- Progress is measured as we go against the baseline schedule
- Task managers and consultants assess progress in both expenditures and progress complete to develop an earned value
- Next Steps – Construction management

SR 520 Bridge Replacement and HOV Project



SR 520 Bridge Replacement and HOV Project



Alaskan Way Viaduct
Project Management

- Integrated team
- Co-located
- Selected GEC for technical expertise
- Selected Project Management Assistant Consultant to increase strong owner role

Alaskan Way Viaduct and Seawall Replacement Project