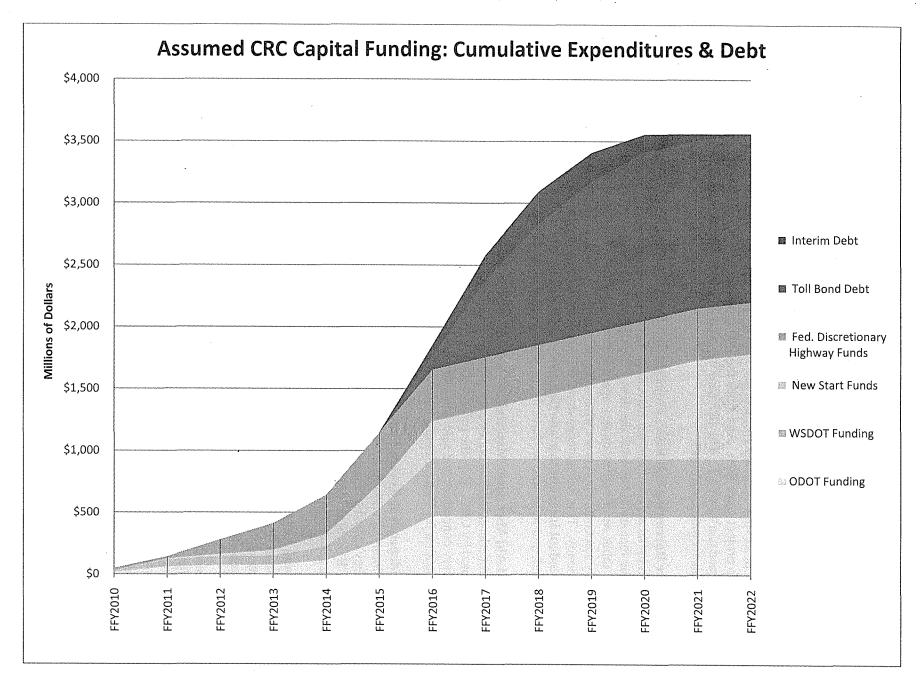
Seven Reasons to Question the CRC

- 1. It's not really a bridge: It's a freeway that happens to cross the river. Rebuilding seven (7) interchanges is almost \$2 billion dollars. LRT is \$850 million, the bridge is less than 20% of the project.
- 2. We don't know how much it will really cost. Neither did the Governor's Independent Review Panel (IRP). The IRP said it can't tell, due to original EIS in 2008, changes to project since then. And since the IRP reported, we learned that the bridge that was designed can't be built. The IRP said we need new cost estimates, and CRC should address this recommendation.
- 3. Massive Borrowing and Risk Projected Toll Bond financing is overly optimistic and risky, both in the assumed amount that can be borrowed, and the traffic projections for toll revenue that are to pay back the debt. The IRP said we need more specific info and data if we think we'll borrow money against the toll revenue. They also said we need an analysis by someone who knows what the bond rating agencies and bond issuers need to loan the money. This has not been done. We need an independent traffic analysis, and an independent investment-grade financial analysis to be sure we can borrow as much as projected, and to be sure we have the revenues to pay the debt.
- **4. Federal Aid May never Materialize—leaving us with the bill.** The projections for anticipated Federal funding are overly optimistic, and it's just not going to happen like it's estimated by CRC. Esp. the projected FTA "New Starts" \$850 million dollars. The IRP was very concerned, and said that CRC needs to re-do their analysis and accelerate their application for Federal funds, before the FEIS is submitted.
- 5. The Independent Review Panel flagged major problems. The IRP in fact said, and I quote, "financial viability of the project remains a key concern" and that we should plan for what they called a "limited funding scenario". But we have not yet seen this plan from the CRC. Specifically, the IRP called for CRC to "fully investigate and develop alternative construction phasing concepts".
- **6.** We would have to raise taxes to pay the state share. We don't know how Oregon is able to fund its \$450 million share of the project. The CRC proposes raising the gasoline tax, vehicle registration fees, and motor carrier taxes and fees, and to go to the bond markets for this as well, to the tune of \$500 million.
- 7. Key agreements with Washington haven't been reached. Finally, we don't know what the agreements will be between the two States and other entities (C-Tran, Tri-Met, Cities of Portland and Vancouver). The IRP said we need to not only figure this out, but we need to figure out who's in charge here.... and they said we should do it before the final EIS and before seeking funding. Quoting the IRP, "The lack of formation on the legal entities and/or formal agreement between states has the potential to delay the funding/financing process".



CRC Funding Graph Explanations

Of the total \$3.6 billion illustrated, the bridge alone would cost about \$500 million dollars. The Light Rail component is \$1 Billion dollars. Rebuilding seven (7) interchanges and other road construction is the majority of the total cost at \$2 Billion dollars.

The total cost of the project is unknown, according to the Governors' Independent Review Panel (IRP), because of all the changes from the initial Environmental Impact Statement (EIS); e.g. change in bridge type and Hayden Island changes. The IRP said we need a new cost estimate, and CRC agreed. We do not have this new cost estimate.

The Governor's IRP also said that the cost/benefit analysis should be reviewed, and that the CRC should address Portland's and their consultant's concerns about the Rose Quarter traffic congestion. According to the IRP, failure to do so could "threaten the viability of the project".

The accompanying graph illustrates projections from the CRC's Draft Financial Plan. The plan has not been formalized beyond this point, and CRC has conveyed that there is no plan at present for public involvement in the process. Every single component of the current plan has serious deficiencies and significant risks that have not been adequately addressed.

The following information is directly from CRC materials and from the IRP analysis and recommendations.

Oregon's proposed contribution is for only \$40 million for the current year, 2011, but the full initial commitment, not counting cost overruns and funding shortfalls, is for \$450 million over the next 5 years. Note that the two States need to come up with \$300 million in 2015, and \$400 million in 2016.

CRC recognizes that the states don't have these funds available. The proposal calls for increasing the gasoline tax, vehicle registration fees, and motor carrier taxes and fees. This proposed new cash flow stream is to be dedicated solely to the CRC Project, to be bonded for the \$500 million required to fund Oregon's initial portion of the project.

There has been no determination by Oregon's Legislature as to whether the proposed taxes and fees are reasonable or even politically feasible. Furthermore, the State Treasurer has warned about the state's diminished bonding capacity, and this condition is unlikely to improve in the foreseeable future.

The state of Washington is in a similar financial position in considering their required initial commitment for \$450 million dollars. There is no commitment

from Washington on the required funding, nor are there agreements between the two states on the proportion and allocation of funds, other than general discussions about splitting the initial costs 50/50. There are also multiple interagency agreements that have not yet been finalized.

It is important to know when these funding agreements will be finalized. What are the correct cost-sharing proportions? Which entities will be responsible for cost overruns and other funding shortfalls, and in what proportion?

The Federal Transit Authority (FTA) "New Start" funding is projected at a relatively modest \$6 million in 2012. After 2012 the funding requirements from this proposed source begin ramping up significantly. Beginning in four (4) years, the CRC proposal indicates that the project will need \$100 million per year in each of the next 7 years. However the current federal Transportation Re-Authorization bill has not even been written yet.

It is a well-known fact that the Federal Government is looking at significantly curtailed spending. Representative John Mica, Chair of the House Committee on Transportation and Infrastructure has framed the challenge by asking "How can we do more with less". He has also indicated that his Committee will not raise the federal gas tax, and that "earmarks" are not going to be as they were in the past.

For these reasons, it is not at all certain, or even likely, that the CRC Project will receive \$850 million from the FTA in the amounts and timing projected. This critical tranche of funding should be firm before Oregon is committed past a "point of no return".

This tenuous funding scenario prompted the Governor's IRP to caution that "the financial viability of the project remains a key concern", and that there should be a phasing plan, in the event the project runs over on costs or short on expected funding. The CRC agreed with this. However this project, with all of its interconnected components of light rail and interchange rebuilds is very difficult to phase. The CRC has yet to provide a realistic phasing plan that shows how and where construction will be delayed if/when cost and/or funding problems are encountered.

The next component of funding is Federal Highway Administration (FHWA) Discretionary Highway Funds, projected to provide \$400 million dollars. The same questions apply to this as apply to the FTA funding. It is not at all certain that this money will be available in the amounts and timing projected by the CRC. This source is particularly at risk given the aforementioned change in the Federal outlook for "earmarks".

On a related note, the CRC has promoted this project as capitalizing on Federal money that will be new money that is not available for other projects, and will not detract from other regional transportation and infrastructure needs. However in

the CRC's Draft Finance Plan they recognize that we may not get this money, at least not in the amounts projected, and CRC discusses how funding from other projects can be diverted. This fact is only cursorily addressed in the Draft Finance Plan and should be fully analyzed in terms of impacts on Oregon's other critical deferred needs.

The Draft Finance Plan projects no funding from FHWA 2011, but beginning in 2012 the project will require \$100 million for each of the next four (4) years. The supposed source is from Projects of National and Regional Significance (PNRS), which is not funded. CRC recognizes in its analysis that this funding is "uncertain", and expects to divert money if necessary from other "administrative grants" and/or "other discretionary highway funds". This obviously would negatively impact other critical infrastructure needs.

The projected Toll Bond Debt for \$1.6 billion in funding is the largest component of the proposed funding. Independent professional analysis has shown that the project probably will not be able to borrow that much, and there are serious questions about the underlying traffic and toll assumptions. The project will likely be unable to realize nearly the amount projected, it is unlikely to be able to meet the debt service requirements, and there remains the broader question about Oregon's overall bonding capacity.

Regarding this uncertainty, the IRP recommended a new traffic study, and an independent investment-grade analysis, to ensure that there will not be a large funding hole to fill five-plus years down the road, when the project would unquestionably be well past a point of no return. CRC agreed with the need for this analysis, but their position is that they will do so "at a later stage, before bonding". This huge funding component requires much more certainty, and sooner. Otherwise Oregon's taxpayers would have to fund the shortfall, which could be very significant, if not fatal to the entire project.

Although not shown directly on the funding sources graph, it is significant to note that bridge users will be required to pay \$6.3 billion dollars in tolls to pay back the \$1.6 billion in toll bond debt. Citizens will have to pay over <u>four-times</u> the amount proposed to be borrowed. Toll collection costs account for \$1.7 billion in expenses (more than the amount financed), and interest expense is projected at \$3 billion because interest expenses cannot be paid until toll revenue begins. This creates the need to "capitalize" interest expenses, adding to the principal amount, and paying additional interest on the deferred interest. This is a very expensive financing scheme.

Finally, the project requires "Interim Borrowed Funds" of \$300 million. The potential sources and terms and conditions are completely speculative. This is additional debt that needs to be borrowed because the project's funding requirements exceed the aforementioned debt and funding cash flows, even if the full assumed amounts are actually realized.

In summary, the CRC Draft Finance Plan describes a dangerously highly-leveraged project, with very risky assumptions in every tranche of projected financing. Very significant questions remain to be answered.

The CRC must provide updated cost estimates, a new independent traffic analysis, an independent investment-grade analysis, a realistic and workable phasing plan, and finalized cost/revenue agreements among all entities. All of these tasks were recommended by the Governor's Independent Review Panel. All of these, and firming up the proposed federal funding programs, should be required from the CRC before Oregon makes a substantial additional commitment to the project.

Columbia River Crossing



PO Box 11351 Olympia, WA 98508

July 27, 2010

Governor Christine O. Gregoire Office of the Governor PO Box 40002 Olympia, WA 98504-0002 Governor Theodore R. Kulongoski 160 State Capitol 900 Court Street Salem, Oregon 97301-4047

Columbia River Crossing Independent Review Panel Final Report

Dear Governors Gregoire and Kulongoski:

In accordance with your charge to the Independent Review Panel (IRP) the final report documenting our findings and recommendations is transmitted for your consideration. The IRP has examined a large volume of information, heard from project owners, project sponsors, key stakeholders and the public and conducted independent research.

The IRP is unanimous in assessing that the Columbia River Crossing Project (CRC) must move forward with a new crossing to be built at the earliest possible date. In addition, the IRP affirms that the CRC has made significant progress in preliminary engineering and environmental studies.

This report outlines the IRP findings regarding the work to date and offers recommendations to serve as a "road map" for Oregon and Washington toward project completion. Complying with these recommendations will be the most expeditious path for the CRC and bring substantial long-term benefit to the region.

Columbia River Crossing



We appreciate the opportunity to assist you and the citizens of your respective states in this important initiative. The IRP would be pleased to provide further clarification on any part of the report as needed.

Sincerely,

Thomas R. Warne, PE

Chair

Enclosure

I-5 Columbia River Crossing Project Independent Review Panel

Final Report

July 27, 2010



Contact: Tom Warne twarne@tomwarne.com 801.302.8300 www.tomwarne.com



Submitted by:

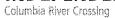
Thomas R. Warne, PE Chair

Mike Meyer, PhD, PE



Table of Contents

TABLES AND FIGURES	
	_
TERMINOLOGY	5
1 EXECUTIVE SUMMARY	g
Findings	
Recommendations	17
2 INTRODUCTION	22
2.1 Project Description	22
2.2 Independent Review Panel Formation	
2.3 Independent Review Panel Charge	
2.4 Process followed by the Independent Review Panel	
2.5 IRP Recommendations	
3 IMPLEMENTATION	32
3.1 Context Sensitive Solutions	
3.1.1 Recommendation	
3.2 Project Planning, Environmental Review and Coordination	
3.2.1 NEPA Process and Documentation	
3.2.2 Federal Agency Coordination and Permitting	
3.2.3 Stakeholder Outreach / Public Involvement	
3.2.4 Tribal Consultation	
3.3 Roadway Design	
3.3.1 Overall Corridor Approach and Sizing	
3.3.2 Roadway Alignment Design	
3.3.3 Roadway Design: Bridge	
3.4 Light Rail Transit	
3.5.1 Constructability	
5.5.1 COUSTI ACCUPATION	14/





3.5.2 Schedule	149	
3.6 Project Management, Decision Making and Governance	149	
3.6.1 Project Delivery Phase		
3.6.2 Long-Term Project Management	154	
3.6.3 Environmental Stewardship, Management and Consultation	156	
3.6.4 Schedule	159	
3.6.5 Project Cost Estimate	161	
3.6.6 Risk Management	164	
4 FINANCE	170	
4.1 Project Finance Overview		
4.2 Finance Plan	171	
4.3 Tolling		
4.4 Cost Benefit Analysis		
4.5 New Starts Funding Assumptions	180	
4.6 Phasing Considerations	184	
5. PERFORMANCE MEASURES	188	
5.1 Environmental Performance Measures		
5.2 Freight Performance Measures	189	
5.3 Congestion Performance Measures	190	
CONCLUSION	193	
Recommendations	100	

Columbia River Crossing



Tables and Figures

Table 1 - Terminology	<u>5</u>
Table 2 – IRP Findings	
Table 3 - IRP Members	
Table 4 – IRP Public Meetings	
Table 5 – Acknowledgement of Additional Actions Needed Post-LPA	
Table 6 – Cost Estimates for Alternatives	
Table 7 – National Sample of Similar Projects Using a Phased Approach	185
Figure 1 – CRC Decision-Making Model	152
Figure 2 – Expenditure Plan	172
Figure 3 – Capital Finance Plan Scenarios	173

Columbia River Crossing



Terminology

An understanding of the following terms is necessary to have appropriate context for this document:

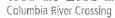
Table 1 - Terminology

Acronym	Meaning
AASHTO	American Association of State Highway and Transportation Officials
AACEI	Association for the Advancement of Cost Engineering International
ADS	UDAG Aesthetic Design Subcommittee
BA	Biological Assessment
BIA	Bridge Influence Area
CEJG	Community and Environmental Justice Group
CEQ	Council on Environmental Quality
CEVP	Cost Estimate Validation Process
CFR	Code of Federal Regulations
CRA	Cost Risk Assessment
СРМ	Critical Path Method
CRC	Columbia River Crossing Project / Project Team
CSS / CSD	Context Sensitive Solutions / Context Sensitive Design
CRITFC	Columbia River Inter Tribal Fish Commission
C-TRAN	Clark County Transit Agency
DEQ	Department of Environmental Quality





Acronym	Meaning
DOI	US Department of the Interior
DOTs	Departments of Transportation
EIS	Environmental Impact Statement (Draft, Supplemental, or Final)
EJ	Environmental Justice
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FTA	Federal Transit Authority
FWG	Freight Working Group
FY	Fiscal Year
GHG	Green House Gasses
HSM	AASHTO's Highway Safety Manual
IGA ·	Intergovernmental Agreement
InterCEP	Interstate Collaborative Environmental Process
IPS	Integrated Project Staff
IRP	Independent Review Panel
I-5	Interstate 5
LPA	Locally Preferred Alternative





Acronym	Meaning
LRT	Light Rail Transit
MAX	Metropolitan Area Express
MDSG	Marine Drive Stakeholder Group
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NHS	National Highway System
NMFS	National Marine Fisheries Service
NPS	National Park Service
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NRHP	National Register of Historic Places
ODOT	Oregon Department of Transportation
ODOT HQ	Oregon Department of Transportation Headquarters
O&M	Operations and Maintenance
PAC	Portland Pedestrian Advisory Committee
PBAC	Pedestrian Bicycle Advisory Committee
PMAG	Performance Measures Advisory Group
PSC	Project Sponsors Council
PWG	Portland Working Group
ROD	Record of Decision





Acronym	Meaning
RTC	Regional Transportation Council
SAFETEA-LU	The Safe, Accountable, Flexible Transportation Equity Act: A Legacy for Users
STHB	Stacked Transit Highway Bridge
SWG	Sustainability Working Group
TDM	Transportation Demand Management
THUD	Transportation, Housing, and Urban Development Appropriations Act
TriMet	Portland, Oregon Metropolitan Area Transit Agency
TS&L	Type, Size and Location
UDAG	Urban Design Advisory Group
URS	URS Corporation
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VWG	Vancouver Working Group
VNHR and FVNHR	Vancouver National Historic Reserve (and Fort Vancouver National Historic Reserve)
WSDOT	Washington State Department of Transportation
WSDOT HQ	Washington State Department of Transportation Headquarters
WSU	Washington State University

Columbia River Crossing



1 Executive Summary

The Columbia River Crossing Project (CRC) represents one of the most ambitious and complex transportation initiatives in the nation. This multi-partner, multi-modal project is aimed at improving travel efficiency and safety for cars, trucks, transit and pedestrians; strengthening the regional economy through transportation solutions, and supporting community livability. Although only five miles in length, this transportation corridor presents many engineering, environmental, social, commercial, and community challenges. If handled correctly, it will be an invaluable asset to the cities of Vancouver and Portland and their respective states. On the other hand, if poorly conceived and executed it will fail to serve mobility and other community needs and values of the region in the years to come. It is the type of project where the owners/sponsors have only one chance to get it right.

Work on the CRC has been ongoing for a decade with a strong local consensus behind the need for action. Many of those living in the region are anxious to move the project forward to construction. The current project schedule shows a Final Environmental Impact Statement (Final EIS) as ready to distribute in the near future with a Record of Decision (ROD) by early 2011.

Now, however, the project is at a critical juncture. Amidst design constraints that complicate an already complex river crossing, unresolved issues have caused concern among elected officials and stakeholders about the state of the project and its approach. On April 13, 2010 Governors Christine Gregoire and Theodore Kulongoski announced the appointment of an Independent Review Panel (IRP) composed of eight national experts with extensive credentials in large project delivery and the issues facing the CRC. The governors convened the panel to ensure that:

- Key project assumptions and methods are reasonable.
- CRC embraces a modern way of thinking in improving local, regional and national transportation infrastructures that integrate light rail, pedestrians, bicycles, and highway needs into a single solution.

The panel is chaired by Thomas R. Warne, PE. Other members include:

Columbia River Crossing



- Rodney L. Brown, Jr.; JD
- E. Robert Ferguson
- Patricia D. Galloway, PhD, PE
- Diana C. Mendes, AICP
- Michael D. Meyer, PhD, PE
- Timothy R. Neuman, PE
- Mary Lou Ralls, PE

Recognizing the need to maintain momentum by the CRC, the Governors charged the IRP to do the following:

- Review the project implementation plan
- Review the project finance plan
- Review project performance measures

Their efforts consisted of extensive public briefings, community comment sessions and independent research conducted by members on specific topic areas. The IRP held six public meetings where relevant project presentations were made by the Washington State Department of Transportation (WSDOT), the Oregon Department of Transportation (ODOT), TriMet, C-Tran, project sponsors, key stakeholders and the public. In addition, community comment sessions were held on three separate evenings. All of these meetings occurred in Vancouver and Portland. In addition, the IRP attempted to communicate with other interested parties, undertook their own original research into project issues and otherwise sought to understand the CRC. This report reflects the findings and recommendations of the IRP concerning the CRC.

Two overall comments should be highlighted relative to the IRP's findings and conclusions. First, a new river crossing must be built; the "no-build" option is not a viable alternative. Merely retrofitting the existing bridge does not address the fundamental purpose and need. The IRP recognizes a strong regional consensus on the type, severity and nature of the problems associated with I-5 and the project plus the need for action to address those

Columbia River Crossing



problems. The IRP does not endorse a specific option other than to emphasize something must be done—sooner than later.

Second, the IRP found that much of the work conducted by the CRC and their counterparts in the other sponsoring organizations is good, sound, and reflects appropriate practice for such a project. Of particular note is the effectiveness of the Integrated Project Staff (IPS) and their efforts to advance critical issues to the Project Sponsors Council (PSC) for consideration.

Findings

During the course of their work the IRP identified findings among the topic areas assigned by the governors. The recommendations included in this IRP report reflect conclusions on how the CRC can address these areas of concern. Major findings are presented in the table 2 below.

Table 2 – IRP Findings

Finding	Description
Public outreach has lost	The original aggressive, comprehensive public outreach effort and efficient
momentum.	coordination that characterized the Draft EIS preparation has not been
	continued in the same manner during the preparation of the Final EIS and
	thus lost its effectiveness and momentum.
LPA caveats reflect a low	The Locally Preferred Alternative (LPA) adopted in 2008 indicated
level of agreement, which	agreement on the need for a replacement bridge and provision of high
contributed to current	capacity transit with light rail transit as the preferred mode. However,
project status.	caveats indentified by the various project sponsor resolutions showed a
	number of project design issues outstanding and requiring additional
	coordination, thus making the LPA susceptible to individual interpretations
	and disagreements later. The apparent consensus reached in 2008 actually
	reflected a very low level of agreement between the parties that contributed
	to the current project status.

Columbia River Crossing



Much NEPA work remains.

Much work remains to complete the NEPA process for this project. Work to be completed includes the following:

- Addressing the nature of modifications to the Draft EIS to be included in the Final EIS.
- The need to complete key Section 106 requirements.
- The need to complete important 4(f) requirements.
- Issues relating to the Native American tribes and fishing rights.
- Environmental justice concerns.

The current river crossing structure type is unique and presents risk to both the cost and the schedule of the CRC.

Bridge Type Rejected

Since the publication of the Draft EIS the LPA has been modified considerably. Most significant is the change in structure type for the main bridges across the Columbia River. This change from a closed box segmental design to the open-web Stacked Transit/Highway Bridge (STHB) approach is substantial. It reflects a departure from a standard structure type used across the nation to one that has never been built anywhere in the world, requiring extensive testing and engineering to determine viability. The STHB accommodates light rail transit within one of the bridges and the open-web design eliminates the confined attributes of segmental box configuration. The IRP determined several key things about the open-web STHB including:

- No Cost Estimate Validation Process (CEVP) has been done on the current design. Past CEVP efforts were conducted on a version of the bridge no longer under consideration.
- The earlier Constructability Workshop reviewed a previous version of the bridge as well.
- Current cost estimates are for a previous bridge type and may not reflect the actual cost of the STHB.
- FHWA and others will require substantial testing and evaluation of the open-web STHB prior to final approval.

Columbia River Crossing



Clearance issues present a challenge.	Clearance issues linked to the river traffic and aviation associated with Pearson Field and Portland International Airport present constraints that make reasonable bridge solutions difficult.
Consensus on a specific plan regarding land use, commercial development, and community concerns on Hayden Island must be in place before the right transportation solution can be developed.	Completing the Final EIS requires consensus behind a specific plan. The controversy at Hayden Island has been a contentious issue for the CRC. The interchange design for Hayden Island, the number of lanes crossing the island and the river in that area each affect the future of the island in terms of land use and development. The CRC will be unable to provide the right transportation solution for the island until these issues are resolved. Once the City of Portland and the island residents have resolved their issues and are unified so that decisions can be made, a transportation solution will emerge.
Light rail transit is essential.	The IRP finds that light rail transit (LRT) is an essential component of the successful CRC and that LRT and the CRC Bridge are co-joined; one won't be built without the other. The systemic value of extending the LRT from EXPO Center to downtown Vancouver seems obvious to the IRP as it contributes to the long-term mobility needs of the region.
Tolling issues require attention.	The finance plan contains typical revenue sources including New Starts funding for the light rail project, grants from the Projects of National Significance program, funds from the respective legislatures, and revenues from tolls. The certainty of each revenue source is unique although some are more predictable than others. For example, the IRP is unable to judge whether or not the state legislatures will provide the \$750-850 million shown in the project finance plan. Tolling is seen by the IRP as essential to the viability of the suggested plan. However, many tolling issues remain including overall philosophy, how and when tolls are imposed, and whether their purpose is project finance, travel demand management or some of both.
Discussion of project phasing is not in the Draft EIS.	No provision was presented to the IRP about project phasing. The IRP finds this to be unrealistic given the final cost of the CRC as well as the need to address cash flow demands and construction sequencing. Phasing is not part of the Draft EIS currently under review but should be included in the Final EIS.

INDEPENDENT REVIEW PANEL Columbia River Crossing



Cost/benefit analysis is reasonable.	The project has many uncertainties, such as the number of lanes and cost of improvements. The IRP found the general approach to the cost/benefit analysis to be reasonable regarding the relative benefits and costs for the project segments conducive to monetization. However, while the CRC approach was procedurally correct, many project changes have not been addressed and the IRP cannot assess the validity of the conclusion until that happens. As a result, the cost-benefit ratio calculation is not useful in the overall decision-making process.
IRP is unable to assess the accuracy of the cost estimate due to change in bridge type and Hayden Island issues.	The IRP is unable to assess the accuracy of the cost estimate for the project. Past efforts to determine an accurate cost have been largely negated due to the change in bridge type and the continuing controversy regarding Hayden Island. Until a resolution to these two issues is achieved and the NEPA process is closer to completion, the total cost of the project is unknown with any certainty. Conducting a new CEVP and other cost estimation activities are necessary to rectify this situation.
Due to change in bridge type and Hayden Island Issues, project risks may not be fully understood.	Project risk management has received attention from the project staff. The process followed is typical of other large projects and netted useful information. Unfortunately, with the change in bridge type and the prevailing issues at Hayden Island, the project will have to conduct new risk assessments using CEVP and other tools in order to fully understand and manage the substantial risks associated with a project of this nature.
2030 design year presents concern.	The IRP found the current efforts to reconcile the number of lanes on the CRC to be encouraging. This level of cooperation among the staff through the IPS and within the individual organizations is commendable. In resolving lane numbers the IRP does have some concerns about the ongoing dialogue. The design year for this project is 2030 and the opening of the new facility could be as late as 2018 or 2020. Only 10 or 12 years will pass before the design year is reached.

Columbia River Crossino



Current number-of-lane discussions present risk of inadequate capacity for a 100-year bridge.

The risk of not seeing far enough into the future on this project is a concern; the new CRC bridges will last for 100 years or more. This is not simply a street widening project where a community can widen again in ten years. Traffic patterns; land use strategies, freight growth and other key inputs into existing models do not provide a dynamic vision of the future when thinking in terms of a 100-year facility. The desirability of living in the Portland/Vancouver region is not going to diminish, so populations will continue to grow. Freight growth is planned for and desired by that industry and policy makers on both sides of the river. These and many others factors will influence mobility needs for 90 years beyond the project design year. In the context of the current 10 lane versus 12 lane discussion, the IRP believes the greatest risk in the decision-making process is not over-sizing the bridges but not building enough capacity for the next 100 years.

Decision-making appears cumbersome.

CRC governance and management has been difficult to date due to the bistate nature of the project and the diverse ownership and sponsorship relationships. The current structure of the PSC and IPS appear to be working to some degree of effectiveness. However, decision-making appears to be cumbersome due to management, in effect, "by committee." Although this structure may serve the project through the NEPA process, it is not the kind of management and governance structure that should exist during construction and for long-term facility management once it opens. A number of ideas have emerged around the concept of a bi-state commission, interstate compact, a bridge authority or mobility council as the model that should be implemented to address this critical need. In spite of much discussion, no consensus exists among the sponsors about the membership, role, or authority of such an entity, yet time is of the essence for establishing this project element.

Difficult decisions are pushed to the future.

The IRP has observed a pattern of decision-making where difficult issues often are not dealt with immediately, but are more likely to be pushed into the future. The future governance structure appears to be one example. The adoption of the LPA in 2008 with resolution caveats to be resolved at some future date is another.





The CRC started a process for identifying and following performance
measures during the life of the project and into the future. This is an
important long-term strategy that deserves attention from all parties. Much
work remains to be done so it is too soon to render judgment concerning
any particular measure or its management.
Given the remaining uncertainties and unresolved issues, it is incumbent
upon the CRC to immediately advise the FHWA and FTA of any potential
environmental impact differing significantly from those previously
publically disclosed to the Draft EIS. They must also consult on appropriate
modifications to the environmental review process needed to accommodate
such changes. These changes could result from design
refinements/modifications, from analyzing phasing impacts, or from
additional consideration of cumulative, induced growth, or environmental
justice issues.

If left unaddressed, potential consequences to the CRC associated with these findings may include:

- Emergence of new alternatives not previously considered.
- Identification of previously undisclosed consequences to the human and natural environment requiring additional agency review and public comment.
- Increases in project costs associated with unforeseen design features, mitigation requirements or schedule delays.
- Lack of flexibility in project implementation, including ability to respond to uncertainties in project funding.
- Project delays resulting from public controversy, the need to undertake additional environmental reviews, or legal challenges.

Columbia River Crossing



While all these concerns can be addressed between the Draft EIS and the Final EIS, management commitment and dedication of appropriate resources will be required to do so effectively and efficiently.

Recommendations

The IRP has developed 30 recommendations to address the findings listed above. These recommendations will allow the project to move forward to completion and achieve the stated purpose and need. The recommendations are grouped by topic, as discussed in the report and are not listed in any particular order or priority; the IRP considers all recommendations to be of equal weight and importance. Having considered the CRC implementation plan, finance plan, and performance measures, the IRP offers the following recommendations:

Context Sensitive Solutions (CSS)

1. The CRC should more aggressively adopt CSS principles in the on-going project development process.

NEPA Process

- 2. Finalize and define the Locally Preferred Alternative to reduce ambiguity and address all related caveats.
- 3. Evaluate and offer public review of phasing options.
- 4. Educate communities about environmental justice versus general community impacts.
- 5. Increase detail levels associated with mitigation measures to provide decision makers with better information related to environmental benefits.
- 6. Consult with FHWA and FTA about whether additional environmental analyses are required, and if so, the appropriate timing of that work in light of outstanding issues including: river crossing bridge design, phasing considerations, and Hayden Island redesign.

Columbia River Crossing



Endangered Species Act (ESA)

7. Advance ESA consultation immediately.

Clean Water Act

8. Continue to monitor storm water requirements at the federal, state and local levels.

Clean Air Act

- 9: Assign risk and resources to monitoring greenhouse gas requirements.
- 10: Finalize outstanding issues related to impact assessment.

Section 106 (Historic Preservation Regulations)

- 11: Immediately provide the additional resources necessary to expedite the Section 106 Consultation process, before the schedule is further impacted.
- 12: Immediately bring the NPS, Trust and City of Vancouver into the Memorandum of Agreement (MOA) process, and actively engage in resolving concerns about necessary mitigation measures.

4 (f) [cultural/historical protection]

13: Accelerate the resolution of Section 106 and 4(f) issues.

Executive Order 12898 - Environmental Justice

14: Separate the environmental justice discussion in the Final EIS from other impact assessment categories, and limit debate to only those areas related to the federal definition of environmental justice.

Public Outreach

15: Re-invigorate public involvement and re-engage with respective working groups. Review with these groups how their respective input and recommendations have been incorporated into the current design.





16: Bring the tribes and the Columbia Fishing Commission into the MOA process immediately, and actively engage them to resolve concerns regarding the mitigation measures to be undertaken.

Interchange Design – Oregon

- 17: The CRC should perform sensitivity analyses using a range of growth rate assumptions for traffic volume, then estimate I-5 performance for time periods beyond 2030, including sensitivity of different traffic volume levels associated with Hayden Island and Marine Drive. Comparison for 8, 10, and 12-lane sections should also be done.
- 18: The IRP encourages ODOT to work with the City of Portland and fully develop a solution for I-5 from I-405 to I-84.
- 19: The Marine Drive Interchange issue needs to be resolved without delay.

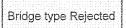
Hayden Island

20: The City of Portland and the CRC must commit to timely resolution of the design and transportation issues at Hayden Island.

Interchange Design – Washington

21: The CRC should consider developing one or more phased construction plans reflecting the potential for a significant funding shortfall.

Columbia River Bridge Replacement



22: Revisit the bridge type selection for the river crossing given the risks: reconsider the June 2008 UDAG recommendations concerning the possibility of a concrete segmental or steel box-girder shape for the Columbia River Bridge and an iconic shape for the North Portland Harbor Bridge.

Light Rail Transit

23: Prior to the Final EIS, immediately develop a plan for resolving the LRT issues surrounding Hayden Island and operation and maintenance costs.

Columbia River Crossing



Constructability

Bridge Type Rejected

24: Reconvene a panel of experts to conduct a constructability review of the bridge type once it has been determined.

Long-Term Management Structure

25: Establish a Long-Term Project Management/Governance Structure; consider retaining legal expertise to assist in determining the best option and how to structure it between the two states.

Schedule

26: Update immediately the Critical Path Method (CPM) Project Schedule to reflect activities and events that have occurred to date as well as projecting future activities which may not currently be included in the schedule and maintain an updated CPM schedule, distributing it to the PSC on a regular (typically monthly) basis.

Cost Estimate

27: Prepare new updated cost estimates with better control of realistic financial needs once the actual bridge type and design have been determined.

Risk Management

28: Re-do the CEVP by the end of December 2010 and before submitting the Final EIS, using the selected river crossing bridge option and including any other assumptions that changed since February 2009, thus allowing information to be acquired regarding realistic schedule and cost information needed for state appropriations.

Finance

29: Accelerate receipt of FTA concurrence to the revised Baseline prior to tendering the FY2012 New Starts submission. Recalculate the cost effectiveness and user benefits associated with the project so the revised figures can be disclosed in the Final EIS as is FTA

Columbia River Crossing



practice and the project's competitiveness in the New Starts process can be properly assessed.

Performance Measures

30: Consider a performance-oriented, system management approach to manage corridor performance over the long term based on performance measures that reflect stakeholders' desires, including developing a mobility council to establish, review and monitor performance measures.

By addressing these recommendations, the states of Oregon and Washington will be able to advance a Columbia River Crossing Project that meets the stated purpose and need and which will bring ultimate value to the communities affected for many decades.

Columbia River Crossing



It is also extremely important for the documentation of design decisions to be complete and made accessible to all who will be involved in latter stages of project development, through final design to construction. Much design work has involved dialogue with key stakeholders, adjacent property owners (both business and residents) and officials of communities served. Promises have been made and expectations created in avoiding impacts through alignment design and retaining wall or structural solutions. It is typical of project development, particularly for projects of this size and scope, for different entities to 'pick up' the design and complete it. The credibility and acceptability of the project as it moves to construction will rely on maintaining those promises and retaining the intent of the work that has been completed to date.

The following sections address observations and recommendations regarding design of selected critical interchange locations along I-5.

Interchange Design - Oregon

One of the challenging aspects of this project is the geometric and operational design of the interchanges. Their proximity to one another, the mix of auto and freight traffic, high traffic volumes and many other factors weigh into this discussion and make it an urban design challenge.

Issues/Open Items

The IRP heard testimony from CRC consultants that I-5 corridor traffic analyses had been performed for a significant length of I-5 beyond the BIA to establish the operational quality of the proposed design. Despite this work there remains substantial concern within the public and with some stakeholders that the proposed freeway improvements will not produce substantial benefits due to capacity restrictions in freeway segments at the Rose Quarter and I-405 interchange to the south. The concerns take two forms – first, that no real benefits will be seen; or second, that ODOT and the City will be 'forced' to make unwanted capacity improvements to I-5 further south of the CRC.

Questions about the reasonableness of investment in the CRC bridge because unresolved issues remain to the south threaten the viability of the project. Given the long term nature of

Columbia River Crossing



access needs. The CRC team has demonstrated design sensitivity with respect to minimizing the footprint of I-5 in proximity to Fort Vancouver and National Park Service property.

Issues/ Open Items

Demand management is central to the project's success. Restricting entering traffic during periods of potential congestion through metering is the best tool available for demand management on the freeway. Entrance ramps of insufficient length are difficult to meter without adverse queuing spilling back onto the crossroad. The ability to institute and operate ramp-metering technology at entrance ramps is a key element of any demand management program. The CRC should verify that entrance ramp designs (length and width) are sufficient to enable the implementation of metering, including the ability to implement bus transit bypass or other transit priority schemes.

The financial viability of the project remains a key concern. A significant part of the total project investment need is associated with interchange reconstruction and capacity improvements along the I-5 mainline in Washington. With respect to phasing, there may be more than one potential phasing scheme to consider under a limited funding scenario. The CRC team has pointed out that deferral of system interchange construction at the north end of the project is one such approach, as well as deferral of portions of the Marine Drive interchange in Oregon.. The IRP recommends the CRC fully investigate and develop alternative construction phasing concepts for the I-5 corridor in Washington.

The CRC engineering team has recommended single point diamond (SPI) interchanges at a number of locations. Members of the IRP have considerable experience in interchange configuration design studies. The panel's experience is that such designs can be more expensive and operationally less efficient than other diamond alternatives, particularly in locations where the crossroad is under the freeway. The IRP suggests that as part of design refinement the CRC should investigate such alternative diamond forms with the objective being to determine whether cost savings in the profile of I-5 and bridge structures can be attained.

Columbia River Crossing



specific CRC Executive Project Group has not yet been formed. Reporting to this Owners Group will be the CRC who will be responsible for collaborating with and communicating with the following entities:

- PSC
- IPS
- Advisory Groups
- Regulatory Agencies
- Tribes
- Public

Decisions at a Project level will be under various departments including:

- Environmental
- Transit
- Project Controls
- Highway
- Structures

These departments flow up through the Director of Project Delivery who in turns reports directly to the ODOT/WSDOT Co-Project Directors.

3.6.2 Long-Term Project Management

The second phase of project management, decision-making and governance relates to the activities that are not specific to the environmental study or technical design of the project but those which occur during construction and beyond. Some believe that this management structure should be put in place after construction is completed but the IRP believes that the sooner it is defined, established and functional the greater impact it will have on the operation of the future completed CRC.

In order to progress a mega-project of this size and complexity between states, the proper legal entity must be in place that can make decisions regarding the project relative to

Columbia River Crossing



financial issues, operational matters and how the I-5 fits into the broader transportation system of the region. In addition, this entity must be in a position to monitor and administer the performance measures stipulated for the project.

Project finance deserves special attention in this discussion. The discussion of tolls, the manner in which those toll rates will be set and adjusted in the future, the nature of debt financing necessary to construct the project as well as a myriad of other issues will fall under the auspices of this long-term management entity.

The IRP has observed that all parties to the project seem to agree on the need to eventually have some kind of structure in place for the long-term oversight and management of the completed facility and corridor. However, the duties and responsibilities seem to be in question and the timing of the launch of this group continues to be up for discussion.

Additional discussion about this entity that will serve the role for long-term management of the facility is found in Section 5. Ultimately, decisions concerning governance, membership, organizational structure, authority and responsibilities must be resolved. Whether it is a bistate authority, one state DOT or the other, some kind of bridge authority or commission or what some refer to as a mobility council something must be done and a direction taken.

Issue - State Agreements / Oversight

The lack of formation on the legal entities and/or formal agreement between states has the potential to delay the funding/financing process. In addition to potential delays that may arise, lack of movement in how the project will be funded, financed and managed through tolls may lead to mistrust and credibility problems among the project sponsors, which may also have an impact on the Final EIS review and approval as well as potential claims and disputes lodged against the CRC Owners.

Recommendation related to a Long-Term Management Structure

With respect to a long-term management structure, the IRP offers the following key recommendation:

Recommendation 25: Establish a Long-Term Project Management/Governance Structure; consider retaining legal expertise to assist in determining the best option and how to structure it between the two states. It is the IRP's opinion that

Columbia River Crossing



the formal management/governance structure between the states is essential to have in place as soon as possible. The IRP recommends doing so before the Final EIS is completed to allow the CRC to continue forward without disruption once the ROD is received. It is the IRP's experience that there are various legal options to be explored including some kind of joint authority or council, or even a decision to identify one DOT or the other as the lead, or any number of other entities to fill this role beginning in the very near future.

3.6.3 Environmental Stewardship, Management and Consultation

The CRC is one among many nationwide that are complex and have required substantial time in project development. The technical, management and political issues associated with CRC are not unique. State DOTs and FHWA have been confronted elsewhere with similar problems in coming to environmentally and financially feasible solutions codified in a Record of Decision that leads to actual implementation.

During the previous administration Executive Order 13274, "Environmental Stewardship and Transportation Infrastructure Project Review" was issued to the US DOT. Under this order high priority projects would be afforded resources and attention from federal agencies to 'provide a collaborative framework for Federal agencies to explore mutually beneficial stewardship opportunities, and to expedite, to the maximum extent practicable, their reviews for relevant permits or other approvals.'

States could apply to FHWA for status under Executive Order 13274 for their projects. In doing so they would be seeking the assistance of the US DOT (in the case here, FHWA and/or FTA), and specifically would be seeking both technical resources as well as authority for agency review periods to be firmly established so deadlines could be met.

CRC sought entry to this program (letter from Douglas Ficco to Mr. John McAvoy, FHWA Major Project Manager dated April 21, 2008). The project was considered to be eligible, as I-5 from Washington to California had been previously selected as one of the US DOT's Corridors of the Future. The FHWA acknowledged the request by CRC in a letter to Douglas Ficco from Fred Skaer, FHWA's Director of Project Development and Environmental

Columbia River Crossing



might method would substitute for the absence of toll revenues but only to acknowledge their need if tolling efforts are not successful.

The IRP observes that the Finance Plan has many of the hallmarks of plans from around the country and includes sources that are typical and to be expected. Two areas of the plan represent the largest risk to the project: funds to be secured through the respective legislatures and revenues coming from tolls.

4.3 Tolling

The CRC has devoted considerable time and attention to understanding the potential for and revenue generating possibilities associated with tolling I-5. There are many challenges to understanding tolling impacts, not the least of which is there is no recent history of tolling facilities in the area. Other technical challenges include the special 'river crossing' nature of the study area (river crossings in themselves present special driver behaviors in trip choice) and how to model I-205.

CRC analyses demonstrated knowledge of the technical requirements to estimate travel demand. The approaches used provided reasonably reliable information to inform decision-makers about both expected changes in travel demand as well as revenue potentially generated under a range of potential scenarios. This latter information is considered useful for informing discussions on policy issues around the types of toll regimes that may be used, as well as broader regional policy issues concerning tolling (or not tolling) I-205.

The IRP heard a critique of the travel demand forecasting approach that questioned the use of value of time, the data that was used to calibrate the travel demand model and the method used to include tolling in the demand analysis. 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 will only accept as investment-grade quality work that is performed by certain entities who typically have proven experience in conducting such studies.

Columbia River Crossing



share of the unified finance plan for the multi-modal project as opposed to just the transit element of the project, which lowers the New Starts share to 18.3 percent as opposed to 79 percent. This was done to comply with Section 173 of the FY2010 Transportation, Housing and Urban Development Appropriations Act. The Act directs FTA to base the New Starts share rating for interstate, multi-modal projects located in an interstate highway corridor on the unified finance plan, which lowered the New Starts share to 18.3 percent of the total cost of the multi-modal project, assumed to be \$4,096.1 million at the time of FY2011 New Starts report preparation.

- Although the CRC received an overall rating of Medium for the Capital Finance Plan in the FY2011 New Starts Report, the subfactor relating to "Capital Cost Estimates, Planning Assumptions, and Financial Capacity" received a rating of Medium-Low. In addition, in the rating the CRC Capital Finance Plan/Capital Cost Estimates, Planning Assumptions and Financial Capacity, the FY2011 New Starts Report indicates that "The interest rates and financing terms were reasonable when the submittal was prepared. However, given current market conditions, the assumptions are now optimistic."
- Although the CRC received an overall rating of Medium for the Operating Finance Plan, the subfactor relating to "Operating Cost Estimates, Planning Assumptions, and Financial Capacity" received a rating of Medium-Low. In addition, in the rating for the CRC Operating Finance Plan/Operating Cost Estimates, Planning Assumptions, and Financial Capacity, the FY2011 New Starts Report states that "Several assumptions supporting the operating and maintenance cost estimates and revenue forecasts are optimistic relative to historical experience, especially in the short term."

Given that the two most highly weighted subfactors for both the Capital Finance Plan and the Operating Finance Plan received a Medium-Low, and FTA identified potential issues affecting the assumptions used, if these subfactors were downgraded to Low, that, in combination with the down grading of any other subfactors, could lower the Financial Commitment rating to Medium-Low, delaying advancement of the project through the New Starts process.

Currently the effects of Section 173 of THUD on the competitiveness of the CRC in the New Starts process is unknown, and cannot be determined until the FTA concurrence on

Columbia River Crossing



the Baseline has been obtained, and the travel demand forecasting projections, calculation of user-benefits and the cost effectiveness evaluation are updated. As part of this updating, the capital costs for the project and the assumptions regarding the New Starts share have changed from those assumed as the basis for the FY2011 New Starts evaluation, and need to be modified accordingly.

Recommendation related to Finance

With respect to finance, the IRP offers the following key recommendation:

Recommendation 29: Accelerate receipt of FTA concurrence to the revised Baseline prior to tendering the FY 2012 New Starts submission. Recalculate the cost effectiveness and user benefits associated with the project so the revised figures can be disclosed in the Final EIS as is FTA practice and the project's competitiveness in the New Starts process can be properly assessed.

In re-reviewing the FTA rating factors, the IRP suggests CRC consider:

- Conducting sensitivity analyses to understand the implications of various combinations of potential changes in ratings in order to identify the critical financial drivers, assess risks, and develop options to address changes to these ratings should they occur.
- Updating the capital costs based on the Locally Preferred Alternative carried forward in the Final EIS prior to the release of the document and the New Starts FY2012 submittal.

4.6 Phasing Considerations

The CRC has recognized both the magnitude of the investment necessary to complete the project as well as the difficulties in assembling a workable finance plan. During refinement of the LPA concerns over total cost led to concerted efforts to refine project features or elements with the objective being to produce a more affordable project. CRC has in place mechanisms such as CEVP and Value Engineering, which are also valuable tools to address project affordability.

Page 184

Columbia River Crossing



Issues / Open Items

There is a possibility that despite best efforts to assemble funding, the Project Sponsors may encounter a significant shortfall in funding to complete all of CRC as currently envisioned. There is also a possibility that a number of current uncertainties in design and schedule will adversely affect the total cost of the project.

Projects of this size and scope are often planned and developed assuming a phased construction effort. Phasing (as opposed to staging) refers to the completion of some major portion of a total project, with such completion having meaningful value, yet deferring subsequent construction till later, often uncertain, dates when additional funding can be obtained.

From a long term perspective, phasing is preferred over permanent 'scaling back' of the ultimate plan, particularly in growing regions such as the Portland/Vancouver Metro area.

Optimal phasing plans address the most pressing problems first, minimize throw-away construction, and preserve right-of-way for subsequent phase completion. For any given phasing plan, slight revisions to current ultimate designs may be needed. As phased construction offers unique impacts and effects on resources and communities, potential phasing plans should be discussed with stakeholders and fully evaluated and documented.

Phasing is routinely considered by project owners for projects of this size and uncertain delivery timeframe. Current examples of similar projects (information obtained from FHWA Megaprojects office) either in final design or construction are summarized in Table 7 below:

Table 7 – National Sample of Similar Projects Using a Phased Approach

Project	Phased Approach
I-29/I-80/I-480, Council Bluffs Iowa	Reconstruction including Missouri River Bridge; project developed using tiered EIS; five segments identified with funding and construction for only segments 1 and 2 (\$837M); partial or interim solution for segment 3 and no funding yet for segments 4 and 5.
I-64/I-65/I-71 Indiana and Kentucky	Project in Louisville includes two new bridges over the Ohio River and adjacent interchange reconstruction; project funding and construction plan spread over 12 years (\$4.1 B)

IRP Final Report July 27, 2010 Page 185

Columbia River Crossing



I-70 St. Louis	New crossing of the Mississippi River; project split into phases (SEIS re-evaluation performed) with initial phase of \$660 M (including the new bridge) and subsequent phases requiring \$2 B not yet funded but planned
I-71/I-77/I-90 Cleveland Inner Belt	Reconstruction including crossing of the Cuyahoga River; planned for phased construction from 2010 to 2033; initial phase of \$400 M and total funding requirement of \$3.5B.

Successful phasing for projects of this magnitude addresses the most pressing problems in initial phases, and produces manageable projects (say, three phases each in the \$1B to \$1.5B range). Appropriate consideration of phasing involves a number of project development steps. In carefully planned phasing actual geometric and structural design solutions may change to accommodate interim 'ties' or minimize subsequent throw-away.

IRP team members were recently involved with a similar project (replacement and widening of a major river crossing on an interstate highway between two states) in which deferral of one of two new river crossing bridges and conversion of existing crossing bridges for one direction of travel was considered as a phased solution to an expected possible major funding shortfall. In that case, approach roadway design solutions were developed to demonstrate the feasibility and cost implications of having to resort to such phasing plan should funding not become available for the full ultimate solution.

In the context of the project there may be many different ways to approach phasing. For example, the ultimate plan may call for reconstruction of the North Portland Harbor Bridge, but its replacement may be deferred to a second phase. Similarly, individual interchange reconstruction may be deferred, and/or some auxiliary lane widening associated with deferred interchange reconstruction could also be deferred. A three-bridge solution offers potential for phasing of all bridges if significant shortfalls occur. For example, only two of the three bridges could be built initially under a range of operating regimes (one might be -- build one highway bridge slightly overwidth; operate with 8 lanes with reduced interim dimensions; build the transit and pedestrian bike bridge; perhaps operate bus rapid transit as an interim measure on the transit bridge with LRT eventually implemented; defer the other highway bridge until, say, 2035 at which point the full ten or 12 lanes would be provided).





Construction on a new interchange at Hayden Island could be deferred until after completion of all three bridges. It is possible or even likely that significant development may be delayed as this area will be a major construction zone and may not be as desirable during first phase construction; perhaps look for developer participation in Hayden Island interchange construction and until then use Marine Drive as the initial phase access).

Note that traffic and environmental impacts may vary after implementation of an initial or interim phase from those anticipated at completion. These must be fully investigated and disclosed to stakeholders. In other examples of similar projects noted above, phasing was explicitly included in project development and covered in the Final EIS.

As currently envisioned development of the CRC is counting on full funding from multiple sources, including tolling which will be new to the community and unproven in its revenue generating potential. Failure to achieve one or more major sources of funding can make the entire project unmanageable or unaffordable in the present. The IRP is less concerned about 'marginal' shortfalls but more about individual funding sources and/or unanticipated cost increases representing \$0.5 B or more.

Finding

As discussed in Section 3.2 the IRP recommends evaluating and offering public review of phasing options. In conducting the phasing evaluation, the CRC should consider:

- Developing and reviewing different phasing concepts with Project Sponsors and other key stakeholder groups. This would be more than a cost cutting exercise but rather explore what a workable project might look like if, for example, only \$2.5B rather than \$3.5B were available. This exercise could be conducted using outside experts in workshop settings to brainstorm phasing solutions, with background on phasing conducted in other similar projects. Phasing in this context should include all major project components freeway improvements, the CRC bridges, and LRT components.
- Describing and fully evaluating project phasing as part of a Supplemental EIS, assuming FHWA and FTA concurs that an SEIS is needed. This will leave options open to the Project Sponsors and avoid having to perform yet another SEIS if phasing is required due either to lack of funding or significant increased implementation costs.

From: Gleason, Tonja [mailto:GleasonT@columbiarivercrossing.com]

Sent: Wednesday, March 30, 2011 6:49 AM

To: Chris

Subject: Your CRC Public Disclosure Request

March 30, 2011

Dear Mr. Girard,

In response to your request for records dated February 21, 2011, please find the answers to the your questions below:

In reviewing files from our last public records request, I see that the "Finance Plan" was updated in September 2010, and that document references a revised tolling plan and bond repayment schedule dated 12/31/09. These documents were labeled by CRC as "Mike Lilly – 0457.pdf" and "Mike Lilly – 0383", and I have attached copies of them for your reference.

Have these documents been updated subsequent to these versions? The documents you attached are the most current versions.

Are these documents available in the "Library" section of the CRC website, and if not can you have them posted for public review?

These documents are not posted in the CRC website library. Financial information is posted on our website on the <u>cost estimates</u> page, <u>tolling</u> page, <u>tolling study</u> website, and within documents like the <u>Draft Environmental Impact Statement</u>. The information available online has been developed to address frequently asked questions in a format that is readily understandable by the general public.

Additional financial information will be posted on our website as part of the Final Environmental Impact Statement. These specific documents you attached are available through the request process but will not be posted on the website at this time.

Have there been any public meetings relating to the development of the Finance Plan and the various tolling and bonding scenarios as represented in these documents? Financial planning, tolling and bonding for the project have been discussed at Project Sponsors Council meetings and through meetings of the Tolling Study Committee.

If public meetings regarding the Finance Plan are being planned, and I would urge that you do so, I am requesting that I be notified, as I am interested in participating in this part of the process.

To ensure notification of public meetings regarding the Finance Plan, please sign up to receive email updates through our web page:

http://columbiarivercrossing.org/GetInvolved/SignUp.aspx. We use this list as a regular notification tool for public involvement opportunities. If you are already on this list, you do not need to sign-up again.

If the Finance Plan, Funding Contribution Analysis, and any related documents have been revised since the attached documents were produced, may I please have copies of the latest revisions, and any future revisions until a public process in this area is established? Staff have searched project documents and no updates have been completed on the requested documents. Public records requests can only be made for documents which exist at the time of the request. You are welcome to submit additional public disclosure requests in the future.

This request is pursuant to the Oregon Public Records Law ORS 192.410 – 505, and Washington Public Records Act Chapter 42.56 RCW. In addition, because the information is part of an ongoing process required by the National Environmental Policy Act (NEPA), Washington DOT is obligated to provide these documents to the public under 40 CFR Section 1506.6 (f).

With this letter, your request for records dated February 21, 2011, is complete. If you have any further questions you may contact me at 360.816.2188.

Sincerely,

Tonja Gleason

Public Disclosure Coordinator Columbia River Crossing Project

FINANCE PLAN

Draft Report

September 2010





Title VI

The Columbia River Crossing project team ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin or sex in the provision of benefits and services resulting from its federally assisted programs and activities. For questions regarding WSDOT's Title VI Program, you may contact the Department's Title VI Coordinator at (360) 705-7098. For questions regarding ODOT's Title VI Program, you may contact the Department's Civil Rights Office at (503) 986-4350.

Americans with Disabilities Act (ADA) Information

If you would like copies of this document in an alternative format, please call the Columbia River Crossing (CRC) project office at (360) 737-2726 or (503) 256-2726. Persons who are deaf or hard of hearing may contact the CRC project through the Telecommunications Relay Service by dialing 7-1-1.

¿Habla usted español? La informacion en esta publicación se puede traducir para usted. Para solicitar los servicios de traducción favor de llamar al (503) 731-4128.

TABLE OF CONTENTS

_	_	•	
1.		DUCTION	
		he Integrated Multi-Modal Finance Plan: Authority	
	1.2	Overview of the Columbia River Crossing Project	
	1.2.1	Columbia River Crossing Bridge	
	1.2.2	Highway Improvements	
	1.2.3	Light Rail Extension.	
	1.2.4	Bicycle and Pedestrian Improvements	
	1.2.5	Tolling	
		RC Project Roles and Responsibilities	
		RC Project Capital Cost Estimate	
	1.5 C	RC Project Finance Plan	1-6
	1.6 C	compliance with Capital Plan Rating Standards	1-7
	1.7 S	rummary of the Agency-Wide Operations Plans for TriMet and C-TRAN	1-12
	1.7.1	TriMet	1-12
	1.7.2	C-TRAN	1-13
	1.8 C	ompliance with Operations Finance Plan Rating Standards	1-14
	1.9 C	rganization of Report	1-17
2.	CRC	PROJECT CAPITAL FINANCE PLAN	2-1
	2.1 B	ackground	2-1
		roject Development Schedule	
		apital Cost Estimates for Multi-Modal CRC Project	
	2.3.1	Cost Estimating Methodology	
	2.3.2	Interim Borrowing Costs	2-4
	2.3.3	Cost Estimate for CRC LRT	2-5
	2.4 P	roposed Capital Funding Sources	2-5
	2.4.1	\$56 million in Currently Committed Federal Discretionary and State Funds	2-5
	2.4.2	\$400 Million in Highway Discretionary Funds	2-6
	2.4.3	\$900 Million in State Funds	2-7
	2.4.4	\$850 Million in Section 5309 New Start Funds	2-9
	2.4.5	Interim Borrowing Program	2-9
	2.4.6	\$1.36 Billion in Net Toll Bond Proceeds	2-9
	2.5 T	he Capital Finance Plan	2-14
	2.5.1	Cash Flow Plan	
	2.5.2	Capital Funding Capacity	2-14
3.	TRIME	T AGENCY-WIDE OPERATING FINANCE PLAN	3-1
	3.1 B	ackground	3-1
	3.1.1	Forecast Preparation	3-1
	3.1.2	Business Plan and Stress Test Forecasts	3-2
	3.2 R	evenues	3-2

3.2.1	Passenger Revenues (Appendix A, Table 1, Line A)	3-2
3.2.2	Other Operating Revenues (Appendix A, Table 1, Line B)	3-{
3.2.3	Payroll Tax Revenues (Employer and Municipal) (Appendix A, Table 1, Line C)	3-6
3.2.4	Self-Employment Tax Revenues (Appendix A, Table 1, Line D)	3-8
3.2.5	State-In-Lieu of Tax Revenues (Appendix A, Table 1, Line E)	3-9
3.2.6 Line F		pendix A, Table 1,
3.2.7	Capital and Operating Project Grants (Appendix A, Table 1, Line 6 (Row 141))	3-12
3.2.8	Interest Earnings (Appendix A, Table 1, Line G)	3-13
3.2.9	Accessible Transportation Program (ATP) Funds (Appendix A, Table 1, Line H)	3-13
3.2.10	One-Time-Only Revenues and DMAP Reimbursement (Appendix A, Table 1, Lir	ne I) 3-14
3.2.1 ² 1, Lin	Additional System Revenue: Payroll Tax Rate Increase e J) 3-15	Appendix A, Table
3.2.12	Total Continuing Revenues (Appendix A, Table 1, Line K)	3-15
3.3	System Operating, Maintenance and Capital Costs	3-16
3.3.1	Overview	3-16
3.3.2	Major Assumptions for Forecasting Future System Operating Costs	3-17
3.3.3	Bus Operations: Existing Services (Appendix A, Table 1, Line M)	3-20
3.3.4	Light Rail Operations: Existing Services (Appendix A, Table 1, Line N)	3-20
3.3.5	Commuter Rail Operations (Appendix A, Table 1, Line O)	3-21
3.3.6	Streetcar Operations: Existing Services (Appendix A, Table 1, Line P)	3-21
3.3.7 1, Line	Field Services: Road and Rail Supervision, Dispatch and Control, Fare Inspection (.e Q)	
3.3.8	Facilities (Appendix A, Table 1, Line R)	3-22
3.3.9	Accessible Transportation Program (ATP or "LIFT") (Appendix A, Table 1, Line S)	3-22
3.3.10	Accessible Transportation - DMAP (Appendix A, Table 1, Line T)	3-23
3.3.11	Security and Operations Support (Appendix A, Table 1, Line U)	3-23
3.3.12	Capital Projects Development (Appendix A, Table 1, Line V)	3-23
3.3.13	Funding Exchanges (Appendix A, Table 1, Line W)	3-24
3.3.14	General & Administration (Appendix A, Table 1, Line X)	3-24
3.3.15	OPEB Trust (Appendix A, Table 1, Line U)	3-24
3.3.16	Retiree Medical (Other Post Employment Benefits) (Appendix A, Table 1, Line 2	Z) 3-24
3.3.17	Capital and Operating Projects (Appendix A, Table 1, Line AB)	3-26
3.3.18	Debt Service (Appendix A, Table 1, Line AC)	3-27
3.3.19	Bus Operations: Future Expansion (Appendix A, Table 1, Line AD)	3-30
3.3.20	Rail Operations: Blue, Red, Yellow and Green Lines (Appendix A, Table 1, Line	AE) 3-31
3.3.21	Portland-Milwaukie Light Rail (Appendix A, Table 1, Line AB)	3-31
3.3.22	Portland Streetcar Loop to OMSI (Appendix A, Table 1, Line AI)	3-31
3.3.23 1, Line	Portland Streetcar: OMSI to Portland State University	(Appendix A, Table 3-32
3.3.24		
3.4	ystem Cash Flow Analysis	3-32
3.4.1	Overview	
3.4.2	Total Continuing Expenditures (Appendix A, Table 1, Line AL)	
3.4.3	Total Expenditures (Appendix A, Table 1, Line AM)	
3.4.4	General Fund Results (Appendix A, Table 1, Line AN)	

	3.4.5	Beginning/Ending Cash Restricted and Unrestricted (Cash Reserves)	. 3-33
	3.5	Business Plan Forecast Results	. 3-34
	3.6	Sensitivity Analysis (Appendix B, Tables 12 and 13)	. 3-34
4.	C-T	RAN AGENCY-WIDE OPERATING FINANCE PLAN	4-1
	4.1	Background	
	4.2	Local Economy: C-TRAN District	
	4.3	C-TRAN Operations Revenues (Appendix G, Table 1)	
	4.3.1		
	4.3.2		
	4.3.3		
	4.3.4		
	4.3.5		
	4.3.6		
	4.4	C-TRAN Operating and Capital Expenses.	
	4.4.1		
	4.4.2		
	4.4.3		
	4.4.4		
	4.4.5		
	4.4.6		
	4.4.7	Insurance, Tax, Lease, and Miscellaneous Expenses (Appendix G, Table 11)	4-19
	4.4.8	Contract Service (TriMet for LRT O&M Expenses) (Appendix G, Table 1, Line U)	4-21
	4.4.9	Innovative Programs Expenses (Appendix G, Table 12)	4-21
	4.5	Capital Revenues	4-22
	4.5.1	Capital Grants (Appendix G, Table 4)	4-22
	4.5.2		
	4.5.3	Bond Proceeds (Appendix G, Table 17 and 18)	4-22
	4.6	Capital Expenses	4-22
	4.6.1		
	4.6.2	Facilities (Appendix G, Table 14)	4-23
	4.6.3	Equipment (Appendix G, Table 15)	4-23
•	4.6.4	BRT Improvements (Appendix G, Table 16)	4-24
	4.6.5	Debt Service Payments (Line X, Appendix G, Table 1)	4-24
	4.7	General Fund Results	4-25
	4.7.1	Beginning Balance (Appendix G, Table 1, Line Y)	
	4.7.2		
	4.7.3		
	4.7.4		
	4.7.5 (App	Beginning Year Cash Reserve Net of Insurance Reserve as a Percent of Annual Operating Costs endix G, Table 1, Line AG)	4-26
	4.7.6		Э,
	4.8	Financial Results	4-26
			4-26

4.8.2 Risks and Uncertainties	4-27
List of Figures	
Figure 4-1. C-TRAN Funding Plan 2009-2050	4-24
Figure 4-2. C-TRAN Funding Plan 2009-2030	4-25
List of Tables	
Table 1-1. Outline of General Roles and Responsibilities for CRC Project (1)	1-5
Table 1-2. Multi-Modal CRC Project Cost by SCC In Millions of Dollars	1-6
Table 1-3. Integrated Capital Finance Plan for the CRC Project	1-7
Table 1-4. Appendices	1-17
Table 2-1. Summary of Project Development Schedule	2-1
Table 2-2. Summary of Capital Cost by SCC and Component in Millions of Dol	ars2-5
Table 2-3. Toll Rate Schedule Scenarios - One-Way Toll Rates a,b,c,d	2-11
Table 2-4. Financial Capacity of I-5 Bridge Toll Scenarios in Billions of Year-of-	Expenditure Dollars a,b 2-14
Table 3-1. TriMet Fare Increases	
Table 3-2. Average Annual Change for TriMet Area	
Table 3-3. Proposed Source of Streetcar Operating Funds in 2012 Dollars	3-32
Table 4-1. Population Growth in Clark County 1980-2009	4-2
Table 4-2. Historical Employment Growth in Clark County 1980-2009	4-3
Table 4-3. History of Taxable Retail Sales for Clark County	4-3
Table 4-4. Population and Employment Growth in Clark County	4-4
Table 4-5. C-TRAN Passenger Revenues History	4-4
Table 4-6. C-TRAN Sales and Use Tax History	4-6
Table 4-7. History of Other Operating Revenues	4-8
Table 4-8. C-TRAN 5307 Grant History	4-9
Table 4-9. C-TRAN Total Operating Revenue History	4-10
Table 4-10. History of C-TRAN Salary and Wage Costs	4-11
Table 4-11. History of Salary and Wages per Platform Hour	4-12
Table 4-12. History of C-TRAN Benefit Costs	4-14
Table 4-13. History of Fringe Benefits: Fixed Route Service	4-14

Table 4-14. History of Fringe Benefits: Demand Responsive Service	. 4-15
Table 4-15. History of Benefit Costs per Platform Hour	. 4-15
Table 4-16. History of Expenses for Services: Fixed Route	. 4-16
Table 4-17. History of Expenses for Services: Demand Responsive	. 4-16
Table 4-18. History of Service Costs per Platform Hour	. 4-16
Table 4-19. History of Fuel Costs	. 4-17
Table 4-20. History of Supplies (Other than Fuel): Fixed Route Service	. 4-18
Table 4-21. History of Supplies (Other than Fuel): Demand Responsive Service	. 4-18
Table 4-22. History of Utility Expenses: All	. 4-19
Table 4-23. History of Insurance, Tax, Lease, and Miscellaneous Expenses	. 4-20
Table 4-24. History of Total Operating Expenses	. 4-21
Table 4-25. C-TRAN Capital Program History (1)	. 4-23
Table 4-26. Summary of Financial Results of Base C-TRAN Cash Flow Plan	. 4-27

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1. Introduction

The Columbia River Crossing (CRC) Project is a bi-state, multi-modal transportation project serving the heaviest congested corridor in the rapidly growing Portland-Vancouver metropolitan region. The Project is currently in Preliminary Engineering; a complete application for FTA approval to enter Final Design is anticipated by the end of calendar year 2011.

The CRC Project is being developed as a single, multi-modal project and, as explained below, federal statutory language requires that the project finance plan be reviewed for New Start and project matching purposes on the basis of being an integrated multi-modal plan.

This report addresses the capital finance plan for the entire multi-modal Columbia River Crossing (CRC) Project, and the 20-year agency-wide operations finance plan for the two affected public transit districts -- C-TRAN (Vancouver, Washington) and TriMet (Portland, Oregon). This report is submitted as part of the annual New Start update process. It is not a request to advance the project into a subsequent stage of the New Starts process.

1.1 The Integrated Multi-Modal Finance Plan: Authority

The financial structure of the CRC Project is rooted in an integrated, multimodal project finance plan. Thus, unlike those of other more traditional fixed guideway projects, this finance plan submitted for New Starts rating purposes addresses the finance plan for the entire multi-modal project.

The integrated multimodal finance plan is facilitated by statutory language enacted in the Consolidated Appropriations Act, 2010, Section 173 (H.R. 3288, December 9, 2009) that requires USDOT to take into account the entire funding plan in rating the light rail transit component of the CRC project for New Starts funding. The statute also provides that the local match requirement for New Starts funds can be met by the entirety of local funding included in the integrated finance plan. Specifically, the federal statute states:

"Hereafter, for interstate multi-modal projects which are in Interstate highway corridors, the Secretary shall base the rating under section 5309(d) of title 49, United States Code, of the non-New Starts share of the public transportation element of the project on the percentage of non-New Starts funds in the unified finance plan for the multi-modal project: Provided, That the Secretary shall base the accounting of local matching funds on the total amount of all local funds incorporated in the unified finance plan for the multi-modal project for the purposes of funding under chapter 53 of title 49, United States Code and title 23, United States Code: Provided further, That the Secretary shall evaluate the justification for the project under section 5309(d) of title 49, United States Code, including cost effectiveness, on the public transportation costs and public transportation benefits."

In response to earlier drafts, the statutory language quoted above was provided by FTA to the Subcommittee on Transportation, Housing and Urban Development, and Related Agencies of the Senate Appropriations Committee and was explained to mean that:

The rating of the non-New Starts share component of the finance plan is based on the percentage that non-New Starts funds comprises of all revenues in the integrated finance plan, and

The accounting of local match for FTA and FHWA funds is based on all local funds incorporated in the integrated finance plan.

1.2 Overview of the Columbia River Crossing Project

The Columbia River Crossing (CRC) Project includes the following improvements; which are described in more detail in the paragraphs that follow.

The new river crossing over the Columbia River

Highway improvements to I-5 north and south of the river, including reconstruction of seven interchanges.

Extension of light rail from the Expo Center in Portland to Clark College in Vancouver

Bicycle and pedestrian improvements;

Tolling the I-5 Bridge over the Columbia River.

1.2.1 Columbia River Crossing Bridge

The CRC Project includes construction of new bridges across the main channel of the Columbia River and three new structures across North Portland Harbor, along with improvements to the existing bridge across North Portland Harbor.

The parallel bridges that form the existing I-5 crossing over the Columbia River would be replaced by two new parallel bridges. The eastern structure would accommodate northbound highway traffic on the bridge deck, with a bicycle and pedestrian path underneath; the western structure would carry southbound traffic, with a two-way light rail guideway below. Whereas the existing bridges have three lanes each with virtually no shoulders, each of the new bridges would be wide enough to accommodate three through-lanes; two add/drop lanes, and full-width shoulders. A lift-span would no longer be required.

The northbound bridge would accommodate a bicycle and pedestrian path below the highway deck, located within the support structure under the highway deck. The support structure will have an open web box design to afford a partially open-sided, covered passage for bicyclists and pedestrians. Similarly, the southbound bridge would accommodate a two-way guideway for light rail vehicles beneath the highway deck. This guideway would also be located within the support structure between the bridge webs and the bridge deck, and would use an open web box design so that light rail would not be traveling in an enclosed tunnel.

The existing highway structures over North Portland Harbor would not be replaced; instead, they would receive seismic upgrades and would be widened to accommodate all mainline I-5 traffic. In addition, parallel structures would be built across the waterway to serve as collector-distributor roads.

1.2.2 Highway Improvements

The CRC Project includes improvements to seven interchanges along a 5-mile segment of I-5 between Victory Boulevard in Portland and SR 500 in Vancouver. These improvements include some reconfiguration of adjacent local streets to complement the new interchange designs, as well as new facilities for bicyclists and pedestrians.

In addition to interchange improvements, highway safety would be improved with a series of auxiliary (add/drop) lanes that would be sequentially added and then dropped at strategic locations through the corridor). The add/drop lanes would allow vehicles to travel between given points without merging into mainline interstate traffic, and would allow vehicles exiting or entering to minimize conflicts with through traffic.

1.2.3 Light Rail Extension

The CRC Project includes a 2.9-mile extension of TriMet's "Yellow (light rail) Line" across the North Columbia Harbor, across Hayden Island in Oregon, across the Columbia River, through downtown Vancouver, Washington, ending near Clark College. The Project includes a total of five new stations; one in Oregon and four in Washington.

Starting from the Expo Center MAX station, the double track alignment would curve toward I-5. North of Marine Drive the profile would rise as the guideway transitions onto a bridge structure to cross the North Portland Harbor. A station would be constructed on Hayden Island. From the station, the LRT guideway would transition from its own alignment onto the new "stacked" highway/LRT bridge over the Columbia River. The new bridge would consist of two parallel bridges. One bridge is designed for southbound highway traffic on the upper level and both the northbound and southbound LRT on the lower level. The other bridge would be designed to accommodate northbound highway traffic as well as bicycles and pedestrians.

After crossing the Columbia River, the LRT alignment would curve northwards from the highway bridge onto its own approach structure in the State of Washington. The double-track alignment would reach grade prior to the intersection with 5th Street (there would be a LRT station between 5th and 6th Streets), and continue north to 7th Street where the northbound guideway would traverse two blocks east to Broadway and turn northward into the Broadway Street right-of-way. There would be a 570-space park-and-ride near SR-14. The LRT alignment would then form a couplet with the southbound guideway on Washington Street and the northbound guideway on Broadway Street.

The couplet would traverse ten blocks north to 17th Street. There are two stations on the couplet, each with a northbound platform on Broadway and a corresponding southbound platform on Washington. There would be two platforms on Washington: one at 9th Street and another at 15th Street. There would also be two platforms on Broadway: one between 9th Street and Evergreen Blvd and one between 15th and 16th Streets. In addition, there would be a 420 space structured park-and-ride lot near Mill Plain and 15th Street.

On 17th Street, a double-track guideway would traverse in the center of the street. The double-track guideway alignment would continue eastward approximately nine blocks crossing under I-5 and ending at a station in McLoughlin Boulevard east of I-5. This station would be on the western boundary of Clark College and would include a 1,910 space park-and-ride lot.

1.2.4 Bicycle and Pedestrian Improvements

The CRC Project includes a variety of bicycle and pedestrian improvement, including the multiuse pathway across the Columbia River, street improvements around the rebuilt interchanges, and facilities for bicyclists and pedestrians around the new light rail stations and park and rides.

1.2.5 Tolling

The CRC project incorporates a variety of demand and management measures, most relevantly all-electronic toll collection (ETC). ETC allows tolls to be collected without stopping traffic at tollbooths to pay tolls. Instead, customers would have two methods of payment. Customers with a transponder would be identified electronically as they travel; charges would be transmitted to a computer system that would automatically invoice vehicle-owner's account. Customers without a transponder would pay via a license plate recognition (pay-by-plate) system that either (i) matches the license plate to a customer account or (ii) identifies and invoices the vehicle's owner by mail. Customers with a transponder would pay the base "Transponder Rate" for that vehicle type and time of day. Vehicles without a transponder would pay the base toll rate charged to vehicles with a transponder for that vehicle type and time of day plus a "pay-by-plate" surcharge. 1 ETC has several advantages over traditional toll collection methods:

Electronic toll collection avoids the need to stop drivers at tollbooths to pay cash tolls; instead, traffic remains free-flowing at highway speeds.

The absence of toll plazas reduces potential displacement impacts, and noise and air quality impacts caused by vehicle acceleration/deceleration in toll plaza areas.

Electronic toll collection eliminates the need for cash handling and cash transport.

The cost of collection is lower for transponders than manned booths, and the additional costs of license plate collection are recovered with the surcharge fee.

1.3 CRC Project Roles and Responsibilities

The multi-modal project will be financed and developed by a project team consisting of Washington State Department of Transportation (WSDOT), Oregon Department of Transportation (ODOT), Tri-County Metropolitan Transportation District of Oregon (TriMet), and the Clark County Public Transportation Benefit District Authority (C-TRAN), as well as partnering local and regional jurisdictions in Oregon and Washington. The basic roles of each of the major project partners are summarized below:

¹ The terms 'administrative fee' or 'processing fee' are sometimes used in lieu of the term 'surcharge' when referring to the additional fee applied to pay-by-plate transactions to offset the additional collection costs of this method of payment. The assumed amount is the estimated average additional cost of collection. The actual surcharge or fee would be set as part of the formal toll rate setting process, and may depend on the methods required to collect the toll.

Table 1-1. Outline of General Roles and Responsibilities for CRC Project (1)

	·	
	Construction	Operations
WSDOT	FTA Grantee for transit grants. Lead agency for overall multi-modal project. Responsible for design and construction of Columbia River bridge and highway improvements in Washington.	Assigns ownership of transit improvements to C-TRAN and TriMet, as applicable. Responsible with ODOT for maintaining bridge structure shared with transit. Establishes highway toll rates with ODOT; collects and disburses toll revenues.
ODOT	Co-lead of overall multi-modal project. Responsible for design and construction of highway improvements in Oregon.	Responsible for maintaining bridge structure with WSDOT; and maintaining highway improvements in Oregon. Establishes toll rates with WSDOT; shares in toll revenues.
TriMet	As sub-recipient under WSDOT (grantee) and under the overall project management of WSDOT, TriMet manages design and construction of LRT elements, other than the shared Columbia River bridge structure that will be directly managed by the DOTs.	TriMet will operate and maintain the LRT in Oregon and, under an agreement with C-TRAN, in Washington. O&M costs share based on allocation methodology. LRT passenger revenues and Modernization grants also shared. TriMet operates feeder bus service in its district. TriMet and C-TRAN establish mutual bi-state fares and passes. Each accepts transfers from other district.
C-TRAN	C-TRAN works with TriMet on design and construction of LRT elements; as prospective owner of CRC LRT assets in Washington holds co-approval rights on design and construction issues.	C-TRAN approves LRT service policy approval with TriMet. LRT O&M costs, passenger revenues, and Modernization grants shared. C-TRAN operates feeder bus service in its district. TriMet and C-TRAN establish mutual bi-state fares and passes. Each accepts transfers from other district. Performs some LRT-related operations, such as manages park-rides, maintains stations in Washington, etc.

⁽¹⁾ Assumptions underlying New Start submittal. Concepts are being refined and are subject to final agreement by the applicable parties.

1.4 CRC Project Capital Cost Estimate

WSDOT uses the Cost Estimate Validation Process (CEVP), a risk-based methodology, to develop capital cost estimates for all major projects it undertakes. CEVP utilizes a detailed base cost estimate comprising over 1,000 line-items defined by capital element and area. A unit-cost, lump sum or percentage is designated for each line item based on the recent cost experience of WSDOT, ODOT, TriMet, and other data bases and applicable quantities are estimated.

The activities feeding into the line-item costs are then connected into a critical path chart based on a baseline project development schedule. CEVP then applies a project-specific array of potential scope risks, cost risks, schedule risks, and inflation factors to yield a probability curve of total cost estimates in year-of-expenditure dollars. Consistent with WSDOT practice, a range of costs (in this case, the 60% and 90% confidence interval costs) that resulted from CEVP will be reported in the FEIS.

FTA requires cost estimates for New Starts review to be reported in Standard Cost Categories (SCC) and to include an amount of contingency that FTA finds appropriate for the project's stage of development. Thus the CEVP costs estimates for the CRC Project needed to be converted to

fit FTA requirements. The process for developing the SCC-formatted cost estimate began with the detailed, line-item base cost estimates developed for through CEVP. Each line-item was assigned an allocated contingency defined by a percentage of line-item cost, with the percentage guided by past project experience.

The "contingency" that CEVP added to the baseline cost for risk and uncertainty at the 90% confidence interval cost was back-calculated to be approximately 28.5%. An additional 1.5% of unallocated contingency was added to the CEVP cost estimate to provide a total contingency of 30%, a frequently used factor for Preliminary Engineering cost estimates. The resulting base cost and contingency by line-item was then rolled-up into the applicable SCC categories. These base cost estimates by SCC category were then converted to year-of-expenditure costs by applying the most recent inflation factors developed by WSDOT for construction, engineering, and right-of-way. These inflation factors were assigned to the comparable SCC and a weighted annual escalation rate for each year was calculated and applied in the SCC spreadsheet. The resulting cost estimate for the multi-modal project by SCC is shown in Table 1-2 below. Additional details are available in the "Basis of Capital Cost Estimate" report (See Appendix E, Exhibit 1).

Table 1-2. Multi-Modal CRC Project Cost by SCC In Millions of Dollars

Standard Cost Category (and Number)						
10 Guideway & Track Elements	\$1,322.0					
20 Stations, Stops, Terminals & Intermodal	\$125.4					
30 Support Facilities: Yards, Shops & Admin Buildings	\$12.2					
40 Sitework & Special Conditions	\$592.3					
50 Systems	\$62.9					
60 Right-of-Way & Land Improvements	\$125.6					
70 Vehicles	\$92.6					
80 Professional Services	\$453.5					
90 Unallocated Contingency	\$186.1					
Total Project Cost in Base Year Dollars	\$2,972.6					
Escalation to YOE Dollars	\$538.2					
100 Finance Costs (in YOE Dollars)	\$54.3					
Total Project Costs in YOE Dollars	\$3,565.0					

1.5 CRC Project Finance Plan

Section 2 of this report details the finance plan for designing, constructing and equipping the multi-modal CRC Project. Table 1-3, on the following page, summarizes the current funding plan for the multi-modal CRC Project, which is continuing to be refined during Preliminary Engineering.

² CEVP does not actually add contingency as is done in SCC cost estimates; it raises the cost estimate based on the occurrences of a risk array at a given confidence interval. The effective contingency derived from CEVP can be back-calculated by backing out inflation and comparing the result to the baseline cost estimate in current dollars.

Table 1-3. Integrated Capital Finance Plan for the CRC Project

Costs	Tota	ıl	Explanation				
Transit Component Cost	\$931.7	tra brid	Cost of PE, Final Design, ROW, construction, systems, and equipment for ransit component of overall multi-modal CRC Project. Includes allocation of bridge cost and interest paid on interim borrowing required due to lagging New Start appropriations.				
Highway Component Cost	\$2,633.		st of PE, PS&E, ROW, construction, etc. for the highway and bridge coept of costs allocated to transit) components of the multi-modal project				
Transit Component Cost	\$931.7	trai brid	st of PE, Final Design, ROW, construction, systems, and equipment for nsit component of overall multi-modal CRC Project. Includes allocation o dge cost and interest paid on interim borrowing required due to lagging w Start appropriations.				
Total Multi-Modal Project Cost	\$3,565.	0					
Revenues	-	-					
Federal Discretionary High Existing	way:	\$18.6	ODOT and WSDOT have collectively received a total of \$44.3 million in discretionary highway dollars through congressional earmarks and administrative grants. About \$25.7 million was spent prior to PE. The remaining amount is available for PE/post-PE activities.				
Federal Discretionary Highway: \$4 Additional		\$400.0	Project seeking earmark or administrative grant from Projects of National and Regional Significance program.				
ODOT/WSDOT: Existing		\$37.6	ODOT and WSDOT have collectively provided a total of \$89.7 million in state funds. About \$52.1 million was spent prior to PE. The remaining amount is available for PE/post-PE activities				
ODOT/WSDOT: Additional		\$900.0	Finance plan seeks commitment of additional (i.e.; new) ODOT and WDOT funding during the 2011 legislative sessions in Washington and Oregon.				
Toll Bond Proceeds and Revenues		\$1,358.8	CRC main river crossing will be tolled and net revenues bonded to provide capital funding for project. Pre-completion tolling may also be considered. Variable rate tolling is anticipated. While rates not yet set, a peak-period toll for autos of about \$2 (one-way) will produce sufficient revenues to provide this amount.				
New Start Funds		\$850.0	Proposed New Starts Share				
Total Multi-Modal CRC Proj Revenues	ect	\$3,565.0					

1.6 Compliance with Capital Plan Rating Standards

The following summarizes how the CRC capital finance plan addresses the Federal Transit Administration's Capital Plan Rating Standards for New Starts, as they relate to a project in Preliminary Engineering.

A. Current Capital Condition

- Age of Bus Fleet:
 - TriMet: The average age of TriMet's bus fleet is 12 years. TriMet will replace 40 buses per year throughout the forecast or 80 buses every other year, lowering the average age of the fleet over the planning period to 7.5 years. TriMet replaces buses in its 605-bus fleet on an even schedule--80 buses every two years after

fifteen years and 700,000 miles of service. Converting to a uniform bus replacement schedule required replacing some buses after their fifteen-year life, but the program also allows the maintenance work force to complete preventive maintenance on schedule without overtime while preparing new replacement buses for service.

- c-TRAN: The average age of C-TRAN's fixed route bus fleet is currently 8.8 years; the average age of the paratransit fleet is 4.3 years.
- Bond Rating (Representative rating documents are provided in Appendix E, Exhibit 5):
 - Washington: The current (as of September 2010) State of Washington credit ratings for General Obligation (GO) Bonds are:
 - Fitch: AA+
 - Moody's Aa1
 - S&P AA+
 - Oregon: The most recent State of Oregon credit ratings for General Obligation (GO) Bonds are:
 - Fitch: AA on GO Bonds
 - Moody's Aa2 on GO Bonds
 - S&P AA on GO Bonds
 - o ODOT bonds are anticipated to provide a large portion of its local matching fund contribution, primarily highway revenue bonds. Current bond ratings include:
 - Moody's Aa1 on senior lien highway user tax revenue bonds
 - Moody's Aa2 on subordinate lien highway user tax revenue bonds
 - S&P AAA on senior lien highway user tax revenue bonds
 - S&P AA+ on subordinate highway user tax revenue bonds
 - Fitch: AA+ on senior lien highway revenue bonds
 - Fitch AA on subordinate lien highway revenue bonds
 - TriMet is not assumed to issue bonds for the CRC Project. TriMet Senior Lien Payroll Tax Revenue Bonds Series 2009 A (Tax-Exempt) and Series 2009B (Build American Bonds-Direct Payment), which sold September 1, 2009 were rated AAA by Standard and Poor's September and Aa2 by Moody's in 2010.
 - C-TRAN has not issued debt, does not have a credit rating, and is not expected to issue any debt for the CRC Project.

B. Completeness of Capital Plan

• CRC Project: The assumptions regarding the capital finance plan for the multi-modal CRC Project are documented in Section 2 of this report. The CRC Project capital finance plan is prepared on a cash flow basis, the details of which are documented in Appendix E, Exhibits 1-5.

- TriMet: TriMet's agency-wide capital plan is incorporated in its 20-year cash flow. Assumptions are detailed in Section 3 and Appendix A (in particular Table 9). Fleet management plans for TriMet buses and LRT are provided in Appendix F, Exhibits 1-2.
- C-TRAN: C-TRAN's agency-wide capital plan is included in its 20-year cash flow. Assumptions regarding replacement and improvement of rolling stock, facilities, and equipment are respectively detailed in Section 4 and Appendix G, Tables 13-15. C-TRAN's Fleet management plan is included in Appendix F, Exhibit 3. Historic data on C-TRAN's capital improvement and replacement program is provided in Table 4-25.
- WSDOT uses a risk-based capital cost estimating methodology ("Cost Estimate Validation Process" or "CEVP"), which provides a sensitivity analysis of cost estimates in the form of a probability distribution reflecting the confidence (or probability) that a cost estimate will not be exceeded based on an array of cost estimation risks (i.e.; high inflation, high unit costs, etc.) and schedule risks (i.e.; delays in receiving environmental permits, delays in funding approvals, etc.). (See Appendix E, Exhibit 6)
- Details of the assumptions used in the analysis of the funding capacity of toll revenues are provided in Appendix E, Exhibit 4. Conservative financing assumptions were employed, including but not limited to the use of bond interest rates that are about 100 basis points higher than current market conditions. The analysis incorporated a sensitivity analysis based on low, medium, and high estimates of traffic volumes and various toll rate scenarios.

C. Commitment of Capital Funds

- Up to this point, \$134 million has been committed to the CRC Project, consisting of \$89.7 million in aggregate state funding from ODOT and WSDOT and \$44.9 million in federal discretionary funding received from administrative grants and congressional earmarks. Of the \$134 million committed to date, \$77.8 million was spent prior to P.E approval; leaving \$56.2 million for PE and post-PE expenses. The DOTs are currently engaged in committing another \$10 million each to the project (\$20 million total) and the Senate's 2011 transportation appropriations bill includes a \$40 million New Starts earmark for the CRC Project.
- The capital finance plan for the CRC Project includes toll bond proceeds. As a replacement bridge on the Interstate system, the federal authority exists to toll the new bridges. ODOT currently has the state authority to toll the bridge. Washington statutes require separate legislative authority for each new toll facility. WSDOT is executing a two-session legislative plan to secure the state authority to toll the bridge that is similar to the process used to successfully secure tolling authority for the SR-520 project in the Seattle region. During the 2009 regular session the Washington legislature enacted SB 5352 (Section 306(12)), which mandated that WSDOT undertake a technical analysis and outreach program regarding tolling the CRC Project. This is viewed as a necessary prerequisite to seeking actual tolling authority in the upcoming legislature. The technical study and outreach program were completed and a final report has been submitted to the Governor and legislature in compliance with the legislative schedule. With the first step complete, tolling authority will be sought in the 2011 session.

- The capital finance plan for the CRC Project incorporates \$900 million in state funds collectively from ODOT and WSDOT. Both Governors have prioritized the project. State funds will be sought by ODOT and WSDOT during each state's 2011 legislative session. Legislative briefings have occurred and are continuing with affected legislative committees and leadership.
- The capital finance plan incorporates \$400 million in highway discretionary funds, which re anticipated to mostly or entirely come from the Projects of National and Regional Significance (PNRS) program. Key members of the Oregon and Washington delegation have expressed interest in helping to secure an earmark of PNRS funds (if the PNRS program is earmarked as it was in SAFETEA-LU). \$400 million is equivalent to the total amount of PNRS funds received by Oregon (\$160 million for a program of bridge retrofits along I-5 in Oregon) and Washington (\$220 million for the Alaskan Way Viaduct) in SAFETEA-LU. So while \$400 is a large earmark, the two states in the aggregate have shown the ability to obtain this amount.

An administrative grant would be sought if PNRS is not earmarked in reauthorization and instead left to operate as a FHWA discretionary program (similar to New Starts). The CRC Project would rate highly as a national project under the program's current criteria, as evidenced by the CRC Project's designation as a "Corridor of the Future" and a priority project under Executive Order 13274 for Environmental Stewardship and Transportation Infrastructure Reviews. While these specific designations may no longer be applicable, they indicate the national importance FHWA has historically placed on the project.

D. Capital Funding Capacity

- The plan for providing capital funding capacity to respond to unanticipated cost-revenue imbalances has three key elements, which are outlined below and further detailed in the bullets that follow.
 - Employ conservative assumptions regarding costs and revenues to reduce downside risks and retain a reasonable opportunity for additional funding capacity within the base finance plan;
 - o Recognize how tolling can be adapted to different circumstances, if required to rebalance the funding plan; and
 - Recognize the flexibility of the Departments of Transportation to manage resources within the highway trust fund to adapt to different circumstances.
- CEVP produces a distribution of cost estimates reflecting the confidence that a cost estimate will not be exceeded. The finance plan in this New Starts submittal incorporates a contingency level that is approximately 1.5 percentage points higher than the level of contingency inherent in the 90% CEVP cost estimate. That is, the amount of contingency in the New Starts finance plan cost estimate exceeds the amount required for a 90% probability that the cost estimate will not be exceeded without any management or mitigation of the risks.

- The funding capacity of the toll revenues are based on conservative assumptions provided by the Washington State Treasurer, including bond interest rates that are at least 100 basis points higher than market rates, and other cautious suppositions. While this was done to minimize the downside risk of the financial contributions of tolls, it is more likely to provide an opportunity for increased funding capacity from the toll revenues.
- With state-backed bonds, the "coverage" of the net revenues used for debt service is for the benefit of the state and intended to protect the states' general fund and/or highway trust fund from having to cover shortfalls in net toll revenues. Assuming the baseline toll rate structure and state-backed bonds with 1.25 coverage, there is a stream of funds associated with unexpended and unobligated coverage ranging between about \$14 million in per year in the early years to \$55 million per year in the out-years that can be used, if necessary, to resolve cost overruns or funding under-runs. At a six percent discount rate, this stream of revenue has a present value capacity of about \$307 million that can be tapped on with a subordinate pledge if needed for project funding.
- Some highway improvements (i.e.; the interchanges not physically connected to the bridge) can be deferred if the costs of core project elements, such as the transit element or main bridge crossing, exceed estimates. This would allow the funding associated with the deferred elements to be applied to cost overruns/funding shortfalls on the core improvements. The duration of tolling could be extended beyond repayment of the initial construction bonds, if necessary to provide funding for any deferred project elements. For example, assuming toll revenues remain flat after the initial bonds are repaid and tolling is extended another ten years, the additional stream of net toll revenues would have a present value capacity of over \$298 million at a 6.5% discount rate. Alternatively, noncore elements of the CRC Project could be permanently eliminated if required to rebalance costs and revenues. The elimination of these non-core elements (i.e.; interchanges or portions of interchanges) would not reduce the benefits of the light rail component of the multi-modal project.
- Toll rates can be adjusted, within a reasonable range, if additional funding capacity is required. Analyses have shown that toll revenues can be increased by raising toll rates to over twice the assumed baseline rate of \$2.00 in 2006 dollars (or about \$2.21 in 2010 dollars) in the peak-period for an auto with transponder, although toll rates of that level are not anticipated. However a more limited and targeted change to the baseline toll scenario can produce significant levels of additional funding capacity. For example a 50-cent increase in the toll rate for automobiles traveling in the one-hour peak-of-the-peak period would provide \$100 million in additional funding capacity. Since toll rates would be set and toll bonds would be issued after state funding commitments and discretionary highway funding commitments are in place, it provides an opportunity to take those previous actions into consideration.
- The Departments of Transportations manage their respective highway trust funds, which are primarily funded with formula federal funds and existing state transportation taxes and fees. Some of these funds have dedicated uses through legislation or existing commitments. However, the DOTs are able to and are experienced with reprogramming

undedicated and non-committed funds within their highway trust funds to respond to cash-flow needs.

E. Capital cost estimates and planning assumptions

- The financial plan is based on the methodology and pricing factors described in Basis of Capital Cost Report shown in Appendix E, Exhibit 1. Additional details are provided in Section 2.
- Unit-costs and other capital cost assumptions for highway and bridge-component costs are based on the recent project cost experience of WSDOT, ODOT, and other construction cost databases.
- Capital cost assumptions for the light rail component are consistent with recent experience with the I-205/Portland Mall Light Rail Project and those used to estimate the capital cost of the Portland-Milwaukie LRT Project.
- The computation of interim borrowing costs is described in Sections 2.3.2 and shown in Appendix E, Exhibit 3A.
- The amount of contingency in cost estimates used for this New Starts finance plan cost estimate exceeds the amount of contingency calculated by CEVP for a cost estimate with a 90% probability that the cost estimate will not be exceeded without any management or mitigation of the risks.
- Conservative financing assumptions were employed in the toll capacity analysis, including but not limited to the use of bond interest rates that are at least 100 basis points higher than current market conditions.

1.7 Summary of the Agency-Wide Operations Plans for TriMet and C-TRAN

Because the CRC LRT would serve and affect both the C-TRAN and TriMet districts, the agency-wide plan for both operators are analyzed in this report. The assumed role and relationship between C-TRAN and TriMet with regard to the CRC Project is summarized in Table 1-1.

Like most other transit districts through-out the country, TriMet and C-TRAN are facing challenges caused by the economic downturn, and are in the process of executing plans to mitigate its impact. The plans of both districts are built to ensure adequate revenues are in place to operate the transit component of the CRC Project, including the supporting feeder network, as well as to meet their agency-wide service, capital improvement, and capital replacement requirements. The background of these plans are summarized below and detailed in Sections 3 and 4 of this report:

1.7.1 TriMet

TriMet undertook service reductions in FY2010 and FY2011 to attenuate the long-term impact of the economic slowdown. These service reductions were less severe than those of most

comparable districts. Moreover, even with these service reductions, between FY1991 and FY2011 the growth of fixed route service (adjusting rail vehicle hours for seating capacity) outpaced population growth by about a 2:1 ratio; transit service grew 79% while population grew by only 37%.

While the recent economic slowdown affected TriMet's finances, TriMet's operating revenues have historically been stable, reliable, and growing. The employer payroll tax is TriMet's largest revenue generator. Except during recessions, when employment declines, the employer payroll tax has grown at a rate greater than inflation, supplying real growth in revenues. The historic average underlying annual growth of employer payroll tax receipts for the last fifteen years has been 4.7 percent (the underlying rate excludes revenue growth from the tax rate increase explained below). It has averaged 2.9 percent for the past five years, which includes the impacts of the 2007 recession, the worst recession in over sixty years.

In addition to the natural (i.e.; underlying) growth in payroll tax revenues, the 2003 Oregon Legislature gave the TriMet Board the authority to increase the payroll tax on employers and self-employed individuals from 0.6218 percent to 0.7218 percent in 1/100th of one percentage point increments over a 10-year period. The TriMet Board approved the increases on August 11, 2004 and the first increase went into effect January 1, 2005. The payroll tax rate as of January 1, 2010 is 0.6818%. See Appendix D, Exhibit 9 Ordinance No. 279 Revising Payroll and Self-Employment Tax Rates; Amending Chapters 13 and 14 of the TriMet Code. In 2009 TriMet was granted the legislative authority to further increase the payroll tax rate for employers and self-employed individuals from 0.7218 percent to 0.8218 percent. The increase must be phased in over ten years and no annual increase can exceed 0.02 percent. See Appendix D, Exhibit 10 Senate Bill 34. The plan assumes the TriMet Board would levy this payroll tax rate increase effective January 1, 2015. The tax rate on the self-employment tax would be increased by the same amount.

The TriMet 20-year agency-wide cash flow demonstrates that as planned TriMet can fund its share of operating the light rail extension to Clark County (and the Portland-Milwaukie LRT Project currently seeking Final Design approval), a program of service replenishment and expansion, and its capital improvement and replacement program, while maintaining a "cash and cash equivalent" reserve in excess of 12% of annual operating costs throughout the 20-year analysis period.

1.7.2 C-TRAN

Prior to 1999 C-TRAN operations were primarily funded with 0.3% (3/10th of 1 percent) sales and use tax and a Motor Vehicle Excise Tax (MVET) that matched the amount of revenue derived from the sales tax. Due to passage of a statewide initiative in 1999, C-TRAN lost its MVET funding. In response, C-TRAN implemented a Service Retention Plan, amended its boundaries to focus on urban routes, and passed a 0.2% (2/10th of 1 percent) increase in its sales and use tax rate (making the sales and use tax rate a total of 0.5%). Even though it continues to have an aggregate tax rate lower than that in 1999, C-TRAN has been able to avoid a major service reduction by employing a large reserve it created in the 1990s.

The sales tax is the largest source of C-TRAN operating revenues comprising about 59% of all such revenues in 2009. It contributed a higher percentage prior to the economic downturn that

began in 2007. In 2006, after C-TRAN's district boundary was changed to its current limits, each 0.1% (1/10th of 1 percent) of sales tax produced about \$5.2 million. In 2009 as a result of the recession, in particular the loss of construction activity, each 0.1% sales tax produced only about \$4.2 million. The declines have bottomed-out; sales tax receipts as of June 2010, the most recent update, are up about 4.4% above 2009 levels.

In response to declining sales tax receipts, declining reserves, and public pressure to expand and improve service, C-TRAN undertook the preparation of the 20-year Transit Development Plan, which was adopted by the C-TRAN Board on June 8, 2010 (See Appendix H, Exhibit 10). The plan addresses capital improvement, capital replacement, and operating needs of the agency by seeking a 0.3 (3/10th of 1 percent) increase to the currently existing 0.5% sales and use tax rate. The 0.3% tax increase would be divided in approximately the following manner: 0.1% for preservation and enhancement of the fixed route bus system, 0.1% for paratransit (C-VAN) service increases, and 0.1% of high capacity transit (HCT) services and improvements. The HCT component consists of providing operating funds for the light rail component of the CRC Project and the development of a Bus Rapid Transit route.

A March 2010 telephone survey of 600 randomly selected C-TRAN residents (an error margin of +/- 4 percentage points at the 95% confidence interval) found that 61% of the residents would support such a measure. In September 2010, C-TRAN adopted a resolution that puts the funding measures in front of district voters in November 2011 (See Appendix D, Exhibit 12). The current plan is to have a ballot measure requesting approval of a 0.2% tax increase for bus and paratransit services under C-TRAN's basic public transportation benefit area (PTBA) authority set forth in RCW 36.57A.

RCW 81.104, commonly referred to as the HCT Act, requires transit districts pursuing high capacity transit improvements to seek voter approval of a HCT system plan. The HCT Act allows a district to levy an additional 0.9% sales and use tax for a HCT system (beyond the tax rate allowed under the PBTA authority); subject to voter approval of a HCT systems plan that incorporates the tax as part of its finance plan. The current plan is to seek through the HCT Act authority a 0.1% sales and use tax for light rail operations and BRT improvements and service. The ballot measure for this 0.1% sales tax would seek voter approval during the same election as the 0.2% tax increased explained above.

The agency-wide operations and capital plan submitted hereunder reflects the recently adopted C-TRAN 20-year Transit Development Plan. The plan includes a continuous program of replacement and rehabilitation of equipment and vehicles; expansion of bus, paratransit and HCT service throughout the 20-year period, and provisions to fund the capital needs of the entire transit system as planned. The 20-year agency-wide cash flow demonstrates that as planned C-TRAN could fund its share of operating the light rail component of the CRC Project, a program of service replenishment and expansion, and its capital improvement and replacement program, while maintaining a "cash and cash equivalent" reserve in excess of 12% of annual operating costs throughout the 20-year analysis period.

1.8 Compliance with Operations Finance Plan Rating Standards

The following summarizes how the Operations Finance Plan for TriMet and C-TRAN respond to the Federal Transit Administration's Operations Plan Rating Standards.

A. Current Operating Financial Condition

- TriMet: Historical and actual balanced budgets and financial reports are provided in Appendix I. Annual cash flow shortfalls during economic downturn were paid for with cash reserves. TriMet's operating ratio as of June 30, 2010 is about 1.6. Service reductions were made in FY2010 and FY2011 to respond to economic downturn; these service reductions were less than most comparable districts around the country. However, even with the planned service reductions, the growth of fixed route service between FY1991 and FY2011, adjusting rail vehicle hours for seating capacity, has outpaced population growth by about 2:1; service has grown 79%, while population has grown 37%.
- C-TRAN: Historical and actual balanced budgets and financial reports are provided in Appendix H. C-TRAN's operating ratio was 9.9 for calendar year 2009, the most recent audit. This operating ratio reflects C-TRAN's \$48.8 million in cash and cash equivalent reserves. C-TRAN has used these reserves to mitigate cash flow shortfalls. While service was cut in 2000 and 1999 in response to the loss of MVET funding, service has grown since. Through the use of its cash reserves, C-TRAN was able to address the impacts of the recent economic downturn with a 5% cut in under-performing trips as of January 2010.

B. Completeness of Operating Plan

- TriMet: A 20-year agency-wide cash flow is provided in Appendix A, Table 1. The build-up of the individual components of the cash flow is provided in detail in Appendix A, Tables 2-10. Ten years of historic data is provided in Appendix C, Exhibit 1 and Appendix D, Exhibits 1-8. All assumptions are detailed in Section 3 of this report. A sensitivity analysis is discussed in Section 3 and documented in Appendix B, Tables 12 and 13.
- C-TRAN: A 20-year agency-wide cash flow is provided in Appendix G, Table 1. The build-up of the individual components of the cash flow is provided in detail in Appendix G, Tables 2-15. Ten years of historic data is provided in Appendix C, Exhibit 2 and Appendix D, Exhibit 11, and detailed historic data is provided throughout Section 4. All assumptions are detailed in Section 4 of this report. A sensitivity analysis was prepared and is documented in Appendix G, Table 16, and summarized in Section 4.8.2.

C. Commitment of O&M Funds

• TriMet: Additional O&M funding is committed and a reasonable plan is being implemented to secure the remaining amount of O&M funding required for the 20-year plan. In 2003, TriMet received the legislative authority to increase the payroll tax for employers and self-employed from 0.6218% to 0.7218% over a 10-year phase-in period in one-hundredth of one percent per year increments. The TriMet Board approved the full increase at their August 11, 2004 meeting; and the rate has already increased to 0.6818%

as of January 2010.³ In 2009 the Oregon Legislature gave the TriMet Board the authority to increase the payroll tax rate for employers and self-employed individuals from 0.7218 percent to 0.8218 percent. The legislation specifies that the increase must be phased-in and that no annual increase can exceed 0.02 percent. See Appendix D, Exhibit 10 Senate Bill 34. The plan anticipates that the TriMet Board would levy this payroll tax rate increase as of January 1, 2015 and that it would be totally phased-in by January 1, 2024, at which time the total payroll (and self-employment) tax would be 0.8218%.

• C-TRAN: A plan is in place to secure funding for C-TRAN's share of operating and maintaining the CRC Project light rail extension. The C-TRAN Board approved the 20-year Transit Development Plan on June 8, 2010, providing the policy basis for seeking additional operations funding. In September 2010, the C-TRAN Board adopted a resolution of intent to place two funding measures on the November 8, 2011 general election ballot that together would increase C-TRAN's sales and use tax rate by 0.3%. One measure would be for a 0.2% increase in C-TRAN's sales tax under its PTBA authority. These funds would to pay for bus service and C-VAN service expansion. A second, concurrent measure would be for a 0.1% sales and use tax under the authority granted in the HCT Act. These funds would be used to pay for light rail operations and the development and operations of a bus rapid transit project.

D. O&M Funding Capacity

- TriMet: Under the plan, projected cash balances and reserves in the 20-year cash flow shown in Appendix A, Table 1 exceed 12% of annual system wide operating expenditures throughout the forecast period. The sensitivity analysis demonstrates that there are reasonable policy actions that TriMet Board can take if tax revenues grow slower or expenses grow faster than assumed in the cash flow tables.
- C-TRAN: With the proposed sales and use tax rate increase, projected cash balances and reserves in the 20-year cash flow shown in Appendix G, Table 1 exceed 12% of annual system wide operating expenditures throughout the forecast period. The sensitivity analysis demonstrates that there are reasonable policy actions that C-TRAN Board can take if tax revenues grow slower or expenses grow faster than assumed in the cash flow tables.

E. Operating Cost Estimates and Planning Assumptions

• TriMet: The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are consistent with historical experience. The assumptions are explained in detail in Section 3. The build-up of individual costs and revenues are provided in Appendix A, Tables 2-11, and these can be compared to historic trends detailed in Appendix C, Exhibit 1 and D, Exhibits 1-8, and the supplemental information in Appendix I.

³ See Appendix D, Exhibit 9 Ordinance No. 279 Revising Payroll and Self-Employment Tax Rates; Amending Chapters 13 and 14 of

• C-TRAN: The assumptions supporting the operating and maintenance cost estimates and revenue forecasts are consistent with historical experience. The assumptions are explained in detail in Section 4. The build-up of individual costs and revenues are provided in Appendix G, Tables 2-15, and these can be compared to historic trends in Section 4 and Appendix C, Exhibit 2, Appendix D, Exhibit 11, and the detailed historic data provided in Section 4.

1.9 Organization of Report

In compliance with FTA requirements, this submission includes the following:

This report entitled "Columbia River Crossing Project Capital and Operations Finance Plan," which is organized as follows:

- Chapter 1 of this report provides an overall introduction and summary of conclusions regarding the capital and operations plans.
- Chapter 2 of this report details the plan to finance the design and construction of the CRC Light Rail Project.
- Chapter 3 addresses the TriMet agency-wide 20-year operations plan, including the 20-year capital plan beyond the CRC Light Rail Project. A 20-year cash flow is provided.
- Chapter 4 addresses the C-TRAN agency-wide 20-year operations plan, including the 20-year capital plan beyond the CRC Light Rail Project. A 20-year cash flow is provided.

In addition, this report includes the following appendices, which are included in the materials posted for FTA review:

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Appendix A	TriMet Cash Flow Forecast
Table 1	Cash Flow
Table 2	Passenger Revenue `
Table 3	Other Operating Revenue
Table 3A	One-Time-Only and DMAP Reimbursement
Table 4	Operating Grants and Capital Reimbursement
Table 5	Capital and Operating Project Grants
Table 6	Accessible Transportation Program Revenues
Table 7	Labor Cost Forecast
Table 8	Commuter Rail Forecast
Table 9	Capital Improvement Program
Table 10	Debt Service
Table 11	Complementary Paratransit Forecast
Appendix B	TriMet Agencywide Stress Test Forecasts
Table 12	TriMet Agencywide Pessimistic Forecast
Table 13	TriMet Agencywide Optimistic Forecast

Appendix C	Historical Transit System Financial Results
Exhibit 1	TriMet Historic Financial Summary
Exhibit 2	C-TRAN Historic Financial Summary
Appendix D	Historical Transit Service and Regulatory Information
Exhibit 1	TriMet Historic Expenses
Exhibit 2	TriMet Historic Employer Tax Revenues
Exhibit 3	TriMet Historic Passenger Revenues
Exhibit 4	TriMet District Historic Economic Data
Exhibit 5	TriMet Historic Ridership and Service Data
Exhibit 6	TriMet Long-Term Recurring Obligation History
Exhibit 7	TriMet Fixed Route Performance Indices History
Exhibit 8	TriMet District Population and Employment History
Exhibit 9	TriMet Ordinance No 279 Revising Payroll and Self-Employment Tax Rates under ORS 267.385 as Amended by 2003 Oregon House Bill 3183
Exhibit 10	Oregon 2009 Legislature Senate Bill 34
Exhibit 11	C-TRAN Historic Operating Statistics
Exhibit 12	C-TRAN Board Resolution of Tax Increase Election in November 2011
Exhibit 13	TriMet Transit Historical Data on Transit Capacity and Population
Appendix E	Capital and Operations Cost Methodologies, Estimates, and Related Factors
Exhibit 1	Basis of Capital Cost Report
Exhibit 2	FTA Template-"Main Worksheet - Build Alternative" and "Inflation Worksheet"
Exhibit 3	Capital Costs Calculations
	Calculation of Interim Borrowing
	Cash Flow Capital Plan Base Scenario
Exhibit 4	Funding Contribution Analysis Report for the CRC Project Toll Scenarios
Exhibit 5	Selected Credit Ratings
,	WashingtonWSDOT
	Oregon/ODOT
	TriMet
Exhibit 6	WSDOT Executive Order of Cost Estimate Validation Process (CEVP)
Exhibit 7	Transit Operations and Maintenance Cost Models Report
Exhibit 8	Forecasts of Transit Operations and Maintenance Cost Report
Exhibit 9	2009 Washington Legislature SB 5352, Section 306 (12)
Appendix F	Fleet Management Plans
Exhibit 1	TriMet Bus Fleet Management Plan
Exhibit 2	TriMet Light Rail Transit Fleet Management Plan
Exhibit 3	C-TRAN Fleet Management Plan
Appendix G	C-TRAN Cash Flow
Table 1	C-TRAN 20-year Cash Flow
Table 2	Passenger Revenues
Table 3	Sales Tax and Other Revenues
Table 4	Grant Revenues

Table 5	Wage Costs
Table 6	Benefit Costs
Table 7	Service Costs
Table 8	Fuel Costs
Table 9	Other Supply Costs
Table 10	Utility Costs
Table 11	Insurance Costs
Table 11b	Tax Expenses
Table 11c	Miscellaneous Expenses
Table 11 d	Lease Cost
Table 12	Innovative Program Costs
Table 13	Rolling Stock Plan and Costs
Table 14	Facilities Plan and Costs
Table 15	Equipment Plan and Costs
Table 16	Capital Improvement BRT Costs
Table 17	Bond Sizing
Table 18	Debt Service Charts
Table 19	Sensitivity Test 1 Lower than Anticipated Sales Tax Growth
Table 20	Sensitivity Test 2 Higher than Expected Wage Growth
Appendix H	C-TRAN Supplemental Information
Exhibit 1	Auditor's Report 2007
Exhibit 2	Auditor's Report 2008
Exhibit 3	Auditor's Report 2009
Exhibit 4	2007 Adopted Budget, C-TRAN.
Exhibit 5	2008 Adopted Budget, C-TRAN.
Exhibit 6	2009 Adopted Budget, C-TRAN.
Exhibit 7	C-TRAN Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2007
Exhibit 8	C-TRAN Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2008
Exhibit 9	C-TRAN Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2009
Exhibit 10	C-TRAN 20 Year Transit Development Plan
Exhibit 11	STIP Summary
Exhibit 12	RTC Metropolitan Transportation Plan for Clark County
Exhibit 13	Description of C-TRAN
Exhibit 14	20-Year C-TRAN Capital Plan
Appendix I	TriMet Supplemental Information
Exhibit 1	Financial Statement and Supplementary Information as of June 30, 2010 and 2009
Exhibit 2	Financial Statement and Supplementary Information as of June 30, 2009 and 2008
Exhibit 3	Financial Statement and Supplementary Information as of June 20, 2008 and 2007
Exhibit 4	2010 Adopted Budget
Exhibit 5	2009 Adopted Budget
Exhibit 6	2008 Adopted Budget

1-20 Finance Plan Draft Report

Exhibit 1

Exhibit 7	TriMet Official Statement TriMet 2009 Payroll Tax Bonds
Exhibit 8	2010-2014 Capital Improvement Plan
Exhibit 9	Transit Investment Plan
Exhibit 10	Regional Transportation Plan Projects
Exhibit 11	MTIP Approved Project List 2010-2013
Exhibit 12	Description of TriMet
Appendix J	Regional Supplemental Information

Metro, 20 and 50 Year Regional Population and Employment Range Forecasts, April 2009

2. CRC Project Capital Finance Plan

This section addresses the capital finance plan for the CRC Project. The capital improvement and replacement plans of TriMet and C-TRAN beyond the CRC Project are addressed as part of the agency-wide operations plans in Sections 3 and 4 of this report.

2.1 Background

As explained in Section 1.1, the CRC Project capital finance plan is prepared on the basis of being an integrated, multimodal finance plan. The use of the integrated multimodal finance plan is mandated by the statutory language enacted in the Consolidated Appropriations Act, 2010, Section 173 (H.R. 3288, December 9, 2009) that requires the entire funding plan be taken into account in the New Starts rating process. The details of the statutory language are provided in Section 1.1, which in summary provides that:

- The rating of the non-New Starts share component of the finance plan compares the non-New Starts share to the total cost of the entire project, and
- The accounting of local match for FTA and FHWA funds is based on the entirety or local funds incorporated in the finance plan.

The sections below describe the costs and revenues of the integrated finance plan and demonstrate its compliance with FTA ratings criteria.

2.2 Project Development Schedule

The project capital finance plan is based on a detailed baseline schedule, which is summarized below in Table 2-1.

Table 2-1. Summary of Project Development Schedule

Activity	Date
Washington Legislative Approval Committing State Funds	June 2011
Washington Legislative Approval Authorizing Tolling for the CRC Project	June 2011
Oregon Legislative Approval Committing State Funds	July 2011
Right-of-Way Acquisition Starts	July 2011
Federal Transportation Reauthorization Enacted making Highway Discretionary Funds Available	October 2011
Entry into Final Design Approved by FTA	December 2011
Bridge Construction Contract Executed	July 2013
FTA Approval of Full Funding Grant Agreement Committing Section 5309 New Starts Funds	September 2013
New Bridges Fully Open/Start Tolling	November 2017
Light Rail Construction Complete/Service Starts	October 2019
Highway Construction Complete	September 2020

2.3 Capital Cost Estimates for Multi-Modal CRC Project

2.3.1 Cost Estimating Methodology

The capital cost estimates cover all costs of developing and constructing the highway, bridge, bicycle/pedestrian, and light rail elements of these alternatives, including the cost of engineering, project administration, right-of-way acquisition, system procurement and installation, vehicle procurement, construction, finance, and start-up cost.

WSDOT's Cost Estimate Validation Process (CEVP), a risk-based methodology, was used to develop the initial capital cost estimates. CEVP utilizes a detailed base cost estimate comprising over 1,000 line-items defined by capital element and area. (See Appendix E, Exhibit 6) For each line-item, a unit-cost, lump sum or percentage is designated based on the recent project cost experience of WSDOT, ODOT, TriMet, and other construction cost data bases and applicable quantities are estimated. The activities feeding into the line-item costs are then connected into a critical path chart based on a baseline project development schedule. CEVP then applies a project-specific array of potential scope risks, cost risks, schedule risks, and inflation factors to yield a probability curve of total cost estimates in year-of-expenditure dollars.

The basis of the capital costs estimate used in this finance plan is the "90% confidence level" estimate (referred to herein as the "90%" estimate) from CEVP, adjusted (as explained in the following paragraph) to comply with FTA's SCC methodology. The 90% estimate is the cost that would only be exceeded 10% of the time (i.e. there is a 90% probability that the actual cost will be at or lower than the estimate) without management or mitigation of the array of risks. This is a conservative cost estimate; the 60% estimate is frequently used for financial planning, recognizing that on an actual project cost overruns and schedule risks would be managed or mitigated.

While WSDOT employs CEVP cost estimates, FTA requires cost estimates for New Starts review to be in Standard Cost Categories (SCC) and to include an amount of contingency that FTA finds appropriate for the project's stage of development. Thus the CEVP cost estimates for the CRC Project needed to be converted to fit FTA requirements. The process for developing the SCC-formatted cost estimate began with the detailed, line-item base cost estimates developed through CEVP. Each line-item was assigned an allocated contingency defined by a percentage of line-item cost, with the percentage guided by past project experience.

The "contingency" that CEVP added to the baseline cost for risk and uncertainty at the 90% confidence interval cost was back-calculated to be approximately 28.5%.4 For the SCC-formatted cost estimate, the contingency allocated to individual line-items plus additional unallocated contingency yielded a total project contingency of 30%. The resulting base cost and contingency by line-item was then rolled-up into the applicable SCC categories. These cost estimates by SCC category were then converted to year-of-expenditure costs by applying the most recent inflation factors developed by WSDOT for construction, engineering, and right-of-way. These inflation factors were assigned to the comparable SCC and a weighted annual

⁴ CEVP does not actually add contingency as is done in SCC cost estimates; it raises the cost estimate based on the occurrences of a risk array at a given confidence interval. The effective contingency derived from CEVP can be back-calculated by backing out inflation and comparing the result to the baseline cost estimate in current dollars.

escalation rate for each year was calculated and applied in the SCC spreadsheet. Additional details are available in the "Basis of Capital Cost Estimate" report (See Appendix E, Exhibit 1).

While the CRC project is an integrated multimodal project, the use of some funding sources is limited by law (for example, fuel tax revenues in Oregon and Washington may only be used for highway-related improvements). Thus, the capital cost estimates are divided into highway and transit components. Many costs are easily allocated to transit or highway because they are distinctly attributable to one of the components; for example, the cost of mainline highway improvements where there is no transit alignment is a highway cost, and the cost of light rail track is a transit cost. However, the costs of some highway and transit improvements overlap and must be allocated between these components. The allocation of these overlapping costs is summarized below.

- Columbia River Crossing: Because one of the bridges crossing the Columbia River incorporates highway and transit elements, the cost of that bridge is apportioned between highway and transit. Transit's share of the bridge structure cost is viewed as the marginal cost incurred to accommodate transit, which is calculated as the difference between the cost of the proposed stacked highway-transit bridge and the cost of an equivalent conventional box-girder bridge that does not accommodate the light rail alignment. The costs of removing the existing bridge structures, which are not marginally increased due to transit, are fully attributed to the highway cost. The cost of the transit tracks, electrification, and systems equipment on the main bridge is fully allocated to the transit cost. The costs of the transit-only structures crossing North Portland Harbor, Tomahawk Island Drive, and Hayden Island Drive are also fully allocated to transit.
- Bicycle/Pedestrian Improvements: The main river crossing would incorporate bicycle and pedestrian improvements, the costs of which are entirely assigned to the highway component. The costs of bicycle and pedestrian improvements on the transit-only structure across Hayden Island are considered transit costs.
- Right-of-Way: Because most right-of-way costs would occur where the transit and highway improvements are physically separated from each other, these right-of-way costs are easily apportioned into transit and highway costs. Except for the land parcel contributed by WSDOT for the park and ride near SR 14, the cost of real property required for park and ride locations is a transit cost (all construction costs for the park and rides are transit costs). The cost of right-of-way required for the main Columbia River crossing is a highway cost. The cost of other property acquisitions required for both transit and highway improvements is proportioned into highway and transit costs based on the relative size (square footage) of the transit and highway footprints necessitating the acquisition.
- Engineering and Project Management/Administration: The highway and transit costs include their respective share of preliminary engineering and final design costs, calculated by applying multipliers to the construction costs of the highway and transit elements.

Based on these assumptions:

- *Highway capital costs* include the costs of designing, acquiring right-of-way for, and constructing the highway sections of the river crossing, mainline I-5 improvements, highway interchange improvements,5 the bicycle and pedestrian improvements incorporated in the main river crossing and highway sections, and related project administration costs.
- Transit capital costs include the costs of designing, procuring, installing, and constructing the transit guideway and related structures (including a share of the main river crossing); stations and park and ride facilities; maintenance facilities; vehicles; electrification, signalization, and systems and equipment; bicycle/ pedestrian improvements on transit-only structures; start-up costs; and related project administration costs.

2.3.2 Interim Borrowing Costs

The project will establish an interim borrowing program to fill temporary funding shortfalls caused by the time lag between when funds are received and when they are needed to meet the construction expenditure schedule. It is anticipated that the state funds and toll bond proceeds will be available as needed for cash flow purposes. The federal discretionary funds incorporated in the finance plan are scheduled for use based on their expected availability, and do not add to the interim borrowing requirement. Thus, the need for interim borrowing is driven by the protracted flow of Section 5309 New Starts funds.

FTA current practice caps the availability of annual New Start funds at \$100 million. The finance plan is based on project cash-flow requirements; therefore incorporates for each year an amount of New Starts funds that is the lesser of (a) \$100 million or (b) the amount of New Start eligible expenses in that year. At these levels of New Start appropriations the New Start funds do not keep pace with construction expenditures, necessitating an interim borrowing program.

The interim borrowing program is assumed to (a) start when the cumulative New Starts-eligible expenses exceeds the cumulative amount of New Starts funds available to the project and (b) end when the cumulative amount of New Start funds made available to the project equals the full amount of New Starts funds proposed in the finance plan. Due to the time it takes to receive grant funds, New Start funds are assumed to be available for cost reimbursement in the May following the appropriation bill in which they are appropriated.

While the structure of the interim borrowing has not been determined, this finance plan assumes it will function as a commercial paper borrowing in which funds are borrowed on a month-by-month basis as needed. It assumes a 5 percent interest rate, which is meant to account for interest and any administrative fees. Based on these assumptions, the project capital incorporates about \$54 million in estimated interim borrowing costs.

⁵ The access road to the Clark Park and Ride, which is part of the Fourth Plain interchange improvement, is included in the transit

2.3.3 Cost Estimate for CRC LRT

The capital costs in 2010 and year of expenditure dollars (YOE \$) by standard cost categories are provided in FTA's templates "Main Worksheet – Build Alternative" and "Inflation Worksheet", which are provided in Appendix E, Exhibit 2. A summary of the cost estimate by component and SCC category is shown in Table 2-2, below.

Table 2-2. Summary of Capital Cost by SCC and Component in Millions of Dollars

Standard Cost Category	Highway Costs	Transit Cost	Total Cost
10 Guideway & Track Elements	\$1,132.7	\$189.3	\$1,322.0
20 Stations, Stops, Terminals & Intermodal	\$0.0	\$125.4	\$125.4
30 Support Facilities: Yards, Shops & Admin Buildings	\$0.0	\$12.2	\$12.2
40 Sitework & Special Conditions	\$513.9	\$78.3	\$592.3
50 Systems	\$1.1	\$61.9	\$62.9
60 Right-of-Way & Land Improvements	\$89.6	\$36.0	\$125.6
70 Vehicles	\$0.0	\$92.6	\$92.6
80 Professional Services	\$367.3	\$86.2	\$453.5
90 Unallocated Contingency	\$126.4	\$59.7	\$186.1
Total Project Cost in Base Year Dollars	\$2,231.0	\$741.5	\$2,972.6
Escalation	\$402.3	\$135.9	\$538.2
100 Finance Costs (in YOE Dollars)	\$0.0	\$54.3	\$54.3
Total Project Costs in YOE Dollars	\$2,633.3	\$931.7	\$3,565.0

2.4 Proposed Capital Funding Sources

A total of approximately \$134 million has been committed to the project; of which about \$77.8 million was spent prior to FTA's approval to enter Final Design. This finance plan addresses only the post-PE approval costs and revenues. Thus, about \$56 million is currently committed to the project, and a plan is in place to secure the remaining funds. The following sub-sections describe the anticipated funding sources.

2.4.1 \$56 million in Currently Committed Federal Discretionary and State Funds

ODOT and WSDOT have collectively received a total of \$44.3 million in discretionary highway dollars through congressional earmarks and administrative grants. About \$25.7 million was spent prior to PE. The remaining \$18.6 million is committed and available for PE/post-PE activities

ODOT and WSDOT have collectively provided a total of \$89.7 million in state funds to the project. About \$52.1 million was spent prior to PE. The remaining \$37.6 million is committed and available for PE/post-PE activities.

2.4.2 \$400 Million in Highway Discretionary Funds

The funding plan anticipates seeking an allocation of funds from the Projects of National and Regional Significance (PNRS) program. The PNRS program was established under Section 1301 of SAFETEA-LU as a discretionary funding program, patterned after FTA's New Starts program, which provides funding to high-cost surface transportation projects (sometimes referred to as "mega-projects"). The criteria for funding from the PNRS program are set forth in FHWA regulations at 23 CFR 505, and include such factors as:

- Eligible project costs. Eligible project costs must exceed the lesser of \$500 million or 75 percent of the state's formula transportation funding apportionment;6
- The ability of the project to generate national and/or regional economic benefits;
- The amount and importance of freight and passenger travel served;
- The ability of the project to generate long-term congestion relief and enhance the national transportation system by improving throughput; and
- The ability of the project to improve transportation safety.

While funding allocation under the PNRS program was envisioned as a criteria-based administrative program, the entire \$1.8 billion funding authorization was earmarked to specific projects in SAFETEA-LU. Oregon received an award of \$160 million to improve bridges throughout the state in the I-5 corridor, and Washington received a \$220 million award for the Alaska Way Viaduct project. The aggregate amount of earmarks to Oregon and Washington of \$380 million is similar to the amount planned to be secured for the CRC Project.

The PNRS program is anticipated to continue in the upcoming reauthorization act; however, the extent to which PNRS funds will be earmarked in the act or awarded to projects by USDOT is uncertain. In either case, PNRS funding will be sought for the CRC project.

Key members of the Oregon and Washington delegation have expressed interest in helping to secure an earmark of PNSR funds (if the PNSR program is earmarked as in SAFETEA-LU). While \$400 million would be a large earmark, the aggregate PNRS earmark received by Oregon and Washington in SAFETEA-LU illustrate the states' ability to obtain this amount.

An administrative grant would be sought if PNSR is not earmarked in reauthorization and instead left to operate as a FHWA discretionary program. The CRC Project would rate highly as a national project under the program's current criteria, as evidenced by the CRC Project's designation as a "Corridor of the Future" and a priority project under Executive Order 13274 for Environmental Stewardship and Transportation Infrastructure Reviews. While these specific designations may no longer be applicable, they indicate the national importance FHWA has historically placed on the project.

If PNRS funds are not sufficiently available for the CRC project, other discretionary highway funds will be sought, such as High Priority Projects (HPP) and Interstate Maintenance

⁶ For multi-state projects such as the CRC project, the largest apportionment among the participating states applies

Discretionary (IMD) funds. Traditionally reauthorization bills include the HPP program, which generally provides funding to specific projects named in the bill. While HPP has not provided earmarks as large as PNSR, earmarks in the \$20-\$30 million range are not unusual. Earmarks from the HPP program could supplement monies from other programs, including PNSR. In SAFETEA-LU Oregon received \$307 million in HPP funds. Washington received \$250 million, including \$11.2 million for the Alaska Way Viaduct, which also received an earmark from the PNRS program. Between Oregon and Washington earmarks, the CRC Project received \$14.2 million in HPP funding in SAFETEA-LU.

IMD funds may be used for resurfacing, restoring, rehabilitating, and reconstructing the Interstate System, including providing additional Interstate capacity. Currently about \$100 million per year is authorized nationwide under this program. The CRC project received several grants from this discretionary program totaling almost \$22.3 million.

Thus, while the CRC Project will seek PNSR funds, the planned amount of discretionary highway funds may come from an array of discretionary programs.

2.4.3 \$900 Million in State Funds

The funding plan calls for \$900 million in additional state transportation funds collectively from ODOT and WSDOT beyond the amounts already committed to the project and discussed in Section 2.4.1, above. These funds can come entirely from new revenues that are legislatively approved for the CRC Project or a combination of new revenues and existing revenues, including formula federal funds allocated to the states. The current plan is to pursue new revenues for the project. New revenues may be created by increasing one or more of the statewide fees or taxes. While the actual package of taxes, fees, and other revenue sources that may be used to fund each state's share of CRC capital costs must be developed through their legislative processes, potential sources of new state revenues are described below.

2.4.3.1 Oregon

As of January 1, 2011, Oregon will levy a 30¢ per gallon tax on all fuels used for vehicle transportation. ODOT estimates that on average between FY2010 and FY2015 the fuel tax will gross about \$17.5 million per penny of tax. State law requires certain transfers and expenses be paid from gross fuel tax revenues; as a result, a 1¢ fuel tax is forecast to produce about \$16.8 million net revenues for transportation projects. The Oregon legislature may increase the fuel tax rate by vote of the legislature. The use of any revenues resulting from an increase to the fuel tax could be set in the legislation enacting the increase.

Oregon levies several fees and taxes on heavy trucks, including weight-mile taxes, heavy vehicle registration fee, trip permits, and other fees paid by motor carriers. Taken together these are referred to as "motor carrier fees and taxes." The Oregon legislature may increase motor carrier fees and taxes by vote of the legislature. The use of any revenues resulting from an increase in motor carrier fees or taxes could be set forth in the legislation enacting the increase.

⁷ ODOT, Summary of Transportation Economic and Revenue Forecasts, June 2010

The Oregon Constitution restricts the use of fuel tax and truck-related revenues to highway purposes only. The Oregon Constitution also requires the proportion of highway revenues paid among the major vehicle classes, primarily passenger vehicles and heavy trucks, match the relative financial burden each places on the transportation system. This concept is commonly referred to as "cost responsibility." To maintain cost responsibility, any increase in the fuel tax rate may be paired with a proportionate increase in taxes on heavy trucks. An increase in motor carrier fees and taxes proportionate to a 1¢ increase in fuel tax would generate about \$9.8 million in net proceeds on average over FY2010 – FY2015. Thus, a 1¢ increase in fuels tax plus an equivalent increase in motor carrier taxes and fees would annually produce \$26.6 million in net revenues on average.

Thus, for example, if all of the proceeds from an Oregon 1.5¢ fuel tax plus an equivalent increase in motor carrier taxes and fees were dedicated to a multi-year revenue stream, the revenue stream would produce about \$500 million in net bond proceeds.8 Oregon collects a variety of Department of Motor Vehicle (DMV) fees, including vehicle registration fees, title fees, driver license fees, and other fees. One or more of these fees can be increased to fund a transportation improvement program and, thereby, reduce the required increases from gas tax and motor carrier fees. The amount of required new revenues may also be decreased by allocating existing revenues to the project.

2.4.3.2 Washington

The State of Washington currently levies a 37.5¢ per gallon fuels tax on gasoline and other "special" transportation fuels. The proceeds from these fuel taxes were anticipated to gross about \$34.1 million per 1¢ of tax in FY 2010. After deducting a variety of expenses and transfers mandated by state law, a 1¢ combined gas and special fuels tax is estimated to net about \$32.2 million in FY 2010. The Washington state constitution limits the use of proceeds from the state fuels tax to highway purposes.

The allocation of the fuels tax proceeds in Washington depends on the provisions in the legislation enacting each increase. A share of existing fuels tax revenues is generally allocated among the state, cities, and counties; the allocation formula among these recipients has varied in different fuels tax legislation. On occasion, the Washington legislature has dedicated all of the proceeds from a fuel tax increment to a special program without any direct allocation to cities and counties. The use or allocation of any future increases to the fuel tax would be set forth in the legislation enacting the increase. If, for example, the entire proceeds of a 1¢ Washington fuel tax (no allocation to cities and counties) in FY 2010 were dedicated to a multi-year revenue stream, the revenue stream would produce about \$434 million in net bond proceeds for highway projects.9

In Washington, licensing fees for trucks, buses, and for-hire vehicles consist of combination of a fee based on the gross weight of the vehicle (gross weight fee) and an additional fee of 1 dollar. The gross weight fee schedule for trucks was increased by 15 percent as part of the Nickel Package. The Transportation Partnership Account legislation increased the licensing fee for light trucks, except for farm vehicles, by \$10 to \$30, depending on weight. Registration fees for

⁸ Assumes issuance of uniform-payment, subordinated highway revenue bonds with a 25-year term, 6 percent annual interest, 2 percent issuance costs, and coverage supplied by other revenues.

⁹ Assumes uniform-payment highway revenue bonds with a 30-year term, 6 percent annual interest, 2 percent issuance costs, and coverage supplied by other revenues

passenger cars consist of a combination of a \$30 license fee plus a fee that depends on the gross weight of the vehicle (vehicle weight fee). The vehicle weight fee was introduced as part of the Transportation Partnership Account legislation. Each \$1 increase to the basic vehicle license fee in Washington is estimated to produce about \$4.5 million in FY 2010. Each 1 percent increase in the combined license fee (CLF) on commercial vehicles in Washington would produce about \$1.9 million in 2010. One or more of these fees can be increased to fund a transportation improvement program and, thereby, reduce the required increases from gas tax. The amount of required new revenues may also be decreased by allocating existing revenues to the project.

2.4.4 \$850 Million in Section 5309 New Start Funds

\$850 million in New Starts funds are proposed for the CRC Project. The schedule assumes the Full Funding Grant Agreement would be executed in 2013 and that some early acquisition and construction is assumed to be undertaken prior to the FFGA under a Letter of No Prejudice (LONP). The finance plan assumes an annual amount of New Starts funds that is the lesser of (a) \$100 million or (b) the amount of New Start eligible expenses in that year, up to a cumulative total of \$850 million in New Start funds.

2.4.5 Interim Borrowing Program

As discussed in Section 2.3.2, the project must establish an interim borrowing program to fill temporary funding shortfalls caused by the difference between when New Start funds are received versus when they are needed to meet the construction expenditure schedule. To meet project needs, this program must be sized to provide up to an estimated \$360 million in interim borrowing capacity

Washington legislation may be sought similar to that enacted for the SR-520 Project, which would permit sales and use taxes applicable to the CRC Project to be deferred until five years after completion of the project. This may address about \$60 million of interim borrowing capacity requirements. Additional interim borrowing capacity may be provided in a manner similar to that used for TriMet's recent light rail transit projects; in which the monies in the Full Funding Grant Agreement are pledged to repay commercial paper, a letter of credit, or other form of borrowing, and backed with other governmental revenues. In the case of the CRC Project, interim borrowing capacity will be developed on a project-wide basis. TIFIA assistance may also be used to address interim borrowing requirements.

2.4.6 \$1.36 Billion in Net Toll Bond Proceeds

2.4.6.1 Introduction

As explained in Section 1, the new I-5 Bridge would be tolled. The capital finance plan for the CRC Project depends on toll revenues (i.e. toll bond proceeds) to cover about 38 percent of project costs. In addition, the toll revenues provide capacity to address any project cost overruns and/or revenue shortfalls in other project revenues. The following sub-sections describe the steps to be taken to implement tolling and the estimated revenues that it would produce. Specifically, the following factors are addressed:

• The authority to toll the new bridge

- Toll rate structure
- The cost of operating the bridge/highway component of the CRC Project (transit operating costs are addressed in Sections 3 and 4 of this report)
- Estimation of net toll revenues available to the capital finance plan
- Financing assumptions
- Funding capacity

Additional details can be found in CRC Project, Funding Contribution Analysis Report for the CRC Project Toll Scenarios, December 2009 (See Appendix E, Exhibit 4)

2.4.6.2 Authority

As a replacement bridge on the Interstate system, there is federal statutory authority to toll the new bridges. ODOT currently has state authority to toll the bridge; no additional legislative action is needed. However, Washington statutes require separate legislative authority for each new toll facility; WSDOT must seek that authority.

WSDOT is 2/3rds through a three-legislative session plan to secure the state authority. It is following a process patterned after the process successfully used to secure tolling authority for the SR-520 project in the Seattle region. During the 2009 session the Washington legislature mandated 10 that WSDOT undertake a technical analysis and outreach program regarding tolling the CRC Project and report back to the legislature in 2010. This was viewed as a pre-requisite to seeking actual tolling authority in the 2011 legislative session. The technical study and outreach program were completed and a final report was submitted to the Governor and legislature in compliance with state law.

With the pre-requisite study and outreach program complete, WSDOT will seek during the 2011 session the state authority to toll the I-5 Bridge. Subsequently, WSDOT and ODOT will enter a bi-state agreement establishing a cooperative process between the Oregon Transportation Commission and the Washington Transportation Commission to set actual toll rates.

2.4.6.3 Toll Rate Structure Scenarios and Forecasts of Gross Toll Revenues

As explained above, the toll rate schedule for the I-5 bridges (i.e., the toll rates by time-of-day, day-of-week, vehicle classification, and applicable discounts, if any) must be formally set by the state transportation commissions through specific processes set in state law and the bi-state agreement between WSDOT and ODOT. An analysis was undertaken to examine the traffic and revenue impacts of a broad array of toll scenarios; several of which are being documented in the FEIS for the project and reported herein. Each scenario incorporates variable tolling in which toll rates differ by type of day and vehicle type. The analysis looked at "post-completion tolling" (i.e.; when tolling starts after completion of the new I-5 Bridge) and "pre-completion tolling" (i.e.; when tolling starts during the construction period). The finance plan shown in this report

¹⁰ 2009 Washington Legislature SB 5352, Section 306 (12) (See Appendix E, Exhibit 9)

assumes post-completion tolling only; it would not materially change with pre-completion tolling.

Table 2-3 provides the toll rate schedule scenarios for passenger cars by time period over the course of a typical weekday. 11 The rates shown are one-way tolls. A round-trip would pay tolls in each direction at the applicable rate for the time period of each crossing.

Toll rates for commercial vehicles are proportionately greater than for passenger cars, roughly based on the number of axles. For the purposes of this analysis, it is assumed that large-sized commercial vehicles (five or more axles) would pay four times the passenger car rate for the given time of day, and medium-sized commercial vehicles (three- or four-axle vehicles) would pay two times the passenger car rate for the given time of day. The actual toll rates for commercial vehicles will be determined in the formal toll rate setting process.

		Toll Rate Struc	ture for Autose	
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Time Period	Base	Lower than Base	Added Price Point	1.5X Base
12AM - 5AM	\$1.00	\$1.00	\$1.00	\$1.50
5AM-6AM	\$1.50	\$1.25	\$1.50	\$2.25
6AM-10AM	\$2.00	\$1.50	\$2.00	\$3.00
Peak of Peak Rate 7AM-9AM	N/A	N/A	\$2.50	N/A
10AM-3PM	\$1.50	\$1.25	\$1.75	\$2.25
3PM-7PM	\$2.00	\$1.50	\$2.00	\$3.00
Peak of Peak Rate 4PM-6PM	N/A	N/A	\$2.50	N/A
7PM-8PM	\$1.50	\$1.25	\$1.50	\$2.25
8PM-12AM	\$1.00	\$1.00 ·	\$1.00	\$1.50
Pay-by-Plate Process Fee g	\$1.22	\$1.22	\$1.22	\$1.22

a Toll rates are shown in 2006 dollars. Toll rates are assumed to escalate at 2.5% per year. Thus, for example, a \$2.00 toll in 2006 dollars would be about \$2.21 in 2010 dollars.

- d The actual toll rates imposed through the formal toll setting may differ from these scenarios.
- e Toll rates charged after new I-5 bridges are opened for traffic operations.
- f Toll rates on existing I-5 bridges, if tolls were imposed prior to completion of the new bridges.

b Medium trucks, defined as vehicles with 3 or 4 axles, are assumed to have a toll rate that is twice the rates shown above for autos.

c Large trucks, defined as vehicles with 5 or more axles, are assumed to have a toll rate that is four times the rates shown above for autos.

g The pay-by-plate surcharge, shown in 2006 dollars, is applicable to all types of vehicles and does not change by time of day. The surcharge represents an average of the anticipated added cost to collect these tolls compared to costs for vehicles with transponders.

¹¹ Toll rates are shown in 2006 dollars because those were rates used in the Draft Environmental Impact Statement (DEIS) and it was thought it would be confusing to keep changing the year of, and therefore the amount of the tolls. A \$2.00 toll in 2006 dollars is equivalent to a \$2.21 toll in 2010 dollars.

It is assumed that the toll rates would increase over time at 2.5 percent annually to approximately keep pace with inflation. Thus, under Scenario 1, for example, the assumed peak-period toll rate for an automobile with a transponder would be \$2.21 in 2010 dollars.

Individual forecasts of bridge traffic volumes were computed for each of the above-described toll rate structure scenarios (and others). The process consisted of employing Metro's regional travel demand models, which incorporated a toll sub-model that was based on an extensive stated preference survey of passenger and freight travel. Those results were then inputted into a microsimulation traffic assignment model (VISUM) to refine the assignments. The "post-processed" results were provided to Stantec, a consulting firm with worldwide experience in tall analyses, who prepared a range (Low, Baseline, and High) of gross toll revenues by year by creating hourby-hour traffic volumes by vehicle type and applying the appropriate toll rate for the scenario in question.

2.4.6.4 Toll/Bridge Operating Costs and Conversion of Gross Toll Revenues to Net Toll Revenues Available for Repayment of Bonds

The costs of toll operations and maintaining and rehabilitating the bridge were estimated on the basis of comparable operations on the Tacoma Narrows Bridge, as well as the current I-5 and I-205 Bridges. Specifically, the following costs were estimated:

- Routine highway facility O&M costs (i.e.; the annual costs of operating and maintaining the roadway and bridges)
- Routine annual toll collection costs (i.e.; the annual fixed and variable (per transaction) costs of collecting tolls and maintaining toll equipment)
- Bridge insurance costs, including property damage and business loss
- Periodic rehabilitation and replacement facility costs (i.e.; resurfacing, bridge inspections, etc.)
- Periodic rehabilitation and replacement of tolling equipment and software

The detailed estimates of these costs are provided in Funding Contribution Analysis Report for the CRC Project Toll Scenarios. (See Appendix E, Exhibit 4)

2.4.6.5 Financing Assumptions and Factors

The financial capacity of each toll scenario is derived from borrowing against future annual net toll revenues resulting from the scenario. Bonds would be sold pledging a multi-year stream of net toll revenues for repayment of the bond, and the bond proceeds would be used to pay for the design and construction of the CRC project. The net toll revenues pledged to the bonds exclude the toll revenues used to pay (i) operating and maintenance costs of toll collection, (ii) credit card transaction fees, (iii) uncollectible accounts, and (iv) annual facility operations and maintenance costs.

The funding capacity of each toll scenario is also affected by the financing structure employed, including the timing of the bond issuances, the back-up pledge (if any) provided, the type of bonds employed, and other technical assumptions. A detailed enumeration of these assumptions

are provided in Funding Contribution Analysis Report for the CRC Project Toll Scenarios (See Appendix E, Exhibit 4), which also addresses scenarios not included in this finance plan report. The following is a summary of the assumptions (which were set by the Washington State Treasurer to be conservative) used to report the conclusions herein:

- A blend of serial Current Interest Bonds (CIBs) and Capital Appreciation Bonds (CABs) are used to tailor debt repayment to match the revenue stream.
- Bonds are assumed to be sold in multiple annual issues during the construction period
- Debt is assumed to be 30-year state-backed debt with general obligation bond characteristics (the detailed analysis considered other structures).
- A 1.25X debt service coverage factor is maintained in each year.
- A 6.0% interest rate for Current Interest Bonds and a 6.5% interest rate for Capital Appreciation Bonds. These interest rates are assumed to be constant over the maturity periods of the bonds.
- For each bond issuance, the gross bond proceeds are sized to include capitalized interest to cover interest payments prior to the start of revenue operations.
- Issuance costs include an underwriter's discount of 0.5% for Current Interest Bonds and 1.0% for Capital Appreciation Bonds plus a 0.2% to cover other issuance costs.

2.4.6.6 Funding Capacity of Toll Revenues

Table 2-4 shows the range of project funding potentially available from each of the toll rate scenarios. The funding capacity is shown as a range to reflect the possibility that revenue collections, facility operations and maintenance costs, financing costs, timing of the toll bonds, and/or other factors affecting the amount of net bond proceeds may differ from the assumptions used.

The CRC Project capital finance plan does not presume a particular toll rate schedule. Rather it assumes that toll bonds would be issued annually in the amount needed to pay project costs in that year, given the plans for the other funding sources available to the project. The finance plan shows the total amount of net bond proceeds it requires. While the finance plan is not directly tied to a particular toll rate schedule, the level of toll rates required to support the finance plan can be seen by comparing the total amount of funding required from toll bonds in the finance plan with the funding capacities of the toll rate schedules shown in Table 2-4. This comparison shows that the CRC Project finance plan can be accomplished with a toll rate structure generally similar to the base toll rate scenario (Scenario 1).

Table 2-4. Financial Capacity of I-5 Bridge Toll Scenarios in Billions of Year-of-Expenditure Dollars a,b

		Toll Rate	Structured		
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	
Point in Rangec	Base	Lower than Base	Added Price Point	1.5X Base	
Low	\$1.13	\$0.94	\$1.22	\$1.43	
Baseline	\$1.34	\$1.12	\$1.44	\$1.69	
High	\$1.43	\$1.18	\$1.53	\$1.84	

a Net funding capacity for the design and construction of the project; excludes bond proceeds used for issuance costs, capitalized interest, and reserves.

2.5 The Capital Finance Plan

2.5.1 Cash Flow Plan

Table 2-5 illustrates the capital finance plan on a cash-flow basis based on the above factors and assumptions, a cash flow. The cash-flow requirements are aligned with both the political and administrative timing of receiving funding approvals as well as the technical requirements of the design, construction, and procurement activities themselves.

2.5.2 Capital Funding Capacity

The project capital plan provides funding capacity to respond to unanticipated cost-revenue imbalances in several ways, as outlined in the subsections that follow:

Employ Conservative Assumptions Regarding Costs and Revenues to Reduce Downside Risks and Retain a Reasonable Opportunity for Additional Funding Capacity within the Base Finance Plan

CEVP produces a distribution of cost estimates reflecting the confidence that a cost estimate will not be exceeded. The finance plan in this New Starts submittal incorporates a contingency level that is 1.5 percentage points higher than the level of contingency inherent in the 90% CEVP cost estimate. That is, the amount of contingency in the New Starts finance plan cost estimate exceeds the amount required for a 90% probability that the cost estimate will not be exceeded without any management or mitigation of the risks. Thus, the cost estimate is considered conservative in that it incorporates a larger contingency than other WSDOT projects.

In addition, the funding capacity of the toll revenues are based on conservative assumptions provided by the Washington State Treasurer, including bond interest rates that are at least 100 basis points higher than market rates, and other cautious suppositions. While this was done to minimize the downside risk of the financial contributions of tolls, it provides an opportunity for increased funding capacity from the toll revenues.

b All scenarios assume issuance of 30-year, state-backed bonds.

c A range of funding is shown for each scenario, reflecting the potential variability in traffic forecasts, financing assumptions, and project schedule.

d Assumes toll collection starts when new I-5 bridges open for general traffic operations.

2.5.2.2 Adapt Tolling to Different Circumstances if required to Rebalance the Funding Plan

With state-backed bonds, the "coverage" of the net revenues used for debt service is for the benefit of the state and intended to protect the states' general fund and/or highway trust fund from having to cover shortfalls in net toll revenues. Assuming the baseline toll rate structure and state-backed bonds with 1.25 coverage, there is a stream of funds associated with unexpended and unobligated coverage ranging between about \$14 million per year in the early years to \$55 million per year in the out-years that can be used, if necessary, to resolve cost overruns or funding under-runs. At a six percent discount rate, this stream of revenue has a present value capacity of about \$307 million that can be tapped with a subordinate pledge if needed for project funding.

In addition, some highway improvements (i.e.; the interchanges not physically connected to the bridge) can be deferred if the costs of core project elements, such as the transit element or main bridge crossing, exceed estimates. This would allow the funding associated with the deferred elements to be applied to cost overruns/funding shortfalls on the core improvements. The duration of tolling could be extended beyond repayment of the initial construction bonds, if necessary to provide funding for any deferred project elements. For example, assuming toll revenues remain flat after the initial bonds are repaid and tolling is extended another ten years, the additional stream of net toll revenues would have a present value capacity of over \$298 million at a 6.5% discount rate.

Further, toll rates can be adjusted within reasonable amounts if additional funding capacity is required. Tolling analyses found that toll revenues can be increased by raising toll rates up to about twice the base rate after which the diversion impacts of higher rates exceeds the revenues the higher rates produce. As a practical matter, toll rates twice the base rate are not likely to be proposed. However more limited changes to the base toll structure can produce significant additional funding capacity. For example a 50-cent higher toll rate in the one-hour peak-of-the-peak period would provide \$100 million in additional funding capacity. Since toll rates would be set and toll bonds would be issued after state funding commitments and discretionary highway funding commitments are in place, it provides an opportunity to take those previous actions into consideration.

2.5.2.3 Manage Resources within the Highway Trust Fund to Adapt to Different Circumstances

The Departments of Transportation manage their respective highway trust funds, which are primarily funded with formula federal funds and existing state transportation taxes and fees, to meet the cash-flow needs of their state highway programs. Some of the monies in the highway trust funds are dedicated to specific uses through legislation or existing commitments. However, the DOTs are able to and are experienced with reprogramming undedicated and non-committed funds within their highway trust funds to respond to cash-flow needs or priority projects, such as the Columbia River Crossing.

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Table 2-5 CRC Project Capital F	Through FFY2010	FFY2011	FFY2012	FFY2013	FFY2014	FFY2015	FFY2016	FFY2017	FFY2018	FFY2019	FFY2020	FFY2021	FFY2022	TOTAL
TOTAL PROJECT CAPITAL COST						***************************************								
Highway AA, DEIS, Eng. Construction	\$43.2	\$82.1	\$99.1	\$100.5	\$177.8	\$378.2	\$504.4	\$513.3	\$351.3	\$244,9	\$138.6	\$0.0	\$0.0	\$2,633.3
Transit PE, Design and Construction	\$4.4	\$13.4	\$37.4	\$31.8	\$53.4	\$124.8	\$200.8	\$204.3	\$150.0	\$57.1	\$0.2	\$0.0	\$0.0	\$877.4
Transit Interim Finance Costs	\$0.0	\$0.0	\$0.0	\$0.2	\$0.4	\$0.2	\$2.3	\$7.6	\$12.3	\$13.8	\$10,2	\$5.6	\$1.6	\$54.3
Total Project Capital Cost	\$47.5	\$95.5	\$136,4	\$132.5	\$231.5	\$503,2	\$707.4	\$725.2	\$513.5	\$315.8	\$149.1	\$5.6	\$1.6	\$3,565.0
TOTAL PROJECT REVENUES														
Fed. Discretionary Highway: Existing	\$18.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$18.6
Fed. Discretionary Highway: Additional	\$0.0	\$0.0	\$99.1	\$100.5	\$100.4	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$400.0
ODOT/WSDOT: Existing	\$29.0	\$8.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$37.6
ODOT/WSDOT: Additional	\$0.0	\$81.0	\$22.9	\$6.4	\$77.4	\$303.2	\$409.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0,0	\$900.0
Toll Bond Proceeds	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$110.7	\$513.3	\$351,3	\$244.9	\$138.6	\$0.0	\$0,0	\$1,358.8
Section 5309 New Start Funds	\$0.0	\$5.8	\$14.4	\$25.5	\$53.8	\$100.0	\$100.0	\$100.0	\$100.0	\$100.0	\$100.0	\$100.0	\$50.4	\$850.0
Interim Borrowed Funds	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$87.7	\$111.8	\$62.2	(\$29.1)	(\$89.5)	(\$94.4)	(\$48.8)	\$0.0
Total Project Revenues	\$47.5	\$95,5	\$136.4	\$132.5	\$231.5	\$503,2	\$707.4	\$725.2	\$513.5	\$315,8	\$149.1	\$5.6	\$1.6	\$3,565.0
Cumulative Federal Funds	\$18,6	\$24.4	\$137.9	\$264.0	\$418.1	\$618.1	\$718.1	\$818.1	\$918.1	\$1,018.1	\$1,118.1	\$1,218.1	\$1,268.6	
Cumulative Local Funds	\$29.0	\$118.6	\$141,5	\$148.0	\$225.3	\$528.6	\$1,048,3	\$1,561.6	\$1,912.9	\$2,157.8	\$2,296.4	\$2,296.4	\$2,296.4	
Cumulative Total Funds	\$47.5	\$143.0	\$279.4	\$411.9	\$643.5	\$1,146.7	\$1,766.4	\$2,379.8	\$2,831.0	\$3,176.0	\$3,414.6	\$3,514.6	\$3,565.0	
Percent Local	61%	83%	51%	36%	35%	46%	59%	66%	68%	68%	67%	65%	64%	

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3. Trimet Agency-Wide Operating Finance Plan

3.1 Background

This Section 3 forecasts all system operating and capital revenues and expenditures of TriMet through FY2030. This includes the cost of operating and maintaining the existing transit system, projected increases in those costs, increases in fixed route bus and rail service, LIFT service, the operating cost of the proposed Portland-Milwaukie Light Rail Project, TriMet's share of the operating cost of the Columbia River Crossing Light Rail service, and the operating cost of the Streetcar system ¹². The forecast also includes capital and operating project expenditures from the agency's Capital Improvement Program, including TriMet's share of local matching funds for the New Starts projects. This section provides the same forecast of TriMet revenues and costs as presented in the finance plan submitted by TriMet for Final Design approval for the Portland-Milwaukie LRT Project.

The forecast document presents revenue and expenditure assumptions in detail and provides an explanation of each line on the forecast cash flow table (Appendix A, Table 1).

3.1.1 Forecast Preparation

The forecast is prepared in compliance with FTA guidance for finance plans submitted as part of the New Starts process. The financial forecast is prepared as follows:

- Revenues and expenditures are projected on a fiscal year basis based on the assumptions described below.
- Annual costs are subtracted from the annual revenues for each fiscal year to determine that year's General Fund Result.
- The General Fund Result for each fiscal year is added to TriMet's Beginning Restricted and Unrestricted Cash Reserves to estimate Beginning Restricted and Unrestricted Cash Reserves for the subsequent fiscal year.
- Unrestricted Cash Reserves are calculated by subtracting debt service from Restricted and Unrestricted Cash Reserves.
- Funds in Unrestricted Cash Reserves are expressed as a Percent of Total Expenditures net of Debt Service.

¹² Because the Portland-to-Lake Oswego Streetcar Project has not yet selected a locally preferred alternative, that Streetcar project is not addressed in this forecast. It will be addressed in subsequent forecasts prepared for that project.

The detailed results illustrating TriMet system-wide operating and maintenance costs and revenues and capital costs in year of expenditure dollars are provided in Appendix A, Table 1. Table 1 contains three sub-tables:

- General Fund Cash Flow
- Statistics
- Capital and Operating Projects Cash Flow

Historical data regarding TriMet finances, service, and district socio-economic factors are shown in Appendix C, Exhibit 1, Appendix D Exhibits 1-8, and the supplemental data in Appendix I.

3.1.2 Business Plan and Stress Test Forecasts

The forecast presented is TriMet's business plan forecast. In the FY2011 Adopted Budget TriMet implemented \$20 million of continuing expenditure reductions to bring a FY2011 operating revenue forecast of \$414 million in balance with an FY2011 trend operating expenditure forecast of \$434 million. FY2011 capital expenditures are also reduced to minimum levels. Over half of the reductions are overhead or indirect service expenses. Bus and rail service will be reduced. This follows FY2010 budget reductions of \$24 million. The reductions are needed due to the recession, which has been longer and deeper than any in 60 years.

Even including the FY2010 and FY2011 service reductions, between FY1991-FY2011 the growth of fixed route service, adjusting for passenger capacity, has outpaced population growth as shown in Appendix D, Exhibit 13.

In addition to the business plan forecast, two stress test forecasts are presented. These are a Conservative forecast and a Pessimistic forecast. The stress test forecasts are presented in Appendix B Tables 12 and 13.

The following sections describe the variables and assumptions for each line of the Business Plan forecast. The FY2011 Adopted Budget provides the base year of the forecast. Future years are built from this starting point. FY2010 expenditures and revenues are audited and any exceptions needed to facilitate accurate forecasting are noted.

3.2 Revenues

The sources of operating revenues are shown in Rows A through I on Table 1 in Appendix A and are described below.

3.2.1 Passenger Revenues (Appendix A, Table 1, Line A)

At about 22% of continuing operating revenue ¹³, passenger revenue is TriMet's second largest revenue source. Between FY2000 and FY2010, passenger revenues grew at an average annual rate of 7.2%.

¹³ Continuing operating revenues exclude one-time grant revenues and revenues to operate the state Medicaid transportation brokerage.

Line A in the cash flow plan shown in Appendix A, Table 1 shows annual estimates of passenger revenues from the entire system, both from service existing at the start of the planning period and from new service put in place during the planning period.

The passenger revenue forecast is derived from forecasts of ridership and fares on bus, MAX, WES commuter rail, and LIFT paratransit services. Passenger revenue is estimated by multiplying the average fare for each mode by the estimated ridership for that mode.

A detailed year-by-year forecast of passenger revenues is provided in Appendix A, Table 2 of this report. The following subsection summarizes the basic approach. Section 3.2.1.1 describes the assumptions regarding forecast of average transit fares, and Section 3.2.1.2 describes the assumptions regarding ridership forecasts.

FY2010 passenger revenues exclude \$1.2 million in FY2009 revenues from the Portland Public School Free Fare program that were not recorded until FY2010. The forecast excludes these in FY2010 and adds them in FY2009. This is different from what is recorded in the audited Financial Statements.

3.2.1.1 Forecast of Average Transit Fares

In 1990, TriMet first implemented a policy of increasing fares with inflation. The forecast assumes a continuation of this policy, with inflation-adjusted fare increases each year FY2011-FY2030. In addition, TriMet has occasionally increased fares to offset high diesel fuel costs or to increase service.

The following table enumerates past and future fare increases and classifies them as to whether they are (i) a regularly scheduled increase, (ii) a special increase to increase service levels, or (iii) a special increase to offset a rise in diesel fuel costs.

Table	2_1	TriMet	Faro	Increases

		Reaso	n for Fare	Increase
Year	Passenger Revenue 000s	Regularly Scheduled	Special Service	Diesel Fuel
FY99	\$40,991	\$0.05		
FY00	\$46,373		\$0.05	
FY01	\$51,702	\$0.05		
FY02	\$53,191		\$0.05	
FY03	\$52,746			
FY04	\$55,664	\$0.05		
FY05	\$59,487	\$0.05		\$0.05
FY06	\$68,484	\$0.05		\$0.20
FY07	\$75,931	\$0.05		
FY08	\$80,861	\$0.05		
FY09	\$90,017	\$0.05		\$0.20
FY2010	\$92,806	\$0.00	•	
FY2011+ (1)	\$97,706	\$0.05		

⁽¹⁾ FY2011 and beyond, the average fare is assumed to grow 2-2.5% per year with inflation.

3.2.1.2 Ridership Forecasts

Forecast of Current Year Ridership

The forecast of passenger revenues directly relates to the forecast of ridership, and the current year (FY2011) estimate of ridership is the starting point for the ridership forecast. System fixed route bus and rail ridership is forecast to be down 0.1% in FY2011. LIFT ADA paratransit ridership is forecast to decline 2.2% and year-over-year WES ridership will be up because it will operate for a full year.

FY2010 bus ridership decreased 8.3% and rail ridership increased 9.1% compared to FY09. Much of the increase in MAX ridership was due to the startup of the Green Line in mid-September 2009. In addition, Fareless Square was changed January 2010 so that only MAX trains are free in the fareless zone; all bus rides now require a fare. This change caused a shift of some Fareless Square rides from buses to MAX, reducing bus ridership and increasing MAX ridership.

Ridership Growth: Existing MAX Service (Blue, Red, Yellow and Green Lines)

Historically, after adjusting for the addition of new lines, underlying MAX ridership has grown 3%-3.5% per year. With the newly opened Green Line in the mix and changes to Fareless Square, MAX (the aggregation of the Blue, Red, Yellow, and Green lines) ridership grew 9.1% in FY2010.

Ridership on these lines is projected to grow 3.3% in FY2011 (mostly due to a full year of Green Line service), 3.0% in FY2012, and 3.5% per year thereafter, consistent with the underlying historic trend. The forecast (Appendix A, Table 1, Line AE) incorporates the rail service increases needed to meet the long term ridership forecast. Specifically, the forecast assumes that rail vehicle hours will grow 0.5% per year and rail miles will grow 0.5% per year throughout the forecast beginning in FY2013, as the economy recovers from the recession.

Ridership Growth: Bus Service

Due to year-over-year declines in gas prices, job losses in the region and the elimination of Fareless Square on buses, bus ridership declined 8.3% in FY2010. Due to declining revenues, TriMet is reducing bus service in FY2011.

FY2011 bus ridership is forecast to be flat. Thereafter, bus ridership on existing services is forecast to grow 2.0%-2.5% per year, a growth rate that is commensurate with historical trends, increasing congestion and higher parking prices as the region grows.

Annual bus service increases are incorporated in the forecast to meet peak hour ridership demand and maintain schedule reliability as in the past. Specifically, bus service is estimated to increase 0.25% in FY2013, 0.25% in FY2014, 0.5% in FY2015, and 0.8% per year thereafter (Appendix A, Table 1, Line AD). These service increases generate 23 boardings per vehicle hour added, the average performance for recent service increases. The additional passenger revenue that results from the ridership and the increased operating costs that result from the service increase are included in the forecast.

Ridership Growth: Westside Express Service (WES)

WES commuter rail ridership is averaging 1,200 daily boardings and generating an estimated \$286,000 in passenger revenue in FY2010. WES ridership is projected to growth 3.0%-3.5% per year FY2011 and beyond, commensurate with underlying light rail ridership growth.

E. Ridership Growth: Portland-Milwaukie Light Rail Project

The forecasts incorporate passenger revenues and operating costs for the planned Portland-Milwaukie Light Rail Project, which is currently in Preliminary Engineering. The service level forecasts for the Portland-Milwaukie Light Rail are based on Metro's forecast for FY2015 (opening year) and FY2030. In 2015, the opening year, Portland-Milwaukie Light Rail is projected to carry 17,410 daily boardings then grow 1.8% per year to FY2030 when it carries 22,765 daily boardings. Annual ridership is calculated by multiplying forecast weekday boardings by 327 (historical MAX annual ridership divided by MAX weekday ridership).

The average boarding fare for the Portland-Milwaukie Light Rail Project is estimated to be 17.0% lower than the average MAX fare as most of the stations on the line are in fare Zones 1 and 2. The passenger revenue forecasts for Portland-Milwaukie Light Rail line is based on this lower anticipated average passenger fare.

An estimated 1,366 daily bus boardings are anticipated to be diverted to the Portland-Milwaukie Light Rail line. The resulting bus passenger revenue loss is accounted for in the forecast.

F. Ridership Growth: Columbia River Crossing Project Service

The forecasts incorporate passenger revenues and operating costs for the planned Columbia River Crossing (CRC) Light Rail Project, which is currently in Preliminary Engineering (PE). The service level and ridership forecasts for CRC light rail are based on Metro's forecast for opening year and FY2030. The forecast for intervening years are extrapolated between the opening year and planning horizon year.

The operating costs and passenger revenues for the CRC light rail will be shared between TriMet and C-TRAN based on an agreed-upon cost/revenue sharing formula. The forecasts of TriMet's operating expenses/revenues, shown in Appendix A, Table 1 only incorporate TriMet's share of CRC light rail operating costs/revenues. The remaining CRC light rail operating costs/revenues are reflected in C-TRAN's 20-year system finance plan.

G. Conclusions

The result of the above assumptions is an average annual passenger revenue growth rate of 5.6% per year between FY2010 and FY2030. This growth rate reflects annual fare adjustments for inflation, passenger revenue from the proposed Portland-Milwaukie Light Rail and Columbia River Crossing service, and annual increases in bus and rail service. This forecast rate of growth is significantly lower than the FY2000-FY2010 average annual growth rate of 7.2%.

3.2.2 Other Operating Revenues (Appendix A, Table 1, Line B)

Other Operating Revenue (Line B) includes a variety of smaller continuing funding sources. A detailed forecast of these revenues is provided in Appendix A, Table 3.

Most sources of Other Operating Revenue are estimated to increase 3% per year throughout the forecast period. Notable revenue sources in this line item include:

Revenues from TriMet's reciprocal fare agreement with C-TRAN, the Vancouver, Washington transit agency: under the agreement C-TRAN pays TriMet for C-TRAN pass fares used on TriMet's system and TriMet pays C-TRAN for TriMet pass fares used on C-TRAN's system. The revenues shown on Appendix A, Table 3, line 1 are the net result of the two calculations, indicating there are more C-TRAN pass fares on TriMet than TriMet pass fares on C-TRAN. (Appendix A, Table 3, Line 1)

<u>City of Wilsonville contributions toward WES operations:</u> under the Intergovernmental Funding Agreement Wilsonville to Beaverton Commuter Rail Project, this contribution is capped at \$300,000 a year for the first five years of operation and pro-rated for a partial first year; the contribution increases with CPI beginning FY2014. (Appendix A, Table 3, Line 4)

Advertising Revenues: Advertising revenues are guaranteed through FY2013 under the terms of TriMet's advertising contract. In future years, advertising revenues increase 3.0% per year. (Appendix A, Table 3, Line 2)

City of Portland reimbursement <u>for Streetcar personnel costs</u>. TriMet's annual payment to Portland Streetcar, Inc. for TriMet's share of Streetcar's operating cost is included in the TriMet Streetcar budget. (Appendix A, Table 3, Line 7)

City of Portland reimbursement for <u>Mall Maintenance</u>: These payments are as agreed to with the City and are assumed to grow 3.0% per year thereafter. Costs are included in Facilities Maintenance department. (Appendix A, Table 3, Line 5)

As an employer that provides a prescription benefit to Medicare eligible retirees, TriMet is eligible for Medicare Part D Drug Reimbursement. FY09, the first year TriMet was reimbursed by the program, included two years' reimbursements. (Appendix A, Table 3, Line 6)

Miscellaneous Revenues include a variety of revenues from year to year, generating \$2.0-\$2.5 million a year on average. (Appendix A, Table 3, Line 8)

3.2.3 Payroll Tax Revenues (Employer and Municipal) (Appendix A, Table 1, Line C)

3.2.3.1 Tax Rate

Payroll taxes are TriMet's primary source of revenue for operations and are currently levied at 0.6818% tax (\$6.818 per \$1,000) on the gross payrolls of private businesses and municipalities within the district. The payroll tax is dedicated to TriMet. The employer payroll tax is TriMet's largest source of operating revenue, accounting for approximately 50.0% (\$200 million) of FY2010 operating revenues.

Payroll tax revenues in the forecast are the cash receipts received between July 1 and June 30 of each year. These are different from what is reported in the audited financial statement. Audit basis payroll tax revenues are recognized in the period they are earned (first quarter fiscal year cash receipts are earned/recognized in the fourth quarter of the prior fiscal year, etc.) and include an estimate of revenues earned but not received (receivables) during that period.

The Oregon Legislature (HB 3037) gave the TriMet Board the authority to increase the payroll tax for employers and self-employed individuals from 0.6218% to 0.7218% over a ten-year period. The TriMet Board approved the increase at their August 11, 2004 meeting (See Appendix D, Exhibit 9). The payroll tax rate will increase 1/100th of a percent each year between January 1, 2005 and January 1, 2014.

Revenues generated from payroll taxes at the 0.6218% rate, the rate just prior to the 10-year rate increase, are shown on Appendix A, Table 1, Line C to illustrate the growth of the underlying payroll tax base. Revenues from the rate increases are shown on Appendix A, Table 1, Line J.

In its 2009 session, the Oregon Legislature (SB 34) gave the TriMet Board the authority to increase the payroll tax rate for employers and self-employed individuals from 0.7218% to 0.8218%. The legislation specifies that the increase must be phased in over ten years, cannot be implemented before January 1, 2010, no annual increase can exceed 0.02%, and the TriMet Board must first determine that the economy in the district has recovered to an extent sufficient to warrant the increases. Senate Bill 34 is included in Appendix D, Exhibit 10.

The forecast assumes that the TriMet Board begins to implement Senate Bill 34 on January 1, 2015, increasing the rate an additional 1/100th of a percent for 10 years. This results in a rate of 0.8218% January 1, 2024. Revenues from these rate increases are also shown in Appendix A, Table 1, Line J.

3.2.3.2 Revenue Forecast

The payroll tax is a stable and growing revenue source. On average, the payroll tax revenues escalate at a rate that exceeds the rate of inflation. During recessions payroll tax revenues decline as employment declines. However, in non-recessionary years this source has grown at a rate greater than inflation, supplying on average real growth in revenues.

The payroll tax forecast for the current and following fiscal year is based on a review of current national, state and local economic conditions and indicators, including monthly state and local employment and wage trends, trends in payroll tax receipts, initial claims for unemployment, productivity, CPI, Case-Shiller home price index, housing starts, and other indicators.

TriMet watches national economic trends and indicators closely, receives Global Insight's key indicator forecast monthly, reviews the State of Oregon's quarterly economic and key indicator forecast (Global Insight provides the state's national forecast), and the Western Blue Chip forecasts for Oregon, which are available monthly, although not all forecasts included in the Blue Chip review are updated monthly.

Comparing the worst month of the recent recession, September 2009, with September 2008, 65,200 jobs were lost in the tri-county area, a decline of 7.6% annual decline. As of July 2010, year over year job losses were 15,300 a decline of 1.9%. Employment is expected to grow just 0.3% in FY2011, and grow 1.5% in FY2012.

The underlying (i.e.; excluding receipts from the tax rate increase) growth of payroll tax revenues is directly related to growth in employer payrolls within the district, which in turn is caused by employment growth, wage inflation, changes in job composition and productivity. Wage inflation generally corresponds to increases in the Consumer Price Index (CPI).

Employment and productivity growth result in real (above inflation) growth in payroll tax revenues.

Metro is projecting TriMet area employment mid-range growth rate of 1.8% per year between 2010 and 2030 and a low rate of 1.3% per year. (See Appendix J, Exhibit 1 "20 and 50 Year Population and Employment Forecasts," Metro April 2009).

The long term average rate of inflation has been 2.1%. Long term, U.S. productivity (output per labor hour) has increased at an average rate of over 2.0% per year and contributes to an increased standard of living as employers reward productivity improvements with higher wage growth. However, wage growth is forecast to be constrained by the cost of employer contributions to employee's health care benefits and the high unemployment rate expected for a few more years.

Historical average annual growth of underlying employer payroll tax revenues for the last five, ten and fifteen year periods have been:

FY2000-FY2010: 2.7%

• FY1995-FY2010: 5.7%

• FY1990-FY2010: 4.9%

In FY2010, tri-county employment declined 5.1%. Underlying growth in TriMet's employer payroll (the rate of growth excluding tax rate increase) taxes declined 4.0% in FY2010 from FY2009. TriMet is forecasting a 3.0% increase in underlying growth in FY2011, 4.4% in FY2012, 4.9% in FY2013, 4.5 in FY2014, 4.4% FY2015, and 4.5% thereafter.

The forecast assumes a return to peak employment in the first quarter of 2014. State and tricounty employment exhibit similar trends this recession; however, state employment declines were recorded about one quarter earlier and percentage declines have been a bit shallower than in the tri-county area.

New revenues from increases in the payroll tax rate are discussed in the section for Line I below.

Appendix D, Exhibit 2 provides historical information on the TriMet employer payroll tax.

3.2.4 Self-Employment Tax Revenues (Appendix A, Table 1, Line D)

In addition to the payroll tax, TriMet levies a 0.6818% tax on the net income earned within its district by self-employed individuals. Revenues from this tax are shown in the forecast on a cash basis. This is different from how these revenues are reported in the audited Financial Statements.

As the historical data on self-employment revenue shown in Appendix D, Exhibit 2 illustrates, revenues from this source tend to increase at very high rates during times of economic growth and decrease more than the employer payroll tax during recessions.

Self-employment tax receipts increased 19.8% in FY2006 (up \$2 million) and 21.3% in FY2007 (up another \$2 million) after growth of 4.0% in FY2004 and 5.0% in FY05. Self-employment tax revenues decreased 2.7% in FY2008, decreased 7.7% in FY2009 and increased 1.7% in FY2010, a 2.6% decline net of the tax rate increase.

Self-employment tax receipts are forecast for the current and following fiscal year as explained above for employer payroll tax receipts.

TriMet is forecasting underlying growth in of 3.0% in FY2011 and 4.5% thereafter, consistent with the average growth rate of self-employment tax revenues of the last for the last 10 years.

New revenues from the increases in the self-employment tax rate are discussed in the section for Line I below.

3.2.5 State-In-Lieu of Tax Revenues (Appendix A, Table 1, Line E)

State of Oregon government offices located within TriMet's district boundaries are not subject to the municipal payroll tax. Instead, they make "in lieu of" tax payments to TriMet based on 0.6218% of their gross payrolls. Between FY83 (when the program was instituted) and FY1995 the growth rate of state in lieu receipts was 8.24% per year. In the next two fiscal years there were substantial decreases in these receipts due to the conversion of Oregon Health & Science University (OHSU) one of Oregon's largest employers, from a State agency paying in-lieu of tax to a local government employer paying payroll tax. State-in-lieu of revenues has grown at an average annual rate of 4.7% last ten years.

State in lieu of revenues increased 7.8% in FY2010, are projected to grow 3.0% in FY2011 and grow 4.5% per year thereafter, slightly lower than the average of the last 10 years (FY2000-FY2010) of 4.7%.

3.2.6 Operating Grants and Capital Project Reimbursement (Appendix A, Table 1, Line F)

Line F addresses a variety of grant reimbursements from local, state, and federal sources. A detailed buildup of the forecast of these grants is provided in Appendix A, Table 4, Lines 1-10.

Federal Formula Grants

SAFETEA-LU Reauthorization

The Safe, Accountable, Flexible and Efficient Transportation Equity Act-A Legacy for Users (SAFETEA-LU), which authorizes funding for the Federal Highway Program and the Federal Transit Program, expired September 30, 2009 and the federal transportation program is operating with short term funding extensions.

When the last transportation authorization act (TEA-21) expired on October 1, 2003, the Federal Transit Program and all other federal surface transportation programs continued to operate on the basis of eleven short term extension acts until August 10, 2005, when SAFETEA-LU was signed into law.

Congress may not address the new reauthorization bill until after the November 2012 elections. As a result, the forecast assumes the program operates under an extension of SAFTEA-LU at today's levels plus small adjustments for inflation through FY2013.

Today TriMet receives about \$45 million in federal transit program formula funds, which are used to support operations. In addition, TriMet receives about \$11 million dollars a year in

federal highway program funds through the Surface Transportation Program (STP) and Congestion Mitigation Air Quality (CMAQ) programs to support the regional rail program, passenger amenity improvements, and the Regional Transportation Options program. Federal funds in total constitute about 15.0% of TriMet's operating revenues.

At this time, it is unclear how Congress will address transportation funding in the new reauthorization act. The forecast assumes that Congress continues to adequately fund both the federal highway and transit programs, providing a modest inflation adjustment annually. Specifically, the forecast assumes the following.

Section 5307 Urbanized Area formula funds and Fixed Guide way Modernization (Appendix A, Table 4, Lines 2 and 3) are TriMet's primary federal formula grants. The forecast assumes revenues grow 0% in FY2010 and FY2011, 2.0% growth in FY2012 and FY2013, and 3.0% per year thereafter. Since 2001, this source has grown 4.5% per year.

TriMet's Fixed Guideway Modernization funds increased 89.4% or \$3.5 million in FY06, when the Westside Light Rail entered its eighth year of operation and became eligible to receive Fixed Guideway Modernization (FGM) funds. This source has declined 2.9% in FY2010, is forecast to grow 0% in FY2011, 2.0% in FY2012, 2.0% in FY2013, 4.0% in FY2014 and 5.0% thereafter until 2017 when Commuter Rail enters its eighth year of operation and Fixed Guideway Modernization funds increases 17%. Further increases will occur in 2018 when Green line enters its eighth year of operation and FGM increases 15.0% and 2023 when Milwaukie light rail enters its eighth year of operation and FGM increases 15.0%.

Because the New Starts program has increased national fixed guide way vehicle miles faster than the Fixed Guide way Modernization funding program has grown, the funds in the program are not expected to increase commensurately with TriMet rail service growth.

The Job Access Reverse Commute program provides approximately \$600,000 a year to TriMet via formula to provide transportation for low-income individuals. Match for JARC is 50% local for operating and 20% local for capital. Grant match can be in-kind (i.e., service increases to low income areas). Funds offset a like amount of additional service. TriMet's Job Access program funds a variety of community based transportation providers. Revenues are offset with a like expenditure each year of the forecast. (Appendix A, Table 4, Line 6).

The New Freedom program funds service improvements that address the transportation needs of persons with disabilities beyond those required by the Americans with Disabilities Act. TriMet receives about \$400,000 a year. The funds are included in the forecast, with an additional offsetting cost, beginning in FY08. Match for New Freedom funds is 50% local for operating and 20% local for capital. Grant match can be in-kind (i.e., service increases for people with disabilities). TriMet's New Freedom revenues fund community-based transportation services for elders and people with disabilities through Ride Connection. (Appendix A, Table 4, Line 8).

MTIP and STIP Funds

The following operating funds, which are incorporated in the finance plan, were provided to TriMet by Metro, the Metropolitan Planning Organization (MPO) through the Metropolitan Transportation Improvement Program (MTIP). MTIP funds are Highway Program funds, either

Congestion Mitigation or Air Quality (CMAQ) or Surface Transportation Program (STP) funds, which are by law can be "flexed" for use in transit programs.

TriMet plans to issue GARVEE bonds secured by a stream of Metropolitan Transportation Improvement Program (MTIP) funds pledged to TriMet by Metro for the Portland-Milwaukie Light Rail Project; TriMet general fund revenues will be used to match these federal revenues. MTIP funds include federal Surface Transportation Program (STP) funds and Congestion Management Air Quality (CMAQ) Program funds, which are funds allocated to Metro as the Portland Metropolitan Planning Organization (MPO).

Metro Resolutions No. 08-0932 and No. 10-4133 provide TriMet a multi-year commitment of such funds totaling \$144.8 million to support borrowings that allow TriMet to be reimbursed for the \$13.3 million it provided to the Westside Express Service Project and to provide \$72.5 million in net bond proceeds for the Portland-Milwaukie Light Rail Project. Metro Resolution 10-4185 added \$66 million of regional flexible funds to the multi-year commitment to support additional borrowings to provide approximately another \$27.3 million for the Portland-Milwaukie Light Rail Project (making a total of \$99.8 million available to the Portland-Milwaukie Light Rail Project from this source) and \$12 million for high capacity transit studies in other corridors.

TriMet and Metro have entered into an "Intergovernmental Agreement to Provide and Utilize MTIP Funds to Implement the Milwaukie LRT and Commuter Rail Funding Plan," which sets forth the rights and obligations of the parties with respect to these funds¹⁴. TriMet will be responsible for implementing the borrowing program that provides the stated amount of funds to the Portland-Milwaukie Light Rail Project, and will structure debt service so that principal and interest can be fully paid with the flow of MTIP funds (Appendix A, Table 4, Lines 4 and 5).

Debt service will be structured so that principal and interest can be fully paid with the multi-year commitment of MTIP funds. TriMet has paid Commuter Rail cost increases with General Funds and will use \$13.3 million of CMAQ funds to replace buses in 2012. The offsetting debt service is shown on Appendix A, Table 10, Lines 7 and 11. These new bonds will likely be issued towards the end of FY2011.

Metro will provide <u>CMAQ funds</u> (and the related expenses) for TriMet's <u>Transportation Demand Management</u> program, through the Metropolitan Transportation Improvement Program (MTIP) process. (Appendix A, Table 4, Line 1).

Other Grants and Capital Reimbursements

BABs subsidy payments (Appendix A, Table 4, Line 9): TriMet issued \$49.550 million of bonds October 2009. Most of the bond proceeds were used to reimburse TriMet for past expenditures on Commuter Rail and the 2009 bus purchase. The bond proceeds will also be used to partially pay for the replacement of the bus and rail communications system.

For a portion of the borrowing, TriMet issued Build America Bonds (BABs). This new financing option is the product of the American Recovery and Reinvestment Act (ARRA). Unlike the tax-

¹⁴ The current intergovernmental agreement addresses the funds committed under Resolution 08-0932 and Resolution No. 10-4133; this will be amended to address the additional funds committed under Resolution 10-4185.

exempt interest associated with traditional municipal bonds, interest paid by issuer of Build America Bonds is treated as taxable income to holders of the bonds. But state and local government issuers can use one of two tax benefit options for their Build America Bonds. By issuing Direct Payment BABs, TriMet will receive periodic payments from the federal government in an amount equal to 35.0% of the interest paid to bondholders. The subsidy from issuing \$12.530 million Build American Bonds Direct Payment is on App. A, Table 4, Line 9.

Funds from the <u>state Special Transportation Fund (STF) discretionary grant program</u> for elderly and disabled transportation are assumed for RideWise program, growing 3.0% per year. (Appendix A, Table 4, Line 10).

3.2.7 Capital and Operating Project Grants (Appendix A, Table 1, Line 6 (Row 141))

Due to administrative ease of using capital grant funds for preventive maintenance, most federal formula grants are now used as such and appear in Table 1, Line F, Operating Grants and Capital Project Reimbursement. However, several other grants are provided to TriMet expressly for capital improvements and purchases. These are enumerated on Appendix A, Table 5. A partial list includes:

- \$38 million of American Recovery and Reinvestment Act (ARRA) funds for capital and operating projects.
- \$625,000 per year from the State of Oregon for bus acquisition. TriMet received \$580,000 from this on-going state program for mass transit bus replacement in the FY2003-FY2005 biennium, \$1.3 million in the FY2005-FY2007 biennium, \$1.5 million in the FY2008-FY2010 biennium, and \$1.5 million in the FY09-FY2011 biennium. (App A, Table 5, Line 1).
- Appropriations from the ODOT's <u>Special Transportation Fund (STF) Discretionary Grant program</u> for Accessible Transportation (LIFT) vehicles. (Appendix A, Table 5, line 2). The Special Transportation Fund Discretionary Grant program has provided funding through the Oregon Department of Transportation for the vehicle and other capital needs of elderly and disabled transportation programs throughout the state. The source of this funding is the allocation of federal highway "flexible" funds to elderly and disabled transportation providers. This funding has been flat, however, while the needs statewide have grown tremendously.

In the 2009 legislative session, an additional \$10 million of Surface Transportation Program funds were transferred to the program by Oregon Legislative action through HB 5548, ODOT's budget bill. ODOT has named the additional funding the Older Adults and People with Disabilities Jobs and Transportation Act (JTA) Transit Program.

The \$10 million of funds are distributed statewide via a population based formula. The tri-county area receives 37.0% or \$3.7 million a biennium. At the local level, the funds are again distributed to community-based, private non-profit providers and five (5) public transit providers. Through this process TriMet received \$5.9 million for LIFT vehicle replacements over a two year period. TriMet expects to receive about \$1.9 million a year

for LIFT vehicle replacements or LIFT preventive maintenance in the future, declining 3.0% per year throughout the forecast.

These funds are shown in the forecast on Appendix A, Table 5, Line 2

- Annual CMAQ/STP grants for bus stops and Streamline improvements through the MTIP process. These funds are offset by the program's costs shown in Appendix A, Table 9, Line 35. Should the region decide in the future to not continue funding this program, the expenditures would be cut back. (Appendix A, Table 5, Line 7).
- Department of Homeland Security. These fund a series of TriMet system security improvements included in the Capital Improvement Plan. Through FY09, Department of Homeland Security funds do not require local match, but agencies electing not to match DHS funds must reduce their FY08 and FY09 DHS awards by 20%. TriMet has elected to take the reduction. The security projects would be unaffordable for TriMet without the DHS funds. (Appendix A, Table 5, Line 6).
- Connect Oregon II funds awarded for the redevelopment of the 188th Street MAX LRT Station. (Appendix A, Table 5, Line 18).
- \$1 million CMAQ funds awarded by Metro to retrofit buses with Continuously Regenerating Trap technology are included. (Appendix A, Table 5, Line 16)
- The <u>SAFETEA-LU</u> earmark to build <u>Gresham Civic Station</u> is included. Match is provided by Metro. (Appendix A, Table 5, Line 14).

Year-by-year forecasts of capital program grants are provided in Appendix A, Table 5.

3.2.8 Interest Earnings (Appendix A, Table 1, Line G)

TriMet expects to earn 0.6% on investments in FY2010, 0.6% in FY2011, 1.0% FY2012, 1.5% FY2013, and 3.0% thereafter. Interest earnings do not include earnings on the local share light rail project revenues, which are restricted in use to capital expenditures. Interest earnings on bond revenues are contributed to the bonded project's costs.

3.2.9 Accessible Transportation Program (ATP) Funds (Appendix A, Table 1, Line H)

Funds incorporated in this line item come from state and federal sources and are dedicated to ADA paratransit (LIFT). A detailed build-up of these revenues is provided in Appendix A, Table 6, Lines 1 through 4.

ODOT allocates state cigarette tax and other fund proceeds (Appendix A, Table 6, Line 3) appropriated to the Special Transportation Fund (STF) to transit districts and counties by formula. This source of funds is declining and is expected to decline further with the increase in federal cigarette tax January 2009.

These revenues support many private non-profit organizations under the Ride Connection umbrella that provide rides to elderly and people with disabilities. The great majority of these individuals would otherwise be eligible for the more expensive LIFT ADA paratransit service. For this reason, as these funds decline in the future, TriMet will likely keep the private non-profit

programs whole. This reduces the state cigarette tax revenues TriMet receives as forecast on Appendix A, Table 6, Line 3.

3.2.10 One-Time-Only Revenues and DMAP Reimbursement (Appendix A, Table 1, Line I)

Occasionally, TriMet participates in <u>funding exchanges</u> that are approved by the region and the TriMet Board. Funding exchange revenues have no financial impact on the district as funds are offset by a cost of the same amount. Funding exchanges, which primarily support Metro's Transit Oriented Development (TOD) program, are assumed each year of the forecast, as is the expenditure. (Appendix A, Table 3A, Line 2)

Washington County contribution towards WES operations: under the Wilsonville to Beaverton Commuter Rail Project Definitive Grant Agreement between Washington County and TriMet, Washington County is making payments to TriMet for Commuter Rail operations, a total of \$6 million between FY09 and FY2012 (Appendix A, Table 3A, Line 6)

Medical Transportation Program (DMAP) and Waivered Non-Medical Transportation revenues: DMAP revenues are used to fully pay the costs for the state's Medicaid funded Medical Transportation Program (DMAP). These revenues fully offset TriMet's costs so do not contribute to TriMet's general operating cash flow. Both revenues and expenditures grow 3.5% per year. (Appendix A, Table 3A, Line 1).

This line also includes Title XIX funds and state Cigarette Tax funds TriMet receives to provide "waivered non-medical" rides on LIFT on behalf of Multnomah County Aging and Disability Services. These are door-to-door paratransit rides to services and activities for case-managed individuals who would otherwise be in a nursing home. All of the individuals in this program would be ADA paratransit eligible, so the program pays for rides that would otherwise be paid for by TriMet. Ride Connection operates the same program for Washington County and Clackamas County operates its own program.

ARRA revenues for preventive maintenance to offset service reductions are shown on Appendix A, Table 4, Line 5 in FY2009 and FY2010. \$14.5 million of these ARRA revenues offset service reductions in FY2010 and FY2011; \$740,000 of the revenues do not. TriMet received another \$38.1 million in ARRA revenues, which are discussed in Section 3.2.7 Capital Grant and Operating Project Revenues (Appendix A, Tables 5 and 3A).

Project Funds (Appendix A, Table 3A, Line 5) reimburse TriMet for project expenses incurred by TriMet operating departments, such as Startup and Force Account costs, pension and OPEB costs attributable to Project employees. Startup and Force Account costs are offset by additional revenue so they do not impact the TriMet General Fund. Both the costs and revenues needed to complete the Green line project in FY2010 are included in the forecast. Source of FY2010 Project Funds include \$22 million from the City of Portland LID and \$7 million reimbursement from Portland State University for their share of Mall Block 158. (Appendix A, Table 4, Line 8). On the expenditure side, the remaining interest payments on the 2006 Payroll Tax Receipt Revenue Bonds and \$31 million of remaining project expenditures are included in the debt service forecast in FY2010.

MBIA Lease Revenue (Appendix A, Table 3A, Line 4) TriMet entered into 11 leases in 1997-1998 and 2005. In these transactions, 100 light rail vehicles and 2 maintenance facilities were

sold or leased to private investors. The investors provided TriMet with up-front payments and leased the assets back to TriMet. TriMet invested a portion of the funds received with three insurance companies--MBIA, AIG, and FSA--which guaranteed to make the lease payments. TriMet received a net cash benefit from the leases of \$28 million. The investors received tax benefits associated with the transactions.

The financial crisis that began in 2007 resulted in AIG and MBIA, two of the insurance companies making TriMet's lease payments, receiving ratings downgrades. One of the actions TriMet took in response was to "economically defease" a transaction with MBIA, which resulted in MBIA paying the \$12.6 million that is shown in FY2009 on Appendix A, Table 4, Line 7. In return, TriMet is responsible for the remaining lease payments. These payments are included in debt service expense (Appendix A, Table 1, Line X). Lease payment detail is shown on Appendix A, Table 10, Line 32.

Washington County Share WES Cost Increases (Appendix A, Table 3A, Line 7): WES cost increases are equally shared between TriMet, Metro, and Washington County. Washington County's payments are shown on Appendix A, Table 4, Line 10. Metro's payment is explained above in section B.

TriMet was awarded \$2.4 million of state funds recently for elderly and disabled transportation operating grants and this is shown in this line. This is onetime revenue. (Appendix A, Table 3A, Line 12).

3.2.11 Additional System Revenue: Payroll Tax Rate Increase (Appendix A, Table 1, Line J)

The Oregon Legislature gave the TriMet Board the authority to increase the payroll tax for employers and self-employed individuals from 0.6218% to 0.7218% over a 10-year phase-in period. The TriMet Board approved the increase at their August 11, 2004 meeting. The payroll tax rate has been increasing at 1/100th of a percent each year for 10 years beginning January 1, 2005. Line I includes estimated new revenues from both the employer payroll tax and the tax on self-employed individuals. The forecast uses the underlying growth rates explained above.

In its 2009 session, the Oregon Legislature (SB 24) gave the TriMet Board the authority to increase the payroll tax rate for employers and self-employed individuals from 0.7218% to 0.8218%. The legislation specifies that the increase must be phased in over ten years, cannot be implemented before January 1, 2010, no annual increase can exceed 0.02% and the TriMet Board must first determine that the economy in the district has recovered to an extent sufficient to warrant the increases.

The forecast assumes that the TriMet Board implements SB 34 on January 1, 2015, increasing the rate an additional 1/100th of a percent for 10 years. This results in a rate of 0.8218% January 1, 2024.

3.2.12 Total Continuing Revenues (Appendix A, Table 1, Line K)

Based on the principles and assumptions described above, total continuing revenues, including the payroll tax rate increase, are projected to grow 4.9% annually between FY2010 and FY2030. By comparison, between FY2000 and FY2010, a 10-year period that includes five recessionary

years (FY2002-FY2004, FY2009, FY2010) and the phase in of the first payroll tax rate increase (starting January 2005), total continuing revenues increase 5.1% and total operating revenues continuing and one-time-only increased 6.6%.

3.3 System Operating, Maintenance and Capital Costs

3.3.1 Overview

<u>Framework</u>: System Operating, Maintenance, and Capital Costs are forecast in two categories:

- Costs of transit services that currently exist and that continue in the future
- Costs of transit services that are projected to begin in the future

This section addresses operating expenses associated with bus and rail services existing at the start of the forecast period (which are shown in Appendix A, Table 1, Lines M-X). Operating expenses from new fixed route bus and rail service put in place during the planning period are shown in Appendix A, Table 1, Lines AD-AK.

The FY2011 Adopted Budget provides the base year of the forecast. The forecast of future year expenses pivot from the base year forecast as explained below.

3.3.1.1 Expenditure Reductions

In the FY2011 Adopted Budget TriMet implements \$20 million of continuing expenditure reductions based on an FY2011 operating revenue forecast of \$414 million and FY2011 operating expenditure forecast of \$434 million. Capital expenditures are also reduced to minimum levels. Over half of the planned reductions are overhead or indirect service expenses. Bus and rail service was reduced September 2010. TriMet also made comprehensive reductions in the FY2010 budget to bring revenues and expenditures in alignment. As in FY2011 over half the expenditure reductions in FY2010 were overhead or indirect service expenses.

3.3.1.2 Collective Bargaining

The TriMet-Amalgamated Transit Union (ATU) Working and Wage Agreement expired November 30, 2009 and management and the ATU are in binding arbitration for the next agreement. The Public Employee Collective Bargaining Act (PECBA), ORS 243.650-243.782, establishes the collective bargaining process for Oregon's public employers and unions representing public employees.

ORS 243.716 states that "after a collective bargaining agreement has expired, and prior to agreement on a successor contract, the status quo with respect to employment relations shall be preserved until completion of impasse procedures..." In Oregon, represented transit workers and management are subject to "baseball style" binding arbitration. Following impasse, the parties select an arbitrator and submit final and best offers. The arbitrator selects only one last best offer package.

Given the collective bargaining proceedings underway, the TriMet FY2011 budget assumes the continuation of current labor contract provisions such as the 3.0% wage increase floor, and current medical, dental and pension benefits for active and retired employees.

The Business Plan forecast assumes that management's offer is selected by the arbitrator, resulting in needed savings in active and retiree health costs FY2011 and beyond. If management's plan is not selected, TriMet will have to reduce service further than already planned in the FY2011 Adopted Budget.

Forecast assumptions are based on planned changes and current and historical trends.

3.3.2 Major Assumptions for Forecasting Future System Operating Costs

3.3.2.1 Cost Inflation

A general annual inflation rate of 2.1% is assumed, the long term historical average. Higher rates of inflation are applied to energy, health benefit costs, and security.

3.3.2.2 Wages and Salaries

Management wages are flat in FY2010 and FY2011 and increase 3% per year thereafter, the past trend.

Union wages are tied to CPI with a floor of 1.0% and a ceiling of 5.0%. Union wages are projected to increase 2.1%-2.5% per year throughout the forecast. This assumption is affected by the outcome of the labor agreement.

A twenty year forecast of labor costs include wages and benefits and is provided in Appendix A, Table 7, Appendix A.

3.3.2.3 Health Plans

Per employee costs for health benefits have increased at an average annual rate of 10.0% per year for over ten years. This trend is unsustainable.

The weighted average cost per employee of union medical and dental plans is expected to be \$19,000 a year in FY2011 and management plans is \$13,800 a year.

To reduce costs, management employees enrolled in the PPO health and dental plans pay an annual deductible for most services with higher co-insurance for prescription drugs and pay a portion of the monthly premiums to cover dependents. These measures, which have been in place since 2003, have reduced costs and the growth rate of non-union health benefits.

The forecast assumes changes to health benefits costs as a result of binding arbitration. The cost savings are based on estimates provided by TriMet's benefits consultants and are phased in beginning July 1, 2011.

As a result of plan design changes, TriMet will see savings in health benefits costs. The forecast assumes that the rate of growth of health benefits decreases from the historical average of 10.0% to 0.7% in FY2012, 6.0% in FY2013, 7.5% in FY2014 and 8.0% per year thereafter, following changes to active and retiree health benefits. TriMet's Board of Director's stated goals are for

health benefit increases that mirror the growth in TriMet's revenues, which at 4.5% annual growth are lower than the 8.0% forecast assumption. The proposed plan design changes also flow through to retiree medical benefits, which are explained below in Section 3.3.14.

3.3.2.4 Pensions

TriMet is one of the few public sector agencies in Oregon not in PERS, the Public Employee Retirement System managed by the State of Oregon. By comparison, the management Defined Benefit and union Defined Benefit pension plans provide benefits to TriMet employees with 30 years of service that are roughly comparable to PERS Tier 2 or Tier 3, the reformed PERS, with the exception of the retiree-medical benefits.

The union Defined Benefit plan payment to retirees is calculated based on years of service for all union employees, regardless of pay rate or earnings.

The management Defined Benefit plan is based on final average salary and years of service.

In 2003, TriMet closed its management defined benefit plan to new employees. Non-union employees hired after April 27, 2003 are part of a defined contribution plan to which TriMet contributes 8.0% of salary.

The Annual Required Contribution (ARC) for the management pension plan in FY2010 was \$4.4 million and the Annual Required Contribution for the union plan in FY2010 was \$32.2 million. The ARC is the annual amount to be deposited to the pension fund in order to pay for the full retirement benefit over an amortization period. TriMet is fully funding the required ARC for the union and non-union DB plans each year. As of FY2009, the union pension is 52.0% funded. The management pension is 68.0% funded.

The ARC consists of the normal cost for the year and an amount to amortize the past unfunded liabilities.

The normal cost is the annual cost to pay for benefits earned by workers this year. In FY2010, the union DB plan normal cost is \$9.7 million and the management DB plan normal cost is \$1.1 million. The normal cost of pensions is incorporated the in Appendix A, Table 1, Lines M through V. The amount to amortize the unfunded liabilities was \$22 million in the union DB plan and \$2.8 million in the non-union DB plan. The expense associated with paying the unfunded liability is shown in Appendix A, Table 1, Line W. The unfunded liability reflects investment losses and (primarily) the 1992, 1998, and 2003 increase in pension benefits to active and retired union employees.

Both plans experienced investment losses in FY2008 and FY2009. The adoption of new actuarial method for the management DB plan, recommended by the actuary, resulted in a decrease in continuing costs of \$2.6 million, while the plan is funded over 20 years, instead of the previous 7 years. In the union plan, approximately \$42 million in net investment losses have yet to be reflected in the actuarial value of assets. Therefore, the recommended FY2011 contribution of \$32 million increases in the forecast.

In the management plan, investment losses yet to be reflected are \$13 million. The increase in the annual required contribution is an estimated \$1.15 million phased in over five years. These additional costs are included in the forecast.

Key plan assumptions in the union DB plan are:

- Investment Returns: union 8.0% per year
- Cost of Living: 3.0% per year during current agreement, after expiration of agreement, after retirement
- Amortization period: a continuous 20-year period
- Five year smoothing of market value
- Actuarial cost method: individual entry age cost method (for each participant the present value of projected benefits is allocated on a level basis between entry age and retirement age).

Key plan assumptions in the management DB plan are:

- Investment returns: 7.0% per year
- Wage increase of plan participants: 4.0% per year. After retirement 90.0% of CPI
- Amortization period: a closed 20-year period
- Five year smoothing of market value
- Actuarial cost method: individual entry age normal actuarial cost method.

As management employees retire, their replacements are in the defined contribution plan. The forecast assumes the retirement of 19 management employees per year, replaced with 19 management employees in the DC plan. The additional costs of the DC plan are included in the forecast.

The labor offer includes two provisions related to the union pension; both are incorporated into the forecast.

The first is that effective April 1, 2012, the retirement COLA for new retirees will be 90% of CPI. TriMet's actuary has estimated a decrease in pension costs of \$1 million a year. This savings is included in the forecast beginning in FY2012.

The second provision is that new employees hired after April 1, 2012, become members of a DC Plan. The management contribution is 6.0% of wages. TriMet's actuary has estimated the annual costs of the DC Plan and the annual decrease that results in the DB Plan. The changes are included in the forecast.

3.3.2.5 Diesel Fuel

The forecast makes the following assumptions for FY2011 diesel fuel costs:

- No additional fuel hedges
- \$2.50 per gallon bio-diesel fuel (5.0% of purchases) (currently paying \$3.35 per gallon)
- \$2.37 per gallon floating price (currently paying \$2.30 per gallon)
- \$0.16 per gallon for WES and ATP fuel delivery and filling.

This forecast lowers FY2011 costs \$3.2 million from FY2010. FY2012 costs grow 7.0%, FY2013-14 costs grow 6%, FY2015 and beyond costs grow 5.0% per year. The long term growth rate is provided by the Energy Information Agency.

3.3.2.6 Electricity and Other Utilities

Electricity costs are projected to increase 7.0% in FY2012, 6.0% thereafter.

3.3.2.7 Other Materials and Services

Other materials and service costs are projected to increase 2.1% per year.

The result of all of the above forecast assumptions is a weighted average personal services and materials and services inflation rate each year. This rate averages 3.8% per year in the Business Plan Forecast.

3.3.3 Bus Operations: Existing Services (Appendix A, Table 1, Line M)

Line M includes costs for Bus Transportation and Bus Maintenance. The FY2011 Bus Operations cost estimate is based on TriMet's FY2011 Adopted Budget. To project expected Bus Operations costs for FY2012, increases and reductions in personnel and materials and services costs based on the above - described assumptions were made. This process is repeated for each year in the forecast period.

3.3.4 Light Rail Operations: Existing Services (Appendix A, Table 1, Line N)

Line N includes costs for Rail Transportation, Equipment Maintenance, and Maintenance of Way. The FY2011 Rail cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected Rail Operations costs for FY2012, increases and reductions in personnel and materials and services costs based on the above-described inflation assumptions were made. This process is repeated for each year in the forecast period. In addition in FY2013, with the start of operations of TriMet's new communication system, the annual \$500,000 of communications fees TriMet pays to the City of Portland are eliminated.

Light rail vehicle rehabilitation and overhaul costs are included in this line. TriMet's rail vehicles are maintained in new condition throughout their life with a progressive overhaul program. Unlike most other rail agencies, TriMet's rail vehicles will not be removed from service for an extensive period for overhaul. The overall LRV maintenance program consists of continual program of preventive maintenance, running repairs, component rebuilds, progressive overhaul, modifications (product improvements) and equipment engineering analysis and training. These six programs require about 1,000 labor hours per year per vehicle. Five mechanics are added to

the forecast in FY2017 and five more are added in FY2022 to accommodate increased maintenance as the fleet ages.

Light rail maintenance of way such as rail grinding and surfacing, maintenance and repair or rail operating and customer facilities that is not included in Rail Maintenance operations is included in the Capital Improvement forecast, in particular Appendix A, Table 9 Lines 6, 8, 9, 10, and 11.

3.3.5 Commuter Rail Operations (Appendix A, Table 1, Line O)

Line O accounts for the operations costs of the Commuter Rail line, which opened for service February 2009. Commuter Rail service is provided during a three-hour morning and a three-hour afternoon commute period each weekday, except for those weekdays designated as a holiday by TriMet.

Responsibility for operations of the Commuter Rail line is divided as follows between TriMet and the Portland & Western Railroad, a short-line rail operator providing freight service in the Commuter Rail corridor:

TriMet maintains vehicles and facilities (i.e. stations park and rides).

Portland & Western RR operates Commuter Rail trains, provides dispatch functions, and maintains the right-of-way.

A breakdown of Commuter Rail costs is shown in Appendix A, Table 8. Commuter Rail fuel costs are consistent with the diesel fuel forecast explained in Section 3.3.2.5. Commuter Rail operations forecast includes the cost of heightened maintenance as the system ages. Portland & Western RR provided the cost estimates. Shown on Appendix A, Table 8, Line 5.

3.3.6 Streetcar Operations: Existing Services (Appendix A, Table 1, Line P)

Line P includes the cost of TriMet operations, mechanics, and superintendents for Portland Streetcar. The City of Portland reimburses TriMet for these costs. It also includes TriMet's \$2.8 million annual contribution to the City of Portland for Streetcar operations. The reimbursement is included in Other Operating Revenue.

As of FY2011, TriMet pays Portland Streetcar \$2.8 million a year for operations to Lowell, roughly one-half of operating costs. TriMet's contribution to Streetcar was reduced 5.0% in FY2010 and again in FY2011 as a cost cutting measure. Future costs grow with CPI from this lower starting point. TriMet's contribution to Eastside Streetcar operations costs (Streetcar Loop to OMSI) is shown on Appendix A, Table 1, Line AI and explained below.

3.3.7 Field Services: Road and Rail Supervision, Dispatch and Control, Fare Inspection (Appendix A, Table 1, Line Q)

Line Q includes costs for the Field Services department, which combines bus dispatch, rail control, and bus and rail supervisors. The FY2011 Field Services cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected Field Services costs for FY2012 increases and reductions in personnel and materials and services costs based on the abovedescribed assumptions were made. This process is repeated for each year in the forecast period.

3.3.8 Facilities (Appendix A, Table 1, Line R)

Line R includes costs for the Facilities department. The FY2011 Facilities cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected Field Services costs for FY2012, increases and reductions in personnel and materials and services costs based on the above-described assumptions were made. This process is repeated for each year in the forecast period.

3.3.9 Accessible Transportation Program (ATP or "LIFT") (Appendix A, Table 1, Line S)

The ATP line item includes the transportation and maintenance costs of complementary paratransit services provided for people with disabilities.

The ADA complementary paratransit (LIFT) forecast includes the cost of current service levels and the cost of estimated service growth. LIFT provides door-to-door transportation for individuals who are unable to access fixed route services due to a disability.

The LIFT forecast begins with the costs shown in the FY2011 Adopted Budget, with the following adjustments:

LIFT ridership is expected to decline in FY2011. As a result of lower than projected ridership growth and new, lower cost LIFT provider contracts, LIFT costs were \$1.2 million under budget in FY2010 and grow in future years from this lower base. Inflation in the new LIFT provider contracts is lower than past contracts and past forecasts (2.8% compared to 4.5% previously) saving millions of dollar. These lower costs are reflected in the forecast. In FY2014, for example the savings are \$5 million a year compared to the spring 2009 forecast.

FY2012 and beyond, costs are the product of the rate of growth of such services and the inflation rate applicable to the costs of such services as discussed below.

<u>LIFT Growth Projections.</u> A TRB study of 28 transit systems "Improving ADA Complementary Paratransit Demand Estimation" found the factors that significantly affect demand for ADA complementary paratransit are:

- Demand is highly sensitive to fares.
- Systems that have higher percentages of applicants found conditionally eligible have lower demand.
- Systems that conduct trip-by-trip determination based on conditions of eligibility have much lower demand.
- Demand is highly sensitive to standards for on-time pickups. Systems that define on-time for pickups using a wider window have lower demand.
- Demand is correlated with total population growth.

In FY2010, TriMet changed its process for LIFT eligibility to conduct an in-person assessment. As required by the ADA, emphasis will be placed on determining when and under what conditions individuals with disabilities can and cannot use fixed route. TriMet LIFT will recertify current LIFT clients over a three-year period as well as conduct in-person assessments

of new applicants. A new LIFT forecast has been developed taking into account the changes in ridership growth that can be expected according to the TRB study.

The forecast includes the annual costs of the in-person assessments, the projected savings from the three-year recertification (which accumulate over three years, then decline as the client base turns over (LIFT has a 30% annual turnover rate), and lower future growth in LIFT ridership. Future LIFT growth is based on the state's population forecast by age for the tri-county area. About 30% of LIFT trips are made by individuals who are over age 70; their ridership is assumed to increase at the same rate of growth in elderly population as forecast by the state of Oregon. About 70.0% of LIFT trips are made by riders who are under age 70. Their ridership is assumed to grow with the growth in total population as forecast by the state of Oregon.

The population forecast by age from the State of Oregon is summarized here for the tri-county area.

	2005- 2010	2010- 2015	2015- 2020	2020- 2025	2025- 2030
Total Population	1.2%	1.0%	0.8%	1.0%	1.0%
Population Age 70-85	0.6%	3.1%	5.7%	5.3%	3.8%

3.3.10 Accessible Transportation - DMAP (Appendix A, Table 1, Line T)

Line T includes the costs of Medicaid Transportation and Waivered Non-Medical Transportation program. The expenses are forecast to increase 3.5% per year, as are program revenues. Since these expenses are fully reimbursed by the federal Title XIX program and the State of Oregon, growth rates do not affect TriMet's financial condition.

3.3.11 Security and Operations Support (Appendix A, Table 1, Line U)

Line U includes costs for Operations Administration, Operations Support, and Security. The FY2011 cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected Security and Operations Support costs for FY2012, increases and reductions in personnel and materials and services costs based on the above-described assumptions were made.

3.3.12 Capital Projects Development (Appendix A, Table 1, Line V)

Line V includes costs for Capital Project Development (the name has been changed in the forecast from Capital Projects to Capital Projects Development to distinguish the department from Capital and Operating Projects (line X). The FY2011 cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected Capital Projects costs for FY2012 increases and reductions in personnel and materials and services costs based on the above-described assumptions. Additional one-time costs were added in FY2012 for the household travel survey as well as costs associated with the transition of the Center Street Administration facility to a rail control and bus dispatch center.

3.3.13 Funding Exchanges (Appendix A, Table 1, Line W)

TriMet enters into funding exchanges occasionally. These are an exchange of federal STP funds for TriMet General Funds. These vary from year to year and are offset by a like amount of revenue, which are included in Appendix A, Table 1, Line I.

3.3.14 General & Administration (Appendix A, Table 1, Line X)

Line X includes costs for the Office of the General Manager, Finance and Administration, Human Resources/Legal Services, Marketing and Customer Service, Operations Administration, Planning and Scheduling. The FY2011 cost estimate is based on TriMet's FY2011 Adopted Budget. To calculate expected General Administration costs for FY2012 increases/reductions in personnel and materials and services costs based on the above-described assumptions. This process is repeated for each year in the forecast period.

3.3.15 OPEB Trust (Appendix A, Table 1, Line U)

TriMet has created an OPEB trust to fund future retiree-medical disbursements. The forecast assumes TriMet contributes the normal cost for new employees who are replacing retirees beginning in FY2012.

3.3.16 Retiree Medical (Other Post Employment Benefits) (Appendix A, Table 1, Line Z)

TriMet's disbursements for retiree medical costs, also known as OPEB or Other Post Employment Benefits, increased at an average annual rate of 18.0% per year between FY1999 and FY2009, the combined effect of additional retirees and the growth rate of medical benefits. This rate includes both union and non-union plans and both pre and post age 65 benefits for retirees.

TriMet employees are fully vested in retiree medical benefits after 10 years of service at age 55, and the benefits received as an active employee continue after retirement for the employee and dependents. At age 65, union medical benefits are secondary to Medicare, but TriMet reimburses retired employees' for the cost of Medicare Part B monthly. TriMet also provides a Medicare supplement plan for the retiree and spouse.

TriMet pays for 100% of the premiums for eligible retirees from the General Fund revenues each year, using what is known as the "pay-as-you-go" method of funding. TriMet paid \$13.5 million in FY09 post-employment healthcare and life insurance benefits and \$15 million in FY2010 (includes Medicare Part B payment).

The Annual Required Contribution (ARC) for the District's OPEB liability is an amount actuarially determined in accordance with accounting standards as required under GASB Statement No. 45. The ARC represents a level of funding, which if paid on an ongoing basis, is projected to cover benefits earned (normal costs) each year and amortize any unfunded actuarial liabilities over a period of 30 years. TriMet's FY2010 ARC was \$75 million, of which \$15 million in disbursements was funded from the General Fund.

As of May 1, 2009, new non-union employees who complete ten years of credited service and retire at or after age 55, are eligible for retiree health care benefits comparable to the health care

plan offered to active employees but the retiree must pay the entire cost of the coverage provided.

The current benefit is unsustainable. The forecast assumes changes to these costs as a result of binding arbitration. Management's offer closes the current plan (Tier 1). New employees hired after April 2011, and current employees who retire after April 1, 2012, go into the Tier 2 plan. The costs shown in the forecast reflect the management's offer. The paragraphs below outline how the costs were developed.

Retiree-Medical Tier 1:

- There are an additional 329 Tier 1 retirees FY2011 and FY2012, then Tier 1 is closed (at closing there will be about 1,250 Tier 1 retirees).
- In this Tier, retirees are reimbursed for Medicare Part B and employee and spouse receive supplemental Medicare benefits.
- The forecast assumes an annual death rate and forecasts the number of individuals turning 65, when they go into lower cost Medicare supplement plans.
- Co-insurance and employee contributions to the monthly premium reduced cost growth for pre-65 retirees from 9% per year to 7.5% per year.
- Costs for Medicare eligible retirees grow 10% per year.
- Costs for this Tier level out and decrease in real and constant dollar terms until they are close to zero by 2040.

Retiree-Medical Tier 2:

- In this Tier, employees who retire before age 62 will receive active benefits for only 3 years.
- This will reduce the number of early retirees. In addition, co-insurance and employee contributions reduce cost growth for pre-65 retirees from 9% to 7.5% per year.
- Medicare-eligible retirees receive \$500 per month for employee and \$500 per month for spouse to pay for medical, dental, vision, prescription drugs, and all Medicare premiums without any reimbursement from the district.
- Retirees in the group total 1,759 over the next 20 years.
- Retirements are forecast by age, and as retirees turn 65, they receive \$500/month (for employee and spouse), growing 3% per year.
- After 10 years, a death rate is assumed, reducing this group somewhat.
- The forecast goes out far enough to add in the retirements of the replacement hires for those retiring in early years.

Retiree-Medical Tier 3 (new employees replacing old):

• TriMet funds a trust for new employees who are replacing retirees beginning in FY2012. The normal cost per employee of the new plan is \$7,200 per year. This is shown in the OPEB Trust line of the forecast.

3.3.17 Capital and Operating Projects (Appendix A, Table 1, Line AB)

Line AB includes General Fund monies to support capital and operating projects. This line includes expenditures for TriMet's Capital Project Replacement and Improvement Program, which generally consists of:

- Committed improvements.
- An on-going vehicle replacement program that replaces fixed route buses and paratransit vehicles and light rail vehicles that have exceeded their economic lives with new vehicles.
- An on-going program of fixed route bus, ATP and LRT equipment and facilities and information technology improvements and replacements.
- The acquisition of additional (non-replacement) fixed route buses, paratransit vehicles, and light rail vehicles to meet the needs of forecast service and ridership increases.

A schedule of specific improvements and vehicle and equipment replacements is included in Appendix A, Table 9. The costs of capital improvements and vehicle replacements are estimated to inflate 3.0% per year throughout the planning period.

The following summarizes key elements of the program.

A. Replacement Program

- Buses replaced: 80 in 2012, 80 in FY2014, 80 in FY2016, 80 in FY2018 and 40 a year through 2030. 18-year bonds are issued to pay for buses.
- ADA paratransit vehicles replaced at eight years of age, 280,000 miles of service
- IT expenditures through 2012 as planned in the Capital Improvement Program FY2013 and beyond, the forecast assumes a \$3 million annual IT replacement requirement growing 3.0% per year.
- Non-revenue vehicle replacement expenditures constrained through FY2011, with an increase to \$0.350 million in FY2014, then restored to \$1 million a year, growing with inflation.
- BDS and Radio Replacement as planned. YOE total cost: \$44 million. Bonds issued to pay for project.
- Begin Fare System Replacement/Electronic Fare Payment project:
 - FY2012 with farebox replacement (\$8 million)

- FY2018 TVM replacement (\$8.5 million)
- Maintenance of Way (MOW) capital maintenance requirements (rail grinding, ties, ballast, and signal materials) for Commuter Rail is included in the annual operating costs of the project. Portland & Western Railroad, the freight operator, has estimated these costs. An additional \$1 million cost (YOE dollars) is assumed in MOW capital maintenance when the Green Line begins its 8th year of operation FY2018.
- The cost to replace 26 Type I LRVs in FY2022 at 36 years of age is included in FY2022

B. Additions:

• American Recovery and Reinvestment Act (ARRA) projects and revenues are shown on Appendix A, Tables 9 and 5.

Other additions, FY2011 and beyond include:

- Five buses are added to the fleet every two years beginning FY2018 to maintain schedules and add peak capacity
- LIFT fleet additions for ridership growth per year as discussed above.
- The forecast assumes no TriMet funding of Columbia River Crossing (CRC) capital costs.
- \$375,000 in FY2012 and FY2013 and \$250,000 a year thereafter is added, growing with inflation, for the replacement of the original CCTVs.
- \$10 million for Positive Train Control systems on the WES cars as required by the Federal Railroad Administration, funded with debt.
- The cost of eight additional light rail vehicles forecast to be needed for system growth is included in the forecast in FY22, purchased with the Type 1 replacement and 12 are added in FY27.
- TriMet's share of Milwaukie LRT construction costs (\$41.5 million). Bonds are issued FY2013 to fund these projects.
- Additional TriMet share of \$25.1 million for Portland-Milwaukie Light Rail is assumed in FY2015. Bonds are issued to fund this project.

3.3.18 Debt Service (Appendix A, Table 1, Line AC)

This line item addresses all debt service, both senior lien payroll tax revenue bonds and grant receipt backed bonds. On new debt, issuance costs and fees add 2% to the cost. Interest rates assumed are 5.0%-5.5%. TriMet has the following payroll tax and grant-backed revenue bonds, either outstanding or planned: Appendix A, Table 10 includes Debt Service detail by year.

Outstanding Debt

Outstanding debt consists of the following:

- \$32.2 million senior lien payroll tax revenue bonds for Eastside MAX local match requiring \$2.6 million annual payments. Last year of payments is 2012. Appendix A, Table 10, Line 1.
- \$27.4 million senior lien payroll tax revenue bonds for the Eastside MAX retrofit requiring \$1.9 million annual payments. Last year of payments is FY2017. Appendix A, Table 10, Line 2.
- \$37.5 million senior lien payroll tax revenue refunding bonds for the Airport Light Rail project and \$45 million for the Interstate MAX project. Interstate MAX is composed of \$38.5 million of short and long term debt for Interstate MAX, \$2.5 million of long term debt for rail retrofits with the balance for reserves (\$4 million). Last year of payments is FY21. Appendix A, Table 10, Line 5.
- \$68.5 million of capital grant receipt backed revenue bonds to complete Washington County Commuter Rail and I-205/Mall LRT Project. This cost of debt service is offset by a like amount of STP or CMAQ revenues made available by Metro Council Resolution. An additional \$13.255 million of debt, also backed by grant receipts, for the FY06 bus order and other capital, was issued at the same time. Table 10, Line 7.
- \$45.333 million senior lien payroll tax revenue bonds issued to pay for TriMet's share of the I-205/Portland Mall LRT project and Commuter Rail. Debt was issued January 2007. Appendix A, Table 10, Line 8.
- In June 2009, TriMet entered into a Credit and Security Agreement to make available to TriMet a revolving line of credit facility in an aggregate amount outstanding at any one time of up to \$50 million. TriMet may draw funds for working capital purposes and to provide short term funding of capital expenditures. Fees on the unused portion are 25 basis points per annum therefore the cost of the line is \$125,000 a year at a minimum. The forecast assumes some use of the line each year, with interest and fees costing \$250,000 a year. Appendix A, Table 10, Line 9.
- \$49.55 million senior lien payroll tax revenue bonds to reimburse the General Fund for Commuter Rail cost increases and the FY09 bus order and to partially pay for the bus communications system replacement. \$37.029 million tax-exempt bonds, \$12.53 million Build America Bonds Direct Payment. Appendix A, Table 10, Line 10.
- MBIA Lease payments are shown on Appendix A, Table 10, Line 32. The largest payment is \$7.5 million in FY2013.
- Final interest payments on the 2006 Payroll Tax and Grant Receipt revenue bonds, the interim financing for I-205/Portland Mall construction, Appendix A, Table 10, Line 33.

• Arbitrage interest payments of \$0.971 million (FY2010) on the Capital Grant Receipt bonds and \$2.2 million (FY2011) on the Payroll Tax and Grant Receipt bonds. Appendix A, Table 10, Line 34

Projected Debt

The project debt consists of the following:

- \$140 million grant receipt backed revenue bonds, \$99.8 million for Portland-Milwaukie Light Rail construction and \$13.3 million for the FY2012 bus order, \$12 million for Lake Oswego PE and \$14.2 million issuance costs. Debt service will be structured so that principal and interest can be fully paid with the multi-year commitment of MTIP funds, which begin in FY2012 and end in FY27. Appendix A, Table 10, Line 11
- \$63 million senior lien payroll tax revenue bonds for the FY2011 and FY2012 bus purchase, farebox replacement, and the remaining costs of the communications system replacement. Appendix A, Table 10, Line 12
- \$41.5 million senior lien payroll tax revenue bonds issued FY2013 to pay for TriMet's share of the Milwaukie light rail project (includes \$1.5 million of Center Street costs attributable to the Columbia River Crossing). Appendix A, Table 10, Line 13
- \$44.7 million senior lien payroll tax revenue bonds issued FY2014 to pay for the FY2013 and FY2014 bus orders and Positive Train Control, an FRA requirement on WES cars. Appendix A, Table 10, Line 14
- \$25.1 million senior lien payroll tax revenue bonds to pay for TriMet's second contribution to Portland-Milwaukie Light Rail construction Appendix A, Table 10, Line 15
- \$37.9 million senior lien payroll tax revenue bonds issued FY2016 to pay for the FY2015 and FY2016 bus orders. Appendix A, Table 10, Line 16
- \$51 million senior lien payroll tax revenue bonds issued FY2018 to pay for the FY2017 and FY2018 bus orders. Appendix A, Table 10, Line 17
- \$47 million senior lien payroll tax revenue bonds issued FY20 to pay for the FY2019 and FY20 bus orders. Appendix A, Table 10, Line 18
- \$53 million senior lien debt service to pay for eight additional LRVs needed for system growth. Appendix A, Table 10, Line 19
- \$23 million senior lien debt service to pay for the FY21 bus order. Appendix A, Table 10, Line 20.
- \$215 million senior lien debt service to pay for the FY22 bus order and the replacement of 36 Type 1 light rail vehicles. Appendix A, Table 10, Lines 21 and 22.
- Additional senior lien debt service each year between FY24 and FY2030 to finance annual bus replacements.

- \$103 million senior lien debt service to pay for the FY27 purchase of 12 additional light rail vehicles needed for system growth. Appendix A, Table 10, Line 27.
- Senior lien debt as a percentage of revenues is shown in Appendix A, Table 10, Line 41.

The next sections address changes to operating expenses associated with new bus and rail services during the forecast period. Expenses associated with services that existed at the outset of the planning period are accounted in Lines K-AC, above. The major expenses from future service are shown in Lines AD through AK described below:

3.3.19 Bus Operations: Future Expansion (Appendix A, Table 1, Line AD)

Beginning in FY2014, bus service is increased 0.25% each year to meet ridership demand as the region grows. These are: +0.25% in FY2013, +0.25% in FY2014, +0.5% in FY2015, and +0.8% per year thereafter. Beginning in FY2018 an average of five additional buses are purchased every two years to support these bus service increases.

Between FY1990 and FY2006 bus service levels increased an average of 2.0% per year. Between FY2001 and FY2006 TriMet reallocated 4,200 weekly hours of low performing service to high performing lines -- to create frequent service routes, add peak hour service and improve schedule reliability. In FY2006, the final year of adjustments, TriMet reduced both bus (-4.0%) and rail service (-2.7%). These service reductions were "surgical" and reduced unproductive trips within routes. The result was minor service adjustments on over three dozen bus lines, focusing on low ridership trips and on adjusting schedules on lines with available seating capacity. TriMet minimized impacts on riders by making minimal changes to span of service, adjusting schedules by 3 to 5 minutes; keeping Frequent Service intact; and measuring lift deployments and use of lines by low income/minority riders to determine that there is not a disproportionate impact on those riders.

In FY2007, TriMet added service to four inner-city bus lines. In FY08 TriMet extended Line 155 and added trips to accommodate ridership demand on several bus lines. In FY09 TriMet added service on six bus lines.

In FY2010, to address declining revenues resulting from 2007 recession, TriMet decreased bus service 3.7% in September 2009 and 2.6% in December 2009. The factors considered in the service reductions were the effectiveness of the service (boarding's per hour), alternative service availability, equity and efficiency. In FY2011 to address a revenue/expenditure imbalance caused by the recession, bus service will decrease 7.6%. Reductions focus on reducing low ridership service by eliminating several low performing lines, reducing weekend service with low ridership, eliminating the low ridership portions of several lines weekdays, reducing the frequency of service on selected lines, and changing the hours of service on selected lines.

The cost per hour multiplier used to estimate the cost of additional service includes the normal cost of funding new employees' retiree medical benefit.

The cost shown in each fiscal year in Appendix A, Table 1, Line AD is the cumulative additional cost since FY2013.

3.3.20 Rail Operations: Blue, Red, Yellow and Green Lines (Appendix A, Table 1, Line AE)

Line AE includes costs to meet peak hour demand in the Blue, Red, Yellow and Green MAX Lines.

The cost shown in each fiscal year in Line AE is the cumulative additional cost since FY2013.

Forecast service increases are based on historic growth in MAX peak hour ridership trends.

3.3.21 Frequent Service Bus Restoration (Appendix A, Table 1, Line AF)

Line AF includes the cumulative cost net of passenger revenue of restoring the FY2009 and FY2010 bus Frequent Service cuts over 10 years, beginning in FY2017.

3.3.22 Frequent Service Rail Restoration (Appendix A, Table 1, Line AG)

Line AG includes the cumulative cost, net of passenger revenue of restoring FY2009 and FY2010 rail service cuts over 10 years, beginning in FY2016.

3.3.21 Portland-Milwaukie Light Rail (Appendix A, Table 1, Line AB)

Portland-Milwaukie Light Rail service begins September 2015. Line AB contains the cost to operate the Portland to Milwaukie extension. Milwaukie Light Rail service hours are derived from Metro model peak load ridership for the opening target years and TriMet policy headways.

TriMet's rail vehicles are maintained in good condition throughout their life with a progressive overhaul program. These costs are included in the operating costs shown in Line AA. Unlike most other rail agencies, TriMet's rail vehicles will not be removed from service for an extensive period for overhaul. The overall LRV maintenance program consists of continual program of preventive maintenance, running repairs, component rebuilds, progressive overhaul, modifications (product improvements) and equipment engineering analysis and training. These six programs require about 1,000 labor hours per year per vehicle.

Other costs that increase as the system ages, such as rail grinding and surfacing, maintenance and repair or rail operating and customer facilities that is not included in Rail Maintenance operations is included in the Capital Improvement forecast, Appendix A, Table 9 lines 6, 8, 9, 10, 11; beginning in the eighth year of operation (FY2023) \$2 million a year in 2020 dollars is added to the finance plan.

3.3.22 Portland Streetcar Loop to OMSI (Appendix A, Table 1, Line AI)

Portland Streetcar service to OMSI begins operations FY2014. TriMet provides partial financial support for its operation of \$1.288 million in FY2012 dollars annually. The basis for the TriMet General Fund contribution is what the Streetcar service would cost if provided by bus at TriMet's Frequent Service at policy headways. The table below illustrates the Streetcar Loop revenues and expenditures as agreed to between TriMet and the City.

Table 3-3. Proposed Source of Streetcar Operating Funds in 2012 Dollars

Factor	Amount
Expenditures	
Operating Cost	\$4,211,491
Operating Cost Savings*	\$ (510,932)
Total Operating Cost	\$3,700,559
Revenues	
Streetcar Farebox Revenues	\$1,063,606
Streetcar Sponsorships	\$180,250
City Parking Tax Revenues	\$1,228,351
TriMet General Fund Contribution	\$1,228,351
Total Operating Revenues	\$3,700,559

^{*}Operating Cost Savings represent expected savings from a combination of increased travel times, reduced service, or reducing the number of management overhead positions assumed in costs.

3.3.23 Portland Streetcar: OMSI to Portland State University (Appendix A, Table 1, Line AJ)

This is TriMet's estimated share (50%) of the cost of extended service from OMSI across the new bridge to Portland State University.

3.3.24 Columbia River Crossing (CRC) (Appendix A, Table 1, Line AK)

The cost of CRC operations was developed using the methodology described in the Transit Operations and Maintenance Cost Models Report, Appendix E, Exhibit 7. The operating cost estimates are documented in Forecasts of Transit Operations and Maintenance Cost Report shown in Appendix E, Exhibit 8.

TriMet and C-TRAN will share in funding the cost of operations. TriMet's share, shown on Table 1, Line AD is based on an assumed cost allocation methodology to be agreed-upon by the transit districts.

As explained above, TriMet's vehicles are maintained in good condition throughout their life with a progressive overhaul program. These costs are included in the operating costs shown on Line AC. Other costs that increase as the system ages, such as rail grinding and surfacing, that are not included in operating costs are included in the Capital Improvement forecast.

3.4 System Cash Flow Analysis

3.4.1 Overview

The total of all the assumptions enumerated above represents TriMet's agency-wide operating plan. The detailed result showing all TriMet system-wide operating and maintenance costs and revenues in year of expenditure dollars are provided in Appendix A, Table 1. Each of these lines is explained below.

3.4.2 Total Continuing Expenditures (Appendix A, Table 1, Line AL)

This line item is the total of all system operating expenditures, minus Accessible Transportation - DMAP (Appendix A, Table 1) and Funding Exchanges (Appendix A, Table 1, Line W). DMAP and Fund Exchange expenses have offsetting revenues.

3.4.3 Total Expenditures (Appendix A, Table 1, Line AM)

The sum of all system operating expenditures Line M through AK, Table 1, Appendix A.

3.4.4 General Fund Results (Appendix A, Table 1, Line AN)

Line AN is calculated by taking Total Revenues (Line L) and subtracting Total Expenditures (Line AM). A negative number means that expenses exceeded revenues for that year.

3.4.5 Beginning/Ending Cash Restricted and Unrestricted (Cash Reserves)

(Appendix A, Table 1, Lines AO-AS)

TriMet classifies cash into restricted and unrestricted funds. Restricted cash includes funds deposited into the Project Account for Portland to Milwaukie Light Rail construction and other construction projects. FY2011 and beyond project revenues are generally not included in Appendix A, Table 1, Lines AO-AS. Restricted cash also includes cash set aside each week throughout the year to pay interest and principal on debt. Unrestricted cash is cash available to meet cash flow requirements throughout the year plus additional cash for contingency.

Line AO includes cash restricted for debt service and unrestricted cash and cash equivalents as of the beginning of the fiscal year. FY2010 and FY2011 are actual amounts.

Line AP Unrestricted Cash is Line AO Restricted and Unrestricted Cash minus 65% of Line AC Debt Service. It is 65% because by the first of the fiscal year, approximately 65% of upcoming debt service has been restricted.

Line AR, Unrestricted Cash Reserves as a multiple of operating expense is Line AP divided by Line AL Total Expenditures minus Line AC divided by 12.

Line AJ Unrestricted Cash as a Percent of Operating Expense is Line AP Unrestricted Cash divided by Line AL Total Expenditures minus Line AC.

TriMet conducts a monthly cash forecast to insure that it has sufficient unrestricted cash funds for operations throughout the year. Unrestricted cash is highest after federal formula funds are received, usually spring of each year. Due to the mismatch between monthly revenues and expenditures (expenditures are monthly, payroll tax revenues are quarterly, federal revenues are largely annual), TriMet estimates that as a rule of thumb, beginning unrestricted cash reserves should be above 1.5 months of expenditures (minus debt service) with some months higher and some months lower to cover expenses without short term borrowing.

3.5 Business Plan Forecast Results

The Business Plan forecast results show that TriMet can build and operate the Portland-Milwaukie Light Rail Project and maintain adequate reserves. Results are positive margins every year. Restricted cash reserves average 16.0% of operating expense throughout the forecast. Restricted and unrestricted cash reserve average 21% of continuing total expenditures minus DMAP and fund exchanges.

3.6 Sensitivity Analysis (Appendix B, Tables 12 and 13)

This section addresses risks to the agency-wide operating finance plan. In the near term, lower employment growth and lower payroll tax growth rates are TriMet's greatest risks.

One additional unknown is fuel prices. The forecast assumes that TriMet like other transit agencies will survive by passing the cost on to their customers through fare increases. Ultimately, the market will reach equilibrium as new sources of energy and more fuel-efficient vehicles are manufactured.

TriMet has a good record of addressing issues early. During the 2001-2003 recession in the Portland region there were job losses for three consecutive years and annual payroll tax revenues declined. It wasn't until FY2005 that payroll tax revenues exceeded pre-recession (FY2001) payroll tax revenues.

In addition, TriMet had to contend with stock market declines resulting in unexpected increases in pension costs and high and increasing diesel fuel costs. TriMet managed its way through the worst economic downturn in sixty years by reducing overhead, spending reserves, reallocating low performing service to high performing service, keeping capital plant expansion to a minimum, stretching capital replacement cycles.

In this section, sensitivity analyses are presented illustrating forecast results given different near term economic scenarios. These are worst case forecasts and help illustrate the problems TriMet might face as it constructs and prepares to open the Portland to Milwaukie Light Rail Project and how TriMet might address the financial results.

The Pessimistic Forecast assumes that after declined 4.0% (underlying growth) in FY2010, payroll tax underlying growth is 1% in FY2011, 2% in FY2012, and just 3.0% in FY2013, 4.0% in FY2014 and 4.5% per year thereafter. This scenario would result in negative operating margins throughout the forecast and would have to be addressed with strong, decisive measures in the short term. The forecast shown on Appendix B, Table 12 shows the General Fund results after the following revenue and expenditure measures have been taken:

- Low payroll tax growth is an indicator that employment is not growing. As a result, there would be less of a need to increase service. The forecast reflects a decrease in bus and rail service growth.
- TriMet's LIFT ADA complementary paratransit fare is \$1.80. Under the ADA is could be \$4.00. A higher ADA paratransit fare would encourage people with disabilities to use

fixed route service, thus decreasing demand for LIFT. Cost savings and additional passenger revenue are assumed in the forecast.

- Fixed route fares are increased 5.0%, instead of 2.5% in FY2013. This equates to a \$0.10 adult cash/\$4.00 pass fare increase.
- TriMet would negotiate a 0% union wage increase in FY2011. Union wages have exceeded the CPI over the last ten years.
- Like many public agencies and private employers TriMet will have to constrain unit costs of health benefits to 6.0% per year. TriMet's board of directors recently issued a statement supporting an employee compensation package that grows no more than the employer payroll tax.
- TriMet would not restore the FY09 and FY2010 service reductions.
- TriMet would not add Streetcar service between OMSI and PSU
- TriMet would not contribute to an OPEB Trust for five years for new employees.

All of these measures would be necessary to maintain fiscal stability if payroll tax revenue growth, regional employment and wages, are stagnant for two more years and then increase at low rates in the future.

The Conservative Forecast assumes that after declining 4.0% in FY2010, payroll tax underlying growth is 2.0% in FY2011, 3.0% in FY2012, 3.7% in FY2013 and 4.0% in FY2014 and 4.5% thereafter. This scenario would also result in negative operating margins throughout the forecast and would also have to be addressed with strong, decisive measures in the short term. The forecast shown on Appendix B, Table 13 shows the General Fund results after the following revenue and expenditure measures have been taken:

Because revenue growth is greater in the Conservative forecast, management action would not need to be as drastic. The results on Appendix A, Table 13 assume all of the measures taken above except for the doubling of the LIFT fare. In addition, TriMet could contribute the normal cost of retiree medical benefits for new employees to an OPEB Trust.

In conclusion, if payroll tax growth is as low as these scenarios, management would have to address costs aggressively. The above measures would address revenue shortfalls without service reductions.

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4. C-TRAN Agency-wide Operating Finance Plan

Because the CRC Project serves and affects the agency-wide finances of both C-TRAN and TriMet, this report presents the agency-wide finance plan for both districts. Other than the sharing of CRC LRT-related costs and revenues and the apportioning of Section 5307 formula funds, which are addressed in both plans, the districts' plans are exclusive of each other. This Section 4 focuses on C-TRAN's agency-wide operating finance plan. TriMet's agency-wide plan is discussed in Section 3 of this report.

4.1 Background

The Clark County Public Transportation Benefit Area (C-TRAN) operates the transit system within the project area in the State of Washington. C-TRAN provides fixed-route bus service and demand-responsive paratransit service within the urban growth boundary of Vancouver, Camas-Washougal, and Battle Ground, Washington; and dial-a-ride and connector service using paratransit vehicles in Camas, Ridgefield, and La Center, Washington. C-TRAN is governed by a nine-member Board of Directors comprised of all three Clark County Commissioners; three representatives from the Vancouver City Council; and one representative each from the Camas/Washougal, Battle Ground/Yacolt, and Ridgefield/La Center City Councils.

When C-TRAN was approved by a vote of citizens in 1980, the service and taxing boundary was established county-wide. For almost two decades, C-TRAN was funded through a combination of a 0.3% (3/10ths of 1 percent) "sales and use" tax in its district and matching funds from a Motor Vehicle Excise Tax (MVET) imposed by the State of Washington. In 1999, Washington voters approved Initiative 695, which capped MVET at \$30, eliminating it as a funding source for C-TRAN. While the Washington Supreme Court found Initiative 695 invalid on constitutional grounds (based on the fact that it addressed more than one subject), the Washington legislature effectuated the result through legislation.

This created a funding crisis for C-TRAN. C-TRAN responded by raising fares, focusing service on its productive routes to increase ridership, and diverting reserves designated for capital projects to subsidize services. In anticipation of passage of Initiative 695, C-TRAN had accumulated a sizable reserve fund that would allow it to preserve its operations for a number of years while it charted a new funding base for the district.

Finally, in an effort to avoid major service reductions, C-TRAN asked its voters for a tax increase. On June 1, 2005, the C-TRAN boundary was reduced from the whole of Clark County to the urbanized portion of Clark County – an area including only the cities of Vancouver, Camas, Washougal, Ridgefield, La Center, Battle Ground, and Yacolt; and the unincorporated area surrounding Vancouver within the Vancouver Growth Management Area. In September 2005 the voters of the revised C-TRAN district approved an increase of C-TRAN's "sales and use" tax by 0.2% (2/10th of 1 percent), making its total tax rate 0.5%, where it stands today. This

stabilized C-TRAN's funding base, and avoided the service cutbacks that would have been necessitated by the loss of MVET funds five years earlier.

More recently, like almost all other local governments throughout the U.S., C-TRAN has been affected by the 2007–2009 recession and its aftermath. The economic downturn had a material impact on C-TRAN's sales tax receipts (although most recently they have begun to bounce back), which has required C-TRAN to undertake a modest service cut earlier in 2010. The service cut was significantly less than in most other transit districts.

This history must be taken into account when reviewing the 10-year trends of C-TRAN's revenues and expenses. For example, the growth in C-TRAN's sales and use tax proceeds is affected by the contraction of the district in 2005. These relationships will be pointed out in the discussion of revenues and expenses that follows.

4.2 Local Economy: C-TRAN District

Clark County, which encompasses the C-TRAN district, is one of the fastest growing areas within the Portland-Vancouver metropolitan region. As shown in Table 4-1, since 1980 Clark County population has been growing at an average annual rate of 2.8% per year. A large amount of the growth has occurred within the urbanized portions of the County, although the growth rates shown in Table 4-1 for the City of Vancouver and Other Incorporated areas reflects, in part, annexations that have occurred since 1980.

Table 4-1. Population Growth in Clark County 1980-2009

	1980	1990	2000	2009	1980-2009 Avg. Annual Growth Rate
Vancouver	42,834	46,380	143,560	164,500	4.7%
Other Incorporated	14,414	17,829	35,399	56,285	4.8%
Unincorporated	134,979	173,844	166,279	210,415	1.5%
Total Clark County	192,227	238,053	345,238	431,200	2.8%

Source: 2010-2014 Clark County Consolidated Housing and Community Development Plan

Clark County's population growth is mirrored by an enlarging economy. As shown in Table 4-2, since 1980 the number of jobs in the County has grown at an average annual rate of 4.6%, including the job losses caused by the 2007-2009 recession. The Portland-portion of the region remains a key employment area for County residents However, since 1980 the number of Clark County jobs per Clark County resident has increased at a 1.6% annual rate.

Table 4-2. Historical Employment Growth in Clark County 1980-2009

	1980	1990	2000	2009 (1)	1980-2009 Avg. Annual Growth Rate
Total Clark County Jobs	52,870	80,100	118,310	196,370	4.6%
Jobs per Person	0.28	0.34	0.34	0.45	1.6%

Source: 2010-2014 Clark County Consolidated Housing and Community

Development Plan

January 2009

As shown in Table 4-3, until 2007 economic growth had been particularly strong in terms of retail sales, as the number of retail businesses grew in response to population and job growth in the County. From 1980-2007, taxable retail sales grew at a 7.3% average annual rate. However, the economic recession of 2007-2009 caused a major slowdown in taxable retail sales. Since 2007 taxable retails sales have dropped over 20%. Preliminary numbers on the first half of 2010 indicate that sales are beginning to recover.

Table 4-3. History of Taxable Retail Sales for Clark County

Year	Taxable Retail Sales	Avg. Annual Growth Rate (1)
1980	\$717,465,283	
1985	\$975,231,457	6.3%
1990	\$1,637,258,010	10.9%
1995	\$2,543,535,428	9.2%
2000	\$3,312,943,000	5.4%
2001	\$3,375,916,000	1.9%
2002	\$3,490,221,000	3.4%
2003	\$3,723,675,180	6.7%
2004	\$4,063,402,358	9.1%
2005	\$4,581,235,929	12.7%
2006	\$4,866,777,344	6.2%
2007	\$4,849,742,747	-0.4%
2008	\$4,548,933,138	-6.2%
2009	\$3,893,050,313	-14.4%

Source: Washington State Dept. of Revenue, Quarterly Business Review

While population growth in Clark County is forecasted to slow compared to historic rates, it is still anticipated to be robust, averaging around 1.9% per year over the next two decades. Job growth over the next two decades is also anticipated to be robust growing at 3.4% per year, as Clark County continues to evolve into a strong economic center within the Portland region.

⁽¹⁾ Growth rates shown for 1985-2000 represent average annual rate over previous five years.

Table 4-4. Population and Employment Growth in Clark County

	2007	2024 (1)	2030 (2)	2007-24 Avg. Annual Growth Rate	2007-30 Avg. Annual Growth Rate
Population	415,000	584,310	639,337	2.0%	1.9%
Employment	131,000	230,000	283,875	3.4%	3.4%

⁽¹⁾ Clark County Comprehensive Plan, 2004-2024, updated September 2007

4.3 C-TRAN Operations Revenues (Appendix G, Table 1)

The C-TRAN agency-wide cash-flow plan shown in Appendix G, Table 1 provides the forecast of all C-TRAN operating revenues over a 20-year period. It also addresses all capital revenue sources, but capital revenues are addressed in Section 4.5, below. The following sections explain historic trends and forecast assumptions for each of the operating revenue sources included in the 20-year plan. The table referenced in the heading of each section below is where the detailed forecast for the named revenue source is documented.

4.3.1 Passenger Revenues (Appendix G, Table 2)

4.3.1.1 History

Passenger fares are C-TRAN's second largest revenue source, accounting for about \$6.9 million in 2009. Table 4-5 shows that the annual average growth rate in passenger revenues over the past decade was 10.3 percent. If only the past five years are considered, the average annual growth rate was 11.7 percent, reflecting the greater Board emphasis on increased fare rates.

Table 4-5. C-TRAN Passenger Revenues History

Year	Passenger Revenues	% change
1998	\$2,434,569	
1999	\$2,611,353	7.3%
2000	\$3,227,198	23.6%
2001	\$3,598,114	11.5%
2002	\$3,700,670	2.9%
2003	\$3,780,406	2.2%
2004	\$3,997,897	5.8%
2005	\$4,766,441	19.2%
2006	\$5,060,166	6.2%
2007	\$5,580,409	10.3%
2008	\$6,149,592	10.2%
2009	\$6,938,257	12.8%

⁽²⁾ Southwest Washington Regional Transportation Council, Metropolitan Transportation Plan for Clark County, amended July 2008

4.3.1.2 Forecast

The forecast of passenger revenues assumes there will be a \$0.05 annual increase in fares in 2010 through 2015 and annual fare increases of \$0.10 thereafter. It is further assumed that each \$0.05 increase in the fare yields only about a \$0.02 increase in the average fare when all discounts are accounted for. In addition, the 20-year plan forecast of passenger revenues assumes that as service coverage and frequency improve, population and service area employment grows, and the population ages:

- Bus ridership per platform hour on regular bus fixed route service would grow 3% per year, up to a maximum of 35 boardings per hour.
- BRT ridership per platform hour would increase by 3% per year from an initial base of about 42 boardings per hour.
- Bus riders per platform hour on the intra-county limited ("BRT lite") service would increase by 3% from a base of about 25 hourly boardings.
- Riders per platform hour on innovative/connector routes would increase at 1.5 percent per year, up to a maximum of 3.67 boardings per hour.
- Paratransit (ADA) ridership per platform hour would increase at 1% per year up to a maximum of 2.5 boardings per hour.
- Express bus ridership would increase at 3% per year, up to a maximum of 35 boardings per hour.

In addition, it is anticipated that TriMet and C-TRAN will mutually establish a bi-state fare that will help pay for the bi-state transit service. The expenses of the CRC LRT extension will be allocated between C-TRAN and TriMet based on an intergovernmental agreement between the districts. While the detailed agreement for allocating light rail costs is being formulated, this finance plan assumes that cost of the CRC LRT extension will be allocated based on a sharing formula that results in C-TRAN being responsible for 64% of CRC LRT extension costs. Since the bi-state fares will be dedicated to paying bi-state expense, the effective result of this allocation is that C-TRAN receives 64% of CRC LRT revenues.

The specifics of the passenger revenue forecast are shown in Appendix G, Table 2. The net result of these assumptions over the period 2010 through 2030 is an annual average growth rate for passenger revenues, excluding revenues from CRC LRT operations, of 9.2%; less than the passenger revenue growth rate of the past decade (and past five years).

4.3.2 Sales and Use Tax (Appendix G, Table 3)

4.3.2.1 History

Under its enabling legislation as a Public Transportation Benefit Area (PTBA), C-TRAN may levy a "sales and use" tax of up to 0.9% (9/10ths of 1 percent) for transit service and facilities in

its district.15 Currently C-TRAN levies a 0.5% (5/10ths of 1 percent) sales and use tax; with voter approval C-TRAN could impose an additional 0.4% (4/10th of 1 percent) tax under its PTBA authority.

The sales and use tax is C-TRAN's largest revenue source, accounting for slightly under \$21.2 million in 2009. The 10-year history of C-TRAN's sales and use tax receipts is shown in Table 4-6. Until January 2006, C-TRAN levied a 0.3% sales and use tax and C-TRAN's district boundary encircled the urbanized portions of Clark County and a substantial portion of the rural areas. In 2005 the C-TRAN boundary was contracted to the urbanized and urbanizable areas of the county. In September 2005 the district voters approved a 0.2% increase in the sales and use tax rate. Since January 2006, C-TRAN has collected the 0.5% sales and use tax within the contracted boundary.

Table 4-6. C-TRAN Sales and Use Tax History

Year	Sales Tax Receipts	Rate	Amount per 0.1%
1998	\$11,320,182	0.30%	\$3,773,394
1999	\$11,699,532	0.30%	\$3,899,844
2000	\$11,853,310	0.30%	\$3,951,103
2001	\$11,912,575	0.30%	\$3,970,858
2002	\$11,939,105	0.30%	\$3,979,702
2003	\$12,972,872	0.30%	\$4,324,291
2004	\$14,583,396	0.30%	\$4,861,132
2005	\$16,287,514	0.30%	\$5,429,171
2006 (1)	\$26,086,132	0.5Ò%	\$5,217,226
2007	\$25,852,664	0.50%	\$5,170,533
2008	\$24,256,571	0.50%	\$4,851,314
2009	\$21,179,904	0.50%	\$4,235,981
2010	(2)	0.50%	

The C-TRAN district was contracted in January 2006, the reduced sales and use tax receipts in years 2006 and later reflect the smaller district.

2010 sales tax receipts through June 2010 are 4.4% higher than the equivalent period in 2009.

The right-most column of Table 4-6 shows the tax receipts on a normalized (1/10th of 1 percent) basis; thus controlling for the different rates during the 10-year period. From 1998 through 2005, with the original C-TRAN district, receipts from a 0.1% sales and use tax receipts grew at the compound growth rate of 5.3%. The decline in receipts per 1/10th of 1 percent tax rate between 2005 and 2006 results from the change in the size of the district. Receipts began dipping in 2007 due to the slowing economy, and had not yet begun to recover in 2009 in large part due to the lag in new construction activity. However, sales tax receipts are beginning to recover in 2010. While

¹⁵ RCW 36.57A authorizes the creation of Public Transportation Benefit Areas (PTBA) and RCW 82.14.045 authorizes PBTAs, such as C-TRAN, to levy a sale and use tax, subject to voter approval.

annual results are not yet available, receipts through June, the latest available, are 4.4% higher than the equivalent period in 2009.

Washington statutes provide an additional taxing authority for High Capacity Transit (HCT) systems. RCW 81.104, commonly referred to as the HCT Act, allows a district to levy an additional 0.9% sales and use tax for a HCT system (beyond the tax rate allowed under the PBTA authority), subject to voter approval of a HCT systems plan that includes the tax as part of its finance plan. Under RCW 81.104.015(1):

"High-capacity transportation system" means a system of public transportation services within an urbanized region operating principally on exclusive rights of way, and the supporting services and facilities necessary to implement such a system ..." [emphasis added].

Thus the proceeds of a sales and use tax levied under RCW 81.104 may be used for the supporting bus system as well as the HCT service itself. As explained below, while C-TRAN does not currently levy any sales tax under the RCW 81.104 authority, its plans are to request voter approval of a 0.1% sales and use tax under this authority.

4.3.2.2 Forecast

The 20-year cash flow plan employs an underlying (i.e.; excluding growth caused by higher tax rates) annual growth rate for sales and use tax proceeds per 0.1% of tax rate of 2.0% in 2010 (which based on first half results appears to be conservative), 5.1% per year in 2011 through 2013 (as retail sales and construction activity bounce back from the lower base), and 4.1% per year in 2014 and thereafter. Even with this growth rate, there would not be sufficient tax proceeds to meet operating needs of the fixed route bus system, the demand-responsive system, and the CRC LRT extension at the current 0.5% sales and use tax rate.

Consequently the finance plan calls for an increase of C-TRAN's sales and use tax rate of 0.2% under C-TRAN's PTBA authority and an additional 0.1% under the HCT Act authority. Since these two sales tax authorities are identical in their operation, it is easiest to view them cumulatively as a 0.3% increase, resulting in a total C-TRAN sales tax rate of 0.8%. The plan assumes the vote would occur in November 2011, per the C-TRAN Board's resolution of intent (See Appendix D, Exhibit 12), and the increase would be effective January 2012.

The forecast of Sales and Use tax revenues is shown in Appendix G, Table 3. As shown, the combined affects of the underlying growth rate in sales tax revenues and the increased tax rate yields an average annual growth rate in sales tax proceeds of 7.9% between 2010 and 2030.

4.3.3 Other Operating Revenues (Appendix G, Table 3)

4.3.3.1 History

Other operating revenues include advertising, rent of C-TRAN rooms for private uses, and other minor revenues; advertising makes-up the vast majority of these revenues. As shown in Table 4-7, while these sources do not contribute a great deal of revenue they had been increasing rapidly due to the new advertising contract, which took a downturn in 2009 due to the bad economy.

Table 4-7. History of Other Operating Revenues

	2005	2006	2007	2008	2009
Advertising	\$197,765	\$274,122	\$358,437	\$486,798	\$362,500
Rents (1)	\$11,698	\$12,872	\$2,956	\$1,229	\$711
Miscellaneous	\$7,453	\$7,548	\$12,060	\$12,031	\$37,482
Total Other Operating Revenues	\$216,916	\$294,542	\$373,453	\$500,058	\$400,693

⁽¹⁾ A 2007 policy no longer allows the board room to be rented for parties; reducing potential revenues from rents

4.3.3.2 Forecasts

The forecast assumes that advertising revenues will stay flat through 2011 and increase at 1.0% per year in 2012 and thereafter, miscellaneous revenues will increase at 1.0% throughout the forecast period, and rent revenues will increase at 0.5% per year throughout the forecast period. The forecast of Other Operating revenues is detailed in Appendix G, Table 3.

4.3.4 Operating and Maintenance Grants (Appendix G, Table 4)

4.3.4.1 History

C-TRAN has received a variety of grants from state and federal sources that can be used for operations or for preventive maintenance. These include, among others:

- Section 5307 Grants
- Jobs Access Reverse Commute (JARC) and New Freedom Grants
- WSDOT Special Needs and Regional Mobility Grants

Section 5307 funds may be used for preventive maintenance and for capital projects. Through 2008 C-TRAN used all or virtually all of its Section 5307 funds for capital projects. Over the next several years, C-TRAN anticipates using an increasing amount of Section 5307 funds for preventative maintenance, until 2012 at which time it anticipates dividing these funds between capital projects and preventative maintenance (the allocation differing by year depending on need). The Portland-Vancouver metropolitan area receives an allocation of Section 5307 urbanized area formula grants, which is then divided among TriMet, C-TRAN and SMART, the three urban transit districts within the metropolitan region based on the same factors used in the national apportionment. Table 4-8 shows the history of receipts of these revenues by C-TRAN. On average, since 2000, C-TRAN's annual apportionment of Section 5307 funds grew at an average annual rate of 4.1% per year.

Table 4-8. C	-TRAN 5	5307 C	Grant	History
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Table 4-0.	Table 4-0: 0-11tall tool Statisticity					
Year	5307 Grant	% change				
2000	\$2,889,659					
2001	\$3,375,362	16.8%				
2002	\$3,540,061	4.9%				
2003	\$3,479,997	-1.7%				
2004	\$3,699,266	6.3%				
2005	\$3,830,630	3.6%				
2006	\$4,121,131	7.6%				
2007	\$4,006,082	-2.8%				
2008 (1)	\$3,907,473	-2.5%				
2009 (2)	\$5,456,820	39.7%				
2010 (3)	\$4,332,230	-20.6%				

⁽¹⁾ Portion of allocation used in 2009

4.3.4.2 Forecast

C-TRAN's allocation of Section 5307 funds are projected to increase at 4% per year, slightly lower than the historic growth rate. WSDOT Special Needs grants are anticipated to drop from their high in 2007 of about \$682,000 to \$408,000 in 2010 and then grow at 2% per year thereafter. JARC and New Freedom grants are anticipated to grow at 4% per year from 2011 through 2030. Note the forecast assumes that if the JARC or New Freedom is eliminated or absorbed into another program, the successor grant program would provide similar levels of funding.

The forecast includes Section 5309 Fixed Guideway Modernization Grant ("Rail Mod Grant"). After seven years of operations, the CRC LRT extension would be eligible for a Rail Mod Grant, which can be used for capital improvements or preventative maintenance. It is estimated that the 2030 operations of the CRC LRT extension would be eligible for about \$414,000 of Rail Mod Grant funds in current dollars. Based on the assumed allocation formula, C-TRAN would receive about \$265,000 (current dollars) of this total.

The forecast of grant revenues is detailed in Appendix G, Table 4. In the aggregate, the total of capital and operating grant revenues, while fluctuating on an annual basis, has an average annual growth rate of 1.5% over the forecast period. ¹⁶

⁽²⁾ Higher than normal due to ARRA and partial allocation of 2008 funds

⁽³⁾ Regular allocation, serves as base for forecasted amounts.

¹⁶ The annual grant requirement spikes during the development of the BRT line incorporated in C-TRAN's 20-year development plan.

4.3.5 Interest Income (Appendix G, Table 1, Line E and F)

Interest income includes short-term and medium-term interest earnings on reserve funds. The cash flow analysis assumes that an amount of reserve funds equivalent of three months of operating costs is invested at short term rates, and the remaining reserve funds, if any, are invested at medium-term rates. Short and medium term interest rates start at current rates and respectively increase by about 3.5 and 3.3-basis points per year, until 2018 and are held constant thereafter.

4.3.6 Total Operating Revenues (Appendix G, Table 1, Line G)

4.3.6.1 History

Total operating revenues is the sum of passenger revenues, sales and use tax revenues, MVET revenues (prior to 2001), other operating revenues, grants, and interest income. The history of total operating revenues is shown in Table 4-9. The average annual increase in total operating revenues between 1999 and 2009 was only 1.9% per year; but that reflects fundamental changes during that period. As described below, this growth rate does not provide a good basis for projecting future total revenues.

Table 4-9. C-TRAN Total Operating Revenue History

Year	Total Op Revenues	% change
1999	\$29,159,371	-2.2%
2000	\$32,534,469	11.6%
2001	\$22,885,155	-29.7%
2002	\$20,880,131	-8.8%
2003	\$21,334,864	2.2%
2004	\$23,230,400	8.88%
2005	\$27,346,204	17.7%
2006	\$35,141,452	28.5%
2007	\$35,475,796	0.9%
2008	\$34,169,077	-3.7%
2009	\$35,363,617	3.5%

The last MVET grant in 2000 was a sizable \$7.2 million. The almost 30% decline in total operating revenues in 2001 shown in Table 4-9 reflects the loss of MVET funding. The 8.8% loss of operating revenues in 2002 primarily resulted from reduced interest earnings as C-TRAN began to spend-down its reserve funds to fill the gap created by the loss of MVET. The 28.5% increase in total operating revenues in 2006 results from the 0.2% increase in sales and use tax rate that went into effect that year. The 2007 through 2009 amounts reflect the dip in sales tax revenues caused by the economic recession, but additional grant receipts dampened the declined.

4.3.6.2 Forecast

The forecast of total operating revenues reflects the assumptions described above for the individual revenue sources. In sum, the assumptions lead to an average annual growth rate in total operating revenues of 7.5% per year between 2010 and 2030. This growth rate is primarily

driven by the planned additional 0.3% sales tax rate and the increase in passenger revenues from the planned fare increases and growth in ridership due to the service expansion plan.

4.4 C-TRAN Operating and Capital Expenses

The C-TRAN agency-wide cash-flow plan shown in Appendix G, Table 1 provides the forecast of all C-TRAN operating expenses over a 20-year period. ¹⁷ It also addresses all capital expenses, but those costs are addressed in Section 4.6, below. The following sections explain historic trends and forecast assumptions for each of the operating expenses included in the 20-year plan. The table referenced in the heading of each section below is where the detailed forecast for the named expense is documented.

4.4.1 Salary and Wages (Appendix G, Table 5)

4.4.1.1 History

Salary and wages are C-TRAN's largest expense category, comprising over 41% of all operating expenses in 2009. Table 4-10 shows the 10-year history of C-TRAN's Salary and Wage costs.

Table 4-10. History of C-TRAN Salary and Wage Costs

Year	.Wages	Annual Growth
1999	\$11,518,766	
2000	\$11,333,722	-1.6%
2001	\$11,460,629	1.1%
2002	\$12,063,165	5.3%
2003	\$12,512,129	3.7%
2004	\$13,116,370	4.8%
2005 (1)	\$12,786,876	-2.5%
2006 (2)	\$16,004,287	25.2%
2007	\$18,031,333	12.7%
2008	\$20,017,604	11.0%
2009	\$20,346,420	1.6%

⁽¹⁾ Reflects salary freeze in 2005

In reviewing Table 4-10, note that C-TRAN changed how it classifies vacation, sick leave, and holiday costs in the forecast model. These were Benefit costs prior to 2006 and Salary and Wage

⁽²⁾ From 2006 and after vacation and sick leave are counted in the forecast model as a wage cost rather than a benefit, as in 2005 and earlier.

¹⁷ C-TRAN's share of CRC LRT operating expenses is shown in Section 4.4.8 as a contract payment to TriMet; these costs are not incorporated in other expenses.

costs since. Excluding the impacts of this change, the average growth in total annual Salary and Wages was 7.1% per year.

Wage and Salary growth results from two factors: (i) service hour increases and (ii) increases in hourly Salary and Wages. These factors differ between C-TRAN's fixed route system and demand responsive system; the change in hourly rates also differs between fixed cost and variable cost elements. Table 4-11 shows the growth in hourly rates between 2000 and 2009. The blended average hourly rates shown in the last row of Table 4-11 adds the hourly rates of the fixed route service with those of the demand responsive system in proportion to their relative total costs.

In reviewing Table 4-11, once again the data reflects the change made in 2006 on how vacation, sick leave, and holidays are classified. Controlling for this change, the average annual growth rate in the blended Salary and Wage costs per platform hour was 3.3% per year between 2000 and 2009.

Table 4-11. History of Salary and Wages per Platform Hour

	2000	2001	2002	2003	2004	2005	2006 (1)	2007	2008	2009
Fixed Route Services:										
Salary and Wages per Platform Hour: Variable Costs	\$22.67	\$24.14	\$24.44	\$25.61	\$26.61	\$27.10	\$31.99	\$33.60	\$33.38	\$36.55
Salary and Wages per Platform Hour: Fixed Costs	\$11.17	\$11.98	\$13.11	\$13.97	\$14.71	\$15.69	\$21.13	\$22.12	\$20.70	\$16.69
Total Salary and Wages per Platform Hour	\$33.84	\$36.12	\$37.55	\$39.59	\$41.32	\$42.80	\$53.12	\$55.72	\$54.08	\$53.24
Demand Responsive Services		100 mg					Absent S		and an T	
Salary and Wages per Platform Hour: Variable Costs	\$16.14	\$16.72	\$16.80	\$18.12	\$19.13	\$20.29	\$23.75	\$25.16	\$26.86	\$29.18
Salary and Wages per Platform Hour: Fixed Costs	\$11.25	\$9.70	\$9.64	\$8.72	\$8.68	\$5.60	\$7.53	\$7.34	\$7.47	\$19.35
Total Salary and Wages per Platform Hour	\$27.39	\$26.42	\$26.45	\$26.83	\$27.81	\$25.89	\$31.28	\$32.50	\$34.33	\$48.53
Blended Average Hourly Rates										
Average Blended Salary and Wages per Platform Hour	\$32.68	\$34.17	\$35.25	\$36.73	\$38.17	\$38.68	\$47.88	\$50.11	\$49.50	\$52.20

⁽¹⁾ The data reflects a change in accounting that began in 2006 that incorporates sick leave, holidays, and vacation as salary expenses instead of benefits.

4.4.1.2 Forecast

The current labor agreement between C-TRAN and ATU directs a 3.5% year-over-year escalation in wage rates. The wage scale for operators includes 5-6 steps (for fixed route and paratransit operators respectively) before the final "senior" wage rate is reached. It takes 3-5 years (for fixed route and paratransit operators respectively) to reach the "senior" level. Each wage step increases the wage rate by about 4%-5%. The cash flow plan employs an average

wage rate per platform hour that was calculated at a time when a vast majority of C-TRAN employees were at the "senior" rate. This means that most employees will only receive the annual 3.5% cost escalation; there will be only small wage increases due to progressing through the steps.

However, as senior drivers retire and newer drivers take their positions, the wages of the newer drivers, while escalating at a faster rate, are lower in absolute terms. Salary and Wages are forecasted by multiplying a cost per platform hour factor by the applicable number of platform hours. This cost per platform hour factor addresses the total cost of the entire driver pool. Thus with the growth in senior drivers' wages maxed-out at 3.5% and the agency-wide salary and wage total being somewhat lowered by turn-over, an overall growth rate for Salary and Wages of less than 3.5% would be anticipated.

The cash flow plan assumes that the average hourly Salary and Wage cost for fixed route and demand responsive services will increase at 3.5% per year, slightly higher than the 2000-2009 average growth rate. The build-up of the Salary and Wage forecast is detailed in Appendix G, Table 5. The 20-year forecast of total agency-wide Salary and Wages results in a 5.9% per year average annual growth rate. However, this does not account for C-TRAN's share of the salary and wage costs of the CRC LRT extension, which show as a Contract cost (with TriMet) in the cash flow plan rather than a Salary cost. Taking this into consideration, the growth of salary and wages in the cash flow plan is consistent with historic trends.

4.4.2 Benefits (Appendix G, Table 6)

4.4.2.1 History

Benefit costs represent the second largest expense category at C-TRAN. Table 4-12 shows C-TRAN's history of Benefit costs over the past decade. As was the case with the history of wage costs shown above, the data in Table 4-12 must be understood in the context of the change in classifying vacation, sick leave, and holiday costs as a wage expense rather than a benefit. While wage costs saw a sharp increase in 2006 due to this change, benefit costs saw a reciprocal decline. Controlling for the change, C-TRAN experienced an average annual growth rate in Benefit costs of 7.0% per year over the past decade.

Table 4-12. History of C-TRAN Benefit Costs

Year	Benefits	Annual Growth
1999	\$5,854,739	
2000	\$5,694,057	-2.7%
2001	\$5,887,427	3.4%
2002	\$6,033,534	2.5%
2003	\$6,671,326	10.6%
2004	\$6,934,125	3.9%
2005	\$7,060,784	1.8%
2006 (1)	\$5,476,473	-22.4%
2007	\$6,712,397	22.6%
2008	\$8,028,889	19.6%
2009	\$8,226,736	2.5%

(2) From 2006 and after vacation and sick leave are counted as a wage cost rather than a benefit, as in 2005 and earlier.

The growth in Benefits cost is a function of two variables: (i) service hour increases and (ii) increases in hourly Benefits costs. These factors differ between C-TRAN's fixed route system and demand responsive system. Table 4-13 shows the composition of Benefit costs for the fixed route system on an annual basis between 2000 and 2009. As shown, medical benefits comprise the largest component of benefits costs and were the fastest growing component between 2000 and 2009. Table 4-14 shows the same for C-TRAN's demand responsive system.

Table 4-13. History of Fringe Benefits: Fixed Route Service

Factor	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
FICA	\$874,033	\$878,278	\$923,630	\$975,455	\$1,014,018	\$1,000,745	\$1,053,281	\$1,184,788	\$1,311,812	\$1,133,382
PERS	504,940	365,201	171,729	178,228	178,558	304,280	419,159	886,169	1,257,463	1,013,941
Medical	1,273,372	1,357,166	1,558,824	1,807,245	1,947,532	2,011,516	2,263,735	2,615,954	3,068,050	3,221,289
Dental	250,993	259,207	294,012	326,022	333,192	323,325	345,895	381,695	423,146	413,863
Life Insurance	27,356	30,531	30,613	30,823	33,707	31,711	33,987	36,793	40,494	37,000
Disability	46,343	48,535	51,998	53,599	55,747	54,688	59,544	65,177	71,385	61,989
Unemployment	48,455	46,916	45,813	25,697	25,915	(142,118)	47,707	53,423	60,435	130,239
Workers' Comp	224,361	276,796	234,147	257,728	240,098	203,219	254,772	296,079	387,014	323,550
Sick Leave	364,440	324,502	373,114	468,342	458,349	711,235	(1)	(1)	(1)	(1)
Holiday	367,700	419,451	407,104	420,913	494,861	443,726	(1)	(1)	(1)	(1)
Vacation	832,416	905,608	932,869	1,010,175	959,203	1,005,905	(1)	(1)	(1)	(1)
Other Paid Leave	49,096	47,842	47,095	45,935	33,964	124,772	(1)	(1)	(1)	(1)
Uniforms	62,049	71,308	74,800	68,969	72,995	78,238	68,975	75,620	97,765	82,264
Tuition, Vision & Auto	30,442	22,868	17,282	23,431	20,852	19,828	15,310	22,475	35,385	23,577
Fringe Benefits Distribution	(80,630)	(66,400)	(84,114)	(121,045)	(135,489)	(109,407)	(147,058)	(156,509)	(168,026)	(34,665)
Total	\$4,875,366	\$4,987,809	\$5,078,916	\$5,571,517	\$5,733,502	\$6,061,663	\$4,415,307	\$5,461,664	\$6,584,923	\$6,406,429

(1) Accounting change moved this costs to Salary and Wages

Table 4-14. History of Fringe Benefits: Demand Responsive Service

Factor	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
FICA	\$135,335	\$141,442	\$149,321	\$159,788	\$175,595	\$165,867	\$178,143	\$201,173	\$228,252	\$289,756
PERS	74,438	55,665	27,692	28,230	30,646	40,958	70,414	150,211	213,185	253,101
Medical	224,116	260,903	323,318	381,044	423,505	390,159	470,045	527,534	611,981	950,941
Dental	46,293	54,629	69,927	74,187	74,312	66,018	75,676	78,978	84,709	124,695
Life Insurance	4,964	5,407	5,785	5,910	5,717	5,719	5,407	5,621	6,144	10,284
Disability	6,869	7,750	8,437	8,777	9,128	8,276	8,540	9,059	10,003	16,085
Unemployment	11,439	12,221	11,835	22,622	25,165	(61,263)	8,170	8,923	10,399	33,704
Workers' Comp	47,736	60,451	51,474	57,676	54,839	48,395	60,522	70,283	92,180	89,149
Sick Leave	41,660	53,278	48,153	54,954	72,438	53,922	(1)	(1)	(1)	(1)
Holiday	51,482	65,678	65,275	68,837	81,328	71,286	(1)	(1)	(1)	(1)
Vacation	80,910	92,929	100,228	110,849	111,305	102,654	(1)	(1)	(1)	(1)
Other Paid Leave	1,632	3,301	6,394	6,882	3,458	4,456	(1)	(1)	(1)	(1)
Uniforms	20,663	15,956	18,136	16,971	19,462	15,659	13,116	17,517	20,590	18,980
Tuition, Vision & Auto	3,398	1,606	1,197	1,498	641	121	126	144	1,668	4,892
Fringe Benefits Distribution	67,756	68,402	67, 44 6	101,584	113,084	86,894	129,294	137,337	143,114	28,722
Total	\$818.691	\$899.618	\$954.618	\$1.099.809	\$1,200,623	\$999.121	\$1.061.166	\$1,250,733	\$1,443,966	\$1.820.307

(1) Accounting change moved this costs to Salary and Wages

Table 4-15 summarizes the history of Benefits cost per platform hour for both C-TRAN's fixed route and demand responsive systems. It also shows the blended average of the fixed route and demand responsive hourly Benefits cost. During the 2000-2009 period, the blended hourly Benefits cost grew at an average annual rate of 6.7% per year, controlling for the classification change in how vacation, holiday, and sick leave is accounted for.

Table 4-15. History of Benefit Costs per Platform Hour

	2000	2001	2002	2003	2004	2005	2006 (1)	2007	2008	2009
Fixed Route: Total Benefit per Platform Hour	\$17.14	\$18.61	\$18.72	\$21.08	\$21.76	\$24.24	\$17.38	\$20.01	\$21.20	\$21.10
Demand Responsive: Total Benefit per Platform Hour	\$13.15	\$13.37	\$13.46	\$14.39	\$14.96	\$12.41	\$13.24	\$14.40	\$15.40	\$21.12
Blended: Total Benefits per Platform Hour	\$16.42	\$17.56	\$17.63	\$19.58	\$20.18	\$21.36	\$16.39	\$18.66	\$19.85	\$21.11

⁽¹⁾ Reflects accounting change moving vacation, sick leave, and holiday costs from Benefits to Salary and Wages

4.4.2.2 Forecast

The cash flow plan assumes that the Benefit cost per platform hour for both the fixed route and demand responsive systems will grow at 6% per year throughout the forecast period. When applied to the 20-year service plan, this yields a 7.4% per year growth in total agency-wide Benefit costs; which is slightly higher than observed over the past decade. The forecast of Benefit costs is detailed in Appendix G, Table 6.

The forecast anticipates that C-TRAN will continue to work with its union to find ways to mitigate the high growth in Benefits cost. For example, in September 2007 C-TRAN and the ATU agreed on a contract that established a cost sharing formula on health insurance, and contained a provision capping annual medical insurance increases at 9.5% per year. If premiums are increased by more than 9.5%, either the coverage must be renegotiated to bring the increase beneath the cap, or the employees must pay the differential between the increase and the cap.

4.4.3 Services (Appendix G, Table 7)

4.4.3.1 History

Table 4-16 shows the build-up of fixed route system Services costs for the period 2000 through 2009. Table 4-17 shows the same for the demand responsive system. While Service Costs fluctuate depending on the particular needs in a year, they generally follow a trend. However, unique Service Costs for the demand responsive system in 2009 resulted in an exceptionally high cost in 2009 that fell outside the normal range of expected costs.

Table 4-18 shows history of the Service Costs per Platform Hour for the fixed route and demand responsive systems, and a blended rate. The 2009 cost per platform hour reflects the unique service costs of the demand responsive system in that year. Controlling for the outlying 2009 data (by trending between 2000 and 2008), the blended Service Cost per Platform Hour grew at the average annual rate of 3.8%.

Table 4-16. History of Expenses for Services: Fixed Route

Fixed Route: Services	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Prof. & Tech. Svcs	\$415,267	\$462,658	\$648,912	\$505,851	\$485,633	\$271,482	\$678,500	\$468,831	\$639,165	\$400,280
Temporary Help	1,730	11,442	7,469	5,944	8,881	130,019	4,790	31,129	42,140	30,490
Contract Maint Serv	168,066	230,026	225,121	201,908	253,142	254,172	227,226	246,750	669,143	673,103
Custodial Services	95,468	86,120	103,748	103,493	99,353	104,155	105,636	117,457	119,558	98,159
Security Services	436,046	437	0	0	0	0	231,560	237,449	192,867	
Printing	199,349	152,682	111,332	122,225	92,273	138,919	126,588	201,560	190,027	110,473
Taxi Subsidy	0	5,000	0	0	0	. 0	. 0	0	. 0	
Security-Police	0	101,218	32,124	31,345	50,652	1,342	0	0	0	
Security-Private	0	284,092	301,929	297,997	130,887	166,735	2,080	2,230	1,925	226,237
Other Services	0	0	0	0	10,457	34,377	82,521	95,912	185,956	213,747
Total Services	\$1,315,926	\$1,333,675	\$1,430,635	\$1,268,763	\$1,131,278	\$1,101,201	\$1,458,901	\$1,401,318	\$2,040,781	\$1,752,489

Table 4-17. History of Expenses for Services: Demand Responsive

Demand Resp. Svcs	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Prof. & Tech. Svcs	\$18,173	\$54,622	\$46,406	\$42,813	\$18,599	\$16,719	\$18,447	\$22,889	\$29,585	\$112,553
Temporary Help	0	7,736	4,218	0	0	0	0	0	0	2,460
Contract Maint Serv	30,679	29,210	26,947	27,097	45,157	44,794	49,648	33,377	71,567	200,267
Custodial Services	0	0 :	0	0	0	0	0	0	0	23,983
Security Services	0	0	0	0	0	0	0	0	0	
Printing	4,756	7,660	5,526	9,593	5,515	3,855	4,511	3,684	8,207	28,270
Taxi Subsidy	2,185	2,541	2,220	2,675	3,178	2,682	3,441	4,815	4,794	3,232
Security-Police	0	. 0	0	0	0	0	0	0	0	
Security-Private	. 0	0	0	0	. 0	0	0	0	0	63,220
Other Services	0	0	0	0	0	0	1	0	1,370	250,019
Total Services	\$55,793	\$101,769	\$85,317	\$82,178	\$72,449	\$68,050	\$76,048	\$64,765	\$115,523	\$684,003

Table 4-18. History of Service Costs per Platform Hour

Service Cost per											1							
Platform Hour		2000	- 1	2001		2002	1	2003		2004		2005	2006	:	2007	2008	- 1	2009
Fixed Route	- 1	\$4.63		\$4.98	1	\$5.27	1	\$4.80	-	\$4.29		\$4.40	\$5.74	1	\$5.13	\$6.57	-	\$5.77
Demand Responsive		\$0.90		\$1.51		\$1.20		\$1.08		\$0.90		\$0.85	\$0.95		\$0.75	\$1.23		\$7.94
Blended		\$3.96		\$4.28		\$4.43		\$3.97		\$3.50		\$3.54	\$4.59	7.37	\$4.07	 \$5.33		\$6.25

4.4.3.2 Forecast

The forecast of Service costs is detailed in Appendix G, Table 7. The forecast assumes for the fixed route system and demand responsive system that the Service cost per platform hour grows at 4.0% per year, consistent with recent historical trends controlling for the outlying expenses in 2009.

4.4.4 Fuel Costs (Appendix G, Table 8)

4.4.4.1 History

The history of C-TRAN fuel costs by type of service is shown in Table 4-19

Table 4-19. History of Fu	uel Costs
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Fixed Route	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Fuel Costs	\$1,003,421	\$787,186	\$714,838	\$862,362	\$1,155,780	\$1,510,333	\$1,728,874	\$2,041,838	\$3,157,695	\$1,765,967
Fuel Cost per Platform Hour	\$3.53	\$2.94	\$2.63	\$3.26	\$4.39	\$6.04	\$6.80	\$7.48	\$10.17	\$5.82
Demand Response	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Fuel Costs	\$124,515	\$106,565	\$97,392	\$136,092	\$194,914	\$275,652	\$349,712	\$394,339	\$580,609	\$309,395
Fuel Cost per Platform Hour	\$2.00	\$1.58	\$1.37	\$1.78	\$2.43	\$3.42	\$4.36	\$4.54	\$6.19	\$3.59
Total Blended	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Fuel Costs	\$1,127,936	\$893,751	\$812,230	\$998,454	\$1,350,694	\$1,785,985	\$2,078,586	\$2,436,177	\$3,738,304	\$2,075,361
Fuel Cost per Platform Hour	\$3.25	\$2.67	\$2.37	\$2.93	\$3.93	\$5.40	\$6.22	\$6.77	\$9.24	\$5.32

4.4.4.2 Forecast

The forecast of fuel costs applies a fuel cost per platform hour factor for each of the fixed route and demand responsive systems to the applicable number of platform hours. Since fuel prices fluctuate based on the contract prices of diesel, the 2010 fuel cost per platform hour were estimated by averaging 2009 and 2008 factors. The forecast escalates those rates by 5% per year through 2030. The forecast is shown in Appendix G, Table 8.

4.4.5 Supplies Other than Fuel Costs (Appendix G, Table 9)

4.4.5.1 History

Table 4-20 and 4-21 (on the following page) shows the Supplies costs, other than fuel costs, for the period 2000 through 2009. Aggregating fixed route and demand responsive total annual costs, Supplies (excluding fuel) costs grew at an average annual rate of 2.8%. Tables 4-20 and 4-21 also show the cost of Supplies (excluding fuel) per platform hour for fixed route and demand responsive services. Aggregating fixed route and demand responsive per platform hour costs, the Supplies (excluding fuel) costs per platform cost grew at an average annual rate of 1.5%.

4.4.5.2 Forecast

The build-up of the forecast of Supplies (excluding fuel cost) cost is shown in Appendix G, Table 9. These costs are forecast by applying per platform hour costs for the demand responsive and fixed route systems to the applicable platform hours each year. The forecast assumes for the fixed route system and demand responsive system that the Supplies cost per platform hour grows at 2.0% per year, 1/3rd higher than the historic rate. The Supplies costs associated with CRC LRT extension are incorporated in the CRC LRT O&M contract costs.

Table 4-20. History of Supplies (Other than Fuel): Fixed Route Service

Fixed Route	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Tires & Tubes	\$169,970	\$188,073	\$168,894	\$79,086	\$108,221	\$126,600	\$100,598	\$149,536	\$158,694	\$117,505
Part & Materials	1,095,129	639,430	651,567	781,808	744,468	774,657	1,074,267	1,082,816	1,268,505	1,304,419
Lubricants	58,112	53,151	62,191	43,490	41,712	39,348	77,057	62,295	75,917	65,922
Operating Supplies	143,432	192,874	176,301	208,301	129,246	173,200	189,971	155,885	180,393	90,758
Small Tools & Equip	12,568	52,992	125,049	48,098	45,101	25,560	56,220	72,168	155,399	140,890
Office Supplies	26,313	29,928	35,052	32,061	35,821	32,675	37,520	53,503	50,052	49,892
Total Supplies (exc. Fuel)	\$1,505,524	\$1,156,448	\$1,219,054	\$1,192,844	\$1,104,569	\$1,172,040	\$1,535,633	\$1,576,203	\$1,888,960 ·	\$1,769,386
Other Supply Cost/Hour	\$5.29	\$4.31	\$4.49	\$4.51	\$4.19	\$4.69	\$6.04	\$5.77	\$6.08	\$5.83

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Demand Responsive	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Tires & Tubes	\$28,827	\$40,922	\$33,978	\$5,373	\$10,285	\$19,202	\$30,705	\$33,440	\$28,586	\$26,565
Part & Materials	90,777	126,310	126,935	121,445	101,602	122,732	168,511	187,713	197,749	198,601
Lubricants	4,369	4,944	7,831	5,504	5,103	5,708	8,411	9,662	11,207	14,511
Operating Supplies	2,422	4,915	3,012	9,991	11,370	3,085	6,221	3,478	2,370	15,771
Small Tools & Equip	0	0	3,256	273	0	446	892	3,399	141	54,715
Office Supplies	6,123	7,779	7,638	6,812	6,970	3,512	4,032	5,606	5,246	16,903
Total Supplies (exc. Fuel)	\$132,518	\$184,870	\$182,650	\$149,398	\$135,330	\$154,685	\$218,772	\$243,298	\$245,299	\$327,067
Other Supply Cost per Hour	\$2.13	\$2.75	\$2.57	\$1.95	\$1.69	\$1.92	\$2.73	\$2.80	\$2.62	\$3.80

4.4.6 Utility Expenses (Appendix G, Table 10)

4.4.6.1 History

Table 4-22 shows the Utility Expenses for the period 2000 through 2009 for all services (fixed route and demand responsive). During this period, <u>total</u> Utility Expenses grew by an average annual growth rate of 3.8%. The Utility Cost <u>per platform hour</u> increased by an average annual rate of 2.4%.

Table 4-22. History of Utility Expenses: All

Agency wide Utilities	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Electricity	\$76,921	\$94,199	\$100,870	\$116,408	\$109,867	\$110,514	\$119,570	\$124,656	\$121,242	\$139,127
Natural Gas	\$24,032	\$22,681	\$21,390	\$17,986	\$27,114	\$24,866	\$34,024	\$43,419	\$32,716	\$42,018
Communications	\$166,315	\$182,222	\$184,989	\$186,619	\$196,614	\$203,935	\$210,885	\$212,972	\$232,254	\$232,459
Postage/Delivery	\$31,312	\$30,063	\$25,379	\$28,767	\$37,443	\$39,675	\$4,687	\$4,389	\$6,538	\$286
Water	\$15,739	\$14,444	\$15,979	\$16,018	\$17,841	\$14,982	\$17,573	\$17,296	\$20,516	\$20,322
Sewer	\$8,052	\$10,792	\$13,428	\$14,419	\$19,821	\$27,960	\$34,621	\$38,319	\$34,609	\$36,575
Garbage	\$22,650	\$21,428	\$20,393	\$22,173	\$23,531	\$20,183	\$23,277	\$24,865	\$21,237	\$25,580
Hazmat Disposal	\$15,760	\$6,978	\$6,357	\$11,036	\$6,651	\$9,257	\$8,726	\$6,051	\$7,295	\$6,332
Total Utilities	\$360,781	\$382,807	\$388,785	\$413,426	\$438,882	\$451,372	\$453,363	\$471,967	\$476,407	\$502,699
Cost per Hour	\$1.04	\$1.14	\$1.14	\$1.21	\$1.28	\$1.37	\$1.36	\$1.31	\$1.18	\$1.29

4.4.6.2 Forecast

The build-up of the forecast of Utilities cost, which is based on applying per platform hour costs to the platform hours provided each year, is shown in Appendix G, Table 10. The forecast uses a blended utility cost per platform hour rate for both the fixed route and demand responsive system, which is assumed to grow at 3.0% per year, slightly higher than the growth rate over the past decade.

4.4.7 Insurance, Tax, Lease, and Miscellaneous Expenses (Appendix G, Table 11)

4.4.7.1 History

C-TRAN maintains several insurance policies, including fleet physical damage subject to \$60,000 deductible on coaches and \$5,000 on service vehicles, building and contents, public liability, excess liability with a \$2,000,000 deductible, and others. All other risks arising from vehicle accidents are retained by C-TRAN. The Board of Directors each year sets aside \$3,000,000 of investments for self-insurance to cover deductibles and other uncovered claims.

Miscellaneous expenses include advertising, training, bad debt, and other miscellaneous expenses. Pre-2006 taxes included the use tax on transit services; this tax no longer applies. The remaining tax expenses include license fees, including the license fee on underground storage

4-20 Finance Plan Draft Report

tanks. Lease expenses include facility and equipment leases, and are primarily driven by a lease for administrative facility space.

Table 4-23 shows the history of these expenses over the 2000 through 2009 period; as shown they have fluctuated based in large part on varying insurance needs and the amount of leased space required each year.

Table 4-23. History of Insurance, Tax, Lease, and Miscellaneous Expenses

Fixed Route	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Insurance	\$246,140	\$260,593	\$363,602	\$304,687	\$149,939	\$91,586	\$249,813	\$112,085	\$51,249	\$569,595
Leases	\$388,927	\$394,039	\$399,404	\$395,370	\$322,374	\$303,947	\$291,554	\$248,816	\$194,189	\$163,293
Taxes	\$12,885	\$13,718	\$14,383	\$22,494	\$24,651	\$32,422	\$16,520	\$2,941	\$2,177	\$4,034
Misc.	\$215,322	\$260,277	\$231,379	\$166,923	\$144,731	\$150,722	\$218,988	\$341,860	\$327,201	\$408,079
Total	\$863,274	\$928,627	\$1,008,768	\$889,474	\$641,695	\$578,677	\$776,875	\$705,702	\$574,996	\$1,145,001
F.R Misc. Cost/Hour	\$3.03	\$3.46	\$3.72	\$3.37	\$2.44	\$2.31	\$3.06	\$2.59	\$1.85	\$3.77
Demand Responsive	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Insurance	\$72,574	\$103,974	\$69,724	\$8,316	\$116,975	\$12,852	\$70,594	\$88,156	\$85,762	\$43,523
Leases	\$13,990	\$18,416	\$20,249	\$20,327	\$49,193	\$84,008	\$84,398	\$31,341	\$21,617	\$41,175
Taxes	\$0	\$0	\$0	\$30	\$0	\$85	\$55	\$0	\$0	\$1,372
Misc.	\$7,611	\$4,065	\$6,377	\$5,498	\$5,824	\$2,805	\$6,491	\$5,969	\$4,049	\$87,312
Total	\$94,175	\$126,455	\$96,350	\$34,171	\$171,992	\$99,750	\$161,538	\$125,466	\$111,428	\$173,382
D.R. Misc. Cost/ Hour	\$1.51	\$1.88	\$1.36	\$0.45	\$2.14	\$1.24	\$2.02	\$1.44	\$1.19	\$2.01
Total/Blended	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Misc. Cost/Hour	\$2.88	\$3.27	\$3.51	\$3.26	\$2.37	\$2.16	\$2.88	\$2.41	\$1.70	\$3.38

4.4.7.2 Forecast

The build-up of the forecast of all of these costs is shown in Appendix G, Table 11. The forecast of tax, insurance, and lease expenses is based on per platform hour factors. Insurance costs are inflated at 3% per year. Miscellaneous, taxes, and lease costs are all calculated based on separate per platform hour factors for fixed route and demand responsive services, starting from the 2009 value. The per platform hour cost of Miscellaneous costs grow at 1% per year, of Lease costs at 2.3% per year, and of Tax costs at 1% per year.

4.4.8 Contract Service (TriMet for LRT O&M Expenses) (Appendix G, Table 1, Line U)

It is anticipated that CRC LRT operations will be undertaken by TriMet under an intergovernmental agreement between C-TRAN and TriMet. Based on work to date, it is assumed that TriMet will operate and maintain the light rail vehicles and systems, and that the costs of these "shared" functions will be allocated between the districts by formula. Other light rail-related functions (such as maintaining and operating stations and park-and-rides) will be undertaken and paid for by the transit district where the function is located.

The cost of operating and maintaining the CRC LRT extension is estimated using the methodology described in Operations and Maintenance Cost Models (See Appendix E, Exhibit 7). Costs are based on TriMet's current cost of light rail operations with a few adjustments to account for the higher relative number of park and ride facilities associated with the CRC project. The calculations of these costs are shown in Forecasts of Transit Operations and Maintenance Cost Report (See Appendix E, Exhibit 8). C-TRAN's share of these costs shows as a Contracted Services cost in the 20-year cash flow plan shown in Appendix G, Table 1, Line U.

4.4.9 Innovative Programs Expenses (Appendix G, Table 12)

The cash flow plan assumes that C-TRAN will operate several relatively small Innovative Programs, including vanpool operation, travel demand options, flexcar, transit oriented development, regional rideshare coordination, and travel smart marketing programs. A \$200,000 allowance (in current dollars) is assumed for these programs, which inflates at 3.0% through 2011, then 5% per year throughout the remainder of the forecast period for the Vanpool program and at 10% per year for the other innovative programs. The build-up of the forecast of these costs is shown in Appendix G, Table 12.

4.4.9 Total Operating Expenses (Appendix G, Table 1, Line W)

The Total Operating Expenses shown in Line item W of the 20-Year Cash Flow Plan (Table 1, Line W) is the cumulative total of the expenses discussed in Sections 4.4.1 through 4.4.8.

Table 4-24 shows the 10-year historic trend in Total Operating Expense, which exhibited an average annual growth rate of 3.7% per year.

Table 4-24. History of Total Operating Expenses

Year	Total Operating Expense
1999	\$25,871,069
2000	\$23,093,862
2001	\$22,948,537
2002	\$25,155,292
2003	\$25,218,426
2004	\$25,934,402
2005	\$25,890,317
2006	\$28,810,798
2007	\$32,076,750
2008	\$37,456,291
2009	\$37,270,754

In comparison to historic trends, the 20-year cash flow forecast of Total Operating Expenses exhibits an almost 6.5% annual average growth rate.

4.5 Capital Revenues

4.5.1 Capital Grants (Appendix G, Table 4)

4.5.1.1 History

Historically C-TRAN has used its Section 5307 formula grant funds for capital expenditures. In addition, C-TRAN has received Section 5309-Bus grants, CMAQ grants, state Regional Mobility Grants, and state special needs transportation grants. For the past couple of years C-TRAN's capital program employed large amounts (for C-TRAN) of Section 5309-Bus grants that it had compiled but had not expended over several years. Thus, the capital revenues sources for 2006 through 2008 are not indicative of future grant levels.

4.5.1.2 Forecast

The forecast of Capital Grants, shown in Appendix G, Table 4, assumes that C-TRAN's use of Section 5307 funds for capital projects will continue, at least in part, over the forecast period. About 54% of the capital plan is anticipated to be funded with grants from the federal government, state, or other third parties. Of that total, about 40% is anticipated to come from the formula Section 5307 program.

4.5.2 Transfer from General Fund (Appendix G, Table 1, Line AN)

The capital plan is anticipated to be paid with bond proceeds, grants, and "pay-go" cash (i.e.; transfers from the General Fund). General Fund transfers are anticipated to cover about 27% of the program. These transfers are illustrated in Line AN of Table 1.

4.5.3 Bond Proceeds (Appendix G, Table 17 and 18)

While C-TRAN has historically not bonded for project funding, under the 20-year plan C-TRAN must bond about \$73 million in net project revenues over the 20-year period. The bond sizing computations are detailed in Appendix G, Table 17.

4.6 Capital Expenses

Capital expenditures include all agency-wide capital expenses for rolling stock, including vehicle replacement, facilities, and equipment needed to implement the 20-year cash flow plan. This line item excludes CRC LRT Capital Costs, which are addressed in Section 2 of this report. No linkage is required between the CRC LRT capital plan and the capital expenses included in the agency-wide systems plan because the capital finance plan for CRC LRT extension does not include any C-TRAN revenues. Table 4-25 shows the history of C-TRAN's capital program over the past five years.

Table 4-25. C-TRAN Capital Program History (1)

•	2005	2006	2007	2008	2009
Capital Program Costs					
Fixed Route Vehicles		Billion (1 a libertalistic 1997 (nd a a cili a 1904 (nd di a cili a 1904 (nd	nako (1945 ka ka 1948) na a (1946 ka 1946) ka (1946 ka 1946) na a (1946 ka 1946) na anak	\$11,357,216	\$2,607,372
Paratransit vehicles		\$558,636	\$404,896	\$517,183	\$306,658
Service Vehicles		\$108,703	\$721,071		\$68,884
Vanpool Vans				\$198,010	
Engines and transmissions	\$85,200	\$84,786	\$135,673		
Diesel Retrofit Program			\$417,838	\$426,472	
Intelligent Transportation Project	\$2,310,700	\$804,390	\$21,965	\$71,420	
Bus Stop Program			\$23,411	\$16.119	
Transit Center Security Project			\$24,700	\$422,011	
Computer Systems	\$8,500		\$87,337	\$1,695,821	
Bus Shelters for Vancouver CBD			\$150,720		
Air conditioning unit			\$31,559		
Cameras for paratransit vehicles		\$192,009	\$32,328		
Fueling system		\$180,333			
Software Upgrade					\$2,149,351
Misc.	\$7,759	\$64,180	\$86,807	\$47,255	
99th St Transit Center	\$124,100	\$167,641	\$10,014,283		\$219,156
Salmon Creek Park and Ride					\$142,021
Data Terminals for Paratransit				\$92,729	
AOM Facility	\$86,500	\$2,565,590	\$30,802		
Total Capital Projects Cost	\$2,622,759	\$4,726,268	\$12,183,390	\$14,844,236	\$5,493,442

⁽¹⁾ Major capital expenditures as identified in each year's CAFR.

4.6.1 Rolling Stock (Appendix G, Table 13)

The capital plan for rolling stock shown in Appendix G, Table 13 includes a continuing program of fixed route and paratransit vehicle acquisition and replacement, an on-going program of vehicle component (i.e. engine, transmission, etc.) replacement; maintenance vehicle replacement, and vanpool vehicle acquisition and replacement. Unit costs for these items are assumed to escalate at 3% per year.

4.6.2 Facilities (Appendix G, Table 14)

The facilities plan shown in Appendix G, Table 14 includes improvements to the maintenance and administrative office facilities, park-and-rides, and other similar improvements. These costs are assumed to escalate at 3% per year.

4.6.3 Equipment (Appendix G, Table 15)

The equipment plan shown in Appendix G, Table 15 includes completion of the ITS/VAST program (acquisition and installation of vehicle locators, passenger counters, automated fare collection, maintenance software, and traveler information equipment), computer system upgrades, a program of passenger amenity equipment on buses and buildings, a program of

office equipment and computers replacement and upgrades, and other miscellaneous capital repair and replacement. These costs are assumed to escalate at 3% per year.

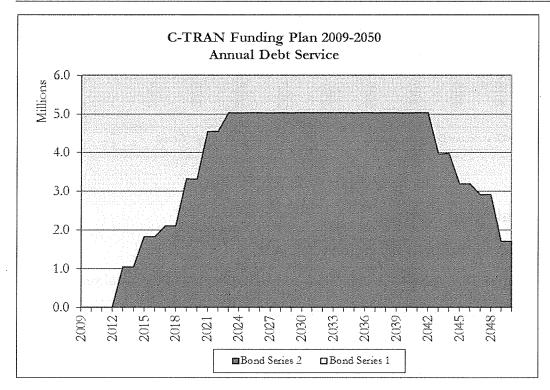
4.6.4 BRT Improvements (Appendix G, Table 16)

C-TRAN's 20-year plan includes development of two BRT lines. These BRT projects are described in the 20-year plan provided in Appendix H, Exhibit 10. The cost build-up of the cost of the BRT improvements is shown in Appendix G, Table 16.

4.6.5 Debt Service Payments (Line X, Appendix G, Table 1)

The resulting debt service requirements and bond coverage is illustrated in the figures shown below.

Figure 4-1. C-TRAN Funding Plan 2009-2050



C-TRAN Funding Plan 2009-2030: Debt Service Coverage 8.00 45.00 40.00 7.00 35.00 6.00 30.00 5.00 25.00 4.00 20.00 3.00 15.00 2.00 10.00 1.00 5.00 0.00 2017 2025 2029 2023 2027 2021 Debt Service Coverage (Net) Debt Service Coverage (Gross)

Figure 4-2. C-TRAN Funding Plan 2009-2030

4.7 General Fund Results

4.7.1 Beginning Balance (Appendix G, Table 1, Line Y)

Beginning balance represents the total reserve funds on hand at the start of the fiscal year.

4.7.2 Net Operating Income (Appendix G, Table 1, Line X)

For each year, the Net Operating Income (NOI) represents the difference between Total Operating Revenues and Total Operating Expenses for that year. A negative NOI means that operating costs exceeded operating revenues for that year.

4.7.3 Insurance Reserve (Appendix G, Table 1, Line AE)

In addition to insurance policies it purchases (discussed earlier), C-TRAN maintains an insurance reserve equal to \$3 million per year. These funds are only expended if and when damage awards exceed or are not covered by the purchased insurance coverage.

4.7.4 Beginning Year Cash Reserves Net of Insurance Reserve (Appendix G, Table 1, Line AF)

The Beginning Year Cash Reserve Net of Insurance Reserves shown in Line AF is the difference between Beginning Balance shown in Line Y and the Insurance Reserve shown in Line AE. This

represents the amount of funds available to C-TRAN that could be used to cover unanticipated costs or unanticipated revenue shortfalls, while continuing to maintain its Insurance Reserve.

4.7.5 Beginning Year Cash Reserve Net of Insurance Reserve as a Percent of Annual Operating Costs (Appendix G, Table 1, Line AG)

The percentages shown in Line AG are the result of dividing the Beginning Year Cash Reserve Net of Insurance Reserve in Line AF by the Total Operating Expenses shown in Line W. It represents the percentage of annual operating expenses that could be paid with the Working Capital Net of Insurance Reserve for that year.

4.7.6 Beginning Year Cash Reserve Net of Insurance Reserve in Months of Operating Costs (Appendix G, Table 1, Line AH)

Line AH shows the amount of annual operating expenses, expressed in months of operations, which could be paid with the Beginning Year Cash Reserve Net of Insurance Reserve for that year.

4.8 Financial Results

4.8.1 Analysis of C-TRAN Agency-wide Plan

The C-TRAN agency-wide cash flow plan is considered financially feasible if:

- All operating expenses required to maintain system service, including the C-TRAN share of CRC LRT O&M costs are met throughout the cash flow period,
- All capital expenses, including vehicle replacement, required during the cash flow period are met.
- The self-insurance reserve is maintained at targeted levels, and
- The working capital net of the insurance reserve provides at least 2-months of working capital throughout the cash flow period.

As shown in Table 4-26, based on the assumptions described above these criteria are met throughout the cash flow period. The planned increase in the sales and use tax rate is crucial to achieving this result.

Year	Beginning Year Cash Reserve after Insurance	Beginning Year Cash Reserve as % of Annual Operating Costs	Cash Reserve in Months of Op. Cost
2010	\$45,875,657	120%	14.3
2011	\$32,951,614	82%	9.9
2012	\$26,130,862	61%	7.3
2013	\$32,767,407	69%	8.3
2014	\$37,823,813	76%	9.1
2015	\$41,303,759	78%	9.3
2016	\$43,557,797	78%	9.3
2017	\$45,946,172	77%	9.3
2018	\$47,970,118	72%	8.6
2019	\$41,617,118	55%	6.6
2020	\$37,282,627	46%	5.5
2021	\$35,731,414	42%	5.0
2022	\$35,232,722	39%	4.7
2023	\$34,755,080	37%	4.5
2024	\$34,020,064	35%	4.2
2025	\$33,352,358	32%	3.8
2026	\$29,745,559	27%	3.2
2027	\$31,812,626	28%	3.3
2028	\$32,945,372	27%	3.3
2029	\$33,090,823	26%	3.1
2030	\$33,298,389	25%	2.9

4.8.2 Risks and Uncertainties

This section addresses risks to the agency-wide operating finance plan. These risks include such factors as lower-than-expected growth in sales and use tax revenues or higher-than-expected growth in wages and/or benefit costs. Two sensitivity analyses were performed to examine the potential impact of these risks on C-TRAN's operating condition.

The purpose of these tests was to determine a representative management response to a poorer than expected operating result. The objective is to determine operating policy changes that would bring the Beginning Year Cash Reserve Net of the Insurance Reserve to at least 12% of annual operating expenses. The responses included in the sensitivity test are representative examples of how management could react to a scenario; a large array of other responses is possible.

Sensitivity Test 1 examines a scenario in which the underlying (excluding any increases in the sales tax rate) growth in sale tax proceeds is 10% less than the base assumption. A Beginning Year Cash Reserve Net of the Insurance Reserve of at least 12% of annual operating costs throughout the entire plan period can be achieved by:

- Reducing the growth of the innovative programs to 3% per year;
- Raising the fare increases beginning in 2020 by 5-cents above the base plan increase; and

• Reducing the growth in ADA service platform hours beginning in 2020 to 3% per year

Sensitivity Test 2 examines a scenario in which the rate of growth in wage costs is 10% higher than the base assumption. A Beginning Year Cash Reserve Net of the Insurance Reserve of at least 12% of annual operating costs throughout the entire plan period can be achieved by:

- Raising the fare increases beginning in 2020 by 5-cents above the base plan increase; and
- Reducing the growth in ADA service platform hours beginning in 2020 to 3% per year

The 20-year cash flow tables for each of these sensitivity tests are provided in Appendix G, Tables 19 and 20.

It should be noted that, as discussed at the beginning of this section, C-TRAN has steered through extremely turbulent times caused by the loss of one-half of its tax revenues in the early part of the decade. C-TRAN was able to manage its way through this period while maintaining its fundamental services and securing voter approval for a tax measure to sustain long-term operations. This record of being able to address difficult times is indicative of C-TRAN's ability to address unanticipated risks in the future.

CRC Toll Traffic & Revenue Projections — Annual Transactions, Gross Revenue, and Net Revenue — FY 2019-59 Scenario 1A Base

	Weighted	Annual	Gross	Plus:	Plus:	Less:	Adjusted Gross	Less:	Less:	Less:	Less:	Less:	Less:	Net Toll	Less:	Net Toll	NPV of Net Revenue
Fiscal	Average	Bridge Toll	Toll •	Pay-by-Plate	Add'l Fees &	Uncol-	Toll -	Credit		Add'l Collection		Bridge	Periodic Tolling	Revenue	Periodic	Revenue	Before R&R in FY
Year	Bridge	Transactions	Revenue	Fee Revenue	Transponder	lectible	Revenues	Card	Collection O&M		O&M Costs	Insurance	Rehab & Repair	Before Periodic	Facility Rehab	After	2016
	Toll Rate ¹	Bridge Span	Potential	(\$ millions)4	Sales	Accounts	(\$ millions)	Fees	Costs	Costs	(\$ millions) ¹⁰	Premium	Costs	R&R Costs	& Repair Costs	Periodic	@ 6.5%
		(millions)2	(\$ millions)3	(a minions)	(\$ millions) ⁵	(\$ millions) ⁶		(\$ millions) ⁷	(\$ millions) ⁸	(\$ millions)9	(3 1111110115)	(\$ millions) ¹¹	(\$ millions)	(\$ millions)	(\$ millions)	Tolling R&R	(\$ millions)
					(\$ 116010115)	(* 11miio112)		(3 minions)	(3 1111110115)	(# HIIIIIO(15)		(4 (1)(1)(1)(1)	(* 1111110715)		(* timilotis)	Costs	l II
			į.													(\$ millions)	
2019	\$2.72	37.49	102.10	11.72	3.23	(5.69)	111.35	(5.01)	(29.24)	(3.23)	(2.39)	(2.03)		69.46		69.46	57,50
2020	\$2.79	42.59	119.00	12.44	3.31	(6.57)	128.18	(4.42)	(31.42)		(2.45)	(2,08)		84.50		84.50	65.68
2021	\$2.86	45.57	130.40	12.32	3.39	(7.14)	138.98	(4.79)	(32.12)	(3.39)	(2.51)	(2.13)		94.03		94.03	68.63
2022	\$2.93	46.34	135.80	11.56	3.47	(7.37)	143.47	(4.95)	(31.59)	(3.47)	(2.57)	(2.19)	// 00	98.69		98.69	67,64
2023	\$3.01	47.09	141.70	10.75	3.56	(7.62)	148.39	(5.12)	(31.01)	(3.56)	(2.64)	(2.24)	(4.90)	98.92	(2.23)	96.69	63.65
2024	\$3,08	47.87	147.30	9.93	3,65	(7.86)	153.02	(5.28)	(30.63)	(3.65)	(2.70)	(2.30)	(0.47)	108.46		108.46	65,53
2025	\$3.16	48.67	153.80	9.03	3.74	(8.14)	158.43	(5.47)	(29.94)	(3.74)	(2.77)	(2.35)	(6.47)	107.69		107.69	61.10
2026 2027	\$3,24	49.48	160.10	8.11	3,83	(8.41)	163.63	(5,65) (5,88)	(29.29)	(3,83)	(2.84) (2.91)	(2.41)		119.61		119.61	63.72
	\$3.32	50.30	167.00	8.27	3.93	(8.76)	170.43	(6.12)	(29.85)			(2.47)	(E E A)	125.39	(2.50)	125.39	62.72
2028 2029	\$3,40	51,15	174.00 181.50	8.47 8.61	4.03 4.13	(9.12) (9.51)	177.38 184.73	(6.12)	(30.50) (31.02)	(4.03) (4.13)	(2.98) (3.06)	(2.54) (2.60)	(5.54)	125,67 137,55	(2.52)	123.15 137.55	59.02
2029	\$3,49 \$3,57	52.00 52.88	181.50		4.13	(9.89)	192.13	(6.63)	(31.02)	(4.13)	(3.13)	(2.60)		143.64		143.64	60.66 59.48
2030	\$3.66	53.75	196.90	8.96	4.34	(10,29)	199.90	(6.90)	(32.46)	(4.34)	(3.21)	(2.73)		150,27		150.27	58,43
2032	\$3,76	54.30	204.00	9.12	4.45	(10,66)	206.91	(7.14)	(33.02)	(4.45)	(3.29)	(2.80)	(7.69)	148.53		148.53	54.23
2031 2032 2033	\$3.76	54.84	211,10	9.21	4.56	(11.02)	213.85	(7.38)	(33.44)		(3.38)	(2.87)	(6.27)	155,97	(34,21)	121.76	53,47
o 2034	\$3.95	55.38	218.60	9.34	4.67	(11.40)	221.21	(7.63)	(33.93)		(3.46)	(2.94)	(0.27)	168.58	(01,21)	168.58	54,26
	\$4.05	55,93	226.30	9.46	4.79	(11,79)	228,76	(7.89)	(34.43)		(3.55)	(3.01)		175.09		175.09	52,92
2035 2036 2037 2038	\$4,15	56.49	234.20	9.62	4.91	(12.19)	236.53	(8.16)	(35.29)	(4.91)	(3.63)	(3.09)		181.46		181.46	51.50
2037	\$4.25	57.06	242.60	9.73	5.03	(12.62)	244.74	(8.44)	(35.75)	(5.03)	(3.73)	(3.17)		188.62		188.62	50.26
2038	\$4.36	57,63	251.00	9.86	5.16	(13.04)	252.97	(8.73)	(36.28)	(5.16)	(3.82)	(3.25)	(7.10)	188.65	(3.23)	185.42	47.20
2039	\$4.47	58.20	259.90	9.99	5.29	(13,49)	261.68	(9.03)	(36.82)	(5.29)	(3.91)	(3.33)	(9.14)	194.17		194.17	45.62
2040	\$4.58	58.78	269.00	10.16	5.42	(13.96)	270.62	(9.34)	(37.45)	(5.42)	(4,01)	(3.41)		211.00		211.00	46,55
2041	\$4.69	59.36	278.50	10.27	5.55	(14.44)	279.89	(9.66)	(37.96)	(5.55)	(4.11)	(3.49)		219.11		219.11	45,39
2042	\$4.81	59.96	288.30	10.42	5.69	(14.94)	289.48	(9.99)	(38.87)		(4.22)	(3.58)		227,13		227.13	. 44.18
2043	\$4.93	60.56	298.60	10.57	5.83	(15.46)	299.55	(10.33)	(39.46)		(4.32)	(3.67)	(8.03)	227.90	(3.65)	224.25	41.62
2042 2043 2044 2045 2046 2047	\$5.05	61.17	309.20	10.77	5.98	(16.00)	309.95	(10.69)	(40.15)		(4.43)	(3.76)		244.93		244.93	42.00
S 2045	\$5.18	61.78	319.90	10.88	6.13	(16.54)	320.37	(11.05)	(40.68)		(4.54)	(3.86)		254.11		254.11	40.91
₹ 2046	\$5.31	62.40	331.30	11.04	6.28	(17,12)	331.50	(11.44)	(41.34)		(4.65)	(3.95)	(10.87)	252.97		252.97	38.25
2047	\$5,44	63.02	342.90	11.20	6.44	(17.70)	342.83	(11.83)	(41.98)		(4.77)	(4.05)	(0.00)	273.77	(40.54)	273.77	38,86
2048	\$5.58	63.64	355.00	11.39	6.60	(18.32)	354.67	(12.24)	(43.10)		(4.89)	(4.15)	(9.08)	274.60		225.06	36.60
2049	\$5.71	64,29	367.40	11.55	6.77	(18.95)	366.77	(12.65)	(43.72)		(5.01) (5.14)	(4.26) (4.36)		294,36 305,61		294.36 305.61	36,84 35,92
2050 2051	\$5.86		380.50 393,90	11.72 11.90	6.93 7,11	(19.61) (20.29)	379,54 392,62	(13.09) (13.55)	(44.40) (45.13)		(5.14)	(4.47)		317.09		317.09	34,99
2051	\$6.01	65.58 66.24	407,70	12.11	7.11	(20.29)	406.11	(14.01)	(45.93)		(5.40)	(4.47)		328.90		328.90	34,99
2052	\$6.15 \$6.31	66.91	422.00	12.11	7.47	(21.71)	420.02	(14.01)	(46.58)		(5.53)	(4.70)	(23.19)	318.06		313.39	30.94
2053	\$6.47	67.58	422.00		7.65	(22,48)	434.74	(15.00)	(47.83)			(4.70)	(20,10)	353,77	(4.07)	353.77	32,32
2055	\$6,63	68.25	452.50		7.85	(23.26)	449,74	(15.52)	(48.59)		(5.81)	(4.94)		367.04		367.04	31.48
2056	\$6.80	68.92	468,40	12.87	8.04	(24.06)	465,25	(16.05)	(49,46)		(5.96)	(5.06)		380,68		380.68	30.66
2057	\$6.96	69.61	484.80	13.05	8.04	(24.89)	481.00	(16.59)	(49.80)		(6.10)	(5.19)		395.27		395.27	29.89
2058	\$7,14		502.00		8.04	(25.76)	497,53	(17.16)	(50,21)		(6.26)	(5.32)	(11.63)	398,92	(5.29)		28,33
2059	\$7.32		519.60		8.04	(26.65)	514.45	(17.75)	(50.62)		(6.41)	(5.45)		426.17		426.17	28.42
Totals FY 2		-	-						-, 10-100								
Totals FY 2		1,626	6,639	301.99	141.60	(347.05)	6735.54	(233.55)	(1040.87)			(89.13)		5,050.44		4,955.07	1,597.59
Totals FY 2	019-58	2,298	10,955	425,82	216,79	(569.06)	11028.85	(381.66)	(1512.51)	(216.79)	(161,01)	(136.83)	(109.91)	8,510.15	(105.33)	8,011.19	1,923.04
Footnotes					*												

Footnotes

- 1 Reflects the average revenue per passenger car equivalent based on time-of-day variable weekday & weekend toll structures.
- ² Annual volume of vehicles subject to tolls in each travel direction tolled, net of ramp up adjustments; includes autos and trucks.
- ³ Excludes toll surcharge revenue assessed to customers without transponders for pay-by-plate (photo tolling/license plate list).
- ⁴ Revenue from initial pay-by-plate fees assessed for photo toll payment to cover the average additional collection cost by vendor.
- 5 Revenue from transponder sales and fees from additional pay-by-plate cost recovery efforts by the State; net revenue neutral.
- ⁶ Approximately a 2.5% deduction for revenue loss due to evasion, processing errors & uncollectible accounts.
- ⁷ Credit card fees estimated at 3,45% of annual gross toll and fee revenues; 4.5% in first year to capture higher account refund activity.
- ⁸ Includes vendor and State toll collection O&M costs, including basic photo toll processing, and toll equipment R&R costs.

- 9 Includes additional costs associated with photo toll revenue recovery and toll enforcement staff, and transponder inventory
- ¹⁰ Pre-completion facility O&M costs are assumed to be capitalized and/or included in existing maint, budgets.
- ¹¹ Insurance premium for the physical structure of the bridge and business disruption.
- * Pre-completion tolling period (FY 2014-2018); nights from 11 PM to 5 AM are toll-free for pre-completion tolling.

General Notes

- Demand and revenue are reduced for "ramp-up" in initial years as customers get accustomed to tolls.
- Toll rate escalation and certain O&M cost inflation, where applicable, is projected at 2.5% per year.

\$ 1.7 billion in collection costs.

Columbia River Crossing State-Backed Debt - Scenario 1A Base 30 Year Debt Term

Period		FY2014		FY2015		FY2	D16	FY2	017	FY2	018	· FY2	019		Total	
Ending	Net Revenues	Principal Interes	st	Principal Inte	erest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Debt Service
2014	_			-	-	-	-	-	-	-		-		-	-	-
2015				-	-	-	-	-	-	-	-	-	-		-	-
2016	*			-	-	-	17,743,684	-		-	-	-	*	-	17,743,684	17,743,684
2017				-	-	-	17,743,684	-	19,570,761	-	-	-	-	-	37,314,445	37,314,445
2018	-			-		-	17,743,684	-	19,570,761	- '	10,912,048	-	10,912,048	-	59,138,541	59,138,541
2019	69,456,807				-	36,955	17,753,957	90,706	19,588,481	507,355	10,972,239	507,355	10,972,239	1,142,371	59,286,916	60,429,287
2020	84,500,998			-	-	2,878,889	18,765,495	3,439,007	20,502,649	2,561,620	11,404,428	2,561,620	11,404,428	11,441,137	62,077,000	73,518,137
2021	94,032,713				-	4,390,735	19,695,137	5,219,043	21,423,233	3,642,360	11,899,059	3,642,360	11,899,059	16,894,497	64,916,488	81,810,985
2022	98,692,362				-	4,893,806	20,385,605	5,809,697	22,152,796	3,985,083	12,326,468	3,985,083	12,326,468	18,673,669	67,191,336	85,865,005
2023	98,917,985				-	4,613,554	20,723,648	5,476,812	22,549,606	3,755,009	12,593,832	3,755,009	12,593,832	17,600,385	68,460,918	86,061,303
2024	108,458,706			-	-	5,735,747	22,045,249	6,797,846	23,931,743	4,554,886	13,370,814	4,554,886	13,370,814	21,643,366	72,718,620	94,361,986
2025	107,685,920			-	-	5,259,955	22,323,097	6,234,669	24,275,967	4,184,370	13,613,607	4,184,370	13,613,607	19,863,363	73,826,278	93,689,641
2026	119,612,254			-	-	6,483,421	24,154,484	7,675,397	26,214,326	5,061,279	14,707,843	5,061,279	14,707,843	24,281,375	79,784,497	104,065,872
2027	125,393,775		,	-	-	6,780,183	25,338,621	8,023,473	27,504,327	5,259,880	15,464,793	5,259,880	15,464,793	25,323,417	83,772,534	109,095,951
2028	125,666,153		,	-		6,380,951	25,807,622	7,550,946	28,054,028	4,949,280	15,820,411	4,949,280	15,820,411	23,830,456	85,502,471	109,332,927
2029	137,554,236			-	-	7,258,712	27,974,916	8,584,363	30,388,859	5,576,218	17,158,296	5,576,218	17,158,296	26,995,512	92,680,366	119,675,878
2030	143,637,125			-	-	7,415,522	29,376,198	8,767,735	31,928,951	5,675,513	18,064,361	5,675,513	18,064,361	27,534,284	97,433,871	124,968,155
2031	150,265,292			-	•	7,576,037	30,913,446	8,955,570	33,619,074	5,778,496	19,056,860	5,778,496	19,056,860	28,088,599	102,646,239	130,734,838
2032	148,525,154		,	. -	-	6,943,179	31,100,578	8,207,946	33,873,665	5,300,603	19,247,149	5,300,603	19,247,149	25,752,331	103,468,541	129,220,872
2033	155,967,976			-	-	7,127,375	32,822,813	8,423,879	35,766,506	5,422,720	20,355,157	5,422,720	20,355,157	26,396,694	109,299,632	135,696,326
2034	168,581,325			-	-	7,667,333	35,513,684	9,059,406	38,704,717	5,806,524	22,056,046	5,806,524	22,056,046	28,339,787	118,330,492	146,670,279
2035	175,094,099			-	-	7,663,920	37,185,301	9,054,264	40,555,123	5,792,621	23,146,358	5,792,621	23,146,358	28,303,427	124,033,140	152,336,567
2036	181,455,336			•	-	7,621,242	38,857,368	9,002,889	42,408,826	5,750,632	24,239,712	5,750,632	24,239,712	28,125,395	129,745,619	157,871,014
2037	188,623,714			-	-	7,605,780	40,708,964	8,983,671	44,459,059	5,729,262	25,445,848	5,729,262	25,445,848	28,047,976	136,059,719	164,107,695
2038	188,646,273			-	-	7,129,068	41,191,455	8,420,606	45,028,516	5,370,274	25,808,565	5,370,274	25,808,565	26,290,222	137,837,100	164,127,322
2039	194,166,880			-	-	6,995,056	42,739,534	8,261,713	46,751,562	5,263,175	26,828,091	5,263,175	26,828,091	25,783,120	143,147,279	168,930,399
2040	210,997,292			-	-	21,941,595	32,103,997	8,802,814	50,979,019	5,591,895	29,281,047	5,591,895	29,281,047	41,928,200	141,645,109	183,573,309
2041	219,106,165			-	-	40,059,998	16,062,629	8,729,115	53,350,204	5,538,772	30,674,378	5,538,772	30,674,378	59,866,656	130,761,590	190,628,246
2042	227,130,451			-	-	44,585,851	13,592,145	8,626,172	55,726,666	5,467,914	32,071,464	5,467,914	32,071,464	64,147,852	133,461,738	197,609,590
2043	227,895,065		•	-	-	47,469,072	10,904,775	45,639,235	18,930,242	5,149,361	32,516,390	5,149,361	32,516,390	103,407,028	94,867,797	198,274,825
2044	244,928,330			-	-	54,819,363	7,917,445	53,351,399	16,044,110	5,342,828	35,138,125	5,342,828	35,138,125	118,856,418	94,237,805	213,094,223
2045	254,107,815	-	•	-	-	60,544,222	4,543,851	59,240,141	12,756,191	5,268,899	36,729,209	5,268,899	36,729,209	130,322,161	90,758,460	221,080,621
2046	252,972,647		•	-	-	30,093,907	902,817	96,275,818	9,199,469	4,908,026	36,902,465	4,908,026	36,902,465	136,185,777	83,907,217	220,092,995
2047	273,766,036		•		-	-	-	71,672,755	2,150,183	93,641,102	25,472,606	93,641,102	25,472,606	258,954,960	53,095,395	312,050,355
2048	274,604,892		•	-	-	-	-	-	-	90,826,683	2,724,800	90,826,683	2,724,800	181,653,366	5,449,601	187,102,967
Total	5,050,443,776	•	•	-	-	427,971,429	744,635,884	504,377,087	917,959,621	321,662,641	646,002,467	321,662,641	646,002,467	1,575,673,799	2,954,600,439	4,530,274,238

Laura Dawson-Bodner

From: Sent:

Ina Zucker on behalf of Carlotta Collette Wednesday, June 08, 2011 4:58 PM

To:

Laura Dawson-Bodner

Subject:

FW: Shift the Balance - Transportation News and Resources

From: Coalition for a Livable Future [mailto:mara@clfuture.org]

Sent: Wednesday, June 08, 2011 4:31 PM

To: Carlotta Collette

Subject: Shift the Balance - Transportation News and Resources

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Shift the Balance Transportation News and Resources

June 8, 2011

Shift the Balance is an announcement list helping to spread the word on regional transportation news, research and events. Coalition for a Livable Future's Shift the Balance program supports a more sustainable and equitable transportation system in the Portland-Vancouver metropolitan area.

Want to connect with the organizations and issues that matter to you? Donate online and become an individual member of CLF! You can also join CLF on Facebook.

Action Alerts:

· Take Action on the CRC Highway Mega-Project

Events:

• Laugh for Livability. Not your typical fundraiser - June 10, 6pm

Resources and Announcements:

- Columbia River Crossing: Pollution or salvation in North and Northeast Portland?
- Why Building Roads Creates Traffic
- New Report Finds Deferred Road Repair a Financial Time Bomb for Many States
- Move It: How the U.S. Can Improve Transportation Policy

Action Alerts:

Take Action on the CRC Highway Mega-Project

Return to Top

Bicycle Transportation Alliance (in collaboration with CLF)

It's been a big week for the Columbia River Crossing highway expansion project. If you haven't seen it yet, take a look at the point by point article written by Nigel Jaquiss with the Willamette Week debunking major myths surrounding the project, as well as a thoughtful roundup by Evan Manvel on BlueOregon.com.

Next week our own Metro Regional Government is scheduled to vote on a resolution supporting the new highway expansion on Thursday, June 9th at 2:00pm. You can view the Resolution No. 11-4264 here.

For the last several years, ODOT and its consultants have championed an irresponsible and costly highway project that may have worked in the 20th century but fails to inspire today. It is extremely costly – about \$4 billion, or \$4,000 for every household in the region. If this happens, we'll burden future generations with billions of dollars of debt for thirty years.

In 2008, when Metro adopted a Locally Preferred Alternative (available here) they placed a set of conditions on their approval. On Thursday of next week Metro Councilors are being asked to say that the project's highway consultants have satisfied Metro's conditions. They haven't.

Our partners at the Coalition for a Livable Future have done policy research that makes it clear that Metro Councilors should vote no on Resolution No. 11-4264. Their research is available here.

So what can we do? This costly highway project, despite substantial and repeated shortcomings on such key issues as project financing, multi-modal accommodations, and community impacts, continues to move forward. **We must act now!**

It's our responsibility to build the right bridge that works for bicyclists without bankrupting all of our other priority projects. BTA believes that we can build bridges that meet regional requirements, are safe for bicyclists to ride across as well as access from both sides, and that stands as a legacy that we can be proud of.

Here is what you can do:

Write an email to your Metro Councilor, let them know how you feel about the CRC project, that the highway consultants need to do more to address your concerns, and urge them to vote no on Resolution No. 11-4264. You can look up your Metro Councilor here.

Attend the upcoming Metro Council hearing on Thursday, June 9th at 2:00pm, 600 NE Grand Ave, Portland. Testify and encourage Councilors to vote no on this overly costly highway project and to work to achieve real community benefits from ODOT and their consultants. See BTA's public letter and our advocacy toolkit for guidance on your message and how to testify.

Write letters to the editors of the Oregonian, Portland Tribune, Willamette Week, Portland Mercury, and other local papers raising concerns and asking local leaders to help us build projects that don't harm human health and the environment the way an overpriced highway mega-project would. Resources and contact information for local papers from 1000 Friends of Oregon.

Send this message to your friends and encourage them to get involved. Now is the time to act to prevent this monstrous mistake of a highway project from rolling forward.

Events:

Laugh for Livability. Not your typical fundraiser.

Return to Top

Join us for a bit of fun & laughter this Friday...and support a great cause

Friday, June 10, 6 pm Melody Ballroom 615 SE Alder, Portland

CLF's signature fundraiser enters its 5th year and is better than ever. Described by many as "Prairie Home Companion meets the Daily Show with Jon Stewart", LAUGH is an evening filled with spoken word, sharp-tongued political satire and musical talents from our region's leaders and rising stars. Your ticket includes dinner, dessert, music from some of our best local musicians, an abundance of laughter, and the satisfaction of knowing your dollars are supporting a livable future for all! You will find more information about this great event here.

Purchase Tickets Now!

Your 2011 LAUGH for Livability Performers Include

Live Wire! Radio's Courtenay Hameister

Laura Dawson-Bodner

From: Sent: Ina Zucker on behalf of Carlotta Collette Wednesday, June 08, 2011 4:57 PM

To:

Laura Dawson-Bodner

Subject: Attachments:

FW: CRC Resolution No. 11-4264 CRCC Background 060111.doc; ATT00001..htm

From: Brian Gard [mailto:bgard@gardcommunications.com]

Sent: Wednesday, June 08, 2011 10:32 AM

To: Carlotta Collette

Subject: CRC Resolution No. 11-4264

Councilor Collette, I'm writing to you as the director of the Columbia River Crossing Coalition to encourage your support of the CRC resolution at the Metro Council meeting this Thursday. The Coalition advocates both for careful review of the Crossing by the Metro Council and others, and, at the same time, for the importance of moving forward on this critical project, which is so important to both the environment and the economy of the entire region. Passing the resolution is an important component of moving forward.

I've attached a brief backgrounder on the Coalition. I hope you will take a moment to review the depth of support evident from the Coalition's directors, advisors and members.

Thanks for your consideration, Carlotta. Brian

Laura Dawson-Bodner

From:

Aaron Brown

Sent:

Wednesday, June 08, 2011 4:40 PM

To: Subject:

Laura Dawson-Bodner FW: Metro CRC Testimony

Attachments:

Cortright_Metro_June_8_2011.pdf; CRC_Financial_Analysis_by_Impresa_Inc.pdf;

Impresa_Response to ODOT_Feb11.pdf

Categories:

UGB/CIS/COO

----Original Message----

From: Amani Bryant [mailto:amanib@plaidpantry.com]

Sent: Wednesday, June 08, 2011 3:56 PM

To: Aaron Brown; Chris Myers

Cc: chris.girard@vzw.blackberry.net
Subject: RE: Metro CRC Testimony

Attached is the letter submitted by Mr. Cortright for tomorrow's meeting along with his Financial Analysis of the CRC and his response to a letter from ODOT in February of this year.

Sincerely,

Amani

Amani Bryant Administrative Assistant Plaid Pantries Inc 10025 SW Allen Blvd. Beaverton, OR 97005 PH: 503.646.4246 ext 8308

FAX: 503.646.3071

----Original Message----

From: chris.girard@vzw.blackberry.net Sent: Wednesday, June 08, 2011 3:25 PM

To: Amani Bryant

Cc: aaron.brown@oregonmetro.gov; chris.myers@oregonmetro.gov

Subject: Metro CRC Testimony

Hi Amani,

Please email PDFs of our complete testimony package to Arron and Chris at Metro.

Thanks!

Chris Girard



MEMORANDUM

February 7, 2011

TO: Mr. Chris Girard, Plaid Pantry

FROM: Joe Cortright, Impresa

RE: Response to Mr. Garrett's Reply to Impresa's CRC Analysis

This memorandum responds to the comments made by ODOT Director Matt Garrett in a January 21, 2011 communication to legislative leaders, responding to Impresa's October 4, 2010 report on the financial aspects of the Columbia River Crossing.

Mr. Garrett questions Impresa's analysis of traffic forecasts, cost estimates, and the CRC funding plan. Impresa stands by the accuracy of all of the data and conclusions in our report, and based on our analysis, we disagree with Mr. Garrett's comments. We continue to conclude:

- Traffic levels in the I-5 corridor have been declining since 2005, raising serious doubts about the reliability of the project's future traffic projections. Flawed traffic projections undercut the need for the project itself, the rationale for its size, the accuracy of its environmental assessment, and the viability of its financing plan.
- The total cost that will have to be paid by taxpayers and bridge-users for the Columbia River Crossing over the next thirty years will be \$10 billion, including capital, interest and operating costs, and the attendant improvements that will likely be needed to resolve identified issues in the Rose Quarter. The region's road-users and taxpayers will have to pay all of these costs, not just the widely publicized initial capital cost.
- The proposed financing plan for the project poses major risks for the state and the region, and there is a high probability of cost overruns and revenue shortfalls.

The reasons for our conclusions and specific responses to each of the points raised by Mr. Garrett are presented in this memorandum. Mr. Garrett's comments are shown in *italic*, and our comments follow in **normal text.**

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

Traffic forecasts

Impresa's report found that traffic volumes have been in decline on I-5 since 2005, and are falling dramatically behind CRC projections, undercutting the rationale for the project itself, the justification for its sizing, the analysis of its environmental impacts, and the viability of its financial plan. Mr. Garrett disputed our analysis of traffic data.

". . . traffic counts for the I-5 bridge, which have shown a recent decline with the current recession."

As we noted in our analysis, the decline is not recent, and predates the current recession which started in December 2007.

"It is typical for traffic volumes to decline during a recession and to rise during boom periods. These fluctuations are expected."

The data shows that historically, previous recessions have had only minor and transitory impacts on traffic growth changes. The current stagnation in traffic growth on I-5 is a decade-long trend, reflecting fundamental changes in travel behavior and a response to much higher fuel prices. In addition, the CRC modeling makes no allowance for recessions. Traffic levels are assumed to increase steadily each year without interruption. (See for example, document PEAC-54, page 15).

We analyzed ODOT's latest data on traffic levels on I-5, through November 2010. These data show:

- Traffic growth rebounded modestly in 2010. According to ODOT's calculation, for the first 11 months of 2010, traffic levels were up 1 percent over the 12 months of 2009. (Compared to the first 11 months of 2009, traffic in the first 11 months of 2010 was up 0.7%).
- Traffic in 2010 was 126,700 vehicles per average weekday.
- This traffic level is still almost 6,000 vehicles per day below the 2005 peak of 132,600.
- The 2010 traffic level is 17,000 vehicles per day below the DEIS forecast of 143,700 vehicles per day in 2010.
- At ODOT's calculated current rate of growth of 1.0% per year, 2030 traffic will be 154,400; this is about 30,000 vehicles per day less than the DEIS forecast.
- In order to reach the DEIS forecast, traffic growth would have to almost double -- to 1.9% per year -- and grow that fast every year for the next two decades. Over the past decade, traffic has increased that fast in only one year (2002).

145,000 140,000 Actual 17,000 l-5 Traffic, Average Weekday Vehicles Per Day 135,000 Below Forecast 130,000 125,000 120,000 115,000 110,000 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 Source: CRC Tolling Studies, ODOT Traffic Data

CRC Forecast v. Actual

This 17,000 vehicle per day shortfall from projections would have a material adverse effect on project financing. The shortfall to date coupled with the much lower than predicted level of growth would produce financial results similar to those outlined in our original report. In that report (page 15), we showed that a slower than projected rate of traffic growth on the I-5 bridges would produce a debt service payment shortfall of more than \$1 billion over the life of the project.

Our report explicitly addressed the role of the recession in influencing traffic levels on I-5. We noted that the decline in I-5 traffic volumes preceded by two full years the advent of the recession. The dramatic difference between the CRC forecast and actual traffic levels is not a minor "fluctuation"—it is a sea change in travel behavior reflecting important national and regional trends.

". . . evidence suggests that traffic volumes are resuming their long-term upward trend on both I-5 and I-205."

Mr. Garrett presents no data to show what the actual "upward trend" of traffic volumes is now. The question is not merely whether they are rising, but whether they will recover to the previous levels, and whether they will grow at anything close to the rate CRC projected five years ago. The evidence shows the growth rate is much slower than

forecast, raising serious questions about the need for the project, its sizing, and how it will be financed.

As we noted in our report, per capita vehicle miles traveled continues to decline nationally. The doubling of fuel costs since 2005 has produced a dramatic change in travel behavior. This is confirmed by ODOT's own data on travel on state highways; vehicle miles traveled per capita on state highways peaked in 1999, and are 13% below that level. On a per capita basis, Oregonians are driving on state highways at rates lower that at any time since 1987. This shift is not a small or temporary change induced by the recession—it is a long term shift in the nation's driving habits that is not captured in transportation models calibrated in an era of cheap energy (Oregon State Vehicle Miles Traveled for state owned highways, http://www.oregon.gov/ODOT/TD/TDATA/tsm/vmtpage.shtml#Oregon VMT Graph).

20.0 15.0 Actual —— Trend 1949-2004 10.0 1949 1954 1959 1964 1969 1974 1979 1984 1989 1994 1999 2004 2009 Source: ODOT & BEA data, Impresa calculations

Oregon VMT Per Capita Declining

This trend is also confirmed by similar data from the Washington DOT. Between 2006 and 2009, per capita vehicle miles traveled in Washington State have declined 3.9% (Washington State Department of Transportation, 2010)

A multi-jurisdictional team and an expert review panel has reviewed the model.

In 2008, the CRC convened a Travel Demand Model Review Panel consisting of staff from four other metropolitan planning organizations. This panel was not provided with copies of comments on the DEIS that questioned and criticized the data, methodology and findings of the CRC traffic forecasts. The panel spent two days reviewing the

methodology, but did not independently develop its own estimates, and there is no indication it reviewed actual traffic data from 2005 (the base year of the forecast) and 2008.

Our report pointed out that the problems of over-estimating future traffic levels are endemic to the entire class of models used by CRC and metropolitan planning organizations. This is not our conclusion, it is the conclusion of independent expert review by the Government Accountability Office (2005) and the National Academy of Sciences (Committee for Determination of the State of the Practice in Metropolitan Area Travel Forecasting, 2007). Claiming that the travel demand model review panel found that the methodology was consistent with the general practice doesn't refute the point made in our report, and the general practice is seriously flawed.

"Vehicle operating costs, of which fuel costs were a component were reasonable."

The CRC traffic forecasts are based on the Metro model which relies upon travel behavior surveys taken in 1994 when the price of gasoline was less than \$1 per gallon. The CRC traffic models contain no explicit variable that addresses changes in fuel costs. The model is based on the assumption that the per mile cost of driving will not increase faster than inflation, and that increases in real (i.e. inflation-adjusted fuel prices) will be exactly offset by improvements in vehicle fuel economy, leaving travel behavior unchanged regardless of any change in fuel prices. As shown above, this premise is incorrect.

"... tolling analysis is within standard practice."

As we noted, a careful review of toll revenue forecasts undertaken for other similar projects shows that standard practice methods consistently over-estimate future traffic and associated revenue (Bain, 2009). We also showed that WashDOTs forecasts for the Tacoma Narrows Bridge have significantly over-estimated toll revenues. The CRC has not commissioned an independent, investment-grade forecast that would reflect probable results that would be achieved in practice.

"... two new analytical surveys validated and updated assumptions used in the model. First, an origin-destination study compared the actual patterns

In fact, as we noted in Section 1.4 of our original report, the authors of the CRC traffic forecasts manually adjusted the model outputs, substituting their own judgment for the modeled results, and inflating traffic volumes assigned to the I-5 bridge by 6% as part of what they euphemistically labeled "post-processing."

"a 'stated-preference' survey determined corridor specific value of time for use in the regional travel demand model."

As we noted in our analysis, the stated preference survey is regarded as a second-best method for estimating the actual value that travelers attach to travel time savings. We

also noted that the CRC survey systematically under-sampled low and moderate income households, biasing upward its value of time estimates. The IRP agreed with these concerns and concluded that a new travel demand forecast would be needed, in conjunction with the investment grade forecast (page 179).

It is also worth noting that the travel demand modeling for the CRC does not include an estimate of the effect of the "pay by plate surcharge" that travelers will have to pay if they don't purchase transponders. The CRC states that the surcharge may be an additional \$1.50 on top of the toll, so most of the region's population will face a \$3.50 or higher toll (a \$2.00 toll plus a \$1.50 surcharge) to use the CRC at peak hours. The CRC has not estimated the effect of the combined toll/surcharge on travel behavior. The actual surcharge may be higher. The Washington Transportation Commission found it necessary and has just approved a \$2.75 per transaction "pay by plate" surcharge above the transponder toll for the Tacoma Narrows Bridge (WAC 468-270-070).

"There will be about a 4.5 percent shift of auto trips on an all day basis from the I-5 corridor to I-205."

This estimate is highly dependent upon the incorrect value of time assumptions used in the forecast, and is further affected by the failure to include the effect of the pay by plate surcharge on travel demand. Overestimating the value of time has resulted in the CRC underestimating diversion. Moreover, it is exactly this diversion effect which has shown to be systematically underestimated by standard models, and is only corrected by undertaking an investment grade analysis, which has not been done for the CRC.

Cost estimates

Impresa's analysis concluded, based on estimates obtained from CRC and ODOT, that the total capital and operating cost of the CRC, plus the improvements needed at the Rose Quarter for the CRC to work as designed, would cost the region \$10 billion over the next 30 years.

The CRC finance plan fully accounts for all project costs, maintenance and operations costs and financing and interest costs."

The widely quoted \$3.9 billion capital construction price tag, still repeated by CRC, does not include the full 30 year cost of building, financing and operating the project. Prior to the release of documents obtained in response to a public records request, there was no publicly available information on the total dollar amount of operations, maintenance or interest costs of the project.

The total cost of the project over the next 30 years, including the fix for the Rose Quarter that was addressed by the IRP, will be roughly \$10 billion, assuming that there are no cost overruns. As documented in our original report, none of these estimates were made by Impresa; every figure was taken from estimates prepared by CRC, ODOT and the IRP.

"The Rose quarter is outside of the project area and therefore, should not be part of the CRC project cost estimates.

The reports of both the Independent Review Panel and the city of Portland's engineering consultants, URS, identified the bottleneck at the Rose Quarter as a major issue. 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 IRP panel recommends a new set of traffic studies to test whether the CRC will simply shift the bottleneck south, and calls 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).

"Cortright disregards this rigorous process used to develop capital cost estimates for the CRC."

Actually, the IRP found that the Cost Estimation Validation Process (CEVP) used to-date on the CRC was anything but rigorous. After their review they found that total project costs were "unknown with any certainty," that the CEVP had "significant weakness" and had been undertaken for a different design than that now contemplated. They called the assumptions used for cost estimates and project schedules unreasonable and optimistic. The IRP concluded that the CEVP was "not accurate enough" to support a financial plan.

"The February 2009 CEVP workshop was based on an LPA design, which is fundamentally different from the current LPA "refined" design currently contemplated for the Final EIS. As the CEVP performed in February 2009 used information and assumptions available at the time which are fundamentality different than the design concept and assumptions being put forth in the Final EIS, there is a significant risk that the range of numbers and dates used for the financing model, which in turn will be used for funding and financing of the Project is not accurate enough for such purposes."

(Independent Review Panel Report, pages 166-167)

Additional quotations taken from the Independent Review Panel report are shown in the Appendix to this document.

And, as we now know, based on the report of the Bridge Review Panel (issued February 4, 2011), the "open-web" design proposed for the bridge in the project refinement is now regarded as un-buildable.

"The recent CRC Independent Review Panel commended the project's risk assessment approach . . ."

In fact, the IRP offered many significant criticisms of the CRC risk analysis. The IRP cited incorrect assumptions in the CEVP process that "dramatically affect the assumptions on the identification of potentially emerging risks, the probability of those risks occurring and the schedule and cost impact these risks would then have on the project." Similar concerns have been raised by the federal government's independent Project Management Oversight Consultant (PMOC). The PMOC consultant, Gannett-Fleming, found that project budget and schedule documents assumed a unrealistic 12 month in-water work window (IWWW), and that with a likely 4-month IWWW, the project may be "not constructible." (Gannett Fleming Inc., 2009, page 4-8) While acknowledging progress in negotiating the in-water work window with regulatory agencies, the latest PMOC report concluded that the final implications for the project will not be know until the Biological Opinion is issued.

"The report methodology also incorrectly combines capital costs, operation and maintenance costs and financing costs in a way that erroneously depicts capital costs."

This is not correct. Our report never describes interest, operating costs or maintenance costs as "capital costs." We are quite clear that our estimates represent the total 30-year cost of the CRC. It is also worth noting that Mr. Garrett does not challenge the accuracy of any of the operation and maintenance costs or interest costs. These are the total costs that Oregon and Washington taxpayers and road users would have to pay over the next 30 years. In addition, it seems likely that some costs would be even higher than CRC has estimated. For example, as noted earlier the Washington Transportation Commission has just approved a \$2.75 pay by plate surcharge for the Tacoma Narrows Bridge—nearly double the cost assumed in CRC estimates.

The home buyer analogy.

Mr. Garrett offered an analogy of a consumer buying a home. We don't believe this a relevant example, but within that context, it is not just the advertised price of the "home" that the consumer must consider. Aside from the purchase price, it is critical that the homeowner know if he/she can make the monthly payments. In the case of the CRC, we don't know if we can get a loan (bonding), how much we can finance, what the interest rate, fees and terms will be, or how we can make the \$450 million "down payment" in the current and foreseeable weak economy. And in this analogy, the consumer will only get a loan by pledging other state assets as a guarantee, and agreeing to pay all of the contractor's cost overruns.

The finance plan proposed for the CRC is an integral part of the project and deserves close scrutiny. As proposed, the financing is the equivalent of a high risk, negative amortizing home loan of exactly the type that generated the huge increase in home mortgage delinquencies in the past five years. It is based on unrealistic and unsupported assumptions of steady traffic increases and continuous toll rate increases. As noted in our original report, the interest cost alone would be nearly double the cost of the kind of standard level-payment, fully amortizing mortgage that most consumers would recognize,

because it capitalizes interest payments in early years, and "backloads" debt repayment based on the assumption of steady and continuous increases in total toll revenue. And the project will require the states to offer "credit enhancements"—essentially an unconditional guarantee to make up revenue shortfalls and cost overruns. The total cost of the project, not just an estimated price tag for capital costs, should be carefully scrutinized by state policymakers, because the taxpayers and users of the bridge will end up paying the total costs, including making good on guarantees, not just the estimated capital costs.

Funding plan

Impresa's analysis found the funding plan for the Columbia River Crossing is at best uncertain and risky. There is a high probability of cost-overruns, such as those experienced in ODOT's Pioneer Mountain-Eddyville and Newberg-Dundee projects. It is also likely that the project has overestimated likely revenues from tolling. In addition, the project faces significant and unresolved risks in obtaining federal funding, and in negotiating an in-water work window consistent with the project schedule and budget.

"At a later stage, before bonding, the project will conduct an investment grade study."

Mr. Garrett does not dispute the need for the investment grade analysis, also recommended by the Independent Review Panel. The CRC has offered no rationale as to why such a study should not be undertaken immediately. The Legislature and the Governor should have access to the same high quality, independent financial analysis that an investor would insist upon, prior to their deciding whether to finance and guarantee this project.

Mr. Garrett's statement does not specify who would undertake the investment grade study, and when it would occur. As the IRP and financial industry documents make clear, the investment grade study has to be undertaken by an entity independent of the project in order to be credible, in the same way that auditing is done by independent, outside firms.

"Federal highway funds are being sought from a category known as Projects of National Significance. Very few projects in the country and no other projects in the region can compete for these funds These sources are unique to the CRC project and do not affect other Oregon projects."

The category of "Projects of National and Regional Significance" was established in the SAFTEA-LU transportation funding bill of 2005. All of the funds in that program were earmarked by Congress for 25 named projects, and funding under this section ran from fiscal year 2005 to 2009.

There is currently no legal authorization for a "Projects of National Significance" category. There have been legislative proposals to enact a "Projects of National Significance" category, but no legislation has passed either house of Congress. This source of funding is at best speculative.

The CRC makes it clear in its financial plan—as pointed out in our initial report—that it will seek federal funding for the CRC from whatever sources possible, including earmarks and other discretionary highway funds.

If PNRS funds are not sufficiently available for the CRC project, other discretionary highway funds will be sought, such as High Priority Projects (HPP) and Interstate Maintenance Discretionary (IMD) funds. (Final EIS Financial Plan—Draft Report, September 2010, page 2-6.)

Funding for the CRC from earmarks and discretionary funds therefore will likely reduce the availability of federal funding for other project in Oregon. In the previous transportation legislation, the money allocated for projects of "national significance" was earmarked by Congress based on local priorities: Oregon used the earmarks it received under the Projects of National and Regional Significance program of SAFETEA-LU to fund the statewide I-5 bridge repair program.

While funding allocation under the PNRS program was envisioned as a criteria-based administrative program, the entire \$1.8 billion funding authorization was earmarked to specific projects in SAFETEA-LU. Oregon received an award of \$160 million to improve bridges throughout the state in the I-5 corridor, and Washington received a \$220 million award for the Alaska Way Viaduct project. (Final EIS Financial Plan—Draft Report, September 2010, page 2-6.)

While Mr. Garrett has raised questions about some issues, and argued about the characterization of some costs, his letter does nothing to disprove the accuracy of any of the specific figures on costs or traffic levels presented in Impresa's October 4, 2010 report. Over the next 3 decades, according to the project's own estimates, the region's travelers and taxpayers will end up spending at least \$10 billion to construct and operate the Columbia River Crossing, and to upgrade the Rose Quarter bottleneck sufficiently to make the CRC work. The project is based on traffic projections that have not been borne out it practice, and which grossly overstate future traffic levels and likely toll revenues. Our initial conclusions stand that this project poses enormous financial risks for the state and region.

References

- Bain, R. (2009). Toll Road Traffic and Revenue Forecasts: An Interpreter's Guide: Author.
- Committee for Determination of the State of the Practice in Metropolitan Area Travel Forecasting. (2007). *Metropolitan Travel Forecasting: Current Practice and Future Direction* Washington: Transportation Research Board of the National Academies.
- Gannett Fleming Inc. (2009). Columbia River Crossing (CRC) Project Risk Assessment Report. Mill Valley, CA: Author.
- Government Accountability Office. (2005). Highway and Transit Investments: Options for Improving Information on Projects' Benefits and Costs and Increasing Accountability for Results (GAO-05-172). Washington, DC.
- Washington State Department of Transportation. (2010). *The 2010 Congestion Report* (Gray Notebook Special Edition). Olympia, WA: Washington State Department of Transportation.

Appendix: Independent Review Panel Findings

Independent Review Panel. (2010). Columbia River Crossing Independent Review Panel Final Report. Olympia: Author.

Page 12

"No Cost Estimate Validation Process (CEVP) has been done on the current design. Past CEVP efforts were conducted on a version of the bridge no longer under consideration. The earlier Constructability Workshop reviewed a previous version of the bridge as well."

Page 14

"The IRP is unable to assess the accuracy of the cost estimate for the project. Past efforts to determine an accurate cost have been largely negated due to the change in bridge type and the continuing controversy regarding Hayden Island. Until a resolution to these two issues is achieved and the NEPA process is closer to completion, the total cost of the project is unknown with any certainty. Conducting a new CEVP and other cost estimation activities are necessary to rectify this situation."

Page 166

"However, the validity of the Basis of Estimate is only as good as the inputs used for the CEVP model. This is where the IRP sees a significant weakness in the Final CEVP Report as presented to the IRP and thus potentially in the cost and schedule dates used in the financial model."

Page 194

The open-web design is "one that has never been built anywhere in the world and which will require extensive testing and engineering to determine its viability for this project"

Page 159

"The schedules that have been provided to the IRP do not reflect major, important issues that have been identified in this report, which should be considered before the schedule is finalized."

Page 160

"The IRP believes the schedules provided are very optimistic and aggressive as to essential milestones. In many cases recent events have made the schedules obsolete."

Page 160

"Response to IRP requests with dated and in many cases no longer valid project schedules suggest that CRC is not using project schedules as a core management tool. This can detract from the credibility of and confidence in the project management staff and can lead to public uncertainty in the delivery of the Final EIS as currently promised to the Governors."

Page 164

"The current CEVP costs are relative only and form little basis for actual conditions as they exist at this time."

Page 166-167:

"The February 2009 CEVP workshop was based on an LPA design, which is fundamentally different from the current LPA "refined" design currently contemplated for the Final EIS. As the CEVP performed in February 2009 used information and assumptions available at the time which are fundamentality different than the design concept and assumptions being put forth in the Final EIS, there is a significant risk that the range of numbers and dates used for the financing model, which in turn will be used for funding and financing of the Project is not accurate enough for such purposes."

Page 168

"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."

From: Sent:

Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:43 PM

To: Subject:

Laura Dawson-Bodner FW: river crossing

For the CRC record

From: Scott Oldham [mailto:scotto@iupatdc5.org]

Sent: Wednesday, June 08, 2011 8:03 AM

To: Carl Hosticka **Subject:** river crossing

Good morning and thank you for your work in our community. I am a representative of the International Union Of Painters and Allied Trades.

As a member of the Columbia River Crossing Coalition, I am writing to urge you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design.

Please help move the project forward by supporting the CRC resolution.

Thank you,

Scott Oldham

Field Representative 11105 N.E. Sandy Blvd. Portland, Oregon 97220

Cell 971-219-3299

FAX 503-256-5271 Office 503-257-6644 Toll Free 1-800-237-2070 E-MAIL scotto@iupatdc5.org



From: Sent:

Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:44 PM

To:

Laura Dawson-Bodner

Subject:

FW: 11-4264

For the CRC record

From: Carolee Collen [mailto:caroleecollen@yahoo.com]

Sent: Wednesday, June 08, 2011 2:34 PM

To: Carl Hosticka Subject: 11-4264

Please vote NO!

Carolee Collen

From: Sent:

Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:44 PM

To:

Laura Dawson-Bodner

Subject:

FW: Columbia River Crossing Project

For the CRC record

From: Ginger Metcalf [mailto:ginger@identityclarkcounty.org]

Sent: Wednesday, June 08, 2011 12:04 PM

To: Carl Hosticka

Subject: Columbia River Crossing Project

Dear Councilor Hosticka:

Thank you for your work in our region.

As a member of the Columbia River Crossing Coalition Board of Directors, I am writing to urge you to support the CRC Resolution to approve the Locally Preferred Alternative (LPA). The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design.

Please help move the project forward by supporting the CRC resolution.

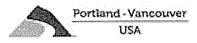
Thank you,

Ginger Metcalf, Board Member

Columbia River Crossing Coalition

Ginger Metcalf
Executive Director





Identity Clark County 703 Broadway, Suite 610 Vancouver, WA 98660

(360) 695-4116 (360) 695-3678 FAX ginger@identityclarkcounty.org www.identityclarkcounty.org

From:

Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:44 PM

Sent: To:

Laura Dawson-Bodner

Subject:

FW: CRC-Resolution No. 11-4264

Attachments:

CRCC_Background_060111.doc; ATT00001..htm

For the CRC record

From: Brian Gard [mailto:bgard@gardcommunications.com]

Sent: Wednesday, June 08, 2011 11:16 AM

To: Carl Hosticka

Subject: CRC-Resolution No. 11-4264

Councilor Hosticka, I'm writing to you as the director of the Columbia River Crossing Coalition to encourage your support of the CRC resolution at the Metro Council meeting this Thursday. The Coalition advocates both for careful review of the Crossing by the Metro Council and others, and, at the same time, for the importance of moving forward on this critical project, which is so important to both the environment and the economy of the entire region. Passing the resolution is an important component of moving forward.

I've attached a brief backgrounder on the Coalition. I hope you will take a moment to review the depth of support evident from the Coalition's directors, advisors and members.

Thanks very much for your consideration. Brian

BOARD OF DIRECTORS

Sandra McDonough, President Portland Business Alliance

Ginger Metcalf, Executive Director Identity Clark County

Larry Paulson, Executive Director Port of Vancouver

Bill Wyatt, Executive Director Port of Portland

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> Debra Dunn, President Oregon Trucking Associations

Gregg Kantor, President & GEO NW Natural

John Mohlis, Executive Secretary Oregon State Building and Construction Trades Council

Kelfy Parker, President & CEO later Vancouver Chamber of Commerce

> Bart Phillips, CEO Columbia River Economic Development Council

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Pat Reiten, President Pacific Power

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Duke Schaub, Representative Associated General Contractors, WA

Connie Seeley, Chief of Staff Oregon Health & Science University

Dave Underriner, Chief Executive Providence Health & Services Portland Service Area

EXECUTIVE DIRECTOR

Brian Gard

711 SW Alder Street | Suite 400 Portland | Oregon 97205 T 503 552 5011 www.crossingcoalition.com



The Columbia River Crossing Coalition (Coalition) supports and advocates for the new I-5 crossing across the Columbia River.

The Coalition was formed as a 501c4 and began its work in January 2009. The Port of Portland, Port of Vancouver, Portland Business Alliance and Identity Clark County approached Gard Communications to manage the Coalition in late 2008. Representatives from these four organizations constitute the governing board. The Coalition's bylaws also authorize a board of advisors, which is a key component of the organization. Brian Gard serves as the Coalition's director. Funding for the Coalition comes entirely from voluntary contributions of its members.

The Coalition consists of more than 400 business and labor organizations, businesses, unions and individuals in Washington and Oregon. Our role is to encourage the various interested parties to come together and to build the Columbia River Crossing sooner rather than later.

The need

The existing I-5 Columbia River bridge is outdated, unsafe and a major contributor to costly traffic congestion and the highest accident rate of any section of I-5 in Oregon and Washington. The bridge is also considered to be the weak link of the entire trade corridor between Mexico and Canada. The new Crossing is widely viewed as essential for the economy because it will relieve congestion to keep goods moving and improve access to highways, ports and labor markets.

The solution

The Columbia River Crossing is a comprehensive transportation plan, designed to address the needs associated with our region's continued growth. It encompasses three distinct aspects: construction of a new bridge; the creation of a new light rail system, bike lanes and pedestrian paths across the bridge; and significant improvements to a five-mile stretch of highway on either side of the bridge with seven interchanges that will improve access and traffic flow.

The Crossing will meet modern seismic requirements, reduce congestion and improve safety for commuters and freight traffic, encourage mass transit, and provide vastly improved bicycle and pedestrian alternatives.

The Coalition has been and continues to be supportive of the extensive public Process. At the same time, it is important to keep the Crossing project moving forward according to its timetable, in order to solve the serious economic, environmental and transportation problems caused by the overwhelmed I-5 bridge – and to create the thousands of new jobs that its construction will create and that are desperately needed in our region.

To learn more about the Columbia River Crossing Coalition, visit □www.crossingcoalition.com.

Background

The Columbia River Crossing project is a bridge, transit and highway improvement partnership project of the Oregon Department of Transportation and the Washington Department of Transportation. The project's purpose is to reduce congestion, enhance safety and increase mobility throughout the project area.

In 2005, a 39-member task force was formed to advise the project on key decisions. The members represented public agencies, businesses, environmental groups and communities in both Oregon and Washington. The task force met for three years and on June 24, 2008, voted in favor of a Locally Preferred Alternative (LPA), which includes a replacement bridge, light rail extending to Clark College in Vancouver, bike lanes and pedestrian paths. The group dissolved after it made this recommendation.

Following the dissolution of the task force, the governors of Oregon and Washington created the Project Sponsors Council (PSC) to advise the governors on the project. The appointed members are: TriMet, C-TRAN, Metro, the Southwest Washington Regional Transportation Council, the City of Portland and the City of Vancouver. These partners will advise the governors on the particular details of the LPA.

The Columbia River Crossing Coalition (CRCC) was formed to organize and encourage support for the project, and to demonstrate that support to state and □federal officials.

Current Status

On August 05, 2010, in a unanimous vote, the Project Sponsors Council approved plans for a 10-lane crossing, five miles long with seven interchanges including a new design for the Hayden Island interchange, resolving a number of key issues. In addition, the Independent Review Panel appointed by Governors Kulongoski and Gregoire emphasized the absolute necessity for the new bridge and called for it to be built as soon as possible. The Crossing is estimated to cost \$3.2 to \$3.6 billion, with funding provided from federal, state and regional contributions.

On April 25, 2011, Governors Gregoire and Kitzhaber approved the preliminary recommendation of the project staff and selected the deck truss bridge design because it provides the most certain path to keep the project on schedule and on budget.

The schedule calls for the Final Environmental Impact Statement and Federal Record of Decision in 2011; final design, property acquisition and financing in 2012; and the beginning of construction in 2013.

In addition, they announced new bi-state oversight from both a joint committee of the Oregon and Washington legislatures and the two state treasurers. The first stage of the oversight process will be review and refinement of the financing plan and toll revenue assumptions. The intent of the bi-state collaborative approach is to minimize financial risks and provide accountability as the project moves toward construction.

From:

v taft [victoriataft@yahoo.com]

Sent:

Wednesday, June 08, 2011 9:00 AM

To:

stevescare@aol.com; jkarlock@gmail.com; comments@trimet.org; Tom Hughes; Shirley Craddick; Rex Burkholder; Carlotta Collette; Carl Hosticka; Kathryn Harrington; Barbara Roberts; DebbieJ@c-tran.org; don.b.hamilton@odot.state.or.us; info@rtc.wa.gov; swwebinfo@wsdot.wa.gov; steve.stuart@clark.wa.gov; Mark.Boldt@clark.wa.gov;

Tom.Mielke@clark.wa.gov

Cc:

njaquiss@wweek.com; akissee-wilder@katu.com; letters@columbian.com;

john@cascadepolicy.org; NWRepublican@aol.com; demographia@gmail.com; rot@ti.org;

myz7@comcast.net; rob@thirdcenturysolutions.com

Subject:

Victoria Taft Post: The [CRC] Rent is Too Damn High (and other scandals).

June 08, 2011

Mr. Why: The Rent is Too Damn High for CRC. Metro to Vote on Thursday As Questions Grow About Cooked Books.

Metro vote on the CRC is Thursday. There is nothing normal or acceptable about the condition of accounting with the CRC. And the concern is not only about the \$35,000.00/month rent for the CRC.

CRC officials can't even produce a financial statement or reasonable facsimile to account for the approximately \$150,000,000.00 of taxpayer funds it has already spent. Please see the report from the forensic accountant below.

Here's a memo to members of Metro:

If any of you vote to proceed with the CRC with this kind of scandal emerging then you are certainly part of the scandal.

It matters not whether it is by gross negligence, fiduciary irresponsibility, incompetence, an ideologically driven agenda or conflict of interest.

Any public official who, by their vote, condones this abhorrent handling of tax dollars has lost both their integrity and credibility.

The media may have ignored their responsibility but elected public officials do not have the option to ignore their fiduciary responsibilities.

Please halt this travesty until a full investigation can identify exactly where the \$150 million went and what taxpayers got for their money.

David Madore of <u>NoTolls.com</u> has ponied up the money to pay for a forensic accountant, a former government auditor, to take a look at the books.

<u>Here's Victoria Taft's interview the other day with Tiffany Couch.</u> Couch's assessment is just underway but take a look at her power point presentation <u>here.</u> Mr. Why

Posted by Victoria Taft, 11am - 3pm KPAM 860 at <u>08:52</u> <u>0 comments</u> Labels: \$35, 000/month rent, crc



Thank you for listening! Victoria

Victoria Taft
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Local 503.225.0860 Toll Free 877.774.KPAM

From: "stevescare@aol.com" < stevescare@aol.com>

To: jkarlock@gmail.com; comments@trimet.org; tom.hughes@oregonmetro.gov; shirley.craddick@oregonmetro.gov; burkholderr@metro.dst.or.us; carlotta.collette@oregonmetro.gov; carl.hosticka@oregonmetro.gov; kathryn.harrington@oregonmetro.gov; barbara.roberts@oregonmetro.gov; DebbieJ@c-tran.org; don.b.hamilton@odot.state.or.us; info@rtc.wa.gov; swwebinfo@wsdot.wa.gov; steve.stuart@clark.wa.gov; Mark.Boldt@clark.wa.gov; Tom.Mielke@clark.wa.gov

Cc: njaquiss@wweek.com; Lars.Larson@alphabroadcasting.com; victoria@victoriataft.com; akissee-wilder@katu.com; letters@columbian.com; john@cascadepolicy.org; NWRepublican@aol.com; demographia@gmail.com; rot@ti.org; myz7@comcast.net; rob@thirdcenturysolutions.com

Sent: Wed, June 8, 2011 8:11:42 AM

Subject: Metro to vote on \$150 million scandal at CRC

A Metro vote on the CRC is Thursday.

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Please halt this travesty until a full investigation can identify exactly where the \$150 million went and what taxpayers got for their money.

Forensic auditor's power point presentation http://couv.com/issues-viewpoint/tiffany-couch-crc

----Original Message----From: Jim Karlock < jkarlock@gmail.com>

From:

stevescare@aol.com

Sent:

Wednesday, June 08, 2011 8:12 AM

To:

Cc:

jkarlock@gmail.com; comments@trimet.org; Tom Hughes; Shirley Craddick; Rex Burkholder;

Carlotta Collette; Carl Hosticka; Kathryn Harrington; Barbara Roberts; DebbieJ@c-tran.org;

don.b.hamilton@odot.state.or.us; info@rtc.wa.gov; swwebinfo@wsdot.wa.gov; steve.stuart@clark.wa.gov; Mark.Boldt@clark.wa.gov; Tom.Mielke@clark.wa.gov njaquiss@wweek.com; Lars.Larson@alphabroadcasting.com; victoria@victoriataft.com;

akissee-wilder@katu.com; letters@columbian.com; john@cascadepolicy.org;

NWRepublican@aol.com; demographia@gmail.com; rot@ti.org; myz7@comcast.net;

rob@thirdcenturysolutions.com

Subject:

Metro to vote on \$150 million scandal at CRC

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Forensic auditor's power point presentation http://couv.com/issuesviewpoint/tiffany-couch-crc

----Original Message----

From: Jim Karlock <ikarlock@gmail.com>

To: Customer Comments <comments@trimet.org>; tom.hughes@oregonmetro.gov; shirley.craddick@oregonmetro.gov; Rex Burkholder <burkholderr@metro.dst.or.us>; carlotta.collette@oregonmetro.gov; carl.hosticka@oregonmetro.gov; kathryn.harrington@oregonmetro.gov; barbara.roberts@oregonmetro.gov; Debbie Jermann < DebbieJ@c-tran.org>; don.b.hamilton@odot.state.or.us; info@rtc.wa.gov; swwebinfo@wsdot.wa.gov; steve.stuart <steve.stuart@clark.wa.gov>; Marc Boldt <Mark.Boldt@clark.wa.gov>; Tom.Mielke <Tom.Mielke@clark.wa.gov>

Sent: Wed, Jun 8, 2011 1:43 am

Subject: Public record request for copy of CRC FEIS

It was announced at the June 7, 2011 RTC meeting that the CRC FEIS is now available for review and at least some some public agencies possess copies.

Please supply an electronic copy of the CRC FEIS by email if under 10 meg or on a CD/DVD that I can pick up and pay a moderate fee.

Thank you for you early attention to this matter.

Please do not ask me to fill out a form - this email contains all necessary information & I am not claiming any special exemptions. I am just asking for a copy of a public record at a reasonable cost for posting on the internet for the benefit of the public, a compelling public need for a multi-BILLION dollar project.

Thanks

From:

Scott Oldham [scotto@iupatdc5.org]

Sent:

Wednesday, June 08, 2011 7:57 AM

To: Subject:

Shirley Craddick

ibject: river crossing

Shirley, the IU of Painters and Allied Trades appreciates the work you put forth at Metro. We ask you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%. Thank you, Scott.

Scott Oldham

Field Representative 11105 N.E. Sandy Blvd. Portland, Oregon 97220

Cell 971-219-3299

FAX 503-256-5271
Office 503-257-6644
Toll Free 1-800-237-2070
E-MAIL scotto@iupatdc5.org



Laura Dawson-Bodner

From:

Jim Karlock [jkarlock@gmail.com]

Sent:

Wednesday, June 08, 2011 1:44 AM

To:

Customer Comments; Tom Hughes; Shirley Craddick; Rex Burkholder; Carlotta Collette; Carl

Hosticka; Kathryn Harrington; Barbara Roberts; Debbie Jermann;

don.b.hamilton@odot.state.or.us; info@rtc.wa.gov; swwebinfo@wsdot.wa.gov; steve.stuart;

Marc Boldt; Tom.Mielke

Subject:

Public record request for copy of CRC FEIS

It was announced at the June 7, 2011 RTC meeting that the CRC FEIS is now available for review and at least some public agencies possess copies.

Please supply an electronic copy of the CRC FEIS by email if under 10 meg or on a CD/DVD that I can pick up and pay a moderate fee.

Thank you for you early attention to this matter.

Please do not ask me to fill out a form - this email contains all necessary information & I am not claiming any special exemptions. I am just asking for a copy of a public record at a reasonable cost for posting on the internet for the benefit of the public, a compelling public need for a multi-BILLION dollar project.

Thanks JK

Laura Dawson-Bodner

From:

Pamela Ferguson [pamfergusonpdx@aim.com]

Sent:

Wednesday, June 08, 2011 12:25 AM

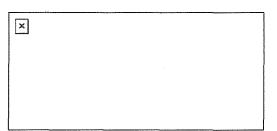
To:

Tom Hughes; Shirley Craddick; Carlotta Collette; Carl Hosticka; Kathryn Harrington; Rex

Burkholder; Barbara Roberts

Cc: Subject: Donna & Pat Murphy; Herman & Carroll Kachold; Jonathan Ostar; Roger Staver

HILP'S ONGOING CONCERNS WITH CRC



June 8, 2011

JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION (JPACT) Metro Council

Re: Hayden Island Livability Project – Ongoing CRC Concerns

Dear Metro Council,

On behalf of the Hayden Island Livability Project (HILP), we are writing to urge you to reject the current iteration of the Locally Preferred Alternative (LPA) for the Columbia River Crossing (CRC) Project, and/or condition your support on the successful resolution of our continued concerns around livability, equity and environmental justice.

HILP is comprised of Hayden Island residents and friends interested in protecting and promoting the livability of our community. HILP is a grassroots effort that was established to empower the 1,400 residents of the Hayden Island Manufactured Home Community. We are a diverse community, primarily low-income seniors with a range of health concerns, limited-mobility and fixed-incomes, as well as working-class families of color with young children. Our community is an environmental justice community, and we are concerned that the current CRC plan does not address the disproportionate impacts that we will bear as a result of this project. We are aware of the regional significance of this project, and yet it is our community that will bear the majority of impacts – both during and after construction. We are the fenceline community to the construction, and we live in closest proximity to the Interstate Bridge.

While our two-plus years of advocacy has been successful in achieving a compromise design proposal for the Hayden Island freeway interchange and a slight reduction in the number of freeway lanes crossing our community, too many questions remain unanswered at this time to move forward with the plan in good conscience. Fundamental to these concerns is the continued failure of the CRC agency to acknowledge our community as an environmental justice community. This critical oversight perpetuates errors throughout the design and impact analysis process that will result in a flawed Final EIS, and as such, an unjust project. Given Metro's commitment to regional equity, this Council must lead by example and condition approval of the LPA on CRC's recognition of our socioeconomic

circumstances and hardships. The following issues represent some of the ongoing concerns that have yet to be addressed by CRC.

1. Construction Staging

The revised LPA includes the community's priority of a local access bridge to connect our community to Portland. It is essential that this local access bridge be designated a top priority in the construction staging for two primary reasons: (1) to ensure government accountability to deliver on a community priority, lest this bridge fail to materialize later in the process on account of fiscal or transportation shifts; and (2) to ensure that our community, comprised of a disproportionate amount of seniors with medical concerns, are not trapped on the island once principal bridge construction begins. Any mobility restrictions for our residents would represent an unacceptable burden. Associated with this demand is the need for continuous emergency vehicle access for community residents.

2. Grocery and Pharmacy Availability

The current LPA requires a complete taking of the Safeway store on Hayden Island, which is the only local source of fresh food and prescription medication for our community. Given the age, health conditions and limited mobility of many of our residents, this represents an unacceptable and unlawful impact for our community. Although we have clearly stated our need for local access to food and medication, CRC has yet to provide a well-defined plan for doing so. Until there is a commitment to mitigating the impacts of the Safeway taking, the LPA presents an unconscionable burden for our community.

3. Air Toxics and Air Quality

Although mitigation of community impacts is not a part of LPA design itself, the Metro Council should be extremely cautious in approving a proposal that would significantly threaten the air quality of local communities. Our community will be severely burdened in two primary ways: from diesel pollution and dust due to bridge/freeway construction, and from increased vehicle emissions after the project is complete. The current LPA sites the staging ground for construction at the vacant Thunderbird Motel, which sits at the fenceline of our community. We will be dealing with the immediate impacts from construction, as well as the brunt of emissions from increased freeway traffic. We ask the Metro Council to condition their approval of the LPA on CRC's commitment to air quality mitigation measures: on-site air quality monitoring, low-sulfur diesel in all construction equipment, dust mitigation and a 1% community enhancement fund.

This project represents an opportunity for the Portland Metro region to uphold equity principles and put them into action. We are a low-income vulnerable community bearing the disproportionate burden of this massive public works project while realizing few if any of the benefits.

We call on the Metro Council to uphold environmental justice values in rejecting any project plan that does not consider and protect our community needs.

Donna Murphy

Herman Kachold

HILP Co-Chair

HILP Co-Chair

pennyputupon@yahoo.com

hkachold@msn.com

Laura Dawson-Bodner

From:

Ina Zucker

Sent:

Wednesday, June 08, 2011 9:16 AM

To:

Laura Dawson-Bodner

Subject:

FW: Vote NO to the CRC on Thursday

For the record

From: Herman Kachold [mailto:hkachold@msn.com]

Sent: Wednesday, June 08, 2011 7:32 AM

To: Ina Zucker

Subject: Vote NO to the CRC on Thursday

Please read the article in the Willamette Week by Nigel Jaquiss. The CRC Project is a big mistake as it is now envisioned. There are better ideas out there. Please take a another look at solving the crossing of the Columbia River.

http://www.wweek.com/portland/article-17566-a bridge too false.html



8 June 2011

Metro Council 600 NE Grand Ave. Portland, OR 97232

Dear Metro Council,

I'm writing in support of Resolution 11-4264 as Executive Director of the Columbia Corridor Association, Chair of the Portland Freight Committee and a member of the Columbia River Crossing (CRC) Freight Working Group.

The CRC project has had an extraordinary amount of local oversight. A 39 member Task Force, an independent review panel, three active working groups, and a project sponsors council. In addition, a variety of reviews have resulted in a Metroscope analysis and a national award for greenhouse gas analysis. Our region can be proud of the comprehensive, albeit expensive, public process this project continues to go through.

With so much local oversight comes an increase in opinions voiced. The additional critiques can help us build a better project. But when it comes to a vote, such as the case with Resolution 11-4264, it behooves us to note that the increased cacophony of voices has not led to more disagreement. Approximately 70% of our region's population wants the project to be built. 37 of the 39 members of the Task Force want the project to be built. The Independent Review Panel concluded the project is worthy. The CRC working groups support the project. The Project Sponsors Council supports it and the governors of both states are firmly behind it. Most pertinently, Metro's own well-written analysis recommends adoption of the resolution before you. If all this support is the result of a conspiracy of myths, the ringleader must be an extremely capable villain.

As the Metro analysis makes clear, there are still topics we must keep an eye on. This project is an excellent opportunity to make even more progress on environmental justice. Tolls need to be tied firmly to objective demand management criteria. Bicycle access needs to be safe and convenient. However, there is no indication that these unfinished concerns are being ignored.

Please cast a strong vote for this resolution a send a message to our federal partners that we have put more consideration into this project than perhaps any other they have seen. Please remain committed to the need for light rail to Vancouver, excellent bicycle access, and safety improvements.

Respectfully submitted,

Corky Collier

Executive Director



June 8, 2011

Metro President Hughes Metro Councilors Burkholder, Colette, Craddick, Harrington, Hosticka, Roberts Metro 800 NE Grand Avenue Portland, OR 97232

RE: Proposed Resolution 11-4264

Dear President Hughes and Metro Councilors:

I want to strongly urge you <u>not</u> to adopt Resolution 11-4264, as proposed. Fundamental questions about the proposed Columbia River Crossing remain unanswered. To give your approval at this point would be premature at best and at worst a dereliction of your duty to the region's citizens.

While there are a wealth of reasons to oppose moving forward with this project, I will restrict my analysis only to those instances in which the advocates of the Columbia River Crossing have simply failed to meet the conditions identified by Metro Council when it deliberated on a locally preferred alternative nearly three years ago.

1. CRC traffic projections are incorrect

The traffic projections used to justify the project's construction, to analyze the project's environmental impact, and to establish its financial viability are simply wrong. We have five full years of data since the base year of the CRC projections (2005); this is 20 percent of the planning period. Rather than increasing by 7,000 vehicles per day as the model predicted, ODOT's own published data show that traffic has decreased by 7,000 vehicles per day. This clearly shows that the traffic projections are already inaccurate. Calendar Year 2010 daily traffic on the I-5 bridges is about 17,000 vehicles per day below the level estimated by the CRC models. The traffic modeling is based on incorrect assumptions about low gasoline prices and a very high value of user time. In addition, the Independent Review Panel appointed by the two governors identified the need to address the likelihood that the CRC would simply shift the I-5 bottleneck to the Rose Quarter, and recommended that additional traffic studies be performed. Nothing further has been done on this issue since that panel's report.

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Metro Council Re: Resolution 11-4264 June 8, 2011 Page 2

2. CRC traffic and greenhouse gas review panels ignored contrary data

The purportedly independent reviews of the projects traffic modeling and greenhouse gas emissions estimates are flawed and inadequate. The so-called "peer review" panel for traffic modeling met for two days and consisted of members chosen by the CRC. The panel was not provided with analyses that criticized the CRC projections, and it did not examine actual post-2005 data on traffic counts (as illustrated in the preceding paragraph) show that the forecasts are already demonstrably wrong. This is one of many examples in which the CRC has received substantive public testimony questioning and contradicting its methodology and conclusions and then simply ignored these questions and criticisms. Similarly, the greenhouse gas review panel did not review the accuracy of traffic modeling, which created an artificially inflated "no-build" emissions estimate, and ignored the effects of induced demand from additional highway capacity.

3. The CRC has no financial plan

The Columbia River Crossing has not prepared a credible financial plan which gives this Council any basis for understanding how this project will be financed, how that financing will affect other projects in this region, or—perhaps most importantly—an honest and accurate assessment of the fiscal risks to the state and region from moving ahead with this project.

Nearly three years have elapsed since the Council imposed these conditions, and essentially nothing has been done to address project financing. The Metro staff report makes reference to an un-adopted "conceptual" finance plan floated more than a year ago, on which no action has been taken. There has been no opportunity for public scrutiny of or debate on financial issues; my own analysis of CRC toll financing was only possible because I was able to obtain key financial documents through a public records request. Neither the Oregon nor the Washington Legislatures has approved even one cent for project construction. The Washington Legislature has not approved necessary tolling authority for the bridge. No agreement has been reached between the two states about financial responsibility for the project, or for any cost overruns. Voters in Clark County have not provided the necessary voter approval of transit operations. It is a fair summary of CRC finances and project approval to say that no one who has voted for the project will pay for it, and no one who would need to pay for the project has voted for it.

Fundamental questions about financial risks to the state and region remain unanswered. The CRC has eliminated plans to undertake a "Funding Risk Analysis Memo" from its project schedule. I have reviewed several successive iterations of the CRC's project schedule, including versions obtained in response to public records requests. The November 2009 version of the schedule identifies task FN 1520: Funding Risk Analysis Memo. The August 2010 version of the schedule indicates that this task is "no longer

Metro Council Re: Resolution 11-4264 June 8, 2011 Page 3

required." This task does not appear in the December 2010 version of the project schedule, and no more recent schedule has been prepared.

An independent, investment grade financial analysis is essential. This was a key recommendation of the Independent Review Panel appointed by Governors Kulongoski and Gregoire. Its recommendations were accepted by the two state DOT directors. The report said, in part:

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 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.

The Metro Council cannot reasonably ascertain whether its project financing conditions have been met until it is in receipt of an independent, investment grade analysis. Governor Kitzhaber has recently committed to undertake such an analysis; the Council should wait until this is complete before taking action. It would not be prudent to do otherwise.

In sum, none of the issues that the Metro Council identified three years ago are close to being resolved. The project's traffic projections are demonstrably wrong, and as a consequence so too is its analysis of greenhouse gas emissions. The project has no financial plan, nor has anyone committed to funding project construction. The risks the CRC poses for transportation finance in the region have simply not been examined. The essential independent, investment grade analysis has not been performed. The questions that citizens and leaders appropriately posed three years ago remain unanswered to this day. It would be a serious error to proceed further with the CRC in these circumstances. The Council should insist on real answers to its questions before taking further action.

Best regards,

Joseph Cortright



MEMORANDUM

February 7, 2011

TO: Mr. Chris Girard, Plaid Pantry

FROM: Joe Cortright, Impresa

RE: Response to Mr. Garrett's Reply to Impresa's CRC Analysis

This memorandum responds to the comments made by ODOT Director Matt Garrett in a January 21, 2011 communication to legislative leaders, responding to Impresa's October 4, 2010 report on the financial aspects of the Columbia River Crossing.

Mr. Garrett questions Impresa's analysis of traffic forecasts, cost estimates, and the CRC funding plan. Impresa stands by the accuracy of all of the data and conclusions in our report, and based on our analysis, we disagree with Mr. Garrett's comments. We continue to conclude:

- Traffic levels in the I-5 corridor have been declining since 2005, raising serious doubts about the reliability of the project's future traffic projections. Flawed traffic projections undercut the need for the project itself, the rationale for its size, the accuracy of its environmental assessment, and the viability of its financing plan.
- The total cost that will have to be paid by taxpayers and bridge-users for the Columbia River Crossing over the next thirty years will be \$10 billion, including capital, interest and operating costs, and the attendant improvements that will likely be needed to resolve identified issues in the Rose Quarter. The region's road-users and taxpayers will have to pay all of these costs, not just the widely publicized initial capital cost.
- The proposed financing plan for the project poses major risks for the state and the region, and there is a high probability of cost overruns and revenue shortfalls.

The reasons for our conclusions and specific responses to each of the points raised by Mr. Garrett are presented in this memorandum. Mr. Garrett's comments are shown in *italic*, and our comments follow in **normal text**.

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Traffic forecasts

Impresa's report found that traffic volumes have been in decline on I-5 since 2005, and are falling dramatically behind CRC projections, undercutting the rationale for the project itself, the justification for its sizing, the analysis of its environmental impacts, and the viability of its financial plan. Mr. Garrett disputed our analysis of traffic data.

". . . traffic counts for the I-5 bridge, which have shown a recent decline with the current recession."

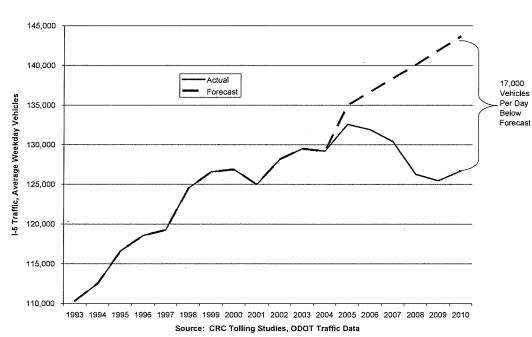
As we noted in our analysis, the decline is not recent, and predates the current recession which started in December 2007.

"It is typical for traffic volumes to decline during a recession and to rise during boom periods. These fluctuations are expected."

The data shows that historically, previous recessions have had only minor and transitory impacts on traffic growth changes. The current stagnation in traffic growth on I-5 is a decade-long trend, reflecting fundamental changes in travel behavior and a response to much higher fuel prices. In addition, the CRC modeling makes no allowance for recessions. Traffic levels are assumed to increase steadily each year without interruption. (See for example, document PEAC-54, page 15).

We analyzed ODOT's latest data on traffic levels on I-5, through November 2010. These data show:

- Traffic growth rebounded modestly in 2010. According to ODOT's calculation, for the first 11 months of 2010, traffic levels were up 1 percent over the 12 months of 2009. (Compared to the first 11 months of 2009, traffic in the first 11 months of 2010 was up 0.7%).
- Traffic in 2010 was 126,700 vehicles per average weekday.
- This traffic level is still almost 6,000 vehicles per day below the 2005 peak of 132,600.
- The 2010 traffic level is 17,000 vehicles per day below the DEIS forecast of 143,700 vehicles per day in 2010.
- At ODOT's calculated current rate of growth of 1.0% per year, 2030 traffic will be 154,400; this is about 30,000 vehicles per day less than the DEIS forecast.
- In order to reach the DEIS forecast, traffic growth would have to almost double -- to 1.9% per year -- and grow that fast every year for the next two decades. Over the past decade, traffic has increased that fast in only one year (2002).



CRC Forecast v. Actual

This 17,000 vehicle per day shortfall from projections would have a material adverse effect on project financing. The shortfall to date coupled with the much lower than predicted level of growth would produce financial results similar to those outlined in our original report. In that report (page 15), we showed that a slower than projected rate of traffic growth on the I-5 bridges would produce a debt service payment shortfall of more than \$1 billion over the life of the project.

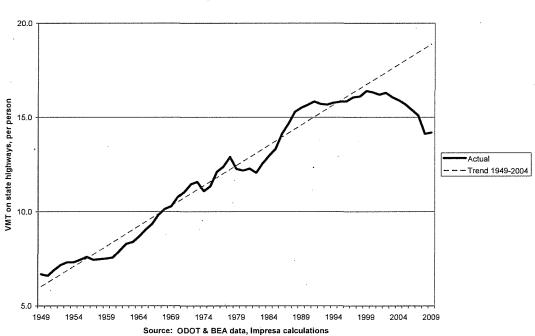
Our report explicitly addressed the role of the recession in influencing traffic levels on I-5. We noted that the decline in I-5 traffic volumes preceded by two full years the advent of the recession. The dramatic difference between the CRC forecast and actual traffic levels is not a minor "fluctuation"—it is a sea change in travel behavior reflecting important national and regional trends.

". . . evidence suggests that traffic volumes are resuming their long-term upward trend on both I-5 and I-205."

Mr. Garrett presents no data to show what the actual "upward trend" of traffic volumes is now. The question is not merely whether they are rising, but whether they will recover to the previous levels, and whether they will grow at anything close to the rate CRC projected five years ago. The evidence shows the growth rate is much slower than

forecast, raising serious questions about the need for the project, its sizing, and how it will be financed.

As we noted in our report, per capita vehicle miles traveled continues to decline nationally. The doubling of fuel costs since 2005 has produced a dramatic change in travel behavior. This is confirmed by ODOT's own data on travel on state highways; vehicle miles traveled per capita on state highways peaked in 1999, and are 13% below that level. On a per capita basis, Oregonians are driving on state highways at rates lower that at any time since 1987. This shift is not a small or temporary change induced by the recession—it is a long term shift in the nation's driving habits that is not captured in transportation models calibrated in an era of cheap energy (Oregon State Vehicle Miles Traveled for state owned highways, http://www.oregon.gov/ODOT/TD/TDATA/tsm/vmtpage.shtml#Oregon VMT_Graph).



Oregon VMT Per Capita Declining

This trend is also confirmed by similar data from the Washington DOT. Between 2006 and 2009, per capita vehicle miles traveled in Washington State have declined 3.9% (Washington State Department of Transportation, 2010)

A multi-jurisdictional team and an expert review panel has reviewed the model.

In 2008, the CRC convened a Travel Demand Model Review Panel consisting of staff from four other metropolitan planning organizations. This panel was not provided with copies of comments on the DEIS that questioned and criticized the data, methodology and findings of the CRC traffic forecasts. The panel spent two days reviewing the

methodology, but did not independently develop its own estimates, and there is no indication it reviewed actual traffic data from 2005 (the base year of the forecast) and 2008.

Our report pointed out that the problems of over-estimating future traffic levels are endemic to the entire class of models used by CRC and metropolitan planning organizations. This is not our conclusion, it is the conclusion of independent expert review by the Government Accountability Office (2005) and the National Academy of Sciences (Committee for Determination of the State of the Practice in Metropolitan Area Travel Forecasting, 2007). Claiming that the travel demand model review panel found that the methodology was consistent with the general practice doesn't refute the point made in our report, and the general practice is seriously flawed.

"Vehicle operating costs, of which fuel costs were a component were reasonable."

The CRC traffic forecasts are based on the Metro model which relies upon travel behavior surveys taken in 1994 when the price of gasoline was less than \$1 per gallon. The CRC traffic models contain no explicit variable that addresses changes in fuel costs. The model is based on the assumption that the per mile cost of driving will not increase faster than inflation, and that increases in real (i.e. inflation-adjusted fuel prices) will be exactly offset by improvements in vehicle fuel economy, leaving travel behavior unchanged regardless of any change in fuel prices. As shown above, this premise is incorrect.

". . . tolling analysis is within standard practice."

As we noted, a careful review of toll revenue forecasts undertaken for other similar projects shows that standard practice methods consistently over-estimate future traffic and associated revenue (Bain, 2009). We also showed that WashDOTs forecasts for the Tacoma Narrows Bridge have significantly over-estimated toll revenues. The CRC has not commissioned an independent, investment-grade forecast that would reflect probable results that would be achieved in practice.

"... two new analytical surveys validated and updated assumptions used in the model. First, an origin-destination study compared the actual patterns

In fact, as we noted in Section 1.4 of our original report, the authors of the CRC traffic forecasts manually adjusted the model outputs, substituting their own judgment for the modeled results, and inflating traffic volumes assigned to the I-5 bridge by 6% as part of what they euphemistically labeled "post-processing."

"a 'stated-preference' survey determined corridor specific value of time for use in the regional travel demand model."

As we noted in our analysis, the stated preference survey is regarded as a second-best method for estimating the actual value that travelers attach to travel time savings. We

also noted that the CRC survey systematically under-sampled low and moderate income households, biasing upward its value of time estimates. The IRP agreed with these concerns and concluded that a new travel demand forecast would be needed, in conjunction with the investment grade forecast (page 179).

It is also worth noting that the travel demand modeling for the CRC does not include an estimate of the effect of the "pay by plate surcharge" that travelers will have to pay if they don't purchase transponders. The CRC states that the surcharge may be an additional \$1.50 on top of the toll, so most of the region's population will face a \$3.50 or higher toll (a \$2.00 toll plus a \$1.50 surcharge) to use the CRC at peak hours. The CRC has not estimated the effect of the combined toll/surcharge on travel behavior. The actual surcharge may be higher. The Washington Transportation Commission found it necessary and has just approved a \$2.75 per transaction "pay by plate" surcharge above the transponder toll for the Tacoma Narrows Bridge (WAC 468-270-070).

"There will be about a 4.5 percent shift of auto trips on an all day basis from the I-5 corridor to I-205."

This estimate is highly dependent upon the incorrect value of time assumptions used in the forecast, and is further affected by the failure to include the effect of the pay by plate surcharge on travel demand. Overestimating the value of time has resulted in the CRC underestimating diversion. Moreover, it is exactly this diversion effect which has shown to be systematically underestimated by standard models, and is only corrected by undertaking an investment grade analysis, which has not been done for the CRC.

Cost estimates

Impresa's analysis concluded, based on estimates obtained from CRC and ODOT, that the total capital and operating cost of the CRC, plus the improvements needed at the Rose Quarter for the CRC to work as designed, would cost the region \$10 billion over the next 30 years.

The CRC finance plan fully accounts for all project costs, maintenance and operations costs and financing and interest costs."

The widely quoted \$3.9 billion capital construction price tag, still repeated by CRC, does not include the full 30 year cost of building, financing and operating the project. Prior to the release of documents obtained in response to a public records request, there was no publicly available information on the total dollar amount of operations, maintenance or interest costs of the project.

The total cost of the project over the next 30 years, including the fix for the Rose Quarter that was addressed by the IRP, will be roughly \$10 billion, assuming that there are no cost overruns. As documented in our original report, none of these estimates were made by Impresa; every figure was taken from estimates prepared by CRC, ODOT and the IRP.

"The Rose quarter is outside of the project area and therefore, should not be part of the CRC project cost estimates.

The reports of both the Independent Review Panel and the city of Portland's engineering consultants, URS, identified the bottleneck at the Rose Quarter as a major issue. 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 IRP panel recommends a new set of traffic studies to test whether the CRC will simply shift the bottleneck south, and calls 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).

"Cortright disregards this rigorous process used to develop capital cost estimates for the CRC."

Actually, the IRP found that the Cost Estimation Validation Process (CEVP) used to-date on the CRC was anything but rigorous. After their review they found that total project costs were "unknown with any certainty," that the CEVP had "significant weakness" and had been undertaken for a different design than that now contemplated. They called the assumptions used for cost estimates and project schedules unreasonable and optimistic. The IRP concluded that the CEVP was "not accurate enough" to support a financial plan.

"The February 2009 CEVP workshop was based on an LPA design, which is fundamentally different from the current LPA "refined" design currently contemplated for the Final EIS. As the CEVP performed in February 2009 used information and assumptions available at the time which are fundamentality different than the design concept and assumptions being put forth in the Final EIS, there is a significant risk that the range of numbers and dates used for the financing model, which in turn will be used for funding and financing of the Project is not accurate enough for such purposes." (Independent Review Panel Report, pages 166-167)

Additional quotations taken from the Independent Review Panel report are shown in the Appendix to this document.

And, as we now know, based on the report of the Bridge Review Panel (issued February 4, 2011), the "open-web" design proposed for the bridge in the project refinement is now regarded as un-buildable.

"The recent CRC Independent Review Panel commended the project's risk assessment approach . . ."

In fact, the IRP offered many significant criticisms of the CRC risk analysis. The IRP cited incorrect assumptions in the CEVP process that "dramatically affect the assumptions on the identification of potentially emerging risks, the probability of those risks occurring and the schedule and cost impact these risks would then have on the project." Similar concerns have been raised by the federal government's independent Project Management Oversight Consultant (PMOC). The PMOC consultant, Gannett-Fleming, found that project budget and schedule documents assumed a unrealistic 12 month in-water work window (IWWW), and that with a likely 4-month IWWW, the project may be "not constructible." (Gannett Fleming Inc., 2009, page 4-8) While acknowledging progress in negotiating the in-water work window with regulatory agencies, the latest PMOC report concluded that the final implications for the project will not be know until the Biological Opinion is issued.

"The report methodology also incorrectly combines capital costs, operation and maintenance costs and financing costs in a way that erroneously depicts capital costs."

This is not correct. Our report never describes interest, operating costs or maintenance costs as "capital costs." We are quite clear that our estimates represent the total 30-year cost of the CRC. It is also worth noting that Mr. Garrett does not challenge the accuracy of any of the operation and maintenance costs or interest costs. These are the total costs that Oregon and Washington taxpayers and road users would have to pay over the next 30 years. In addition, it seems likely that some costs would be even higher than CRC has estimated. For example, as noted earlier the Washington Transportation Commission has just approved a \$2.75 pay by plate surcharge for the Tacoma Narrows Bridge—nearly double the cost assumed in CRC estimates.

The home buyer analogy.

Mr. Garrett offered an analogy of a consumer buying a home. We don't believe this a relevant example, but within that context, it is not just the advertised price of the "home" that the consumer must consider. Aside from the purchase price, it is critical that the homeowner know if he/she can make the monthly payments. In the case of the CRC, we don't know if we can get a loan (bonding), how much we can finance, what the interest rate, fees and terms will be, or how we can make the \$450 million "down payment" in the current and foreseeable weak economy. And in this analogy, the consumer will only get a loan by pledging other state assets as a guarantee, and agreeing to pay all of the contractor's cost overruns.

The finance plan proposed for the CRC is an integral part of the project and deserves close scrutiny. As proposed, the financing is the equivalent of a high risk, negative amortizing home loan of exactly the type that generated the huge increase in home mortgage delinquencies in the past five years. It is based on unrealistic and unsupported assumptions of steady traffic increases and continuous toll rate increases. As noted in our original report, the interest cost alone would be nearly double the cost of the kind of standard level-payment, fully amortizing mortgage that most consumers would recognize,

because it capitalizes interest payments in early years, and "backloads" debt repayment based on the assumption of steady and continuous increases in total toll revenue. And the project will require the states to offer "credit enhancements"—essentially an unconditional guarantee to make up revenue shortfalls and cost overruns. The total cost of the project, not just an estimated price tag for capital costs, should be carefully scrutinized by state policymakers, because the taxpayers and users of the bridge will end up paying the total costs, including making good on guarantees, not just the estimated capital costs.

Funding plan

Impresa's analysis found the funding plan for the Columbia River Crossing is at best uncertain and risky. There is a high probability of cost-overruns, such as those experienced in ODOT's Pioneer Mountain-Eddyville and Newberg-Dundee projects. It is also likely that the project has overestimated likely revenues from tolling. In addition, the project faces significant and unresolved risks in obtaining federal funding, and in negotiating an in-water work window consistent with the project schedule and budget.

"At a later stage, before bonding, the project will conduct an investment grade study."

Mr. Garrett does not dispute the need for the investment grade analysis, also recommended by the Independent Review Panel. The CRC has offered no rationale as to why such a study should not be undertaken immediately. The Legislature and the Governor should have access to the same high quality, independent financial analysis that an investor would insist upon, prior to their deciding whether to finance and guarantee this project.

Mr. Garrett's statement does not specify who would undertake the investment grade study, and when it would occur. As the IRP and financial industry documents make clear, the investment grade study has to be undertaken by an entity independent of the project in order to be credible, in the same way that auditing is done by independent, outside firms.

"Federal highway funds are being sought from a category known as Projects of National Significance. Very few projects in the country and no other projects in the region can compete for these funds These sources are unique to the CRC project and do not affect other Oregon projects."

The category of "Projects of National and Regional Significance" was established in the SAFTEA-LU transportation funding bill of 2005. All of the funds in that program were earmarked by Congress for 25 named projects, and funding under this section ran from fiscal year 2005 to 2009.

There is currently no legal authorization for a "Projects of National Significance" category. There have been legislative proposals to enact a "Projects of National Significance" category, but no legislation has passed either house of Congress. This source of funding is at best speculative.

The CRC makes it clear in its financial plan—as pointed out in our initial report—that it will seek federal funding for the CRC from whatever sources possible, including earmarks and other discretionary highway funds.

If PNRS funds are not sufficiently available for the CRC project, other discretionary highway funds will be sought, such as High Priority Projects (HPP) and Interstate Maintenance Discretionary (IMD) funds. (Final EIS Financial Plan—Draft Report, September 2010, page 2-6.)

Funding for the CRC from earmarks and discretionary funds therefore will likely reduce the availability of federal funding for other project in Oregon. In the previous transportation legislation, the money allocated for projects of "national significance" was earmarked by Congress based on local priorities: Oregon used the earmarks it received under the Projects of National and Regional Significance program of SAFETEA-LU to fund the statewide I-5 bridge repair program.

While funding allocation under the PNRS program was envisioned as a criteria-based administrative program, the entire \$1.8 billion funding authorization was earmarked to specific projects in SAFETEA-LU. Oregon received an award of \$160 million to improve bridges throughout the state in the I-5 corridor, and Washington received a \$220 million award for the Alaska Way Viaduct project. (Final EIS Financial Plan—Draft Report, September 2010, page 2-6.)

While Mr. Garrett has raised questions about some issues, and argued about the characterization of some costs, his letter does nothing to disprove the accuracy of any of the specific figures on costs or traffic levels presented in Impresa's October 4, 2010 report. Over the next 3 decades, according to the project's own estimates, the region's travelers and taxpayers will end up spending at least \$10 billion to construct and operate the Columbia River Crossing, and to upgrade the Rose Quarter bottleneck sufficiently to make the CRC work. The project is based on traffic projections that have not been borne out it practice, and which grossly overstate future traffic levels and likely toll revenues. Our initial conclusions stand that this project poses enormous financial risks for the state and region.

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Appendix: Independent Review Panel Findings

Independent Review Panel. (2010). Columbia River Crossing Independent Review Panel Final Report. Olympia: Author.

Page 12

"No Cost Estimate Validation Process (CEVP) has been done on the current design. Past CEVP efforts were conducted on a version of the bridge no longer under consideration. The earlier Constructability Workshop reviewed a previous version of the bridge as well."

Page 14

"The IRP is unable to assess the accuracy of the cost estimate for the project. Past efforts to determine an accurate cost have been largely negated due to the change in bridge type and the continuing controversy regarding Hayden Island. Until a resolution to these two issues is achieved and the NEPA process is closer to completion, the total cost of the project is unknown with any certainty. Conducting a new CEVP and other cost estimation activities are necessary to rectify this situation."

Page 166

"However, the validity of the Basis of Estimate is only as good as the inputs used for the CEVP model. This is where the IRP sees a significant weakness in the Final CEVP Report as presented to the IRP and thus potentially in the cost and schedule dates used in the financial model."

Page 194

The open-web design is "one that has never been built anywhere in the world and which will require extensive testing and engineering to determine its viability for this project"

Page 159

"The schedules that have been provided to the IRP do not reflect major, important issues that have been identified in this report, which should be considered before the schedule is finalized."

Page 160

"The IRP believes the schedules provided are very optimistic and aggressive as to essential milestones. In many cases recent events have made the schedules obsolete."

Page 160

"Response to IRP requests with dated and in many cases no longer valid project schedules suggest that CRC is not using project schedules as a core management tool. This can detract from the credibility of and confidence in the project management staff and can lead to public uncertainty in the delivery of the Final EIS as currently promised to the Governors."

Page 164

"The current CEVP costs are relative only and form little basis for actual conditions as they exist at this time."

Page 166-167:

"The February 2009 CEVP workshop was based on an LPA design, which is fundamentally different from the current LPA "refined" design currently contemplated for the Final EIS. As the CEVP performed in February 2009 used information and assumptions available at the time which are fundamentality different than the design concept and assumptions being put forth in the Final EIS, there is a significant risk that the range of numbers and dates used for the financing model, which in turn will be used for funding and financing of the Project is not accurate enough for such purposes."

Page 168

"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."



Financial Analysis of the Columbia River Crossing

Joseph Cortright, Impresa, Inc., October 2010

Prepared for Plaid Pantries, Inc.

Executive Summary

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 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.



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.



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.



1. CRC Traffic Forecasts Are Inaccurate.

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 periodsince 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.



Average Daily Traffic, I-5 Bridges,

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

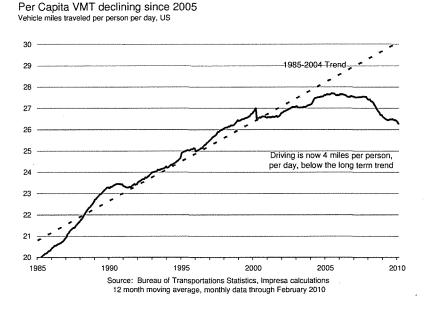


CRC traffic forecasts. Whereas the CRC forecast implied that traffic over the I-5 bridges (in the no build scenario) would increase by almost 7,000 vehicles per day; in reality, the number of vehicles crossing the bridge declined by 7,000.

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

CRC Forecast v. Actual 145,000 140,000 I-5 Traffic, Vehciles Per day 135,000 Actual Forecast 130,000 125,000 120,000 2000 2001 2002 2004 2005 2008 2009 2010 Source: CRC Tolling Studies, RTC Traffic Data

Figure 2: National Trends in Vehicle Miles Traveled





2249

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)



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, 2010f). 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).



2251

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.



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, underestimating 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



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



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



CRC Financial Analysis October 2010 Page 14

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.

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

	Thirty Year Cost, Millions,
Category	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.



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



CRC Financial Analysis October 2010 Page 17

to pay for the bridges. These interest and financing costs are <u>not</u> 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, 2010e)

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.

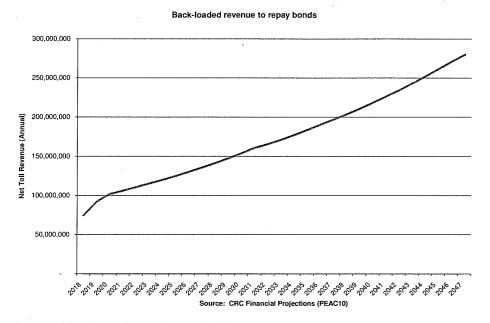
Our baseline estimate of interest costs is \$2.7 billion, based on the project's own estimates of thirty-year interest payments on toll-backed bonds (Columbia River Crossing, 2010c). This estimate is based on issuing \$1.4 billion dollars of bonds, in three series. This high interest cost is the product 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

¹ The 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.



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)



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 1 - 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



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,



CRC Financial Analysis October 2010 Page 21

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



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.



2.10 Opportunity Cost

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.



2265

CRC Financial Analysis October 2010 Page 24

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.



3. The CRC Poses Major Financial Risks

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.



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



CRC Financial Analysis October 2010 Page 27

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.



3.3 Housing Market Distortion Risk

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 &



CRC Financial Analysis October 2010 Page 29

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.



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



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).



2273

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.



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).



Conclusion

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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2277

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E	xecutive Summary	1
1	CRC Traffic Forecasts Are Inaccurate.	5
	1.1 CRC traffic forecasts have already proven to be inaccurate	5
	1.2 CRC traffic forecasts do not account for higher gas prices	9
	1.3 CRC traffic forecasts are outdated	10
	1.4 CRC forecasts inflated I-5 traffic estimates using "post processing"	11
	1.5 CRC forecasts over-estimate the value of travel time, under-estimating toll diversion, and over-estimating revenues	11
	1.6 Inaccurate toll forecasts threaten CRC financial viability	13
2.	Total 30-year CRC Costs will total nearly \$10 billion.	15
	2.1 Construction Cost	16
	2.2 Interest Cost	16
	2.3 Toll Collection Cost	
	2.4 Bond Issuance Cost	. 19
	2.5 Credit Card Cost	20
	2.6 Sales Tax Cost	. 20
	2.7 Supplemental Project Cost	. 20
	2.8 Negative Economic Impact Costs	. 22
	2.9 Transit Operating Costs	. 22
	2.10 Opportunity Cost	. 23
3.	The CRC Poses Major Financial Risks	. 25
	3.1 Cost Overrun Risk	. 25
	3.2 Mega-project Risk	. 27
	3.3 Housing Market Distortion Risk	. 28
	3.4 Competing Bridge and Cross Subsidy Risk	. 28
	3.5 Unconditional Guarantee Risk	. 30
	3.6 Foregone Road Pricing Revenue Risk	. 30
	3.7 Federal Earmark Shortfall Risk	. 31
	3.8 New Starts Funding Shortfall Risk	. 32
	3.9 Schedule Delay Risks	. 32
C	onclusion	. 34
R	eferences	. 35



To: Metro Commissioner Carl Hosticka

Re: Columbia River Crossing Improper Alternative Analysis and Purpose and Need for

Environmental Impact Statement of NEPA.

Dear Commissioner Hosticka,

Before more funding is designated for the planning or development of the Columbia River Crossing (CRC) it is important to realize that a critical alternative analysis has not been completed as required by the National Environmental Policy Act.

According to the Council on Environmental Quality (CEQ) Regulations for implementing NEPA, the analysis and comparison of alternatives is considered "the heart" of the National Environmental Policy Act. A full range of alternatives should be included in the analysis to ensure that the government has fulfilled its mandate and requirements under NEPA statutes, otherwise more time and money will be wasted by governing jurisdictions.

The alternatives accepted into the CRC process during NEPA scoping were removed without being considered, vetted and/or thoroughly studied. During the first phase of the CRC analysis study, documents were handed out by staff stating that all concepts recommended during the scoping process needed to be considered. Unfortunately viable new bridge alternatives that would relieve congestion with the ability to connect local traffic, freight, high speed and commuter rail were never seriously studied.

An alternative third bridge in an alternative corridor, (once in the CRC study area) west of the existing Burlington Northern Santa Fe (BNSF) freight/Amtrak bridge was recommended for further study in the I-5 Partnership Study, I-5 Partnership Bridge Influence Area Study, and the SW Regional Transportation Council Visioning Corridor's Study in 2008. Similar alignments in this location are in adopted regional transportation plans in both states, but no research data regarding alignment, capacity or demand modeling was conducted for a third bridge alternative west of the BNSF bridge.

A properly conducted Environmental Impact Statement (EIS) of the new CRC bridge, as proposed by both Oregon and Washington's Department of Transportation, compared to a new third bridge will show striking differences in cost and impact to the environment. The third bridge could facilitate four new tracks; double tracks for high-speed rail and double tracks for freight. The long distance high-speed rail corridor could also serve as a one stop seven minute commute line between a 4th Plain Blvd Vancouver, Washington Station to the new Portland Rose Quarter Transit hub which could immensely reduce congestion on I-5 and connect with other alternative transportation systems.

The following are documented attempts by local, state and federal officials and appointed groups encouraging the CRC to complete a thorough alternative study:

- 1. On March 22, 2006, the Washington Co-Chair at the beginning of the CRC Advisory Task Force states that the third Bridge is not going to be studied in this process.
- 2. On March 22, 2006, the CRC Task Force, an Advisory Committee to the CRC Sponsor Council, was strongly encouraged to vote on removing project alternatives without review.
- 3. Letters from Clark County Commissioners dated July 12, 2006, December 18, 2006 and February 22, 2007, stated concerns that alternatives are not being studied for NEPA.
- 4. The NEPA process has not been followed. There exists 4 (f) Resources or significant historical sites in the plan area, such as the following: Fort Vancouver, Pearson Airport, Northbound CRC Bridge, the Apple Tree, Native American Archeological sites and Delta Park. (see SHPO Officer Tim Wood letter dated March 6, 2007).
- 5. Letter from U.S. Representative Earl Blumenauer dated January 7, 2008, expressed concerns that the NEPA process has not followed NEPA criteria.
- Letter from State Senator Benton that was signed by 13 elected officials recommends a
 thorough study of RC-14 "port to port" that must commence immediately in order to
 follow the NEPA requirements.
- 7. Clark County Commissioners who sit on the South West Washington Regional Transportation Council and CTRAN stated "the third bridge option was not fully vetted". (see letter dated July 23, 2010)
- South West Washington Regional transportation Council, A CRC Sponsor Agency, letter dated November 15, 2010 sates "The third bridge option....WAS NOT FULLY VETTED."

We also question the purpose and need statements by ODOT and WSDOT for the Columbia River Crossing. Relief of congestion and job creation are the two most popular reasons given for a new bridge. Compared to a third bridge alternative both reasons for need could be satisfied with less impact to the environment. Another reason given for a new bridge is because the existing I-5 bridges are considered too old and unsafe and yet studies show that seismic upgrades could be conducted with a fraction of the cost of a replacement bridge and greatly improve safety. Lastly the I-5 draw bridge is said to be outdated and the use needs to be minimized. This problem could be relieved by centering the draw bridge on the BNSF train bridge for better alignment for water cargo and/or boats to the taller center span on the I-5 bridges. Thus the use of the draw bridge on I-5 could be reduced by 95%.

Thank you for your time and consideration into this important matter.

Sincerely,

Brad Perkins, President

Cascadia High Speed Rail Advocates,

cascadiahsr@aol.com

cc: Representative Peter DeFazio, Representative Earl Blumenauer, Representative John Mica, Senator Ron Wyden, Senator Jeff Merkeley, Governor John Kitzhaber, State of Oregon House and Senate, Metro Commissioners, Transportation Secretary Ray LaHood



July 12, 2006

Columbia River Crossing Project Sponsors Council Project Task Force WSDOT and ODOT Project Directors 700 Washington St. Suite 300 Vancouver, WA 98860

With this letter we wish to enter into all relevant forums and records the unanimous policy statement of the Board of Clark County Commissioners regarding the Columbia River Crossing project, as follows:

The people who live and do business in Clark County are likely to pay a substantial share of any tolls, taxes, or fees associated with future crossings. By the same token, local residents and businesses will bear additional costs for public and private transportation associated with the crossing. Our citizens already are paying considerable state and federal taxes for public facilities and services in both Washington and Oregon.

Congestion surrounding the Interstate Bridge has become intolerable. Our top priority is immediate relief for freight and other through traffic that supports the region's economic vitality. The challenge of building consensus and securing financing for public transit must not stand in the way of this goal.

Specifically, we favor:

- A new supplemental crossing west of the existing Interstate Bridge. This would enhance public safety and greatly reduce the risk of serious delays and disruptions in transporting people and freight. The supplemental crossing should not preclude future uses for existing spans.
- Maximum flexibility for high-capacity transit, including options to change or combine types of transit over time.
- Public involvement and consensus building, including elections if necessary, to secure multi-jurisdictional funding for related projects. In particular, this should focus on capital investment and operating expenses to connect public transit facilities and services in Washington and Oregon.

Given the county's enormous stake in this project, we are seeking maximum consideration for the many Southwest Washington interests that are represented by Clark County, apart from those represented by the City of Vancouver. We look forward to your response.

Sincerely,

Marc Boldt, Chair

Steve Stuart, Commissioner

Betty Sue Morris, Commissioner

BOCC/mk



proad past, promisian istura

CLARK COUNT

December 18, 2006

Mr. Douglas B. MacDonald Secretary of Transportation Washington State Department of Transportation Post Office Box 47300 Olympia, WA 98504-7300

Dear Secretary MacDonald:

We write to share our concerns regarding the National Environmental Policy Act as it relates to the Columbia River Crossing project. The Board of Clark County Commissioners believes that the NEPA process is substantially flawed and any recent action taken by the Columbia River Task Force is arguably illegitimate.

On the evening of Wednesday, November 29th, the Columbia River Task Force met in regular session. During the proceedings, the Chairman, Hal Dengerick, deviated from the agenda by accepting a motion from Rex Burkholder Burkholder "to accept the project team's recommendations... and forward the report to the public for comment." The motion was seconded, voted on, and passed.

The Board of Clark County Commissioners takes objection to this deviation. The agreed upon and predetermined process would have allowed each member of the Task Force to go back to their respective bodies and present the staff alternatives. The motion as passed denied Clark County this opportunity.

Unfortunately for the residents of Clark County and the customers of C-Tran, Commissioner Stuart and Commissioner Morris had to depart the meeting early to attend the Clark County Planning Commission hearing on the Comprehension Growth Management Plan. Since there was no prior notification, each Commissioner was unaware of the vote and therefore, had not appointed an alternate to vote on their behalf.

The Board believes that a decision of this magnitude should have followed the agreed upon process. We should have had plenty of advance notice and a printed copy of the text. We believe this vote undermined the integrity of the NEPA process, for there needs to be a higher degree of consensus, and not a vote that was passed marginally or for the ease of a few.

On a night in which Governor Gregoire addressed the Task Force as a whole and urged our region to not be competitors but partners in the CRC project, we find it inappropriate what transpired. Over 400,000 residents live in Clark County, and as the duly elected Board, we find it unacceptable to be left out of this process. Therefore, we seek a fair and objective analysis as well as a reasonable opportunity to comment on the project. There needs to be a frank and honest discussion about the staff recommended alternatives, and Clark County needs to be involved.

Sincerely,

Marc Boldt

Chair

Betty Sue Morris Commissioner Steve Stuart Commissioner

2285

BOARD OF CLARK COUNTY COMMISSIONERS Betty Sue Morris - Marc Boildt - Sceye Stuart



proud post, promising luture

CLARK COUNTY

February 22, 2007

Columbia River Crossing Project Task Force 700 Washington Street Suite 300 Vancouver, WA 98660

Dear Fellow Task Force Members:

With this letter we wish to enter once again into all relevant forums and records the unanimous policy statement of the Board of Clark County Commissioners regarding the Columbia River Crossing project, as follows:

The outcome of this project will have a long lasting impact on our communities, for our progeny will bear the burden of its price and the social habits it will promote. Therefore, we believe we have an opportunity to be visionary yet practical while being ever vigilant with our public coffers.

From the first ferry boats to the original Interstate Bridge, some 167 years have been dedicated to shuttling people across the river. Now, more than 120,000 vehicles cross the river throughout cach day, which results in intense congestion that frustrates commuters and slows down delivery of goods throughout the region. We need to address those issues. However, it is our firm belief that we cannot end rush-hour congestion on the 1-5 corridor by simply building a new bridge over the Columbia River, no matter how much we spend on it.

If we were to build a new bridge, complete the Delta Park widening project, and eventually widen both the 1-5/1-405 split and Rose Garden, we will still only have three freeway lanes from here to downtown Portland. Each one of those lanes can handle about 2,000 vehicles per hour, so 3 lanes can handle a maximum of 6,000 vehicles per hour. As of 2005, there were already about 5,000 vehicles per hour traveling along the 1-5 corridor during the peak travel hours. By 2030 that number will jump to at least 7,500 – more than 1-5 can handle under the best circumstances. Put another way, Columbia River Crossing staff estimates that congestion during the commute southbound every morning will increase from 2 hours in 2005 to 4.75 hours in 2030. That is with a new 12-lane replacement bridge, high capacity transit, and a toll to pay the multi-billion dollar price tag.

The bottom line is: build a new 12-lane bridge, and shortly thereafter, congestion will return.

Let us be clear, we know doing nothing is not an alternative that should be considered. If we do nothing, people and goods will be stuck in a "rush hour" that extends through most of the day. That is not acceptable for our commuters or the neighborhoods that will suffer greater health risks caused by the increased car exhaust from stalled traffic. What we are saying is that because our carrying capacity is limited, we need to look at how to move traffic at different times, different directions, and using a variety of modes to clear that capacity for freight and commuters who have to drive.

⊜

This means an alternative that is a complete departure from the business as usual approach of just building a big, new, expensive 1-5 bridge. So let us start looking at doing something different, with an eye toward a more positive result. Together, we could:

- Increase transit ridership with more efficient service that works for people's busy schedules, which means pairing bus service with a new bridge structure for either bus rapid transit or light rail and lanes to clear on- and off-ramp traffic.
- Prioritize signals, ramp meters, and lanes for vehicles with more than one person.
- Fix the interchange system around the I-5 bridge to clear the congestion that happens when people try to weave on and off at Hayden Island, SR-14, and downtown Vancouver.
- Move the swing arm on the rail bridge to the center channel and make it a lift span. This \$40 million fix would eliminate the need to use the I-5 Bridge lift for barge traffic.
- Work with employers to provide incentives for flexible schedules that allow workers to commute south during non-peak hours when there is no congestion.
- Aggressively bring jobs to Clark County so people can live and work closer together and avoid the hours of commuting that keep them away from family and community.

Only by changing how, when, and where we travel will there ever be hope for true congestion relief on the 1-5 corridor. We have an opportunity right now to show true vision and leadership that addresses the root of our congestion instead of just putting a band-aid on it.

Please understand that we are not giving you an answer to what the preferred alternative should be for the Columbia River Crossing project. We are simply asking that an alternative is included in the study that shows vision, creativity, and lower costs to move more people. We believe that together we can achieve this goal.

Sincerely,

Steve Stuart

Chair

Betry Suc Morris Commissioner Marc Boldt Commissioner



Parks and Recreation Department State Historic Preservation Office 725 Summer St. NE, Suite C Salem, OR 97301-1266 (503) 986-0707 FAX (503) 986-0793 www.hcd.state.or.us



HISTORY Discovery

March 6, 2007

Hal Dengerink
Henry Hewitt
Columbia River Crossing Task Force
700 Washington Street. Suite 300
Vancouver. WA 98660

Dear Co-Chairs Dengerink and Heivitt:

I am writing to express our concerns about the Columbia River Crossing (CRC) staff recommendations considered by the CRC Task Force on February 27, 2007.

The recommendations do not appear to adequately address the cultural resource review process. The northbound bridge is listed in the National Register of Historic Places. The southbound bridge appears to be eligible for National Register designation. Yet there are no alternatives in the Draft Environmental Impact Statement (DEIS) that explore the re-use of either bridge for future use.

I believe that the CRC project and staff would be well served by including alternatives for both bridges in the DEIS. If a legitimate exploration of re-use options does not take place, and the reasons against re-using the bridges are not justified, then the entire project could be exposed to criticism and procedural challenges in the future. Various engineering and transportation studies have no doubt examined options for both bridges. I recommend including the results of those studies and the accompanying rationale for their viability in the DEIS.

We would welcome any discussions from the CRC staff regarding this issue. Our comments are offered with the intent of ensuring CRC's compliance with the cultural resource regulations as well as the spirit of preservation of these historic bridges, if possible. We look forward to a continued dialogue on this issue, and to assisting with an improved crossing over the Columbia River.

Sincerely.

Tim Wood

State Historic Preservation Officer

63-100 (64)

EARL BLUMENAUER
THIRD DISTRICT, OREGON

COMMITTEE ON WAYS AND MEANS SUBCOMMITTEES:

TRADE
SELECT REVENUE MEASURES

COMMITTEE ON BUDGET



Congress of the United States House of Representatives Washington, DC 20515-3703

January 7, 2008

Matthew Garrett, Director Oregon Department of Transportation 355 Capitol Street NE Rm 135 Salem, OR 97301

Dear Director Garrett:

Attached please find correspondence from my constituent, Ms. Sharon Nasset regarding the process for the proposed Columbia River Crossing project. Ms. Nasset is concerned that one option—known as the "port-to-port connector"—was removed from consideration without being subject to a complete NEPA analysis, and leaves the project vulnerable to legal challenges that may result in crippling delays.

Ms. Nasset believes that the CRC project should immediately commence with a supplemental EIS to fully study the "port-to-port connector" option.

As ODOT is one of the agencies leading the efforts on this project, I'm sharing her concerns with you. I would appreciate a response from ODOT or the CRC project addressing how the "port-to-port connector" option was removed from consideration as it relates to the NEPA process.

Thank you for your time and consideration.

Sincerely,

Earl Blumenauer Member of Congress

Cc: Sharon Nasset

WASHINGTON BEFICL

2267 RAYDUMI BUILDING

Washurstou, DC 20515 (202) 225-4811 Fax: (202) 225-8941

DISTRICT DIFFICE

729 N.E. Oregon Street Suite 115

Point Ario, OR 97232 (503) 231-2300 Fax: (503) 230-5413

veobsite: blumonouer.house.nov



Washington State Senate

109B Irv Newhouse Bullding P.O. Box 40417 Olympia, WA 98504-0417

Senator Don Benton
17th Legislative District

Olympia Ph. (360) 786-7632 District Ph. (360) 576-6059 E-mall: benton.don@leg.wa.gov

February 11, 2009

Dear Governors' Christine Gregoire and Ted Kulongoski, Sponsor Agencies; Southwest Washington Regional Transportation Council and CTRAN,

Attached please find correspondence from Congressman Earl Blumenauer to the Director of the Oregon Department of Transportation, dated January 7, 2009

We would like to thank Congressman Earl Blumenauer for his leadership on the Columbia River Crossing project's need to follow the National Environmental Policy Act (NEPA) requirements, that all alternatives are thoroughly studied. A thorough study of all options to include data is a necessary requirement in the NEPA process. This valuable step in the NEPA process brings the best options to the forefront and creates cooperation between the sponsoring agencies, stakeholders, and taxpayers, and the ability to receive Federal funding for the project:

We are asking that the CRC project immediately commence a Supplemental EIS to fully study the "port-to-port connector" option RC-14.

The foci of the Columbia River Crossing are the economy, safety, and the environment. A thorough NEPA process will create comparable data that will answer questions of cost, land use, environmental justice, mobility, congestion relief, regional freight, the distribution of benefits, and impacts.

In summary, adherence to the National Environmental Policy Act is essential for promoting consensus among various stakeholders and for demonstrating transparency. The I-5 international highway system's importance is internationally known. An open and transparent process is needed to build stakeholders consensus that will propel and help develop this project to completion. A project as important and enormous as the Columbia River Crossing must have transparency and must provide credible comparable data on the "port to port connector."

enator Larry George R State Senator 13th District enator's Joint CRC Oversight Co asiness and Transportation Con	mmittee nmittee	Representative Jim T OR Representative D Ways and Means Sut sources	hompson istrict 23 scommittee Natu
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In support of Senator Benton's letter to Governors Christine Gregoire and Ted Kulongoski, Sponsor Agencies; Southwest Washington Regional Transportation

In support of Senator Benton's letter to Governors Christine Gregoire and Ted Kulongoski, Sponsor Agencies; Southwest Washington Regional Transportation Council and CTRAN.

Representative Bruce Chandler WA State Representative 15th District Commerce and Labor Committee Ways and Means Committee	Senator Larry George OR State Senator 13th District Senator's Joint CRC Oversight Committee		
•			
	MARKET 1997		





proud past, promising future

CLARK COUNTY

July 23, 2010

Regional Transportation Consents

AUG

4 2010

The Southwest Washington Regional Transportation Council (RTC) c/o Ms. Molly Coston, Chair 1300 Franklin Street, 4th Floor Clark County Public Service Center Vancouver, Washington 98666-1366

RE: Columbia River Crossing (CRC) Environmental Impact Study / Third Bridge Analysis

Dear Chair Coston and Council Members:

This correspondence is in follow up to a repeated request to RTC by concerned citizens about the lack of a "third bridge option" being studied and included in CRC's Draft Environmental Impact Study (DEIS). The specific area these citizens are interested in includes a new 6-lane freeway connecting I-5 at Mill Plain, west to the Port of Vancouver, south to Hayden Island, Marine Dr., and connecting with HWY-30 near Newberry Hill.

The CRC project references in a March 22, 2006, document, RC-14. RC-14 was used to create a possible transportation alternative in the Draft Environmental Impact Study. RC-14 modeled a multilane, multimodal bi-state industrial arterial or corridor starting near I-5 and Mill Plain, crossing next to the BNSF rail bridge and connecting south to Marine Drive. Traffic analysis of the RC-14 alternative showed that it did not sufficiently relieve traffic congestion to any significant degree on the I-5/Columbia River Bridge and therefore was not advanced into the next round of alternatives. In sum, this alternative provided for a new industrial corridor, but did not provide for a major freeway that would adequately address freeway congestion.

A new <u>freeway corridor</u> alternative was also studied. It was identified as RC-16 (New Western Highway). This alternative functioned as a new freeway bypass to I-5, but did not directly connect to I-5 via Mill Plain. The proposed corridor started near Ridgefield and went around the ports.

Given the specific concern, as stated above, the answer is no. A "third bridge option" as a new freeway starting at I-5 and Mill Plain was not fully vetted.

Sincerely,

Steve Stuart, Chair

Tom Mielke

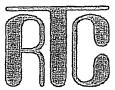
Marc Boldt

cc:

☻

Ms. Sharon Nasset Ms. Tamara McLane

10/5/10 Referenced by Tamara McLore



1300 franklin Street, Floor 4 P.O. Box 1366 Vancouver, WA 98666-1366

360-397-6067 360-397-6132 fox http://www.rtc.wa.gov/

Member Jurisdictions

Clark County Skamania County Klickstat County City of Vancouver City of Camas City of Washougal City of Battle Ground City of Ridgefield City of La Center Town of Yacolt City of Stevenson City of North Banneville City of White Salmon City of Bingen City of Goldendale C-TRAN Washington DOT Port of Vancouver Port of Cantas-Washougal Port of Ridgeheld Port of Skamania County Port of Klickitat Metro Oregon DOT 15th Legislative District 17th Legislative District 18th Legislative District

49th Legislative District

15 November 22, 2010

Ms. Sharon Nasset 1113 N. Baldwin Street Portland, OR 97217

Dear Ms. Nasset:

This letter is in follow up to your request about a "third bridge option" being studied and included in CRC's Draft Environmental Impact Study (DEIS). Your specific area of interest is about a project described as a new 6-lane freeway connecting 1-5 at Mill Plain, west to the Port of Vancouver, south to Hayden Island, Marine Drive, and connecting with highway 30 near Newberry Hill.

The CRC project references in a March 22, 2006 document, RC-14. RC-14 was a possible transportation alternative in the DEIS. RC-14 modeled a multilane, multimodal bi-state industrial corridor starting near I-5 and Mill Plain crossing next to the current BNSF rail bridge and connecting south to Marine Drive. Traffic analysis of the RC-14 alternative showed that it did not sufficiently relieve traffic congestion to any significant degree on the I-5 Columbian River Bridge and therefore not advanced into the next round of alternatives. In sum, this alternative provided for a new industrial corridor, but did not provide for a major freeway that would adequately address I-5 traffic congestion.

A new freeway corridor alternative corridor was also studied. It was identified as RC-16, a New Western Highway. This alternative functioned as a new freeway bypass to I-5 but did not provide direct freeway access to I-5 via Mill Plain.

It is also worth noting that in 2008 RTC completed a Transportation Corridor Visioning Study (http://www.rtc.wa.gov/reports/vision/VisioningCorridors.pdf) that studied new freeway corridors throughout Clark County per a new 50-year growth scenario and given those corridors how a corridor to the east and west might be connected across the Columbia River.

Given your specific concern as stated above, no a "third bridge option" as a new freeway starting at I-5 and Mill Plain was not fully vetted.

Since fely,

RTC Chair, Washbugal Councilperson Molly Coston,

cc: RTC Board of Directors

Southwest Washington Regional Transportation Council



Everything Oregon

High-speed rail could be a major stimulus for the Northwest's economy

Published: Tuesday, May 03, 2011, 7:00 AM



Ву

Guest Columnist

By Brad Perkins

Over this past year, \$10.4 billion in federal funds have been designated to states with the most advanced plans for high-speed rail passenger service. President Barack Obama plans to distribute billions more over the next six years to state transportation departments that have advanced rail plans.

Development and operation of a high-speed rail system in the Cascadia corridor could be a major stimulus for thousands of jobs in the Northwest. Properly connecting rail stations to highways, light rail, streetcar and bike networks would cause less damage to the environment and not be dependent on escalating gas prices that are adjusted or manipulated by forces beyond our control. Fully electrified high-speed rail systems connecting centrally located transportation hubs, less than 500 miles apart, have proven to be the fastest and safest transit systems that avoid the delays of congested freeways and invasive security checks at airports.

Gov. John Kitzhaber should recommend that ODOT conduct a serious study for an exclusive corridor for a double-track, electrified, publicly owned high-speed system as part of the agency's upcoming \$10 million environmental impact statement study for the Cascadia corridor between Eugene and Portland. So far ODOT has limited its studies to two 140-year-old freight rail corridors that are privately owned by freight companies that will perpetually maintain control of both the speed and capacity of passenger trains and therefore limit the success of both systems.

A separate, publicly owned high-speed rail corridor, with grade crossings, already exists in the Willamette Valley. Most of the relatively flat and straight 100-mile I-5 corridor between Eugene and Tualatin has a median strip wide enough to accommodate two electrified high-speed rail tracks for 150 mph trains. Two commuter networks could share the rails with the inter-city system. From Tualatin, a 12-minute commuter link to the Rose Quarter could be developed by using existing rail right of ways and boring a tunnel under Lake Oswego. From Vancouver, Wash., to the Rose Quarter, a new tall passenger/freight rail bridge west of the existing BNSF bridge can transport commuters in seven minutes through a new tunnel below North Portland's bluff and share Union Pacific's right of way along the east side of the Willamette River. Both regional park-and-ride commuter train options from Tualatin and Vancouver to the Rose Quarter could significantly reduce congestion on the I-5 corridor during rush hours if planned for convenience, frequency and speed.

The new Rose Quarter Transportation and Tourism Station could be the hub of activity transitioning over 30,000 commuters a day with connections to MAX, the Portland streetcar and bikeways. This overwhelming amount of foot traffic could create the critical mass of activity needed to give an economic boost to a moribund sports and entertainment district. Developers could satisfy market demand and develop a more exciting and sustainable 24-hour livable community with housing, hotels, offices and retail with great city views of downtown Portland and the Willamette River.

Oregonians and Washingtonians deserve innovative transportation projects that seriously reduce carbon monoxide levels and travel time by offering commuter rail on an exclusive high-speed rail corridor. Unfortunately, ODOT's studies and environmental impact statement have not given serious consideration to high-speed rail, commuter rail and freight rail as an alternative to relieving congestion and creating sustainable jobs. Japan and Europe have shown that rail investment has paid its way over the long term. Unlike a highway, the cost of high-speed rail development is recovered directly from the operators who use it. Leasing the tracks for light-weight freight movement at night could also help the financial return on public capital investment. With enough support and serious analysis of alternatives, Cascadia high-speed rail could prove to be the American example of what's happening in the rest of the world.

Brad Perkins lives in Northeast Portland. More on the Cascadia high speed rail corridor from Eugene to Vancouver can be found at www.cascadiahighspeedrail.org.

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From:

Schwab Mary Ann [e33maschwab@gmail.com]

Sent:

Wednesday, June 08, 2011 3:44 PM

To:

Barbara Roberts

Subject:

CRC vote NO THANK YOU \$3.5 BILLION

Good Afternoon Ms. Roberts:

Kindly vote YES to the "Common Sense Alternative" CRC. I trust by now you have viewed Jim Howell's 6.14 video. We Oregon and Washington State taxpayers simply must not handicap the future generations with the \$3.5 Billion construction cost with its multifaceted financial package including interest.

Did you know that on November 3, 2010, City Council approved an exit facilitating inter-state freight trucks from this new CRC down to West
Hayden Island? This in addition City Council to approving an additional \$64,000 fund for Port of Portland Consultants report,
October 27, 2010. I was the only private citizen to raise the issue and questioned the cost overruns in consultant fees on the West Hayden Island study and the CRC consultant fees toward the \$3.5 Billion bridge project. I reported the Oregonian's article , when the Mike O'Callaghan--Pat Tillman Memorial Bridge crossing the Colorado River came in under \$500 Million. [Sunset November 2010, page 77.]
http://www.hooverdambypass.org/Const PhotoAlbum.htm#BridgeVideo

My only regret is that I did not save that October, 2010 Oregonian article stating the construction cost.

Thank you,

Mary Ann Schwab Retired High School Secretary League of Women Voter's member Northwest Quilter State of Oregon District 42 (503) 236-3522

From:

Shara Alexander [shara.e.alexander@gmail.com]

Sent:

Wednesday, June 08, 2011 12:51 PM

To:

Rex Burkholder

Subject:

Locally preferred alternative, please!

Dear Councilor Burkholder,

I am writing today to thank you for your diligent work for our city, and to ask you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting.

The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design.

Please help move the project forward by supporting the CRC resolution.

Thank you, Shara Alexander NE Portland

From:

Jim Barta [jbarta20@yahoo.com]

Sent:

Wednesday, June 08, 2011 11:32 AM

To:

Rex Burkholder

Jim Barta

Cc: Subject:

Columbia River Crossing: Metro Resolution No. 11-4264--Please vote No

Dear Councilor Burkholder-

Please vote "No" on the subject resolution that will be considered at the June 9, 2011 Metro Council meeting.

The CRC highway expansion project is too expensive, will promote urban sprawl, will create negative environmental impacts on North & Northeast Portland neighborhoods, and is not the proper solution for existing traffic problems on the existing I-5 bridge crossing.

This proposal should not proceed.

Best regards,

Jim Barta 2317 NE 12th Ave Portland, OR 97212 503-335-7205

From: Sent:

Jeff Schwaber [freyley@gmail.com] Wednesday, June 08, 2011 10:38 AM

To:

Rex Burkholder

Subject:

CRC vote

Councilor,

I'm a constituent in NE Portland, approximately 2 miles away from I5. I'd like to urge you to vote no on the CRC bridge as currently constituted, and send the

folks pushing it back to the drawing board.

There are some lovely bike and walking friendly plans that I've seen, but they're getting no traction and the current plan is worse than the current bridge.

Thanks,

Jeff Schwaber

From:

Sent:

m . [tornadogrrrl@gmail.com] Wednesday, June 08, 2011 9:30 AM

To:

Rex Burkholder

Subject:

CRC

Dear Councilor Burkholder,

I am writing to you to ask you to please oppose the CRC in its current form. We deserve something that will better address the regions needs and for less money. The "common sense alternative" is just one option.

Thank you for your time, Megan Manley

From:

Ina Zucker on behalf of Carlotta Collette

Sent:

Friday, July 08, 2011 3:34 PM

To: Subject: Laura Dawson-Bodner FW: river crossing

CRC public comment

From: Scott Oldham [mailto:scotto@iupatdc5.org]

Sent: Wednesday, June 08, 2011 8:00 AM

To: Carlotta Collette **Subject:** river crossing

Carlotta, the IU of Painters and Allied Trades appreciates the work you put forth at Metro. We ask you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%. Thank you, Scott.

Scott Oldham

Field Representative 11105 N.E. Sandy Blvd. Portland, Oregon 97220

Cell 971-219-3299

FAX 503-256-5271 Office 503-257-6644 Toll Free 1-800-237-2070 E-MAIL scotto@iupatdc5.org



From: Sent:

tim oneal [timjimtrue@hotmail.com] Tuesday, June 07, 2011 5:13 PM

To:

Rex Burkholder

Subject:

CRC

Councilor Burkholder,

I am writing to ask you to vote NO on Resolution No. 11-4264. I don't feel I need to recite the many reasons why the current plan should not be implemented. I trust that you are familiar with these well studied and documented reasons already.

I am simply baffled that this situation has gotten to point it has, and I am becoming disillusioned with the region as we approach this poor decision that will negatively impact us for decades to come. Please assuage my cynicism by voting no.

Sincerely,

Tim O'Neal Northeast Portland

From:

Molly Bressers [mollyb123@gmail.com]

Sent:

Tuesday, June 07, 2011 9:51 PM

To:

Rex Burkholder

Subject:

CRC Project comments

Hello Councilor Burkholder,

I feel very strongly that the CRC project firstly should reflect an attempt to meet regional climate goals, rather than blatantly flouting them, and should not encourage motor vehicle traffic over other modes that we want to promote. It should also not simply move congestion south on I-5 or overburden regional taxpayers with a \$4000 cost per household. Solutions that are less expensive such as this "common sense alternative" would be more effective at meeting our demands without sacrificing our environment.

Please vote no on Resolution No. 11-4264!

Thank you,

♡ Molly

Sustaining people, communities and nature must henceforth be seen as the core goals of economic activity, not hoped for by-products of market success, growth for its own sake, and modest regulation. That is the paradigm shift we must now begin to pursue and promote.

From: Sent:

J. White [nikana_99@hotmail.com] Tuesday, June 07, 2011 10:35 PM

To:

Rex Burkholder

Subject:

Please Vote No on Resolution No. 11-4264

Dear Councilor Burkholder,

Please vote no on Resolution No. 11-4264. The current CRC planning has failed to address the 11 concerns/considerations that the JPACT had proposed in 2008. If they have failed to meet those considerations in the almost 3 years they have had to address them then it's your responsibility to vote No. If Metro votes Yes now it will be unlikely that Metro will be able to influence the design of the CRC in the future. We need a strong Metro that is willing to stand up for the Oregonians that it represents. If we get a new CRC then it must be a CRC that it good plan for Oregon. There's no need to rush into a project because we feel it's a magic band-aid that will solve all our problems. We need a CRC that will be a sustainable solution for the future, not an under-planned, sprawl-inducing, smog creating, over budget bridge for people from Washington to commute in single occupancy vehicles to Portland faster. Plus let's not forget that I-5 narrows as it approaches downtown so and traffic congestion that is solved over the crossing will likely move south down I-5. Vote for what Portland wants, not for what Vancouver wants!

Thank you for your time and consideration.

Sincerely,

Jackie White

From: Sent:

VICKIE VELTMAN [vickiel@q.com] Tuesday, June 07, 2011 2:04 PM

To:

Rex Burkholder

Subject:

Our opposition to CRC

Dear Mr.Burkholder,

My husband and I are in opposition to the Columbia River Crossing and site the 10 reasons listed by our friend Mr.Byron Palmer. Please vote against it.

Vickie Veltman

and Hector Cobb

From:

Erica S [es131@hotmail.com]

Sent:

Tuesday, June 07, 2011 12:40 PM

To: Subject:

Rex Burkholder CRC vote

Dear Mr. Burkholder,

I am writing to urge you to vote no on Resolution No. 11-4264. I have deep concerns about the plans for the CRC and believe that more discussions need to take place before any movement forward happens with the project. I do not believe the current plans adequately address the issues and have read of other plans/solutions that would cost less and address the full spectrum of issues. We should not be borrowing money we do not have for a project that does not provide an affordable, practical and supportable solution. Thank you for considering this.

Sincerely, Erica Swartz

From:

Stuart Johnson [go_plato@hotmail.com]

Sent:

Tuesday, June 07, 2011 7:26 AM

To:

Rex Burkholder

Subject:

Vote No On The Columbia River Crossing

Councilor Burkholder,

Please vote no on any vote that continues funding for a Columbia River Crossing as it is currently configured.

One of the main reasons that I live in Portland is our quality of life and the continuing efforts to keep improving that quality. I feel that the CRC project surrenders the vision and control of our future to Vancouver, whose pro-sprawl, pro-car vision is at odds with ours. I have spent 8 years working in Vancouver, including commuting the last 4 by bicycle, and it scares and angers me that I my tax dollars will go to enabling the continuation of the Vancouver vision of pro-sprawl, pro-car instead of our sustainable, walkable vision.

Please Vote No on the CRC.

Thank you,

Stuart Johnson 5012 NE Cleveland Ave Apt 2 Portland, OR 97211

From: Sent:

kristin [famouspotato@gmail.com] Tuesday, June 07, 2011 11:30 AM

To:

Rex Burkholder

Subject:

re: CRC - Let's build the right bridge

Councilor Burkholder,

I'm writing to ask you to oppose Resolution No. 11-4264. While a good crossing, and the right bridge, is an incredibly important priority for this region -- the CRC as it currently stands is <u>not the answer</u>. As outlined by the Coalition for a Liveable Future, the current proposal falls short on many important benchmarks - greenhouse gases, cost of bridge (not offset by tolling), safe bicycling and pedestrian facilities, and more.

Also, as researched by the ever-inquisitive Nigel Jaquiss (recent Willamette Week article), the bridge is supported by false assumptions of vehicle travel increasing, unstopped, over time -- something that is not in-line with this region's climate goals and is not supported by the last four years of car traffic data.

I'm with the BTA on this one - "It's our responsibility to build the right bridge that works for bicyclists without bankrupting all of our other priority projects. BTA believes that we can build bridges that meet regional requirements, are safe for bicyclists to ride across as well as access from both sides, and that stands as a legacy that we can be proud of."

I urge you to consider the long-term, full picture when casting your vote - thanks for your continued commitment to keep this region fantastic.

Sincerely, -kristin

Kristin Bott

Portland resident, active voter, BTA member, WPC member.

From:

Elizabeth Decker [eggdecker@yahoo.com]

Sent:

Tuesday, June 07, 2011 5:14 PM

To:

Kelsey Newell

Subject:

Public comment regarding CRC bridge vote

Categories:

Green Category

Dear Ms. Newell,

I am writing to voice my opposition to the CRC project in advance of the Metro vote on the project this Thursday. For the record, I am a resident of Portland, residing at 2741 SE 28th Ave.

I regularly commute to downtown Vancouver from Portland, by car, bus and bike. My experiences with all three modes of transportation have reveled that the current bridge and interchanges have some flaws, but I am concerned that the proposed CRC project will not remedy the central problems and will leave us burdened by an expensive infrastructure project we simply cannot afford, particularly at the expense of other transportation, land use, social and educational programs. I believe the proposed bike, pedestrian and transit components of the bridge are simply being included as bait to attract support from alternative transportation supporters. I refuse to be held hostage by a \$3.6 billion dollar bridge simply for some wider bike lanes, which sound like they are shaping up to be a slim improvement over the current facilities, by isolating them on the lower deck and building the approach ramps at 4% grade. Further, I am concerned by the park and ride facilities that Vancouver is proposing to place in their downtown to service the MAX connection. It is a downtown, not a parking lot. If everyone is going to parking in downtown Vancouver, then we don't need 10 or 12 lanes on the bridge since everyone will be taking the MAX. Everything about this project smacks of overkill.

Thank you, Elizabeth Decker

From:

Kelsey Newell

Sent: Thursday, June 09, 2011 9:57 AM

To: Laura Dawson-Bodner

Cc: Nikolai Ursin

Subject: FW: Does the CRC proposal meet Metro's areas of concern.

For the record.

Kelsey Newell

Regional Engagement Coordinator

Council Office Metro 600 NE Grand Ave. Portland, OR 97232-2736 503-797-1916 www.oregonmetro.gov

Metro | Making a great place

From: Chris Rall [mailto:christopherjrall@gmail.com]

Sent: Tuesday, June 07, 2011 10:05 PM

To: Barbara Roberts **Cc:** Kelsey Newell

Subject: Does the CRC proposal meet Metro's areas of concern.

Dear Councilor Roberts,

As a constituent in your district, I am deeply concerned about Metro's role in potentially enabling the current bloated Columbia River Crossing proposal. Metro Council listed several "areas of concern" in their resolution in July of 2008 that were to be "addressed as the project moves forward." It has been nearly three years, and it would appear that many of these concerns have not been addressed, the first concern the most clearly so:

"A. TOLLING

Implementation of tolls on the **existing** I-5 Bridge should be undertaken **as soon as legally and practically permissible**. Consideration should be given to potential diversion of traffic to I-205 and potential tolling I-5 and I-205 with those revenues potentially used for projects on these two facilities in the Portland-Vancouver metropolitan area." [bolding for emphasis is my own]

This concern is crystal clear to me. Tolling has not been implemented on the existing I-5 bridges and there does not appear to be a plan to do so. If there is a legal obstacle to this in Oregon, to my knowledge, neither the project sponsors council nor ODOT have introduced legislation to the Oregon legislature to address the problem. If there is a federal restriction, what have the project sponsors council or either of the state DOTs done to remove the legal obstacle by lobbying USDOT or our federal delegation?

High Occupancy Toll (HOT) Lanes have been implemented all over the country, could meet this concern and help enhance C-Tran express bus service. Implementing some tolling regimen before we sink billions into this freeway expansion project would give us a better sense of how the tolling would affect travel demand, how much freeway capacity we really need in the future, and what revenues we can expect to generate to pay for freeway expansion or other transportation investments across the Columbia.

I believe many of Metro's other concerns expressed in 2008 have not been addressed. Coalition For a Livable Future has provided comments on those in detail so I will let you to weigh their analysis.

As future taxpayers, my young daughter and two young sons will be saddled with the massive debt from this project for years to come, and the vast majority of its cost will not serve to create a region for them that is healthier, more livable, or more prosperous in the long term. Several sensible alternative proposals have been put forward, including the "Common Sense Alternative" proposal, which would address the limitations and problems with the existing Interstate Bridges, keep costs more reasonable and serve to enhance 21st Century transportation options.

I urge you to hold the designers and planners of the CRC proposal accountable with our tax dollars, and to not let this project move forward without addressing the concerns Metro, the institution responsible for our region's transportation system, so clearly expressed nearly 3 years ago.

Thanks you for your service and attention to this matter.

Sincerely, -Chris Rall

Chris Rall 2332 SE 54th Ave. Portland, OR 97215 707.834.5495

From: Sent: Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:41 PM

To:

Laura Dawson-Bodner

Subject:

FW: Please vote NO on Resolution 11-4264

Categories:

UGB/CIS/COO

For the CRC record

From: Ted Kozlowski [mailto:thkoz78@yahoo.com]

Sent: Tuesday, June 07, 2011 8:21 PM

To: Carl Hosticka

Subject: Please vote NO on Resolution 11-4264

Dear Councilor: In its recent cover story, "A Bridge Too False," Willamette Week has done a public service which I hope will bear fruit in saving Oregon's financial viability and turning focus to more appropriate ways to deal with a much less affluent future. This would mean that Metro, along with other government bodies, abandons the Columbia River Crossing and stems the outflow of planning costs rooted firmly in some old interstate highway brochure of the 1960's.

Other studies, independent of contractors, building trades unions, and believers in perpetual growth have refuted the need for and affordability of this CRC, "a freeway expansion that just happens to cross a river." Thanks particularly to economist Joe Cortwright, and to Rep. Katie Eyre Brewer, whose doubts lead off the WW article. I also appreciated the alarms sounded by Robert Liberty, when I lived in the district he then served.

CRC goes backward as far as a regional response to the crisis of climate change is concerned. Pollution from stalled traffic will move down to the Rose Quarter bottleneck. Eventually, the rise in fuel prices will cripple commuting from Clark County -- a population segment that notably opposes bridge tolls, but wants the minor benefit from slightly faster bridge crossing times-- and revenues will fall far short of paying off bonds. If one adds in likely construction cost overruns, the taxpayer goose is about cooked; we're seeing state and city financial crises nationwide, let's not plunge deeper into one. (As for truck freight, a new and sustained fuel cost rise could easily imperil the industry and such traffic will decline heavily; we'll wish we had more railroad capacity, and yes, a better bridge for trains.)

Peak oil and other resource depletion is now well documented. The future will require people to do things far more locally. There won't be any cheers for the new situation at first, but the facts don't hold up any applause sign. Even now, without making such a sweeping forecast, many have come up with alternatives to building a new bridge. The CRC will not add permanent, necessary value to the region, especially if it eventually becomes the center of a debate about defaulting on bonds.

Among those researching needs for such a future, I count Prof. Richard Heinberg as one of the best and clearest explicators. Excerpts from his latest book, "The End of Growth," can be found online.

If Metro votes down this resolution approving pushing CRC any further, it will help end this boondoggle in the making. Please vote no.

Thank you,

Ted Kozlowski, 5409 SW Scholls Ferry Rd., Portland 97225

From: Sent: Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:40 PM

To:

Laura Dawson-Bodner

Subject:

FW: METRO's Joint Policy Advisory Committee on Transportation (JPACT)

For the CRC record

From: Columbia River Crossing Coalition [mailto:info@crossingcoalition.com]

Sent: Tuesday, June 07, 2011 1:22 PM

To: Carl Hosticka

Subject: METRO's Joint Policy Advisory Committee on Transportation (JPACT)



Dear Advocate,

On Thursday morning, METRO's Joint Policy Advisory Committee on Transportation (JPACT) will vote on a Columbia River Crossing Project Resolution to approve the Locally Preferred Alternative (LPA). In 2008 the LPA was passed with conditions. Thursday's resolution will affirm that these conditions have been addressed.

Following JPACT's decision, the METRO council will vote on this resolution on Thursday afternoon. As we anticipated, CRC opponents are mobilizing and will likely show up at the METRO council meeting on Thursday afternoon and testify. While we are hopeful that both votes will go our way, it's important that our local elected officials hear from us.

Please take a moment to email or call our METRO Councilors:

Metro President <u>Tom Hughes</u>

503.797.1889

Metro Councilor Shirley Craddick, District 1

503.797.1547

503.797.1887 **Metro Councilo**503.797.1549

Metro Councilor Carl Hosticka, District 3 503.797.1549

Metro Councilor <u>Kathryn Harrington</u>, **District 4** 503.797.1553

Metro Councilor Rex Burkholder, District 5 503.797.1546

Metro Councilor Barbara Roberts, District 6 503.797.1552

Sample	text	for	an	email:	

Dear _____,

Thank you for your work in our community.

As a member of the Columbia River Crossing Coalition, I am writing to urge you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design.

Please help move the project forward by supporting the CRC resolution.

Thank you,

The Crossing:

The Columbia River Crossing is a comprehensive bridge, transit and highway improvement project. The Crossing is designed to reduce congestion, enhance safety and increase mobility. The new Crossing embraces a number of important values, rather than choosing among them, including safety, economic vitality and environmental sustainability. The Coalition advocates for the new safe and

visit <u>www.crossingcoalition.com</u> or call 503-552-5011.

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From: Sent: Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:40 PM

To:

Laura Dawson-Bodner

Subject:

FW: Columbia River Crossing resolution hearing

For the CRC record

From: Lea Vanlue [mailto:vanlue.lea@gmail.com]

Sent: Tuesday, June 07, 2011 12:44 PM

To: Carl Hosticka

Subject: Columbia River Crossing resolution hearing

Dear Metro Councilor Hosticka,

I am a constituent and am writing to urge you to vote no on the Columbia River Crossing resolution # 11-4264 at the hearing this Thursday. I'm sure we can design a bridge that is both useful for all modes of transportation and cost effective; this resolution is neither of those. I shudder to think of the financial burden this would place on current and future generations of Portlanders. Please take a stand and listen to the people you represent when we tell you this is not an appropriate use of time, money and people-power.

Thank you very much,

Lea Vanlue

Lea Vanlue, MPAS, PA-C vanlue.lea@gmail.com

From:

Doug Klotz [dklotz@rdrop.com]

Sent:

Tuesday, June 07, 2011 10:37 PM

To:

Tom Hughes; Shirley Craddick; Carlotta Collette; Carl Hosticka; Kathryn Harrington; Rex

Burkholder; Barbara Roberts

Subject:

Please do not support the CRC

Doug Klotz 2630 SE 43rd Ave. Portland, OR 97206 dklotz@rdrop.com

To Metro Councilors:

Thank you for all your work on the Columbia River Crossing alternatives. I must now ask you to <u>not</u> approve any alternatives for the project. This project is ill-conceived, ill-designed, and will divert much needed regional funds to a project that is too expensive, and will not pay off the region's investment.

Some of the reasons why Metro should not endorse an Approved Alternative:

- 1. It won't reduce congestion, just shift it to the Rose Quarter. The CRC's own projections show it will, at best, shave a minute off a Vancouver resident's commute.
- 2. Traffic on the current bridge is not guaranteed to grow. In fact, the amount of traffic on the bridge has been decreasing steadily since 2006, well before the Recession hit. The projected traffic is not there.
- 3. The bridge is not the most dangerous on I-5. ODOT figures show that there are 24 other Oregon bridges on I-5 that are in more danger of collapsing in an earthquake than the Interstate Bridge.
- 4. We can't afford it. The decrease in bridge traffic that we've seen for the last 5 years means the toll revenue will not meet projections, and states will have to cut other budgets to make the loan payments.
- 5. The bridge currently serves mostly Vancouver commuters. Freight is only 20 percent of the traffic. Encouraging single-occupant-vehicles and long commutes from suburbia is not the way to meet the region's, and Oregon's, environmental, land use, or sustainability goals.

I urge you to <u>not</u> vote for an "approved" alternative for the CRC at Thursday's meeting.

Thank you.

Sincerely,

Doug Klotz

From:

Debbie Aiona [mdjaiona@aracnet.com]

Sent:

Tuesday, June 07, 2011 10:19 PM

To:

Rex Burkholder

Cc:

Tom Hughes; Shirley Craddick; Carlotta Collette; Carl Hosticka; Kathryn Harrington; Barbara

Roberts

Subject:

Columbia River Crossing

Dear Councillor Burkholder,

I am writing to express my serious concern about the wisdom of moving forward with the Columbia River Crossing. I have been skeptical for some time about building a large bridge that would facilitate more auto travel when we should be thinking of ways to cut our greenhouse gases and adapt to peak oil. Making travel between Vancouver and Portland easier will quite possibly lead to increased sprawl, something Metro is trying to contain.

As the decision making has progressed, I have become even more convinced this is a bad idea. Last week's Willamette Week article pointed to some serious problems; in my mind the worst among them was the faulty assumption of the number of cars that will be crossing the bridge. Not only does that make one question why we are building it, but it also undermines the assumptions about the amount of revenue we can expect to collect from tolls. You also need to take into consideration the impact increasing gas prices will have on the number of vehicles crossing the bridge.

If there were no other solutions to the existing problems then it might make sense to go forward, but I have seen a very logical and much less costly proposal from George Crandall that you should consider. I know there are other ideas that have been proposed as well.

Metro may feel it is too late in the process to raise objections, but at a minimum I hope you will challenge the assumptions about the amount of revenue the tolls will produce. Both Washington and Oregon are in dire financial straits and it is irresponsible to plan on spending over \$3 billion on a bridge when we don't know where the money is coming from.

Thank you for considering my views.

Sincerely,

Debbie Aiona 3940 SE Oak St. Portland 97214

From:

Marie Dodds [Marie.Dodds@aaaoregon.com]

Sent:

Tuesday, June 07, 2011 11:52 AM

To: Subject:

Shirley Craddick CRC Resolution

Hi, Shirley,

As an Advisor to the Columbia River Crossing Coalition, and on behalf of the 736,000members of AAA Oregon/Idaho, I urge you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. As you know, the CRC is a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate more than 20,000 jobs and reduce congestion by 70 percent.

Please support the resolution and follow the decision by Governors Gregoire and Kitzhaber's to move forward with the composite deck-truss design.

Thanks, Marie,

Marie Dodds
Director of Government & Public Affairs
AAA Oregon/Idaho
503.222.6729 direct
503.333.2984 mobile
www.AAA.com

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From:

Rick Ledoux [rickl@fought.org]

Sent:

Tuesday, June 07, 2011 1:51 PM

To:

Shirley Craddick

Subject:

CRC

Dear Shirley,

Please support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. A new crossing will improve transportation and help ease congestion.

As a local major steel bridge fabricator Fought & Company, Inc. would appreciate the additional work locally.

And I would also like to thank you for your work in our community.

Best regards,

Rick LeDoux Fought & Company, Inc. 14255 S. W. 72nd Ave. Tigard, Oregon 97224-8042 Telephone (503) 639-3141 Fax (503) 620-3279

From:

Paul Riggs [paul@colpacbuildingtrades.com]

Sent:

Tuesday, June 07, 2011 1:51 PM

To:

Shirley Craddick

Subject:

CRC LPA

Shirley,

I am writing to urge you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting.

The longer we wait for this project to get under way the higher the cost goes both to the area's economy and the cost of construction.

With out this bridge design going forward we risk relegating ourselves to a Grade B industrial area which could be very costly to recover from.

Paul Riggs Columbia Pacific Building and Construction Council

From:

Bob Byrd [BobB@pacdie.com]

Sent:

Tuesday, June 07, 2011 1:56 PM

To:

Shirley Craddick

Subject:

Support the CRC resolution (No. 11-4264)

Dear Shirley Craddick

Now is the time to act with vision for the future. As a member of the Columbia River Crossing Coalition I urge you to support the CRC resolution (#11-4264) in Thursday JPACT meeting. It is critical to the future of my business and my employees. As you are well aware it will improve mobility, accessibility, and safety far into the future. The project will generate up to 20,000 jobs during our current difficult economic times and reduce congestion by 70%.

Again I urge you to support this resolution to move the project forward.

Robert M. Byrd President



Pacific Die Casting Corporation

5712 N.W. Fruit Valley Rd. | Vancouver,WA | 98660 T: 360.433.0256 | F: 360.695.2440 | E: bobb@pacdie.com Web: www.pacificdiecasting.com

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From:

Ginger Metcalf [ginger@identityclarkcounty.org]

Sent:

Tuesday, June 07, 2011 2:26 PM Shirley Craddick

To: Subject:

JPACT Vote on Thursday

Dear Ms. Craddick:

Thank you for your work in our community.

As a member of the Columbia River Crossing Coalition board of directors, I am writing to urge you to support the CRC resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design. Please help move the project forward by supporting the CRC resolution.

Thank you,

Ginger Metcalf

Ginger Metcalf
Executive Director



Portland - Vancouver USA

Identity Clark County 703 Broadway, Suite 610 Vancouver, WA 98660

(360) 695-4116 (360) 695-3678 FAX ginger@identityclarkcounty.org www.identityclarkcounty.org

From:

cterhune@schn.com

Sent:

Tuesday, June 07, 2011 3:23 PM

To:

Shirley Craddick

Subject:

Please approve Council Resolution No. 11-4264

Dear Metro Councilor Shirley Craddick,

I am writing to urge you to approve Council Resolution No. 11-4264 at your meeting this Thursday.

Your approval of this resolution will keep the Columbia River Crossing on schedule and help ensure that Oregon and Washington can maximize federal funding opportunities for this project.

The Columbia River Crossing represents a long term comprehensive solution to a transportation bottleneck that is currently crippling our ability to compete in a global economy and does little to provide transportation options for citizens of Oregon and SW Washington.

When the Metro Council approved the Locally Preferred Alternative (LPA) in 2008 they did so with a series of important conditions. Resolution No. 11-4264, Exhibits A, B and the Staff Report clearly articulate how these conditions have been addressed by the project and stakeholders and provides a solid foundation for a yes vote on this resolution.

Please ensure that the Metro Council keeps this project moving forward so we can improve our region's quality of life, get goods and services moving again, and put our citizens back to work.

Chip Terhune

First Name: Chip Last Name: Terhune City: Tualatin

From:

White, Richard A [richard.a.white7@boeing.com]

Sent:

Tuesday, June 07, 2011 3:27 PM

To: Cc: Shirley Craddick Bernie Bottomly

Subject:

Columbia River Crossing

Dear Councilor Craddick,

Thank you for your work in our community. As you might be aware we employ about 1,400 people at our Gresham facility, which is a Center of Excellence for the machining of specialty parts for Boeing Commercial Airplanes. We view the transportation network as an extension of our production system. As such the reinvestment in our transportation network if of critical concern for us.

As a member of the Columbia River Crossing Coalition, I am writing to urge you to support the Columbia River Crossing (CRC) resolution (No. 11-4264) in Thursday's JPACT meeting. The CRC continues to be a critical project for our region. A new crossing will improve mobility, accessibility, prosperity and safety for years to come. The Crossing will generate upwards of 20,000 jobs and reduce congestion by 70%.

Progress on the Columbia River Crossing is consistent, as was evident with Governors Gregoire and Kitzhaber's decision to move forward with the composite deck-truss design.

Please help move the project forward by supporting the CRC resolution.

Please let me know if you have any questions.

Thank you,

Rich White State & Local Government Relations | Northwest Region The Boeing Company (425) 965-9992 Office (206) 856-6305 Cell

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From:

Brian Gard [bgard@gardcommunications.com]

Sent:

Tuesday, June 07, 2011 6:05 PM

To:

Shirley Craddick

Subject:

JPACT -- CRC Resolution 11-4264

Attachments:

CRCC Background 060111.doc; ATT00001..htm

Councilor Craddick, I'm writing for two reasons. First, I would like to ask for your support of the CRC resolution at the JPACT and Metro Council meetings this Thursday. I serve as director of the Columbia River Crossing Coalition, which advocates both for careful review of the Crossing by such groups as JPACT and the Metro Council, and, at the same time, for the importance of moving forward on this critical project, which is important to both the environment and the economy of the entire region.

Secondly, I wanted to attach some basic background information about the Coalition and to say that I look forward to meeting with you soon. Please take a moment to review the depth of support evident from the Coalition's directors, advisors and members.

Thanks very much, Brian

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Ginger Metcalf, Executive Director Identity Clark County

Larry Paulson, Executive Director Port of Vancouver

Bill Wyatt, Executive Director Port of Portland

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Ryan Deckert, President Oregon Business Association

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> Debra Dunn, President Oregon Trucking Associations

Gregg Kantor, President & CEO NW Natural

John Mohlis, Executive Secretary Oregon State Building and Construction Trades Council

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> Bart Phillips, GEO Columbia River Economic Development Council

John Porter, President AAA Oregon/Idaho

Pat Reiten, President Pacific Power

Paul Riggs Executive Secretary-Treasurer Columbia Pacific Building and Construction Trades Council

Dave Robertson Vice President, Public Policy Portland General Electric

Mike Salsgiver, Executive Director Associated General Contractors, Oregon-Columbia

Duke Schaub, Representative Associated General Contractors, WA

Connie Seeley, Chief of Staff Oregon Health & Science University

Dave Underriner, Chief Executive Providence Health & Services Portland Service Area

EXECUTIVE DIRECTOR

Brian Gard

711 SW Alder Street | Suite 400 Portland | Oregon 97205 T 503 552 5011 www.crossingcoalition.com



The Columbia River Crossing Coalition (Coalition) supports and advocates for the new I-5 crossing across the Columbia River.

The Coalition was formed as a 501c4 and began its work in January 2009. The Port of Portland, Port of Vancouver, Portland Business Alliance and Identity Clark County approached Gard Communications to manage the Coalition in late 2008. Representatives from these four organizations constitute the governing board. The Coalition's bylaws also authorize a board of advisors, which is a key component of the organization. Brian Gard serves as the Coalition's director. Funding for the Coalition comes entirely from voluntary contributions of its members.

The Coalition consists of more than 400 business and labor organizations, businesses, unions and individuals in Washington and Oregon. Our role is to encourage the various interested parties to come together and to build the Columbia River Crossing sooner rather than later.

The need

The existing I-5 Columbia River bridge is outdated, unsafe and a major contributor to costly traffic congestion and the highest accident rate of any section of I-5 in Oregon and Washington. The bridge is also considered to be the weak link of the entire trade corridor between Mexico and Canada. The new Crossing is widely viewed as essential for the economy because it will relieve congestion to keep goods moving and improve access to highways, ports and labor markets.

The solution

The Columbia River Crossing is a comprehensive transportation plan, designed to address the needs associated with our region's continued growth. It encompasses three distinct aspects: construction of a new bridge; the creation of a new light rail system, bike lanes and pedestrian paths across the bridge; and significant improvements to a five-mile stretch of highway on either side of the bridge with seven interchanges that will improve access and traffic flow.

The Crossing will meet modern seismic requirements, reduce congestion and improve safety for commuters and freight traffic, encourage mass transit, and provide vastly improved bicycle and pedestrian alternatives.

The Coalition has been and continues to be supportive of the extensive public Process. At the same time, it is important to keep the Crossing project moving forward according to its timetable, in order to solve the serious economic, environmental and transportation problems caused by the overwhelmed I-5 bridge – and to create the thousands of new jobs that its construction will create and that are desperately needed in our region.

To learn more about the Columbia River Crossing Coalition, visit □www.crossingcoalition.com.

Background

The Columbia River Crossing project is a bridge, transit and highway improvement partnership project of the Oregon Department of Transportation and the Washington Department of Transportation. The project's purpose is to reduce congestion, enhance safety and increase mobility throughout the project area.

In 2005, a 39-member task force was formed to advise the project on key decisions. The members represented public agencies, businesses, environmental groups and communities in both Oregon and Washington. The task force met for three years and on June 24, 2008, voted in favor of a Locally Preferred Alternative (LPA), which includes a replacement bridge, light rail extending to Clark College in Vancouver, bike lanes and pedestrian paths. The group dissolved after it made this recommendation.

Following the dissolution of the task force, the governors of Oregon and Washington created the Project Sponsors Council (PSC) to advise the governors on the project. The appointed members are: TriMet, C-TRAN, Metro, the Southwest Washington Regional Transportation Council, the City of Portland and the City of Vancouver. These partners will advise the governors on the particular details of the LPA.

The Columbia River Crossing Coalition (CRCC) was formed to organize and encourage support for the project, and to demonstrate that support to state and □federal officials.

Current Status

On August 05, 2010, in a unanimous vote, the Project Sponsors Council approved plans for a 10-lane crossing, five miles long with seven interchanges including a new design for the Hayden Island interchange, resolving a number of key issues. In addition, the Independent Review Panel appointed by Governors Kulongoski and Gregoire emphasized the absolute necessity for the new bridge and called for it to be built as soon as possible. The Crossing is estimated to cost \$3.2 to \$3.6 billion, with funding provided from federal, state and regional contributions.

On April 25, 2011, Governors Gregoire and Kitzhaber approved the preliminary recommendation of the project staff and selected the deck truss bridge design because it provides the most certain path to keep the project on schedule and on budget.

The schedule calls for the Final Environmental Impact Statement and Federal Record of Decision in 2011; final design, property acquisition and financing in 2012; and the beginning of construction in 2013.

In addition, they announced new bi-state oversight from both a joint committee of the Oregon and Washington legislatures and the two state treasurers. The first stage of the oversight process will be review and refinement of the financing plan and toll revenue assumptions. The intent of the bi-state collaborative approach is to minimize financial risks and provide accountability as the project moves toward construction.

From:

crankmychain@gmail.com on behalf of Dan Kaufman [dan@pdxk:com]

Sent:

Tuesday, June 07, 2011 9:32 AM

To:

Barbara Roberts

Subject:

Please vote no on CRC Resolution No. 11-4264

Dear Ms. Roberts,

First, let us say Thank you for your service at Metro!

We would like you to vote no on Resolution No. 11-4264. We are strongly opposed to this massive highway project that will be bad for Portland. It is too costly and will not significantly reduce congestion. It is a solution from the past that does not address our need to move away from single occupancy motor vehicles and sprawl.

We have been following this project for several years and would like to see it killed, not supported. Are you with us?

Best regards,

Dan and Kirsten Kaufman 5611 SE 15th Ave Portland, OR 503 267 2862

From:

Herman Kachold [hkachold@msn.com]

Sent:

Tuesday, June 07, 2011 8:07 PM

To:

Barbara Roberts

Subject:

Thursday CRC Vote No

Please read the article in the Willamette Week by Nigel Jaquiss. The CRC Project is a big mistake as it is now envisioned. There are better ideas out there. Please take a better another look at solving the crossing of the Columbia River.

http://www.wweek.com/portland/article-17566-a bridge too false.html

moulliet@gmail.com

Sent:

Tuesday, June 07, 2011 9:11 AM

To:

Kelsey Newell

Subject:

Metro CRC Vote

Categories:

Green Category

As an Oregon resident, I urge Metro to vote no on the CRC.

After reading the recent Willamette Week article, this project is way too much future financial liability for too little gain.

Thanks,

Greg Moulliet 1524 SE Ash St Portland

From: Sent:

Ina Zucker on behalf of Carl Hosticka Wednesday, June 08, 2011 4:37 PM

To:

Laura Dawson-Bodner

Subject:

FW: Please Vote "No" on Resolution No. 11-4264

For the CRC record

From: Will Vanlue [mailto:vanlue@gmail.com]

Sent: Monday, June 06, 2011 9:53 AM **To:** Carl Hosticka; Carlotta Collette

Subject: Please Vote "No" on Resolution No. 11-4264

Dear Council Members Hosticka and Collette,

My name is Will Vanlue and I am a home owner in Tigard, Oregon. I work for a consulting company located on the east side of I-5 in Lake Oswego. I am writing today to urge you to vote "No" on Resolution No. 11-4264 this Thursday.

The current plans for the CRC do not address the issues outlined at the start of the project, and many of projections made by ODOT, especially related to future funding of the project, are faulty at best, and flat-out lies at worst.

Widening I-5 at the point of the crossing will only funnel additional traffic into constrained lanes further south on the freeway. As I'm sure you're aware, the interchange between I-5 and 217 near where I live and work regularly becomes clogged with traffic at rush hour. There are only a few lanes merging into a few others and it is regularly causes traffic delays, congestions, and increased incidences of vehicle collisions. The much, much larger CRC will cause the same issue further north on I-5, magnified by the number of lanes the current proposal includes.

Additionally, current projections show a decreasing number of motor vehicles needing to use the cross in upcoming years. Projections of revenue from user fees (tolls, etc) will not meet the needed levels of revenue to support this project.

Further more, the current project does not adequately address the needs and safety of road users who travel in something other than a single-occupancy vehicle. More space and safer access to the cross needs to be made for people riding bicycles, trains, buses, or those who travel on foot. Encouraging these modes will reduce the demand from single-occupancy vehicles while simultaneously reducing the maintenance costs of the project.

Again, I respectfully ask that you vote "No" on Resolution No. 11-4264 this Thursday. Your "No" vote will help protect the safety and tax dollars of your constituents.

Thank you for your time and consideration.

Sincerely, Will Vanlue

W.D. Vanlue

503-732-0184 vanlue@gmail.com From: Nancy Pautsch [npautsch@gmail.com]

Sent: Monday, June 06, 2011 5:54 PM

To: Kelsey Newell Subject: CRC

Categories: Green Category

Dear Kelsey,

I want to voice my opinion that the CRC project should NOT be allowed to progress forward. The studies used are flawed, the economic and environmental impacts are unacceptable. A new bridge does nothing to address the bottleneck that exists when one lane drops off when south bound about a mile. There are better more cost effective options that must be explored. Please do not take advantage of North Portland residents who will bear a high price for this boondoggle project. Sincerely,

Nancy Pautsch 806 NW 22nd Avenue Portland, OR 9210

Allan Rudwick [arudwick@gmail.com]

Sent:

Monday, June 06, 2011 10:28 AM

To:

Kelsey Newell

Subject:

CRC vote thursday

Categories:

Green Category

Metro Council Members-

Please vote 'NO' to Resolution No. 11-4264. This project will not improve transportation region-wide although it might make minor improvements in the time it takes to get from Vancouver, WA to Portland in a private car. The time savings will only be worth the toll for executives, not for the middle class. Additionally, there is a significant shift of dollars northward with this proposal. the roughly 6 mile project is 1 mile in Oregon and 5 miles in Washington. That doesn't seem fair to me, I hope you can see this as well. I don't like the idea of making life easier for cars while forcing bikes to go on an even longer detour than they currently do. Please vote NO to the CRC. This one decision will not completley ruin our region one way or another, but please vote NO now and NO in the future when it comes up again. I think its interesting that this vote is being held right around a time of alot of bridge lifts. Please don't let this affect your decision.

In summary- Vote NO to 11-4264 and stop the CRC -Allan Rudwick
Eliot Neighborhood Board Member

Allan Rudwick (503) 703-3910

Dan Tochen [dtochen@gmail.com]

Sent:

Monday, June 06, 2011 1:27 PM

To:

Kelsey Newell

Subject:

CRC - not the right choice for Portland

Categories:

Green Category

Hi Kelsey,

I'm a Portland resident and I'm writing you to express my opposition to the CRC. This mammoth construction project is not what Portland needs, and it will only move the bottleneck from the current bridge a few miles south into North Portland.

A much more cost effective approach would be to institute a toll on passenger vehicles with only a single occupant. Freight / commercial vehicles and carpools would not be tolled. I suspect this would reduce traffic levels to the point the bridge would have enough capacity to meet our needs. Though it might shift traffic to the 205 bridge, that could be addressed with another toll. The proposed CRC budget is in the billions of dollars: what would it cost to toll the existing bridge instead? I don't understand why we didn't even consider that approach before settling on the CRC as our best solution.

The CRC is not an effective use of our taxes or federal funds, and it goes against Portland's efforts to move people away from single-occupant cars as their default method of transportation. As a Portland taxpayer and voter, I strongly oppose this project.

Thank you for helping make our voices heard, Dan Tochen

Brandon Van Buskirk [b.scott.vanbuskirk@gmail.com]

Sent:

Monday, June 06, 2011 7:17 PM

To:

Kelsey Newell

Subject:

CRC = Bad Investment

Categories:

Green Category

The CRC is another project that funnels money out of Portland for the benefit of Vancouver. Vancouver suffers because they would have even less of an incentive to strengthen their own downtown & neighborhoods. They won't create more & better jobs, so their citizens will just have to keep commuting to Oregon for work. People will keep moving out of state to avoid our taxes but take advantage of our amenities. Oregon will suffer because we will be supporting people who want to enjoy our higher living standard & better job opportunities but not pay for it. We will be diminishing our ability to meet our environmental goals for the sake of "business as usual." We don't want to be living this lifestyle anymore, we know that's its the wrong way to go but don't have the proverbial

balls to say NO. I say NO to CRC.

I say toll the bridges we have.

I say renovate & upgrade the bridges we have.

I say send light rail across the Union Pacific Rail Line into Vancouver if we want to extend the network.

I say we examine the option of a third bridge if we need greater capacity.

I say more connections if we truly want to strengthen our Metro area into Vancouver.

Brandon Van Buskirk 720 NW 14th #411 Portland OR 97209 503.754.6550 b.scott.vanbuskirk@gmail.com

Alex Reed [malexreed@gmail.com]

Sent:

Monday, June 06, 2011 10:05 PM

To:

Kelsey Newell

Subject:

Comment on resolution No. 11-4264

Categories:

Green Category

I am a constituent in Barbara Roberts' territory. I advocate that she vote "no" on the upcoming CRC resolution. This costly highway project has not met Metro's conditions and should not go forward.

Here are a few of the conditions it has not met:

Please vote "No!" That would be the truly courageous and visionary choice.

Thank you for your consideration.

--1 1

Alex Reed 4525 SE 30th Ave. Portland, OR 97202 240-888-1349

^{*}Has not applied to the federal government to toll I-205.

^{*}Has not shown that it is in compliance with Oregon and Metro's greenhouse gas goals.

^{*}Has not updated its tolling analysis to reflect stagnant traffic levels on I-5 for almost the past decade.

DAVID BROKAW [dbrokaw72@yahoo.com]

Sent:

Monday, June 06, 2011 3:15 PM

To:

Kelsey Newell

Subject:

Columbia River Crossing Vote

Categories:

Green Category

Dear Ms. Newell,

I saw that you were collecting opinions on the Columbia River Crossing vote coming before Metro. I would like to urge the council to vote no on the project. I am a Civil Engineer with a focus on transportation and in my opinion the bridge is an inappropriate solution to the area transportation issues. I recently saw a presentation entitled a common sense alternative to the crossing by another engineering/architectural consultant which I believed was a much better solution at a much cheaper price. I would be in favor of such a solution.

However, I understand that \$3.6 billion dollars in construction funds is a lot of money and means a lot of jobs in this economy. Especially to firms that are hurting from the construction downturn of the last few years. What I would like to see is some of our local politicians going to Washington and convincing someone there to make the difference between the amount they are willing to fund and the amount we could save by constructing a smarter project as a donation to the State of Washington and Oregon's discretionary fund. If the feds are willing to put \$3.2Billion to this project, why wouldn't they put \$2.7 Billion to a better one and \$500 Million into discretionary funds. I think Obama seems like a pretty pragmatic person and might be amenable to something like that. Just something to consider.

Thanks, David Brokaw Wallis Engineering

Scott Cohen [scottbencohen@gmail.com]

Sent:

Monday, June 06, 2011 2:32 PM

To:

Kelsey Newell

Subject:

Resolution No. 11-4264

Categories:

Green Category

Hello - Can you forward this email to the appropriate councilors? Thank you.

I am writing to ask that you vote no on Resolution No. 11-4264. Mara Gross, from the Coalition for a Livable Future, sums up perfectly why you should vote no on the resolution:

When Metro approved the Locally Preferred Alternative in 2008, it simultaneously found numerous issues that "will need to be satisfactorily addressed" and included these concerns in Exhibit A to Resolution No 08-3960. Many of these concerns have not yet been addressed, making Resolution No. 11-4264 premature, and the CRC project has refused to address several of Metro's issues, including Community Enhancements and tolling I-205.

There are many many problems and unknowns with the CRC as it stands right now. For a project that is slated to be the biggest public works endeavor in our region and state's history, I believe we must have more of the CRC's outstanding issues resolved before moving forward.

Thanks for your consideration,

Scott Cohen 2613 N Russet St Portland OR 97217

From: Sent:

Ina Zucker on behalf of Carlotta Collette Wednesday, June 08, 2011 4:53 PM

To: Subject:

Laura Dawson-Bodner FW: columbia river crossing

Public comment on CRC

From: Eben Polk [mailto:eben.polk@gmail.com]

Sent: Monday, June 06, 2011 4:55 PM **To:** Carlotta Collette; Ina Zucker **Subject:** columbia river crossing

Dear Councilor Collette:

I rarely write my elected officials, but thought I would take a few minutes to write to let you know that I hope you and other Metro councilors will have a genuine dialogue about the Columbia River Crossing proposal when it comes before you this week. As it currently stands, the project does not deserve your approval as the locally preferred alternative. I hope Metro councilors have the courage to stand up and say this to the DOTs. Just because a lot of resources have been spent planning this project doesn't make it a good idea.

Among the many reasons why it not worthy of approval as a locally preferred alternative:

- -We should focus first on the infrastructure we have. The new 'Repair Priorities' report from Taxpayers for Common Sense and Smart Growth America indicates that Oregon spends much less on repair and maintenance as a percentage of our road budget. Let's spend billions on that rather than a new bridge.
- -This project costs too much, and there's been insufficient commitment to tolling, including tolling on I-205, which ought to be required if I-5 is to be tolled. It will likely cost more than we have, and with traffic dropping well below CRC projections, revenues may not materialize.
- -It will relocate congestion more than eliminate it. Billions of dollars for a fractional, nearly imperceptible improvement in congestion is simply not cost effective public policy.
- -Let's allow light rail to make it to Vancouver on its own merits. Sure, it may not get approved soon, but we don't have to accept an over-designed freeway expansion as a compromise to get light rail to the north.
- -We can meet the true objectives of the project through other cost-effective alternatives that have been suggested by smart people, but not been fully considered.
- -Safety! This bridge is not the highest priority for seismic protection, but even if it were, we could make the necessary retrofits to it, for much less.
- -Jobs! Yes, we need them, but other proposals to alleviate congestion (e.g. local bridges, reconfigure the rail bridge, seismically upgrade the existing I-5 bridge, and toll it) would also do a lot to create jobs, and we can spend those construction dollars on other job-creation projects that maintain roads in places where needed.
- -When we look back on this decision in 20 years, let's be proud of our legacy--let's send it back to the starting point now, and maybe we'll get something we can be proud of.

For a many billion dollar project, the burden of proof is on the CRC to demonstrate that it is the right solution for the correctly identified problems, for the right cost. It has not met this burden. I hope Metro is willing to point this out.

regards,

Eben Polk

Jennings Lodge resident

4531 SE Jennings Ave Milwaukie (Oak Grove), OR 97267

503-422-1520

From: Sent: Barron [barron@barronmind.com] Monday, June 06, 2011 7:43 AM

To: Subject: Barbara Roberts CRC resolution

Dear Ms Roberts,

I think there are alternatives to the massive freeway and bridge plan for improving transportation over the Columbia which aren't being seriously considered.

Maybe it's time to take a fresh look at this before we spend even more money and get to a point of no return.

Thank you for your consideration of my opinion, Barron 6031 SE 56th Ave
Portland Oregon 97206

From:

Kris Nelson [knelson@hydrophix.com]

Sent: To: Monday, June 06, 2011 10:12 AM Barbara Roberts

Subject:

Resolution No. 11-4264

Counselor Roberts,

If it's not already plainly evident, I urge you to vote no on Resolution No. 11-4264. Clearly the highway consultants (robbers?) haven't adequately explored more cost-effective alternatives to the CRC, including better bicycle and transit access. The conditions of the resolution simply have not been met.

Thank you for your critical eye on this potential boondoggle.

Kindest regards,

Kris Nelson

President **Hydrophix Systems** Portland, Oregon 503.318.0223

From: Sent: Jack Newlevant [jknewl@gmail.com] Monday, June 06, 2011 12:14 PM

To:

Barbara Roberts

Subject:

Please vote no on Resolution No. 11-4264

Dear Ms. Roberts,

I think the CRC, as now proposed is not the best answer for congestion, safety, etc. Do please vote NO on Thursday!

Thank you,

--

Jack Newlevant

jkNewl@gmail.com or more immediately via text to 503.806.3771

From:

David Thelen [dath@netop.com] Monday, June 06, 2011 12:48 PM

Sent: To:

Barbara Roberts

Subject:

Oppose the current CRC project in upcoming vote

Follow Up Flag: Flag Status:

Follow up Completed

Hi Barbara,

I am writing in to voice my opposition to the plans for the CRC as they stand. This project is going to increase gridlock in urban areas while costing an enormous amount of funds. It seems that all non motor-vehicle modes of transportation are valued much less by the transportation planners who are creating this boondoggle. North Portland will become a parking lot as Vancouver commuters take to neighborhood streets and corridors to avoid the impending traffic jam when I-5 goes down to two lanes in the Rose Quarter. With all of the negative history towards minorities in these North Portland neighborhoods this looks to be more of the same.

I know this has not been brought up much among the media and politicians lately, but the environmental impact report that a large portion of claims are built around is flawed. The report does not take in account population growth as an environmental impact. Vancouver does not share Oregon and the Metros values with regards to land use. They view this as a way to increase their local tax base by draining Oregon to degrade their own environment while still being able to have a quick commute to jobs in Oregon. According to the Willamette Week's recent article all a rush hour commuter will save is a minute each way. This project as it stands is not in the best interest of the Metro area or Oregon. Please vote no.

Thanks, David Thelen

From: Sent: David Hoch [dhoch14@gmail.com] Monday, June 06, 2011 1:14 PM

To:

Barbara Roberts

Subject:

Columbia River Crossing - Resolution No. 11-4264 --- VOTE NO

Hi Barbara,

I encourage you to vote no for the upcoming resolution Resolution No. 11-4264. I cannot think why adding more road infrastructure at a hefty price tag benefits Portland or Vancouver. This project is not about what is best for the city, the environment, or the people.

Use your moral compass and think, does this make sense? Do I want to continue to push/encourage automobile usage? Research has shown we are at a peak with car usage, why continue to subside and enable more drivers? Imagine what other transportation projects could be implemented?

Lastly, why should Portland residents support a project that rewards urban sprawl? There are far too many SW Washington's that work in Oregon, yet live in WA to skirt the state income tax. By making it EASIER to live and work in SW WA, you are only eroding the localized tax base. Enough is enough.

Best of luck Barbara,

David & Kelly Hoch SW Portland

From: Sent: Levin Nock [Lnock@comcast.net] Monday, June 06, 2011 7:44 PM

To:

Barbara Roberts

Cc: Subject: 'Coalition for a Livable Future' Please vote no on 11-4264.

Dear Councilor Roberts,

Please vote no on Resolution No. 11-4264.

Some of my concerns which have yet to be addressed by the "highway consultants" include:

- + Regional CO2 emissions should be reduced, not encouraged.
- + Traffic on the bridge is actually declining, not increasing as 'modeled'.
- + Looking forward 5 years and beyond, the primary cross-Columbia traffic congestion to address is in commuter rail, not Single Occupancy Vehicles. If commuter rail managed the commuters, there would be plenty of space on the present bridge for the trucks.
- + For a small fraction of the \$100M already spent on "consulting", we could have a first-rate, luxurious Express Bus service running today, from Vancouver to downtown Portland and Beaverton.
- + The entire project should be a Public Private Partnership based on congestion tolls on the I-5 and I-205 bridges, at minimal public expense. For hints on how to create PPP's successfully, please read the book "reWealth" by Storm Cunningham.
- + It is my understanding that the cost of renovating the present structure is comparable to the cost of demolishing it. Hello? The state is broke, the feds are broke, unemployment is above 10%, and we're gonna borrow money that we don't have, to destroy something that could have been patched up? I've got patches on my shoes, patches on my pants, patches on my lawn mower, patches on the siding of my over-mortgaged house, and gratitude that at the moment I'm employed. This is not the time to use my tax money to destroy something that could have been patched.

Thank you, Levin

Levin Nock, PhD, PMP 1173 NE 71st Ave Portland OR 97213 <u>Lnock@comcast.net</u> 503-706-2101 www.LinkedIn.com/in/levinnock

From: Sent:

Christine Yun [cpypdx@gmail.com] Monday, June 06, 2011 9:44 PM

To: Subject:

Rex Burkholder CRC bridge

Dear Councilor,

I am writing because I am opposed to the current solution for replacing the bridge on I-5 between Portland and Vancouver.

As an architect, we are always thinking of ways to build in redundancy for structure and for use of spaces. It's the most economical and safety-conscious approach to design.

The CRC bridge as currently designed is vulnerable to any kind of natural or engineered catastrophe. I think that Jim Howell's proposal to build several, shorter, less expensive bridges across the river, is a brilliant idea. It separates I-5 traffic from local traffic, such as that from Portland to Hayden Island and Hayden Island to Vancouver. In the event of a catastrophe, there is likely to be at least one way across the river that can be used due to the solution's redundancy.

Please reconsider this project and revise the design for a less expensive, more versatile solution that can better accommodate traffic.

Thanks, Christine Yun

From:

Lynne Coward [lcoward@imagina.com]

Sent:

Monday, June 06, 2011 4:42 PM

To: Subject:

Rex Burkholder Vote on CRC

Follow Up Flag: Flag Status:

Follow up Completed

Hello Rex,

I understand that the Metro Council will be voting this week on a resolution of support for the CRC project. While I value beautiful design (that was the focus of my university degree), even more I value planning that considers the future of the community and our environment --and is respectful of citizen involvement. From what I observe this project fails to meet these objectives. Never have I seen respectful and informed citizen comment so handily dismissed. I understand that the failure to include a resolution of the Rose Quarter bottleneck is driving ODOT and the N/NE Quadrant planning to propose another large project---all heavily weighted to vehicular traffic when this regions has demonstrated the superior value of rail. It is not that roads should not be funded, but using all of our resources to continue a mode that is most expensive and environmentally damaging seems totally contrary to what I thought Portland was about. There also appears to be a disconnect between the state's elected leaders and an understanding of the degree of debt that we as taxpayers can afford.

Sincerely,

Lynne

From:

Philip Brunner [pdbrunner@gmail.com] Monday, June 06, 2011 3:14 PM

Sent:

To:

Rex Burkholder

Subject:

In regards to the CRC project

Hello Rex,

You are my Metro Councilor and I wanted to let you know that I am against the proposed Columbia River Crossing project. I urge you to vote no on Resolution No. 11-4264.

Thanks for your time,

Philip Brunner

From:

Nathan Vaughan [n8vaughan@gmail.com]

Sent:

Monday, June 06, 2011 1:43 PM

To: Subject:

Rex Burkholder Res 11-4264

Dear Councilor Burkholder:

I am writing to voice my strong opposition to the present CRC and resolution 11-4264 which you will be taking up shortly. I have followed this process closely since 2003 when the original stakeholders, or whatever they were called, were formed. I think it is safe to say, no one could have imagined the outcome of the process to be so unsatisfactory. And yet here we are, about to spend vast amounts of money on something almost no one agrees is the best solution. I understand we need a new river crossing to allow our region to continue to grow rapidly. But I urge you to think beyond the short term, or even medium term, effects of your decision on this project. Think beyond moving SOV's and trucks. Beyond jobs for construction. What we have here is another Marquam Bridge; the ultimate single-minded design. A scar on our beautiful city. We need your leadership and longterm vision. Not another excuse to distrust the democratic process.

Sincerely, Nathan R. Vaughan 1969 SW Park Ave. Portland

From:

Byron Palmer [byronpdx@gmail.com] Monday, June 06, 2011 1:12 PM

Sent: To:

Rex Burkholder

Subject:

CRC

I oppose the CRC as it is envisioned and urge you to vote against the project at this time. My reasons are based on the following points:

- 1. We have reached peak-oil and the cost of fuel will only increase, the availability decrease. This will curtail driving. We cannot continue to use oil the way we have in the past which means that driving will have to be reduced. No alternative for oil has been found that works, and I seriously doubt that one will.
- 2. The assumptions that were used for the need of the CRC are invalid, and will become more invalid in the future.
- 3. It does not solve the total transportation problems as there are other bottlenecks in the system.
- 4. It will take more land in Vancouver and turn it into paved and unusable areas. The damage will be significant. Look at what I-405 did to Portland. It also causes environmental damage as well as social. Look at how much we are spending to solve the storm water problem in Portland, most caused by an increasing amount of land devoted to impermeable surfaces for cars.
- 5. It will take money for other projects that we need and use it for something that will not be used in the future.
- 6. The main group that benefits from this is the trucking industry, something that needs to be curtailed rather than encouraged as we need to move from trucks to rail if we are to maintain any decent transportation system. The does not address rail in any way.
- 7. We are not at peak person capacity of the bridge. We are at peak vehicle capacity but these are single person vehicles. Moving the average number of people per vehicle up to 2 or 3 would more than double the capacity of the bridge.
- 8. If anything is to be done, it needs to make bicycling and transit the focus, not vehicular traffic. Vancouver has repeatedly rejected transit into Portland. I don't want to support their choices with my money.
- 9. Current congestion could be managed better by restricting entry to I-5 at times of high volume. This would force people to plan better and carpool. Because people do not want to plan or give up anything is not a reason I want my tax money spent.
- 10. There are no provisions for recovering some of the cost through tolls. This is going to be a burden for years to come and the users should bear some of the burden through tolls. Vancouver has repeatedly rejected tolls.

We need to take a stand for the future. This is a good place to begin.

Byron Palmer 1234 SW 18th Ave, Unit 310 Portland, OR 97205

From:

Jason Barnstead-Long [jbarnsteadlong@aol.com]

Sent:

Monday, June 06, 2011 12:40 PM

To:

Rex Burkholder

Subject:

Columbia River Crossing citizen input

Metro Councilor Rex Burkholder,

I am a community member in your district and am against the version of the CRC that ODOT et al are proposing. For environmental (habitat and pollution), transit option (max, bicycle, pedestrian, etc.), financial burden, ratio of cost to Vancouver/WA, and other reasons that haven't been adequately addressed their proposal should be turned down this Thursday.

Thank you, Jason

FYI:

A Bridge Too False

Turns out most of the case for the \$3.6 billion Columbia River Crossing Isn't true.

http://www.wweek.com/portland/article-17566-a bridge too false.html

From: Sent: John Beaston [john@beaston.com] Monday, June 06, 2011 10:53 AM

To:

Rex Burkholder

Subject:

Vote NO on Resolution No. 11-4264

Hello Rex. I urge you to vote NO on Resolution 11-4264. The resolution is premature since many of the issues raised in the Metro LPA of 2008 (Exhibit A to Resolution No. 08-3960B) have not been satisfactorily addressed. These unresolved issues are: tolling structure (A), impact mitigation and community enhancement (C), financing plan (E), capacity considerations, induced demand and GHG pollution (F), preservation of freight access (G), light rail (H) and bike/ped facilities (I). The large number and overall significance of these unresolved issues to the project mean that more work needs to be done before a resolution such as 11-4264 is considered.

Back in 2008, the Metro LPA identified the right 11 issues; only four have been adequately address. There are seven more to go. Resolution 11-4264 is premature.

Thank you for listening. John Beaston 5133 N Gay Ave Portland, OR 97217

From: johnreinhold@gmail.com on behalf of John Reinhold [john@reinhold.com]

Sent: Monday, June 06, 2011 8:07 AM

To: Rex Burkholder

Subject: A fond farewell request as I head for Memphis

Rex,

I believe it was about 6 years ago when you interviewed me for a position on TPAC. I was selected, and served for 5 years before resigning at the end of 2010. I resigned because my family is relocating to Memphis, TN - we leave in just about one month.

I wanted to drop you a line and share a little insight that I have come by during my process of relocation. I have been researching Memphis, and following politics and policy issues there for almost a year now. I will say that I am pleasantly encouraged by many things I read about Memphis however it is by far no Portland.

The Portland region is held up there as a gold standard of what to strive for. Almost every blog, article, or effort in Memphis relating to livability, transportation, or sustainability will have some reference to the Portland region. In large part this is due to the efforts of people like you and I who have worked hard to keep Portland a wonderful place.

I will admit that I was disappointed in your support of the CRC project. I understand that you spent long hard hours working with that team, for years. I testified wherever they would let me, at City of Portland meetings, Metro meetings, CRC project meetings. I know how long and tiring the process has been.

You are currently my Metro councilor, as my family resides in Irvington within your district. Next month I am moving out of the region, and as such I will no longer be a constituent. You no longer need my vote. So this letter may not mean much to a normal politician. But I feel that in the many times we chatted over the years, and in the hundreds of times I sat in the audience and listened to your speaking on numerous issues - that I got to know you a tiny bit. I feel that you are better than petty politics, and base pandering. So I am sending you this one last request as I move off to work as an activist in a place far away which needs much more help than our beloved Portland region.

I urge you to consider what the CRC project *really* means to Portland in the long term. I believe the CRC project has not met our criteria.

I urge you to vote that the CRC project has _not_ met the criteria which we at Metro established three years ago.

On Thursday, I will be at Metro council for my last time in the foreseeable future. I will urge Metro Councillors to continue in the tradition of responsible growth, planning, and stewardship which has made the Portland region the role-model across the country which other cities strive to become. We have something special here in Portland, and we should think carefully about taking it for granted. It is impossible to un-do a terrible mistake as large as the current design of the CRC project.

I wholeheartedly support finding creative, economically prudent, and environmentally sustainable solutions to the I5 crossing. My recommendations are (and always have been) a set of smaller best-practice type actions which can be implemented over time and in concert will alleviate most of the needs of the corridor.

1. Realign the railroad bridge to allow most river traffic to travel under the "hump" if the Interstate bridges, which will almost eliminate the need for I5 bridge lifts.

- 2. Build a small local traffic bridge to Hayden Island across the slough, and close the Hayden Island I5 ramps to all but emergency vehicles. This will get the merging Hayden Island traffic off of the
- Is freeway and reduce the number of interchanges, improving traffic flow and safety. In addition it would provide a much needed second bridge to Hayden Island in the event of emergency.
- 3. Reestablish the HOV lanes all the way across the bridge into Vancouver, and build "HOV only" lanes on the ramps at Delta Park / Marine Drive.
- 4. Beef up frequent bus service from Vancouver (which will also benefit from the HOV lanes across the bridge).
- 5. Seismically retrofit the Interstate bridges to increase their safety.
- 6. Figure out a way to toll both bridges crossing the Columbia (admittedly this is most likely the hardest one to implement).

Aside from those measures, some other things that can be done for much less than the cost of the current CRC mega project is to focus on improving the Portland region's public schools, and increasing the affordable attractive housing in the central city. Every family we can keep in Portland and prevent from moving to Clark County is a family that won't need to travel across the Columbia on a daily basis.

When speaking with friends and coworkers from Vancouver, their excuse for living in WA is almost always that housing is cheap and the schools are better. Those two things may not be exactly true, but they are the common belief. If the region can work to make the central city more attractive to those families, we reduce the need for bigger bridges and make the city better at the same time.

Rex, I thank you for your service. I thank you for allowing me to contribute. I look forwarding to our paths crossing again in the future.

I wish you and your family the best in whatever may lie ahead!

Sincerely, John Reinhold

From: Sent:

Ben Salzberg [salzberg@reed.edu] Sunday, June 05, 2011 3:51 PM

To:

Barbara Roberts

Subject:

The CRC

Dear Councilor Roberts,

Please join me in opposing the \$4 billion boondoggle that is the proposed Columbia river crossing project. It is a vast public expenditure that will mainly benefit Vancouver commuters, and then only in the shallowest way; an investment in last century's modes of transit; and a waste of money that could be used in so many better ways.

I urge you to vote no on Resolution No. 11-4264.

Thank you, Ben Salzberg 4841 Sherman St. Portland OR 97215

From:

Catha and Mary Anne [clmaj172@easystreet.net]

Sent:

Saturday, June 04, 2011 9:22 AM

To:

Barbara Roberts

Subject:

CRC Resolution Number 11-4264

I am writing to express my concerns about this project. This is not needed in its present form. It does not address transportation needs for pedestrian or mass transit. It is expensive and we have better ways to use this kind of money in Oregon and the Portland Metro Region. Please vote no on this insane use of public money. The current project does not meet the conditions attached to the Metros locally preferred alternative adopted in 2008.

Mary Anne Joyce

1724 Se 48 Portland OR 97215

From:

Heidi Guenin [heidi.guenin@gmail.com]

Sent:

Saturday, June 04, 2011 3:09 PM

To:

Barbara Roberts

Subject:

No on Resolution 11-4264

Councilor Roberts,

I am writing, as a constituent and as the Transportation Policy Coordinator with Upstream Public Health, to urge you to vote "No" on Resolution 11-4264. There are several issues (including financing, active transportation facilities, and greenhouse gas emissions) that have not been adequately addressed by the project sponsors; refusing to address these issues will have serious negative impacts for our community. I am particularly concerned about the lack of a community enhancement fund, especially given the many public health concerns that have been raised by public health professionals and advocates since the beginning of the project.

Thank you for taking the time to consider my concerns.

Sincerely, Heidi Guenin

From:

Walt Mintkeski [mintkeski@juno.com]

Sent:

Saturday, June 04, 2011 5:23 AM

To:

Barbara Roberts

Subject:

Opppose Resolution No. 11-4264

Dear Governor Roberts,

As your Metro constituent, I urge you to vote NO on Resolution No. 11-4264. The Columbia River Crossing highway project, in its current form, is too costly, will promote sprawl in Clark County, and will worsen I 5 congestion in the Rose Quarter Area.

Thank you,

Walt Mintkeski 6815 SE 31st Ave Portland OR 97202 503-771-0232 mintkeski@juno.com

From:

Douglas Kelso [dougkelso@vahoo.com]

Sent:

Saturday, June 04, 2011 6:41 AM

To:

Barbara Roberts

Subject:

Vote No on Resolution 11-4264

Councilor Roberts -

As one of your constituents (I live in Montavilla) I am urging you to oppose the CRC project as it is currently designed. The project as envisioned is an overly expensive freeway expansion, costing far too much for far too little benefit. The project does not meet the conditions set for Metro approval. You should not approve it.

Throughout the process, the planners running the CRC have consistently refused to seriously address numerous reasonable "second bridge" alternatives set forth by the community. Instead, they have stubbornly insisted that we need to tear out a perfectly good freeway bridge and replace it with a twelve lane monstrosity, while simultaneously spending billions on highway interchange projects. As a result, we have a proposal that we can't afford to build, that will drain transportation resources for other regional projects if it goes ahead, and offers results that could be substantially achieved with far less spending.

At this point, the best thing to do with the CRC is to kill it and start over, maybe with Metro and the Southwest Regional Transportation Council in charge. In any case, the CRC does not meet the conditions previously set for Metro Council approval.

Please vote no on resolution 11-4264.

Douglas Kelso 1174 NE 76th Avenue Portland OR 97213

From:

revphil [revphil@gmail.com]

Sent:

Saturday, June 04, 2011 9:33 PM

To: Subject:

Rex Burkholder; letters@oregonian.com

Rex, please vote NO on resolution No. 11-4264, the CRC

Please vote against the upcoming Columbia River Crossing highway expansion. This entire project has already reached a critically stupid stage, and lets be real, its not going to get better.

This bridge is not needed, and it's unwanted. Please do what you can to avoid burdening my neighborhood with poisoned air and billions of debt. Vote no on resolution No. 11-4264.

reverend phil sano NE PDX

From:

Jack [jackhallin@gmail.com]

Sent:

Saturday, June 04, 2011 11:54 AM

To:

Rex Burkholder

Subject:

Vote no on Resolution No. 11-4264

Dear Councilmember Burkholder:

The concerns raised about the CRC have NOT been addressed!

Is this how you want to be remembered? As the councilmember responsible for saddling us with a monstrous, 1950s-style traffic solution?

We do not need this bridge.

As others have explained, CRC proponents use misinformation and scare tactics to get their way. They claim:

- 1. This bridge is unsafe. There are many more bridges that are more dangerous but no one seems worried about spending billions of dollars fixing them.
- 2. This bridge will eliminate congestion. You know very well that's not true. It will just push the bottleneck into Portland, saving 1 minute in travel time for Clark County residents (whose commuting habits this project supports)
- 3. This bridge is necessary for barge traffic. False. There's a much cheaper solution: modify the rail bridge downstream.

It's really very sad that you have moved to the "dark side" on this issue. You didn't always think this way. You used to be a champion of alternative transportation such as bicycling. There's still time for you to come to your senses and see the damage you are doing to our city, region, and planet by pursuing this type of project.

I've lived in other places in the country: L.A., Las Vegas, Honolulu. What makes these places unlivable is their reliance on the automobile and how unpleasant these areas make it for people to take alternative forms of transportation. Portland appeared to be trying to do things differently than these places. But, judging by your actions and other CRC supporters, it appears as if politicians like you don't have the courage to stand up to the moneyed forces rallying against us.

Please vote no on Resolution 11-4264.

Sincerely, John Hallin

From:

Shirley Craddick

Sent:

Monday, June 06, 2011 11:45 AM

To:

Laura Dawson-Bodner

Subject:

FW: About Metro resolution 11-4264 on the Columbia River Crossing

Attachments:

CRC_Financial_Analysis_by_Impresa_Inc.pdf

Hi Laura-

I'm going to be forwarding you CRC emails from Councilor Craddick's email account for the CRC public comment period. You may have received some of them already from other CPCs but I'm sending them to be on the safe side. Thanks.

--Sheena

From: Ron Buel [ronb@donavoncards.com] Sent: Friday, June 03, 2011 11:09 PM

To: Carl Hosticka; Shirley Craddick; carlotta.colette@oregonmetro.gov; Barbara Roberts Cc: Joe Cortright; 'Jim Howell'; bscott@zipcar.com; George Crandall; 'Mara Gross'; Gerik Kransky; fredtrain@aol.com; Ina Zucker; Nikolai Ursin; alanmwebber@comcast.net;

david.m@usdigital.com

Subject: About Metro resolution 11-4264 on the Columbia River Crossing

Carl; Shirley; Carlotta; & Barbara:

At one time or another, I have talked to all four of you about the Columbia River Crossing (CRC). My hope is that you will take the time to read my thoughts below about the Columbia River Crossing and Resolution 11-4264 and then decide to oppose it.

To write this e-mail, I have carefully read Resolution 11-4264 and the "Independent" reports produced by the CRC – the Travel Demand Model Review Panel Report and the Greenhouse Gas Expert Review Panel Report, which Rex and Barbara's Resolution (inaccurately) says have satisfactorily answered the concerns raised by Collette, Liberty, Bragdon and Hosticka when they voted on the LPA in 2008 (two for, two against). I am more than a little familiar with the Draft Environmental Impact Statement (DEIS), and I read more than 200 pages of testimony on the DEIS submitted by Bob Stacey, Fred Nussbaum, Doug Allen, Jim Howell, Joe Cortright, Bill Scott and other long-time opponents of this project. This testimony has never been responded to in any way by the CRC, incidentally.

I attended every one of the hearings on the CRC LPA at the Metro Council, at the Portland City Council, at the Portland City Planning Commission, and at the Portland-Multnomah County Sustainability Commission – more than 12 altogether. I was present when Ron Higbee of URS presented his report on CRC traffic to the Portland Freight Committee, a report for which the City paid \$100,000. I have read the Independent Review Panel Report, and Joe Cortright's 40-page report for Plaid Pantry (attached), as well as Matt Garrett's response to Cortright and Cortright's response back.

I have more than a little experience writing and thinking about transportation since 1966. I wrote several front-page stories about Bay Area Rapid Transit construction in San Francisco for the Wall Street Journal when I was reporter and bureau chief. I wrote a book on U.S. transportation published by Prentice-Hall in 1970. I served on the Tri-Met Board of Directors. When I was Executive Assistant to Neil Goldschmdit when he was a City Commissioner and Mayor, I was involved in a number of transportation issues as we totally remade Portland's transportation and land-use policies – killing the Mt. Hood Freeway and the I-405 extension through NW Portland and the Robert Moses-designed (PVMTS) plan for multiple freeways in the Portland area, starting light rail and the transit mall, helping to create

Metro, etc. After city hall, as a member of Sensible Transportation Options for People, we fought and stopped the Westside Bypass. I served as a member of Mayor Vera Katz' Freeway Loop Group. I have lived and used autos and mass transit in Tokyo, San Francisco, Los Angeles and St. Louis, not just this area.

Rather than delving deeply into policy-work speak, I will try my best to keep my remarks limited to a few basic points and, I hope to keep them on a simpler, more readable level.

OVERVIEW

This Project is based on a descendant paradigm of the 1950s and 1960s when we thought we could build our way out of freeway congestion, an approach which has been proven not to work in every major city in the U.S. The \$1,560,000,000 worth of CRC work on six interchanges, including the \$880 million to be spent on the grand combined Hayden Island/Marine Drive Interchange, are the best demonstrations of excessive expenditures in the 22% increase in highway lane capacity that this project will produce in the so-called bridge impact area. This is not a bridge project, it is a freeway expansion project. The bridge is a loss leader. No least-cost analysis as required by Oregon State law has been undertaken on the CRC.

What do I believe, then, is the ascendant paradigm that the CRC freeway expenditures ignore? The ascendant paradigm is people driving less, living in more compact urban areas, walking and bicycling, and using mass transit and high speed rail. The ascendant paradigm is based on market economics – the rising price of less abundant and therefore more costly fossil fuels. It is based on sustainability. It is also based on a growing recognition that we need to reduce air pollution, air toxics, and carbon dioxide or greenhouse gas emissions, all of which are produced by our fossil fuel-based vehicles. In Oregon, more than 50% of our passenger vehicles such as pick-ups, SUVs and Vans have truck axles, a very high rate nationally, and this means we produce even more carbon per vehicle mile traveled. Based on people per acre, despite Metro and the Urban Growth Boundary, this region is twice as sprawled out as Vancouver B.C., which doesn't help either. We must live the ascendant paradigm, and the CRC does not help us do that.

This CRC project cannot be financed. Former Metro employee Richard Brandman was paid \$16,480 a month for two years to lead the CRC project and try to raise money from the feds and the He failed to raise any construction money and was removed. states for construction. Highway Trust Fund is depleted and the days of 90% federal money for freeways are long gone, and the fact that higher fuel prices are causing people across the country to drive less means the Trust Fund continues to face much higher demand than it can meet. The two U.S. Representatives in whose districts this project 'sits - Earl Blumenauer and Jaimie Butler-Herrera -- are not publicly endorsing the project. It's hard to get federal money when your Congressional Representatives are not publicly supportive. In the Washington State legislature, this project is far behind two multi-billion-dollar projects in the Seattle area which are also mostly un-funded. The \$450 million from Washington State for the CRC is not And, if you've been reading the tea leaves in the Oregon State coming anytime soon. Legislature, you will see that our legislators are not exactly enamored of this project. Patricia McCaig and Governor Kitzhaber have been unable to get their HJM22 (which memorializes the president and Congress on behalf of the CRC) out of the House Transportation and Economic Development Committee or the House Rules Committee -- so far. And, even if they do succeed in getting it to the floor of the House, it will have difficulty passing. If you think our state legislature is ready to spend \$450 million on this project, and raise the gas tax to do it, then what Barbara and Rex are recommending Metro do in Resolution 11-4264 makes sense. I don't believe that has a chance of happening.

Downstate legislators are as aware of their local transportation needs, as are people in the Portland region who support the Sunrise Parkway, widening of 217, replacing the Sellwood Bridge, and even the Newberg-Dundee bypass and Milwaukie light rail, long before they would spend all of this money on the CRC, especially the \$80 million this biennium (a rate of \$3.3)

million a month) and the \$75 million next biennium on the slush fund that plans and promotes and lobbies for this CRC project. The \$450 million of Oregon state monies needed for CRC construction and Oregon's share of the \$130 million spent so far on the slush fund aren't competitive with local projects? Nonsense.

There is also great difficulty with the CRC plan for tolls as a source of financing. The notolls group in Vancouver, led by David Madore, CEO of U.S. Digital Corp. (see no-tolls.com and Couv.com), is stirring up considerable opposition to this whole project, based on tolls and project costs. The CRC plan for tolls is back-loaded to keep the tolls low in the first few years. As a result, interest costs over the 30-year life of the toll revenue bonds, will add \$2.7 billion to the cost of tolls. Using transponders for regular commuters and photos of license plates for non-commuters, we will send out bills to collect the tolls, which will cost, according to the CRC, another \$1.7 billion over 30 years for collection. This means we have to collect \$5.7 million from tolls over the 30 year-life of the bonds to Will mass transit take 37% of the trips across the get the \$1.3 billion for construction. bridge in 2030 as projected by the CRC team - that means there will be less toll money. Will only 3% of the peak-hour commute drivers who might today use the I-5 bridge go to the un-tolled Glenn Jackson Bridge as projected by the CRC? If the percentage of drivers who want to avoid tolls by using I-205 goes up beyond 3%, that means less toll money too. Remember, too, that traffic in the last five years has been going down steadily over the All this means the Wall Street Bond Buyers, when they decide to buy existing I-5 bridges. the bonds that will provide us with \$1.3 billion for construction up front, are going to want a guarantee from Oregon and Washington that the full faith and credit of both state's future transportation monies will be used to pay them. Me, I don't think the state legislature in either state is going to want to do that. Apparently Metro thinks they will? For a great more detail on the tolling problems, read Joe Cortright's attached paper.

Clark County will NOT vote for light rail. Washington State law requires that Clark County voters must pass a measure to approve operating funding for light rail, a vote that is now scheduled to occur in November of 2012. Voters there did not pass such a measure last time it was on the ballot. If David Madore and Jaimie Herrera and the tea party were not fighting the tolls and the project itself, there might be more hope today. This is a suburban county. There are no plans to build a network of connecting bus lines to the light rail stations. Instead, there will be \$60 million spent on park-and-ride garages near the light rail stations in Vancouver. The KATU poll showed commuters to jobs in Oregon, who make up a large chunk of voters, were 55% opposed to tolls before Madore started his campaign. Tim Leavitt, the Mayor of Vancouver, wants tolls now, but ran a campaign against them when he was a candidate. Does Metro want the states to spend another \$75 million planning and promoting a project that doesn't have light rail? Without light rail, the only really likely money for the project, \$800 million-plus from the Federal Transportation Administration, goes away. Why is Metro going out further on this limb now before the Clark County vote? None of the transit money can come anyway before November, 2012 when the vote occurs. ODOT is expected to spend \$50 million on this project for planning and promotion in the next biennium, beginning next month. Aren't there better uses for that money in your opinion? Why are you rubber-stamping this project?

The CRC will NOT reduce congestion! Nor will it reduce air pollution or carbon. The CRC DEIS says reductions in carbon and air pollution are based on speeding up cars in the bridge impact zone because of free-flowing traffic with more lanes. Yet, when Ron Higbee of URS stood up before the Portland Freight Committee a year ago, he put up a Powerpoint slide that said that with a 10-lane bridge and the interchange improvements, traffic in the 2030 modeling year in the southbound a.m. peak will be at 99% of capacity at Victory Blvd. or Delta Park. This means that every workday morning, all those single-passenger cars from Clark County will back up the less than two miles from Delta Park onto the big new \$3.6 billion bridge. The five lanes coming South across the new bridge and Hayden Island will be joined going South by two more lanes coming off Marine Drive, meaning that seven lanes will

have to narrow to three lanes at Delta park going South. I am sure you can understand why there will be congestion.

After the Fremont Bridge I-5 South narrows to two lanes, and then after being joined by a Southbound lane off the Fremont Bridge, it narrows to two lanes again going under Broadway at the Rose Quarter, and then one-lane goes onto the Banfield. Indeed, the Independent Review Panel recommended that \$1.3 billion be "programmed with" the CRC project (at the same time) to clean up the traffic problems at the Rose Quarter. The panel didn't suggest a source for that money while they were pointing out that the new bridge and increased traffic will make the problems at the Rose Quarter worse, which CRC staff had never admitted. Higbee of URS also pointed out that, after the big new bridge is built, there would be new, additional congestion in the a.m. peak where Alberta dumps the Swan island a.m. traffic onto southbound I-5. Does all this sound like congestion reduction to you?

And when the CRC is supposedly cleaning up congestion in the bridge impact zone, what happens on the arterials going on and off I-5, and what happens on the alternatives to I-5 like MLK. In fact, this comment in the Greenhouse Gas Emissions Expert Panel Analysis is telling: "Thus, the Draft EIS restricted its quantification of the greenhouse gas emissions from the highway to the portion of the highway where such data were available, namely the river crossings themselves." All traffic projections used by Metro and the CRC for the region show vehicle miles traveled increasing dramatically, and traffic across the Columbia growing dramatically through 2030 whether the new bridge is built or not. We all know that the state goals are for an 80% reduction in greenhouse gas emissions or carbon by 2050. region, this will depend on reducing vehicle miles traveled, since vehicle pollution produces 33% to 38% of the region's carbon. But this bridge is designed to accommodate significantly more vehicle travel, a 32% projected increase in VMT by 2030, which means that its impact on carbon dioxide or greenhouse emissions will not be salutary, but will be negative from a climate change standpoint. You can only make it positive by limiting your analysis of global warming pollution to the "bridge impact area" which you say you are going to improve (but you really aren't, at least according to URS). How can this now be satisfying Councilor Collette's motion, which passed by a 4-3 vote, for independent review of the CRC impacts on carbon emissions?

The "No Build alternative" is a false strawman, used to make the new bridge look good. While making its traffic modeling and air pollution and carbon claims, the DEIS compares the new bridge and freeway expansion to a no-build alternative in which traffic will grow fast across the bridge because of growth and development in Clark County. In fact, the DEIS claims that traffic will grow as fast or faster without the new bridge as it will with the new bridge. And it claims that congestion on and near the existing I-5 bridges will just get worse and worse and the peak hours will just expand and expand. This isn't happening, however, in the years since the base work was done in 2004. Gasoline prices have doubled. Driving is down all across the country - even in the years before the recession. See Joe Cortright's report that is attached. Ignore the 2010 uptick which was caused by the summertime work on the Glenn Jackson Bridge and people using I-5 as an alternative. Yes, if you say tolls will significantly reduce traffic across the bridge, and that a fantastic 37% of the trips across the river will be made by light rail in the 2030 modeling year, you can get the numbers to work out so that the no-build has more traffic than the new bridge. That happens only if you can make the toll revenue bonds work politically, and if Clark County voters vote for light rail and then decide to use those big new \$60 million park-and-ride garages in Downtown Vancouver. But, even if all that is true, all of the DEIS comparisons are with a "no build" that is not going to see traffic growth as projected. So the DEIS comparisons become bogus. One of the main reasons the comparisons are bogus is they fail to accommodate the growth in fuel prices and its impact on driving in general. The Expert Panel report on traffic modeling does not address this fuel price problem in any realistic way -It's as if these traffic modelers from Atlanta and Dallas don't want read it for yourself. to see their own traffic models as wrong and incomplete, and if they admitted the impact of gas price increases here, they would have to deal with their own inability to make accurate

projections themselves with their own current growth projections that justify highway building. Resolution 11-4264 says that the CRC traffic modeling is just fine. It isn't.

Isn't induced travel caused by perception, not by actual travel time and speeds? no changes in land-use projected in the CRC DEIS when the new bridge and interchanges are compared to the no-build. This is despite the fact that we know 5,000 acres near I-5 in Battleground, La Center, Ridgefield, Three Rivers and North Vancouver are zoned for housing but are today undeveloped. In this housing downturn, the developers who own this land that is sub-divided and permitted are desperate to see a big new bridge. A tip-off came when Rich Carson resigned as Planning Director of Clark County because of all the land he had to zone for housing, which he claimed no one could afford to serve with utilities or schools or roads. When he resigned, he claimed that housing developers with their contributions to the Clark County Commissioners controlled the zoning decisions. Read the story in the Columbian. To see the impact of a big new bridge, look at what happened with the Glenn Jackson bridge across the Columbia. The projections made before 1982 when it was built are 50% below actual traffic across the bridge today - because of land-use changes. Vancouver and Clark County planners say population in Clark County will grow from 450,000 today to 1,000,000 in 2050 (that's 38 new persons a day every day). A big new CRC will surely cause perceptions that make sprawl happen, and increase vehicle miles traveled, carbon and air pollution, whether or not there are tolls on the bridge or light rail from Vancouver to Portland. Where are these figures built into the comparisons between the no-build and the new CRC? They aren't. All of the modeler talk in the panel report about the absence of induced travel is just trying to make the new bridge look good compared to the no build strawman. Your resolution just buys it all, but I don't think the federal courts will buy it when a NEPA lawsuit is filed by all of the state's major environmental, land-use and transportation organizations who oppose the CRC.

I hate to see our Metro government walk deeper into this muddy money pit that is the CRC by saying that all these problems have been addressed by the CRC and these phony independent panels, peopled as they are by bureaucrats who support highway building elsewhere. Especially when Jim Howell and George Crandall have prepared a common sense alternative that is cheaper, better and faster to jobs. Resist the political pressure and serve the public interest.

Regards, Ron Buel (503-358-8677)



convenience stores

Plaid Pantries, Inc. • 10025 SW Allen Blvd. • Beaverton, Oregon 97005 • Telephone: 503.646.4246 • 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

RF:

Columbia River Crossing

Ladies & Gentlemen:

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 multigenerational 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.

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

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 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.



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.



CRC Financial Analysis October 2010 Page 4

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.



1. CRC Traffic Forecasts Are Inaccurate.

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.



Average Daily Traffic, I-5 Bridges,

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



2010

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.

CRC Forecast v. Actual

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

145,000 140,000 L5 Traffic, Vehciles Per day 135,000 Actual Forecast 130,000

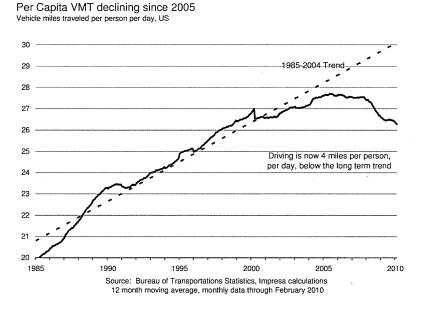
2006

2007

2008

2009

Figure 2: National Trends in Vehicle Miles Traveled



2004

2005

Source: CRC Tolling Studies, RTC Traffic Data



125,000

120,000

2000

2001

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)



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, 2010f). 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).



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.



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, underestimating 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



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



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



CRC Financial Analysis October 2010 Page 14

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.

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

	Thirty Year Cost, Millions,
Category	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.



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



to pay for the bridges. These interest and financing costs are <u>not</u> 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, 2010e)

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.

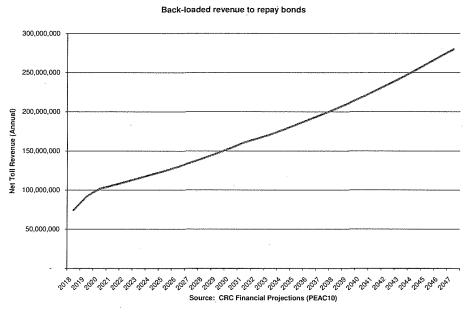
Our baseline estimate of interest costs is \$2.7 billion, based on the project's own estimates of thirty-year interest payments on toll-backed bonds (Columbia River Crossing, 2010c). This estimate is based on issuing \$1.4 billion dollars of bonds, in three series. This high interest cost is the product 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

¹ The 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.



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)



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 2020 rising to more than \$90 million in 2035 (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)). 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



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,



CRC Financial Analysis October 2010 Page 21

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



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.



2.10 Opportunity Cost

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.



2489

CRC Financial Analysis October 2010 Page 24

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.



2491

3. The CRC Poses Major Financial Risks

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.



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



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.



3.3 Housing Market Distortion Risk

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 &

