Joint Transportation Committee

Efficiencies in the Construction and Operation of State Transportation Projects

Advisory Panel Meeting #2 | Meeting Materials
September 30, 2013

BERK STRATEGY + ANALYSIS + COMMUNICATIONS | consulting scanlan | LUND CONSULTING

Introduction to Meeting Packet

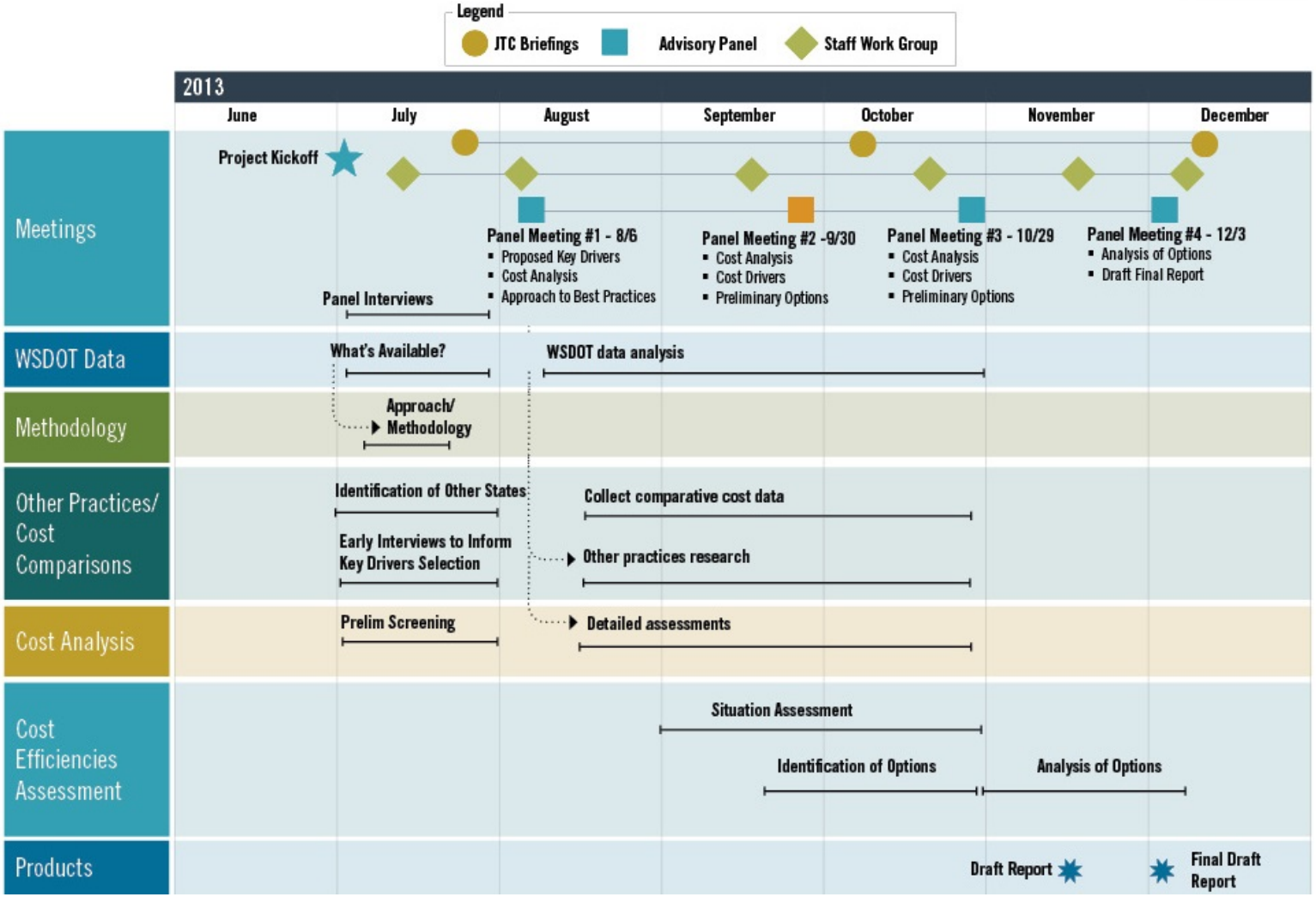
A few notes about the packet:

- **Cost analysis:** More detailed information on the WSDOT project data. The analysis begins at a high level, presenting information on what components are included in construction costs overall and the relative contribution of individual cost drivers.
- **Cost Drivers – Sales & Use Tax and Prevailing Wage**: Given that there is active discussion on these topics in the lead up to a potential special session, we wanted to provide time at this meeting for preliminary discussion. We have identified alternatives and policy implications.
- **Cost Drivers – Mitigation (Part 1):** This initial discussion defines mitigation and assesses the costs based on available data.
- **Cross-cutting themes:** These are things we have heard more than once that cut across multiple drivers and may have broader policy implications.

September 30 Meeting
Objectives

- Provide an update on progress and next steps
- Review updated analysis of WSDOT project costs and expenditure history for key drivers
- Exploration of three cost drivers
  - Sales & Use Tax
  - Prevailing Wage
  - Mitigation
- Begin discussion of potential efficiency options for Sales & Use Tax and Prevailing Wage
- Discuss three cross-cutting themes

Project Status Update



Cost Analysis

ASSESSMENT OF HISTORICAL WSDOT COSTS

Cost Analysis
Introduction

- Understand how highway construction funds have been spent over the last decade
  - What are the biggest expenditure areas?
  - How have expenditures changed over time?
- A broad understanding of spending patterns will allow us to drill down into the costs behind specific drivers (for example, payments to prime contractors)
- This analysis focuses on the Preservation and Improvement Programs at WSDOT, which encompass the majority of highway construction projects
  - Programs break up WSDOT's operations into separate purposes and budgets.
  - The Preservation Program includes projects focused on paving and safety restoration, structures preservation, seismic retrofits, and preservation of drainage/electrical systems
  - The Improvement Program includes projects that improve mobility, reduce or prevent collisions, support economic mobility, and mitigate environmental impacts

Cost Analysis
Available Information

- To begin understanding the potential impact of individual cost drivers, an assessment of the historical pattern of WSDOT spending was conducted.
- Foundation for this analysis is a database provided by WSDOT:
  - The database includes all projects in the Preservation and Improvement Programs that were marked as operationally complete from 2003-2012
  - The database does not includes expenditures on projects that are not yet complete, such as the 520 bridge
- The database includes a total of 2,292 projects and $9.6 billion in expenditures

Project Cost		Number of Projects	Percent of Projects	Project Expenditures	Percent of Expenditures
Min	Max				
Less than $1 M		1,308	57%	$ 522.2 M	5%
$ 1.0 M	$ 5.0 M	718	31%	$ 1,594.3 M	17%
$ 5.0 M	$ 25.0 M	198	9%	$ 2,199.9 M	23%
$ 25.0 M	$ 100.0 M	53	2%	$ 2,597.3 M	27%
$100 M or more		15	1%	$ 2,706.5 M	28%
	TOTAL	**2,292**	**100%**	**$ 9,620.3 M**	**100%**

Cost Analysis
Available Information

- The data includes information for:
  - Type of project (e.g. urban mobility, HOV lanes, noise reduction)
  - Operationally complete date
  - Expenditure category (e.g. project management, payments to contractors, environmental documentation, property acquisition)
  - Project phase (e.g. preliminary engineering, right of way, construction)
- There are more than 100,000 individual rows of data. Each row represents a unique expenditure category on a unique project.

Cost Analysis
Available Information

This table shows how projects and expenditures included the database are spread across different project categories

- About 1/3 of expenditures went to urban mobility projects
- 15% of expenditures went to paving/safety restoration
- Collision reduction and prevention comprised about 10% of costs

WSDOT Project Category	# of Projects	2003-2012 Cost		Average Project Size
Urban Mobility	111	3,150,977,000	33%	28,387,000
Paving/Safety Restoration	801	1,397,233,000	15%	1,744,000
Structures Preservation	193	1,073,731,000	11%	5,563,000
HOV Lanes	22	1,049,748,000	11%	47,716,000
Rural Mobility	35	770,492,000	8%	22,014,000
Collision Prevention	383	593,917,000	6%	1,551,000
Collision Reduction	141	355,932,000	4%	2,524,000
All Weather Highways/Freight	17	320,803,000	3%	18,871,000
Unstable Slopes	176	220,450,000	2%	1,253,000
Trunk System Completion	4	177,767,000	2%	44,442,000
Catastrophic Reduction	87	143,178,000	1%	1,646,000
Major Drainage/Electrical Systems	139	112,745,000	1%	811,000
Fish Barrier Removal	46	48,837,000	1%	1,062,000
Noise Reduction	12	41,316,000	0%	3,443,000
Program Support/Discretionary Buckets	9	24,718,000	0%	2,746,000
Urban Bicycle Connections	8	23,083,000	0%	2,885,000
Bridge Restrictions	3	22,074,000	0%	7,358,000
Weigh Stations/Other	13	21,714,000	0%	1,670,000
Rest Area Preservation	30	21,238,000	0%	708,000
Wetland Monitor	25	6,172,000	0%	247,000
Stormwater Runoff	16	5,652,000	0%	353,000
Scenic Byways	7	4,550,000	0%	650,000
Bicycle Touring Routes	2	2,009,000	0%	1,005,000
Air Quality	1	788,000	0%	788,000
New Safety Rest Areas	1	51,000	0%	51,000
Project Type Not Listed	10	31,094,000	0%	3,109,000
TOTAL	**2,292**	**9,620,269,000**		**4,197,000**

Cost Analysis
Available Information

- WSDOT tracks expenditures in this database using more than 250 unique expenditure category codes
- BERK has worked with WSDOT to align expenditure categories used by WSDOT with the phases that the JTC is interested in analyzing
  - In some cases, categories used by WSDOT align well with expenditure areas we are interested in, such as right of way acquisition
  - In other cases, it is challenging to identify and summarize certain types of expenditures, such as mitigation, using WSDOT's cost categories
- BERK is using the following six major project phases:
  - Predesign, Engineering & Design, Environmental Review, Permitting, Right of Way, Construction
  - Construction is further broken down into subcategories such as project management, payments to prime contractors, inspection and testing, state force construction work, and other construction expenditures

Cost Analysis
Project Costs by Phase

Project Costs by Major Project Phase

Project Phase	2003-2012 Cost	
Construction	8,008,648,000	83%
Right of Way	622,465,000	6%
Engineering & Design	512,523,000	5%
Predesign	422,705,000	4%
Environmental Review	40,379,000	0%
Permitting	13,545,000	0%
TOTAL	**9,620,266,000**	

- Approximately 83% of expenditures ($8 billion) in the database were spent on construction
  - Construction as a proportion of total project costs decreased from 91% in 2003 to 77% in 2012, largely due to the impact of larger projects with greater right-of-way and predesign costs
- Right of Way expenditures totaled 6%, or $622 million. The majority of this cost was for property acquisition ($455 million). Right of Way as a proportion of total non-construction expenditures has been increasing over time
- After Right of Way, Engineering & Design and Predesign are the largest components of non-construction expenditures

Cost Analysis
Project Costs by Phase

Construction Expenditure Detail

- The majority of construction expenditures (84%) went to payments to prime contractors

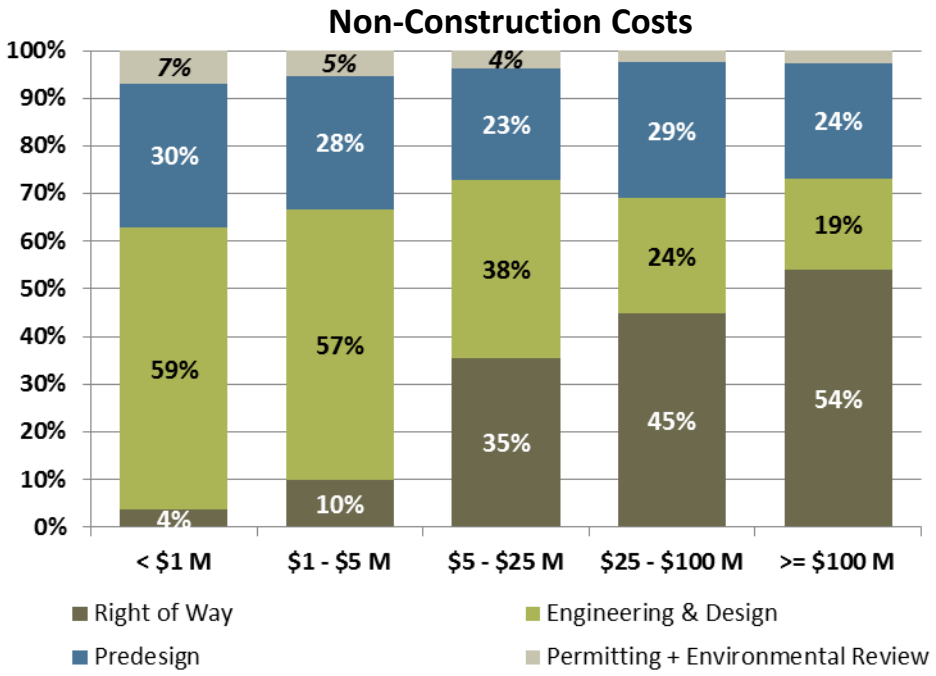
Construction Components	2003-2012 Cost	
Contractor Payments	6,705,941,000	84%
Project Management	484,969,000	6%
Other Construction Costs	429,666,000	5%
Inspection & Testing	304,005,000	4%
WSDOT State Force Work	84,066,000	1%
TOTAL	**8,008,648,000**	

- WSDOT project management, which includes management of contracts and construction oversight, totaled $485 million, or 6% of all construction expenditures
- Construction work by WSDOT's state force totaled approximately 1% of all construction expenditures during the sample period
  - State force work means that WSDOT's maintenance or traffic operations staff are doing construction work
  - By RCW, WSDOT is limited to $60,000 in state force labor per "unit of work," which effectively means per project

Cost Analysis
Project Costs by Phase

Expenditures by Project Size

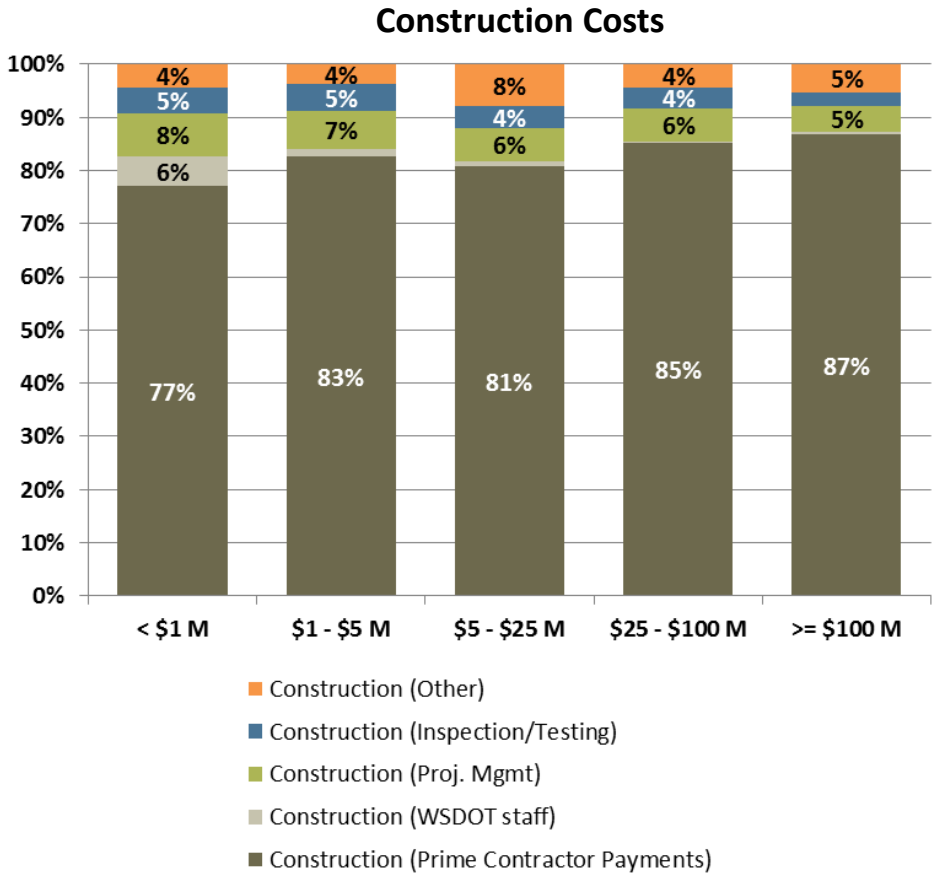
- The distribution of expenditures between construction and non-construction phases is fairly consistent across project sizes, hovering between 80% and 88% construction
- Within non-construction expenditures, proportions of costs vary widely across size categories
  - Projects less than $5 million had a higher proportion of non-construction expenditures on engineering and design
  - The larger the project, the higher the proportion of expenditures went toward Right of Way



Cost Analysis
Project Costs by Phase

Expenditures by Project Size (continued)

- Payments to prime contractors is a larger proportion of construction expenditures for larger projects
- WSDOT state force work represent a larger portion of construction expenditures for projects less than $1 million in total expenditures



Cost Analysis
Project Phase Definitions

Predesign

- For the purposes of this study, the Predesign phase is defined as all expenditures that occur on a project prior to beginning engineering and design
- There are 46 WSDOT expenditure categories rolled up into the Predesign phase
- The table to the right summarizes the ten largest expenditure categories within the Predesign phase

WSDOT Expenditure Title	2003-2012 Expenditures	
Agreements Preliminary Engineering	$ 250.0 M	59%
Traffic Data Collection & Analysis	$ 30.0 M	7%
Traffic Design And Plans	$ 19.3 M	5%
Survey, Location	$ 18.0 M	4%
Hydraulics	$ 16.1 M	4%
Base Map/Right Of Way Plans	$ 13.2 M	3%
Project Data	$ 12.8 M	3%
Respond To Rfis Design-Build	$ 10.5 M	2%
Proj Mgmt Plan Dev & Maintenance	$ 10.3 M	2%
Public & Agency Involvement	$ 7.2 M	2%
All other categories in this phase	*$ 35.3 M*	8%
Predesign Total	**$ 422.7 M**	

Cost Analysis
Project Phase Definitions

Engineering & Design

- The Engineering & Design phase is defined as all expenditures that occur on a project to create designs and put the project out for ad
- There are 62 WSDOT expenditure categories rolled up into the Engineering & Design phase
- The table to the right summarizes the ten largest expenditure categories within the Engineering & Design phase

WSDOT Expenditure Title	2003-2012 Expenditures	
General Project Management	$ 185.3 M	36%
Agreements	$ 55.6 M	11%
Contract Plan Preparation	$ 35.7 M	7%
Hq Geotech Work	$ 27.7 M	5%
Roadway Design	$ 26.5 M	5%
Ps&E Review And Ad Ready Prep	$ 21.4 M	4%
Direct Project Support Pe	$ 21.4 M	4%
Structure Design And Plans	$ 18.3 M	4%
Training	$ 12.2 M	2%
Design Documentation	$ 12.1 M	2%
All other categories in this phase	*$ 96.2 M*	19%
Engineering & Design Total	**$ 512.5 M**	

Cost Analysis
Project Phase Definitions

Environmental Review

- The Environmental Review phase is defined as all expenditures related to scoping and conducting environmental analyses
- There are 26 WSDOT expenditure categories rolled up into the Environmental Review phase
- The table to the right summarizes the ten largest expenditure categories within the Environmental Review phase

WSDOT Expenditure Title	2003-2012 Expenditures	
Nepa/Sepa Compliance	$ 19.0 M	47%
Esa Compliance	$ 7.5 M	19%
Environmental Discipline Repor	$ 6.4 M	16%
Environmental Review Summary	$ 2.5 M	6%
Compliance With Salmon Esa Req	$ 1.2 M	3%
Discipline Studies-Wetlands	$ 1.0 M	3%
Environment Discipline Studies	$ 0.9 M	2%
Early Environmental Scoping	$ 0.6 M	1%
Section 106 & Eo 05-05 Comp	$ 0.4 M	1%
Discipline Studies-Historic	$ 0.2 M	1%
All other categories in this phase	*$ 0.6 M*	2%
Environmental Review Total	**$ 40.4 M**	

Cost Analysis
Project Phase Definitions

Permitting

- The Permitting phase is defined as all expenditures related to acquiring environmental, construction, and local agency permits
- There are 6 WSDOT expenditure categories rolled up into the Permitting phase, shown in the table to the right

WSDOT Expenditure Title	2003-2012 Expenditures	
Environmental Permits	$ 11.6 M	85%
Consultant/Local Agcy Ps&E Rev	$ 1.1 M	8%
Other Agency Permits/Acces Mgt	$ 0.4 M	3%
Consultant/Lag Ps&E Review	$ 0.3 M	2%
Construction Permits	$ 0.1 M	1%
Consult/Local Struct Ps&E Revw	$ 0.1 M	0%
Permitting Total	**$ 13.5 M**	

Cost Analysis
Project Phase Definitions

Right of Way

- The Right of Way phase is defined as all expenditures related to purchasing right of way, including appraisal, relocation, and contract management
- There are 22 WSDOT expenditure categories rolled up into the Right of Way phase
- The table to the right summarizes the ten largest expenditure categories within the Right of Way phase

WSDOT Expenditure Title	2003-2012 Expenditures	
Acquisition - Parcel Payment	$ 455.8 M	73%
Acquisition - Labor Costs	$ 42.7 M	7%
Relocation - Other Costs	$ 30.7 M	5%
R/W Costs - Agreements	$ 27.1 M	4%
General Project Management	$ 23.4 M	4%
Appraisal	$ 12.1 M	2%
Inventory	$ 5.9 M	1%
Condemnation/Preparation-Trial	$ 5.1 M	1%
Relocation - Labor Costs	$ 4.8 M	1%
Appraisal Review	$ 3.5 M	1%
All other categories in this phase	*$ 11.4 M*	2%
Right of Way Total	**$ 622.5 M**	

Cost Analysis
Project Phase Definitions

Construction

- The Construction phase is defined as all expenditures related to completing project construction, such as paying contractors, managing contracts, inspection and testing, etc.
- There are 96 WSDOT expenditure categories rolled up into the Construction phase
- The Construction phase is separated into 5 subcategories: Project management, payments to primes, state force work, inspection and testing, and other expenditures

WSDOT Expenditure Title	2003-2012 Expenditures	
Payments to Prime Contractors	**$ 6,705.9 M**	**84%**
Inspection/Testing	**$ 304.0 M**	**4%**
Inspection (General)	*$ 113.9 M*	
Testing (Roadway Materials)	*$ 58.4 M*	
Inspection (Surface & Pave)	*$ 38.3 M*	
Inspection (Structures)	*$ 16.1 M*	
Other Inspection/Testing	*$ 77.2 M*	
Project Management	**$ 485.0 M**	**6%**
General Project Management	*$ 267.1 M*	
Progress/Final Estimates/Recds	*$ 69.8 M*	
Work Draws,Plan Chk,Data Prep	*$ 37.4 M*	
Management & Support Ce Redist	*$ 33.6 M*	
Other Project Management	*$ 77.1 M*	
State Force Construction Work	**$ 84.1 M**	**1%**
Other Construction Expenditures	**$ 429.7 M**	**5%**
Agreements - Construction	*$ 365.1 M*	
Surveying (Alignmt,Elev,X-Sec)	*$ 28.7 M*	
Legal Services	*$ 13.0 M*	
Surveying (Grade Control,Pave)	*$ 10.7 M*	
All other categories	*$ 12.1 M*	
Construction Total	**$ 8,008.6 M**	

Cost Driver Analysis

SALES TAX ON CONSTRUCTION

Sales & Use Tax Overview

Construction cost driver – state and local sales & use tax on projects on state-owned highways – tax on:

- Prime contractor full contract price
- Prime and sub-contractor purchases of materials consumed during construction

Estimated Sales & Use Tax Collected on Projects Completed in 2003-12	Sales & Use Tax Deferred
$541 million	Tacoma Narrows Bridge - $57.6 million 520 - $140.9 million (estimated)

Policy considerations

- General fund revenue from state sales & use tax
- Local government revenue from local option sales & use taxes
- Sales tax deferrals – Tacoma Narrows Bridge and 520
- Ability to tax federal construction contracts

Sales & Use Tax Overview

Legislative Options

1. Exemption Options
   a) Exempt contractors from sales and use tax when working on state-owned highways
   b) Extend current Public Road Construction exemption to state-owned highways
2. Direct Sales & Use Tax Revenue to Transportation
   - State sales & use tax to either Motor Vehicle Fund or Multi-Modal Fund
3. Sales Tax Deferrals – Change or not if sales & use tax changes
   - Tacoma Narrows Bridge
   - 520

- Constraint
  - Streamlined Sales & Use Tax Agreement – multi-state agreement governs application of sales & use tax

Sales & Use Tax Application

Based on ownership of the highway – higher tax for projects on state-owned highways

Tax	State-owned Highways	City, County, Political Subdivision, & Federal-owned Highways
Sales & use tax	▪ Applied to full contract price ▪ Materials that become part of the structure not taxed ▪ Materials used by contractor during construction (i.e. not part of the structure) taxed at purchase	▪ Not applied to full contract price ▪ All materials taxed at purchase
B&O tax	▪ Public road classification ▪ For both prime contractors & subcontractors – 0.00484	▪ Retail classification prime contractor– 0.00471 ▪ Wholesaling classification for subcontractors – 0.00484
State tax cost* for $1 million contract	Sales tax - $71,100 Prime B&O tax - $4,840 **Total - $75,940**	Sales tax - $39,000 Prime B&O tax - $4,710 **Total - $43,710**

*Cost assumptions based on conversations and research
State sales tax rate of 6.5%

Labor & services – 40%
Consumed materials – 10%
Installed materials – 50%

Sales & Use Tax Administration by WSDOT

Determine ownership of land

- Work on city, county, special district, federal-owned land – lower rates
- Work on state-owned highways – higher rates
- Projects may span more than one type of ownership

Determine rate to be applied

- Apply local sales tax rates as applicable

Materials

- If taxed at purchase, tax include in bid amount

Tax on total amount

- Added separately and paid with each invoice
- Not included in bids

Sales & Use Tax
Other States

Variation in sales & use tax application – affect cost comparisons with WSDOT projects

- 44 other states have a state sales tax
  - Rates range from 2% to 7.5%
  - Additional local options in most states
- Tax on full contract amount
  - 40 no tax on full contract amounts
  - 4 tax on full contract amount
    - 2 exclude sub-contractor payments from gross receipts
    - 1 – Arizona - tax base – 65%
    - 1 – South Dakota – includes sub-contract payments in gross receipts
- Tax on materials
  - 23 tax all contractor materials when purchased
  - 11 tax contractor materials consumed during construction, but not materials that are installed
  - 7 no tax on materials
  - 1 tax all materials but have a building & machinery exemption

Sales & Use Tax
Other States

Four states have other taxes on contractors that affect cost comparison

- Alabama – 5% tax on gross receipts from state highway projects only (not on local highway projects)
  - Funds pensions (15%) and mental health (85%)
  - No sales & use tax on total contract amount
- Delaware
  - 0.006537 tax on gross receipts over $100,000/month (excludes payments to sub-contractors)
  - No state sales & use tax
- Mississippi
  - 3.5% contractor's tax on prime contracts >$10,000
  - No sales & use tax on total contract amount
- Montana
  - 1% license fee on publically funded projects
  - No state sales & use tax

One state – West Virginia – directs sales & use tax on state highway projects to transportation fund

- Sales and use tax on all materials

Sales & Use Tax
Policy Considerations

General Fund

- State sales tax rate – 6.5%
- Revenues from the state sales & use tax collected from construction contracts on state-owned highways support the State General Fund
- Revenues from the application of state sales & use tax on materials purchased and consumed during construction also support the State General Fund

Federal contractor tax

- States cannot directly tax the federal government
- The Public Road Construction Exemption allows the state to tax materials at the point of purchase by contractors working on projects on federal-owned highways
- Supreme Court ruling 1983 – upheld Washington State's ability to tax materials purchased by federal contractors
  - Current law does not impose a higher, discriminatory tax on federal contractors
- Estimated revenue from federal contractors - $89 million per fiscal year

Sales & Use Tax
Policy Considerations

Local government funding

- Streamlined Sales and Use Tax Agreement requires uniform application of sales & use tax
  - Section 302 – "tax base for local jurisdictions shall be identical to the state base unless prohibited by federal law"
- Legislature has authorized cities, counties, and special districts to impose sales & use taxes
  - Range of combined state & local tax from 9.6% (Mill Creek) to 7.0% in unincorporated Klickitat County
  - 9.5% in areas served by Sound Transit – applicable to Puget Sound area mega-projects

Jurisdiction	Sales & Use Tax Allowed	Jurisdiction	Sales & Use Tax Allowed
Counties & Cities	0.5% basic 0.5% optional	Transit	0.9%
Counties	0.1% Criminal Justice 0.1% Juvenile Detention Facility 0.1% E-911 Systems 0.3% Public Safety 0.1% Mental Health 0.2% Transportation Benefit District	High capacity transportation	0.9% - 1.0%
		Public facility districts	0.2%

Sales & Use Tax
Policy Considerations

Sales and use tax deferrals

- Require legislative authorization
- Tacoma Narrows Bridge
  - Deferred until 11th year of the project being operational (original legislation 5th year of operation)
  - Total of $57.6 million to be repaid, at no interest, over 10 years
  - Anticipated to be paid from tolls
- 520
  - Deferred until 5th year after bridge opens to traffic
  - Estimated state and local tax deferred $140 million
  - Anticipated to be paid from tolls

Sales & Use Tax Alternatives

1. a) Exempt projects on state-owned highways from sales & use tax

- RCW exemption for construction contractors working on state-owned highways
  - Exempt from tax on total project cost
  - Exempt from tax on materials installed or consumed during construction
    - Other states use exemption certificates

1. b) Extend Public Road Construction exemption to state – owned highways

- Amend RCW 82.04.050(10) to include state-owned highways
  - Exempt from tax on total project cost
  - Contractor would pay tax on all materials at point of purchase

2. Direct receipts from sales & use tax collected from contractors on state-owned highways to transportation

- Revenues to motor vehicle fund or multi-modal account

Sales & Use Tax Alternatives

Alternative	WSDOT Savings 2003-12	Policy Impacts			
		General Fund	Local Revenue	Federal	18th Amendment Restriction
Total exemption	$453 M[1]	Reduce revenue	Reduce revenue	Risk Federal projects taxed at higher rate	All restricted revenues used for highway projects
Public Road Construction Exemption	$227 M	Reduce revenue	Reduce revenue	No risk Federal projects taxed at same rate	Concern remains – but for less expense
Direct state share of sales tax revenue to motor vehicle or multi-modal account	$336 M[1]	Reduce revenue	No impact	No risk If tax at current rate or if extend public road exemption	All restricted revenues used for highway projects Could either direct all sales & use tax to motor vehicle fund or, if capital from non-restricted funds, to the multi-modal account

[1] *Savings could be higher if the exemption or redirection of funds included sales tax paid by contractors on materials taxed at purchase.*

Sales & Use Tax Alternatives

3. Depending on legislative direction, there are two alternatives for deferred sales & use tax on Tacoma Narrows Bridge and tax paid to date on 520

- No change – repay tax as now mandated
  - 520 toll payers would benefit from any reduced sales & use tax
- Extend reduction in some manner to Tacoma Narrows Bridge and 520
  - Options require further consultation with the Department of Revenue

Cost Driver Analysis

PREVAILING WAGE

Prevailing Wage Overview

Construction cost driver – federal and state prevailing wage requirements on

- State funded WSDOT projects (no federal aid) – state prevailing wage requirements
- Federal-aid WSDOT projects
  - Federal prevailing wage requirements
  - State requires contractors to pay the state rate if higher

Cost of Prevailing Wage Requirements

- 1998 JLARC Highways Audit – 0.44% on state highway program – result of requirement to pay higher state rate on federal-aid projects
- No specific studies on impact of prevailing wage vs. no prevailing wage for WSDOT projects
- Other studies vary on impact of prevailing wage requirements on construction costs

- It is difficult to make comparisons between the state and federal prevailing wages

Prevailing Wage Overview

Policy considerations

- Purpose of state prevailing wage law
  - " To protect workers from substandard earnings and to preserve local wage standards" (Department of Labor & Industries Prevailing Wage Handbook)

Legislative options

1. Exemption Options
   a) Exempt WSDOT state-funded projects
   b) Establish threshold for state prevailing wage requirements on WSDOT projects
   c) Exempt WSDOT projects from paying higher of state or federal rate on federal-aid projects
2. Modify how Department of Labor & Industries (L&I) establishes state rates

Prevailing Wage Application

Based on funding

State-funded

- State requirement – RCW 39.12
  - Hourly rate of wage, usual benefits, and overtime paid in a **locality** to the **majority** of workers, laborers, or mechanics, **in the same trade or occupation**
  - Set by county (based on survey methodology – WAC 296-127-019)
  - Expressed as total wage (wage + usual benefits), holiday, overtime and special pay requirements
  - 300 – 500 wage rates in each of 39 counties
  - No federal requirement

Federal funding

- Federal requirement - Davis-Bacon & Related Acts (DBRA)
  - Hourly wage and usual benefits
  - Four categories (residential, highway, heavy, building) within which there are occupations & wages
- State requirement – pay state rate if higher than federal rate

Prevailing Wage
State and Federal Wage

State rate established by surveys and collective bargaining agreements – one category

- Surveys – by occupation every three years (goal)
  - Actually less often
  - Limited participation in voluntary surveys – 15-25% response rate – instrument pdf
  - No penalty for non-participation
- If survey shows majority wage is set by a collective bargaining agreement (CBA), then it is a CBA derived rate and biannual increases are based on the CBA
- If wages not set by CBA, then no increase until re-surveyed
- Many wages are set by collective bargaining agreement (examples of common WSDOT occupations JLARC)
  - Carpenter – 37 of 39 county rates CBA
  - Flagger – 37 of 39 county rates CBA
  - Truck driver – transit mixer– 5 of 39 county rates survey
- One major category of wages (other than residential) – total wages & benefits + overtime, holiday, special pay rates

Prevailing Wage
State and Federal Wage

Federal rates established by surveys and collective bargaining agreements – 4 categories - zones

- Four categories – residential, highway, heavy, building – within which many occupations
- By county – with zone differentials from major city within county

Difficult to compare state and federal rates

General Laborer Rate		
County	State Rate	Federal Rate – Highway Category
Adams	Wage $34.81 Holiday 7B Overtime 1M	Wage $24.10 Fringes $10.65 Zone 2 (>45 miles from Pasco, Spokane, Lewiston) + $2.00
King	Wage $41.69 Holiday 7A Overtime 2Y	Wage $31.75 Fringes $9.85 Zone 2 (w/in 25-45 miles of Seattle or Kent City Hall) + $1.00 Zone 3 (> 45 miles from Seattle or Kent City Hall) +$2.00

Prevailing Wage
Contractors & WSDOT

Washington State Prevailing Wage

- Contractors and sub-contractors are required to submit the following to L&I:
  - Statement of Intent to Pay Prevailing Wage Form
  - Affidavit of Wages Paid
  - Records. Keep accurate work and pay records and submit a certified copy upon request

Federal Prevailing Wage - additional requirements

- Certified payroll records – submitted weekly to project manager
- Employee interviews – allow for interviews during working hours

WSDOT Administration

- 1998 JLARC study – little administrative costs to WSDOT
- Contract provisions – list minimum wages
  - Contractors pay the higher of federal or state rate
- Federal aid projects
  - WSDOT project engineer check certified payrolls & conduct employee interviews

Prevailing Wage
Other States

- 18 states have no state prevailing wage laws
  - 10 had laws that were repealed
  - 8 have never had them
- 1 state – Nebraska – requires fair labor standards rates but does not set a state rate
- Total 31 states, including Washington, set state prevailing wage rates

Prevailing Wage
Other States

States that Set State Prevailing Wage	Washington	Other States 29 sets wages for state transportation projects
Exemptions		
Exempt state transportation department	No	2 – exempt state transportation department from state prevailing wage
Threshold below which the wage is not in effect	No threshold	17 – thresholds of $25,000 to $500,000 3 – thresholds of $1,000 - $2,000 9 – no threshold
State rate used if higher than federal rate on federal-aid projects	Yes – must use higher rate	14 – higher rate 9 - federal rate 4 – use federal rate as state rate
State Rates – How established & category		
State basis for determining rates	Survey every 3 years &collective bargaining agreements	4 – use federal rate as state rate 9 – collective bargaining agreements 12 – annual survey
Separate highway worker category	No	18 – yes (some combined with heavy) 11 - no

Prevailing Wage
Policy Considerations

Policy for state prevailing wage – wage protection & preserve local wage standards

L&I Prevailing Wage Handbook

"The Washington State Prevailing Wage Act is partly modeled after the federal Davis- Bacon Act, which was enacted to protect the employees of contractors performing public works construction from substandard earnings, and to preserve local wage standards. The employees, not contractors or employers, are the beneficiaries of the Act. The Act is remedial and should be liberally construed. In other words, L&I is directed to apply the law in ways that carry out the law's intent, which is to protect workers from substandard earnings and to preserve local wage standards." Washington State Department of Labor and Industries*, Prevailing Wage Law*, April 2009, p. 2.

Prevailing Wage Alternatives

1. Exemptions for WSDOT projects

a) Exempt WSDOT projects from the state prevailing wage act

- Only one exemption in Washington State law – for irrigation districts solely when doing reclamation & development of waste or undeveloped lands
- Two states that set state prevailing wages exempt transportation department projects

b) Exempt WSDOT federal-aid projects from the state prevailing wage act

- No similar exemption in Washington State law
- Would not affect Davis-Bacon & Related Acts requirements
- Would use only federal wage rates on federal-aid projects
- 13 of 29 other states that set wages for state transportation projects use the federal rate for federal-aid projects

Prevailing Wage Alternatives

1. Exemptions for WSDOT Projects

c) Establish a threshold below which WSDOT projects are not subject to the prevailing wage act

No thresholds in current Washington State law for any public works

Range	2003-12 Prime Contracts					Prime Contract Cost			Other States
	#	%	Cum	Fed*	%	$	%	Cum	
$0 - $2k	47	3%	3%	27	57%	$18,000	0%	0%	3
$2k - $25 k	32	2%	5%	20	63%	$255,000	0%	0%	6
$25k - $50k	13	1%	6%	7	54%	$473,000	0%	0%	3
$50k - $60k	6	0%	6%	3	50%	$326,000	0%	0%	1
$60k – $80k	11	1%	7%	8	73%	$774,000	0%	0%	1
$80k - $100k	15	1%	8%	13	87%	$1.3 M	0%	0%	3
$100k - $250k	138	9%	17%	95	69%	$24.0 M	0%	0%	1
$250k - $500k	206	14%	31%	160	78%	$76.9 M	1%	2%	2
>$500 k	1,049	69%		909	87%	$6,604.9 M	98%		
Total	**1,517**			**1,242**	**82%**	**$6,705.9 M**			**20**

*Denotes contracts on projects with federal funding

Prevailing Wage Alternatives

2. Modify how L&I sets state rate

a) Use federal rate as state rate

- Four states that set state prevailing wage rates use the federal rate as the state rate
- Save expense of setting state rate
- More states moving towards equalizing state and federal rates (Oregon, Montana)

b) Use collective bargaining agreements as basis for state rate

- Nine states use CBA as the primary or sole source of state prevailing wage rates
- Many Washington State rates already set by CBA

c) Require annual survey

- Twelve other states also rely primarily on surveys, but they are done annually and not by individual job classification (L&I has explored this option)
- Surveys are web based, with downloadable spreadsheets
- Some states set a fine to ensure compliance with surveys – example $5,000 in Oregon

Prevailing Wage Alternatives

2. Modify how L&I sets state rate

d) Establish highway category of rates

- Occupations and trades within highway category
- 18 states have separate highway category (some combined with heavy)
  - Similar to federal categories
- Potential method of changing L&I for WSDOT projects only

Prevailing Wage
Policy Implications

Alternative	WSDOT Savings (excludes potential L&I savings)	Policy Impact – Prevailing Wage Goals
1. Exemption Alternatives		
a) Exempt WSDOT projects	TBD Minimum 0.44% total program cost from JLARC estimate	No prevailing wage requirement on WSDOT state funded projects Federal rate on federal-aid projects
b)Threshold	TBD	At $500,00 – 31% of contracts, 2% of project costs affected Minimal impact on policy
c) Federal-aid projects from state wage	0.44% total program cost – JLARC study	Federal rate only on federal-aid projects
2.Modify how L&I sets rate		
a) Use federal rate as state rate	Some administrative cost	Continue state prevailing wage
b) Use CBA to set rate	None	Continue state prevailing wage
c) Annual survey	None	Continue state prevailing wage
d) Highway worker category	None	Continue state prevailing wage

Cost Driver Analysis

MITIGATION

Mitigation Overview

Purpose of Today's Discussion

- Today's mitigation discussion is part one of a two-part discussion. At the next Advisory Panel meeting, we will discuss mitigation in more detail and in the broader context of its relationship to permitting and environmental review
- The purpose of today's discussion is to understand what mitigation is and review preliminary analysis that (1) estimates how large mitigation is and (2) shows what types of mitigation costs are largest

Introduction to Mitigation

- Defining mitigation can be a subjective exercise that generates disagreement about what should or should not be considered mitigation. Mitigation, depending on how it is defined, can include many aspects of a project:
  - Mitigation can take the form of **design changes** during the environmental review or permitting process to avoid environmental impacts. Sometimes these design changes add to overall project costs. These mitigation costs are difficult to track in a database.
  - Some projects have **impacts that need to be mitigated**, which become requirements of the project. Since they are done in concurrence with other project design and construction activities, it is difficult to separate these costs from general project costs.
  - WSDOT also does some projects where the **whole project can be considered mitigation-like**, even though the project may not be mitigating a specific concurrent project.

Mitigation Overview

Available mitigation cost data

Mitigation-like costs are found in two different places within WSDOT's project expenditure data:

- **Project Types**. Some projects are categorized as primarily focused on mitigation-like expenditures.
  - These project types include Environmental Retrofits as well as some Mobility and Economic projects that may also be considered mitigation in some circumstances, such as bicycle connections and scenic highway improvements
  - These costs are simple to identify, as the entire project can be categorized as a mitigation expenditure
- **Project Components**. The true mitigation-related expenditures are included in other projects that are categorized more broadly.
  - The majority of mitigation expenditures are contained in these projects
  - It is not easy to identify costs on these projects that are specifically related to mitigation

Mitigation
WSDOT Case Studies

- On projects where mitigation costs are contained within the overall project, WSDOT does not track costs in a way that allows us to easily identify and summarize these mitigation-related costs
- To better understand the role of mitigation on project costs, WSDOT conducted four in-depth mitigation case studies in 2003, 2006, 2009, and 2013
  - Each study analyzed between 7 and 14 projects selected to represent a broad mix of project types and sizes
  - WSDOT worked with project managers to identify all expenditures related to mitigation, including design alterations
  - This process was labor-intensive and it is not feasible within the scope or timeline of this study to analyze additional projects in this manner

Mitigation
WSDOT Case Studies

Definition of Mitigation in WSDOT Case Studies

- **Temporary**. Temporary embankments, water quality monitoring, stream by-passes, dust prevention, erosion control, etc.
- **Stormwater**. Conveyance to treatment facility, pipes, inlets, manholes, flow control structures, fencing, property acquisition, etc.
- **Wetland**. Retaining walls, altered alignment, bridges, property acquisition, wetland construction, fencing.
- **Stream**. Long bridge spans, retaining walls, riparian area enhancements, etc.
- **Noise**. Property acquisition, concrete foundations and walls, other barriers, clearing and grubbing, wall aesthetic treatments.
- **Context Sensitive Solutions**. Community gateways, concrete stamping and coloring, unique railing or fencing, special landscaping, shared-use paths.

Mitigation
WSDOT Case Studies

- Over the four studies, 46 projects totaling almost $2 billion in project costs were evaluated. Within the selected sample, 16% of project expenditures went to mitigation elements, with a significant range among individual projects of between 2% and 45%

Study Period	Projects Analyzed	Total Project Cost	Total Mitigation Cost	Average Mitigation Percent	Range of Mitigation Percents	
					Low	High
2003	14	426,868,000	78,304,000	18%	2%	34%
2006	7	641,277,610	111,057,000	17%	2%	24%
2009	14	670,290,000	105,214,400	16%	5%	35%
2013	11	241,940,000	31,331,807	13%	2%	45%
TOTAL	**46**	**1,980,375,610**	**325,907,207**	**16%**	**2%**	**45%**

	Types of Mitigation							
Study Period	Stream Protection	Wetlands Restoration	Stormwater Facilities	Dust Control	Noise Walls	Aesthetics & CSS	Temporary	Total
2003	17,915,000	19,859,000	30,180,000	950,000	4,650,000	2,470,000	2,280,000	78,304,000
2006	5,574,000	14,206,000	54,538,000	0	36,739,000	0	0	111,057,000
2009	7,567,000	19,330,000	70,712,400	0	4,942,000	2,663,000	0	105,214,400
2013	2,571,447	14,597,147	11,750,563	0	1,360,000	936,774	115,876	31,331,807
TOTAL	**33,627,447**	**67,992,147**	**167,180,963**	**950,000**	**47,691,000**	**6,069,774**	**2,395,876**	**325,907,207**
Percent of Total	*10.3%*	*20.9%*	*51.3%*	*0.3%*	*14.6%*	*1.9%*	*0.7%*	

Mitigation
Mitigation-like Projects

Available information

- All WSDOT projects are categorized into project types. Depending on how one defines mitigation, there are multiple project types that could be considered mitigation-like:
  - Environmental Retrofit Projects
    - Stormwater runoff
    - Fish barrier removal
    - Noise reduction
    - Air quality
    - Wetland monitoring
  - Other project types that may be considered "mitigation-like"
    - Urban bicycle connections (categorized by WSDOT as a Mobility Improvement)
    - Bicycle touring routes (categorized by WSDOT as an Economic Initiative Improvement)
    - Scenic byways (Categorized by WSDOT as an Economic Initiative Improvement)

Mitigation
Mitigation-like Projects

- The following table shows the 10-year costs related to the project types identified on the previous page.

Project Type	2003-2012 Expenditures	Percent of Total Projects
Environmental Retrofit Improvements		
Fish Barrier Removal	48,837,000	0.5%
Noise Reduction	41,316,000	0.4%
Wetland Monitor	6,172,000	0.1%
Stormwater Runoff	5,652,000	0.1%
Air Quality	788,000	0.0%
Subtotal	**102,765,000**	**1.1%**
Other Mitigation-like Projects		
Urban Bicycle Connections	23,083,000	0.2%
Bicycle Touring Routes	2,009,000	0.0%
Scenic Byways	4,550,000	
Subtotal	**29,642,000**	**0.3%**
Subtotal All Other Projects	**9,487,862,000**	**98.6%**
Total Expenditures	**9,620,269,000**	**100.0%**

- Environmental Retrofit projects total $102.8 million, or 1.1% of total project expenditures.
- Other projects that could be classified as mitigation-like totaled $29.6 million, or 0.3% of total project expenditures.

Mitigation
Overall Cost Implications

- The table below shows a preliminary estimate of how the different components of mitigation we have looked at so far add up over the last decade.

	Expenditures (in YOE $)
Mitigation w/in 2006-13 Case Study Projects	$ 248 M
Expenditures on Mitigation-like Projects	$ 122 M
Subtotal: Identified Mitigation Expenditures	**$ 370 M**
Expenditures not included in above categories	*$ 7,159 M*
Assumed portion spent on mitigation	*16%*
Subtotal: Estimated Mitigation on Other Projects	**$ 1,141 M**
Estimated Total Mitigation Expenditures	**$ 1,511 M**
Total project expenditures included in analysis	*$ 8,834 M*
Implied percent spent on mitigation	*17%*

- This table assumes that the average case study mitigation percentage of 16% applies to projects about which we do not have specific mitigation cost data
- Overall, about 17% of $1.5 billion of total project expenditures from 2003-2012 may be related to mitigation. This estimate is preliminary and will be refined for the next phase of mitigation conversation at the Advisory Panel meeting.

Mitigation
Next Steps

- Given the interconnectedness among permitting, environmental review and mitigation, Part II of the mitigation analysis will be integrated into an overall assessment of these cost drivers.
  - Permit and environmental review processes/practices
  - Statutory and regulatory requirements
  - Decision-making regarding mitigation requirements
  - Practices and costs elsewhere
  - Potential options

Cost Driver Analysis

CROSS CUTTING THEMES

Cross-cutting Themes

Some practices may **limit competition**, which in turn could affect project costs. Examples include:

- OMWBE/DBE requirements
- Administrative aspects of complying with prevailing wage
- WSDOT pre-approval process and audit requirements

- With respect to the above, some consultants and contractors may choose not to bid or become pre-approved because they view the requirements as too onerous and not worth the effort, especially for smaller projects
- Depending on how widespread this is, it may limit the number of bidders on projects and less competition may produce higher costs
- To the extent that any policy has the potential to limit competition, it should be weighed against the other policy objectives

Cross-cutting Themes

How **WSDOT's purpose as an agency** is defined has an impact on project approach, staffing and delivery

- WSDOT is a strong owner with an interest in controlling many aspects of project design and delivery to ensure high quality facilities
- Every DOT makes choices about what they will do in-house and what they will buy. How the agency views its purpose will influence the mix of in-house versus buying and how certain functions are carried out
- An agency whose focus is project delivery will operate differently than one more oriented towards program management. One is not necessarily better than the other, but it has an impact on decision-making, practices, operations, costs, and cost comparisons

Cross-cutting Themes

A recurring theme is that WSDOT was presented with a significant challenge to deliver the Nickel and TPA projects at a time when the agency transitioned to a cabinet agency reporting directly to the Governor.

- Many project budgets were set at 1-3% design
- Projects were front-loaded due to bonding Nickel and TPA revenues
- Availability of ARRA funds created an opportunity but also added to the challenges
- Unprecedented project delivery in a short time frame required a significant ramp-up in terms of staffing and produced a peak delivery model with several mega-projects underway at once
- Real and/or perceived sense that schedule and delivery were the primary policy imperative

JTC Study
Next Steps

- Continue analysis of costs and cost drivers
- Identify policy options
- October 9: Presentation to the JTC
- October 23: Advisory Panel Meeting #3
- December 3: Advisory Panel Meeting #4
- December 12: Presentation to the JTC – DRAFT final report
- January 8: Publish final report