Columbia River CROSSING

A long-term, comprehensive solution

Interim Joint Legislative Oversight Committee Hearing

September 12, 2012




Oregon Department of Transportation

Washington State Department of Transportation

Federal Transit Administration • Federal Highway Administration
City of Vancouver • City of Portland • SW Washington Regional Transportation Council • Metro • C-TRAN • TriMet

CRC project area

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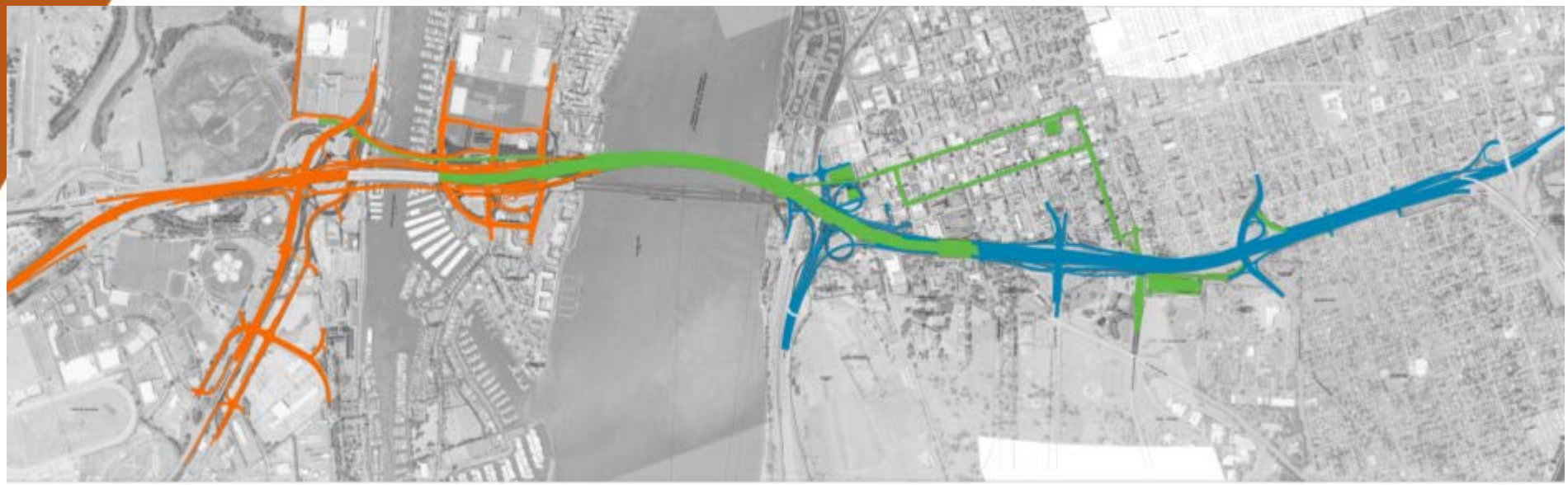
Project construction cost estimates and fund sources



Oregon Roadway and Interchanges	Cost	Funding Source
Oregon Roadway and Interchanges Total	$595 million	State and/ or federal funds

Columbia River Bridge and Approaches	Cost	Funding Source
Columbia River Bridge and Approaches Total	$1.2 billion	Tolls and State or Federal funds

Light Rail Transit Extension	Cost	Funding Source
Light Rail Transit Extension Total	$850 million	FTA New Starts

Washington Roadway and Interchanges	Cost	Funding Source
Washington Roadway and Interchanges Total	$435 million	State and/ or Federal Funds

Targeted Columbia River Crossing Funding Sources	Amount (billions)
FTA New Starts (light rail)	$0.85
FHWA	$0.4
Tolls	$0.9 - $1.3
OR/WA	$0.9
TOTAL FUNDING SOURCES	$3.05 - $3.45

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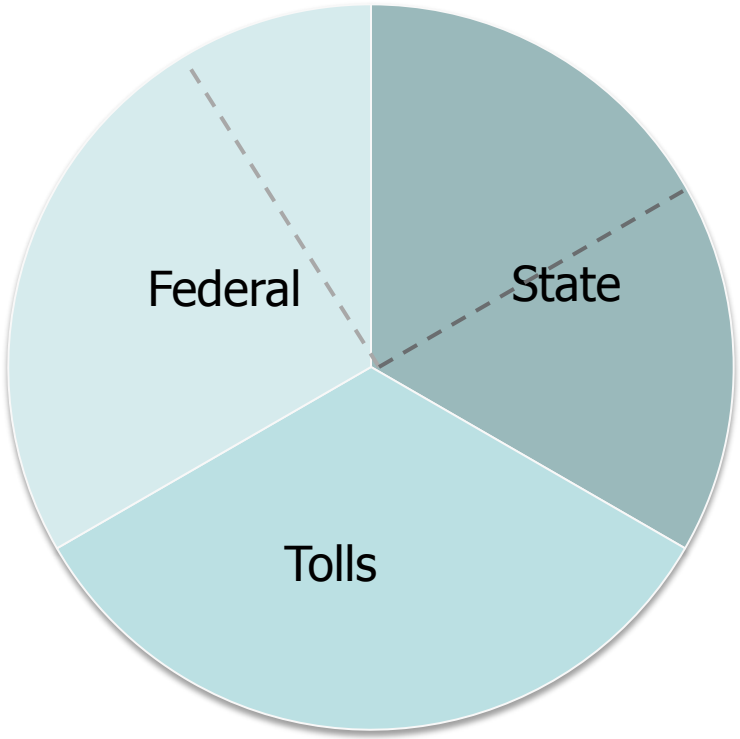
Phase 1 savings

Project element	Cost savings
Local roads around Hayden Island interchange	$10 million (approximate)
Bridge over N. Portland Harbor and Hayden Island bridges over Tomahawk Island Drive and Jantzen Drive	$100 million (approximate)
Local roads around Marine Dr. interchange	$20 million (approximate)
Eastside suspended bicycle/pedestrian path over N. Portland Harbor	$15 million (approximate)
	$145 million (approximate)

Funding sources for CRC



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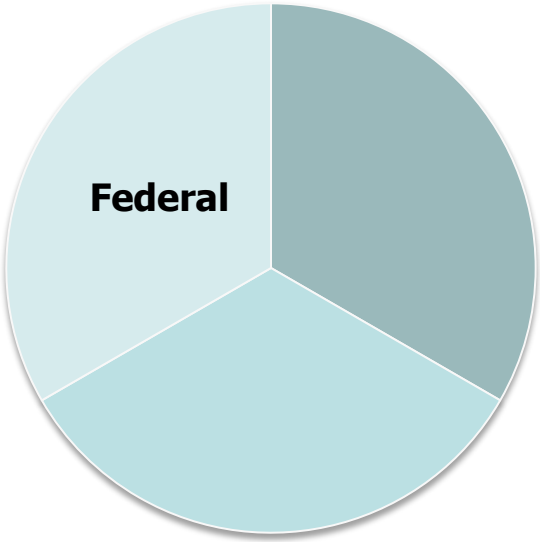
Federal funds

FTA New Starts funds ($850 million)



Process: New Starts application started, with high ranking. Submit Full Funding Grant Agreement application Spring 2013.

Uses: Light rail route, stations, park and rides, ped/bike access

Availability: 2014 or later – must have all funds (state, tolling) secured

FHWA funds ($400 million)

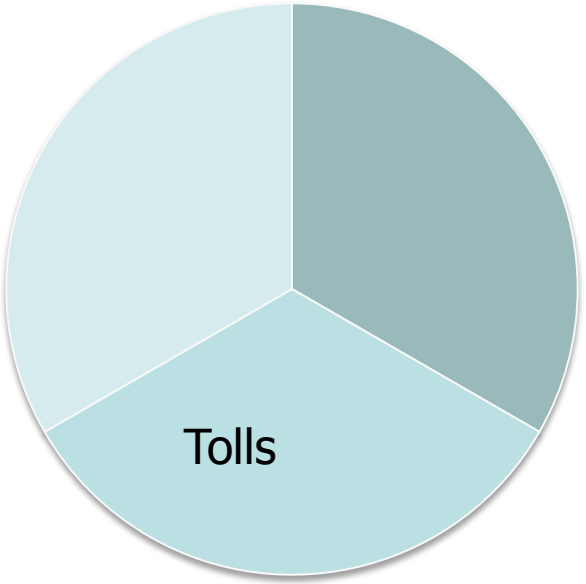
Process: Monitor programs and criteria with special focus on Projects of Regional/National Significance

Uses: Bridge, highway, interchanges

Availability: 2013 or later

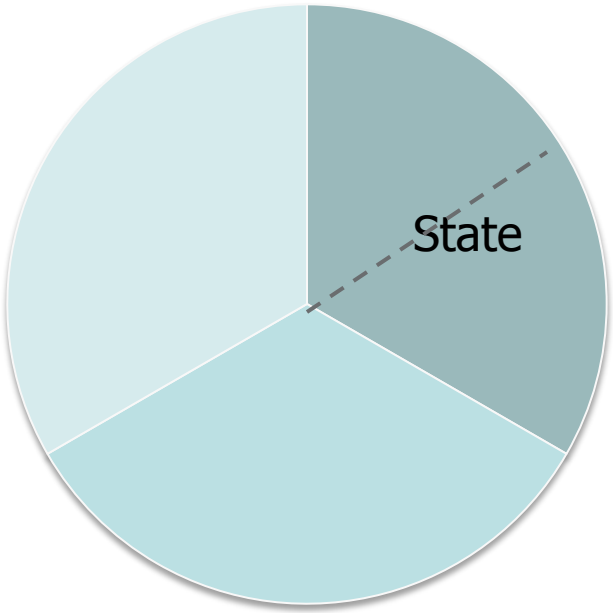
Toll revenue

- **Process:** WA toll authorization legislation in 2012. Develop bi-state toll policy structure for Transportation Commissions in 2012. Investment Grade Analysis begins in 2012.
- **Uses:** must follow state requirements
- **Availability:** Pre-completion tolling in 2015



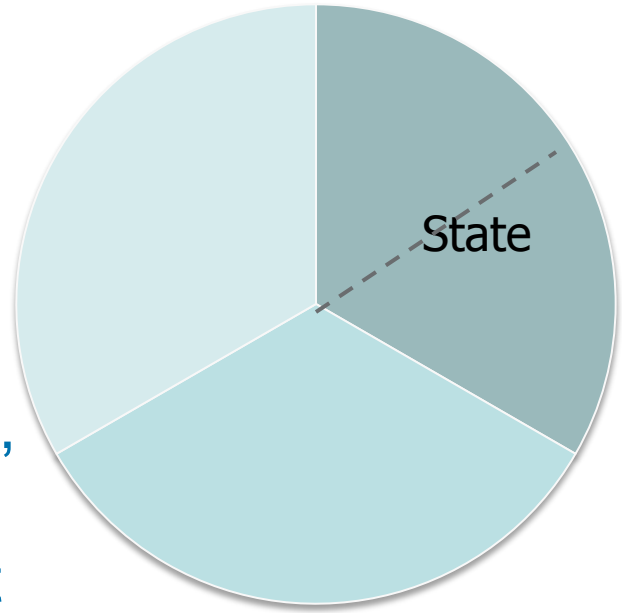
Washington state funds

- **Process:** 2012 Legislature authorized CRC as a toll project and appointed CRC legislative oversight committee.
- **Uses:** Washington highway, interchanges, local improvements, bike/pedestrian
- **Availability:** Committed by 2013 to meet FTA eligibility



Oregon state funds

- **Process:** 2012 Legislative Oversight Committee, Interim Transportation Committees, and legislators review project.
- **Uses:** Oregon highway, interchanges, local improvements, bike/pedestrian. Constitution specifies that highway funds must be used for highway purposes
- **Availability:** Legislature needs to act in early 2013 to meet FTA eligibility



Revenue sources

Revenue Source	Annual Revenue*
***Gas tax*:** 1 cent	$26.7 million
Vehicle registration fee: $1 (annual)	$5.19 million
Title fee: $1	$1.22 million

All figures are estimates based on current data and subject to change.
*Includes revenue generated from accompanying heavy vehicle fees.

Bonding examples

Option	Annual Revenue*	Bond Proceeds**
Option 1 • Gas tax: 1 cent • Vehicle registration fee: $1 (annual) • Title fee: $3	$35.5 million	>$450 million
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Option 5 • Vehicle registration fee: $4 (annual) • Title fee: $6	$28.1 million	>$350 million

All figures are estimates based on current data and subject to change.
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**Assumes 25 year bonds at 5.0% interest rate with 1.10x coverage. With these assumptions, generating $450 million in bond proceeds requires $35.4 million in annual revenue, while generating $350 million requires $27.6 million in annual revenue. Using 30 year bonds at 5.5% interest rate with 1.03x coverage would reduce the annual revenue needed to service $450 million in bonded debt to $32.2 million and the amount needed to service $350 million in bonds to $25 million.

Oregon transportation bonding programs

OTIA $2.4 billion

JTA $840 million

Bonded Construction Program	Year Enacted	Bonded Proceeds	Bonds financed by		
			DMV Fees	Fuels Tax & Wt. Mile Fees	Lottery
OTIA I/II	2001, 2002	$500m	✔		
OTIA III	2003	$1.9 B	✔		
Jobs & Transportation Act	2009	$840m	✔	✔	
***Connect* Oregon I-IV**	2005–2011	$340m			✔

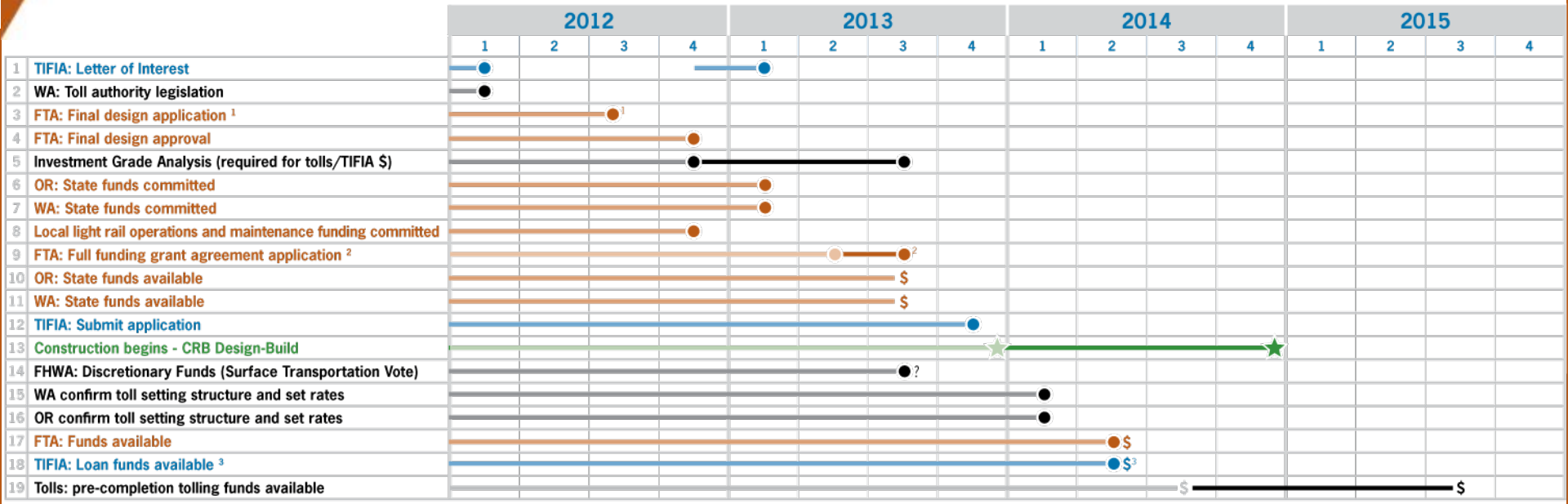
Investment grade analysis

- **First phase of work that will bring certainty to investors prior to bonding:**
  - June-October 2012 : RFP solicited and consultant hired to provide a detailed traffic and revenue forecast and future investment grade analysis
  - January 2013: interim progress report on toll revenue estimates
  - December 2013: preliminary investment grade report
- **Anticipated scope of work**
  - Assessment of existing data
  - Traffic model development (toll rate schedule, traffic volumes, toll revenue)
  - Scenario development and testing for use in 2013 report

FTA requirements for FFGA

- **Commitment of 100% of the non-New Starts funding for the entire project**
  - WA and OR contribution both assumed at $450m (if vote is required, it must have occurred)
  - Toll revenues assumed to be $900-$1.3b
  - TIFIA loan if pursued would need to be approved by USDOT
- **Commitment of all operating funding sources for transit**
- **Resolution of bridge height issue with receipt of Coast Guard permit**

Funding timeline (subject to change)



Estimated funding sources

Federal Transit	$850 M
Federal Highway	$400 M
Tolls*	$900 M - $ 1.3 B
OR/WA state funds ($450/each)	$900 M

*TIFIA is a federal loan and credit program. Tolls are the revenue source for the loan. The federal backed loan program reduces coverage rate for tolls.

[1] Must have 50% non-FTA funds committed or budgeted. Tolling authority in 2012 expected to meet this requirement.
[2] Must have all funds authorized.
[3] TIFIA is typically the last funding source. Must have full finance plan and FTA approved.

KEY

= Due Date BLUE = TIFIA BLACK = Tolling ORANGE = FTA and State Funding

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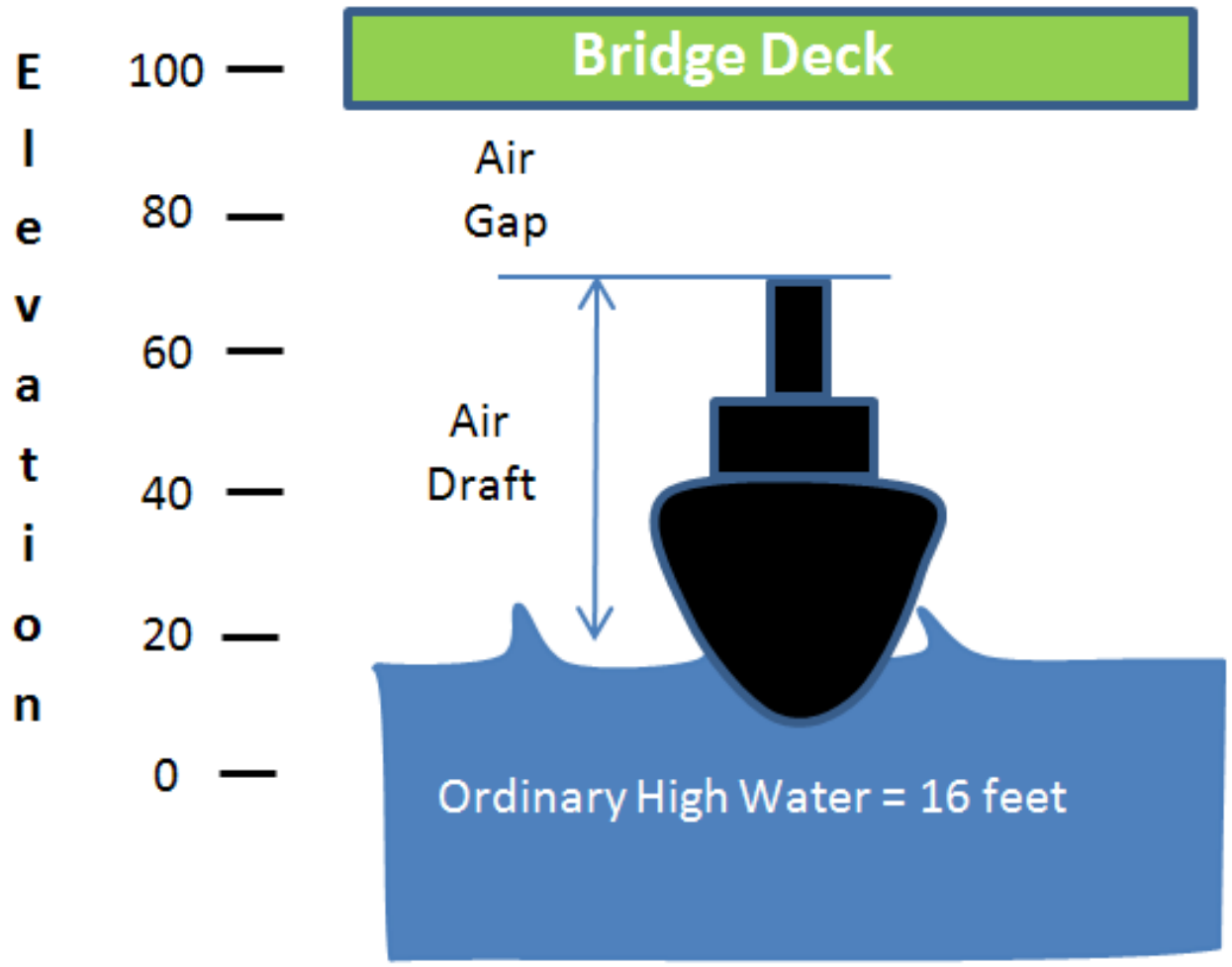
Bridge height history and General Bridge Permit work plan



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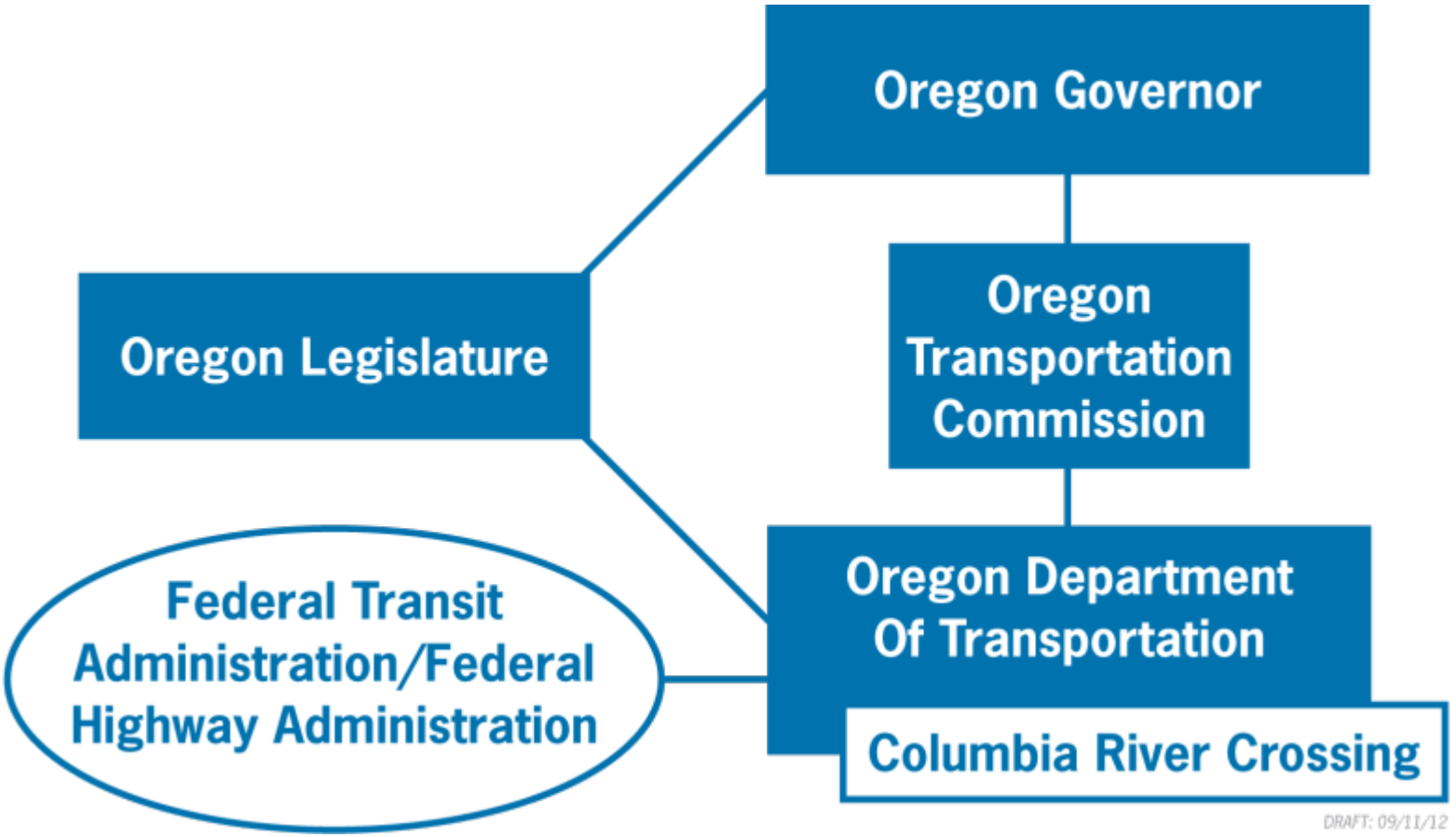
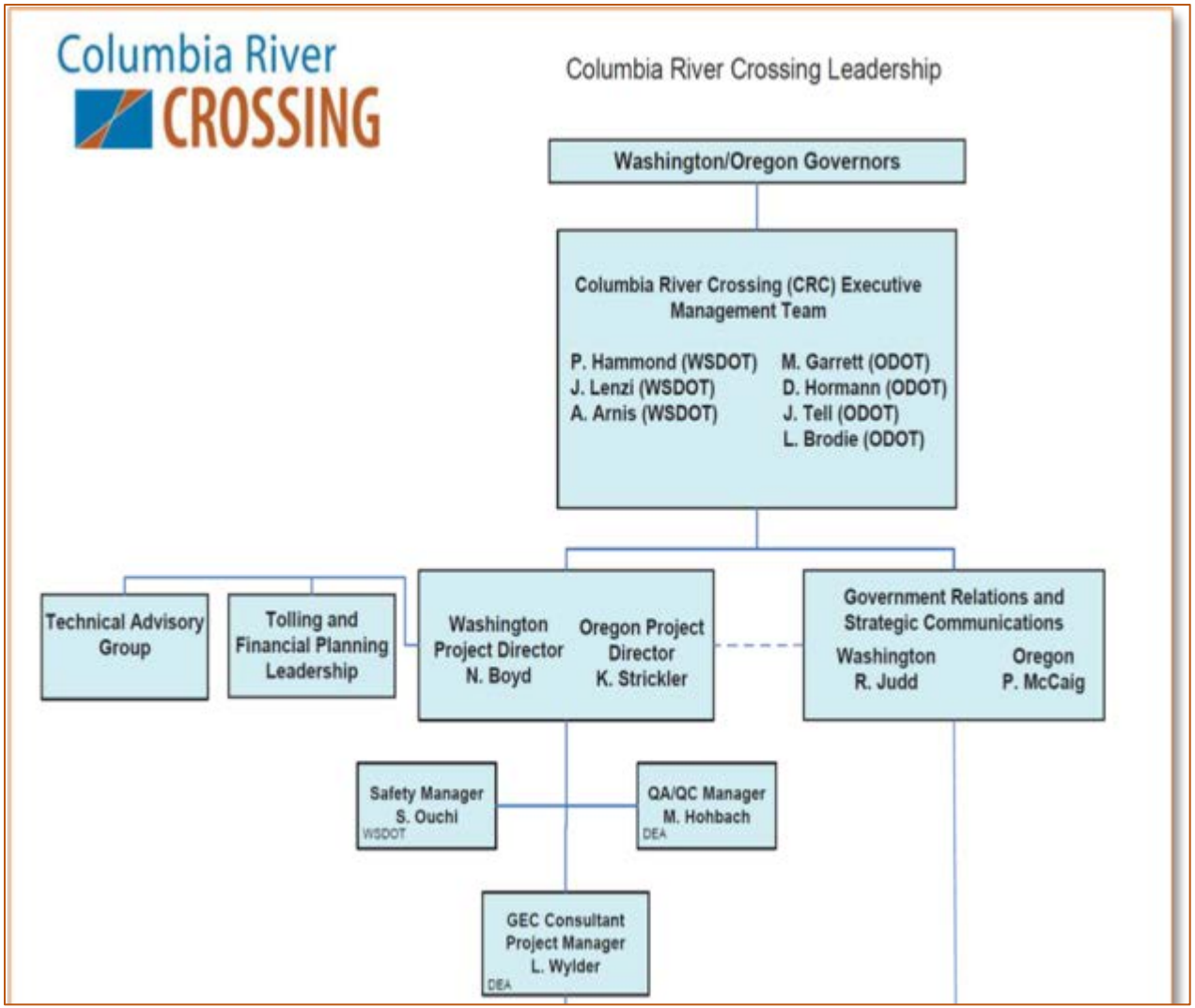
Governance, Management and Contracting

Oversight chart



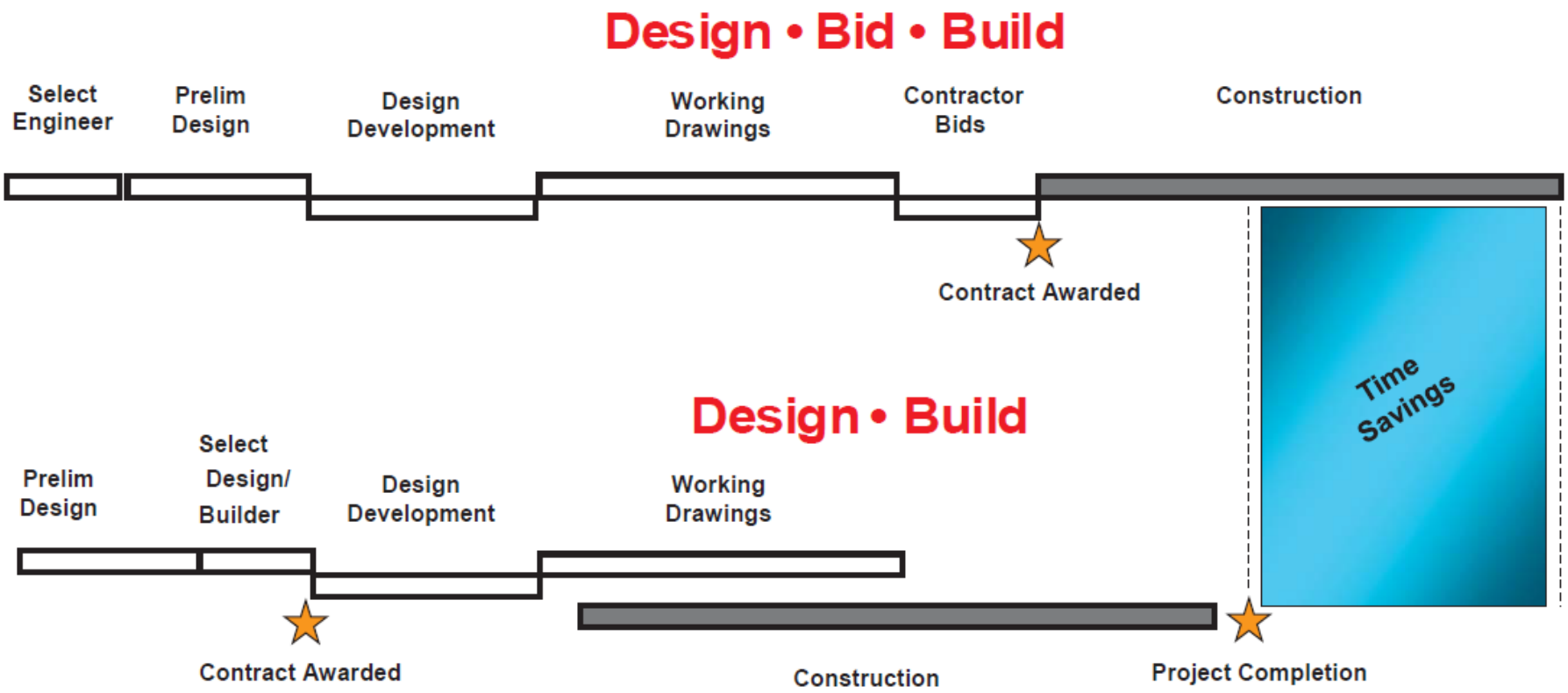
CRC management organization chart



Contract types

- **Design Bid Build (DBB)**
  - Traditional method: Owner responsible for completing plans, specifications and estimates
- **Design Build (DB)**
- **General Contractor/Construction Manager (GCCM)**

How does design build differ from design bid build?



Proposed construction packages

- River crossing and approaches (6 years, starting 2014)
- Mainland connector to Hayden Island (2 years, starting 2015)
- Park and rides (and misc. transit) (2 years, starting 2015)
- WA Transit (4-5 years, starting 2015)
- OR Transit (3-4 years, starting 2016)
- WA North (Mill Plain Blvd., Fourth Plain Blvd., 29th St., 33rd St., SR 500) (5 years, starting 2016)
- Marine Drive/Hayden Island (4 years, starting 2018)
- Bridge demolition (1.5 years, starting 202

CRC Proposed Packaging - Summary

Title	Delivery Method
River crossing and approaches, including Community Connector, Evergreen Blvd., Mill Plain (If funding is available) and McLoughlin Blvd.	DB
Mainland Connector to Hayden Island (transit/local bridge)	DBB
Oregon transit	DBB
Washington transit	DBB or GC/CM
Washington park-and-ride garages	DB
Transit systems (includes overhead catenary, signals, communications)	DB
Transit station finishes	DBB
Ruby Junction maintenance facility modifications	DBB
Steel Bridge modifications	DBB
Light rail vehicle procurement	DB
LRT ticket vending machines	DB
Central control	DB
Owner furnished materials – Mainline track, specialty track, public art	DB
Transit signage and graphics	DBB
Marine Drive interchange and Hayden Island interchange final	DBB
Washington North Package: Fourth Plain Blvd, 29th & 33rd, SR 500, and also Mill Plain (If not funded in river crossing and approaches package above)	DB

DB=Design Build DBB=Design Bid Build GC/CM=General Contractor/Construction Manager

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Project schedule

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www.ColumbiaRiverCrossing.org

700 Washington Street, Suite 300
Vancouver WA, 98660

Washington 360-737-2726
Oregon 503-256-2726
Toll-Free 866-396-2726

feedback@columbiarivercrossing.org

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Oregon Legislative Oversight Committee Questions
CRC Draft Responses – Submitted 9/12/12

Contents

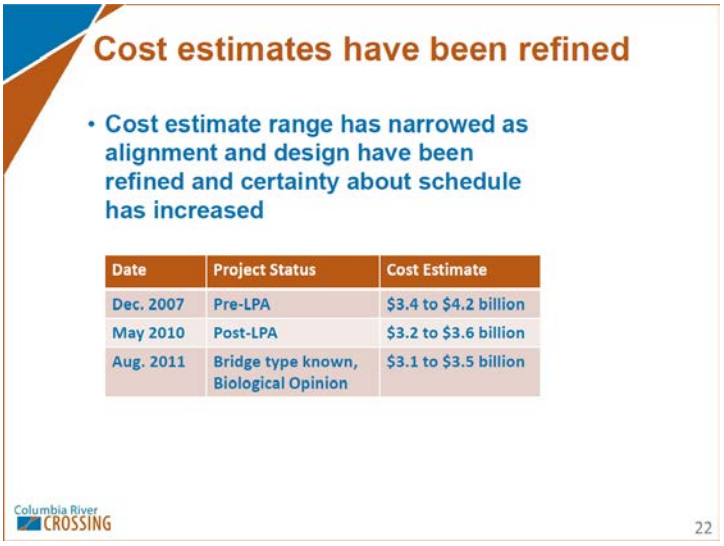
Acronyms

CEVP	Cost Estimate Validation Process
EIS	Environmental impact statement
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
IGA	Intergovernmental agreement
O&M	Operations and maintenance
ODOT	Oregon Department of Transportation
WSDOT	Washington State Department of Transportation

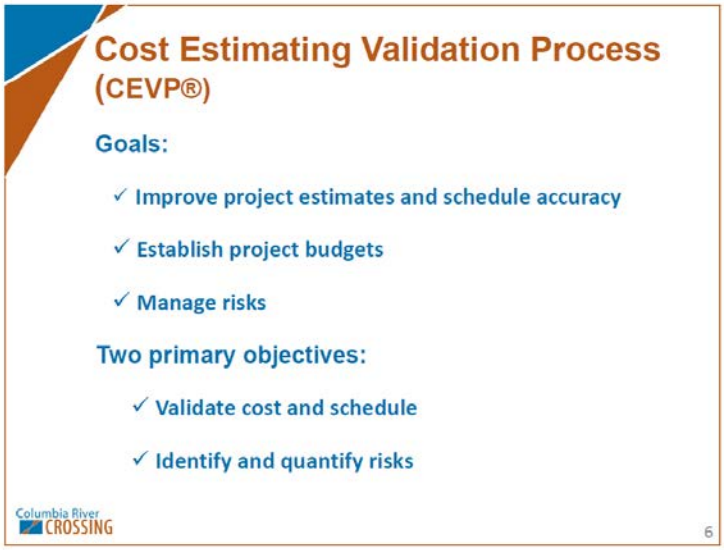
Project costs, funding, and phasing

1. What is the total cost of the project?

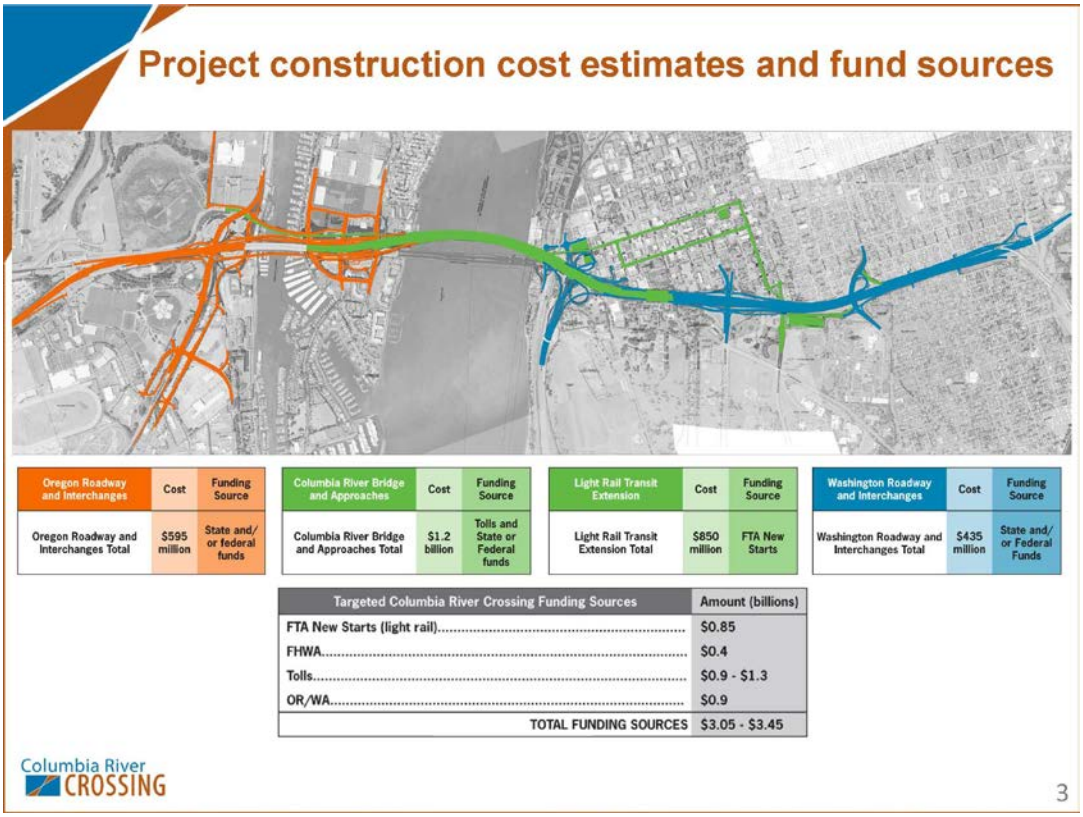
The August 2011 cost estimate range is $3.1 to $3.5 billion (year of expenditure dollars) to fund all three elements of the program: bridge, transit and highway improvements. Construction of the program is assumed to begin in 2014 and last seven to nine years. Demolition of the existing bridges also will occur during this timeframe. There are still many design decisions to be made that will inform the cost estimate and provide more certainty as the project development process continues.



The CRC uses the Cost Estimate Validation Process (CEVP), a risk-based methodology, to develop capital cost estimates. CEVP produces a cost distribution reflecting the confidence that a cost estimate will not be exceeded. The CRC finance plan, consistent with past practices, uses the 60 percent CEVP cost estimate for finance planning purposes (i.e.; there is a 60 percent probability the cost estimate will not be exceeded).



2. What are the total project costs allocated by state and by feature? What are the funding sources?



Columbia River Bridges, including approaches – $1.2 billion

Deck truss structure that includes the landings for mainline I-5 on both sides of the river. The limits for the landings extend approximately 3,600 feet into Oregon on Hayden Island, and approximately 4,600 feet into Washington in Vancouver.

Improvement costs will be shared roughly 50/50 between the states of Oregon and Washington. Funds sources to be used in the following order for this improvement are: (1) Tolling, accompanied by a share of the FTA New Starts funding; (2) state funds if tolling does not cover the entire cost of the structures; and (3) federal highway sources as they become available.

Oregon - Marine Drive Interchange – $325 million

Improvements include a single point urban interchange to increase mobility through the interchange and onto I-5 directly in both directions (north and south).

These improvements are funded primarily with Oregon funds. Fund sources to be used in the following order, for these improvements are: (1) Oregon state funds, accompanied by a share of

the FTA New Starts funding for the mainland connector; and (2) federal highway sources as they become available.

Oregon - Hayden Island Interchange and connector – $270 million

Improvements include full interchange ramps to access Hayden Island and a new structure/bridge to connect Hayden Island to the improved Marine Drive interchange.

These improvements are funded primarily with Oregon funds. Fund sources to be used, in the following order, for these improvements are: (1) Oregon state funds, accompanied by a share of the FTA New Starts funding for the mainland connector; and (2) federal highway sources as they become available.

Washington - SR 14 Interchange – $250 million

Improvements include the connection to the major east/west state route in Washington at the north shore of the Columbia River.

These improvements are funded primarily with Washington funds. Fund sources to be used, in the following order, for these improvements are: (1) Washington state funds; and (2) federal highway sources as they become available.

Washington - Mill Plain – $80 million

These improvements include upgrading the Mill Plain and I-5 interchange to allow for more vehicular and freight capacity to move through the interchange. This interchange is the primary access point to the Port of Vancouver.

These improvements are funded primarily with Washington funds. Fund sources to be used, in the following order, for these improvements are: (1) Washington state funds; and (2) federal highway sources as they become available.

Washington - Fourth Plain – $100 million

This interchange is an alternate freight access point for the Port of Vancouver, and is also the primary interchange connection to the light rail terminus park and ride (Clark College). Some capacity improvements are planned at this interchange to accommodate those uses.

These improvements are funded primarily with Washington funds. Fund sources to be used, in the following order, for these improvements are: (1) Washington state funds; and (2) federal highway sources as they become available.

Light rail transit – $850 million

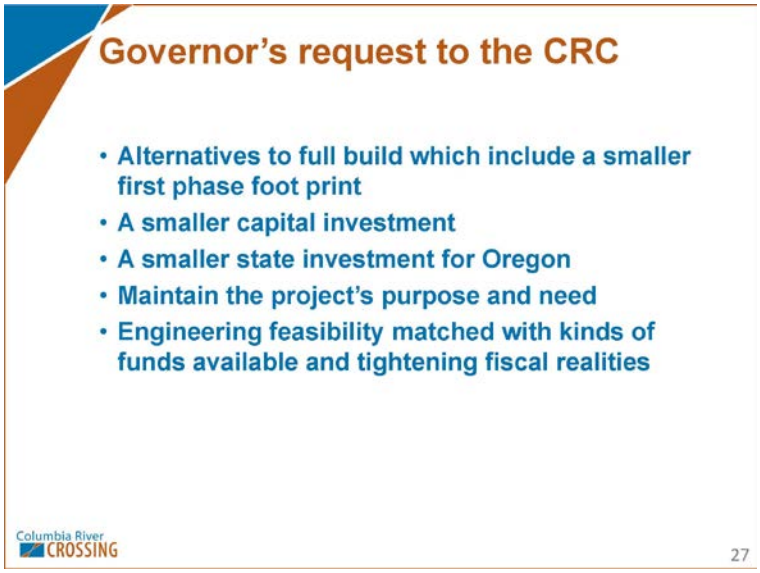
Improvements include extending the MAX Yellow Line from the Expo Center in the Marine Drive area of Oregon to the Clark College park and ride terminus in Vancouver (3 miles). The light rail

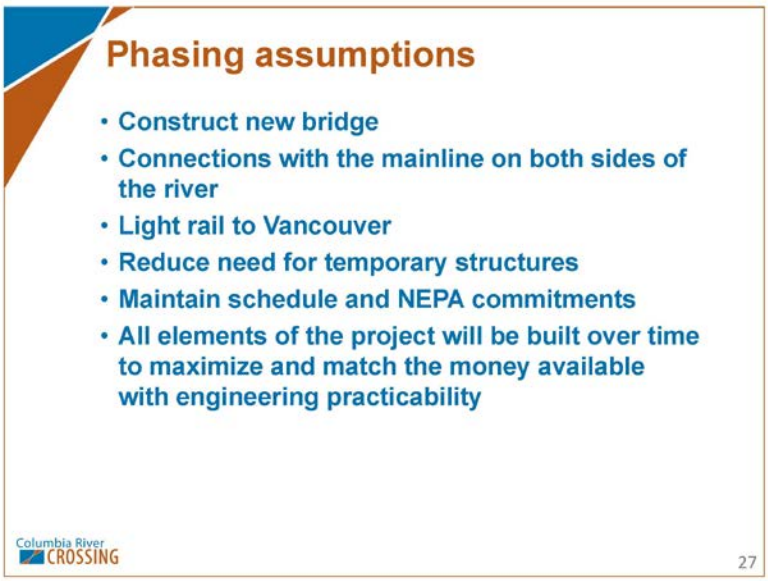
will share two major structures, the mainland connector, and the southbound (western-most bridge) Columbia River bridge.

The capital construction light rail improvements will be funded by the Federal Transit Administration through the New Starts Program. The operations and maintenance costs are the responsibility of the local jurisdictions. In Oregon, TriMet estimates the operations and maintenance costs for the 1-mile Oregon light rail extension at $1.6 million a year in 2020 year of expenditure dollars. C-TRAN estimates the cost for the 1.9-mile Washington segment at $4.34 million in 2020 year of expenditure dollars.

3. What is the phasing plan?

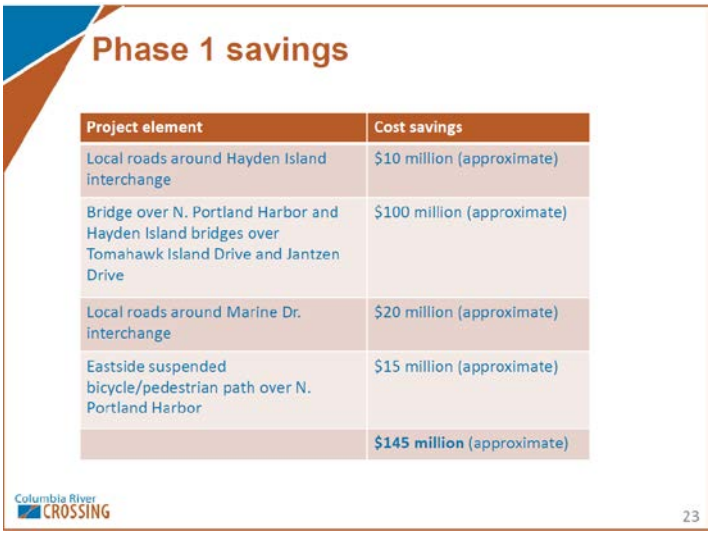
After the Oregon State Treasurer's report in July 2011, Governor Kitzhaber asked the CRC to begin preparing alternatives to the full build proposal that "adapts to available resources and fits into today's economic reality." He asked for alternatives that maintain the project's purpose and need (remain consistent with the Final Environmental Impact Statement) and focus on the benefits of safety and freight mobility. He requested the CRC project develop first phase alternatives for Oregon based on the information presented in the slides to the right.





4. What are the phasing elements and savings?

The phasing proposal maintains the project focus on increasing safety and improving mainline operations. Some non-highway local improvements are postponed.



5. How does phasing affect the Final EIS? Does it open the door to lawsuits?

The phasing proposal was developed specifically within the parameters of the current project's Final Environmental Impact Statement (EIS) and Record of Decision. The proposal does not create new impacts or change the character (significantly more, less or different) of the impacts already identified in the Final EIS. We do not believe the proposal makes the project any more or less vulnerable to lawsuits.

Our federal partners and most major transportation projects around the country have developed phased approaches that maintain the integrity of the projects and respond to cash flow and economic realities.

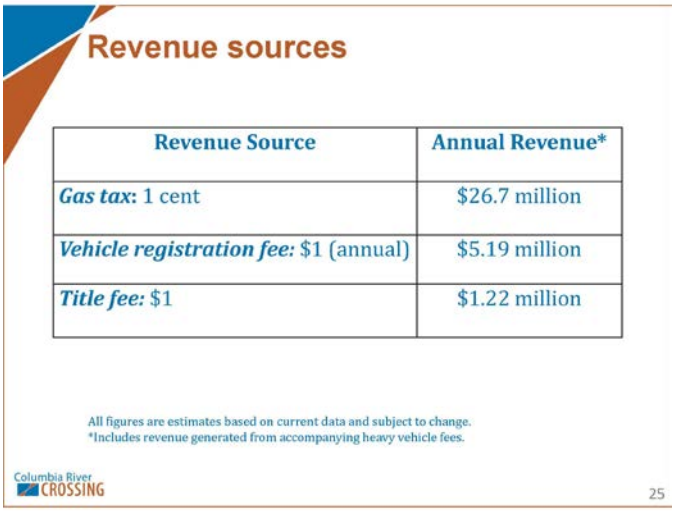
6. How is the phasing (the only cost control feature the Legislature has) baked into the project so that we know for sure that if it is necessary to reduce the size of the project, reduction by phasing rather than cost overrun will actually happen?

We must identify a project for the FTA application. The project can be the first phase of a multi-phase overall program effort. If FTA accepts our application and we enter into a full funding grant agreement we are contractually committed to build the project described in the application. As part of the application process, we will identify a budget that will deliver the phased project. If there are cost overruns that exceed the planned FTA New Starts funds, then those overruns must be paid from a source other than the FTA funds. The application for the Full Funding Grant Agreement (FFGA), will only be accepted by FTA if they concur and accept the finance plan for the project. Their acceptance will require the funding commitments to be in place, and to be consistent with the scope of the project identified in the FFGA.

7. How do we know for sure that phasing does not impact FTA money?

The Full Funding Grant Agreement is a contract with the FTA – not just a grant. This contract will outline the scope of the project that must be constructed to secure the funds. The DOT's cannot enter into that contract and accept the funds unless and until FTA has concurred with the scope of the project and the financing plans to fund the project. FTA is a full partner with the project and has provided oversight and input since 2005 when the project began, and is aware of the current phasing approach.

8. What are possible sources of state funding?



Revenue sources

Revenue Source	Annual Revenue*
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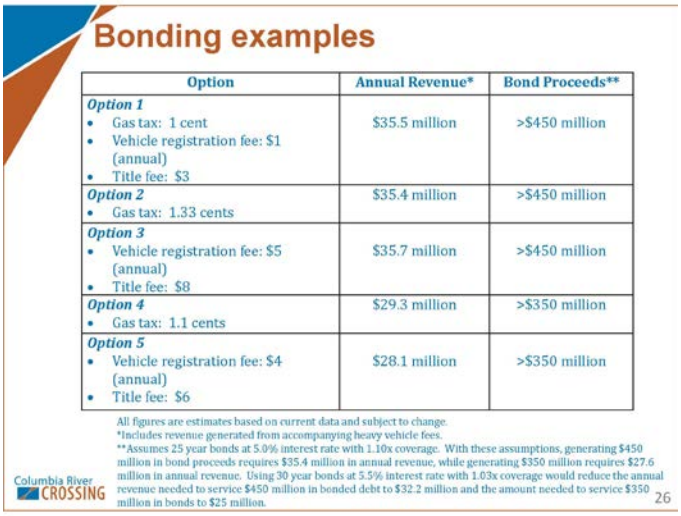

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9. Can higher tolls be used to reduce the state contribution?

The amount of the toll rate, and the ability to generate additional funding will be a function of a series of analyses and policy considerations. It is a funding option that may generate additional funds, but the agreed upon bond proceeds and associated bond covenants will be decided closer to the point of actual bond sale (likely 2015 timeframe), and after the investment grade traffic and revenue analysis (preliminary understanding of conditions in early to mid-2013, final report immediately prior to bond sale). Pre-completion tolling is another variable in this equation as well.

With all toll related projects, there will always be a theoretical "breakover" point at which the decline in traffic caused by a toll rate increase actually diminishes the overall revenues. This type of analysis is covered as part of an investment grade analysis.

10. How much is the contingency fund and where is it accounted for in the project costs?

In the past contingency funds were a lump sum established as protection against unforeseen emergencies. The use of CEVP allows for enhanced forecasting and improved focus on risk management. Project estimates include risk and inflation. Inflation costs are estimated in year of

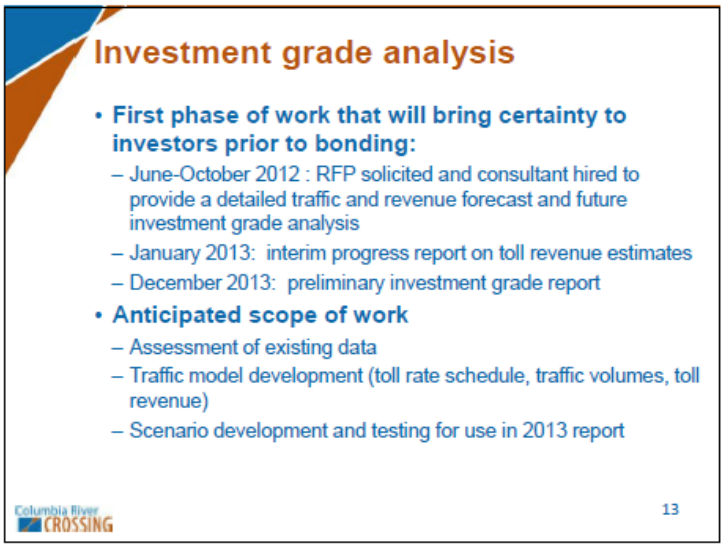
expenditure dollars. Risks are identified and quantified and include unknowns. The cost estimate incorporates a contingency of $650 million for the $3.1 - $3.5 total project, roughly 25%.

11. What is the federal money over and above the FTA funds? How much, when and for what purpose?

The CRC has been very successful at securing federal funding from grant programs, bringing more than $20 million in additional federal transportation money into the state. The new federal transportation bill, MAP-21, continues the Projects of National and Regional Significance program. The CRC will be highly competitive for this grant program if funding is made available, so ODOT will work with WSDOT to see that Congress appropriates funding for the program.

12. How and when will the Investment Grade Analysis inform revenue projections? Can the outcome be linked to phasing- if the analysis shows less toll revenue, an agreement already made kicks in triggering a pre-established phasing process (scope reduction)?

Initially the project had planned to perform the analysis 6 to 12 months prior to issuing bonds. However, as a result of legislative and executive requests for more detailed traffic and revenue information sooner, the project revised its schedule for the investment grade analysis. This is the first phase of the work that will provide certainty needed for investors prior to bonding. The outcomes will inform the financing plan, but will not be directly linked to phasing.



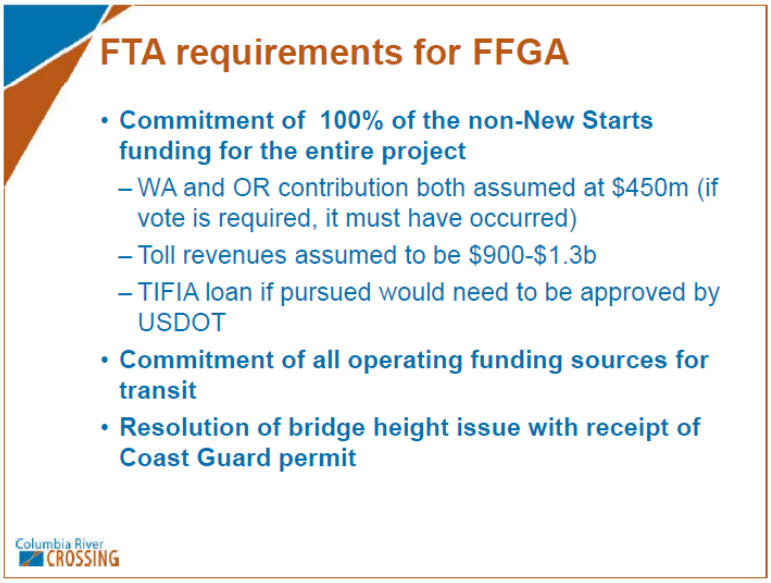
Conditions precedent to Oregon's commitment - "triggers" or (Oregon's commitment, with conditions to be met prior to expenditures)

The Columbia River Crossing's design and construction schedule has been centered on taking advantage of federal financial support, especially transit funding, from the FTA's New Starts program. The New Starts program is currently funded and the CRC is well positioned to receive support through 2013. The project's favorable rating with FTA has earned the project a leading spot in the competitive queue for New Starts funds, about $850 million. After 2013, however, our federal partners have made it clear that there is less certainty about federal transit funding and that the New Starts fund may be reduced. The possibility, in 2014 and beyond, of reduced federal transit funds coupled with other national projects moving up in the queue competing for the funds, puts the centerpiece of the CRC's financing plan at risk.

To apply for the New Starts transit funds in 2013, FTA requires both Oregon and Washington to have committed state funds. We are talking about a $450 million commitment from each state. A $35 million a year revenue stream that we can bond against for 30 years would produce the $450 million. Oregon's $450 million commitment would result in an infrastructure improvement worth $3.1-3.5 billion.

1. How do the un-resolved issues like the bridge permit and lawsuits factor into a state decision to fund the project and the FTA's commitment of $850 million?

A Full Funding Grant Agreement with FTA requires a permitable, constructible project with a solid finance plan. The New Starts funding application process is rigorous, designed to reduce risk and limit exposure.



a. FTA commitment

The commitment of state funds (not allocation) will have to be made to be eligible for the New Starts funding. The allocation and availability date of state funds will need to be known as well to secure the FTA funds.

b. General Bridge Permit

To be eligible for New Starts funds the FTA has stated that the project will need to resolve the bridge height with the Coast Guard in order to proceed with a bridge permit application that carries a reasonable expectation of a successful outcome. Additionally the project will need to secure the General Bridge Permit from the United States Coast Guard prior to beginning construction on the bridge. See attached bridge height work plan.

c. Washington's (and Oregon's) commitment

To be eligible for New Starts funds, FTA requires a commitment of all capital funding sources to receive a Full Funding Grant Agreement (FFGA). The funding source needs to be identified and committed. If the funding source requires a voter referendum, the vote will need to have occurred and been successful for the funding to be considered committed.

d. Tolling

The commitment of toll funds will require a bi-state agreement between the Oregon and Washington transportation commissions. The toll rate schedule, traffic projections and toll revenue will be developed and evaluated as part of an investment grade study.

e. Light rail construction costs

The FTA New Starts grant will pay for light rail construction.

f. Post construction O&M of the light rail

To be eligible for the FTA New Starts funds, the operating funding sources for ongoing operations and maintenance (O&M) will have to be demonstrated and committed to for the entire segment of the light rail extension. This will be shared by both TriMet and C-TRAN.

2. Impact of lawsuit - how can we commit with it pending?

Three lawsuits were filed in early July challenging the CRC's Final EIS and Record of Decision. The lawsuits allege violations of the Administrative Procedures Act (APA) and NEPA by federal agencies; the APA claim is procedural only. Two of the lawsuits focus on environmental and health effects, while the third, filed by Thompson Metal Fab (Greenberry recently added), focuses on the bridge's effects on river users.

WSDOT and ODOT believe that the seven-year environmental review and public process for CRC was thorough and legally sufficient. It is not uncommon for large public works projects to be litigated and this was not unexpected.

The administrative record for the suits will be compiled over several months and then a federal judge will rule on the merits of the suits. In the meantime the project will continue to move forward. If the judge's findings result in remanding issues to the project to address, there could be impacts to project budget and schedule.

3. Where is the analysis identifying those that will benefit financially from this project (on the Oregon side) and stand to make money because of the design of the Project? Is the Project being overbuilt to get someone's buyoff?

The Final EIS identifies the potential impacts to homes and businesses in the project area as well as effects to community, natural and cultural resources. The project is working to stay within the existing right of way, but some temporary and permanent land acquisitions and easements will be unavoidable. Approximately 59 residential displacements and 69 commercial displacements are expected. (See chart on next page.) CRC will work with the cities and residents to provide notice of unavoidable inconveniences and to work within city construction guidelines.

Exhibit 3.3-2

Summary of Permanent Property Acquisitions and Displacements for the LPA[a]

Impact Type	Impact	LPA Option A	LPA Option B
Parcel Impacts (count)	Full Parcel Acquisitions	74	73
	Partial Parcel Acquisitions	143	131
	Total Parcels Impacted	217	204
Displacement of Use (count)	Residential Displacements	Total: 59	Total: 59
	Single-family	55	55
	Multi-family	4	4
	Commercial Displacements	Total: 69	Total: 69
	Retail/Services	50	50
	Office/Professional/Healthcare	15	15
	Lodging	1	1
	Other[b]	3	3
	Public Use Displacements	Total: 2	Total: 2
	Public Service w/ Employees	2	2
	Religious/Community Center	0	0
	Park/Historic Site/Museum	0	0
	School	0	0
Permanent Easements[c] (acres)	Airspace Easements	2.3 acres	2.3 acres
	Subsurface Easements	3 acres	3 acres
	Property Easements	Less than 1 acre	Less than 1 acre
Area required (acres)	Total Area Acquired	91 acres	93 acres

a Does not include ODOT- or WSDOT-owned property or right-of-way or City-owned right-of-way.

b Includes the displacement of two cellular phone towers on Hayden Island and a billboard near the Marine Drive interchange.

c For information about utility easements, please see Section, 3.6 Public Services and Utilities.

4. If cost overruns occur, how will they be addressed, who is responsible, and what impact could they have on our Full Funding Grant Agreement with FTA?

The CEVP process is designed to anticipate and incorporate potential risks (added costs) and opportunities (cost savings) into the projected cost estimates—thus identifying early those items that could increase project costs or lead to scheduling delays. The ODOT director and WSDOT secretary are responsible for project budget oversight and CRC project directors are responsible for managing the project within budget.

If FTA accepts our application and we enter into a full funding grant agreement we are contractually committed to build the project described in the application. As part of the application process, we will identify a budget that will deliver the phased project. If there are cost overruns that exceed the planned FTA New Starts funds, then those overruns must be paid from a source other than the FTA funds.

If there are instances where cost overruns do occur or seem likely, ODOT and WSDOT would identify additional cost saving opportunities and, in some cases, adjust non-mission critical project scope. If

project costs cannot be recovered through these efforts, the funding agency would be responsible for the remaining costs.

5. Bridge height and Coast Guard permit

Was it an oversight and if so should the bridge be higher? Or is the EIS causing the inability to change design? Is it the airport that is causing the restriction on height? Is it the impact on the landing areas of the bridge, or the increased cost or what that prevents us from raising the height of the bridge?

See attached work plan and General Bridge Permit handout.

Project management, oversight, governance and contracting

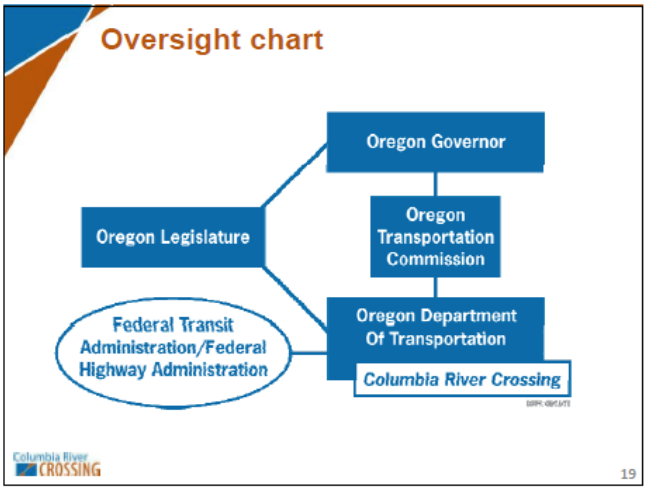
1. Who is in charge of the construction of the Project?

ODOT and WSDOT have joint responsibility over the project. The project is on the Interstate system, which is part of a federally-assisted, state-delivered program. Through stewardship agreements with FHWA, the state DOT's are responsible for construction and maintenance of the Interstate facility. As it relates to the light rail improvements, WSDOT is the "grantee" for the federal New Starts funds, and will have the responsibility to deliver the light rail improvements. WSDOT will perform this in a coordinated manner, via intergovernmental agreements, with ODOT, TriMet and C-TRAN.

2. What is the structure of accountability?

Project oversight occurs at several levels. The states and federal agencies provide funding for, and oversight of, project delivery. The Federal Highway Administration and Federal Transit Administration provide oversight on the National Environmental Policy Act process, project management, project implementation, financial planning, risk management, schedule and budget management.

The WSDOT and ODOT report to the executive, legislature and transportation commissions on project progress and consistency with state policies. WSDOT and ODOT use the systems and policies to deliver the CRC project that are used elsewhere in the two states. The agencies provide financial accounting services and oversight for the CRC project in compliance with applicable state and federal laws, regulations and policies. WSDOT and ODOT also provide procurement services and oversight in compliance with applicable state and federal laws, regulations and policies. Expenditures on the CRC project by WSDOT and/or ODOT are tracked within department accounting systems using unique identifiers which allow for project-specific reporting. Expenditures also are closely tracked at the project office level to ensure payments do not exceed available funding. Internal audits by



each agency are ongoing to further ensure that policies and procedures are being appropriately followed.

3. What is the design of continuing legislative oversight? (We should not rely on intermittent reports).

2011 Budget Note: The Columbia River Crossing (CRC) bridge project is a major initiative to address congestion problems on I-5 between Portland, Oregon and Vancouver, Washington that requires support by not only the Governors of both states but the Legislatures as well. The Oregon Department of Transportation (ODOT) budget includes resources to continue work on solutions that advances the CRC to completion of the required Environmental Impact Statement.

ODOT is directed to provide reports to the Senate and House Transportation Committees on the progress made on the CRC project whenever these committees or their interim equivalents meet. Such ODOT reports shall include updated information on cost estimates, proposed alternatives, right-of-way procurement schedule, financing plans for the CRC project including initial and updated information regarding projected traffic volumes, fuel/gas rate assumptions, toll rates, cost of toll collections, as well as potential impacts on other Oregon transportation funding, needs and priorities.

ODOT is directed to secure and provide an independent investment grade analysis of the project with oversight of the consultant provided by the State Treasurer.

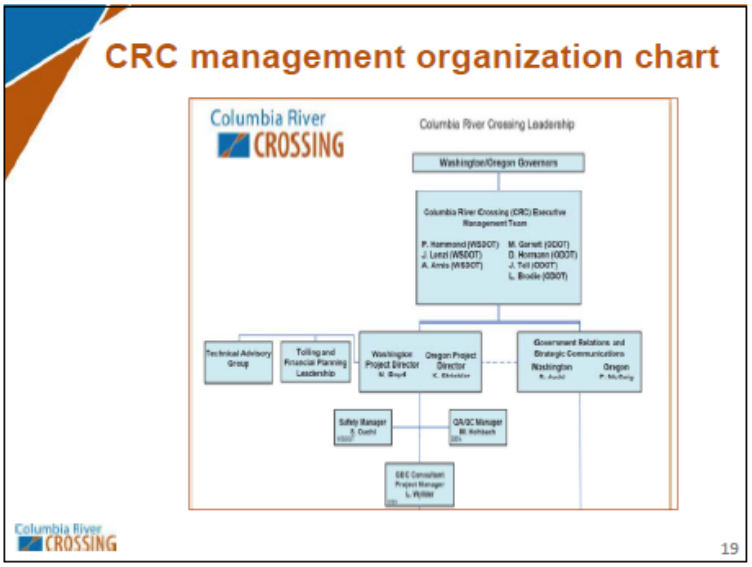
Finally, ODOT shall provide a clear and concise feasibility study, and develop a phased master plan for the CRC that allows for legislative oversight and approval at key decision points and report to the Legislature by February 2012, with the first iteration of CRC reports.

4. How are Oregon and Washington to jointly make decisions?

ODOT and WSDOT have maintained an Intergovernmental Agreement (IGA) relating to the CRC project since 2006. The current IGA for project development of the CRC will continue, and be amended to incorporate the construction activity. Oregon and Washington will continue to jointly manage the program activities, via ODOT and WSDOT. This arrangement is much like the maintenance arrangements on the other border crossings, with the difference being the initial construction activity and tolling implementation for the CRC. The IGA for the tolling implementation will likely be between the Oregon Transportation Commission and the Washington State Transportation Commission. The overall program will be broken into several different contract packages, delivered by several agencies. The highway improvements will be delivered by the DOT's in each of their respective states. The exception to that will be the main Columbia River Bridges and their touchdowns, which will likely be contracts procured through WSDOT, but have joint approvals for both ODOT and WSDOT.

5. Who will be the project manager? (Who will Washington and Oregon hire as Project Manager and what will Oregon have to say about it?)

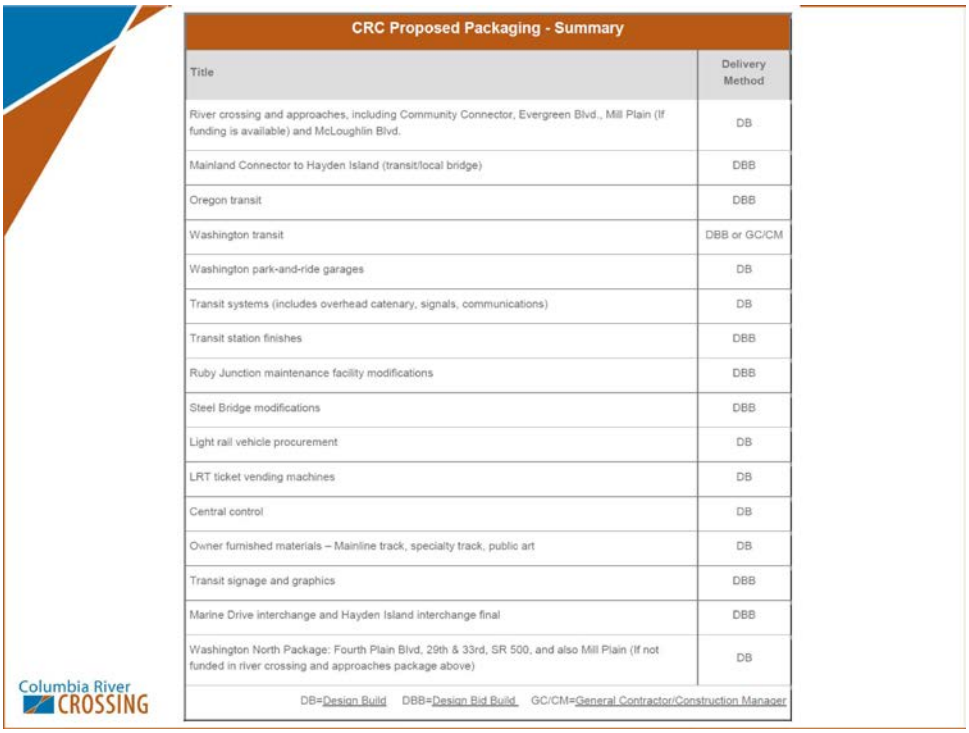
ODOT Director and WSDOT Secretary are responsible for hiring the project director(s). Currently each state is represented by a project director.



6. What type of construction contract is being considered? Is design-build being considered and if so how does it shift risk? Who decides and when?

The program will be delivered via several contracts, and potentially several different contracting methods, depending upon permit conditions, engineering readiness, cash flows and timing. The likely contracting methods that we have identified so far include:

- Design Build (DB)
- Design Bid Build (DBB)
- Construction Manager/General Contractor (CM/GC)



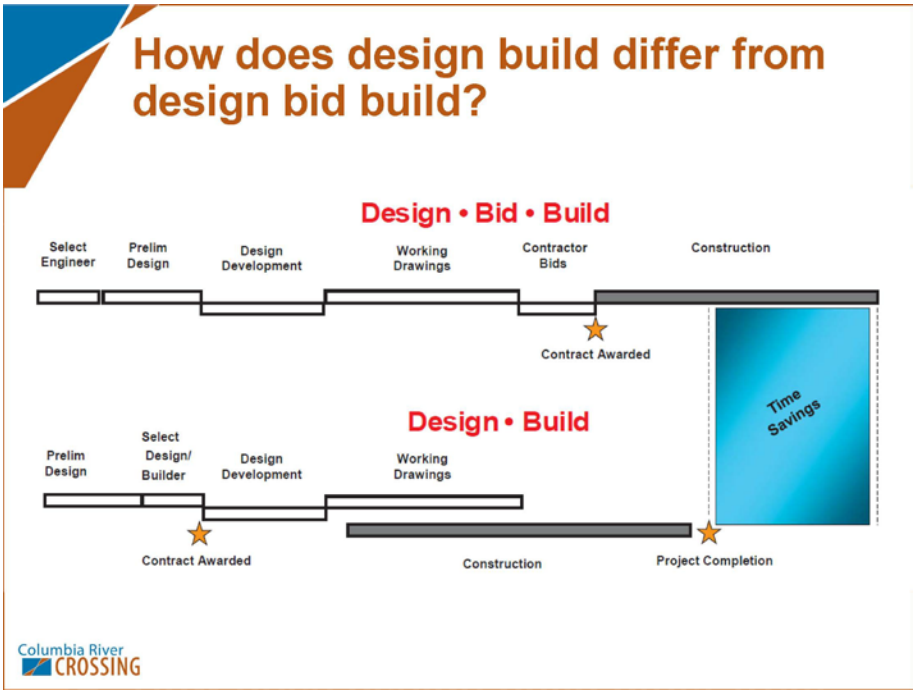
CRC Proposed Packaging - Summary

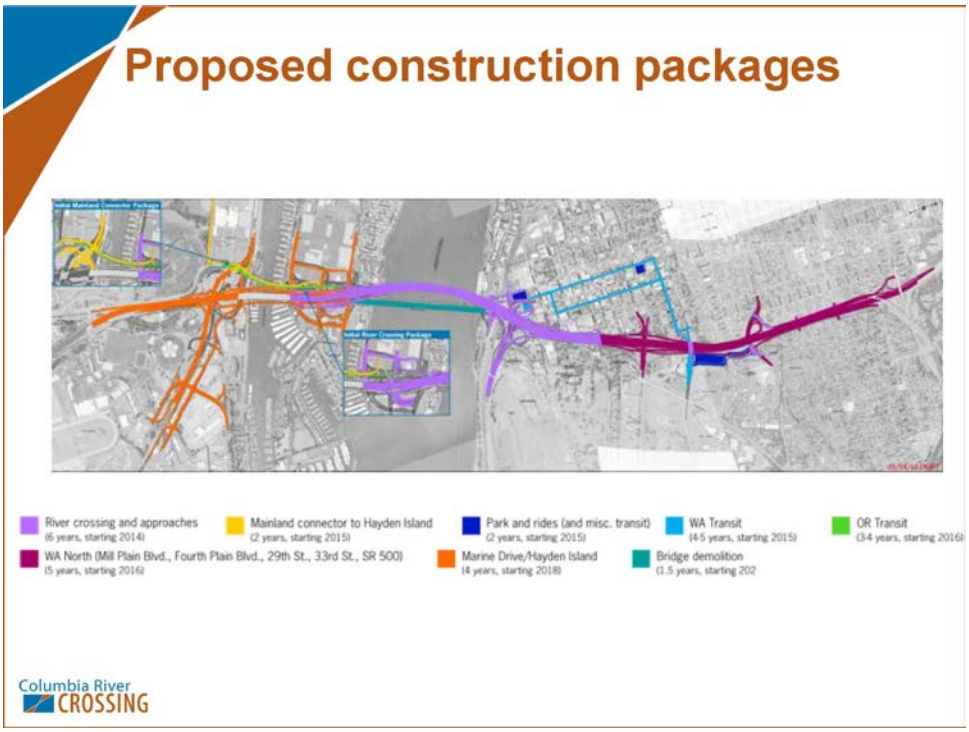
Title	Delivery Method
River crossing and approaches, including Community Connector, Evergreen Blvd., Mill Plain (If funding is available) and McLoughlin Blvd.	DB
Mainland Connector to Hayden Island (transit/local bridge)	DBB
Oregon transit	DBB
Washington transit	DBB or GC/CM
Washington park-and-ride garages	DB
Transit systems (includes overhead catenary, signals, communications)	DB
Transit station finishes	DBB
Ruby Junction maintenance facility modifications	DBB
Steel Bridge modifications	DBB
Light rail vehicle procurement	DB
LRT ticket vending machines	DB
Central control	DB
Owner furnished materials – Mainline track, specialty track, public art	DB
Transit signage and graphics	DBB
Marine Drive interchange and Hayden Island interchange final	DBB
Washington North Package: Fourth Plain Blvd, 29th & 33rd, SR 500, and also Mill Plain (If not funded in river crossing and approaches package above)	DB

DB=Design Build DBB=Design Bid Build GC/CM=General Contractor/Construction Manager

DRAFT

For the Columbia River Bridges contracts we will use a design build contract, procured through WSDOT, and jointly administered by ODOT and WSDOT.





7. Who makes decisions on contracts? Who decides where bridge materials come from? How will local businesses be represented? Is there an allocation or percentage of dollars allocated to local businesses/suppliers/vendors?

The selected (low bid, best proposal, etc.) contractor, regardless of procurement method, typically decides the material source that meets the specifications required by the contract documents. In big projects, there is likely to be a blend of local material sources and also regional or national materials sources for bulk needs. Labor sources are similar. ODOT and WSDOT will jointly select or approve the contractor for the Columbia River bridges.

Columbia River CROSSING

General Bridge Permit

Sept. 12, 2012

Bridge height history

(2000) **Studies conclude a balanced set of improvements to highway, transit and freight needed**

- Alternatives would need to consider effects to highway/transit performance, safety/access for air travel, cost of bridge lift delays and existing conditions of river vessel negotiating multiple bridge piers and calling for bridge lifts.

(2004) **Boat survey**

- 80 feet above low water level would meet needs of all but four barges, two sailboats.
- Thompson Metal Fab included.
- 125 feet would accommodate all known users.

(2005-2006) **39-member Bi-state Task Force**

- A replacement bridge selected in part because it provides increased safety for river users with fewer piers in the water.
- Three representative bridge heights discussed for replacement bridge: low with a moveable span (around 65 feet), mid (95-110 feet), and high (around 130 feet).
- Remove low-level, movable span bridge; remove four high-level bridge components (greater than 130 feet) because of potential land based impacts, Pearson Airfield safety issues, and preliminary 2004 vessel survey; advance mid-range height component for further definition and study.

(2006) **Coast Guard hearing on mid-level bridge**

- Public hearing for review and comment of mid-level replacement bridge. One fabricator (Thompson Metal Fab) asked for 100 feet and a construction barge owner requested a "high" level of navigation clearance.
- Federal Aviation Administration reported it had "no objections" to the mid-level bridge height.
- Boat survey data updated.

(2008) **Draft environmental impact statement analyzes mid-level bridge**

- Based on technical analysis, public comment, bi-state task force and six elected boards and council recommend a replacement bridge at mid-range height.

(2011) **Bridge type public process and decision**

- Only one comment during public process that mid-level height could potentially impede river navigation during public process.
- Thompson Metal Fab requests 125 feet.

(2011) **Final environmental impact statement process**

- USCG forwards an amended height request from an existing river user (Thompson Metal Fab – 125 feet), USCG expresses formal concern about 95-foot bridge height
- Project responds as part of Final EIS providing preliminary information to federal partners on the 125-foot clearance with condition that an updated vessel assessment, impact analysis and engineering evaluation would be necessary to fully explore 125 feet.
- Federal Leads (FHWA/FTA) issue their Record of Decision for the CRC.

(2011 – 12) **Other**

- Greenberry moves to area in 2010, starts operating in early 2011.
- Corps of Engineers dredge Yaquina identified.

Columbia River CROSSING

General Bridge Permit

Sept. 12, 2012

USCG Work Plan

1. Coordinate between USCG/USACE/CRC/ODOT/ WSDOT/FHWA/FTA/FAA
2. Demonstrate that vertical clearance proposed in application avoids impacts to navigation as much as is reasonable practicable
3. Analyze vessel impacts
4. Evaluate mitigation options and costs
5. Document economic impact of the project
6. Coordinate with FAA regarding obstructions to aviation
7. Conduct NEPA re-evaluation
8. Prepare draft permit application and submit to USCG

Preliminary findings:

- A mid-level (95-110 feet) bridge will address navigation needs for all but a small number of rivers users and is technically feasible at a moderate cost without substantial environmental, community, and mobility impacts.
- At some height above 110 feet the bridge substructure would need to be modified significantly in order to sustain the additional weight and seismic load on the bridge structure. Such modifications will be costly, and likely have greater impacts, which would require additional environmental review.
- Future river uses likely will be consistent with the existing types of vessels and clearance requirements associated with existing river uses.
- Adding a lift span to the proposed deck truss bridge and alignment would result in a structure of unprecedented complexity with associated technical challenges. Substantial, additional costs and environmental reviews would be expected.
- A cost-effective mitigation proposal for the dredge Yaquina has been developed and proposed to the U.S Army Corps of Engineers for a 95-foot bridge clearance. The project also has identified possible impact avoidance alternatives for the Yaquina within the mid-range bridge height.

Work Plan highlights:

1. Avoid/minimize impacts to river users. Include feasibility and costs analysis above 110-feet in additional 5-foot increments to determine at what point the substructure is unable to accommodate the additional weight.
2. Identifying potential impacts that cannot be avoided or minimized and might require mitigation; develop potential mitigation plans, feasibility, and costs to address these impacts. We have started the conversations with the fabricators and will meet with them regularly to develop mitigation plans.
3. Further identify potential, future river uses, future navigation needs, and corresponding impacts. This analysis, combined with an analysis of the project's economic impacts, will provide a more complete context for informing the bridge permit application.

Washington State Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

Oregon Department of Transportation
Matthew L. Garrett
Director

August 16, 2012

MEMORANDUM

TO: Rear Admiral Taylor, U.S. Coast Guard
Rick Krochalis, FTA Region 10 Administrator
Dan Mathis, FHWA Washington Division Administrator
Phil Ditzler, FHWA Oregon Division Administrator

FROM: Paula Hammond, Washington State Transportation Secretary
Matt Garrett, Oregon Department of Transportation Director

CC: Col. John Eisenhauer, U.S. Army Corps of Engineers
Capt. Michael Gardiner, U.S. Coast Guard
Kris Strickler, Oregon Director, Columbia River Crossing
Nancy Boyd, Washington Director, Columbia River Crossing

SUBJECT: Columbia River Crossing Project – Work Plan for Finalizing Bridge Height and Submitting Bridge Permit Application

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Thank you for your continued assistance related to the Columbia River Crossing project's development of a work plan to prepare an application for a general bridge permit for the replacement Interstate 5 bridge over the Columbia River. We have intended to reflect your feedback throughout the work plan and look forward to your comments.

The approach taken in our plan is to build on the work to date, including recently completed vessel surveys and technical analysis, while also demonstrating that we have taken the necessary steps to avoid impacts to river users. It outlines what steps will be taken to minimize and mitigate impacts to river users if avoidance is not feasible or reasonable; continued analysis of incremental increases in bridge heights to help assess vessel impacts as well as cost, environmental and community impacts; a thorough review of future river needs; and how we will continue to balance the needs of river users with the other transportation needs in the corridor, including air, freight, transit, and drivers.

We appreciate the cooperation and input from you and believe it will result in a bridge permit application that will allow for a thorough and comprehensive review by your agency at the end of the year.

Thank you again and we look forward to continuing to work with the U.S. Coast Guard on this critical safety and mobility project with national and regional significance.

WORK PLAN FOR FINALIZING BRIDGE HEIGHT AND SUBMITTING BRIDGE PERMIT APPLICATION

August 16, 2012

Introduction

The U.S. Coast Guard (USCG) requires a General Bridge Permit prior to construction of the Interstate 5 replacement bridge across the Columbia River. The following work plan outlines elements for finalizing a bridge height and informing an application for the General Bridge Permit. It starts with a brief project background, followed by USCG policy requirements, a description of technical work elements and a schedule for completion of the work.

Background

Designated in 2008 as a project of national significance, the Columbia River Crossing project is a one of a kind, multi-modal and safety improvement project affecting about 134,000 vehicle trips a day and more than 7,000 vessels a year. Local, regional, state, national and international trade markets depend on moving goods and services over the bridge and through at least one of the seven interchanges connecting the interstate system with access to deep water shipping, up-river barging, two water-level transcontinental rail lines, and the ports of Vancouver and Portland. Trucks carry 67 percent of all freight in the region today, twice as much as the other five modes (rail, ocean, barge, pipeline, and air) combined. By 2030, with another one million people expected in the region and freight movements projected to almost double, studies predict that this five and a half mile stretch will be stuck in congestion at least 15 hours each day, with freight and commuters likely delayed by one of the 750 projected collisions that will occur each year.

Since 1999, citizen groups, business and community leaders, elected officials, transportation and transit agencies, and designers and engineers have studied the project area. As early as 2000, studies of the corridor concluded that a balanced set of improvements to the highway, transit and freight systems was needed to ensure continued economic competitiveness and community livability in the region. Alternatives would need to consider the effects to highway and transit transportation performance as well as safety and access for air travel; cost of bridge lift delays for transit, autos and trucks; and the existing condition of river vessels negotiating multiple bridge piers and calling for a bridge lift.

This early work identified the Interstate Bridge as a significant bottleneck and called attention to bridge lifts as a contributor to time delays and queuing. Since then subsequent research and technical analyses have confirmed that the lift on the I-5 Interstate Bridge:

- Is the last lift bridge between Mexico and Canada on I-5
- Contributes to congestion
- Is unsafe, creating a 3 to 4 times higher likelihood of a collision
- Disproportionately affects freight traffic

A replacement bridge, rather than building a new, supplemental bridge next to the existing structures, was ultimately recommended as key part of the Locally Preferred Alternative (LPA) by a 39-member bi-state task force and six local and regional governments (Metro, Southwest Washington Regional Transportation Council, C-TRAN, TriMet, cities of Vancouver and Portland). The replacement bridge was selected, in part, because it provides increased safety for river users with fewer piers in the water and elimination of the existing "S" curve maneuver river users must make between the Interstate Bridge and the Burlington Northern Santa Fe railroad bridge.

A mid-height bridge

As the replacement bridge was considered, the project team sought to avoid, minimize and mitigate any potential impacts. Different heights were discussed in relationship to impacts on river users, traffic safety, airspace, transit, downtown Vancouver, Washington, and Hayden Island, Oregon, and overall footprint. Local communities and the states recognized the need to balance these (at times) competing interests as potential solutions were evaluated. The bi-state task force considered the need for:

- improved navigational safety and access
- observing Federal Aviation Administration requirements that obstructions should be avoided for the safe operation of aircraft
- replacement of substandard features and improved sightlines for safety on the Interstate
- improved interstate traffic and freight mobility
- grades that would accommodate transit
- bridge landings that are compatible with local land use and community plans
- improved bicycle and pedestrian access
- safer connections to adjacent state highway system

In 2006, three representative bridge heights were discussed for a replacement bridge: low with a movable span (around 65 feet), mid (95 to 110 feet), and high (around 130 feet). After further study, the bi-state task force recommended:

1) Removing the low level, movable span bridge components from consideration due to negative effects to highway mobility, highway safety, freight movement, maintenance costs and the lack of a significant difference in community impacts when compared to a higher mid-level fixed span bridge.
2) Removing four high-level bridge components (greater than 130 feet) because of safety concerns with Pearson Airfield and 2004 findings that all known commercial and recreational vessels could be accommodated at 125 feet.
3) Advancing the mid-range height component based on the 2004 boat survey findings that a fixed span of 80 feet would accommodate all but six known vessels.

Also in 2006, the USCG accepted "cooperating agency" status and provided critical guidance to the project including offering a public hearing for review and comment of a mid-level replacement bridge. At the Sept. 2006 USCG public hearing, 17 people testified: one construction barge owner requested a bridge with a "high" level of navigation clearance and one fabricator requested 100 feet.

During this same period, the Federal Aviation Administration reported it had "no objections" to the mid-level bridge height provided for the agency's consideration.

The bi-state task force moved the mid-level bridge component forward within different multi-modal alternatives for technical analysis in the Draft Environmental Impact Statement (EIS). About 1,600 public and agency comments were received on the Draft EIS in 2008. Of the comments stating a preference on the bridge element, the majority favored a replacement (mid-level bridge) as compared to no action or a supplemental bridge.

Based on the technical analysis in the Draft EIS and public comment, the bi-state task force and six boards and councils of each local sponsor agency unanimously recommended a replacement bridge at mid-range height with an extension of light rail to Clark College in Vancouver for the LPA.

The development and refinement of the LPA was informed by public input - over 29,000 public contacts at more than 1,000 public events - elected councils and commissions from two states, local, state and federal partners, topic specific peer reviews and two independent reviews with national experts.

In early 2011, the Oregon and Washington governors initiated a three-month bridge type review process and ultimately identified a deck truss bridge for the replacement river crossing structures. More than 250 people and organizations provided comment. Of those, fewer than 10 provided comments on vertical navigational clearance or highway grade. Only one said the mid-level height would potentially impede river navigation. The others suggested that a higher bridge would impact air navigation and bicycle and pedestrian mobility.

During 2011, the USCG forwarded an amended height request from an existing river user, and a new river user was also identified with concerns about the bridge height. In September 2011, the Final EIS was published and available for review and comment. During this time, the USCG expressed formal concern with the proposed 95-foot bridge height based on comments received from river users and notified the project that 125 feet clearance would be given serious consideration during their review.

As part of responding to the Final EIS comments from USCG, the project provided very preliminary information to federal agencies on the 125-foot clearance with the understanding that an updated vessel assessment, impact analysis, and engineering evaluation would be necessary to fully explore 125-feet clearance. The early analysis on 125 feet-bridge height concluded that:

- Major items amount to approximately $150-$200 million in increased cost for a higher bridge.
- There would be a steeper profile grade for the Interstate and would exceed the 4 percent in AASHTO guidance, and deviate from state standards.
- Increasing grades may require connecting on and off ramps on the main river crossing with an auxiliary lane.
- The light rail transit maximum grade of 6 percent lengthened from 500 to 1,200 feet in Washington, impacting maintenance and operations.
- In Vancouver, 5th Street would be closed, and the Columbia Park and Ride would be accessed solely from Columbia Street, causing operational issues.

- The increased elevation of 30 to 40 feet of the Interstate in downtown Vancouver results in additional impacts to downtown, including closed 6th Street access to southbound I-5.
- Bicycle and pedestrian grades would steepen and lengthen on both sides of river.
- It is likely that one or more light rail stations would need to be re-evaluated and redesigned.

After seven years of planning, public involvement and technical analyses this work culminated in December 2011 with a Record of Decision (ROD) issued by the Federal Highway Administration and Federal Transit Administration validating the project's purpose and need, public process and technical work. With the ROD the project moved into the next phase of design, construction planning, funding, and permitting.

USCG Permit Requirements

The USCG has statutory authority to approve the location and clearances for all bridges over navigable waterways. That authority is rooted in the Commerce Clause of the US Constitution and further defined in numerous laws.[1] Congress' intent in enacting the legislation has been to retain exclusive jurisdiction for all bridges over navigable waterways of the United States. Under that exclusive jurisdiction, the USCG is responsible to preserve the public right of navigation, and bridges are permitted only when they serve the needs of land transportation. Inherent in that responsibility is the obligation "to accommodate, to the greatest practical extent, the needs of all surface transportation modes."[2] In considering a permit application, the USCG must "promote and expedite projects that facilitate national and international commerce and provide for the reasonable needs of present and prospective land and marine transportation."[3] In that context, bridge statutes require that in issuing a bridge permit the USCG must provide for the reasonable needs of navigation, not all needs. The CRC project is preparing to apply for a USCG bridge permit that complies with the requirements. The application must demonstrate a balanced approach to meeting the needs of all modes of transportation. It is the obligation of the project, which has demonstrated substantial proposed benefits to land-based modes of transportation, to also provide the analyses and documentation needed for the USCG to determine that the reasonable needs of current and future marine navigation are addressed.

Work Plan to Finalize Bridge Height and Submit Bridge Permit Application

The following lays out a comprehensive work plan designed to inform the application for a USCG bridge permit for the main span crossing the Columbia River, a necessary step prior to the start of bridge construction, which is scheduled to begin in 2014 if funding is available. It fully incorporates and respects the requirements of the USCG, was developed in cooperation with USCG staff, and specifically addresses the following issues raised in USCG correspondence:

[1] The laws relating generally to the protection, preservation, and safety of the nation's navigable waterways are found in Section 9 of the Act of March 3, 1899, as amended, 33 U.S.C. 401; the Act of March 23, 1906, as amended, U.S.C. 491; the Act of June 21, 1940, as amended (Truman-Hobbs Act), 33 U.S.C. 511-523; the General Bridge Act of 1946, as amended, 33 U.S.C. 525; the International Bridge Act of 1972, 33 U.S.C. 535; and the Ports and Waterways Safety Act of 1972; as amended by the Port and Tanker Safety Act of 1978, 33 U.S.C. 1221-1225

[2] U.S. Coast Guard Bridge Administration Manual, p. 1-2

[3] Ibid.

1. Updating the study of river users to accurately document the number of vessels that may be affected by a change in existing vertical clearance at the I-5 bridge;
2. Identifying potentially impacted vessels and developing strategies to avoid, and if that is not possible, then minimize or mitigate those impacts;
3. Working collaboratively to avoid, minimize and mitigate impacts to upstream fabricators that rely on access to the Columbia river system to ship large industrial assemblies by finding creative and cost-effective solutions; and
4. Assessing current and future impacts to waterway users resulting from alternative vertical clearances for the I-5 Bridge.

This work plan also acknowledges and respects the years of work from local, state, and federal partners developing the LPA with a recommendation for a mid-range bridge height and the corresponding ROD issued in December 2011. The plan intentionally recognizes the importance of developing strategies to avoid and minimize potential impacts to river users first and then focus on mitigation as necessary. The results of the work plan will provide a thorough and detailed analysis of the mid-range bridge height alternatives and potential impacts on river users, freight, transit, aviation, and local communities. It will evaluate vertical clearance alternatives to document the trade-offs at different clearances between surface transportation, land use, and river navigation needs.

In addition to developing strategies to avoid and minimize impacts to current river users, the work plan specifically addresses questions about potential future river uses, future navigation needs, and corresponding impacts. This analysis combined with an analysis of the project's economic impacts will provide a more complete context for informing the bridge permit application.

The following seven tasks will be undertaken to complete the data collection and technical analyses, coordinate with all state and federal partners, and prepare the NEPA re-evaluation and bridge permit application.

1. **Coordination between USCG/USACE/ODOT/WSDOT/FHWA/FTA/FAA.** Develop and implement a plan for communication between all the federal and state partners. Elements of the plan will include:
    a. Permit oversight team (WSDOT, ODOT, project staff) meetings.
    b. Coordination meetings with FTA, FHWA, project staff.
    c. Coordination meetings with USCG staff.
    d. Coordination with FAA regarding obstructions to aviation (see task 5 below).
    e. Principals meetings between USCG, FTA, FHWA, WSDOT, and ODOT at key milestones.
    f. Briefings at key milestones to FHWA Administrator Mendez and FTA Administrator Rogoff pursuant to meetings with USCG Commandant Papp.

2. **Avoidance and Minimization.** To support a permit decision that will result in impacts to vessels, the USCG administrative record must demonstrate that the applicant has considered reasonable alternatives to avoid and minimize impacts to marine navigation.
    a. **Demonstrate that the vertical clearance to be proposed in the permit application avoids impacts to navigation as much as is reasonably practicable.** The impact analyses currently

underway will consider design alternatives consistent with the ROD supporting a mid-level bridge that demonstrate trade-offs between alternative navigation clearances and landside transportation and land use impacts. A review of design assumptions and analyses to date will confirm and validate conclusions about viable alternative bridge heights. Design criteria, functional requirements, costs, and prior environmental studies will be considered to determine whether alternative vertical profiles for the bridge are practicable, and whether impacts to vessels have been reasonably avoided and/or minimized while protecting the functionality of the proposed crossing.

b. **Vessel Impact Analysis.** A detailed description of potential impacts to current and future river users resulting from the construction of the new main span bridges will be prepared. Specific vessels and owners that are potentially impacted will be identified, and potential effects to their historic and planned operations will be described. The seasonality of use vis-à-vis historic river elevation data will be considered. Alternative vessel operating scenarios that could potentially minimize impacts from vertical clearance limitations created by the new bridges will be described.
    i. Use field surveys and interviews with owners/operators to verify the data gathered to date to better understand the extent of impact, including vessel height, air gap requirement, frequency and time of year, and past history from bridge log data.
    ii. Analyze data by type of vessel, user and user class/type.
    iii. Conduct an analysis of future river user needs, addressing currently anticipated user needs, including future uses identified by current river users, and currently known plans by port districts and industrial users upriver of the I-5 Bridge. This work will be supplemented by an analysis of potential changes in land use along that portion of the river that might affect future maritime traffic.
    iv. Conduct a vessel-by-vessel impact analysis for each alternative clearance above 0 Columbia River Datum considered under 2.a.

3. Mitigation options and costs. For each potentially impacted vessel, continue to develop and evaluate alternatives for mitigating the impacts if those impacts cannot be avoided. Alternatives will vary depending on the type of vessel and use:

a. Barges carrying large fabricated assemblies. Discussions with fabricators will be conducted to develop an understanding of their operations, including the extent to which their current and predicted future business activities will be impacted. Working with the fabricators, alternative mitigation strategies will be developed. Such strategies may include (but are not necessarily limited to) partial assembly of the modules in their existing yards with full assembly downstream, or the relocation of part or all of their operations to a site that could accommodate the height of their shipments. The technical team working with the fabricators will include marine/industrial engineers and a business economist to support development and evaluation of mitigation alternatives.

b. Dredges, construction barges, and commercial/government vessels. Discussions with owners/operators and field inspections of vessels by a naval architect will be conducted to evaluate seasonality of operations, frequency of passage, and potential changes in operating

procedures. If anticipated operations cannot be supported by operational changes, re-configuring the vessel superstructure or equipment to permit passage under the proposed clearances will be considered.

c. Recreational sailboats. Anticipated seasonality of use and frequency of passage will be discussed with the vessel owner. If projected passage requirements cannot be accommodated, mitigation options will be evaluated such as minor changes to antennas or masts, or potential relocation to a downstream slip.

4. **Document economic impacts of the project. T**he project provides improvements to safety, mobility, congestion relief, and freight movement for land and water transportation modes. It is important context to consider overall economic benefits when evaluating impacts to river users. This analysis will describe the overall effects of the project to the region relative to the no build alternative:
   a. Describe the value or economic benefit in terms of: improvements in safety and efficiency for all modes (landside, rail, river, and air); future economic growth from improved access and mobility (job creation, tax revenue, etc.); and jobs from construction.
   b. Quantify economic benefits of improved river navigation resulting from construction of the proposed bridge, such as improved horizontal clearance, and no bridge lifts or time of day restrictions.
   c. Consider incremental benefits or costs from higher bridge clearance alternatives.

5. **Coordination with FAA regarding obstructions to aviation.** For the CRC project, a balanced approach to addressing the needs of marine and land transportation must also consider the potential impacts to aviation, due to the close proximity of Pearson Airfield and Portland International Airport. CRC will need to file notice with the FAA Administrator of the potential for a conflict with aviation airspace. Once that notice has been filed, FAA will conduct aeronautical studies and make a determination of whether or not the project is a hazard to air navigation. In advance of filing the notice, CRC staff will schedule informal discussions with the FAA to coordinate the notice and the FAA review.

6. **NEPA Re-evaluation**. Conduct a NEPA re-evaluation on new information generated in this permit process, using information from the river users survey and potential impacts resulting from alternative bridge heights considered. FHWA and FTA stated in a letter to the USCG on August 3 that this approach will address the USCG requirement to satisfy NEPA for their federal action of issuing a permit.

7. **General Bridge Permit application.** Prepare draft permit application for submittal to USCG in compliance with permit application guide COMDTPUB P16591.3C (dated October 2011). Coordinate to ensure that all relevant data is submitted. Prior to submittal, work closely with USCG staff to ensure that the application is comprehensive and provides the data needed for a permit decision.

Work to Date with Draft Findings

Concurrent with the development of the work plan, the project identified critical technical work and analysis that would be timely and provide essential information. Preliminary work and findings are outlined below. This work is still in draft form and will be incorporated as part of the work plan above.

1. The project completed preliminary bridge, highway and transit engineering analyses to assess technical feasibility, cost, and environmental impacts associated with vertical clearance alternatives of 95, 100, 105, and 110 feet in order to avoid some impacts to users. Similar work will be conducted on additional five foot increments with results expected by mid to late September. This work will update and expand upon the preliminary findings shared with FHWA and FTA prior to the ROD in 2011.

Key draft finding: Bridge heights at 95, 100, 105 and 110 feet appear to be technically feasible at moderately increasing costs and without significant additional environmental impacts that would require supplemental environmental studies. The technical analysis has identified that at some height above 110 feet the substructure would need to be modified significantly in order to sustain the additional weight and seismic load on the structure. Such modifications will be costly, and likely have greater impacts which would require additional environmental review. Further work will identify the height at which substantially increased substructure costs will be incurred.

2. The project has completed an extensive outreach effort to update the assessment of vessels potentially affected by the construction of the replacement bridge over the Columbia River. The outreach, which included public notices, letters to registered vessel owners, phone calls and in-person interviews, identified a total of about 170 vessels that report a history or plans to transit the river at the I-5 Bridge. From that total, the work documents vessels potentially impacted at a range of vertical clearances consistent with a mid-level fixed span bridge as determined by the Record of Decision.

Key draft finding: A mid-level bridge has the potential to address navigation needs for all but a small number of river users (the exact number will depend on the final height of the bridge).

3. The Army Corps of Engineers dredge *Yaquina* was identified as a potentially impacted vessel. A naval architect inspected the vessel and has prepared a conceptual mitigation plan for review by the Corps.

Key draft finding: The conceptual mitigation plan for the *Yaquina* appears to provide a cost-effective solution that would allow the Corps unimpeded transit under a 95-foot bridge. The project has also identified potential alternatives that avoid impacts to the Yaquina within the mid-range. The project will work with the Corps to reach concurrence on an acceptable mitigation plan if the impacts cannot be avoided.

4. A preliminary analysis of current river users' future needs has been completed. This includes those future uses identified by current river users, and currently known plans by port districts and industrial users upriver of the I-5 Bridge, taking into account the designated Columbia River Gorge National Scenic

Area which begins a few miles upriver from the bridge. This work will be supplemented by an analysis of potential changes in land use along the river that might affect future maritime traffic, which will be completed in the next several weeks.

Key draft finding: Currently anticipated future river uses are generally consistent with the existing types of vessels and clearance requirements associated with existing river uses.

5. CRC project engineers have completed a preliminary assessment of the technical feasibility and cost of adding a lift span to the proposed deck truss bridge. Additional work is underway to further document the effects of adding a lift span.

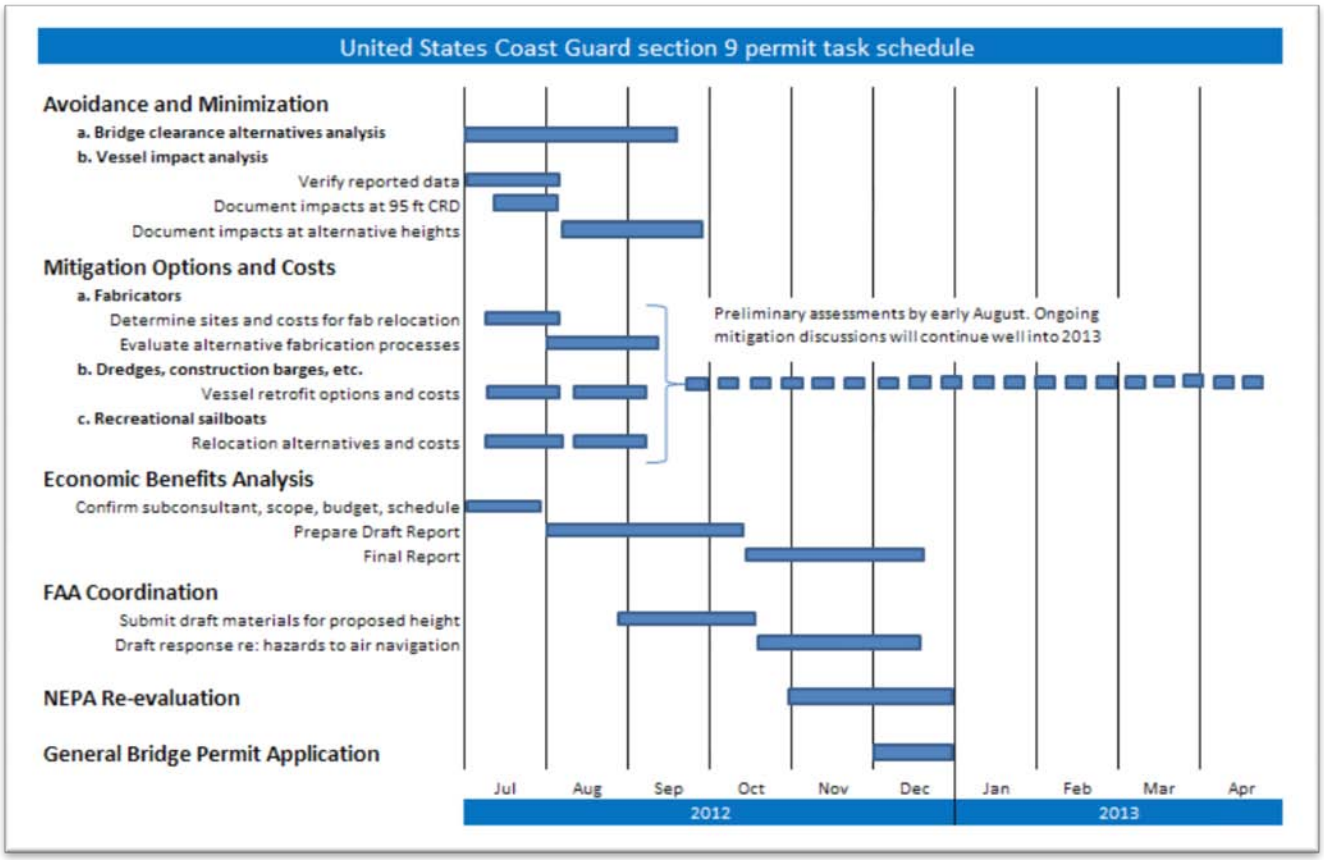
Key draft finding: To date, it appears that adding a lift span to the proposed deck truss bridge and alignment would result in a structure of unprecedented complexity with the associated technical challenges. A lift span would increase the cost of the project by approximately $250 million. The technical challenges of placing a lift span on the proposed bridge would require a re-evaluation of the bridge type, configuration, and alignment, which would also open up the project to additional environmental reviews and approvals and further costs associated with delay.

6. Outreach to fabricators and property owners (on-going).

- Project staff members have met with all three fabricators (Thompson Metal Fab, Greenberry, Oregon Iron Works).
- Discussions are underway to address the confidential use of proprietary information, and will start in the next several days to develop and analyze potential mitigation strategies.
- Industrial engineers (BergerABAM) and business economists (BST Associates) have been added to the technical staff to support the development and evaluation of mitigation strategies.

Schedule

In support of an anticipated start of bridge construction in 2014, it is the intent of the project to submit a permit application in late December 2012, with a goal to achieve a general bridge permit issued by the Coast Guard in mid to late 2013. We anticipate that mitigation discussions with potentially impacted river users will continue into 2013, and will need to be substantially completed prior to the Coast Guard completing action on the bridge permit.


United States Coast Guard section 9 permit task schedule
Avoidance and Minimization
a. Bridge clearance alternatives analysis
b. Vessel impact analysis
Verify reported data
Document impacts at 95 ft CRD
Document impacts at alternative heights
Mitigation Options and Costs
a. Fabricators
Determine sites and costs for fab relocation
Evaluate alternative fabrication processes
b. Dredges, construction barges, etc.
Vessel retrofit options and costs
c. Recreational sailboats
Relocation alternatives and costs
Preliminary assessments by early August. Ongoing mitigation discussions will continue well into 2013
Economic Benefits Analysis
Confirm subconsultant, scope, budget, schedule
Prepare Draft Report
Final Report
FAA Coordination
Submit draft materials for proposed height
Draft response re: hazards to air navigation
NEPA Re-evaluation
General Bridge Permit Application
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
2012
2013