

Hines, Maurice

From: Tiffany Couch [TCouch@acuityforensics.com]
Sent: Monday, October 24, 2011 10:15 PM
To: Columbia River Crossing
Subject: FEIS Comments

P-048-001 We have an opportunity at this point in time to call a time out to the CRC project and to put this project back on track. Traffic impediments in our area affect commerce and mobility.

The CRC Project Office purports that their current project will:

- Alleviate Congestion
- Improve Freight Mobility
- Improve Public Transportation (reliability, connectivity)
- Provide a Safer Crossing
- Improve bicycle and pedestrian access
- Improve seismic vulnerability

When you read the words on the immaculate reports that this office has created, they all *sound just right*. They *sound* exactly like the solutions most of us are looking for.

However, when one just simply scratches the surface, it becomes apparent that the words are just that....words. The work that has been performed by numerous experts (many of whom remain unpaid); has uncovered astounding anomalies in the work performed by the CRC Project Office. In fact, the body of work presented by outside experts causes one to realize that the "purpose and need" of this CRC project isn't being addressed at all.

From the start, there have been serious breakdowns in process:

P-048-002

- When an agency is charged with spending precious taxpayer dollars, mustn't that agency also have proper financial reporting? The CRC has no basic financial statements. In fact, reporting from their accounting system has uncovered problems reconciling total project expenditures.

P-048-003

- When an agency realizes a project must be completed using outside contractors, mustn't there be proper bidding, contracting, and payment processes and procedures? The CRC does not appear to have followed basic contracting principles. Why did only a single bidder submit qualifications? Why does it happen to be the same vendor who has been awarded all major

P-048-001

Significant work has gone into developing the CRC project, including an ongoing public involvement effort. The public involvement program includes numerous advisory groups to ensure that the values and interests of the community are reflected in project decisions. These groups include representatives of public agencies, businesses, civic organizations, neighborhoods, and freight, commuter and environmental groups. Feedback from the general public and advisory groups has been generally supportive of the project, including support for the transit, bicycle, pedestrian, highway, interchange, and financing elements of the project. See Chapter 2 (Section 2.7) of the FEIS for more discussion on the process used to develop project alternatives and select a Locally Preferred Alternative.

P-048-002

The project takes these charges very seriously. Recently the project has introduced new accounting measures and provides monthly updates on the project website. If there are specific financial data that you would like to review, please contact the project office.

P-048-003

Numerous other contractors work with both the Oregon and Washington DOTs. And, as the project prepares for the start of construction, new contractors will be selected, and the values of those contracts will, in fact, be larger than the contract for the alternatives analysis and environmental process. Much like with residential contracting (such as plumbers), the team that begins the work is often best able to complete the work and is most familiar with the data, related analyses, and negotiations among local agencies.

P-048-003 | contracts in recent Oregon and Washington history? Why does it happen to be the same vendor who also did all of the previous "I-5" studies for WSDOT?

P-048-004 |

- When an agency pays bills, shouldn't all expenditures be tracked in the appropriate fund? **The CRC has not tracked all expenditures of this project in a separate fund.** So far, we have traced over \$18M (of \$125M) in unknown expenditures. The CRC project office has provided us a white paper explaining to a Certified Public Accountant what a "journal entry" is; but has not provided any reporting to explain the purpose of the journal entries that effectively transferred expenditures from one fund into the "CRC Fund".

P-048-005 | The accounting anomalies we continue to uncover are truly astounding. But what is most astounding is the body of evidence produced by other experts who have pointed out significant issues with this project. When this many significant issues arise, governing bodies must call a time out, call attention to the issues, and work to solve them.

Other experts have pointed out the following:

- **The Rose Quarter Bottleneck**
 - The bottleneck at the Rose Quarter is currently (and will continue to be) a significant bottleneck on the I-5 Corridor. An independent study commissioned by the City of Portland (http://portlandtransport.com/documents/URS_CRC_Report_July_7_2010.pdf) as recently as 2010 indicates that southbound commuters will save 1 minute on their southbound commute. The primary cause of this is related to the bottleneck at the Rose Quarter...where traffic narrows to two through lanes and one dedicated exit lane.
- We've heard Ms. Boyd indicate that the CRC Project can't "fix everything" at once; however, there are NO PLANS to fix the Rose Quarter Bottleneck.

P-048-006 |

- **Bridge Design Issues**
 - The Independent Review Panel indicated that the bridge that had been planned for could not be built. <http://www.columbian.com/news/2011/feb/03/engineers-report-endorses-crossing-project/>

P-048-007 |

- Mr. Kevin Peterson, an expert on numerous international projects, has put forth a bridge design that could be built more safely and more cost-effective than the current project. Yet, the Project Office did not fully study this design (as required by NEPA).

P-048-004

The Columbia River Crossing project is a joint project of the Oregon and Washington state departments of transportation. ODOT and WSDOT provide financial accounting services and oversight for the project in compliance with applicable state and federal laws, regulations and policies. Expenditures on the CRC project by ODOT and/or WSDOT are tracked within department accounting systems using unique identifiers which allow for project specific reporting.

In response to public records requests, the project has worked with ODOT and WSDOT accounting and other offices to gather and provide complete project expenditures lists, contracts and invoices as specifically requested, as well as respond to questions about the data and information provided. There are no unknown expenditures. Journal vouchers are used to conduct accounting transactions between subsystems which interface with WSDOT's accounting system. Expense detail for any specific journal voucher is available and retained according to approved retention schedules by WSDOT. The project office uses software to manage the project day-to-day. This software is used to track project finances for project management purposes. Information in this software is reconciled with the accounting records of each state monthly.

P-048-005

The Oregon Department of Transportation (ODOT) completed Phase I construction of the I-5 Delta Park widening project in fall 2010. Phase I of the project involved widening I-5 and lengthening the entrance and exit ramps at Victory Boulevard and Columbia Boulevard. Phase II involves improving local streets and will begin when funding is secured. Phase I of the Delta Park project widened the current 2-lane segment of southbound I-5 to 3 lanes. There are currently no immediate plans to widen I-5 south of Delta Park. Neither the CRC project nor the Delta Park projects are intended to address the southbound traffic congestion that currently exists near the I-5/I-405 split. However, traffic analyses

P-048-007 | (Please contact me for white paper(s) submitted by Mr. Peterson over the last 18 months).

- **Financing Issues**

P-048-008 |

- Mr. Joe Cortright, an economist in Portland conducted an extensive study. His findings indicate that the Project Office has used significantly flawed assumptions AND out of date traffic studies, creating a potential \$500M revenue shortfall.
- Oregon State Treasurer's office commissioned a study by two separate experts who concurred.

- **Total Cost**

P-048-009 |

- Mr. Cortright points out that financing costs (interest, finance charges, etc.) have not been included in reports to the product. The costs could exceed \$2B.
- Operation and Maintenance Costs for the bridge, rail lines, and tolling facilities are NOT included in the price of the bridge.
- Total costs of the bridge, financing costs, and O&M costs, are estimated to exceed **\$10B**.
- Please contact me for Mr. Cortright's Study

- **Transit Issues**

P-048-010 |

- Light Rail Times from downtown Vancouver to downtown Portland will exceed CURRENT express bus lines and will exceed current single occupancy vehicle times. (By 15 to 20 minutes *per trip*).
- Light Rail has been voted down
- The Light Rail portion of this project is estimated to cost in excess of \$1 Billion
- Light Rail is highly subsidized and expensive
- Buses, BRT, and other options are less expensive!
- Please contact me for studies related to transit issues

- **Bidding and Contract Issues**

P-048-011 |

- Only a single vendor (David Evans) submitted a bid for this project
- The Call for Consultants indicate the EIS project will "exceed \$20M"
 - Funding available was just \$6 M
- Contract for \$50M is executed less than 90 days after call for consultants
 - Current Contract is slated at **\$105M**.

show the congestion at the split will not be worsened because of the Columbia River Crossing project. The main reason is that fewer cars are expected to cross the river with a project in 2030 than without a project. This is due to the provision of improved transit service and tolling.

Beyond the CRC and Delta Park projects, the I-5 Transportation and Trade Partnership Final Strategic Plan recommended a comprehensive list of modal actions relating to: additional transit capacity and service; additional rail capacity; land use and land use accord; transportation demand/system management; environmental justice; additional elements and strategies (such as new river crossings); and financing. RTC and Metro are tasked with initiating recommendations as part of their regional transportation planning role. Examples of current efforts include RTC's evaluation of future high-capacity transit in Clark County, and evaluation of needs for future river crossings. Regional planners have investigated solutions to existing bottlenecks at the I-5 connections with I-405 and I-84. ODOT is responsible for conducting ongoing studies to identify other congestion problems on I-5 in Oregon that may need to be addressed in the future.

P-048-006

The Bridge Expert Review Panel considered the suggestions from the Independent Review Panel, and recommended three bridge types to the project. The Selected Alternative includes one of those types, as discussed in Chapter 2 of the FEIS.

P-048-007

Mr. Peterson's proposal was considered. Please see the responses to his comments (P-029 and P-030).

P-048-008

The CRC project is subject to the same review and audit procedures as

P-048-012

- **Lack of Financial Statements and Accountability**
 - No financial statements for this project have been created
 - Data provided purporting to show 100% of all CRC expenditures does not reconcile to "Prolog" reports provided by the CRC project office.
 - Project office has refused and/or has been remiss in providing *basic* accounting data (contracts, invoices supporting payment, etc.)

P-048-013

- **Unclear Funding Sources**
 - The funds being used to pay for this single project could be better spent by "spreading the wealth" to various parts of the state where critical needs can be met
 - There is much uncertainty in the federal budget; will we even have funding for this project.
 - There is NO INFORMATION Provided as to who is going to bear the cost of any costs in excess of \$3.2B

P-048-014

At what point are the local leaders and decision makers going to say "Enough is Enough". I urge you to sit down with experts who are providing you with the warnings related to inefficiencies, and the anomalies associated with this project. I urge you to take a look at your funding. Is it prudent to spend all of our money in a single place, or might there be prudent alternatives to the current congestion situation here; yet enough dollars to spread to fix aging and failing areas along other trade routes in the States of Washington and Oregon?

Thank you for your consideration.

Best regards,
Tiffany

Tiffany R. Couch, CPA/CFF, CFE
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other projects under the authority of the lead agencies. Additionally, Governors Kitzhaber and Gregoire, and Oregon and Washington legislators, have made it clear that they will review every element of this project and provide oversight and accountability. The governors and legislative leaders are discussing the scope of interim legislative oversight committees. At Governor Kitzhaber's request, the Oregon State Treasurer conducted an independent review of the CRC's financing plan and released a report in July 2011. CRC incorporated the treasurer's recommendation in Chapter 4 of the Final EIS.

The traffic projections which have been called into question are the same traffic projections which are used for all growth management and infrastructure sizing efforts in the Metro area. In fact, the project is required to base its traffic projections on these local plans and studies. The potential for a slower-than-projected rise in trips has been considered. Even if the projections are high, the facility is intended to serve mobility needs for 100 years. Therefore, even if it takes an additional five or ten years to reach the projected levels, the facility has still been appropriately sized.

P-048-009

The FEIS Finance Chapter (Chapter 4) provides a table (Exhibit 4.4-3, page 4-18) with revenue sources and amounts to cover costs expected for four scenarios (LPA med; LPA high; LPA with highway phasing med; LPA with highway phasing high). These scenarios range in total revenue needed from \$3.2 - \$3.8 billion.

Mr. Cortright has included costs in his estimates which are not appropriate. The capital (construction) costs for a project should not include maintenance and operations costs, though these too are discussed in the Finance Chapter. Mr. Cortright's estimates include costs to rebuild the Rose Quarter area of I-5, which is not part of the CRC project.

"Whenever you see a successful business, someone once made a courageous decision." - Peter Drucker

P-048-010

The FEIS compares light rail transit travel time in year 2030 to bus rapid transit travel times in year 2030 and finds that light rail will offer a quicker trip than bus rapid transit. It is not applicable to compare future travel times (light rail) to existing conditions (express buses). Congestion on I-5 will increase as more vehicles travel on the highway, therefore increasing the travel times of express buses, which use standard traffic lanes.

Light rail has been endorsed by every local Sponsoring Agency (Vancouver City Council, C-TRAN, RTC, Portland City Council, TriMet, and Metro), whose boards include elected leadership from throughout the area.

Annual light rail passenger trips crossing the I-5 bridge in 2030 are projected to be 6.1 million, with daily ridership around 18,700. The travel time for the morning commute by light rail between downtown Vancouver and Pioneer Square in downtown Portland will be approximately 34 minutes. Light rail would travel on a dedicated right-of-way, with more reliable travel times than auto drivers dealing with unpredictable road conditions, traffic congestion, and parking challenges.

The CRC project planning for light rail incorporates and supports the principles of Vancouver's City Center Vision Plan. Downtown Vancouver has seen recent growth in higher density mixed use projects from three to 12 stories in height. In addition, another 4,000 downtown condominiums are proposed or pending as part of new developments. The core of Vancouver has, along with many of the larger corridors such as Fourth Plain Blvd, medium to high density residential development and an urban mix of uses. Transit demand in these areas is quite high, and ridership will increase with the introduction of light rail.

As described in Chapter 3 (Section 3.1) of the DEIS, the operations and

maintenance (O&M) costs associated with light rail (LRT) would be less than those associated with bus rapid transit (BRT), largely because LRT operates on electricity while BRT is dependent on the volatile fuel market. LRT costs approximately \$3.50, or 31%, less than BRT, per incremental rider when comparing both capital and operating costs.

Long-term operation and maintenance of the new light rail line will be funded through C-TRAN and TriMet. For its share of the operations and maintenance funding, C-TRAN plans on having a public vote.

P-048-011

Past financial performance is an important issue but is not relevant to the NEPA review process. The Record of Decision concludes the NEPA analysis. It indicates which alternative has been selected by the federal government, and allows for the continued design, eligibility for federal funding and permitting, and eventual construction of that alternative. The Locally Preferred Alternative is supported by local, regional, state, and federal agencies and has been selected following an exhaustive analysis and public involvement program.

The project takes the issues of financial management very seriously. Project staff have provided you with considerable records and reports and has responded to your inquiries. The project is currently developing new financial reporting mechanisms and has started providing monthly reports on the internet. The project will continue to work with the public to improve transparency and an understanding of the resources required for an undertaking of this scale.

The contracting process and any increases in contracting limits includes oversight by the project directors, WSDOT headquarters and legal counsel. The procurement process that resulted in selection of a General Engineering Consultant for the CRC project was open and competitive.

Contracting limits with the selected General Engineering Consultant (GEC) have been increased over time due to a variety of factors. WSDOT's contracting limit is \$50 million to allow the agency to assess if work is being conducted well and provides the best value before increasing the contract limit. Funds cannot be committed to a contract or agreement before they have been allocated. At the beginning of the NEPA phase, when the consultant agreement was initially executed, there were many unknowns – including the number of alternatives to be studied. As a result, the entire scope of the project was unknown increasing the need for contract changes over time.

P-048-012

Please see the responses to your similar comments above.

P-048-013

As the only continuous north-south Interstate on the West Coast connecting the Canadian and Mexican borders, I-5 is vital to the local, regional, and national economy. The I-5 crossing also provides the primary transportation link between Vancouver and Portland, and the only direct connection between the downtown areas of these cities. As described in the DEIS, serious problems face this important crossing, including growing congestion, impaired freight movement, limited public transit options, high auto accident rates, substandard bicycle and pedestrian facilities, and vulnerability to failure in an earthquake. The fact that other important issues face our communities does not diminish the importance of addressing the problems plaguing the I-5 crossing.

CRC assumes funds allocated to other projects would remain dedicated to those projects, and anticipates needing to find new funds to finance the project. Funding for the project will come from a variety of sources including federal grants that would not be available to other transportation projects in the region, State of Oregon, State of Washington, and regional and local sources. In addition, it is assumed

that the replacement bridge will be tolled. Please refer to Chapter 4 of the FEIS for a description of the current plans for funding construction and operation of the LPA.

P-048-014

There has been considerable input from independent experts and the project has made changes based on that input, as discussed in Chapter 2 of the FEIS. Please see the responses to your comments above.

Hines, Maurice

From: Dan Coursey [ascente@comcast.net]
Sent: Sunday, October 23, 2011 9:35 PM
To: Columbia River Crossing
Subject: CRC Project Feedback -- NO ON LIGHT RAIL

Dear Sirs:

P-049-001 You are trying to shove Light Rail down the throats of Clark County, even though we have been exceedingly clear in telling you we don't want it here. Three times Clark county has voted this down and here you are trying to make and end-run around us by manipulating some of the local politicians.

Those politicians are going to pay a price at the voting booth for what they are doing. We have a long memory.

P-049-002 In the meantime, when Initiative 1125 (tolling prohibitions) pass in Washington State you can be assured you were responsible. Also when Proposition-1 in Clark County, for increasing the tax rate for C-Tran bus transit fails miserably, you again can be assured you were responsible. We continue to petition our Federal representatives and State representatives to deny any funding for the CRC as long as it includes Light Rail. We don't like bullies in Clark county.

Sincerely,

Daniel and Margaret Coursey
4842 Dr Eldridge Drive
Washougal, Washington

P-049-001

Light rail has been endorsed by every local Sponsoring Agency (Vancouver City Council, C-TRAN, RTC, Portland City Council, TriMet, and Metro), whose boards include elected leadership from throughout the area.

Annual light rail passenger trips crossing the I-5 bridge in 2030 are projected to be 6.1 million, with daily ridership around 18,700. The travel time for the morning commute by light rail between downtown Vancouver and Pioneer Square in downtown Portland will be approximately 34 minutes. Light rail would travel on a dedicated right-of-way, with more reliable travel times than auto drivers dealing with unpredictable road conditions, traffic congestion, and parking challenges.

The CRC project planning for light rail incorporates and supports the principles of the Vancouver's City Center Vision Plan. Downtown Vancouver has seen recent growth in higher density mixed use projects from three to 12 stories in height. In addition, another 4,000 downtown condominiums are proposed or pending as part of new developments. The core of Vancouver has, along with many of the larger corridors such as Fourth Plain Blvd, medium to high density residential development and an urban mix of uses. Transit demand in these areas is quite high, and ridership will increase with the introduction of light rail.

Long-term operation and maintenance of the new light rail line will be funded through C-TRAN and TriMet. For its share of the operations and maintenance funding, C-TRAN plans on having a public vote.

P-049-002

The tolling initiative failed and the Transit funding proposition passed.

Tom Dana
1501 N Hayden Island Dr #110
Portland, OR 97217
ThomasHDana@gmail.com
503-954-9217

October 22, 2011

Heather Wills
Columbia River Crossing
700 Washington Street, Suite 300
Vancouver, WA 98660

re: FEIS Comments

Greetings,

P-050-001

To begin I want to express my support for LPA Option A. A new bridge is necessary to alleviate the traffic congestion of the current I-5 bridge.

Currently life on the Island is very relaxing and easy going with a small town feel to it. Except for the traffic rush during the November/December shopping season the Island is easy to get around. But this will change starting with the construction of the new bridge.

The loss of Safeway, our full service grocery store on the Island is not being fully replaced by the new Target store which will only have partial fresh meats, fruits, and vegetables. And at present it doesn't look like the mall will lease to another full service grocery store. We are losing our only gas station. We are losing our car wash. We are losing one of our two banks. We are losing most of our low cost restaurants. The central part of the Island will change from easy driving with few traffic lights to stop and go driving with traffic lights and restricted turn lanes. The Island will be split in two by a massive interchange of on-ramps and off-ramps for both the Island and the Marine Drive interchange. The Hayden Island Plan's area for local commercial is being covered by storm water runoff ponds. The Manufactured Home Community is an Environmental Justice Community and this is not recognized in the FEIS. The Island will endure 5 to 10 years of construction and disruption to our community and the ensuing noise, difficulty getting around, dust pollution, air pollution, and loss of businesses will take its toll on our community.

With varying degrees of satisfaction most of these losses are touched upon in the FEIS, but what is not dealt with at all is the gestalt of the whole devastating package put together. And there is no mitigation specified for this whole package.

To this end a community enhancement fund would be a first step towards mitigating the whole package. One possibility is to have a community center for the Island which during construction would provide information about road closers and provide assistance to the elderly and mobility challenged. One suggestion from the transit consultant Greg Baldwin was to have some of the community enhancements completed at the start of construction so that we could feel something of the project completion ahead of time. A possibility for this would be a pocket park with a construction viewing area so we could watch the construction in progress. Also some of the retail around the transit station could be arranged at the start of construction. A possibility here would

P-050-001

In the last three years the CRC project team, the Project Sponsors Council, and CRC advisory groups have focused on incorporating a wide range of community enhancements into the project. The project has looked for ways to leverage the highway and transit investments into additional improvements for project neighbors and local communities. These improvements are beyond the benefits identified as the project's purpose and need. These tangible improvements include new local roads and improved local flow and connections for Hayden Island residents; better bike and pedestrian access to the improved facilities; new bike and pedestrian trails; and a separate bridge for local auto access from North Portland to Hayden Island. We know there is more to be done. The CRC remains committed to aggressively maximizing and leveraging resources to bring additional benefits and improvements to our community.

Two options have been identified for further exploration; both include a financial set-aside of a specific amount dedicated to a specific purpose. One approach is a project-specific community enhancement fund. There is some history with such an approach - the Delta Park 1-5 widening project (2006) and Metro's solid waste program (1991) are two examples. The other approach is a different concept, a regional fund established by the state to benefit the neighborhoods and communities in close proximity to 1-5 and the CRC project. Both approaches have been successfully implemented in the Portland region and will help inform this effort. We need to be clear about both of these approaches - neither will be easy. Both approaches have limitations and legal restrictions associated with anticipated funding sources. Both will require legislative support. Both will likely need enabling legislation and both will require funding.

P-050-001 | be food carts which would serve both the construction personnel as well as the local residents and Island visitors.

A community enhancement fund which does as much as is possible at the start of construction will go a long way towards easing the 5 to 10 year negative impact of the project.

Thank you

Tom Dana

Hines, Maurice

From: mw.durrell@comcast.net
Sent: Monday, October 24, 2011 10:19 PM
To: Columbia River Crossing
Subject: CRC - Environmental impact concern

- P-051-001** | My concern relates to the impact on environment by spending billions on the CRC with such a low return.
- P-051-002** | I-5 traffic has not increased as projected.
- P-051-003** | Light rail is light capacity and does little to reduce traffic.
- P-051-004** | The costs and impact of CRC on businesses are immense.
- P-051-005** | This project will spend billions of borrowed money and disrupt the environment for no good reason.

Mark Durrell
Camas, WA

P-051-001

As the only continuous north-south Interstate on the West Coast connecting the Canadian and Mexican borders, I-5 is vital to the local, regional, and national economy. The I-5 crossing also provides the primary transportation link between Vancouver and Portland, and the only direct connection between the downtown areas of these cities. As described in the DEIS, serious problems face this important crossing, including growing congestion, impaired freight movement, limited public transit options, high auto accident rates, substandard bicycle and pedestrian facilities, and vulnerability to failure in an earthquake. The fact that other important issues face our communities does not diminish the importance of addressing the problems plaguing the I-5 crossing.

CRC assumes funds allocated to other projects would remain dedicated to those projects, and anticipates needing to find new funds to finance the project. Funding for the project will come from a variety of sources including federal grants that would not be available to other transportation projects in the region, State of Oregon, State of Washington, and regional and local sources. In addition, it is assumed that the replacement bridge will be tolled. Please refer to Chapter 4 of the FEIS for a description of the current plans for funding construction and operation of the LPA.

P-051-002

Traffic forecasts reported in the DEIS and used to inform decisions on a locally preferred alternative were derived from adopted regional employment and population forecasts and state-of-the-art modeling and evaluation conducted by Metro, RTC and the project team. These traffic forecasts were reviewed by all project sponsor agencies as well as FTA and FHWA. In addition, an independent panel of traffic modeling experts was convened in October 2008 to review the modeling methods and findings. These experts concluded that the project's approach to estimating future travel demand was reasonable and that it relied on

accepted practices employed in metropolitan regions throughout the country. These findings are summarized in the “Columbia River Crossing Travel Demand Model Review Report” (November 25, 2008). This independent review confirmed the approach CRC modeling used to address multiple variables that can affect travel demand, including gasoline prices, tolling, travel demand measures, and induced development.

P-051-003

Light rail has been endorsed by every local Sponsoring Agency (Vancouver City Council, C-TRAN, RTC, Portland City Council, TriMet, and Metro), whose boards include elected officials from throughout the area.

Annual light rail passenger trips crossing the I-5 bridge in 2030 are projected to be 6.1 million, with daily ridership around 18,700. The travel time for the morning commute by light rail between downtown Vancouver and Pioneer Square in downtown Portland will be approximately 34 minutes. Light rail would travel on a dedicated right-of-way, with more reliable travel times than auto drivers dealing with unpredictable road conditions, traffic congestion, and parking challenges.

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Long-term operation and maintenance of the new light rail line will be

funded through C-TRAN and TriMet. For its share of the operations and maintenance funding, C-TRAN plans on having a public vote.

P-051-004

The impacts of the proposed project on businesses are discussed in Section 3.4 of the FEIS. While there will be commercial displacements and other impacts, it is presumed that the investment in infrastructure will directly benefit the local and regional economy in many ways.

P-051-005

The FEIS discusses the reasons for the proposed action (Chapter 1) and discusses the environmental impacts (Chapter 3), which include adverse as well as beneficial impacts.

From: John Eichler [mailto:Eichler4@comcast.net]
Sent: Friday, September 16, 2011 8:29 AM
To: Columbia River Crossing
Subject: Question on design of bridge

P-052-001 | Is it not possible to make this a 2 deck bridge doubling the lanes heading in each direction? I do realize this would require a significant build-out of the freeways, and create an issue with merging lanes eventually, but has it been looked at?

P-052-001

The project has evaluated alternatives with up to, but not more than, 6 lanes in each direction across the bridge, and the selected alternative would build 5 lanes in each direction. The selected alternative also has a double deck bridge (two parallel structures) with highway lanes on the 2 top decks and light rail transit and a pedestrian and bicycle path underneath. The project has looked at stacked highway lanes, as Mr. Eichler suggested. However, aviation and navigation constraints would require the facility to land further from the Columbia River, perhaps missing Hayden Island, and would add significant costs.

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 10:19 AM
To: Columbia River Crossing
Subject: Comment on FEIS

Categories: Red Category

Greetings,

P-053-001 | I'm really concerned that the present CRC proposal is wrong, and a huge waste of money we don't have.

The project claims it will alleviate congestion, which is difficult to understand. If you ever use the Portland freeway system you will know that there are numerous congestion points regionwide. If the CRC enables more traffic to enter the system, it will aggravate travel for everyone in the region. Congestion, air pollution, greenhouse gases will all soar. The FEIS ignores this, by limiting study to arbitrarily defined "project limits".

P-053-002 | If, on the other hand, the CRC limits traffic (by tolls/congestion pricing) to existing levels or less, to maintain free flow on I-5, then why do we need to spend \$4.0 billion on a new bridge ?

P-053-003 | A supplementary bridge could provide relief to the existing bridge at a fraction of the cost.

I think we should stop the present waste of tax money, and devise a solution that is cost effective, and consistent with the real needs of the 21st century.

Gerald Fox

P-053-001

The proposed new add/drop lanes (i.e., lanes that connect two or more interchanges) are used to alleviate safety issues associated with the closely spaced interchanges in the project area and are not designed to increase capacity generally on I-5. 68 to 75% of I-5 traffic enters and/or exits I-5 within the CRC project area, and these add/drop lanes provide space for this traffic to do so without disrupting cars and trucks traveling to destinations further north and south of the project area. The project does not propose to add lanes north or south of the project limits.

The DEIS evaluation found that the project, with a toll and light rail, would actually reduce the total daily volume of traffic using the I-5 and I-205 river crossings by approximately 3%. The FEIS analysis of the project has been updated to include an evaluation of how the CRC project would affect Vehicle Miles Traveled (VMT) (see Chapter 3, Section 3.1). Rather than inducing sprawl, the CRC project will likely reinforce the region's goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and development patterns. In 2010, Metro ran the MetroScope model (an integrated land use and transportation model) to forecast growth associated with transportation improvements of a 12-lane river crossing and light rail to Clark College. The model showed only minimal changes in employment location and housing demand compared to the No-Build. For more information see FEIS Chapter 3, Section 3.4.

Though there are numerous congested areas in the region, this area has been identified by many agencies as requiring a comprehensive solution.

P-053-002

While tolls and the extension of high capacity transit will reduce the demand for the Interstate river crossing, demand and throughput on the bridge will certainly increase. Alternatives which did not replace the

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 10:31 AM
To: Columbia River Crossing
Subject: CRC

Categories: Red Category

Hi,

P-053-004 | I'm a retired transportation engineer, and I've been following the CRC project with a growing sense of dismay and foreboding. Seems it's all about building a big new bridge, regardless of cost, and not about solving the problems identified in the Purpose and Need in a manner appropriate to our region, and the transportation needs of the 21st century.

P-053-005 | We already have 14 freeway lanes across the Columbia River. The CRC project would give us 18 lanes, at a cost of \$4.0 billion. The project never considered an alternative emphasizing Alternative Transportation, which is the main goal of transportation planning everywhere else in the region. The committees selecting alternatives were stacked to support the "Big Bridge" cause, and dissent was ignored or suppressed. Some staff were reportedly threatened !!

P-053-006 | The existing bridge has already had one seismic retrofit, and is in better condition than many other highway bridges. What a waste of public money to tear it down when a supplementary bridge could relieve congestion at far less cost, and far fewer negative consequences.

Gerald Fox

bridge and increase capacity fail to satisfy the adopted Purpose and Need for the project.

Following the selection of the LPA in July of 2008, the CRC Project Sponsors Council (PSC) was developed to provide recommendations to the project on a variety of issues, including the number of add/drop lanes over the river crossing. Over the course of several months, PSC was provided with operational characteristics and potential environmental impacts of 8-, 10-, and 12-lane options. Technical evaluation criteria included, but were not limited to, traffic safety, congestion, traffic diversion onto local streets and I-205, regional vehicle miles travelled, transit ridership, regional economic impact, effects to neighborhoods and protected species and habitats. In addition to the technical information, PSC received input from CRC advisory groups and reviewed public comment submitted to the project and obtained during two public Q&A sessions in January 2009 regarding the number of lanes decision, as well as hearings conducted by Portland City Council and by Metro Council. In August 2010, the PSC voted unanimously to recommend that the replacement bridges be constructed with 10 lanes and full shoulders. For more information regarding the number of lanes decision making process, see Chapter 2 (Section 2.7) of the FEIS.

P-053-003

A supplemental bridge was studied in the EIS. See Chapter 2 of the FEIS, as well as the Record of Decision, for a discussion of why a supplemental bridge is not part of the preferred alternative.

P-053-004

Many ideas involving low investment in highway alternatives were considered during the early evaluation of alternatives. See Chapter 2 of the FEIS. In the DEIS and FEIS, Alternatives 4 and 5 put much more emphasis on high capacity transit and TSM/TDM and much less on highway improvements. These alternatives had only one new auxiliary

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 10:37 AM
To: Columbia River Crossing
Subject: CRC

Categories: Red Category

P-053-007

The CRC project makes much of the "Trade Corridor" from Canada to Mexico, on which the CRC is supposedly a barrier and embarrassment. Except that it isn't. Through traffic on I-5 is routed onto I 205 around Portland, because I-5 through Portland has numerous choke points. The CRC is only one of them, and the source of only a small percentage of the daily freeway delays in Portland. If the CRC is built, through traffic will still be routed round I-205, because there will still be no more capacity at all the other choke points, regardless of how many lanes there are on the \$4.0 billion bridge.

I haven't seen this disclosed anywhere.

Gerald Fox

lane in each direction across the river, had double the HCT service levels, and had higher highway tolls. Modeling indicated significantly worse congestion with these alternatives and only slightly better transit ridership. Transit cost effectiveness was much poorer for these alternatives than for the other build alternatives in the DEIS.

P-053-005

Multiple methods have been used to engage the public so as to address the needs of a wide variety of people in the project decision-making process. Public feedback has helped guide the outreach effort. Examples include workshops with facilitated small-group discussions, open houses where participants can talk one-on-one with staff, public hearings, presentations and discussions at community and neighborhood-sponsored meetings (often at the group's request), and advisory group meetings where CRC seeks recommendations from a citizen committee. These events and meetings have taken place at a variety of locations, days of the week, and times of the day to meet the needs of the entire community. For more information on the project's public outreach, please see Appendix B (Public Involvement) of the FEIS.

P-053-006

The supplemental river crossing would not substantially improve congestion over No-Build, would maintain some substandard and unsafe design features, and would not be substantially cheaper to construct than a replacement river crossing, as originally believed. See the discussion of seismic safety issues of the existing bridges in the following reports available through CRC: Columbia River Crossing, Panel Assessment of the Interstate Bridges Seismic Vulnerabilities, December 2006; DGES Inc., ODOT - Interstate 5 Bridges over Columbia River Seismic Evaluation of Lift Span Unit, December 1994; DGES Inc., ODOT - Interstate 5 Bridges over Columbia River Seismic Retrofit of Truss Span Pier Foundations Conceptual Design and

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 10:43 AM
To: Columbia River Crossing
Subject: CRC

Categories: Red Category

P-053-008

The CRC project claims it will cut congestion, which will reach 15 hours a day if we don't build the Big Bridge.. Which is odd, because there is nowhere for any more peak hour traffic to go. According to Metro, Light Rail is supposed to carry 37% of peak hour trips across the bridge by 2030. And I-5 will presumably carry pretty much what it carries today, at least beyond Columbia Boulevard.

So why not just build a supplementary bridge to relieve I-5, to carry local traffic, transit, and bikes at far less cost, and with far less environmental damage?

Gerald Fox

Estimate, February 1995; DGES Inc., ODOT - Interstate 5 Bridges over Columbia River Seismic Retrofit of Truss Span Bearings Conceptual Design and Estimate, March 1995.

P-053-007

The Vancouver-Portland region is a trade hub, acting as a gateway and distribution center for domestic and international markets. The region has become a trade hub, in large part, because of its direct access to the freeway system, navigable rivers, rail lines, and international air shipping. The region's continued competitiveness as a trade hub is dependent on the ability to efficiently move freight on and between these transportation facilities. Though I-205 is a convenient, cost-effective route for some freight trips, it cannot replace the role of I-5 as a freight route. For many freight trips, I-205 would be out of direction, adding to travel time and shipping costs. In addition, trucks will travel on I-5 because it is shorter and faster than I-205. In 2005, the I-5 Interstate Bridge carried approximately 3,240 more trucks per day or 42 percent more than the I-205 Glenn Jackson Bridge. Trucks try to avoid congestion and travel during uncongested periods, and because the travel distance on I-5 from junction to junction is only 19.3 miles compared to 25.5 miles on I-205, trucks will travel on I-5. Increased shipping costs can have a significant impact on the overall costs of doing business in our region, making us less competitive and threatening our status as a trade hub.

P-053-008

By 2030, the region's population is expected to increase by one million people. This increase will result in more people needing to travel between home, work, school, recreation, etc. In 2005, 135,000 vehicles crossed the Columbia River on the Interstate Bridge each weekday, which led to 4-6 hours of congestion. By 2030, 184,000 vehicles are predicted to cross the river each weekday, which would lead to 15 hours of daily congestion if no action is taken.

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 10:52 AM
To: Columbia River Crossing
Subject: CRC

Categories: Red Category

P-053-009

The CRC is said to reduce air pollution, greenhouses gases, and congestion, compared to the **No Build** alternative.

Unfortunately for the region and the local taxpayers, the Project manipulated the process to avoid studying an alternative based on Alternative Transportation. For instance of the 5 alternatives studied in exhaustive detail, two were simply using bus transit instead of rail for the purpose of distracting study participants, and claiming that surely 5 alternatives were enough. Of course an Alternative Transportation alternative would have accomplished the project "Purpose and Need" with less impacts, and a fraction of the cost, undermining the DOTs desire to build a really big bridge!

Time to stop this nonsense, and fix the disastrous proposals now before us.

Gerald Fox

Congestion occurs when vehicle demand is greater than a transportation system's capacity. It results in slower speeds and increased travel times. CRC defines congestion as vehicles traveling less than 30 mph. The Columbia River Crossing project uses information gathered from Metro's nationally-recognized travel demand models to determine the project's effect on congestion. These models predict trip frequency, types or modes of transportation, destination, and time of day. Transportation planners use these models to analyze the effects of such factors as increased population and employment, transportation improvements, and new developments on the transportation system.

Based on the Metro model's past ability to predict transportation effects, the CRC project is confident in the data received from Metro and uses it to determine what impact the project will have on congestion. The improvements proposed by the project to the highway and seven interchanges will help better accommodate increased future vehicle traffic. New auxiliary lanes and longer on/off ramps will allow safer and more efficient merging and weaving to enter or exit the freeway. Narrow lanes and shoulders will be widened to current standards. Shoulders will be added where they are currently missing. All of these changes will improve the flow of traffic in the bottleneck area of the Interstate Bridge.

Issues related to a supplemental bridge are addressed above.

P-053-009

See response to the comment above regarding the problems with the proposals that relied mostly or solely on alternative transportation to address the multiple transportation needs in the project area.

Hines, Maurice

From: Gerald Fox [gdfox@q.com]
Sent: Thursday, October 20, 2011 11:03 AM
To: Columbia River Crossing
Subject: CRC

Categories: Red Category

P-053-010 | The CRC is supposed to generate thousands of much-needed jobs. Originally 20,000 jobs were claimed, but when that was challenged, the number became 2,000. And that doesn't count the hundreds of jobs lost because the project will destroy numerous businesses in Vancouver and Hayden Island. And that assumes the project will actually survive legal challenges, lack of money, and eventually the ballot box, and get built.

P-053-011 | Many well informed critics have advocated an alternative based on Alternative Transportation principles. This will of course generate many jobs, as well as reduce the jobs lost through business destruction. And because such an approach will include several components, such as an improved railroad bridge, and a supplementary street bridge, it will likely come to construction sooner.

And because the Alternative Transportation alternative will cost less, it won't suck up all the available discretionary funds (and the jobs they could generate) elsewhere in the states of Oregon and Washington.

Let's get past this inappropriate project, and get on with something the will relieve congestion, and actually get built.

Gerald Fox

P-053-010

It is fairly standard to express projected employment from capital investments in terms of "job years". The early CRC estimate that it would generate about 20,000 jobs (job years) has not changed. What has changed is that the estimate has been broken down into the number of estimated full time employees per year (jobs per year) rather than the total number of job years for the full duration of project construction.

P-053-011

See responses above regarding alternative transportation proposals.

Hines, Maurice

From: Dennis Ghormley [dennis.ghormley@comcast.net]
Sent: Monday, October 24, 2011 5:28 PM
To: Columbia River Crossing
Subject: Fiscal Accountability

P-054-001

There should be a transparency in the fiscal accountability on this CRC and any public project. From what I have been able to determine, transparency is no where to be found!

Dennis Ghormley

P-054-001

The project is willing to meet and discuss detailed questions. The project can also send detailed financial information if requested.

Hines, Maurice

From: halverbk@comcast.net
Sent: Sunday, October 23, 2011 8:58 PM
To: Columbia River Crossing
Subject: Comment from CRC Submit Comments Page

From: Brad Halverson
E-Mail: halverbk@comcast.net
Comment or Question:

P-055-001

Thank you for completing the EIS! I endorse the modifications that have occurred since the DEIS was published. I do hope that if construction of some elements is deferred that their priority will be reassessed at that time so the problems left by their deferral will be dealt with in a logical progression.

Sincerely,

Brad Halverson
CRC Task Force member

P-055-001

If some elements of the project need to be phased, those decisions will include consideration of the timing of benefits and the effects that would have.

Hines, Maurice

From: Daniel Hoyer [lunch.rider@gmail.com]
Sent: Monday, October 24, 2011 4:48 PM
To: Columbia River Crossing
Subject: CRC

P-056-001

I want to add my voice to the people commenting on this project.
The EIS is flawed
The basic premis of the need for a new and larger bridge is flawed
Just build a simple bridge to Jansen Beach for non freeway traffic and TOLL the existing bridge

Daniel Hoyer

Portland

P-056-001

The transportation needs that the project addresses are described in Chapter 1 and further explained in Section 3.1 of the FEIS. The idea Mr. Hoyer mention was considered during CRC project evaluation and screening, as summarized in Chapter 2 of the FEIS.

Hines, Maurice

From: david4466@gmail.com
Sent: Tuesday, October 25, 2011 12:31 AM
To: Columbia River Crossing
Subject: Endorsed Tolling for I-205 & I-5 and LRT



Hello

P-057-001 | I write in strongly endorsed for Tolling systems in I-205 and I-5 and Light Rail route. I felt that I-205 and I-5 should installed tolling system, so it helps paying to federal and WA/OR Department of Transportation funds. I do urge supporting tolling system should start in 2012 or later 2013 ?

P-057-002 | In a supporting action for a light rail should extend from Expo Center to Hyden (spelling, you fix my spelling) Island - Jantzen Beach station to Vancouver, WA that keeps on TRIMET plans stays, please not cancel light rail route.

P-057-003 | Let me know about when do tolling starts operation?
P-057-004 | I do not sure about tolling installs on I-205 & I-5 bridges? Otherwise, I support both of toll bridges. Let me know more specific dates, so I found construction starts on 2013 which first of January 2013 or early spring 2013?

I recommend old bridges moves to Grand route in Vancouver connects to Grand route in Portland on Columbia Rivers (low speed like transit, others). Pass to City of Vancouver/City of Portland recommendation addresses.

Sincerely,
David Johnson

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P-057-001

Tolling I-205 is not part of this project, but could be implemented separately. With few exceptions, federal statutes do not permit tolling of an existing interstate highway without associated improvements. FHWA does have pilot programs that allow state departments of transportation to apply for approval to toll a facility.

Some form of tolling prior to constructing CRC may be implemented. The ultimate decision on any tolling options will be made by both the Washington and Oregon Transportation Commissions.

P-057-002

The LPA includes light rail from Expo Center to a terminus near Clark College in Vancouver, with a station on Hayden Island.

P-057-003

Regarding tolling I-205, please see P-057-001.

Modeling has indicated that tolling I-5 without making the improvements that are part of the CRC project would not meet the project's Purpose and Need. This does not mean that some form of tolling prior to constructing CRC couldn't be implemented. The ultimate decision on any tolling options will be made by both the Washington and Oregon Transportation Commissions.

P-057-004

Construction is expected to start in late 2013. See Chapter 2 of the FEIS for additional discussion of the expected construction schedule. The project will actively seek ways to reuse the existing bridges. However, because they include a lift span which impedes river navigation, they may not be used nearby. A separate analysis will start after the Record

of Decision is published, and there will be many alternate uses considered for the bridge.

-----Original Message-----

From: lesliejerryg@aol.com [<mailto:lesliejerryg@aol.com>]

Sent: Monday, September 26, 2011 9:46 AM

To: Columbia River Crossing

Subject: Comment from CRC Submit Comments Page

From: Jerry Leslie

E-Mail: lesliejerryg@aol.com

Comment or Question:

P-058-001 | What is being done about the I-5 near the Rose Quarter. Untill this bottleneck is undone there should'nt be an improvement to make a bigger PROBLEM.

P-058-001

The Oregon Department of Transportation (ODOT) completed Phase I construction of the I-5 Delta Park widening project in fall 2010. Phase I of the project involved widening I-5 and lengthening the entrance and exit ramps at Victory Boulevard and Columbia Boulevard. Phase II involves improving local streets and will begin when funding is secured. Phase I of the Delta Park project widened the current 2-lane segment of southbound I-5 to 3 lanes. There are currently no immediate plans to widen I-5 south of Delta Park. Neither the CRC project nor the Delta Park projects are intended to address the southbound traffic congestion that currently exists near the I-5/I-405 split. However, traffic analyses show the congestion at the split will not be worsened because of the Columbia River Crossing project. The main reason is that fewer cars are expected to cross the river with a project in 2030 than without a project. This is due to the provision of improved transit service and tolling.

Beyond the CRC and Delta Park projects, the I-5 Transportation and Trade Partnership Final Strategic Plan recommended a comprehensive list of modal actions relating to: additional transit capacity and service; additional rail capacity; land use and land use accord; transportation demand/system management; environmental justice; additional elements and strategies (such as new river crossings); and financing. RTC and Metro are tasked with initiating recommendations as part of their regional transportation planning role. Examples of current efforts include RTC's evaluation of future high-capacity transit in Clark County, and evaluation of needs for future river crossings. Regional planners have investigated solutions to existing bottlenecks at the I-5 connections with I-405 and I-84. ODOT is responsible for conducting ongoing studies to identify other congestion problems on I-5 in Oregon that may need to be addressed in the future.

Hines, Maurice

From: Doug Mabry [doug@mabry.org]
Sent: Monday, October 24, 2011 9:48 PM
To: Columbia River Crossing
Subject: feedback

P-059-001

How will businesses be re-imbursed for lost revenue during the building project?

P-059-001

Businesses will not be reimbursed for lost revenues, but any business that would be directly displaced would be provided with financial and other relocation assistance. The project will also work with businesses located near construction to support their continued viability. This is discussed in the FEIS, Section 3.4.

Hines, Maurice

From: Doug Mabry [doug@mabry.org]
Sent: Monday, October 24, 2011 9:50 PM
To: Columbia River Crossing
Subject: feedback

P-059-002

What is the impact of repairing the existing structure so it will last for another 50 years?

P-059-002

As documented in the Panel Assessment of Interstate Bridges Seismic Vulnerabilities Technical Report (2006), it was determined necessary for any CRC project alternatives that reused the existing I-5 bridges to also seismically retrofit those bridges. The DEIS analyzed a Supplemental River Crossing as a component of two out of the five alternatives studied.

A Supplemental River Crossing, which would retain and seismically retrofit the existing bridges for northbound traffic and add one new bridge to the west for southbound traffic, was not chosen as a part of the Locally Preferred Alternative by the local sponsor agencies. This decision was informed by the DEIS, which found, among other things, that the Supplemental River Crossing would not substantially improve congestion over No-Build, would maintain some substandard and unsafe design features, and would not be substantially cheaper to construct than a replacement river crossing, as originally believed. In addition, the Supplemental crossing could worsen marine navigation by retaining the existing piers, and adding a new set of structures in the water with the new bridge. The US Coast Guard informed the project in a letter dated January 26, 2006, that "retention of one of the existing bridges for travel off Interstate 5 would at best maintain the same degree of difficulty to vessels, especially downbound tows. For that reason I would also not recommend such a plan..."

Although the Supplemental River Crossing would improve the seismic safety of the existing bridges, these findings indicate that it did not meet the project's Purpose and Need as effectively as the Replacement River Crossing. A supplemental bridge that only includes improvements for transit and/or bicycles and pedestrians also does not meet the CRC project's Purpose and Need. As described in Chapter 1 of the DEIS, the project's Purpose and Need "was developed by relying on previous

planning studies, solicitation of public input, and coordination with stakeholder groups."

Hines, Maurice

From: David Madore [David.M@usdigital.com]
Sent: Monday, October 24, 2011 7:44 PM
To: Columbia River Crossing; David Madore
Subject: CRC Light Rail Crossing Project – problem 1

24 Oct, 2011

Re: CRC Light Rail Crossing Project – problem
To: feedback@columbiarivercrossing.org
Unanswered excessive cost issue

P-060-001

Please do not approve this project. Here is one fundamental reason why it should be rejected:

In February John **Mica**, chairman of the House **Transportation** and Infrastructure Committee, at a "listening session" in Vancouver Washington. During that meeting, he held up a graph that David Madore passed to him that showed the cost of the CRC Light Rail project as extreme compared to the other recent bridge projects in the country. He asked everyone in the room why this project was off the chart in extreme expense compared to the others. He that it appeared that something was fundamentally wrong with this project that question needed to be answered.

After Mr. Mica returned to Washington, he then praised the project as though he had forgotten the red flag that indicted something was very wrong with the cost. There is no record of the excessive cost being addressed or justified. That is a problem. Such a fundamental red flag should have caused a pause in this project and a clear investigation conducted to determine the source of the anomaly. The NEPA process was not followed because other more practical less costly alternatives were not considered to resolve the prohibitively high cost.

It would be irresponsible to move forward with this project with such a glaring red flag.

Please acknowledge receipt of this letter to:

David Madore
david.m@usdigital
1400 NE 136 Ave
Vancouver, WA 98684
cell: 360-601-3056

P-060-001

Although project expenditures are appropriate for a project of this type - complex, large, and inter-agency - the Project Directors and the leadership of Sponsoring Agencies are mindful of the project's costs, and are working to both reduce costs and find the necessary funding. Based on this comment, it appears that concerns Representative Mica may have had regarding the project were resolved. However, as Representative Mica has not submitted a comment on the FEIS, the project cannot make any definitive conclusions as to his perspective on the project.

Hines, Maurice

From: David Madore [David.M@usdigital.com]
Sent: Monday, October 24, 2011 8:19 PM
To: Columbia River Crossing; David Madore
Subject: CRC Light Rail Crossing Project – problem 2
Attachments: CRC_Financial_Analysis_by_Impresa_Inc.pdf

24 Oct, 2011

Re: CRC Light Rail Crossing Project – problem 2

To: feedback@columbiarivercrossing.org

ODOT statements contradict fundamental CRC statements

P-061-001

Please do not approve this project. Here are several fundamental reasons why it should be rejected:

This project is based on a false information. The bridge that this project is to replace has been fallaciously deemed as unsafe when ODOT documentation declares the bridge to be in healthy condition and able to continue serving the public for another 60 years. During the last major upgrade to the existing I-5 Columbia River Bridge, ODOT published the following statements on their official website for the public:

"The two bridges have a full-time crew on deck to keep the aging structures in top operating condition. Only three other Oregon bridges -- all in Astoria -- have a designated maintenance crew.

This personalized care, combined with large maintenance projects, has kept the spans healthy and free of weight restrictions. With ongoing preservation, the bridges can serve the public for another 60 years.

The Interstate Bridges continue to be a vital link between Portland and Vancouver and complement any long-range plans to manage and improve transportation in the I-5 corridor between the two states.

Maintenance and repairs keep the bridges healthy and free of weight restrictions. Some recent bridge preservation efforts have included:

- 1987-90 - Replacement of the lift-cables, drums, expansion joints and deck pavement overlay (\$3 million)
- 1995 - Replacement of diesel generator and lift-engine (\$120,000)
- 1997 - Replacement of an axle-like steel trunnion, counterweight sheaves and steel ropes (\$3 million)
- 1999-2001 - Painting, sub-deck and steel rehabilitation on the northbound bridge (\$20 million)

The current project will upgrade and replace significant portions of the electrical systems within the two spans. Transportation funding experts estimate a replacement bridge would cost between \$500 million and \$1 billion."

P-061-001

The safety needs for these bridges are in relation to traffic safety and seismic safety, as described in Section 1.3.2 of the FEIS. Also see the discussion of seismic safety on page 6-22 of the FEIS. The safety aspect Mr. Madore is referring to is structural integrity. The bridges have adequate structural integrity and are not in danger of any immediate failure, except in the case of a major seismic event.

The estimated cost for the replacement bridges over the Columbia River is within the range noted. The total CRC cost includes much more than the two Columbia River bridges, as described in Chapter 4 of the FEIS.

P-061-001

Notice also that ODOT stated that "Transportation funding experts estimate a replacement bridge would cost between \$500 million and \$1 billion." Yet the CRC Light Rail project is now stated to cost 4 to 7 times the cost that the experts stated at the time. Prices of materials and services have not grown to explain the inflated costs that the CRC now estimates. Note that the Cortright Report (attached) shows the actual cost of the CRC plan to be \$8.7 billion with finance charges. A copy of that report is attached. It shows numerous problems that have not been addressed by the NEPA process.

It would be irresponsible to move forward with this project with such a glaring red flags.

Please acknowledge receipt of this letter to:

David Madore
david.m@usdigital
1400 NE 136 Ave
Vancouver, WA 98684
cell: 360-601-3056

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Plaid Pantries, Inc. • 10025 SW Allen Blvd. • Beaverton, Oregon 97005 • Telephone: 503.646.4248 • Facsimile: 503.646.3071

MEMORANDUM

TO: Senator Peter Courtney, President of the Senate
Senator Richard Devlin, Senate Majority Leader
Senator Ted Ferrioli, Senate Minority Leader
Representative Dave Hunt, Speaker of the House
Representative Mary Nolan, House Majority Leader
Representative Bruce Hanna, House Minority Leader
Members Oregon Legislative Assembly

COPY: Mr. Ted Wheeler, Oregon State Treasurer
Columbia River Crossing Project Sponsors Council

FROM: Chris Girard, President & CEO, Plaid Pantries, Inc.

DATE: October 4, 2010

RE: Columbia River Crossing

Ladies & Gentlemen:

P-061-001 Enclosed is a professional analysis of the economics of the current proposed Columbia River Crossing Bridge Project. I commissioned this study, and as a small business operator, I am respectfully requesting that you invest the time to read and understand the information in this analysis. It is not just about the proposed Columbia River Crossing (CRC) itself, but the likely negative impacts for Oregon's overall finances, taxpayers, and businesses, especially small business.

The report documents the unfortunate fact that the proposed CRC project's real costs are more than double the widely-accepted figure of \$3.6 billion. In reality the current design for the project will cost in the range of \$8 billion to \$10 billion, or more, and there is no available source of revenue to pay for it. The financing plan is a guess at best, and the revenue projections are significantly flawed with bad assumptions and unacceptable risk at every step. The numbers and analysis underpinning this project simply do not add up to a happy ending.

This report also includes new analysis relating to the Governors' Independent Review Panel Report. The realities of our situation demand additional critical analysis before we proceed past a point of no return. There is a very real danger that we will create an irreversible multi-generational financial disaster. The current proposal is a "debt-bomb" that blows up well after all the consultants, planners, and engineers have moved on to their next projects. Only the State and its taxpayers will be saddled with the ultimate responsibility, creating serious implications for Oregon's overall finances, small businesses, our customers, and all Oregon taxpayers.

P-061-001 There is no doubt that we need to address the congestion on the I-5 system, and the ultimate solution probably involves one or more new river crossings. But the plan must be realistic, affordable, financially sound, and phased to allow for financing contingencies. The current CRC proposal fails these criteria in every respect.

I initially became involved with the CRC Project due to potential impacts on three of our company's stores. As I learned more about the project, and realized the full scope and costs of this mega-project, I developed a broader concern because the economic analysis seemed flawed. In particular I began to doubt that we could pay for it. My research led me to others who shared my concerns, including Mr. Joseph Cortright of Impresa, Inc., who had conducted an earlier analysis of the project. Mr. Cortright is a widely-published leading economic analyst, an expert in regional economic analysis and development, and a Nonresident Senior Fellow at the Brookings Institution. I retained Mr. Cortright to update and expand on his earlier work, and the attached report is the result.

Please take the time to understand this report, and I urge you to take whatever action is within your power to help ensure that we avoid a very big mistake. We need to come up with an affordable, responsible, and buildable solution that works for Oregon and its taxpayers, especially small businesses, and all stakeholders who depend on a well-functioning I-5 system.

Respectfully Submitted,



William C. (Chris) Girard, Jr.
President & CEO
Plaid Pantries, Inc.
503-526-8300
chrisg@plaidpantry.com



Financial Analysis of the Columbia River Crossing

Joseph Cortright,
Impresa, Inc.,
October 2010

Prepared for Plaid Pantries, Inc.

Executive Summary

P-061-002

This report analyzes the forecast accuracy, financial costs, and financial risks associated with the proposed Columbia River Crossing Project. It reaches three principal conclusions: 1) the traffic forecasts on which project finances are based are inaccurate and unreliable; 2) the thirty-year cost of building and operating the CRC will be at least double the \$4 billion estimated and could reach \$10 billion or more; 3) the project will necessitate a huge increase in bonded public debt and poses substantial additional financial risks including mega-project cost overruns.

1. CRC traffic forecasts are inaccurate.

CRC forecasts grossly over-estimate the traffic growth on the I-5 Columbia River Crossing. These forecasts are critical because they provide both the justification for the sizing of the project (number of lanes and size of interchanges), and because they underpin the financing of the project through toll backed bonds.

The CRC forecasts that traffic over I-5 will grow at an average of 1.3 percent per year from 2005 to 2030, from 135,000 vehicles per day in 2005 to 184,000 vehicles per day in 2030. But in fact, traffic on the I-5 bridges has declined every year after 2005.

Traffic levels in the nearly five years since CRC forecasts were completed have declined by about 7,000 vehicles per day, rather than increasing by about 7,000 vehicles per day as forecast by the CRC. In the five years prior to the CRC forecast (1999-2004) traffic increased on the bridges at only about 0.6 percent annually. The CRC forecasts assumed that traffic growth on the I-5 crossing would accelerate from 0.6 percent annually to 1.3 percent annually. But instead of growing at an accelerating rate, the volume of traffic crossing the bridges has declined every year after 2005, and the traffic growth rate has been decelerating systematically over the past 15 years.

The effects of this forecasting error are significant. In order to reach the 2030 predicted level of traffic in the no-build scenario, traffic growth rates would have to reverse their current decline and then accelerate to 1.8 percent per annum for the next 20 years.

1424 NE Knott Street
Portland, OR 97212
503.213.4443
www.impresaconsulting.com

P-061-002

The October 2010 letter from Mr. Cortright attached to Mr. Madore's comment letter was originally sent as an attachment to an October 2010 letter from Mr. Chris Gerard to members of the Oregon legislature. A response to those comments was provided in a January 21, 2011, letter from the ODOT Director to Oregon legislature members. The response letter addresses and refutes the inaccuracies in Mr. Cortright's letter. The response letter is available on the CRC website at: http://www.columbiarivercrossing.org/FileLibrary/Memorandums/PlaidPantry_Response.pdf

P-061-002

CRC forecasts are flawed for a variety of reasons. Most importantly, they are outdated (based on 2005 estimates and a 1994 survey of travel behavior), they use estimates for the value of time that are inaccurate, thereby systematically underestimating likely diversion in the face of tolls. In addition, the estimates contain errors of arithmetic calculation, and were “post-processed”—a euphemism for CRC planners substituting their judgment about appropriate values in place of model outputs to produce higher levels of traffic on the I-5 crossing. The result of this one change was to raise forecast traffic (and associated toll revenues) 6 percent above those produced by unaltered Metro model results.

The inaccuracy of these traffic forecasts casts serious doubt on the findings contained in the environmental impact analysis, because these forecast traffic levels are used as the baseline for calculating the net environmental impacts of build alternatives. Inaccurate traffic forecasts also cast doubt on the financial analysis. If the bridge has less traffic than forecast, toll bonds will not produce the projected levels of revenue, and the project will experience significant revenue shortfalls that could produce bond defaults or require additional state subsidies. The overestimates also mean that both the DEIS traffic analysis and the URS traffic analysis (which uses the same forecast volumes) are leading to an oversized facility relative to likely demand.

2. Total 30-year CRC costs will total nearly \$10 billion.

The total 30-year cost of the Columbia River Crossing is likely to approach \$10 billion (measured in year of expenditure dollars). In addition to the construction cost of the project, currently estimated at upwards of \$3.9 billion, the project will necessitate additional expenditures over the next 30 years estimated as follows:

\$3,875 million in construction costs, plus:

- \$2,700 million in interest payments,
 - \$1,700 million in toll collection costs,
 - \$1,300 million in supplemental project costs,
 - \$ 275 million credit card, sales tax and bond issuance costs
 - \$ 175 million incremental transit operating costs
- \$10,025 million total 30-year cost

Because the financing for the project requires borrowing in advance of the receipt of federal, state and toll revenues, the CRC will have to borrow money to pay interest while the project is being constructed, and will effectively have to pay interest on top of interest. The scale of the project imposes major opportunity costs on the region—the loss of benefits from other projects that could be financed with this stream of revenue. In addition, because the region’s commuters will be paying additional costs, through tolls and taxes to pay for the project, this will reduce consumer income available for spending in the local economy, resulting in a loss of jobs and tax revenues for state and local governments.



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3. The CRC poses major financial risks

The Columbia River Crossing poses a major financial risk to transportation finance in the Portland metropolitan area, and to the state. For this type of project, there is a very high likelihood of cost overruns. The multi-billion dollar scale of the CRC qualifies it as a “mega-project.” Given the history of similar scale projects, both nationally and internationally, the likelihood of cost overruns is on the order of 90 percent. Cost escalation for the two most recent large scale projects undertaken by ODOT exceed 200 percent from the DEIS stage (the current stage of the CRC) to current estimated completion cost. While responsibility for cost overruns has not been established, it is likely that these costs would have to be borne by Oregon and Washington, and could be on the order of additional hundreds of millions to billions of dollars. Once construction is commenced, there would be few ways to mitigate or reduce these risks.

The Independent Review Panel criticized cost estimates for the project, observing that the estimates were based on a now discarded design and that they don’t address key risks. The panel labeled the cost estimates “problematic” and warned that unless corrected, they would have a “dramatic effect” on the ability of the project to obtain funding.

There is also a considerable risk associated with traffic and toll projections, which have regularly proved to be over-optimistic in practice. The CRC assumes that even with tolling, traffic on I-5 will increase dramatically faster than it has for the past decade. The project’s debt service payments are “back-loaded” meaning that the project pays a higher and higher payment each year. As a result, the ability to pay for the project is highly dependent on a sustained high level of traffic growth and regular toll increases. If traffic growth is only half as fast as forecast—for example, 0.8 percent per year during the 2020s, compared to the 1.75 percent increase forecast by the CRC—the project would experience a \$1 billion shortfall in net revenues available to pay debt service. There are interest rate risks as well; although current borrowing rates are relatively low, they may increase substantially when bonds are actually issued, three to five years from now.

There are major risks to accomplishing the Columbia River Crossing project according to the schedule proposed by project sponsors. Delay is significant because it is likely to increase the total cost of the project, both due to inflation in the cost of materials and labor, but also due to the interest cost associated with a longer construction period. Special factors—like the need to time in-water construction to avoid salmon migration—can have the effect of magnifying the impact of even minor schedule delays.

The Columbia River Crossing runs the real risk of a financial collapse because it relies on over-optimistic traffic and revenue projections, and downplays the real risks of cost overruns, revenue shortfalls and project delays. There is a significant likelihood of concurrent problems resulting in a situation in which project costs exceed the amounts now estimated, federal and state contributions are less than hoped, and traffic volumes are dramatically less than forecast. Because such a significant portion of the cost of the bridge must be borrowed, these fiscal shortfalls would lead to a cascade of events: the project would deplete borrowed project reserves and would be forced to further increase tolls, which is likely to have the effect of driving traffic levels lower. When reserves are exhausted bond covenants would likely require that the two states make good on any toll revenue shortfalls, either by diverting money from other projects or raising taxes.

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This report was prepared by Impresa, Inc., based on documents obtained from the Columbia River Crossing, and other pertinent information identified in the reference section of this document. Analyzing the financial status of the project is complicated because the CRC is behind schedule in completing important financial planning tasks, and because it has provided some key documents only in response to formal public records requests. We have relied on several documents obtained through a public records request filed by the Pacific Environmental Advocacy Center. Among other things, these documents identify the dollar amount of total interest costs, toll collection costs and pay by plate surcharges that are revealed nowhere in the public presentations of project costs by the CRC. While the project's official schedule (dated November 30, 2009) called for several key financial documents, including a Financial Plan, Financial Risk Analysis and State Funding Documents to be completed in January and February of 2010, we were told by project officials in July that copies of these documents could not be produced because they had not been completed. The fact that significant portions of project costs have been largely unavailable for public review, and key financial planning documents remain incomplete underscores the concerns raised in this report about the level of risk and uncertainty surrounding this project.



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Please see responses to Joe Cortright's letter (P-047).

1. CRC Traffic Forecasts Are Inaccurate.

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Both the need for the CRC and the financing plans for the CRC depend directly on the accuracy of the traffic forecasts for the I-5 river crossing. The Draft Environmental Impact Statement projects that between 2005 and 2030, traffic crossing the I-5 bridges would rise from about 130,000 vehicles per day to 184,000 vehicles per day. If these traffic forecasts are incorrect, then there would be less need for the capacity provided by the CRC, and the financial contribution estimated to be provided by tolls will not be realized. The CRC traffic projections are directly contradicted by recent trends in traffic in the I-5 corridor.

1.1 CRC traffic forecasts have already proven to be inaccurate

The base year for the forecasts of future traffic for the Columbia River Crossing is 2005. The CRC forecasts that traffic in the no-build scenario on the I-5 bridges will be 184,000 vehicles per day in 2030.

We now have nearly five years of experience—about 20 percent of the planning period—since the base year of the CRC traffic forecasts. How well have their estimates been born out by actual experience?

The Oregon and Washington Departments of Transportation collect data that track the average level of traffic volumes on I-5 across the Columbia River. These data are reported by the Southwest Washington Regional Transportation Council. Data are from the council website: <http://www.rtc.wa.gov/data/traffic/brdgawd.asp> "Columbia River Bridges." The following table shows average annual traffic over the I-5 Columbia River Bridges for the past 15 years. It also displays the annual growth rate of traffic each year, compared to the preceding year, and the average annual growth rate for three five-year periods.

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Average Daily Traffic, I-5 Bridges,

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Year	Average Daily Traffic	Annual Growth Rate
1994	112,988	
1995	116,589	3.2%
1996	118,558	1.7%
1997	120,644	1.8%
1998	124,516	3.2%
1999	126,589	1.7%
2000	126,903	0.2%
2001	125,652	-1.0%
2002	128,162	2.0%
2003	129,657	1.2%
2004	130,279	0.5%
2005	132,603	1.8%
2006	131,916	-0.5%
2007	130,389	-1.2%
2008	126,278	-3.2%
2009	125,436	-0.7%
Annual Average Growth (Five-year Periods)		
1994-1999		2.3%
1999-2004		0.6%
2004-2009		-0.8%

This data shows several key trends. First, for the past four years, average traffic levels on the I-5 bridges have been declining, not increasing. Second, the growth rate in traffic on the I-5 bridges has been decelerating for the entire period shown in this table. Growth rates averaged 2.3 percent per year during the late 1990s, only 0.6 percent per year in the next five year period through 2004, and traffic decreased at an average rate of 0.8 percent per year for the past five years. Third, the slowdown in traffic growth rates and the annual decline in traffic clearly preceded the recession that began in December 2007.

It is apparent that the baseline forecast for growth of I-5 traffic included in the Draft Environmental Impact Statement assumed a very dramatic acceleration in traffic growth from historical trends. To grow from a 2005 level estimated at 134,000 to a projected 2030 level of 184,000 in the DEIS base case, I-5 traffic would need to increase 1.3 percent per year over the 25-year period, 2005 to 2030. That would require more than doubling the rate of growth actually observed in the 1999-2004 period (0.6 percent). And as illustrated above, the historical data show that the rate of traffic increase has been decelerating (and now declining) and not increasing, as forecast in the DEIS. The DEIS and the traffic projections offer no explanation as to why the rate of increase of traffic should more than double from this long term trend.

Figure 1 shows the actual level of traffic reported by the Regional Planning Council (from the table above), and the forecast level of traffic growth required to achieve the 2030 projection of 184,000 vehicles per day. The actual level of traffic recorded in 2009 was roughly 14,000 vehicles less than the more than 140,000 vehicles per day implied by the



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CRC traffic forecasts. Whereas the CRC forecast implied that traffic over the I-5 bridges (in the no build scenario) would increase by almost 7,000 vehicles per day; in reality, the number of vehicles crossing the bridge declined by 7,000.

Figure 1: I-5 Bridge Traffic: Actual v. Predicted

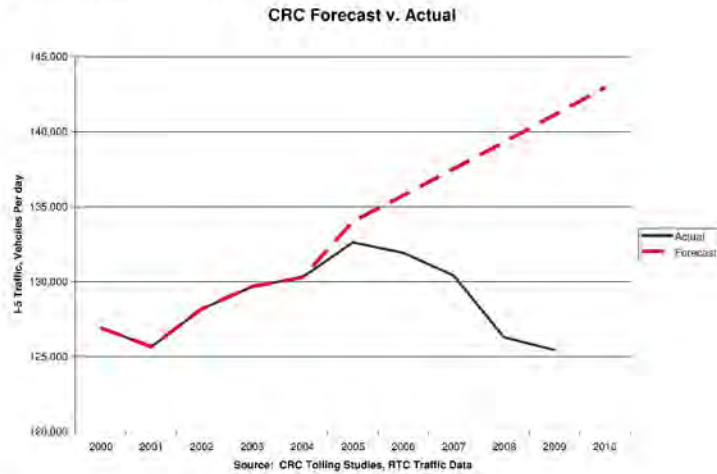
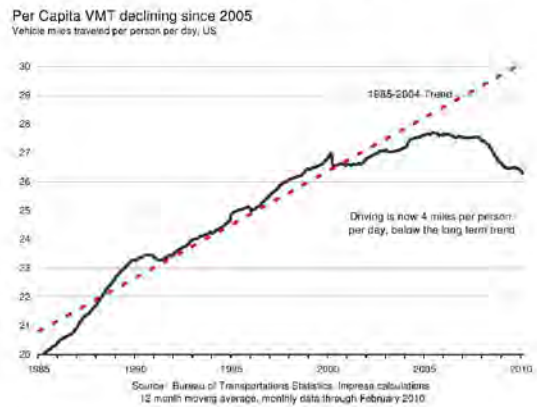


Figure 2: National Trends in Vehicle Miles Traveled



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As Figure 2 makes clear, travel demand estimates based on pre-2005 trends are very likely to overestimate travel demand growth. Following the big increase in gas prices after 2004, American citizens began driving less. That trend has persisted over the past five years.

It might be argued that the past four years of declining traffic are a temporary aberration, and that in the longer term, forecast growth will make up for these declines. This is unlikely to be true for three reasons. First, as noted above, the trend has been for a decelerating rate of growth over the past 15 years. Second, as discussed below, changes in gas prices and consumer behavior that are very long term in nature are behind the decline in CRC traffic. And third, the departure from forecast experienced so far means it is likely impossible to make up the shortfall over the remaining time in the forecast period. In order to reach the expected No-Build 2030 traffic volumes of 184,000 from the actual 2009 level of traffic, traffic would have to increase by 1.85 percent per year for each of the next 20 years. That is a growth rate about forty percent faster than the 1.30 percent forecast in the DEIS, and two and a half times faster than the 0.7 percent growth rate actually observed over the fifteen year period 1994 to 2009. The CRC project materials provide no basis for believing such a dramatic increase in driving will occur.

The tendency to overestimate future traffic levels in mature travel corridors is also apparently an endemic problem with the current methodology used to predict future transportation demand. After a careful review of the literature, the Government Accountability Office found:

... current travel demand models tend to predict unreasonably bad conditions in the absence of a proposed highway or transit investment. Travel forecasting, as previously discussed, does not contend well with land-use changes or effects on nearby roads or other transportation alternatives that result from transportation improvements or growing congestion. Before conditions get as bad as they are forecasted, people make other changes, such as residence or employment changes to avoid the excessive travel costs.
(Government Accountability Office, 2005)

The weakness of transportation models in accurately predicting future traffic levels is a continuing problem. So it is not merely the CRC traffic projection model that is problematic; rather the entire class of four-step models (trip generation, assignment, mode, routing) have proved inaccurate in practice. After an exhaustive review of the state of the art, the Transportation Research Board of the National Academies wrote:

"In 2005, as has been true for the past four decades, these models could not provide accurate information to inform decision making on many transportation and land use policies or traffic operation projects."
(Committee for Determination of the State of the Practice in Metropolitan Area Travel Forecasting, 2007)

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While technology has allowed for faster computation, and more detailed mapping, they conclude:

“The practice of metropolitan travel forecasting has been resistant to fundamental change. Every 10 years or so there begins a cycle of research, innovation, resolve to put innovation into practice, and eventual failure to affect any appreciable change in how travel forecasting is practiced.”

(Committee for Determination of the State of the Practice in Metropolitan Area Travel Forecasting, 2007) pages 123-124.

As a result of over-forecasting, the size of the CRC may be much larger than needed. Traffic volumes are falling, even without tolls. If the I-5 crossing were tolled, many fewer vehicles would cross, depressing traffic levels still further and revenue would be correspondingly less than forecast.

The no-build scenario serves as the base case for evaluating all of the other alternatives—to the extent that the no-build scenario is flawed, the traffic estimates for the build alternatives are also similarly flawed.

Even the traffic analysis by URS, which served as the basis for a recommendation to reduce the bridge from 12 through lanes to 10, is predicated on the flawed DEIS forecasts. A more accurate forecast of future travel volumes would indicate that much less capacity is needed over the Columbia River.

1.2 CRC traffic forecasts do not account for higher gas prices

CRC traffic forecasts appear to be badly out of date, and there is no evidence that they have been adjusted to deal with current gasoline prices or development trends. The CRC traffic forecasts are poorly documented, and don't indicate what baseline data were used, what assumptions were made, and what error and uncertainty factors are associated with these estimates. It appears from the documents included in the Draft Environmental Impact Statement that traffic projections were made in 2007, based on 2005 data. The key measures of traffic activity (184,000 crossings of the I-5 bridge in the no-build, and 178,000 in the build alternatives), have remained essentially unchanged for several years. (See for example, Draft Environmental Impact Statement, Summary, Exhibit 26 Summary of Transportation Effects and Cost for Each Alternative, Page S-30). The forecast documents, including those released in 2010, use the same numbers (184,000 in the no-build, and 181,000 for the LPA) as the project has publicly quoted since the DEIS was released in 2008. The forecast documents refer to the “current year” for traffic purposes as “2005.” The modeling was based on Metro's transportation model (Columbia River Crossing, 2010). The Metro model was calibrated based on behavioral data collected in 1994 and assumes that real gasoline prices would not increase at all, i.e. that gasoline prices increase no faster than the rate of inflation (Higgins, 2008).

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There is clear evidence that the persistently much higher level of gas prices since 2005 has produced a sea change in consumer behavior. Nationally, per capita driving has been in decline since 2004, and is now at 1999 levels. (See Figure 2 on page 6.)

Consumers are not only driving less, but are scrapping cars faster than they are buying new ones. Nationally, the number of vehicles in operation declined by four million in 2009 (Brown, 2010). In Oregon, vehicle registrations have declined by 30,000 compared to the previous year (Har, 2010).

The rise in gasoline prices and a growing interest in alternatives to car-dependent living has triggered a shift in housing markets within metropolitan areas. The biggest price decreases in housing and the highest foreclosure and default rates have been recorded in outlying suburban locations (Cortright, 2008).

The CRC's transportation model is based on observations made in 2005, and assumes the consumers will continue to behave as they did in 1994 (when gasoline cost \$1.10 gallon). As a result CRC predicts the rate of increase of vehicle travel will be double that of the previous decade. This is highly suspect in a world where gasoline prices have more than doubled, where driving is in decline, and consumer behavior patterns are obviously changing.

1.3 CRC traffic forecasts are outdated

The traffic forecasts used to justify the need for the project, estimate its environmental impacts, and develop its financial plan appear to be significantly outdated.

The materials documenting these forecasts do not clearly reveal the dates on which they were prepared, or the vintage of the data used to estimate key variables. The base year for the forecasts in the DEIS and in subsequent financial planning documents is 2005. It is apparent that the toll revenue forecasts relied on the same forecasts shown in the DEIS, i.e. total levels of traffic in the no-build scenarios match the forecasts in the DEIS, exactly: 184,000 vehicles per day in the no-build replacement bridge scenario. Data for 2010: Traffic Effects for Tolling Scenarios, (Columbia River Crossing, 2010f); data for 2008: Traffic Technical Report, Exhibit 4-1 (Columbia River Crossing, 2008b). The traffic technical report is dated January 2008, and the text of the report indicates that many technical reports were completed in "late 2007." Again, this report describes 2005 as the "current year" for traffic comparison purposes.

Neither the DEIS, the traffic technical report to the DEIS, or the subsequent documents available for this review indicate the year in which traffic forecasts for the project were undertaken. It appears from these documents that the forecasts were made in 2006, using a base year of 2005. The forecasts also appear to rely on a Metro regional transportation model that was calibrated based on the household travel survey conducted in 1994.

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1.4 CRC forecasts inflated I-5 traffic estimates using “post processing”

While the CRC traffic forecasts based their initial estimates on the regional transportation model, they adjusted these estimates to shift some forecast traffic from I-205 to I-5. The authors of the study labeled this manual adjustment “post-processing”—but it simply means that they used their own judgment to select higher values for I-5 than those produced by the regional transportation model. The reasonableness of this adjustment is debatable. The CRC claims that an analysis of 2005 actual traffic data shows that actual traffic on I-5 was underestimated, relative to I-205 by the regional model. The authors made no apparent attempt to see if their adjustment was supported by data in any subsequent year. But each year after 2005, traffic volumes have been proportionately higher on I-205 than I-5, undercutting the stated basis for this “post-processing” adjustment.

According to the report, the effect of the “post-processing” adjustment was to increase traffic volumes assigned to the I-5 bridges by 6 percent over the levels predicted by the regional transportation model without this modification.

The report concedes:

However, the post processing methodology forecasts less traffic diversion from I-5 to I-205; forecasted 2030 average weekday volumes on the I-5 Bridge are about 6 percent higher with the post-processing methodology than with the regional travel demand models.
(Columbia River Crossing, 2010b).

The effect of this adjustment is to understate the amount of diversion that will occur to I-205, even with the relatively high value of time estimates used in the travel demand model.

Despite its technical sounding name “post-processing” really represents a judgment on the part of the CRC to disregard the outputs of the Metro travel demand model, and to manually choose the values for traffic.

1.5 CRC forecasts over-estimate the value of travel time, under-estimating toll diversion, and over-estimating revenues

The toll revenue forecasts estimate traveler response to tolls by estimating the value that travelers attach to time savings, and then translating the cost of tolls into a time equivalent penalty. For example, the toll study estimates that travelers value their time at about \$18.89 per hour, meaning that a toll of \$2.00 has the same effect on travel behavior as a 6 minute delay. (Here’s the math: at \$18.89 per hour, each minute saved is worth about 31 cents. At this rate, two dollars would be equal to about 6.3 minutes of time). Since travel models are used to predict traveler behavior based on travel time between

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points, these delay values can then be incorporated into travel demand models and used to predict changes in travel behavior.

Use of a single amount for the value of time for all commuters is inappropriate and underestimates the effect of tolls especially on lower income households. At least 7,000 Clark County residents who commute to Oregon, according to the Census Bureau, earn less than \$1,250 per month at their primary job. Most of these persons earn \$10 per hour or less. The transportation literature suggests that most such workers value travel time at one-half their wage rate. For these low paid workers, their value of travel time is likely to be \$5 per hour (or less) and not \$19 per hour. Consequently, tolls are much more likely to reduce commuting (and Oregon job holding) by lower income residents. This is not analyzed in the financial projections or the DEIS.

This shortcoming has both financial and equity considerations. For lower income travelers (and those who place a lower value on their time), the toll has a much larger impact on travel behavior. For travelers who value their time at \$5 per hour, a toll of \$2.50 is the equivalent of 30 minutes delay in terms of shaping travel behavior. The CRC analysis assumes that all travelers treat the toll as having a six minute time penalty.

The estimate of \$18.89 per hour as the value of time for all commuters is shown in *Description of Revised Toll Model and Traffic and Gross Revenue Projections for Tolling Scenarios* (Columbia River Crossing, 2010b).

Two different VOTs, peak and off-peak, were assumed for passenger cars in the Metro modeling:
Peak periods (AM and PM): \$18.89 (2009 \$) which equates to \$13.33 (1994 \$)
Off-Peak periods: \$12.57 (2009 \$) which equates to \$10.38 (1994 \$)

Value of time estimates are a critical part of tolling assumptions. Independent analysts of toll revenue forecasts routinely call for a deep discount to value of time estimates in evaluating the credit-worthiness of toll forecast estimates. Fitch's criteria for stress testing toll revenue forecasts call for re-computing revenue estimates after reducing the estimated value of time 50 percent to 75 percent (Seattle-Northwest Securities Corporation & Montague DeRose and Associates, 2007). Such a stress test is an integral part of preparing what is referred to as an "investment grade" revenue forecast. In the case of the Columbia River Crossing, this would require reducing the value of time to between \$4.72 and \$9.45 for peak hours and \$3.33 and \$6.67 for non-peak hours.

The Independent Review Panel noted that an investment grade analysis has not been undertaken, and that one will be required:

It is clear that if tolling is to be part of the investment package, where tolls are the source for paying back revenue bonds, an investment grade analysis will have to be conducted. Such an analysis will have to be at a much higher level of specificity, for example, knowing what the tolling schedule will be. This investment grade analysis will include another travel demand analysis, most likely requiring a more up-to-date database upon which to calibrate the model. Project financiers typically

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will only accept as investment-grade quality work that is performed by certain entities who typically have proven experience in conducting such studies. Independent Review Panel 2010, page 176.

Using a lower value of time has a direct effect on the traffic and toll revenue estimates prepared for the Columbia River Crossing. A lower value of time would mean fewer trips over the I-5 bridge and more diversion to alternative routes, especially in the event that the I-205 bridge is not tolled. It would also mean that the I-5 bridge tolls would produce lower levels of revenue.

In addition to the problems in the estimation of travel times overall, and for low income travelers, there is also an obvious math error in the computation of the inflation-adjusted value of time. The value of time calculations are adjusted to different year's dollars based on two different indices: at least one is in error. On pages 3-1 through 3-3, the report claims that a wage of \$18.86 in 2009 dollars is worth \$10.38 in 1994 dollars and that a wage of \$12.57 2009 dollars, is worth \$10.38 in 1994 dollars. The first calculation implies a 1994 dollar is equal to .71 2009 dollars, the second implies a 1994 dollar is equal to .83 2009 dollars. One must be wrong.

1.6 Inaccurate toll forecasts threaten CRC financial viability

Traffic forecasts underpin both the rationale for building a larger capacity crossing over the Columbia River and the financial plan for paying for the project. If traffic levels are less than forecast, as is already apparent, then a key part of the plan for financing the project is compromised.

The CRC toll bonds are planned to have a highly back-loaded amortization schedule (Columbia River Crossing, 2010c). This means repayment depends heavily on sustained annual increases in traffic and regular toll increases. If traffic levels do not increase as fast as projected, it would trigger a significant revenue shortfall. To calculate the sensitivity of toll revenue estimates we modified the CRC forecasts to assume a 50 percent lower rate of traffic growth than that used by CRC. (From 2020 to 2030, CRC assumes that traffic will increase about 1.75 percent each year, and 1.0 percent thereafter). We examined the effect of annual increases of half that amount, starting from the opening year (2018) estimate used by CRC. Reducing the growth rate (in the 2020's, for example to 0.875 percent per year), has the effect, over the 30-year life of the bonds, of reducing gross toll revenue by about \$1.24 billion, and reducing net toll revenue (the amount available after collection costs available to make debt service payments), by slightly more than \$1 billion.

This is not merely a theoretical problem. Predicting net revenues for tolled facilities, especially when there is no recent history of tolling in the area, is even more difficult than predicting future traffic volumes. Experience in Washington State shows that faulty forecasts can easily and quickly produce revenue difficulties for toll bridges. In 2007, WashDOT completed a second Tacoma Narrows bridge, and imposed tolls to finance the

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cost of construction. In 2007, just prior to opening the Tacoma Narrows Bridge, WSDOT forecast that revenues in FY 2010 would be \$62,937,827 (Washington State Department of Transportation, 2008). In a more recent forecast, updated through April, 2010, however, WSDOT forecast that FY 2010 revenues would be about 25 percent less, \$45,207,519 (Washington State Department of Transportation, 2010a). The toll revenue shortfall was a result of lower than anticipated traffic and slower than anticipated increases in toll levels. Political opposition to higher tolls prompted the state to defer the toll increases that were assumed in the project's original financial plan.

One way forecasters attempt to deal with uncertainty is to develop alternative scenarios. The CRC has failed to undertake any serious sensitivity or alternatives analysis. They applied a "15 percent bandwidth" to their estimates, i.e. computing the effect of a 15 percent smaller volume of traffic and a 15 percent higher volume of traffic than called for in their forecast. They provide no basis for assuming a 15 percent error factor is sufficient. It is already the case, as illustrated in Figure 1 that the forecast for the year 2010 has an error of more than 10 percent in total traffic volumes in just four years. And, as indicated above, the Tacoma Narrows Bridge experienced a 25 percent shortfall in revenue from forecast over a period of just two years.

The CRC financial plans assume that the authority setting the tolls for the Columbia River Crossing is willing and able to increase tolls each year by at least the rate of inflation (assumed to be 2.5 percent per year). If the authority fails to increase tolls by this amount, or delays the increases, the project will experience a shortfall in revenue. Indeed, this has been a contributing factor to revenue shortfalls for the Tacoma Narrows project.

2. Total 30-year CRC Costs will total nearly \$10 billion.

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How much will the Columbia River Crossing project cost? Widely distributed public materials circulated by the Oregon and Washington Departments of Transportation state the project will cost between \$2.6 billion and \$3.6 billion. (See for example "Project Fact Sheet" (Columbia River Crossing, 2010d). That number is just the up-front construction cost and does not include the cost of financing, including interest, or the cost of operations, especially toll collection. Many of these costs will be incurred over a period of decades, rather than being paid "up-front." This memorandum compiles the additional costs not included in the construction-only cost estimate.

The actual cost of the Columbia River Crossing is difficult to portray because many of the costs will be paid over a number of years. To provide a fuller and more complete picture of project costs, we have developed a set of estimates of the 30-year costs associated with constructing and operating the Columbia River Crossing.

This task is further complicated because the financial plans for the Columbia River Crossing have not been fully worked out. Project sponsors are assuming that most of the money will come from state and local governments, and the remainder from toll-backed bonds. About \$400 million would need to come from earmarked federal funds from a yet-to-be-enacted federal transportation bill, and related federal gas tax increase.

CRC documents show plans to borrow \$1.3 billion over 30 years, to be repaid by future toll revenues. When we compute the total cost of the project over the next 30 years, the total price tag will more than double.

Thirty-Year Estimate of Columbia River Crossing Costs

Category	Thirty Year Cost, Millions, Year of Expenditure Dollars
Construction Cost	3,875
Interest Cost	2,700
Toll Collection Cost	1,700
Credit Card Cost	142
Sales Tax	117
Bond Issuance Cost	16
Transit Operating Cost	175
Added Project Costs	1,300
TOTAL	10,025

The \$2,700 million is the interest (excluding principal repayment) over the 30-year life of the \$1,300 million bonds; the \$1,700 million is the cost of building and operating an electronic transponder and billing system to collect tolls. Credit card fees are what CRC will pay banks to process electronic payments. The bond issuance costs are the fees (and discount) the bankers will charge for preparing and issuing bonds.

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The cost of financing is not relevant to environmental and NEPA review. However, see the finance plan in Chapter 4 of the FEIS for related information. Also, for a response to the letter from Plaid Pantry expressing concerns regarding construction costs, traffic modeling, and financial risks, please see the January 21, 2011, letter from Matt Garrett, ODOT Director, to members of the Oregon legislature. That letter can be found on the CRC website at:

<http://columbiarivercrossing.com/FileLibrary/Memorandums/PlaidPantry>

Also see the March 25, 2011, letter from Matt Garrett to Chris Gerard, President of Plaid Pantry, available from the project office.

In addition, see the responses to Mr. Cortright's FEIS comment letter (P-047) regarding traffic forecasting, financing and other related issues.

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One technical note: These figures are in terms of year of expenditure dollars (i.e. not adjusted for future inflation). These amounts are taken directly from budget and amortization schedules that estimate these costs in the dollars of the year in which they will be spent.

Toll bonds might appear to some to be inexpensive up front, but roughly speaking, each \$1 of the project financed by toll bonds results in an additional 30 year cost to bridge users of more than \$3.00, about \$2.00 for interest and about \$1.00 for toll collection costs. In other words, bridge users will have to pay a total of \$4.00 in tolls for each \$1.00 of bridge construction costs that are financed by toll bonds.

2.1 Construction Cost

No one is certain how much the Columbia River Crossing will cost to build. There is still considerable debate over what form the project will take.

Publicly, the CRC promotional materials claim that the cost of constructing the Columbia River Crossing, as currently proposed, is between \$2.6 billion and \$3.6 billion (Columbia River Crossing, 2010d). Specifically, CRC states:

Based on fall 2009 design refinements and additional engineering, construction is expected to cost \$2.6 to \$3.6 billion (in year of expenditure dollars). Funding is expected from federal and state sources and tolling.

These estimates are subject to considerable uncertainty and risk. The project scope may be changed—discussions are currently underway to dramatically alter the project's profile on Hayden Island—and there are a series of other sources of risk—described in Section 3. It is also clear from the wording of the fact sheet "construction is expected to cost \$2.6 billion to \$3.6 billion" that these numbers do not include costs for financing, collecting tolls, and operating the project.

However, the \$3.6 billion cost estimate is based on a bridge design (closed-box segmental girder) that has now been discarded in favor of a double-decked open web design. The new design has not been subjected to a detailed Cost Estimate Validation Process. According to the Independent Review Panel, because the open web design has never been built at this scale, the cost could be much higher than the box girder design (Independent Review Panel, 2010).

According to materials presented to the Independent Review Panel, the project may cost as much as \$3.877 billion. These estimates are based on the so-called 90 percent probability that costs will not exceed this amount and are for the "full" project. See Independent Review Panel, 2010, page 173. We adopt this figure as our baseline estimate of construction costs.

2.2 Interest Cost

Neither Oregon nor Washington have \$3.9 billion on hand for this project, and as a result will have to borrow a significant portion of the funds needed to finance construction. Both states will incur significant interest and finance charges to borrow the money needed

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to pay for the bridges. These interest and financing costs are not included in the CRC's estimate of a \$2.6 to \$3.6 billion price tag for the bridge.

This is disclosed in the report on toll financing:

The use of toll bonds will increase the total costs paid during and after construction due to the added interest and issuance costs. However, these financing costs are treated separately from the project capital cost during construction.

(Columbia River Crossing, 2010c)

The CRC's need for borrowing—and the attendant financing and interest costs—will be driven by the mismatch between the time it receives its revenue (from tolls and from federal and state sources) and when it needs to pay contractors who will build the project. The project will need to pay its construction costs prior to the time the bridge opens.

At a minimum, the CRC will pay interest on the bonds that are to be repaid from future toll revenues. It is also possible that the project will have to borrow additional money against future payments of state and/or federal revenues earmarked for the project. Project funding has not been approved by either state or by the federal government, and as a result, the payment schedule and amounts of funding to be provided from state and federal sources are unknown. It is likely that construction will commence before all projected federal and/or state revenues are in hand, so in order to finance construction it would be necessary for Oregon and Washington to issue bonds, and pay interest, in order to build the project. The Draft Environmental Impact Statement anticipates the possible use of so-called "GARVEE" bonds (grant anticipation revenue vehicle bonds). These bonds would enable the state to spend money now against anticipated future federal grants (Columbia River Crossing, 2008a). Oregon has also bonded money from vehicle registration fee increases in order to be able to accelerate timing of its bridge repair program. In all of these cases, the amounts paid in interest on bonds reduce the amount of money available to pay for transportation projects.

Our baseline estimate of interest costs is \$2.7 billion, based on the project's own estimates of thirty-year interest payments on toll-backed bonds (Columbia River Crossing, 2010c).¹ This estimate is based on issuing \$1.4 billion dollars of bonds, in three series. This high interest cost is the product of a complex financing structure. First, money has to be borrowed several years in advance of completion of the bridge, so the project has to borrow additional funds to cover "capitalized interest"—i.e. an additional \$112.6 million to pay interest on the bonds during the period before toll revenues are expected to start flowing. Second, the amortization and payment schedule for the bonds is "back-loaded"—rather than having the same payment each year, the bond repayment amounts increase each year (based on the assumption that both traffic and toll rates will increase each year). Debt service payments start out (following bridge opening) in 2018

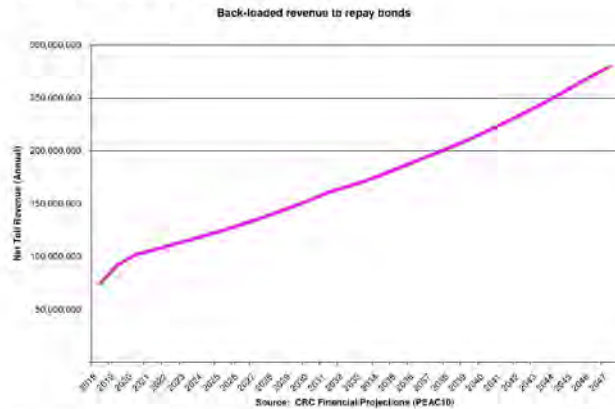
¹The total amount of interest payments associated with toll-backed revenue bonds has not been disclosed in any publicly available reports issued by the Columbia River Crossing. These statistics were obtained from a report released in response to a public records request, and identified by CRC as PEAC-54.

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at less than \$60 million annually and escalate steadily to more than \$250 million per year at the end of the repayment period in 2047.

Figure 3: Debt Repayment Schedule



The combination of carrying capitalized interest during construction and back-loading amortization dramatically increases the total amount of interest paid compared to the kind of garden variety borrowings with which most consumers are familiar. In effect, the CRC borrows money to make interest payments while the project is under construction, and ends up paying interest on top of interest. For example, if one could borrow \$1.3 billion over 30 years, with a level repayment schedule (like a home mortgage) this would necessitate annual payments of about \$93.5 million per year for a total of \$2.8 billion in repayments over 30 years (30 * 93.5 = 2,805). Over the life of the bonds, \$1.3 billion would be attributable to principal, and the remainder—\$1.5 billion—represents interest costs. In rough terms, the additional interest associated with construction period financing and back-loading amortization works out to an added cost of \$1.2 billion over the cost of a simplified mortgage like borrowing arrangement.

In addition, depending on the timing of payments from state and federal governments, the project could need to borrow larger sums to finance construction, and incur additional interest costs as a result. The CRC financial analysis assumes that federal and state contributions are available, in full, in the early years of project construction, and that issuance of toll-backed bonds (and accruing interest costs on these borrowings) can be postponed to later years.

Toll bond proceeds are assumed to be received in the middle and latter years of construction to maximize their funding contribution, and other funding sources are assumed to cover construction costs in the initial years.
 (Columbia River Crossing, 2010e)



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If federal and state money is available later, or spread over a period of years (as is likely) this will further increase interest costs. In addition, the two states may issue bonds to finance their portions of the project costs against future revenues (such as gas taxes or vehicle registration fees), and these sources will also involve additional interest costs beyond those calculated here.

Interest costs could be considerably higher, and bond funding proceeds could be lower, for a variety of reasons. First, the interest rate charged on bonds could be higher than 6 percent, the amount assumed in the toll revenue analysis. The toll revenue analysis examined the effect of 7 percent interest, plus a higher level of debt service coverage, if the bonds were issued solely as revenue bonds, guaranteed by the tolls, with no state guarantee. In this case, the net amount of revenue likely to be lent declined by almost half. The non-recourse debt structures yield only between 50 percent and 55 percent of the amount yielded by state-backed debt (Columbia River Crossing, 2009b).

2.3 Toll Collection Cost

The CRC will need to build and operate a system for collecting tolls from bridge users. The CRC anticipates building a barrier-free tolling system. Most users would buy electronic transponders (small radio receiver/transmitters) that record travel across the bridge and bill users automatically. Those who didn't have a transponder would have their license plates photographed and would be billed through the mail using a system called "pay by plate." This system will require motorists to buy transponders, and for the states to build and operate a system for monitoring and billing transponder users, and for reading license plates, preparing and mailing bills, and collecting bills. All of these costs would be passed on to bridge users through the toll system. Transponder users would pay a standard toll rate (that would include the cost of operating the transponder system), and pay-by-plate users would pay the standard toll, plus a surcharge of \$1.00 to 1.25 to cover the added costs associated with billing. The costs of operating this toll collection system are not included in the \$2.6 to \$3.6 billion construction cost of the CRC.

According to documents released by the CRC, the annual costs of operating the collection system would be \$27 million in 2018 rising to \$90 million in 2047 (Columbia River Crossing Toll Bond Program, Scenario I - Base (DEIS) Toll on I-5 Only: (Baseline (Post Processed) Forecast) State-Backed Bonds - 30 Year Term, (Columbia River Crossing, 2010c)). Over the first 30 years of project operation, the estimated total cost of operating the toll collection system would be \$1,695 million. This is our baseline estimate of toll collection costs.

2.4 Bond Issuance Cost

The states of Oregon and Washington will have to issue bonds to raise the funds needed to pay for the construction of the CRC. In addition to the interest costs associated with repaying the bonds, the two states will have to pay financial and legal costs associated with bond issuance. According to documents released by the CRC, the costs of such

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issuance are estimated at 0.8 percent of the face amount of bonds issued (Columbia River Crossing, 2007). This reflects the bond underwriters discount and the costs of legal and other work in association with bond issuance.

In its analysis of bond financing costs, the CRC estimates a cost of \$15.6 million for issuance expenses in the DEIS base case scenario. Columbia River Crossing Toll Bond Program, Scenario 1 - Base (DEIS) Toll on I-5 Only: (Baseline (Post Processed) Forecast) State-Backed Bonds - 30 Year Term, (Columbia River Crossing, 2010c). We use this as our baseline estimate of financing costs. As with interest costs, the amount could be higher depending on the timing of state and federal payments for the project.

2.5 Credit Card Cost

It is anticipated that a majority of those who use the CRC will pay for tolls by using debit or credit cards. The CRC will have to pay processing fees to banks and credit card companies associated with accepting these payments. According to documents released by the CRC, (Columbia River Crossing, 2010b), the annual costs of credit/debit card processing would be \$2 million in 2020 rising to more than \$5 million in 2035. Over the first 30 years of project operation, the estimated total cost of processing credit and debit card payments would be \$142 million.

2.6 Sales Tax Cost

Washington construction projects are subject to state sales taxes. It is not clear from the DEIS that the project sponsors have made any allowance for the cost of paying these sales taxes to the state of Washington. Sales taxes do not appear to be included in the cost estimate. A search of the Columbia River Crossing website found no references to sales taxes to be paid on the construction of the bridge itself (Google search for "sales tax" site:www.columbiarivercrossing.org).

In the case of other major projects, such as the proposed 520 bridge in Seattle, the state has allowed for a sales tax deferral, i.e. allowing the sales tax to be paid after the bridge is constructed, out of toll revenues. For the 520 bridge, with a total price of \$4.6 billion, the amount of the sales tax deferral is \$300 million (Washington State Department of Transportation, 2010b). This works out to 6.5 percent of the cost of the project. If 50 percent of the CRC is in Oregon and not subject to the tax, then sales tax would apply only to the Washington portion. With a total construction cost of \$3.6 billion, the Washington sales tax liability would be $(.065 * .5 * 3,600)$ million or \$117 million.

Based on this analysis, we use \$117 million as our estimate of the cost of sales taxes due to the State of Washington for the CRC. This number could be higher or lower depending on the portion of the project built in Washington.

2.7 Supplemental Project Cost

In addition to the direct cost of constructing and operating the Columbia River Crossing,

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it is likely that the traffic generated by this project will necessitate further expansions of the freeway system in Portland. The Oregon Department of Transportation has already identified the need for capacity expansion between the Fremont Bridge and I-84, a need that will be substantially increased by the construction of the Columbia River Crossing. ODOT estimates that such a project would cost between \$780 million and \$1.3 billion over and above the cost of the CRC (Tindall, 2008). In addition, since this would have to be financed exclusively by Oregon (i.e. no toll revenues, federal earmarks or Washington contribution), it would require a financial contribution from the State of Oregon in addition to the state's share of the CRC project.

The need for this expansion was confirmed by the URS analysis of the Columbia River Crossing—the effect of building the CRC is to move the traffic bottleneck on I-5 from the existing Columbia River Bridge, to the Rose Quarter area. The URS report concludes that without a change to the Rose Quarter, the effect of the CRC project will be to reduce travel times only one minute compared to the no-build.

Compared with the No-Build conditions, the LPA Full Build and Phase 1 would reduce the average travel time during the two-hour peak period within the bridge influence area (BIA) from 19 minutes to 18 minutes (A.M. peak) and on I-5 northbound from 14 minutes to 6 minutes (P.M. peak). The relatively small travel time reduction on I-5 southbound is mostly due to the bottleneck around the I-5/I-405 split. (URS, 2010).

The Independent Review Panel convened to examine the project reached the same conclusion. Unless the chokepoint at the Rose Quarter is fixed, the utility of the entire CRC investment is jeopardized. They write:

"Questions about the reasonableness of investment in the CRC bridge because unresolved issues remain to the south threaten the viability of the project."
(Independent Review Panel Report, 2010, page 112).

The panel recommends a new set of traffic studies to test whether the CRC will simply shift the bottleneck south, and call for ODOT and the City of Portland to "fully develop a solution for I-5 from I-405 to I-84" and to program that solution in conjunction with the phasing of the construction of the CRC (page 113).

The Chokepoints report published by TRIP, a Washington DC based road advocacy organization, identified the I-5/I-405/I-84 exchange, that portion of the I-5 system between the Fremont Bridge and I-84, as the second most severe bottleneck in the Portland metropolitan area (TRIP, 2010). It actually carries more traffic than the I-5 bridges (135,000 vehicles per day vs. 127,000 for the I-5 bridges). According to the Chokepoints report, this project will require \$800 million to \$1.3 billion and \$300 to \$350 million for improvements to Broadway-Weidler and widening I-5 to 3 lanes in each direction (TRIP, 2010).

Based on the information in the 2008 ODOT report and the 2010 Chokepoints report we use a figure of \$1.3 billion as the cost of supplemental projects that will be necessitated to

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improve traffic flow on I-5 in the wake of the CRC project. The actual cost could be higher or lower depending on the scope of supplemental projects actually undertaken to address traffic congestion in this corridor.

2.8 Negative Economic Impact Costs

In addition to tax revenues, the project assumes that a portion of the project revenues will come from tolls levied on traffic using the I-5 bridge. The toll payments are estimated to be \$120 million annually when the bridge opens to traffic, and rising to \$220 million annually in 2030. These amounts include both the direct amount of tolls, as well as the \$1.22 (2015) surcharge that will be levied on bridge users who do not purchase transponders. Money spent on tolls will largely be from local households and businesses, and represents money that would otherwise be spent elsewhere in the local economy. Again, the DEIS does not consider the economic or environmental impacts of shifting \$100 million or more annually from consumer and business spending to toll payments. These impacts are likely to include lower levels of purchases of goods and services from local businesses, an associated reduction in employment at such businesses, and a loss of tax revenues from a lower level of business activity.

There will be significant economic impacts to the region from spending this \$4 billion in construction costs, plus toll payments of \$100 million or more annually indefinitely. The DEIS does not consider the impact of these diversions of money from other uses, and therefore omits a significant impact.

We have not undertaken an input-output analysis to compute the exact impact on sales and jobs, but we use as a rule of thumb that each \$1,000,000 in consumer and business income diverted to pay for tolls produces a loss of ten jobs. This means that the project would result in the loss of 1,200 jobs initially rising to 2,400 jobs by 2030. While the project would result in temporary job creation during construction, this long term job loss would continue over the life of the project.

2.9 Transit Operating Costs

CRC's proposed Columbia River Crossing includes a light rail transit line extending the existing Max Yellow Line from the Expo Center in North Portland to a northern terminus in Vancouver. A portion of the costs of this line would be paid from fare box revenue, but in general, operating costs of light rail facilities exceed passenger fares. According to the Draft Environmental Impact Statement, the net incremental increase in operating costs for light rail above transit service that would be provided in the no-build case would be \$2.96 million annually in 2010, with that amount expressed in 2007 dollars. The DEIS does not provide a year-by-year breakdown of net incremental operating costs. To estimate the 30-year cost of transit operations, we use the \$2.96 million per year figure for each year, and convert it to year of expenditure dollars. The total 30-year incremental cost of transit is approximately \$175 million.

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2.10 Opportunity Cost

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Opportunity cost is a term used by economists to describe the idea that if resources are used for one purpose, they cannot be used for some other purpose. Resources used to construct the Columbia River Crossing, for example, cannot be used for other transportation projects in the Portland metropolitan area. In the specific case of the Columbia River Crossing, there are opportunity costs for all of the transportation funds that would be shifted to pay for this project that could otherwise be used for other transportation projects in the Portland metropolitan area. There are three specific areas in which the region would be likely to experience significant opportunity costs in association with the Columbia River Crossing: federal earmarks, federal new starts funding, and state funding allocations.

Earmark Opportunity Costs. Federal earmarks or allocations for the CRC will reduce revenue available for other projects in the region. Like most other states, the State of Oregon used its political clout to get a special allocation of federal funds, or earmark. Virtually every state's delegation seeks and receives similar earmarks based on their delegation's priorities.

If the state makes the CRC its priority, it forgoes its opportunity to seek funding for other eligible projects that would provide statewide benefits. For example, in the last round of federal transportation funding, the state relied on earmarked federal funds to underwrite a significant portion of the cost of repairing state highway bridges. If the state seeks earmarks for the CRC, it will not be able to obtain those same earmarked funds for other projects.

CRC proponents have claimed that CRC earmarks will not reduce funding for other projects because the CRC is a "project of national significance" that would qualify for a separate source of funding. But in fact, the legislation that would allocate the next round of transportation funding has not been passed by either house of Congress, so no such program or source of funding now exists. And the leading proponents of transportation reauthorization such as Representative James Oberstar have specifically rejected the idea of earmarking funds in the next transportation bill. And while the proponents of the project regard it as having national significance, there is no evidence that anyone outside the region shares their view. Every region regards its projects as having national significance.

New Starts Opportunity Costs. The CRC anticipates that some \$750 or \$850 million of the project cost will come from federal "new starts" rail funding. But there is a limited amount of such funding, and historically, the Portland metropolitan area has gotten a disproportionate share of such funding. The region has another major project underway—the Milwaukie light rail line—which would also be funded from this same New Starts program. Funding for the light rail portion of the CRC project will compete for a limited pool of funds for new rail starts from which the region is asking for funding for the Milwaukie light rail.

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State Funding Opportunity Costs. The project will jeopardize state funding for other projects in the Portland metropolitan area. The Columbia River Crossing will be perceived by state policymakers as a project benefiting the Portland metropolitan area, and will jeopardize the ability of the region to get state funding for other projects in the region. In 2009, when the State Legislature identified a list of projects to be funded with increased gas taxes and vehicle registration fees, the Portland metropolitan area got a far smaller share of total funding than its share of population. It is likely that any state earmarks of funding for the CRC would reduce the likelihood that state funds would be allocated to the Portland area for other projects.

In the funding plan provided to the Independent Review Panel on June 17, 2010, the CRC makes it clear that it is counting on diverting funds from existing state and federal programs to pay for the costs of the project. The document "Funding Report" shows that federal money from "Safety-LU and federal interstate maintenance funds (both of which could be invested in other projects) have been used to pay for Columbia River Crossing planning (Columbia River Crossing, 2010a). Similarly the Oregon Transportation Commission allocated \$30 million from House Bill 2001 to pay for Oregon's share of transportation planning costs, reducing funding available for other projects in Oregon.



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Please see the response to comment P-061-004 above.

3. The CRC Poses Major Financial Risks

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The preceding section identifies the costs of the Columbia River Crossing, assuming that everything goes as currently planned. But there are considerable risks and uncertainties associated with the cost estimates outlined above. It is possible that a number of factors could cause the project costs to be considerably higher than the baseline estimates presented in Section 1.

3.1 Cost Overrun Risk

The project is at risk for substantial cost overruns. These costs would have to be met by the states.

The Independent Review Panel expressed grave doubts about the reliability of the current cost estimates. While the CRC has subjected the project to a "Cost Estimate Validation Process (CEVP)", the review looked at a different design from that now proposed. In addition, there have been other significant changes to the project features since the last detailed cost estimates were prepared. In the view of the IRP, uncertainty about the constructability of the novel open web design, the much more restrictive in-water work windows, changes to the alignment across Hayden Island, and the delay in deciding the number of lanes to be built, together effectively invalidate the cost analysis done to date, and mean that cost estimates can't be relied on in putting together a funding plan.

Until these changed conditions are considered in conjunction with the other risks included in the CEVP, the credibility of the cost basis for the project as a means for communicating the needed funding and financing is problematic. Using data and information in the Base Estimate and funding/finance models that are not current and accurate can lead to potential delays in the review and approval process and receipt of a ROD. However, more serious is the concern that the Base Estimate and completion dates could be potentially so significantly different from that currently incorporated into the Final EIS, that seeking the necessary financing may be complicated and/or hindered since the confidence level would be significantly lower than would otherwise be expected with a risk based estimate that is based on the conceptual design and proposal included in the Final EIS. To the extent that the Base Estimate upper range potentially increases when the inputs and assumptions are revised to reflect information contained in the rest of the package, this could have a dramatic effect on the ability to finance the project and may also seriously impact the tolling policies under discussion. (Independent Review Panel, 2010, page 168).

There are substantial risks that construction cost estimates will be exceeded. ODOT's track record in estimating the cost of large highway construction projects suggests that the actual costs of the Columbia River Crossing may be much higher than the current estimates. Consider the two largest projects underway or in the late planning stages in Oregon: the Highway 20 widening in Lincoln County, and the Newberg-Dundee Bypass.

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ODOT's largest current project—a 7-mile long rebuild of U.S. Highway 20 between Corvallis and Newport—is more than 100 percent over budget. When it was planned in 2003, the project was supposed to cost about \$110 million. The original design-build contract awarded in 2005 was valued at \$129.9 million. After construction problems emerged, ODOT subsequently agreed to add \$47 million to the contractor's compensation. Costs have continued to increase and the project is still incomplete.

By comparison, the amount the Oregon and Washington Departments of Transportation have spent on planning the CRC (roughly \$130 million) is the same order of magnitude as the original budget for the U.S. 20 widening. The construction budget for the CRC—about \$3.8 billion—is more than ten times larger than the U.S. 20 widening. Despite entering into a public private partnership that was supposed to insulate it from the risks of cost-overruns, the US 20 project, originally budgeted for \$110 million, is currently budgeted for more than \$230 million, and will take about two years longer to complete than originally planned.

In 2003, the forecast cost of the US 20 project was \$110 million.

"The estimated cost of the Pioneer Mountain to Eddyville project is \$110 million dollars (2003 dollars). Construction is anticipated to begin in 2005 and take about 4 years to complete."

(Federal Highway Administration and Oregon Department of Transportation, 2003)

Today, the project is not complete and has expended more than \$234 million—more than double the original estimate (AASHTO, 2010).

And the effect of these overruns has been to take money that would otherwise be used for other transportation projects.

Will the cost overruns of the Highway 20 project at Pioneer Mountain affect future state highway projects? It's possible, but it's too early to tell, said a spokesman for the Oregon Department of Transportation.

"The fiscal effect is unknown at this time, but we know we're going to go above the \$130 million construction budget," said Joe Harwood, an ODOT spokesman in Springfield. "We have a finite amount of money. Depending on how big a hit we take ... there's a very good likelihood we'll see projects delayed. In extreme circumstances, we might see projects canceled."
(Rollins, 2007).

The next large project in ODOT's pipeline is the Newberg-Dundee bypass. Its cost has also more than doubled as it has moved through the planning process. At the time of the Draft Environmental Impact Statement on the proposed Newberg-Dundee bypass (2003), total project costs were estimated at \$222 million. Just two years later, after additional, more precise engineering analyses, the cost had ballooned 40 percent, to more than \$311 million (Oregon Department of Transportation, 2005). Today, it is estimated that

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completing this project may require between \$752 and \$880 million (Federal Highway Administration and Oregon Department of Transportation, 2010).

Cost overruns would jeopardize future transportation investments. It has not been determined who would be responsible for cost overruns on the Columbia River Crossing.

“WSDOT, ODOT, C-TRAN, TriMet, and possibly the Cities of Vancouver and Portland, must prepare agreements on roles and responsibilities for project development, construction, and capital funding that address such issues as project management and decision-making, capital cost sharing, how potential cost-overruns are managed, and contracting procedures.”
(Draft Environmental Impact Statement, page 4-42)

Cost overruns are a real concern in major transportation projects in the Pacific Northwest. For the proposed deep bore replacement for Seattle’s Alaskan Way Viaduct, the State Legislature required the City of Seattle to pay for any cost overruns. In the case of the Columbia River Crossing, it is clear that the additional resources would be diverted from other transportation priorities in the state and the region. And once ODOT and WSDOT have embarked on bridge construction, it is clear that completing this project—regardless of its final cost—would absorb resources that would otherwise be available for other transportation projects.

3.2 Mega-project Risk

The sheer scale of the Columbia River Crossing increases the likelihood that actual costs will be much higher than currently forecast. The CRC is a mega-project. Mega-projects are defined as major investments that cost several hundred million to several billion dollars. Careful studies of such projects around the world show that in ninety percent of such projects costs are underestimated. For bridge and tunnel projects, average cost overruns were 33.8 percent (Flyvbjerg, 2009). Mega-projects have been consistently shown to suffer from “optimism bias”: the tendency of project sponsors, operating in a political environment, to overestimate benefits, and underestimate costs and risk to build public support for a massive undertaking. The CRC modeling has not considered mega-project risk.

With its official price tag of \$2.6 to \$3.6 billion, the CRC is more than ten times larger than ODOT’s current largest construction project (the Highway 20 project mentioned above). If ODOT had a well-established track record of building multi-billion dollar highway and transit bridge projects, one could look at past experience, and estimate the probability of realizing projected costs levels (and as the Highway 20 and Newberg Dundee Bypass histories show, costs are likely to be under-estimated). The much larger size of the CRC makes it even more likely that the project will experience substantial cost overruns.

Given the scale of the project, a typical mega-project cost overrun of about 33.8 percent would work out to more than a billion dollar cost overrun.

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3.3 Housing Market Distortion Risk

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Tolling will dramatically shift the demand for housing in Clark County. The DEIS contains no analysis of the impact of tolls on housing markets in the metropolitan region. The DEIS uses the same land use patterns (distribution of households and businesses in 2030) in all scenarios, and only varies the trip distribution of these households, given that land use pattern. But imposing peak hour tolls will shift the demand for housing in Clark County and also on the Oregon side of the river.

In effect, for workers who must cross the bridge on a daily basis for work, the value of the tolls is the equivalent of a financial penalty or tax on housing on the opposite side of the river. The capitalized value of the toll penalty associated with commuting to Portland from Clark County will be equal to between \$30,000 and \$40,000 in housing value: a person working in Oregon could afford a house worth \$40,000 more than they could afford in Clark County, once one adjusts for income lost to tolling. The same is true of the much smaller number of workers living in Oregon and working in Washington: they will find it much more attractive to buy a house in Washington, than live in Oregon.

The effect of tolling will be two-fold. First, it will tend to lower housing values in Clark County, affecting both the home equity of Clark County home owners, and tax revenues paid to local governments in Clark County. Second, it will tend to reduce the amount of commuting between Oregon and Washington. These long term effects of the "toll penalty" are not explicitly addressed in the traffic modeling for the Columbia River Crossing, which assumes a fixed distribution of households and trip attractions. Over time the toll penalty will change both the location of households and trips, and the rate of travel between the two states.

3.4 Competing Bridge and Cross Subsidy Risk

The presence of the I-205 crossing greatly complicates plans to finance the I-5 bridge with tolls. It is an open question as to whether it is financially viable or practical to only toll one of the two crossings. Because this issue has not been resolved, it constitutes a risk to successfully completing the project.

The tolling plan for the CRC has not been finally determined. One set of alternatives involves tolling both the I-5 and I-205 crossings. For traffic management and financial reasons, it may be necessary to toll both bridges. If one bridge is tolled and the other bridge is not, there is a substantial danger of very significant diversion of traffic to the non-tolled bridge, with consequent increases in congestion. In its testimony on the project, Clackamas County has formally objected to tolling only I-5 because of the negative consequences for I-205 (County Chair Lynn Peterson Letter to Independent Review Panel, May 20, 2010).

Resolving the tolling regime for I-205 is essential to finalizing financing plans for the CRC. One factor that bond underwriters consider in evaluating toll-backed bonds is the presence of competing, non-tolled facilities (Seattle-Northwest Securities Corporation &

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Montague DeRose and Associates, 2007). The presence of a non-tolled I-205 bridge poses a significant financial risk to the holders of bonds backed by tolls on the I-5 bridge. The dangers are that the I-205 bridge would encourage substantial diversion of traffic that would otherwise cross the I-5 bridge and pay tolls, and would also greatly limit the ability to increase toll rates in the future (because increasing I-5 tolls would simply divert more traffic to I-205). These considerations prompted one Independent Review Panelist, Dr. Michael Meyers, to candidly label the failure to toll both bridges as "stupid." (Independent Review Panel Meeting, June 17, 2010). For these reasons, it is likely that bond underwriters will push strongly for tolls on I-205 as well as I-5. In the absence of tolling both bridges, bond underwriters are likely to deeply discount the amount of debt that can be issued against future I-5 toll revenues. The financial analyses prepared by the Columbia River Crossing do not address this issue.

It may not be legal for the CRC to use toll revenues from the I-205 bridge to retire debt for the construction of a new I-5 bridge. According to the Federal Highway Administration, it is not legal for a state to use toll revenues from an interstate project to pay for a different project. According to FHWA, "The Interstate System Reconstruction and Rehabilitation Pilot Program requires that revenue from tolls be used only to improve the tolled facility . . . FHWA rejected Pennsylvania's request to use the money for other projects, because . . . the application did not meet the federal requirement that toll revenues be used exclusively for the facility being tolled" (Federal Highway Administration, 2010).

As noted in section 1 of this report, there are serious flaws in the traffic projections prepared to date. In particular, the over-estimation of traffic under current non-tolled conditions, the very high value assumed for travel time, and the decision to manually adjust traffic model outputs to shift more vehicles to the I-5 crossing all inflate estimates of toll revenue. In reality, total traffic volumes may be much less, and diversion to the I-205 bridge is likely to be much higher than CRC projections estimate.

Tolling I-205 will require specific permission from the Federal Government, and may be illegal under federal law. And if I-205 is tolled, toll revenues from that bridge may not be legally available to pay costs associated with construction of the CRC. The uncertainty surrounding the toll regime, and potential revenues available for the CRC is a major risk to the project.



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3.5 Unconditional Guarantee Risk

The states of Oregon and Washington would likely be required to offer an unconditional guarantee to bond holders, exposing the states to the risks of revenue shortfalls and cost-overruns. For example, if the cost of the project exceeded the \$3.6 billion now estimated for the revised project, the two states would be liable for these costs. If the toll revenues from the project were insufficient to repay the bonds and interest, the two states would be legally bound to divert other revenues or raise taxes to repay bond holders. The financial plan does not estimate the costs to the states from these guarantees.

The likelihood is that additional funds will be needed. As noted earlier, 90 percent of mega-projects experience cost-overruns. Other sources of revenue may fall short of targeted contributions to the project either initially or over time. Bond rating agencies are likely to say that the project will support a smaller level of borrowing than the amounts estimated by the CRC. In addition, if traffic levels fall short of forecasts, it may be impossible to generate additional toll revenues by raising toll rates, because toll increases will trigger additional diversion of traffic, and lower traffic volumes will more than offset revenue gained from higher rates. It is also possible that federal funding may be less than expected, or may arrive more slowly than anticipated. All of these events have the effect of triggering additional liability for project guarantors.

The likelihood that the states will be called upon to guarantee bond purchasers against the effects of cost-overruns and revenue shortfalls has an added negative effect on the due diligence bond purchasers would otherwise provide for the project. If their financial return is guaranteed by the full faith and credit of the two states, investors have no reason to insist on a careful review of project forecasts. Under normal circumstances, lenders will provide a valuable service by independently evaluating key project assumptions. A guarantee undercuts this added review, and in effect represents a moral hazard in the construction and operation of the project, as bond holders have no incentive to offer strong oversight of the project because they are guaranteed repayment by the state whether or not the project succeeds.

3.6 Foregone Road Pricing Revenue Risk

Establishing tolls for the I-5 bridge may foreclose the opportunity to apply road-pricing to other segments of the highway system in the Portland metropolitan area. One reason that travelers will be willing to pay a toll to use a new I-5 bridge is that they are not charged a toll for using any of the highways that lead to I-5.

For the past several years, Oregon has been investigating comprehensive systems of road pricing. The 2009 Legislature adopted HB 2001 that requires a pilot congestion pricing program in the Portland metropolitan area not later than 2012 (Section 3). As gas prices rise, and as vehicle fuel efficiency improves and as alternative fuel vehicles emerge, it is

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apparent that the gasoline tax may need to be replaced as a means of financing the transportation system.

Tolls assessed for crossing the I-5 bridges do not solely reflect the value travelers attach to the bridge, but reflect the value of the other infrastructure that enables travel to the bridge. Once the two states start collecting in excess of \$100 million per year from travelers crossing the bridge, they will find it extremely difficult to persuade users to pay additional fees for using other parts of the highway system that function as bridge approaches. Those who purchase bonds secured by toll-revenues on the I-5 bridge may want assurances that the two states do not establish tolls or road pricing on the approaches to the bridge, because this would have the effect of lowering traffic on the bridge, and also lowering the willingness of travelers to pay higher tolls over time to use the bridge.

3.7 Federal Earmark Shortfall Risk

The CRC financing plan assumes a massive and politically uncertain level of federal earmarks. The CRC has asserted that the region can expect \$400 million in federal earmarks for this project, and that because of the project's alleged unique characteristics these monies will be over and above federal revenue that the region could expect to get in the future.

But this level of earmarks dwarfs what has gone to any single project. And the climate for earmarks has changed dramatically from the last transportation bill in 2005. Senator Patty Murray—chair of the transportation subcommittee of the appropriations committee—has warned against expecting big funding for this project (Hamilton, 2008).

While the public statements of the CRC imply that this project can expect some special funding, the reality is quite different. The "Corridors of the Future" program which CRC implies is a special category, is defined to include freeway mileage that carries fully one-third of the nation's traffic, and is a bureaucratically created program of the Bush Administration, funded at a total of only \$66.2 million nationally (U.S. Department of Transportation, 2008).

It is apparent that that the CRC will compete for virtually every federal dollar flowing into the region. In the text of the DEIS, the CRC makes it clear that every other source of federal money flowing to Oregon and Washington for transportation is fair game for the CRC, including monies dedicated to preservation and maintenance of the highway system (DEIS, Section 4-3).

In documents released to the Independent Review Panel, it is apparent that the Columbia River Crossing will compete for existing "formula" funds that are distributed to the states, and that are available for a wide range of transportation projects (Columbia River Crossing, 2010a).

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3.8 New Starts Funding Shortfall Risk

The project's financing plan assumes that the federal government will provide \$850 million in federal transit administration funding for the construction of light rail as part of the project.

There is a \$100 million discrepancy between the project budget reviewed by the Federal Transit Administration and the amount of funding projected to be received from FTA. The FY 2011 New Starts report indicates that the CRC has requested \$750 million for transit (Federal Transit Administration, 2010). The funding plan CRC submitted to the Independent Review Panel indicates that the project will receive \$850 million in New Starts Funding from FTA (Independent Review Panel 2010, page 173).

The project assumes a very high rate of federal match, which may not be realistic. According to the FTA, the CRC project funding assumes that federal funds will cover 79 percent of the cost of the transit portion of the CRC (Federal Transit Administration, 2010). This is the second highest level of federal match anticipated by any project; most projects are asking for federal funding of 50 percent or less. The project competes with projects in other regions, and locally, including the Portland-Milwaukie Light Rail line, which has a higher priority in the New Starts evaluation process, and which is being funded at a 50 percent level of matching.

According to the IRP, it is uncertain whether the project will successfully compete for new starts funding, and if it does, whether it will receive the requested level of funding. In its evaluation, the FTA questioned the project's local funding support and its operating cost support. As a result, the IRP concluded:

In the FY2011 New Starts Report, FTA noted concerns relative to the assumptions affecting the capital finance plan and the operating finance. Should the New Starts ratings decrease as a result of changes in assumptions, or as a result of economic conditions, or as a result of changes in project definition, or escalation of project costs, the project's ability to maintain the Medium rating needed to advance through the New Starts process [to] secure a recommendation for a FFGA (full funding grant agreement) could be at risk. (Independent Review Panel, 2010, page 181).

3.9 Schedule Delay Risks

Many of the costs associated with the Columbia River Crossing are influenced by how well the project can execute scheduled tasks. There are a variety of cost risks associated with delay. In the event of price inflation, a delay can produce higher prices, for labor or for materials. Delays also have a financial cost; if project completion is delayed, then interest expense rises and net revenue from tolling will be reduced.

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The size and complexity of the Columbia River Crossing makes it difficult to accurately estimate project schedules. The record of the project's planning stages clearly illustrates these difficulties. The project has repeatedly fallen behind its stated schedule in achieving key planning milestones. For example, in December 2006, the CRC predicted it would issue a Final Environmental Impact Statement in September 2008 (Columbia River Crossing, 2006).

In May, 2009, the CRC schedule indicated that the Final Environmental Impact Statement would be issued in February, 2010 (Columbia River Crossing, 2009a).

Other special considerations make the project vulnerable to delays. Not only does the project involve managing construction in a heavily traveled interstate highway corridor, it also takes place in an environmentally significant area. The seasonal migration patterns of Columbia River Salmon—some of them listed as threatened or endangered species—require that in-water work be done only at certain times when fish are unlikely to be present. Small delays can be magnified if the project misses an opportunity to do construction in one of these available "in-water windows." According to the Independent Review Panel, the existing project schedule assumes that construction will be able to take place year-round, with no requirements to suspend in-water work during migration periods. However, it now appears that Endangered Species Act protections will require that in-water work take place only in four-month windows, rather than year-round. This seriously jeopardizes the ability of the project to be completed according to the current schedule.

The IRP also understands that upon completion of the ESA draft that the in-water time period to perform work is a specific four-month window and there is no probability that it can potentially be eight months or even the entire year, thus severely restricting when in-water works can be performed. (Independent Review Panel, 2010, page 168).

Construction delays are a regular occurrence in such projects, as the experience with ODOT's largest current construction project, the U.S. 20 Pioneer-Mountain to Eddyville project indicates. The project is years behind schedule, having been delayed by previously unidentified geological problems, and a contractor's failure to adequately protect salmon habitat. Most recently, ODOT announced that construction is being suspended on four of the bridges that are part of the project because of concerns about geological stability. A routine examination found two bridge columns out of plumb in February, 2010, leading ODOT to suspend construction in June. It is not known when construction will resume on these bridges (Oregon Department of Transportation, 2010).

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This comment summarizes the above comments. Please see the responses to comments above.

Conclusion

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As currently proposed, this project faces three broad areas of very significant risk.

The cost of the project, as determined from CRC documents, is more than double the widely-publicized \$3.6 billion construction-only costs. CRC's financial projections indicate that over thirty years, total costs of building and operating the project will exceed \$8 billion dollars. Supplemental costs for related improvements, as recommended by the Independent Review Panel, will push costs to \$10 billion, possibly more. Yet additional costs from potential and probable "mega-project" cost-overruns are unquantifiable.

The projected revenue from tolls is significantly overstated due to errors in the underlying traffic assumptions. These errors exaggerate expected cash-flow, and overstate the project's ability to service debt. Because no serious, independent investment grade analysis of tolling has been undertaken, the project's ability to secure favorable bond ratings and obtain the amount of debt needed is highly doubtful.

The project relies on funding from multiple federal programs, and it is highly improbable that all programs will be available, or that they will produce the optimistic levels of funding projected for each program, for the period of time that the funds will be required.

Each factor separately poses significant risk for Oregon's finances, since only the two states can fill the gaps caused by increased costs, toll revenue shortfalls, and unfavorable federal funding actions and timing. Together these risk factors compound to create virtually certain additional demands on the states' finances that have not been adequately addressed or analyzed.

Proceeding with this project based on the unreliable and highly over-optimistic work done to date exposes the region to enormous financial risks. Just as one would insist on an independent certification that the bridge's physical design was sound, decision-makers should insist that the financial plan for the Columbia River Crossing is not one which is so poorly designed that it is liable to collapse. Before taking any further steps which would commit to this risky course of action, the region's leaders should insist on a careful, professional and completely independent review of the project's financial plan.

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