

From: [Maye Thompson/Doug Allen](#)
To: [Draft EIS Feedback;](#)
CC:
Subject: Comments on DEIS
Date: Sunday, June 29, 2008 8:02:50 PM
Attachments: [Stockholm_data.pdf](#)
[A_Plus_Strickler.pdf](#)
[BNSF_FAQ.pdf](#)
[BNSF_Summary.pdf](#)
[Council_to_CRC_Ltr_Oct_19_2006.pdf](#)
[Ignored_Induced.pdf](#)
[Main_Comments_Douglas_Allen.pdf](#)
[MetroWorkSession_02-13-07.pdf](#)
[Noland_Emissions_CongestionRelief.pdf](#)
[Noland_Lem_Induced_Demand.pdf](#)
[Resolution_02-3237A.pdf](#)
[Resolution_07-3782B.pdf](#)

Attached are my comments regarding the CRC DEIS, and supporting documentation for those comments.

The main comments are in file [Main_Comments_Douglas_Allen.pdf](#).

The other 11 attached files are entitled:

[A_Plus_Strickler.pdf](#)
[BNSF_FAQ.pdf](#)
[BNSF_Summary.pdf](#)
[Council_to_CRC_Ltr_Oct_19_2006.pdf](#)
[Ignored_Induced.pdf](#)
[MetroWorkSession_02-13-07.pdf](#)
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[Noland_Lem_Induced_Demand.pdf](#)
[Resolution_02-3237A.pdf](#)
[Resolution_07-3782B.pdf](#)
[Stockholm_data.pdf](#)

This means there are a total of 12 files comprising this set of comments.

Sincerely,

Douglas R. Allen
734 SE 47th Ave.
Portland, OR 97215
(503) 232-6167

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*** IMPORTANT: Do not open attachments from unrecognized senders ***

From: [Maye Thompson/Doug Allen](#)
To: [Draft EIS Feedback;](#)
CC:
Subject: Supplemental Comments on DEIS
Date: Sunday, June 29, 2008 8:52:26 PM
Attachments: [Time_for_congestion_pricing_12_19_07.pdf](#)
[21_bad_reasons.pdf](#)
[BNSF_Dist_Exec_Summ.pdf](#)
[BNSF_Dist_Recs.pdf](#)
[BNSF_Frt_Prior_Memo.pdf](#)
[BNSF_HWY_Benefits.pdf](#)
[Clark_Co_LandUse.pdf](#)
[Final_remarks_on_I-5.pdf](#)
[Phased_Alternatives.pdf](#)
[SDC_CityCouncil_CRC_letter_June_2.pdf](#)
[SeismicSummary.pdf](#)
[The_Arterial_Bridge_haunts_CRC.pdf](#)

Attached are supplemental comments regarding the CRC DEIS, which are in addition to my main comments that were previously sent.

The attached comments cover a variety of topics critical of the DEIS and the CRC analysis, and should be included in the DEIS comments.

There are 12 attached files entitled:

21_bad_reasons.pdf
BNSF_Dist_Exec_Summ.pdf
BNSF_Dist_Recs.pdf
BNSF_Frt_Prior_Memo.pdf
BNSF_HWY_Benefits.pdf
Clark_Co_LandUse.pdf
Final_remarks_on_I-5.pdf
Phased_Alternatives.pdf
SDC_CityCouncil_CRC_letter_June_2.pdf
SeismicSummary.pdf
The_Arterial_Bridge_haunts_CRC.pdf
Time_for_congestion_pricing_12_19_07.pdf

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Douglas R. Allen
734 SE 47th Ave.
Portland, OR 97215
June 29, 2008

Columbia River Crossing
c/o Heather Gundersen
700 Washington Street, Suite 300
Vancouver, WA 98660



Comments on Columbia River Crossing DEIS

Dear Ms. Gunderson:

Here are my comments on the Draft Environmental Impact Statement prepared for the Columbia River Crossing. These comments consist of this document plus attached supplementary and supportive material.

Five Categories of Defects:

1. The project “purpose and need” statement is defective. As a result, the range of alternatives that were developed is inadequate and misdirected, because the range was based on that statement.

The “purpose and need” statement declares: “Daily traffic demand over the I-5 crossing is projected to increase by 40 percent during the next 20 years, with stop-and-go conditions increasing to at least 10 to 12 hours each day if no improvements are made.”

This is not a statement of an objective existing condition or need, but instead defines a future hypothetical problem. If the likelihood of this future problem could be objectively determined, it would be reasonable to regard it as a legitimate “need.” However, a future problem that is not based on any scientifically solid methodology, or even a methodology that can be objectively evaluated by others, does not meet any standard of reasonableness. The DEIS fails to substantiate this 40 percent growth projection by citing any identifiable analysis that is open to public scrutiny. By the use of some unsubstantiated travel demand-modeling technology, the CRC has predetermined the outcome of the analysis. It used the statement of “purpose and need” as a touchstone by which all proposals were evaluated and by which many reasonable alternatives were improperly screened out. While it may be reasonable to use a valid “purpose and need” statement for screening alternatives, as advocated by FHWA, the DEIS provides no scientific basis for accepting the claimed 40 percent increase in traffic demand in the face of growing congestion and increasing fuel costs and likely environmental regulation of carbon dioxide emissions.

2. Reasonable and better alternatives were wrongly screened out by staff, so they were not available for analysis in the DEIS. The reasons that were wrongly used include the

scientifically invalid travel projections in the purpose and need, mistaken assumptions about the ability to seismically retrofit the existing bridges, and refusal to consider modifications to the BNSF railroad bridge as a component of any solution. The range of alternatives excludes options that are not only reasonable, they were explicitly recommended by the transportation MPO for the Portland/Vancouver region (Metro).

3. The range of alternatives that was actually studied in the DEIS was too narrow, and unrepresentative of the range of reasonably desirable options. The “supplemental bridge” options were too similar to the “replacement bridge” options to permit any analysis of the possible benefits of re-using the existing bridges. The appearance is that the “supplemental bridge” options cost just about as much as the “replacement bridge” options, have similar negative impacts from traffic and project scale, and have additional negative qualities in terms of bridge lifts and impeded navigation. These additional negative qualities were the result, largely, of improperly defining the supplemental bridge options to exclude modification to the BNSF railroad bridge.

4. The analysis of the alternatives is biased and incorrect. The analysis of the options that were actually studied for the DEIS is defective regarding projected traffic volumes, projected energy use, and projected effect on climate change. There is also a defective analysis of hours of congestion comparing Alt. 2 & 3 to Alt. 4 & 5. The cited difference in congestion is all in one direction, and is “turbulence” that causes only a minute difference in travel time for through trips, and unfairly makes Alt. 4 and 5 look bad. There is no clarification in the DEIS about the supposed congestion experienced by Alt. 4 and 5 regarding when in the future this congestion is expected to start happening, and the explanation of the nature of the congestion is so far removed from the comparison tables that any reasonable person might assume that the “hours of congestion” comparison involves congestion of comparable magnitude and effect. Using “hours of congestion” rather than travel time savings as a high-level statistic for comparing the various alternatives is unjustified and biases the presentation of the alternatives in favor of the replacement bridge. “Hours of congestion” is repeatedly used in summary tables, whereas differences in travel time must be computed by the reader in order to obtain a meaningful comparison among the alternatives.

5. The outcome was pre-determined. As early as November 5, 2004, David Cox, FHWA Oregon Division Administrator stated that he was certain that the existing bridges would be replaced. He made this statement at a seminar presentation at Portland State University’s Center for Transportation Studies, entitled “The FHWA View of Transportation in Oregon.” He also opined that one might look at moving the river channel south in order to allow for a lower bridge with less impact, but this would require modifications to the downstream railroad bridge, implying that this option was clearly off the table, regardless of how reasonable it might be. This seminar is available as a video record from the Center for Transportation Studies archive of such seminars, available at <http://www.cts.pdx.edu/seminars.htm> while the specific seminar is at http://www.media.pdx.edu/Transportation/Transportation_110504.asx and is a multi-media file.

Analysis of Predetermination:

In addition to the statements by David Cox cited above, the time-line for decision-making indicates that the outcome of this DEIS was pre-determined. In other words, the DEIS was not written in order to allow unbiased analysis of reasonable alternatives, but was instead created for the purpose of anointing the desired alternative. The CRC Task Force met and selected a preferred alternative on June 24, 2008, prior to receipt and compilation of DEIS comments, and there was a massive lobbying effort by the CRC staff to convince local governments to pre-commit to their desired alternative prior to close of comment on the DEIS. It is also a fact outlined in the DEIS that in the fall of 2006, CRC staff had already determined that only two alternatives should be advanced to the DEIS, (beyond the no-build), namely Replacement Bridge with LRT and Replacement Bridge with BRT.

The DEIS makes the following claim, under the heading “The 12 alternative packages: January 2007 Screening results”

Reusing the existing bridges appeared to warrant further evaluation primarily because of the possibility for reduced capital costs compared to replacing the existing bridges. This led the Task Force to explore how the existing I-5 bridges could be reused and still meet this project’s purpose and need. An additional alternative was therefore developed that uses the existing bridges for northbound I-5 traffic, bicycles, and pedestrians. With this alternative a new, supplemental bridge would carry high-capacity transit and southbound I-5 traffic. In March 2007 the CRC partners incorporated the Task Force recommendation into the DEIS range of alternatives. This produced the range of alternatives being evaluated in this DEIS:

The facts speak otherwise. The CRC added the supplemental bridge alternatives as sham alternatives, purely to satisfy the political pressure being applied to them to widen the range of alternatives. Here is a chronology of the actual process:

The Metro Council sent a letter to the CRC in October, 2006, asking for better alternatives. [See attached Council_to_CRC_Ltr_Oct_19_2006.pdf]

Here are some quotes from that letter:

...we all concur with the following recommendations.

Recognize the I-5 Transportation and Trade Partnership Strategic Plan

In 2002, all of the stakeholders in this effort, from both sides of the Columbia River, agreed with the following five principles:

- *The Interstate 5 crossing of the Columbia River should be a maximum of five lanes in each direction (three through lanes and two auxiliary lanes), for a total of ten lanes to accommodate additional auto and truck travel. These lanes could be a combination of freeway, arterial and managed lanes. ...*

- *Commitment to a comprehensive use of innovative measures such as Transportation Demand Management/Transportation System Management strategies.*

...

Use desired outcomes as a guide

...

According, we recommend that all transportation alternatives be evaluated for their land use implications. Obviously, added lanes of traffic, varying levels of transit, etc., and their impact on travel time and access will have an influence on settlement patterns and development. These implications need to be very carefully studied. ...

Coordinate with the railroad bridge

...believe that options that involve even greater coordination, including possible improvements to the railroad bridge, should be further explored. We understand the the railroad bridge is privately owned. However, we believe that the railroad system, including this bridge, performs a public function, and the freight carried on it is part of a larger system that needs to be considered. Further, if a CRC alternative further restricts barge turning movements, mitigation in the form of alterations to the railroad bridge may be warranted.

Provide alternatives in the DEIS that demonstrate the fundamental choices before us

We believe a wider range of alternatives must be studied in order to find the solutions that deliver the best results at the lowest costs. In addition, we believe that alternatives should be considered in the draft environmental impact statement that include both capital intensive and alternative approaches – unless it is clearly demonstrated during the current phase of analysis that such approaches are not viable.

On February 13, 2007, the Metro Council discussed the Columbia River Crossing. Some on the Council expressed surprise and concern that the CRC had essentially ignored their requests from the previous fall. [see attached MetroWorkSession_02-13-07.pdf]

Following is a quotation from the official Metro minutes of that meeting:

2. COLUMBIA RIVER CROSSING DIRECTION

Councilor Burkholder talked about upcoming steps and guidance in attending next week's Columbia River Crossing (CRC) meeting. Metro was one of 39 team members. He distributed two documents (a copy of each is included in the meeting record) and mentioned some of the previous alternatives over the past two years. An important issue was the functionality of the existing bridges and whether they could be retained. Councilor Burkholder personally supported the Task Force recommendation to replace the bridges. He acknowledged that the analysis to date had not been at the level of a Draft Environmental Impact Statement (DEIS)—23 proposals was too many to do a DEIS on all of them.

Councilor Liberty offered a PowerPoint presentation (a copy is included in the meeting record). He pointed out the similarities of the two “non no-action” alternatives. He estimated the total cost at \$2 to \$6 billion. He described the weaknesses that he saw in the analyses done to date, including ways in which they did not meet our desired outcomes. He gave information about the estimated useful life of the existing bridges and how it might be longer than was assumed. Seismic standards were being used to declare the existing bridges unacceptable, but he felt that no bridge in the region met those standards. He gave an alternative seismic standard that was more realistic and an estimated cost of upgrading the existing bridges to meet that standard. He said the bridge lift limitations were being used as a means to eliminate the existing bridges. He felt that land use had not been used as either a ranking or an alternative. He said there was no system management alternative presented, as had been requested by the Metro Council. He gave some information on the potential effects of tolling in managing congestion. The amount of money spent studying just for this one project was about 10-30 times greater than the amount spent for all other regional transportation planning combined.

Councilor Newman asked if there had been another alternative that was a close second in some way, but that had not made the final alternatives. Councilor Burkholder said everyone would have preferred a less expensive alternative. There was not a well-articulated third alternative, however, not substantive enough to do a good study on it. He mentioned some of the issues that would need to be addressed, such as maintenance. Councilor Newman shared Councilor Liberty’s general concerns about the scale and the cost of the project. If the starting assumption was that the existing bridges would be kept, then the no-build would be the best recommendation. He asked about the clarity of the need for a transit option. Councilor Burkholder felt the Council was pretty well on record as preferring a transit alternative.

Councilor Liberty thought that one of the plans did not necessarily talk about the form of the lanes. He felt incremental improvement—such as upgraded onramps—could remediate many of the safety concerns. Councilor Burkholder observed that the existing bridge had too many interchanges. Many of the fender-bender type accidents were caused by bridge lifts.

Councilor Park asked how much discussion had occurred around the issue of river traffic. Councilor Burkholder said the tugboat operators, in particular, had attended the discussions. Their concerns were about the “weave” between the vehicle bridge and the railroad bridge. The medium-height bridge alternative had been chosen to be above the barges and below Vancouver air traffic.

Councilor Burkholder said there was a mix of responses. What had been analyzed, what was part of the DEIS process? He talked about some design issues. Those were still somewhat in the future. He talked about the use of MetroScope. There had been some land use analysis, but a lot of it had been outside the scope of this project. Councilor Harrington said she had heard an expectation that the various things in the October memo had not been addressed. Councilor Burkholder agreed that some of the Council values were not addressed in the DEIS process.

Council President Bragdon asked about freight capacity, as it related to new induced single-occupancy vehicle travel. The greatest inhibition to freight in that corridor was SOV traffic. Would capacity be sucked up by more and more people traveling to Battle Ground? Councilor Burkholder stated that the performance objectives included freight. Systems management had not been addressed deep enough as of yet. He talked about some ideas that had been proposed to improve things for freight.

Council President Bragdon asked when and how the impacts to downtown Vancouver and Hayden Island would be accounted for? Councilor Burkholder said, by replacing rather than keeping the existing bridges, that was one way to reduce impacts. The height of the bridge, the interchanges, and SR-14 were all factors.

Council President Bragdon felt strongly that light rail needed to be extended. That should be a condition of Metro's support. Councilor Liberty said there was a basic difference in understanding in what we were doing and what we were asking. If the recommendation were approved, we would get a 10-12 lane bridge with light rail; land use analysis would then be a derivative of that choice. Seismic standards were going to preclude something else. Other bridges did not meet that standard. The result would be a high, without lifts, 12 lanes, with some form of transit, and no other options were being studied. He compared it to saying Metro would do a fairly large UGB expansion or a really large UGB expansion. Our thrust should be to carry forward not just 2-3 alternatives with additional analysis, but look at the fundamentals and allow us to think about more choices. The crossing still had \$60 million of study money; we should use it to really think creatively.

Councilor Newman felt there was a lot of skepticism out there. The final recommendation simply might not be implementable. He would like to see an alternative recommended that could actually be accomplished. He'd like to see how Option 3, with the existing I-5 bridges for traffic, and something else with transit, functioned under all the analysis for the next stage, including the political situation and what the political leadership would support. He was not 100% comfortable with the staff recommendation. His preferences were moving forward, being explicit about our preferences, not shutting the door, but keeping Option 3 or some variation, whether the bridges were refurbished, seeing what could be done at a lower cost, and addressing local traffic.

Councilor Park asked who would pay the bridge operating costs currently borne by the states? Would that information be in the DEIS? Councilor Burkholder said that was the smart thing about keeping the bridges, because they were part of the interstate system, it was about \$4 million per year to maintain them. New bridges should be less. The state departments of transportation would not want to help maintain them. No one really wanted to take on the new responsibility.

Council President Bragdon was worried about narrowing the options down too quickly. That would be a fiscal and political mistake for a project of this magnitude. For example, he had not seen enough information on community impacts. He wanted Metro's recommendation to be consistent with our other transportation values. He did not see anything like a low-cost option and was not convinced about the longevity of the existing bridges. He'd like to see more study on some of the alternatives.

Councilor Harrington asked Councilor Burkholder if he felt the Council's issues would be addressed with the larger group. Information would be available on congestion, freight mobility, land use impacts, and air quality impacts. There would be no information on a supplemental bridge unless we put it in there. Councilor Liberty thought that the net had not been cast very wide at the very beginning of the project, due to no bridge lifts and seismic. If a supplemental bridge had to be 80 feet high, it would be rejected because of the cost. Councilor Burkholder said he did not know what the outcome would be. The studies showed a lot of negatives to a supplemental bridge, but a study of that option would provide good data.

On February 22, 2007, the Metro Council passed Resolution 07-3782B, which provided the inspiration for the "4th Alternative Subcommittee" following a public hearing in the

Metro Council Chamber. [see attached Resolution_07-3782B.pdf] Here is their request for a "supplemental" bridge, in that resolution:

In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative could include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location.

This restatement of the similar request made in their 2006 letter has been ignored by the CRC in their "supplemental bridge" options in these key respects: 1. I-5 traffic is placed on the supplemental bridge. 2. The railroad swing span is not replaced, which would have eliminated most, if not all bridge lifts on I-5. 3. Bikes and pedestrians were left on the existing bridges, rather than using the new supplemental bridge.

The failure of the CRC to follow the Metro recommendations is not reasonable. The Metro recommendations are not some ad hoc opinion, but are themselves based on a comprehensive consensus process that culminated in the approval of the I-5 Transportation and Trade Partnership's "Final Strategic Plan" of June 2002. Here is relevant language from Metro Resolution No. 02-3237A of November 14, 2002 [see attached Resolution_02-3237A.pdf or <http://rim.metro-region.org/webdrawer/rec/19475/view/Metro%20Council%20-%20Metro%20Legislation%20-%20Reso~he%20Purpose%20of%20Endorsing%20the%20I-5%20Transportation%20and%20Trade%20Study%20Recommendations..pdf>]

Of particular note is this recommendation of the I-5 Task Force, restated by Metro and JPACT in their resolution:

"Three through-lanes in each direction on I-5, between I-405 in Portland and I-205 in Clark County including southbound through Delta Park including designation of one of the three through-lanes as an High Occupancy Vehicle (HOV) lane as feasible."

"An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to 2 additional lanes in each direction for merging plus 2 light rail tracks"

"Capacity improvements for freight rail that will improve freight and intercity passenger rail services"

"Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments"

"Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system"

Metro's Resolution 07-3782B further states, among other recommendations:

...the following should be part of any DEIS analysis: a) land use changes that reduce the amount of 2035 peak-hour commuting across the Columbia River;

...

e) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options

It is clear that the DEIS has failed to meet these reasonable expectations, apparently because the choice of the ultimate outcome was predetermined.

How CRC Response to Metro Resolution 07-3782B was flawed:

Metro's requests in Resolution 07-3782B were transmitted to the CRC Task Force by Metro Councilor Rex Burkholder. The Task Force responded by creating a "4th Alternative Subcommittee." The packet of meeting materials for the March 27, 2007 CRC Task Force meeting [from CRC Library at <http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/TaskFo...>]

contains minutes of the February 27th meeting, describing the setup of the committee. I hereby request that this packet be made part of the official DEIS record of comments.

Appendix 3 has the Metro resolution and letter from Councilor Burkholder.

Appendix 7 is the 4th Alternative Subcommittee report itself. It recommends a "supplemental bridge" option in which the existing bridges would be used for I-5 northbound, and a new bridge would be built for I-5 southbound. It does not give an adequate explanation why they chose this alternative.

A few clues to the committee's deliberations can be obtained by examining the meeting packets for the three subcommittee meetings, here:

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

I hereby request that these packets be made part of the official DEIS record of comments.

However, according to my conversations with CRC staff, the CRC made no audio or video recording of these task force subcommittee meetings, and there are no minutes available on the CRC web site of the final meeting, the latter in apparent violation of Oregon's open meetings law.

Among the options studied by the subcommittee was Option A+.

This option consisted of these components: A new, stand-alone bridge for high capacity transit (LRT or BRT), continued use of existing bridges by I-5, seismic strengthening of the existing bridges, and moving the opening span of the close-by downstream railroad

bridge to the south to line up with the “hump” span on the I-5 bridges, thereby eliminating the need to raise the I-5 bridges for barge traffic, and expanded bike and pedestrian pathways on the existing bridges.

Option A+ was defined in the first meeting, and at the second meeting, a CRC staff report was presented to the subcommittee, and at that point A+ was dropped. This was a crucial mistake, because A+ had the potential, if further refined, to become a worthwhile option for future construction.

The March 19th meeting packet contains a March 15, 2007 memo from Kris Strickler to the Fourth Alternative Subcommittee, defining option A+ and giving the CRC staff perspective. [see attached A_Plus_Strickler.pdf for memo text only.]

If one examines this memo, one will find both that A+ met the “purpose and need” of the project, and A+ was unacceptable to CRC staff. This memo makes this remarkable statement: "If Option A+ is selected as the locally preferred alternative (LPA) it is unlikely that either ODOT or WSDOT would continue funding work on the project. Identified Interstate improvements would be prioritized, funded and built along with other highly needed improvements in each state."

In other words, CRC staff told the Subcommittee that if they chose option A+, then the State highway departments would “pick up their marbles” and abandon the CRC project, taking their funding with them. This is “predetermination” personified!

The March 15, 2007 Strickler memo further prejudiced the choice of the Fourth Alternative Subcommittee by falsely characterizing European experience with Transportation Demand Management and Congestion charges:

OPTION A+ CRC STAFF OBSERVATIONS

• *To achieve a significant reduction in the projected hours of congestion for 2030, travel demand for Option A+ would need to be reduced about 30% which far exceeds reductions in the 15-20% range achieved through congestion pricing programs currently underway in London, Singapore, Stockholm and Germany.*

The May/June 2007 issue of “ITS International” magazine on page 6 has an article entitled “Stockholm congestion charging scheme to become permanent” [see attached Stockholm_data.pdf] and it states:

Congestion charging, which was introduced as a trial from January to July last year by the outgoing Social Democratic government, far exceeded the government’s expectations of a 10-15 per cent reduction of cars entering and leaving the capital. The average reduction was up to 25 per cent. When the trial ended on 31 July last, traffic in and out of the Stockholm city centre shot back up to the pre-trial level of around half a million cars a day, according to official estimates.

This information is at variance with what Strickler’s memo told the committee. Strickler’s memo was issued at a time when correct information about Stockholm was likely available. Furthermore, Strickler’s memo also leaves off the fact that the

Stockholm reduction is not a reduction from future growth, but a reduction from existing levels. Common sense suggests that preventing future growth should be much easier than reducing existing traffic.

Flawed Analysis of Climate Change and Energy:

Page S-31 of Executive Summary, Exhibit 27, sets forth the CO2 emissions of the various alternatives analyzed:

CO2 Emissions (tons/day)

Alt 1 463 (No-build)

Alt 2 452 (replacement bridge)

Alt 3 452 (replacement bridge)

Alt 4 494 (supplemental bridge)

Alt 5 491 (supplemental bridge)

The analysis claims that all build alternatives are projected to reduce personal vehicle travel demand over No-Build conditions and improve the operations of the I-5 crossing, as described in the Traffic section of the DEIS on page 3-434.

Subsequently, page 3-435 exhibit 3.19-4 claims that supplemental alternatives produce significantly more CO2 than the replacement or no-build options. (490-493 versus 452 for replacement and 463 for no-build). Existing condition is 342. Units are daily tons.

The DEIS, Chapter 3, goes on to claim that these estimates are conservative, because they do not capture all the potential reductions in CO2 associated with the highway improvements.

However, hidden inside the Energy Technical Report (ETR), which is part of the DEIS, one finds contradictory information. Exhibit 5-6 on page 5-14 of the ETR is consistent with the Chapter 3 information, as are other tables in chapter 5 of the ETR. What is not stated, let alone made clear, is that these tables are not valid for comparing alternatives, because the methods used for calculating energy use and CO2 emissions from transit and from personal vehicles are totally incommensurable.

Page 2-12 of the ETR, in section 2.5.2.1 states:

Using this approach, the estimates associated with personal automobile use are not intended to be representative of the total or complete amount of energy used or CO2 emitted by the project. Rather, these estimates should be considered in concert with each other and the value of these estimates lie in their relative differences.

Similarly, section 2.5.2.2 “Bus Transit Energy Use,” starting on page 2-12 of the ETR says:

Dissimilar from the personal automobile energy use and CO2 emission estimates, where the emphasis should be placed on the relative differences between alternatives, this

approach provides complete estimates of energy use and CO2 emissions associated with the project since the transit system is finite.

In other words, the numbers in the summary tables do not represent valid estimates of either the greenhouse gas emissions or the energy used by the various alternatives, because they were computed by adding apples and oranges. This invalid mathematical manipulation causes a distortion in the very summary information that would most likely be relied upon by decision-makers, who might not be aware of the totally dissimilar methodology used to compute the bus and transit emissions.

Beyond this glaring mathematical error in summarizing the energy and CO2 data, the DEIS ETR incorrectly focuses on emissions from personal vehicles solely in the 0.9 mile segment between SR 14 and Hayden Island interchange. The analysis of energy use and CO2 emissions purports to be a rational analysis based on EPA and other accepted methodologies for estimating vehicle fuel use at various operating speeds. However, it is not a meaningful representation of the global climate change and energy use impacts of the project alternatives. By citing an extensive analysis of only one component of energy use and greenhouse gas emissions, the DEIS falsely conveys the notion that energy and greenhouse gas impacts have been properly studied for the project alternatives.

Energy use and CO2 emissions over this 0.9 mile segment have no scientifically valid relationship to the actual total vehicle emissions that are caused by (are an environmental impact of) this project. Neither the DEIS nor the ETR cite any evidence that there is a scientifically valid relationship between total project emissions and those on the 0.9 mile segment. Never the less, the DEIS reports their numbers as if they were a fair representation of total emissions, and a fair representation for comparing project alternatives. All of the verbiage about reducing emissions due to reduced congestion, are false and misleading as applied to the actual environmental impacts of the project. The complex analysis of fuel use is a complete and possibly deliberate red herring, giving the reader the impression that science is happening.

Unless and until there is an analysis of the total vehicle miles traveled that occur because of the construction or non-construction of the various alternatives, any claims regarding energy use and CO2 emissions should be stricken from the DEIS. In other words, the DEIS is insufficient and inadequate until supplemented with correct information.

The DEIS also assumes, implicitly, that the various alternatives will have no effect on either trip length, for those trips crossing the Columbia, or on the length and number of other trips taken in the region. Proof that the DEIS makes this assumption is that it should otherwise have reported these effects.

There is no scientific justification cited for this assumption. Logic dictates the contrary. Real estate values and development patterns are well known to be strongly affected by accessibility. To the extent that the CRC alters accessibility (travel time and cost) this will affect not only development patterns, but also the patterns of trip origins and destinations within the development patterns. For a given number of dwelling units and

employment opportunities, it is obvious that individual choices to live closer to work can result in fewer vehicle miles traveled, even with a given pattern of residential dwelling unit locations. No analysis of these factors (trip length of CRC trips, and changes to length and number of non-CRC trips in the region) as they relate to the various alternatives, is available in the DEIS, yet these factors obviously result in important environmental impacts.

Furthermore, the actual travel demand estimates that are being used for trips that cross the Columbia, as opposed to total travel caused by the various options, are also of questionable validity. This further erodes any possible validity of the DEIS and ETR analysis regarding energy and CO2 emissions. As many members of the public, and the press, have noted, the CRC travel demand analysis utterly fails to take into account the changes in land use that would be expected from the various alternatives. This fails to meet either FHWA standards, or simple standards of common sense. For example, the Oregonian published a news article on June 22, 2008 which says: “Columbia River bridge plans ignore effects of growth, Designers decide not to factor in the extra sprawl, leading to traffic and pollution, that a bigger I-5 span might bring” [see attached Ignored_Induced.pdf]

Conservative studies have validated the notion of “induced demand” which, to a large extent, is merely the concept that consumers and developers respond to market forces in a rational manner by altering their choices about where to live and work, and what trips to make. For the CRC to take the contrary position, without any scientific basis, is to act against common sense and the weight of informed opinion in this subject area. I will cite a very conservative study done in 2001 by Robert B. Noland (Centre for Transport Studies, Dept. of Civil and Environmental Engineering, Imperial College of Science, Technology and Medicine) and Lewison L. Lem (US Environmental Protection Agency Office of Transportation and Air Quality). This study is entitled: “A REVIEW OF THE EVIDENCE FOR INDUCED TRAVEL AND CHANGES IN TRANSPORTATION AND ENVIRONMENTAL POLICY IN THE UNITED STATES AND THE UNITED KINGDOM” [see attached Noland_Lem_Induced_Demand.pdf]

Quoting from the Abstract:

This paper reviews recent research into the demand inducing effects of new transportation capacity. We begin with a discussion of the basic theoretical background and then review recent research both in the UK and the US. Results of this research show strong evidence that new transportation capacity induces increased travel, both due to short run effects and long run changes in land use development patterns.

The Abstracts also states: *The role of the new knowledge of induced travel effects would be expected to lead to changes in the conduct of transportation and environmental policy.*

Mr. Lem subsequently worked for the California Automobile Association, and currently is Principal Consultant with PB, well-known international planning and engineering firm.

Mr. Lem spoke in Portland on March 7, 2008 at the PSU Center for Transportation Studies “Transportation Seminars” series, cited above. In his presentation entitled

“Taming the Dragon: Reducing the Climate Impact of the Transportation System” he reiterated that technology alone will not solve the problem, and so reductions in VMT are necessary. In the question and answer period, he confirmed that expanding capacity to reduce congestion is not a good long-term strategy for reducing green house gases, because traffic volume will grow to fill the capacity.

Simulation studies also point to flaws in the simplistic “speed-emissions” methodology used in the Energy Technical Report. In a study entitled “INDUCED TRAVEL AND EMISSIONS FROM TRAFFIC FLOW IMPROVEMENT PROJECTS” [see attached Noland_Emissions_CongestionRelief.pdf] that was presented to the 82nd Annual Meeting of the Transportation Research Board, authors Noland and Stathopoulos conducted traffic simulations showing:

In the short-run, when traffic volumes are held constant, results demonstrate that the smoothing of traffic flow will result in a reduction in emissions.”

However,

Simulation of long-run emissions is done by synthetically generating new trips into the simulated networks in order to represent potential induced travel.

The result:

Our conclusions are that in most cases long run emissions reductions are unlikely to be achieved for the two scenarios evaluated.

Of course a simulation study is not definitive for proving an hypothesis. However, it does show beyond any doubt that it is improper to assume, ad hoc, that one may properly compute the energy use and emissions that result from improving traffic flow by a wrote computation based purely on vehicle characteristics, without taking human behavior into account. The energy use and CO2 emissions analysis found in the CRC DEIS have cited no credible scientific basis for the approach used. The analysis cites authoritative sources for numbers, values, quantities, and formulas, but these sources do not provide any scientific support for using the numbers and formulas in the way that the CRC DEIS does. For that reason, the DEIS is inadequate until supplemented by analysis grounded in science, not ad hoc calculations (however complex those calculations may appear to be, and however correct each individual calculation might be in some particular individual context).

Supplemental Bridge Alternatives as they relate to the downstream Railroad Bridge and Navigation

In the DEIS, Chapter 2 page 2-50 “Description of alternatives, further screening.” We see this claim:

A new low-level bridge would have required a moveable span to allow passage of large ships, similar to the lift span on the existing I-5 bridges. Operation of a moveable span would disrupt traffic, cause more accidents on the bridges, have a greater impact on navigation, be more expensive to construct, and cost substantially more to maintain and operate. A low-level bridge was dropped from further consideration once project staff determined that a mid-level fixed-span bridge could safely avoid height restrictions imposed by Pearson Field and still provide clearance for river users.

Unfortunately, the determination that a low-level bridge would have all of the problems described above, was unjustified when applied to a supplemental bridge. To sum up the CRC staff position, a low-level bridge has numerous disadvantages, and no cost advantage. The question of cost should have been separately determined for a low-level supplemental bridge. Instead, costs were computed for a low-level replacement bridge, found to be disadvantageous, and were used as an excuse for ruling out all low-level alternatives. Logic would suggest that a low-level supplemental bridge might well be cheaper than a high-level supplemental bridge, but we can't know, because the DEIS analysis is non-existent on this point.

Now consider the other claimed flaws of a low-level bridge: that operation of a moveable span would disrupt traffic, cause more accidents on the bridges, and have a greater impact on navigation than a high-level bridge. These can not be substantiated by an analysis that considers the possibility of moving the river channel south and modifying the BNSF railroad bridge.

By allowing consideration of a low-level supplemental bridge, the DEIS would have been enhanced by studying an alternative that better met the reasonable desire to examine reduced capital costs and reuse of the existing bridges. Furthermore, this would have better met the reasonable requests from Metro, cited above, that suggested modifying the railroad bridge.

The Columbia River Towboat Association made a presentation to JPACT at their January 15, 2004 meeting, requesting that modification to the Burlington Northern Santa Fe Railroad bridge be made a high priority in the Regional Transportation Plan.

Following are quotes from material that they provided to JPACT:

How would changing the rail bridge improve the situation at I-5?

If a lift opening were placed at the span just to the south of the current opening, it could be about 300 feet wide and could be approached from either the I-5 wide or high spans with relative ease. There would be no need for towboat captains to use the lifts during high water. At 72 feet (at zero gauge) the high span is high enough to accommodate any towboat under any possible river condition except very high flood levels, when there would be no river traffic anyway. Thus I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge. Source: CRTA to JPACT -- FAQ page 3 [see attached BNSF_FAQ.pdf]

A [railroad bridge] lift opening placed more toward the middle of the river would allow marine traffic to nearly always avoid using the I-5 lifts. Source: CRTA memo to JPACT page 2 [see attached BNSF_Summary.pdf]

The Coast Guard has the legal ability to order a rail bridge improvement for the benefit of marine safety, but declines to use highway benefits in making its cost/benefit analysis to justify such an order. Source: CRTA memo to JPACT page 4

However, Congress can declare on its own that the bridge is an unreasonable hazard to navigation, and it can direct the Coast Guard to apply Truman-Hobbs procedures. This has been done for other bridge projects. Thus the Coast Guard would conduct the engineering study, do the EIS, and contract the entire project from beginning to end. The Coast Guard's Truman-Hobbs director at headquarters has indicated that their Congressional liaison office will work with our Congressional representatives to properly craft the necessary legislation. Source: CRTA memo to JPACT page 4 [see attached BNSF_Summary.pdf]

The significant point is this, and bears repeating: *Thus I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge.*

Clearly any low-level supplemental bridge that followed the profile of the existing bridges would also require no lifts due to towboat traffic, if the rail bridge were modified. The DEIS itself reports that non-towboat lifts are minimal. If these occasional lifts were restricted to periods of low highway traffic and low or no transit traffic, their impact would be minimal, as opposed to the major impact suggested by the DEIS.

Failure of the DEIS to report on the possibility of modifying the railroad bridge, as an adjunct to a supplemental bridge, is a fatal flaw. We know that Metro, JPACT, and the I-5 Transportation and Trade Partnership all supported modification of the railroad bridge. It was also a component of the “4th Alternative Subcommittee” recommendation, yet was inexplicably deleted from that recommendation when the two supplemental alternatives were studied as options in the DEIS.

Modification to the railroad bridge is an obvious and reasonable component of a supplemental bridge. Failure to include it, and the failure to even mention or explain why it was not included, must be regarded as a serious and fatal defect in the DEIS.

Although Alternative 4 and Alternative 5 are arguably not the supplemental bridge options that should reasonably have been studied for the DEIS, they are the only supplemental bridge options that were studied. They should not have been fatally hobbled by refusal to consider modifications to the railroad bridge. By eliminating all bridge lifts due to towboat traffic, a whole category of safety, congestion, and traffic delay impacts would have been drastically reduced for these supplemental bridge alternatives. One can only further conclude that Alternatives 4 and 5 are sham alternatives, studied pro forma in response to Metro’s request, but never intended to be given serious consideration, and therefore burdened with unnecessary fatal flaws.

Conclusion:

The DEIS is defective and deficient, and must be withdrawn or supplemented by a DEIS that properly responds to law and common sense.

Stockholm congestion charging scheme to become permanent

The Swedish Government will reintroduce congestion charging in Stockholm from 1 August. The announcement, that a bill will be put before Parliament, makes good on a promise that Sweden's Alliance government made after it was elected last September that it would reintroduce congestion charging in Stockholm and use the money to build a relief road around the capital. Congestion charging in Stockholm and use the money to build a relief road around the capital. Congestion charging, which was introduced as a trial from January to July last year by the outgoing Social Democratic government, far exceeded the government's expectations of a 10-15 per cent reduction of cars entering and leaving the capital. The average reduction was up to 25 per cent. When the trial ended on 31 July last, traffic in and out of the Stockholm city centre shot back up to the pre-trial level of around half a million cars a day, according to official estimates.

Imtech acquires Peek Traffic Holdings

Imtech NV, a major player in the infrastructure market in The Netherlands and Belgium, has announced it is acquiring the entire share capital of Peek Traffic Holdings and its subsidiary companies held by the BNP Paribas Group and other investors. Peek Traffic enjoys a strong position in the rapidly growing mobility market across Western Europe (especially in the UK and The Netherlands) as well as parts of Eastern Europe with its broad range of intelligent traffic solutions.

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According to Imtech, the acquisition fits in with its strategy



TransScore
Milestones

[NOTE: ORIGINAL FORMATTING LOST WHEN COPIED FROM PDF IN CRC LIBRARY]

March 15, 2007

TO: Fourth Alternative Subcommittee

FROM: Kris Strickler

SUBJECT: **Fourth CRC DEIS Alternative**

Description of Potential Options

COPY:

The purpose of this memorandum is to provide CRC staff feedback on development of the three options

discussed at the initial March 12th committee meeting. Options were developed based on achieving the

following goals:

- a. Maximize the utility of the existing bridges
- b. Provide high capacity transit (HCT) between Clark and Multnomah counties
- c. Provide high quality bicycle and pedestrian access
- d. Minimize impacts on downtown Vancouver and Hayden Island
- e. Ensure better freight mobility
- f. Address issues of barge and ship traffic on the Columbia River

During the meeting there was additional discussion on other goals that needed to be addressed.

In

addition to the above, there was general agreement among the subcommittee that a fourth alternative

should be lower cost and use the existing infrastructure most effectively.

CRC staff has spent an intensive three days evaluating the proposed options for best performance to

meet the above goals. Please note that the descriptions and data below are based on the limited time

allowed and represent reasonableness estimates that are not based on detailed analysis. The information is organized as follows:

- Description of option with additional detail on modes
- Performance evaluation based on criteria used for Step A Screening
- CRC staff observations to help inform the selection process

OPTION A+ DESCRIPTION

This option places a strong emphasis on implementing congestion pricing as a disincentive to making

automobile trips across the Columbia River. No new capacity is added to I-5. Interchange

improvements

are intended to improve safety and system flow. Transit service is increased substantially to meet the

need to move people, not vehicles. This option will aspire to meet purpose and need by reducing travel

demand through aggressive congestion pricing and providing attractive alternatives to driving

alone by

improving transit service.

Highway

• I-5 traffic stays on existing Interstate Bridges. Peak hour directional capacity will remain in the range

of 5,500 vehicles per hour.

• Hayden Island Interchange will undergo minimum changes to the dangerous short ramp connections

because of the need to maintain existing profiles and alignments on I-5.

• Marine Drive Interchange will be modified to improve intersection performance.

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- SR 14 Interchange will remain as is due to limited opportunities for improving safety.
- Minor improvements may be feasible between SR 14 and Mill Plain.
- Spot safety improvements will be made such as widening shoulders in Oregon.
- Traffic system management tools will be incorporated to improve I-5 operations.

Transit

- This option includes a new river crossing bridge to serve HCT.
- HCT is increased to serve approximately 30,000 to 40,000 persons per day or 4,000 to 6,000 in the peak direction during the peak hour. This includes a new bridge dedicated for HCT.
- Depending on whether HCT is Light Rail or Bus Rapid Transit, service hours are increased to meet the demand in riders.
- Express bus service is increased from the existing 19 busses per peak hour to 60. Local and feeder bus are increased substantially.
- Park-and-ride lot capacity is increased from the existing 1,872 spaces in the I-5 corridor to approximately 10,000 to 15,000 spaces in the I-5 corridor.
- Van-pool programs are added to increase vehicle occupancy for point to point service.
- Transit queue bypass lanes are added at interchange on-ramps.

TDM/TSM

- Congestion pricing is included for both I-5 and I-205 with variable pricing to reflect peak hour demand. Pricing is focused on reducing vehicle trips by 15-20 percent. A pricing range of \$5 to \$10 each direction during peak periods may be needed to achieve this goal.
- Transit operating subsidies are provided to encourage increased transit service and use.
- Mandatory parking pricing for all businesses and major public facilities in Vancouver and Portland.
- Transportation system management tools are incorporated to improve I-5 system flow.

Freight Mobility

- Modifications to the Marine Drive Interchange will be made to improve truck flow through intersections.
- On-ramp queue by-pass lanes are provided at Hayden Island, Marine Drive, SR 14 and Mill Plain Interchanges to improve traffic flow. These lanes could be reserved for transit and trucks.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened to provide 10 feet wide bike/ped lanes on each bridge.
- Bike/ped connections are improved throughout the corridor to encourage bicycles and walking.

Seismic

- Seismic retrofit to “no-collapse” standards would be left up to the State DOT’s to implement as funding becomes available.

Railroad Swing Span

- A new railroad marine navigation moveable span will be constructed to align with the main river channel.

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OPTION A+ PERFORMANCE

Increase vehicle capacity or decrease vehicle demand on I-5

- Vehicle capacity on I-5 will not be increased under this option. Minor improvements in traffic flow within the Interchanges will benefit off-peak periods.
- Vehicle congestion will increase to 8-10 hours per day depending on the aggressiveness of pricing.
- A decrease in vehicle demand will be targeted at 15-20%. This is in line with the most aggressive programs currently in place worldwide.
- Increased people capacity will result from added transit service.
- Providing a movable span at mid-channel will reduce the number of bridge lifts and improve traffic flow that would normally be disrupted.

Improve transit performance

- I-5 would be the most transit-intensive corridor in the states of Washington and Oregon.
- Transit service throughout Clark County and the three county TriMet service area will be increased to improve connectivity and throughput.
- Increased transit service will impact system operation levels and may exceed capacity at spot locations throughout the system.
- Increased park-and-ride capacity will be difficult to achieve at the proposed levels due to lack of suitable sites along the I-5 corridor.
- A regionally approved vanpool program will provide more point-to-point service from park-and-ride facilities to major employment centers.

Improve freight mobility

- With no increase in freeway mainline capacity, freight throughput will be affected by freeway congestion for much of each day.
- Minor intersection improvements will aid truck movements, mainly during off peak periods.
- On-ramp queue by-pass lanes for trucks entering I-5 will help improve freight traffic flow.
- Providing a railroad movable span in mid channel will help barge traffic.

Improve safety and decrease vulnerability to incidents

- Congestion levels somewhat better than “No-Build” will result in increased accident rates compared to today.
- Spot improvements and wider shoulders will help offset the increased accident rates.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 River Crossing

- This option will not immediately address seismic risks. Seismic upgrade to a “no-collapse” level will be completed by the State DOTs when funding becomes available.

OPTION A+ CRC STAFF OBSERVATIONS

- To achieve a significant reduction in the projected hours of congestion for 2030, travel demand for

Option A+ would need to be reduced about 30% which far exceeds reductions in the 15-20% range achieved through congestion pricing programs currently underway in London, Singapore, Stockholm and Germany.

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- If little or no reconstruction is done on I-5, FHWA will require a rigorous process to approve variable pricing proposals for implementation on both I-5 and I-205 aimed at relieving congestion. Ultimately FHWA will have approval authority over congestion pricing strategies.
- Transit service increases proposed for Option A+ are more than double CRC staff recommendations for the DEIS. CRC staff recommendations proposed to triple current service capacity across the Columbia River. This service level would result in more than a 500% increase compared to existing.
- Although some safety improvements would be made, the highest accident locations would not be fully addressed because the deficiencies are located on the bridge, immediately off the bridge, and some are connected with bridge lifts.
- If Option A+ is selected as the locally preferred alternative (LPA) it is unlikely that either ODOT or WSDOT would continue funding work on the project. Identified Interstate improvements would be prioritized, funded and built along with other highly needed improvements in each state.

FREQUENTLY ASKED QUESTIONS

About the Vancouver Rail Bridge Project

Prepared for JPACT meeting 1/15/04

by

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Chair, Bridge Committee, Columbia River Towboat Association

Co-Chair, Ad Hoc Committee for the Vancouver Rail Bridge Upgrade Project

1. How many lifts are called for at the I-5 bridge?

That depends entirely on the river levels. In low water years, when the river level does not rise above 6 feet at the Vancouver gauge, we may have very few lifts requested by towboat operators. But in some years, the river may be above 6 feet for six or seven months. The ten-year average is about 275 annual lifts at I-5. But in 1997, a high water year, there were over 100 lifts per month for seven months straight, most of them called by towboat captains. Similarly, 1996 had six straight months with over 100 lifts per month. Washington DOT predicts that the average annual number of lifts will increase to about 400 in 2021.

In the winter up to 90% of lifts may be called by towboat captains, while in the summer perhaps as few as 60%. Whether recreational vessels would be able to use the high span to the same extent as commercial tows may depend on mast heights. But certainly the I-5 lifts could not be immediately disabled upon construction of a rail bridge lift, for a small percentage of vessels would continue to require the use of the 175-foot high I-5 lifts.

2. Why is no one complaining about traffic delays on I-5 caused by lifts?

We have had three straight low-water years, and consequently very few lifts. But after the high water years of 1996 and 1997, there was a great deal of public outcry about the lifts. Identity Clark County (ICC) and others appealed for further restrictions on the times the towboat captains could call for lifts, and in fact, the Coast Guard was compelled to look at the issue very closely, holding several public hearings on the matter. The Columbia River Towboat Association was pressured by Washington's Senator Gorton to negotiate a settlement of the issue with ICC, the Coast Guard and ODOT, participating. In the end, we agreed to increase the lift restriction period by an additional 1 & 1/2 hours.

After the agreement was made, we entered the current period of low water years, where few lifts have been requested. Naturally, some people assume that because of the outcry, the towboat industry has reformed itself, no longer requesting unnecessary lifts. Even ICC officials have occasionally complimented the industry on its admirable restraint.

But this is certainly not the case. As soon as the river again reaches 6 feet, captains will be calling for lifts. This year's mountain snow pack would lead to a reasonable conjecture that we will again see lifts in 2004.

And of course, I-5 traffic has gotten worse in the last few years, and the outcry will again be noisy when the lifts begin stopping traffic. Both ODOT and WSDOT have indicated that they will again seek further lift restrictions from the Coast Guard when the pressure rises.

3. Why does increasing the I-5 lift restriction time make navigation more dangerous?

When the river level is over 6 feet, downbound captains are no longer able to safely use the wide or high spans of I-5 and must use the lifts. If they are unavailable, captains must schedule the arrival time to coincide with non-restricted hours (sometimes by holding the tow upriver). As the opening time becomes more restricted, more tows must schedule their arrivals at the daytime hours of opening, which thus become more crowded with towboat traffic, or at night, when the rail bridge transit is even more hazardous.

And of course, with added opening restrictions, there is increased pressure on captains to avoid the lifts by attempting the maneuver through the wide or high spans. The cautious captain might choose to wait, but the close calls, the difficult decisions will always arise. Much depends on the captain's judgment of the situation. Considering the complexity of factors involved, an error is perhaps inevitable if the conditions are not improved.

4. If the rail bridge is so hazardous, why haven't there been more accidents?

Although Columbia/Snake river towboat captains appear to agree that this is the most dangerous man-made hazard on the river, very few of them have actually had a significant accident at the bridge. It is of course relevant that all captains are very much aware of the dangers. Before navigating between the I-5 and rail bridges, the captains will have thought out the route before making the approach, and will have considered the variables, from weather conditions to river levels, speed and likely currents that will be encountered. Partly this is because he knows it can be treacherous, partly because he must arrange in advance both openings and will thus be alert to the current situation. He will not attempt the downbound approach through I-5 without making sure the rail bridge is open, even if he can avoid using the I-5 lifts.

To say that captains are highly skilled and careful operators may certainly be an accurate assessment. However, these same captains have all had harrowing close calls at the bridge and assert in written and oral testimony that a major accident is inevitable unless the rail bridge opening is changed. Partly this belief is based on the fact that I-5 lifts are now less available (and may even be less so in the future), so he must make harder decisions about how to make the transit. Should the high span be attempted when the river is at six feet, or should he play it safe and wait several hours for lifts to again be available?

Some have expressed the view that the “old guard” is retiring, and a new crop of untested captains must learn the ropes at a time when the region is going through an extended period of low water years, so there will be a steep learning curve when river levels return to historic conditions.

5. What would be the effect of an accident on rail traffic?

Since the local Coast Guard and river operators all agree that a major accident is just a matter of time unless changes are made, we should note the likely effects. If the rail bridge were put out of commission, resulting delays along the west coast would take weeks and months to unsnarl. Rail traffic would be diverted to Eastern Washington, to Eastern Oregon (the closest crossing is at Wishram) and back through the Columbia Gorge. The cost to Burlington Northern and Union Pacific would be about \$156,000 a day (taken from Congressman Blumenauer’s testimony at the Truman-Hobbs hearing). West Coast Amtrak service would simply stop. River traffic would stop. If the cargo involved in the accident happened to include petroleum products or hazardous materials, the ecological effects could be catastrophic.

6. How would changing the rail bridge improve the situation at I-5?

If a lift opening were placed at the span just to the south of the current opening, it could be about 300 feet wide and could be approached from either the I-5 wide or high spans with relative ease. There would be no need for towboat captains to use the lifts during high water. At 72 feet (at zero gauge) the high span is high enough to accommodate any towboat under nearly any possible river condition except very high flood levels, when there would be no river traffic anyway. Thus, I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge.

7. How much cargo moves on this stretch of the river?

The ten-year average for cargo moved in barges through the two bridges is about 10 million tons per year. The estimated value for the cargo (mainly grain, wood products, containerized agricultural products, petroleum and other bulk commodities) likely approaches \$2 billion.

8. Is there a bottleneck for marine traffic at the bridge?

Current barge traffic stack-ups result from two major causes: 1) When the river level is above six feet, downbound tows can collect at Ryan point to await their turn to use the I-5 lifts; and 2) When the rail bridge is occupied by train traffic, tows must also wait for the rail bridge to clear, although river traffic has theoretical priority.

Because of the constricted and dangerous nature of the downbound approach to the rail bridge, only one tow at a time can approach the two-bridge intersection at a time, and both the I-5 lift and the rail swing span must be in the open position before a captain can commence the

downbound approach. All this can take some time to coordinate, and the effect on freight mobility can be significant for all three modes. Obviously, when a barge queue develops, the result on highway and train traffic is to create two more bottlenecks for these modes as the barge tows navigate one by one through the bridges. As river, highway and train traffic increases, these bottleneck effects will only worsen.

A modification in the rail bridge will have positive impacts on all three modes, for it will allow quicker barge transits, shorter rail bridge openings, and far fewer I-5 lifts. The cascading bottleneck that is now developing at the intersection would be nearly eliminated, certainly for marine and highway traffic, and it would be greatly lessened for train traffic as well.

9. Why did the Coast Guard rule against Truman-Hobbs funding?

The Coast Guard's Eighth District, which is headquartered in St. Louis, was asked to do the study and conduct the hearing because of its extensive experience in handling Truman-Hobbs matters. After holding the hearing and considering the facts, it strongly recommended that action be taken to fix the problem. It flatly declared in its report that in its opinion the Vancouver Rail Bridge is an unreasonable obstruction to navigation.

However, when the case got to Headquarters in Washington, D.C., there were other factors to be considered. Namely, the cost/benefit analysis showed that unless the benefits from reducing I-5 lifts and avoiding a hypothetical future accident were factored into the equation, the \$42 million cost of modifying the bridge was not justified by the other benefits to navigation. And it found that the regulations did not provide the flexibility to look at those benefits, particularly the benefits to highway traffic on a nearby bridge, a bridge that was not even under Truman-Hobbs consideration for modification.

We subsequently learned that the Truman-Hobbs program is currently starved for funds, and that nationally it handles about one bridge per year. Had the Vancouver rail bridge been approved for Truman-Hobbs funding, the project would have been put in a queue with a long list of other approved projects, waiting for appropriations.

10. Why is the Coast Guard now willing to undertake the project?

Even after ruling against Truman-Hobbs funding, the Coast Guard's Washington D.C. Headquarters has expressed an interest in managing the project. If funding can be assured without reducing the dollars available for approved projects, the Truman-Hobbs managers at Headquarters would be willing to undertake and complete the project. It is our opinion, based on many conversations with Coast Guard officials, that while the Coast Guard views this project as important to navigational safety, Coast Guard officials also see that its importance to regional multi-modal freight transportation, including I-5 freight mobility, is also a very significant factor and should be considered when deciding the funding issues,

The local Coast Guard Commander, after calling the rail bridge opening “an anachronism from another era without the nostalgia of that era” that represents the greatest man-made navigational challenge to river traffic, stated at the hearing that “to put it simply, the proposal represents an unusual win-win-win-win situation for three modes of transportation and for reduced risk of casualties and environmental harm... and will simplify the planning and construction of future regional transportation links by rail and highway across the Columbia River.” (Truman-Hobbs testimony, March 5, 2002)

The Eighth District agreed with the local Commander and recommended that the project go forward, and also pointed out the benefits to the other modes of transportation. On this latter point rests the hope expressed by so many in the Coast Guard after the failure at Headquarters. The project is important to the region, to multi-modal and intermodal traffic, and even to the rail system. If the region pulls together and recognizes the far-reaching positive impacts of the project, funding will be found. If Truman-Hobbs cannot use the benefits to I-5 traffic in its cost-benefit analysis, the region and its Congressional delegations are certainly able to do so. Authorizing this multi-modal transportation project under TEA-21 makes a great deal of sense, and with proper legislation the Coast Guard will be able to use the mechanisms of Truman-Hobbs to fully manage and complete the project.

11. Why should the project not be considered a rail project?

It is perhaps unfortunate, and certainly misleading, that the I-5 Trade and Transportation Partnership categorized the project as a rail project. Obviously, in a sense it is a rail project, since it involves the rail bridge. But other than the rather large benefit of reducing the likelihood that the rail bridge itself will be hit by a barge tow, the economic benefits derive mainly from a modernized opening. Theoretically, a new lift can be operated with greater speed than the old swing span. But BNSF has put a great deal of money into making sure the old swing span can continue to operate for years into the future. It has expressed little interest in building a new lift. The capital costs would hardly justify such a project in the near future merely on the basis that a new opening could be faster.

It is clear that the justification for the project comes primarily from its effects on maritime safety and its benefits to I-5 traffic. This is not a rail project, and to so classify it induces a kind of torpor, an inclination to wait for the railroads to weigh in on the need for it.

There was some concern expressed at the Truman-Hobbs hearing that the rail bridge ought to be upgraded to accommodate increasing rail traffic, and that perhaps the upgrade could be done at the same time as the safety modification. We believe that this is an independent issue and ought to be decided on its own merits rather than be tied to the critical issue of navigation safety; certainly it should not be used to impede the decision to improve the opening. A new lift could easily be configured to accommodate a third rail if necessary.

12. Why not wait for planning on the new highway crossing to be done?

With the I-5 Trade and Transportation Partnership calling for a new Columbia River crossing, shouldn't the planning be done before we undertake a change at the rail bridge? The new crossing, by the most optimistic forecasts, is a good number of years away, and planning will take considerable time. But that's not the main point. If we go ahead now with the rail bridge project, we open up possibilities for the I-5 planners, and we get immediate benefits for I-5 traffic and freight mobility.

By moving the rail opening to the south, we can eliminate the need to have a high span at the north end of any new I-5 bridge. This is because river traffic will no longer have to line up on the north side of the river to get through the rail bridge. The new bridge can be designed with its high spans nearer the middle of the river, lining up with the new lift at the rail bridge, also nearer the middle of the river.

Thus the new highway bridge could be planned without lifts and without a high span at the north end. This will certainly facilitate access to the street system at Vancouver USA, and will allow more efficient use of the current freeway infrastructure north of the river. A modification of the rail bridge accomplished early in the planning process for the I-5 crossing would thus facilitate that effort, reduce the projected costs of the new crossing, and at the same time ease the congestion currently forecast by WSDOT and ODOT on the existing bridge.

13. How much would the project cost?

The Coast Guard estimated for purposes of the Truman-Hobbs study that the cost would be about \$42 million. This figure includes the costs of the engineering and environmental impact studies and contemplates that the entire project would be managed by the Coast Guard itself. It is frankly an estimate, and it may be high. It was based partly on an unrelated study conducted by HDR Engineering for SW Washington RTC for adding a third track to the bridge, and was considered relevant because it also contemplated removing the swing span and adding a lift.

Summary of the Vancouver BNSF Rail Bridge Project

From: Ad-Hoc Steering Committee for the Vancouver Rail Bridge Upgrade Project:

Co-Chair Jerry Grossnickle
Chair, Bridge Committee
Columbia River Towboat
Association (CRTA)
Phone: 503-289-3046

Co-Chair Ginger Metcalf
Executive Director
Identity Clark County
Phone: 360-695-4116

To: JPACT
January 15, 2004 Meeting

The Request

We are asking JPACT that the Vancouver Rail Bridge Project be included as a high priority of the Regional Transportation Plan.

The Project

The project is to replace the existing "swing span" with a "lift span" and place it closer to the middle of the river.

The Problem

- 1. Opening Too Narrow.** The current opening is too narrow. At less than 200 feet wide, it was built (in 1908) to handle much smaller paddlewheel-type freight vessels; today's tows are often over 600 feet long and over 80 feet wide. It there is current, wind or fog, passage can be very difficult and dangerous. Because of the way the bridge opens, with the swing span turning parallel to the navigation channel, the opening is analogous to a tunnel, forcing tows to line up and head straight through, without any significant ability to slide through to compensate for wind or current. This requires considerable forward momentum in order to maintain course, which only adds to the danger of a catastrophe in the event of a miscalculation.
- 2. I-5 Bridge Problems.** The navigational difficulties for downbound tows are compounded by the nearby I-5 bridge. The distance between the bridges is barely adequate to allow the difficult maneuvers required to safely negotiate the bridge openings. Although the rail bridge opening is reasonably well lined up with the I-5 lifts (both are near the Washington shore), captains do not call for these lifts when they can be avoided, nor are they allowed to use them during the peak traffic periods of morning and evening "rush hour" (6:30-9 AM and 2:30-6PM). So they usually navigate under the I-5 bridges' higher spans toward the middle of the river, which require tows to make a difficult "S" turn to line up with the narrow rail bridge opening. This maneuver

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becomes more dangerous as river levels rise and currents increase. When the river reaches 6 feet at the Vancouver gauge, the maneuver (through the high span) becomes too dangerous, and captains use the I-5 lifts. In years of high run-off, the river can remain above 6 feet for 6 or 7 months at a time.

3. **Increasing Danger.** The dangers to tug & barge tows from a miscalculated maneuver are obvious and immediate, with the possibilities for loss of life and property a constant consideration for towboat captains. With increasing I-5 traffic, there has been increased pressure on captains to avoid using the lifts, and in 1999 the Coast Guard extended the length of rush-hour closures of the lifts. Thus the danger of a miscalculation has steadily increased. If a tow were to hit and disable the rail bridge (the closest alternative is east of The Dalles, at Wishram), the cost to the regional economy would be enormous.

The Benefits of a Relocated Lift Span

1. **Safer Navigation.** If a rail bridge lift span is placed nearer the middle of the river, towboat captains will be able to use the higher spans of the I-5 without making the dangerous "S" turns to line up with the opening. The lift span would be about 300 feet wide if it were placed on current pier structures, making it a much safer opening for marine traffic, and of course, the "tunnel" effect would be eliminated.
2. **Faster Opening.** A lift opening could be made considerably faster than the present swing opening, resulting in less disruption to rail traffic.
3. **Significant I-5 Traffic Benefits.** A lift opening placed more toward the middle of the river would allow marine traffic to nearly always avoid using the I-5 lifts. Of course, each time a captain calls for an I-5 bridge lift, all I-5 traffic comes to a dead halt to wait for the tow to pass through. It is precisely analogous to a rail crossing on the freeway. Nowhere else in the country has such a lift been allowed to remain on the interstate highway system. WSDOT calculated that the current average annual cost of lifts in I-5 traffic delay is about \$0.8 million and will steadily increase to a projected annual cost of \$12 million by 2021. Currently a lift causes about 20 minutes in midday traffic delay, but by 2021 the midday delay is estimated to exceed 90 minutes. Compounding the problem is that the current rush hours, with very slow, full capacity traffic, will grow to include the entire mid-day period. Thus lifts will cause greater disruptions to traffic and freight mobility.

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4. **Part of Existing Plan.** The project is part of an existing regional plan for improving I-5 freight and traffic mobility, for it is included in the Final Recommendations of the I-5 Trade and Transportation Partnership Strategic Plan. Although the Partnership study focused on the highway traffic problems of the I-5 corridor, it concluded that a modification of the rail bridge would have important positive impacts on traffic and freight mobility within the I-5 corridor.
5. **Planning for New I-5 Bridge.** The proposal would permit planners of a new I-5 crossing much greater flexibility, for the lifts at the north end of the bridge could be eliminated. This would result in lower construction costs and would eliminate a large annual budget currently allocated to lift operations and maintenance. Removal of the lift towers would also increase safety for aircraft using the nearby Pearson airfield.

Cost

Truman-Hobbs officials assumed the project would cost about \$42 million. This assumption was based on an unrelated study by SW Washington RTC for adding a third track to the bridge, and was considered relevant because it also contemplated adding a lift. However, the figure must be considered an educated guess, rather than resulting from an actual cost analysis.

Funding Considerations

1. **Truman-Hobbs.** The CRTA initiated a "Truman-Hobbs" proceeding in 1999 to have the Coast Guard declare the rail bridge an "unreasonable hazard to navigation," thereby making it eligible for a federally funded modification under the Truman-Hobbs Act. After convening a hearing in Portland (March 2002), where testimony was taken from towboat captains and a wide variety of river interests, the District (Eighth Coast Guard District, located in St. Louis) recommended that the rail bridge be modified. But then in early 2003, Coast Guard Headquarters overruled the District, on the grounds that the project did not after all meet the cost/benefit requirements of its regulations, partly because the bridge has not been hit often enough, and partly because the benefits to I-5 traffic could not be considered. Headquarters also declined to consider the increasing danger of future accidents (which are inevitable, according to towboat captains' testimony) because of I-5 lift restrictions. Nor did Headquarters consider the massive disruption to freight movement that is likely to result from a major incident at the bridge, or the national security implications of such a disruption.

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2. **Falling Through the Cracks - The Funding Conundrum.** The rail bridge project is truly multi-modal. It has significant benefits for marine safety as well as for highway traffic and freight mobility, and it also provides some benefits to rail from a faster opening. But with the failure of Truman-Hobbs, there appears to be no single agency, federal or state, with the ability to take on the project and provide the funding. The bridge is private property, after all, and is not within the traditional jurisdiction of any highway department (even though they are now called transportation departments), and although the railroad owner is subject to the oversight of the Federal Railroad Administration, the FRA has no legal ability to order a rail improvement for the primary benefit of marine and highway traffic. The Coast Guard has the legal ability to order a rail bridge improvement for the benefit of marine safety, but declines to use highway benefits in making its cost/benefit analysis to justify such an order.
3. **The Solution – Congressionally Mandated Truman-Hobbs.** However, Congress can declare on its own that the bridge is an unreasonable hazard to navigation, and it can direct the Coast Guard to apply Truman-Hobbs procedures. This has been done for other bridge projects. Thus, the Coast Guard would conduct the engineering study, do the EIS, and contract the entire project from beginning to end. The Coast Guard's Truman-Hobbs director at headquarters has indicated that their Congressional liaison office will work with our Congressional representatives to properly craft the necessary legislation. However, considering the benefits to I-5 traffic (as well as benefits to Amtrak and other federally supported rail projects from the new lift), funding would come from sources other than Truman-Hobbs, for which it technically does not qualify and which currently lacks sufficient funding in any event.
4. **Authorization under TEA-21.** Since the project could very well be characterized as providing a solution to a transportation safety and mobility problem at a nationally significant multi-modal crossing on a major freight corridor, we intend to seek federal highway trust funding, and we will target bridge discretionary and other funding as part of a funding package. To achieve authorization under SAFETEA, we seek the support of the various transportation committees in both states, particularly JPACT, for inclusion within the Regional Transportation Plan system as a high priority, while recognizing that funding for the project may come from sources not used to forecast the financially constrained Regional Transportation Plan.

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Project Support

In addition to support from the maritime community (CRTA, Columbia River Pilots, Port of Vancouver, Port of Portland, Pacific Northwest Waterways Association) and the Vancouver business community (Identity Clark County), the project received official support at the Truman-Hobbs hearing from the following:

Senators Patty Murray, Maria Cantwell, Gordon Smith and Ron Wyden
Representatives Brian Baird, Earl Blumenauer, Peter Defazio, Darlene Hooley, Greg Walden and David Wu

WSDOT, ODOT, City of Portland, Metro

We expect support from these and others in our effort to seek funding for the project under a modified Truman-Hobbs approach, and have begun discussions with Congressional staffs about crafting the appropriate legislation.



METRO

October 19, 2006

Mr. Hal Dengerink, Co-Chair
 Mr. Henry Hewitt, Co-Chair
 Columbia River Crossing Task Force
 700 Washington Street, Suite 300
 Vancouver, WA 98660

Dear Co-Chairs Dengerink & Hewitt:

The members of the Metro Council greatly appreciate the briefing about the Columbia River Crossing Project provided by the project staff at our work session on October 3. We are also grateful for the time, energy and dedication devoted to this important issue by both the project technical team and the members of the Task Force.

Any improvements on the Oregon side will ultimately need to be approved by the Metro Council, after careful consideration of public testimony, before proceeding. Accordingly, the Council concluded that it would be helpful to you if we were to present our perspectives on this project sooner rather than later. Of course, individual Councilors may have additional comments, but we all concur with the following recommendations.

Recognize the I-5 Transportation and Trade Partnership Strategic Plan

In 2002, all of the stakeholders in this effort, from both sides of the Columbia River, agreed with the following five principles:

- The Interstate 5 crossing of the Columbia River should be a maximum of five lanes in each direction (three through lanes and two auxiliary lanes), for a total of ten lanes to accommodate additional auto and truck travel. These lanes could be a combination of freeway, arterial and managed lanes.
- Light rail transit is an integral element of travel in this corridor, including service into Clark County. Premium express bus service in the I-5 and I-205 corridors should be provided to markets not well served by light rail.
- Jurisdictions in the Corridor will develop and agree on a plan to manage land use and development in order to avoid adversely impacting I-5 or the region's growth management plans. Land use changes could dramatically affect commuter patterns and future demands on the interstate highway system.

- Commitment to a comprehensive use of innovative measures such as Transportation Demand Management /Transportation System Management strategies.
- Establishment of an environmental justice program that addresses potential impacts.

While conditions and circumstances have changed somewhat since 2002 and we are not opposed to looking at additional information and ideas, we believe that in the absence of compelling data to the contrary, these principles provide balanced guidance for the project. In addition to the above principles, we recommend the following actions.

Use desired outcomes as a guide

The CRC has ably documented the transportation problems in the bridge influence area. However, we believe that the project would greatly benefit from clear definition and prioritization of desired outcomes. These desired outcomes should represent the common goals that all of us share in our region and should include actions that will enable us to achieve these joint goals. This approach will help the project avoid unintended consequences, and will ensure appropriate and realistic consideration of the geographic scope of the project's potential impacts.

As you know, the Metro Council has initiated an update to our Regional Transportation Plan (RTP). This RTP update represents a significant change in approach. The Council is developing policies that make it explicit that the transportation system is a means to achieving certain outcomes, including our regional land use plan. For example, level of service standards for identifying problems and designing solutions are rough methods that can be greatly improved and much better aligned with Council policies by creating new and better performance standards. We will need to work closely with you as your project proceeds and as the RTP policies are developed to ensure that your proposals are consistent with our new policies.

In addition, the Metro Council suggests the following desired outcomes for the Columbia River Crossing:

- Expand multi-modal choices for our citizens.
- Create a dazzling waterfront and gateway for both sides of the River. This includes actions that the Metro area could take to support the City of Vancouver's efforts to preserve and enhance their downtown.
- Improve the reliability of the transportation system for the freight industry.
- Maintain and improve air quality in the corridor.
- Explore how land use changes could help address the problem

One of the great challenges of transportation planning is that it is inextricably bound to land use. Transportation access greatly shapes land use and vice-versa. We believe that we cannot look at transportation solutions without considering land use. On both sides of the Columbia River, local jurisdictions have created land use plans that they hope to achieve. All transportation

solutions will play some role in either helping or hindering these plans. It is critical to coordinate land use and transportation.

Accordingly, we recommend that all transportation alternatives be evaluated for their land use implications. Obviously, added lanes of traffic, varying levels of transit, etc., and their impact on travel time and access will have an influence on settlement patterns and development. These implications need to be very carefully studied.

Determine project priorities

Your problem statement includes a great many challenges, not all of which are of equal weight. We recommend that you consider each problem element and related goal and determine how important it is compared with the others. In this way you will help communicate what the project is trying to accomplish and help understand why one approach may be favored compared with any other.

Recognize financial limitations

As you know, in a bit more than a year the Highway Trust Fund will be depleted. Resolution of this grave problem is critical, but a solution has not yet been found. In addition, maintenance and system preservation are taking ever-greater resources. Accordingly, we believe that transportation solutions must take into consideration cost, feasibility, and the place any one project may have in the overall transportation improvement picture. We must consider that there is an overall regional transportation budget that will not be able to fund every transportation need. Accordingly, we would be concerned that if a very costly project (initial capital costs as well as ongoing maintenance and preservation costs) were financed with revenues other than toll revenues, this could displace all other projects or greatly reduce the number of other projects because of limited funding resources. The Metro Council will be fiscally responsible when considering all public investments. Project cost and a comparison with the other projects proposed within the same time horizon will need to be considered.

Coordinate with the railroad bridge

As we noted with project staff on October 3, the marine navigation challenge of the Interstate 5 bridges is related to the downstream railroad bridge. We recognize that the CRC project is taking this issue into consideration, but believe that options that involve even greater coordination, including possible improvements to the railroad bridge, should be further explored. We understand that the railroad bridge is privately owned. However, we believe that the railroad system, including this bridge, performs a public function, and the freight carried on it is part of a larger system that needs to be considered. Further, if a CRC alternative further restricts barge turning movements, mitigation in the form of alterations to the railroad bridge may be warranted.

Provide alternatives in the DEIS that demonstrate the fundamental choices before us

We believe a wider range of alternatives must be studied in order to find the solutions that deliver the best results at the lowest costs. In addition, we believe that alternatives should be considered in the draft environmental impact statement that include both capital intensive and alternative approaches – unless it is clearly demonstrated during the current phase of analysis that such approaches are not viable.

Non-transportation solutions may be effective in concert with transportation improvements. It is important to demonstrate to the public that we are making every effort to solve problems in new ways and that we are good stewards of limited public resources. This will take extra effort and may lead to some solutions that ultimately may not be workable. But there is the chance that new innovative solutions could be created and we should not avoid some level of prudent risk in finding new answers to old problems.

Further, we believe that, in the absence of compelling information to the contrary, alternatives included in the environmental impact statement should include:

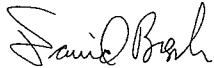
- 1) an alternative that reuses the present bridges;
- 2) an alternative that has a maximum of ten lanes (a combination of freeway, arterial and managed lanes).

Provide thorough public vetting before closing options

We recognize that in order to manage the project effectively, some options will need to be removed from consideration. However, before options are taken off the table, we believe that ample opportunity should be provided for community discussion and debate.

Again, we very much appreciate the work and dedication of the CRC technical team and Task Force members. It is our hope that by sharing our perspectives we can, working with all of the stakeholders, help create an effective and lasting solution to the complex challenges of the Columbia River Crossing.

Sincerely,



David Bragdon, President



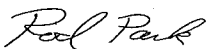
Rex Burkholder, Councilor



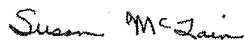
Carl Hosticka, Councilor



Brian Newman, Councilor



Rod Park, Councilor



Susan McLain, Councilor



Robert Liberty, Councilor

cc: Doug Ficco, Co-Director, WSDOT
John Osborne, Co-Director, ODOT

Columbia River bridge plans ignore effects of growth, Designers decide not to factor in the extra sprawl, leading to traffic and pollution, that a bigger I-5 span might bring

Sunday, June 22, 2008

DYLAN RIVERA

The Oregonian Staff

In planning a new, higher-capacity I-5 bridge over the Columbia River, the Oregon and Washington transportation departments ignored the potential for growth in North Portland and southwest Washington that could bring about yet more traffic and pollution.

The Columbia River Crossing, as the bridge project is known, is designed to relieve congestion on the six-lane bridge that now frustrates Oregonians, commuters from Vancouver, and round-the-clock truckers struggling to keep their schedules.

But a paradox lies ahead: If a bigger bridge with more lanes is built, will it create demand for housing and jobs, and yet more congestion? And will the boosted congestion spew more greenhouse gas?

Transportation authorities say it could.

The Oregonian has learned that traffic forecasters involved in planning a new bridge, projected to cost \$4.2 billion, were told to assume a new 12-lane bridge would not trigger any more growth than if the current bridge were simply left in place. Yet a 12-lane bridge would handle 40 percent more cars during afternoon rush hour, according to the forecasters' calculations.

Ignored is a finding by regional planners, in 2001, that eliminating the bridge's bottleneck threatened to push job and housing growth away from other parts of the metropolitan area and concentrate them in North Portland and across the river, in a rapidly expanding Clark County.

That might or might not be a good thing. But it is absent from decision-making on a project that could, according to several planning experts, influence growth and quality of life in a region that prides itself on avoiding sprawl.

The bridge plan isn't decided yet. A vote Tuesday by a 39-member bistate panel will establish the preferred bridge solution from among five alternatives. In coming weeks, the Portland and Vancouver city councils and other local agencies will follow with their own votes. But leading among the alternatives is a new, 12-lane toll bridge with a light-rail line attached.

In that scenario, it is likely that congestion and pollution will be higher than bridge planners have forecast. And the higher-capacity bridge could move the I-5 bottleneck southward, closer to central Portland, where the freeway is chronically congested.

Here's how we got here:

Designers decide not to factor in the extra sprawl, leading to traffic and pollution, that a bigger I-5 span might bring

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In making their designs, bridge planners had assistance from specialists with the Metro regional government. Though Metro is nationally known for using sophisticated computer tools to study sprawl and the role of highways in it, Metro's modeling staff heeded requests by Columbia River Crossing staff to assume that all bridge solutions would have no influence on development patterns in North Portland and southwest Washington.

They did so, according to Metro's chief traffic forecaster, to be free of the complex forces driving growth as they designed the five bridge scenarios.

"Essentially that was a simplifying assumption to assess what the difference might be between the infrastructure changes," said Richard Walker, travel forecasting manager for Metro.

Metro Councilor Rex Burkholder, who represents North and Northeast Portland, defended the approach, saying it would allow a better comparison among the bridge alternatives.

"If you let land use change as part of that, then you're not going to be able to compare those alternatives on a fair basis," Burkholder said.

But simplifying assumptions are "exactly what modeling is not supposed to do," said Todd Litman, of the Victoria Transport Policy Institute in Canada, also cited in Columbia River Crossing's own environmental impact statement. "Modeling allows you to do more detailed, case-appropriate analysis."

Other experts agreed.

Not taking growth into account is "flat out wrong," said Reid Ewing, a research professor at the National Center for Smart Growth at the University of Maryland, also a recent guest speaker and adviser to Metro on global warming issues.

Widening a highway on the northern part of the metro area would make it easier for residents to commute to downtown Portland from there than from other directions, Ewing said. So they're more likely to move there, which fills the expanded highway with more traffic.

"People can drive from subdivisions that are miles away from the facility and then to other employment sites or destinations," Ewing said. "Ripple effects go out quite a distance from the facilities themselves. Five miles would be a timid estimate of how far out those effects are."

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Designers decide not to factor in the extra sprawl, leading to traffic and pollution, that a bigger I-5 span might bring

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Burkholder stands his ground. Tolls on the bridge would limit potential growth in the corridor, Burkholder said. And land-use regulations that limit sprawl can compensate for the easier travel a new bridge will allow, he said.

"Nothing we do transportationwise will solve our land-use problems," he said. "It takes political will to make it function."

Burkholder also said agency planners told him that a new bridge would boost growth in outer Clark County and also in downtown Vancouver, a scenario that Vancouver and Oregon leaders promote as an antidote to sprawl.

Yet when it comes to fighting sprawl with land-use rules, Burkholder said, Washington state is "10 years behind" Portland's Metro, but improving.

Change the traffic and growth assumptions, and the project's air quality assumptions should also change, Ewing said. That's because more traffic will add to pollution and greenhouse gas emissions, he said -- despite Columbia River Crossing's claims that newer vehicles running at higher speeds, even in greater number, would produce less.

The 2001 report on the I-5 corridor, issued by a panel of Oregon and Washington representatives, warned that widening the highway and adding light rail could increase demand for housing in Clark County at the expense of other parts of the region.

"Additional housing demand will increase the political pressure to disproportionately expand the Clark County urban growth area along the I-5 corridor to the north," the report says. "The greater the travel time savings relative to other corridors, the larger the redistribution."

And it examines the relationship of other traffic problems in the region to I-5: If Oregon 217 in Beaverton is not widened and the Sunrise Corridor in Clackamas County isn't built, "then the effect of the capacity increases in the I-5 corridor would be greater," the report states.

The warnings are found in the Findings and Policy Recommendations report of the land-use committee of the Portland/Vancouver I-5 Transportation and Trade Partnership.

The Oregonian sought a copy of the report from the Metro regional government but was told by a Metro spokesperson the report "did not exist," and, later, that only a two-page summary existed.

The Oregonian obtained the full report from Columbia River Crossing staff.

Growth implications of the project can be consequential.

In cases from Chicago to Vermont, environmental groups have obtained federal court orders that required highway planners to redo their traffic forecasts to account for induced development, Ewing said. Such litigation and new study can cause years of delay.

Dylan Rivera: 503-221-8532; dylanrivera@news.oregonian.com

Douglas R. Allen
734 SE 47th Ave.
Portland, OR 97215
June 29, 2008

Columbia River Crossing
c/o Heather Gundersen
700 Washington Street, Suite 300
Vancouver, WA 98660

Comments on Columbia River Crossing DEIS

Dear Ms. Gundersen:

Here are my comments on the Draft Environmental Impact Statement prepared for the Columbia River Crossing. These comments consist of this document plus attached supplementary and supportive material.

Five Categories of Defects:

1. The project “purpose and need” statement is defective. As a result, the range of alternatives that were developed is inadequate and misdirected, because the range was based on that statement.

The “purpose and need” statement declares: “Daily traffic demand over the I-5 crossing is projected to increase by 40 percent during the next 20 years, with stop-and-go conditions increasing to at least 10 to 12 hours each day if no improvements are made.”

This is not a statement of an objective existing condition or need, but instead defines a future hypothetical problem. If the likelihood of this future problem could be objectively determined, it would be reasonable to regard it as a legitimate “need.” However, a future problem that is not based on any scientifically solid methodology, or even a methodology that can be objectively evaluated by others, does not meet any standard of reasonableness. The DEIS fails to substantiate this 40 percent growth projection by citing any identifiable analysis that is open to public scrutiny. By the use of some unsubstantiated travel demand-modeling technology, the CRC has predetermined the outcome of the analysis. It used the statement of “purpose and need” as a touchstone by which all proposals were evaluated and by which many reasonable alternatives were improperly screened out. While it may be reasonable to use a valid “purpose and need” statement for screening alternatives, as advocated by FHWA, the DEIS provides no scientific basis for accepting the claimed 40 percent increase in traffic demand in the face of growing congestion and increasing fuel costs and likely environmental regulation of carbon dioxide emissions.

2. Reasonable and better alternatives were wrongly screened out by staff, so they were not available for analysis in the DEIS. The reasons that were wrongly used include the

scientifically invalid travel projections in the purpose and need, mistaken assumptions about the ability to seismically retrofit the existing bridges, and refusal to consider modifications to the BNSF railroad bridge as a component of any solution. The range of alternatives excludes options that are not only reasonable, they were explicitly recommended by the transportation MPO for the Portland/Vancouver region (Metro).

3. The range of alternatives that was actually studied in the DEIS was too narrow, and unrepresentative of the range of reasonably desirable options. The “supplemental bridge” options were too similar to the “replacement bridge” options to permit any analysis of the possible benefits of re-using the existing bridges. The appearance is that the “supplemental bridge” options cost just about as much as the “replacement bridge” options, have similar negative impacts from traffic and project scale, and have additional negative qualities in terms of bridge lifts and impeded navigation. These additional negative qualities were the result, largely, of improperly defining the supplemental bridge options to exclude modification to the BNSF railroad bridge.

4. The analysis of the alternatives is biased and incorrect. The analysis of the options that were actually studied for the DEIS is defective regarding projected traffic volumes, projected energy use, and projected effect on climate change. There is also a defective analysis of hours of congestion comparing Alt. 2 & 3 to Alt. 4 & 5. The cited difference in congestion is all in one direction, and is “turbulence” that causes only a minute difference in travel time for through trips, and unfairly makes Alt. 4 and 5 look bad. There is no clarification in the DEIS about the supposed congestion experienced by Alt. 4 and 5 regarding when in the future this congestion is expected to start happening, and the explanation of the nature of the congestion is so far removed from the comparison tables that any reasonable person might assume that the “hours of congestion” comparison involves congestion of comparable magnitude and effect. Using “hours of congestion” rather than travel time savings as a high-level statistic for comparing the various alternatives is unjustified and biases the presentation of the alternatives in favor of the replacement bridge. “Hours of congestion” is repeatedly used in summary tables, whereas differences in travel time must be computed by the reader in order to obtain a meaningful comparison among the alternatives.

5. The outcome was pre-determined. As early as November 5, 2004, David Cox, FHWA Oregon Division Administrator stated that he was certain that the existing bridges would be replaced. He made this statement at a seminar presentation at Portland State University’s Center for Transportation Studies, entitled “The FHWA View of Transportation in Oregon.” He also opined that one might look at moving the river channel south in order to allow for a lower bridge with less impact, but this would require modifications to the downstream railroad bridge, implying that this option was clearly off the table, regardless of how reasonable it might be. This seminar is available as a video record from the Center for Transportation Studies archive of such seminars, available at <http://www.cts.pdx.edu/seminars.htm> while the specific seminar is at http://www.media.pdx.edu/Transportation/Transportation_110504.asx and is a multi-media file.

Analysis of Predetermination:

In addition to the statements by David Cox cited above, the time-line for decision-making indicates that the outcome of this DEIS was pre-determined. In other words, the DEIS was not written in order to allow unbiased analysis of reasonable alternatives, but was instead created for the purpose of anointing the desired alternative. The CRC Task Force met and selected a preferred alternative on June 24, 2008, prior to receipt and compilation of DEIS comments, and there was a massive lobbying effort by the CRC staff to convince local governments to pre-commit to their desired alternative prior to close of comment on the DEIS. It is also a fact outlined in the DEIS that in the fall of 2006, CRC staff had already determined that only two alternatives should be advanced to the DEIS, (beyond the no-build), namely Replacement Bridge with LRT and Replacement Bridge with BRT.

The DEIS makes the following claim, under the heading “The 12 alternative packages: January 2007 Screening results”

Reusing the existing bridges appeared to warrant further evaluation primarily because of the possibility for reduced capital costs compared to replacing the existing bridges. This led the Task Force to explore how the existing I-5 bridges could be reused and still meet this project’s purpose and need. An additional alternative was therefore developed that uses the existing bridges for northbound I-5 traffic, bicycles, and pedestrians. With this alternative a new, supplemental bridge would carry high-capacity transit and southbound I-5 traffic. In March 2007 the CRC partners incorporated the Task Force recommendation into the DEIS range of alternatives. This produced the range of alternatives being evaluated in this DEIS:

The facts speak otherwise. The CRC added the supplemental bridge alternatives as sham alternatives, purely to satisfy the political pressure being applied to them to widen the range of alternatives. Here is a chronology of the actual process:

The Metro Council sent a letter to the CRC in October, 2006, asking for better alternatives. [See attached Council_to_CRC_Ltr_Oct_19_2006.pdf]

Here are some quotes from that letter:

...we all concur with the following recommendations.

Recognize the I-5 Transportation and Trade Partnership Strategic Plan

In 2002, all of the stakeholders in this effort, from both sides of the Columbia River, agreed with the following five principles:

- *The Interstate 5 crossing of the Columbia River should be a maximum of five lanes in each direction (three through lanes and two auxiliary lanes), for a total of ten lanes to accommodate additional auto and truck travel. These lanes could be a combination of freeway, arterial and managed lanes. ...*

- *Commitment to a comprehensive use of innovative measures such as Transportation Demand Management/Transportation System Management strategies.*

...

Use desired outcomes as a guide

...

According, we recommend that all transportation alternatives be evaluated for their land use implications. Obviously, added lanes of traffic, varying levels of transit, etc., and their impact on travel time and access will have an influence on settlement patterns and development. These implications need to be very carefully studied. ...

Coordinate with the railroad bridge

...believe that options that involve even greater coordination, including possible improvements to the railroad bridge, should be further explored. We understand the the railroad bridge is privately owned. However, we believe that the railroad system, including this bridge, performs a public function, and the freight carried on it is part of a larger system that needs to be considered. Further, if a CRC alternative further restricts barge turning movements, mitigation in the form of alterations to the railroad bridge may be warranted.

Provide alternatives in the DEIS that demonstrate the fundamental choices before us

We believe a wider range of alternatives must be studied in order to find the solutions that deliver the best results at the lowest costs. In addition, we believe that alternatives should be considered in the draft environmental impact statement that include both capital intensive and alternative approaches – unless it is clearly demonstrated during the current phase of analysis that such approaches are not viable.

On February 13, 2007, the Metro Council discussed the Columbia River Crossing. Some on the Council expressed surprise and concern that the CRC had essentially ignored their requests from the previous fall. [see attached MetroWorkSession_02-13-07.pdf]

Following is a quotation from the official Metro minutes of that meeting:

2. COLUMBIA RIVER CROSSING DIRECTION

Councilor Burkholder talked about upcoming steps and guidance in attending next week's Columbia River Crossing (CRC) meeting. Metro was one of 39 team members. He distributed two documents (a copy of each is included in the meeting record) and mentioned some of the previous alternatives over the past two years. An important issue was the functionality of the existing bridges and whether they could be retained. Councilor Burkholder personally supported the Task Force recommendation to replace the bridges. He acknowledged that the analysis to date had not been at the level of a Draft Environmental Impact Statement (DEIS)—23 proposals was too many to do a DEIS on all of them.

Councilor Liberty offered a PowerPoint presentation (a copy is included in the meeting record). He pointed out the similarities of the two “non no-action” alternatives. He estimated the total cost at \$2 to \$6 billion. He described the weaknesses that he saw in the analyses done to date, including ways in which they did not meet our desired outcomes. He gave information about the estimated useful life of the existing bridges and how it might be longer than was assumed. Seismic standards were being used to declare the existing bridges unacceptable, but he felt that no bridge in the region met those standards. He gave an alternative seismic standard that was more realistic and an estimated cost of upgrading the existing bridges to meet that standard. He said the bridge lift limitations were being used as a means to eliminate the existing bridges. He felt that land use had not been used as either a ranking or an alternative. He said there was no system management alternative presented, as had been requested by the Metro Council. He gave some information on the potential effects of tolling in managing congestion. The amount of money spent studying just for this one project was about 10-30 times greater than the amount spent for all other regional transportation planning combined.

Councilor Newman asked if there had been another alternative that was a close second in some way, but that had not made the final alternatives. Councilor Burkholder said everyone would have preferred a less expensive alternative. There was not a well-articulated third alternative, however, not substantive enough to do a good study on it. He mentioned some of the issues that would need to be addressed, such as maintenance. Councilor Newman shared Councilor Liberty’s general concerns about the scale and the cost of the project. If the starting assumption was that the existing bridges would be kept, then the no-build would be the best recommendation. He asked about the clarity of the need for a transit option. Councilor Burkholder felt the Council was pretty well on record as preferring a transit alternative.

Councilor Liberty thought that one of the plans did not necessarily talk about the form of the lanes. He felt incremental improvement—such as upgraded onramps—could remediate many of the safety concerns. Councilor Burkholder observed that the existing bridge had too many interchanges. Many of the fender-bender type accidents were caused by bridge lifts.

Councilor Park asked how much discussion had occurred around the issue of river traffic. Councilor Burkholder said the tugboat operators, in particular, had attended the discussions. Their concerns were about the “weave” between the vehicle bridge and the railroad bridge. The medium-height bridge alternative had been chosen to be above the barges and below Vancouver air traffic.

Councilor Burkholder said there was a mix of responses. What had been analyzed, what was part of the DEIS process? He talked about some design issues. Those were still somewhat in the future. He talked about the use of MetroScope. There had been some land use analysis, but a lot of it had been outside the scope of this project. Councilor Harrington said she had heard an expectation that the various things in the October memo had not been addressed. Councilor Burkholder agreed that some of the Council values were not addressed in the DEIS process.

Council President Bragdon asked about freight capacity, as it related to new induced single-occupancy vehicle travel. The greatest inhibition to freight in that corridor was SOV traffic. Would capacity be sucked up by more and more people traveling to Battle Ground? Councilor Burkholder stated that the performance objectives included freight. Systems management had not been addressed deep enough as of yet. He talked about some ideas that had been proposed to improve things for freight.

Council President Bragdon asked when and how the impacts to downtown Vancouver and Hayden Island would be accounted for? Councilor Burkholder said, by replacing rather than keeping the existing bridges, that was one way to reduce impacts. The height of the bridge, the interchanges, and SR-14 were all factors.

Council President Bragdon felt strongly that light rail needed to be extended. That should be a condition of Metro's support. Councilor Liberty said there was a basic difference in understanding in what we were doing and what we were asking. If the recommendation were approved, we would get a 10-12 lane bridge with light rail; land use analysis would then be a derivative of that choice. Seismic standards were going to preclude something else. Other bridges did not meet that standard. The result would be a high, without lifts, 12 lanes, with some form of transit, and no other options were being studied. He compared it to saying Metro would do a fairly large UGB expansion or a really large UGB expansion. Our thrust should be to carry forward not just 2-3 alternatives with additional analysis, but look at the fundamentals and allow us to think about more choices. The crossing still had \$60 million of study money; we should use it to really think creatively.

Councilor Newman felt there was a lot of skepticism out there. The final recommendation simply might not be implementable. He would like to see an alternative recommended that could actually be accomplished. He'd like to see how Option 3, with the existing I-5 bridges for traffic, and something else with transit, functioned under all the analysis for the next stage, including the political situation and what the political leadership would support. He was not 100% comfortable with the staff recommendation. His preferences were moving forward, being explicit about our preferences, not shutting the door, but keeping Option 3 or some variation, whether the bridges were refurbished, seeing what could be done at a lower cost, and addressing local traffic.

Councilor Park asked who would pay the bridge operating costs currently borne by the states? Would that information be in the DEIS? Councilor Burkholder said that was the smart thing about keeping the bridges, because they were part of the interstate system, it was about \$4 million per year to maintain them. New bridges should be less. The state departments of transportation would not want to help maintain them. No one really wanted to take on the new responsibility.

Council President Bragdon was worried about narrowing the options down too quickly. That would be a fiscal and political mistake for a project of this magnitude. For example, he had not seen enough information on community impacts. He wanted Metro's recommendation to be consistent with our other transportation values. He did not see anything like a low-cost option and was not convinced about the longevity of the existing bridges. He'd like to see more study on some of the alternatives.

Councilor Harrington asked Councilor Burkholder if he felt the Council's issues would be addressed with the larger group. Information would be available on congestion, freight mobility, land use impacts, and air quality impacts. There would be no information on a supplemental bridge unless we put it in there. Councilor Liberty thought that the net had not been cast very wide at the very beginning of the project, due to no bridge lifts and seismic. If a supplemental bridge had to be 80 feet high, it would be rejected because of the cost. Councilor Burkholder said he did not know what the outcome would be. The studies showed a lot of negatives to a supplemental bridge, but a study of that option would provide good data.

On February 22, 2007, the Metro Council passed Resolution 07-3782B, which provided the inspiration for the "4th Alternative Subcommittee" following a public hearing in the

Metro Council Chamber. [see attached Resolution_07-3782B.pdf] Here is their request for a "supplemental" bridge, in that resolution:

In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative could include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location.

This restatement of the similar request made in their 2006 letter has been ignored by the CRC in their "supplemental bridge" options in these key respects: 1. I-5 traffic is placed on the supplemental bridge. 2. The railroad swing span is not replaced, which would have eliminated most, if not all bridge lifts on I-5. 3. Bikes and pedestrians were left on the existing bridges, rather than using the new supplemental bridge.

The failure of the CRC to follow the Metro recommendations is not reasonable. The Metro recommendations are not some ad hoc opinion, but are themselves based on a comprehensive consensus process that culminated in the approval of the I-5 Transportation and Trade Partnership's "Final Strategic Plan" of June 2002. Here is relevant language from Metro Resolution No. 02-3237A of November 14, 2002 [see attached Resolution_02-3237A.pdf or <http://rim.metro-region.org/webdrawer/rec/19475/view/Metro%20Council%20-%20Metro%20Legislation%20-%20Reso~he%20Purpose%20of%20Endorsing%20the%20I-5%20Transportation%20and%20Trade%20Study%20Recommendations..pdf>]

Of particular note is this recommendation of the I-5 Task Force, restated by Metro and JPACT in their resolution:

"Three through-lanes in each direction on I-5, between I-405 in Portland and I-205 in Clark County including southbound through Delta Park including designation of one of the three through-lanes as an High Occupancy Vehicle (HOV) lane as feasible."

"An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to 2 additional lanes in each direction for merging plus 2 light rail tracks"

"Capacity improvements for freight rail that will improve freight and intercity passenger rail services"

"Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments"

"Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system"

Metro's Resolution 07-3782B further states, among other recommendations:

...the following should be part of any DEIS analysis: a) land use changes that reduce the amount of 2035 peak-hour commuting across the Columbia River;

...

e) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options

It is clear that the DEIS has failed to meet these reasonable expectations, apparently because the choice of the ultimate outcome was predetermined.

How CRC Response to Metro Resolution 07-3782B was flawed:

Metro's requests in Resolution 07-3782B were transmitted to the CRC Task Force by Metro Councilor Rex Burkholder. The Task Force responded by creating a "4th Alternative Subcommittee." The packet of meeting materials for the March 27, 2007 CRC Task Force meeting [from CRC Library at <http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/TaskFo...>]

contains minutes of the February 27th meeting, describing the setup of the committee. I hereby request that this packet be made part of the official DEIS record of comments.

Appendix 3 has the Metro resolution and letter from Councilor Burkholder.

Appendix 7 is the 4th Alternative Subcommittee report itself. It recommends a "supplemental bridge" option in which the existing bridges would be used for I-5 northbound, and a new bridge would be built for I-5 southbound. It does not give an adequate explanation why they chose this alternative.

A few clues to the committee's deliberations can be obtained by examining the meeting packets for the three subcommittee meetings, here:

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

<http://www.columbiarivercrossing.org/FileLibrary/MeetingMaterials/4AltSu...>

I hereby request that these packets be made part of the official DEIS record of comments.

However, according to my conversations with CRC staff, the CRC made no audio or video recording of these task force subcommittee meetings, and there are no minutes available on the CRC web site of the final meeting, the latter in apparent violation of Oregon's open meetings law.

Among the options studied by the subcommittee was Option A+.

This option consisted of these components: A new, stand-alone bridge for high capacity transit (LRT or BRT), continued use of existing bridges by I-5, seismic strengthening of the existing bridges, and moving the opening span of the close-by downstream railroad

bridge to the south to line up with the “hump” span on the I-5 bridges, thereby eliminating the need to raise the I-5 bridges for barge traffic, and expanded bike and pedestrian pathways on the existing bridges.

Option A+ was defined in the first meeting, and at the second meeting, a CRC staff report was presented to the subcommittee, and at that point A+ was dropped. This was a crucial mistake, because A+ had the potential, if further refined, to become a worthwhile option for future construction.

The March 19th meeting packet contains a March 15, 2007 memo from Kris Strickler to the Fourth Alternative Subcommittee, defining option A+ and giving the CRC staff perspective. [see attached A_Plus_Strickler.pdf for memo text only.]

If one examines this memo, one will find both that A+ met the “purpose and need” of the project, and A+ was unacceptable to CRC staff. This memo makes this remarkable statement: "If Option A+ is selected as the locally preferred alternative (LPA) it is unlikely that either ODOT or WSDOT would continue funding work on the project. Identified Interstate improvements would be prioritized, funded and built along with other highly needed improvements in each state."

In other words, CRC staff told the Subcommittee that if they chose option A+, then the State highway departments would “pick up their marbles” and abandon the CRC project, taking their funding with them. This is “predetermination” personified!

The March 15, 2007 Strickler memo further prejudiced the choice of the Fourth Alternative Subcommittee by falsely characterizing European experience with Transportation Demand Management and Congestion charges:

OPTION A+ CRC STAFF OBSERVATIONS

• To achieve a significant reduction in the projected hours of congestion for 2030, travel demand for Option A+ would need to be reduced about 30% which far exceeds reductions in the 15-20% range achieved through congestion pricing programs currently underway in London, Singapore, Stockholm and Germany.

The May/June 2007 issue of “ITS International” magazine on page 6 has an article entitled “Stockholm congestion charging scheme to become permanent” [see attached Stockholm_data.pdf] and it states:

Congestion charging, which was introduced as a trial from January to July last year by the outgoing Social Democratic government, far exceeded the government’s expectations of a 10-15 per cent reduction of cars entering and leaving the capital. The average reduction was up to 25 per cent. When the trial ended on 31 July last, traffic in and out of the Stockholm city centre shot back up to the pre-trial level of around half a million cars a day, according to official estimates.

This information is at variance with what Strickler’s memo told the committee. Strickler’s memo was issued at a time when correct information about Stockholm was likely available. Furthermore, Strickler’s memo also leaves off the fact that the

Stockholm reduction is not a reduction from future growth, but a reduction from existing levels. Common sense suggests that preventing future growth should be much easier than reducing existing traffic.

Flawed Analysis of Climate Change and Energy:

Page S-31 of Executive Summary, Exhibit 27, sets forth the CO2 emissions of the various alternatives analyzed:

CO2 Emissions (tons/day)

Alt 1 463 (No-build)

Alt 2 452 (replacement bridge)

Alt 3 452 (replacement bridge)

Alt 4 494 (supplemental bridge)

Alt 5 491 (supplemental bridge)

The analysis claims that all build alternatives are projected to reduce personal vehicle travel demand over No-Build conditions and improve the operations of the I-5 crossing, as described in the Traffic section of the DEIS on page 3-434.

Subsequently, page 3-435 exhibit 3.19-4 claims that supplemental alternatives produce significantly more CO2 than the replacement or no-build options. (490-493 versus 452 for replacement and 463 for no-build). Existing condition is 342. Units are daily tons.

The DEIS, Chapter 3, goes on to claim that these estimates are conservative, because they do not capture all the potential reductions in CO2 associated with the highway improvements.

However, hidden inside the Energy Technical Report (ETR), which is part of the DEIS, one finds contradictory information. Exhibit 5-6 on page 5-14 of the ETR is consistent with the Chapter 3 information, as are other tables in chapter 5 of the ETR. What is not stated, let alone made clear, is that these tables are not valid for comparing alternatives, because the methods used for calculating energy use and CO2 emissions from transit and from personal vehicles are totally incommensurable.

Page 2-12 of the ETR, in section 2.5.2.1 states:

Using this approach, the estimates associated with personal automobile use are not intended to be representative of the total or complete amount of energy used or CO2 emitted by the project. Rather, these estimates should be considered in concert with each other and the value of these estimates lie in their relative differences.

Similarly, section 2.5.2.2 “Bus Transit Energy Use,” starting on page 2-12 of the ETR says:

Dissimilar from the personal automobile energy use and CO2 emission estimates, where the emphasis should be placed on the relative differences between alternatives, this

approach provides complete estimates of energy use and CO2 emissions associated with the project since the transit system is finite.

In other words, the numbers in the summary tables do not represent valid estimates of either the greenhouse gas emissions or the energy used by the various alternatives, because they were computed by adding apples and oranges. This invalid mathematical manipulation causes a distortion in the very summary information that would most likely be relied upon by decision-makers, who might not be aware of the totally dissimilar methodology used to compute the bus and transit emissions.

Beyond this glaring mathematical error in summarizing the energy and CO2 data, the DEIS ETR incorrectly focuses on emissions from personal vehicles solely in the 0.9 mile segment between SR 14 and Hayden Island interchange. The analysis of energy use and CO2 emissions purports to be a rational analysis based on EPA and other accepted methodologies for estimating vehicle fuel use at various operating speeds. However, it is not a meaningful representation of the global climate change and energy use impacts of the project alternatives. By citing an extensive analysis of only one component of energy use and greenhouse gas emissions, the DEIS falsely conveys the notion that energy and greenhouse gas impacts have been properly studied for the project alternatives.

Energy use and CO2 emissions over this 0.9 mile segment have no scientifically valid relationship to the actual total vehicle emissions that are caused by (are an environmental impact of) this project. Neither the DEIS nor the ETR cite any evidence that there is a scientifically valid relationship between total project emissions and those on the 0.9 mile segment. Never the less, the DEIS reports their numbers as if they were a fair representation of total emissions, and a fair representation for comparing project alternatives. All of the verbiage about reducing emissions due to reduced congestion, are false and misleading as applied to the actual environmental impacts of the project. The complex analysis of fuel use is a complete and possibly deliberate red herring, giving the reader the impression that science is happening.

Unless and until there is an analysis of the total vehicle miles traveled that occur because of the construction or non-construction of the various alternatives, any claims regarding energy use and CO2 emissions should be stricken from the DEIS. In other words, the DEIS is insufficient and inadequate until supplemented with correct information.

The DEIS also assumes, implicitly, that the various alternatives will have no effect on either trip length, for those trips crossing the Columbia, or on the length and number of other trips taken in the region. Proof that the DEIS makes this assumption is that it should otherwise have reported these effects.

There is no scientific justification cited for this assumption. Logic dictates the contrary. Real estate values and development patterns are well known to be strongly affected by accessibility. To the extent that the CRC alters accessibility (travel time and cost) this will affect not only development patterns, but also the patterns of trip origins and destinations within the development patterns. For a given number of dwelling units and

employment opportunities, it is obvious that individual choices to live closer to work can result in fewer vehicle miles traveled, even with a given pattern of residential dwelling unit locations. No analysis of these factors (trip length of CRC trips, and changes to length and number of non-CRC trips in the region) as they relate to the various alternatives, is available in the DEIS, yet these factors obviously result in important environmental impacts.

Furthermore, the actual travel demand estimates that are being used for trips that cross the Columbia, as opposed to total travel caused by the various options, are also of questionable validity. This further erodes any possible validity of the DEIS and ETR analysis regarding energy and CO2 emissions. As many members of the public, and the press, have noted, the CRC travel demand analysis utterly fails to take into account the changes in land use that would be expected from the various alternatives. This fails to meet either FHWA standards, or simple standards of common sense. For example, the Oregonian published a news article on June 22, 2008 which says: “Columbia River bridge plans ignore effects of growth, Designers decide not to factor in the extra sprawl, leading to traffic and pollution, that a bigger I-5 span might bring” [see attached Ignored_Induced.pdf]

Conservative studies have validated the notion of “induced demand” which, to a large extent, is merely the concept that consumers and developers respond to market forces in a rational manner by altering their choices about where to live and work, and what trips to make. For the CRC to take the contrary position, without any scientific basis, is to act against common sense and the weight of informed opinion in this subject area. I will cite a very conservative study done in 2001 by Robert B. Noland (Centre for Transport Studies, Dept. of Civil and Environmental Engineering, Imperial College of Science, Technology and Medicine) and Lewison L. Lem (US Environmental Protection Agency Office of Transportation and Air Quality). This study is entitled: “A REVIEW OF THE EVIDENCE FOR INDUCED TRAVEL AND CHANGES IN TRANSPORTATION AND ENVIRONMENTAL POLICY IN THE UNITED STATES AND THE UNITED KINGDOM” [see attached Noland_Lem_Induced_Demand.pdf]

Quoting from the Abstract:

This paper reviews recent research into the demand inducing effects of new transportation capacity. We begin with a discussion of the basic theoretical background and then review recent research both in the UK and the US. Results of this research show strong evidence that new transportation capacity induces increased travel, both due to short run effects and long run changes in land use development patterns.

The Abstracts also states: *The role of the new knowledge of induced travel effects would be expected to lead to changes in the conduct of transportation and environmental policy.*

Mr. Lem subsequently worked for the California Automobile Association, and currently is Principal Consultant with PB, well-known international planning and engineering firm.

Mr. Lem spoke in Portland on March 7, 2008 at the PSU Center for Transportation Studies “Transportation Seminars” series, cited above. In his presentation entitled

“Taming the Dragon: Reducing the Climate Impact of the Transportation System” he reiterated that technology alone will not solve the problem, and so reductions in VMT are necessary. In the question and answer period, he confirmed that expanding capacity to reduce congestion is not a good long-term strategy for reducing green house gases, because traffic volume will grow to fill the capacity.

Simulation studies also point to flaws in the simplistic “speed-emissions” methodology used in the Energy Technical Report. In a study entitled “INDUCED TRAVEL AND EMISSIONS FROM TRAFFIC FLOW IMPROVEMENT PROJECTS” [see attached Noland_Emissions_CongestionRelief.pdf] that was presented to the 82nd Annual Meeting of the Transportation Research Board, authors Noland and Stathopoulos conducted traffic simulations showing:

In the short-run, when traffic volumes are held constant, results demonstrate that the smoothing of traffic flow will result in a reduction in emissions.”

However,

Simulation of long-run emissions is done by synthetically generating new trips into the simulated networks in order to represent potential induced travel.

The result:

Our conclusions are that in most cases long run emissions reductions are unlikely to be achieved for the two scenarios evaluated.

Of course a simulation study is not definitive for proving an hypothesis. However, it does show beyond any doubt that it is improper to assume, ad hoc, that one may properly compute the energy use and emissions that result from improving traffic flow by a wrote computation based purely on vehicle characteristics, without taking human behavior into account. The energy use and CO2 emissions analysis found in the CRC DEIS have cited no credible scientific basis for the approach used. The analysis cites authoritative sources for numbers, values, quantities, and formulas, but these sources do not provide any scientific support for using the numbers and formulas in the way that the CRC DEIS does. For that reason, the DEIS is inadequate until supplemented by analysis grounded in science, not ad hoc calculations (however complex those calculations may appear to be, and however correct each individual calculation might be in some particular individual context).

Supplemental Bridge Alternatives as they relate to the downstream Railroad Bridge and Navigation

In the DEIS, Chapter 2 page 2-50 “Description of alternatives, further screening.” We see this claim:

A new low-level bridge would have required a moveable span to allow passage of large ships, similar to the lift span on the existing I-5 bridges. Operation of a moveable span would disrupt traffic, cause more accidents on the bridges, have a greater impact on navigation, be more expensive to construct, and cost substantially more to maintain and operate. A low-level bridge was dropped from further consideration once project staff determined that a mid-level fixed-span bridge could safely avoid height restrictions imposed by Pearson Field and still provide clearance for river users.

Unfortunately, the determination that a low-level bridge would have all of the problems described above, was unjustified when applied to a supplemental bridge. To sum up the CRC staff position, a low-level bridge has numerous disadvantages, and no cost advantage. The question of cost should have been separately determined for a low-level supplemental bridge. Instead, costs were computed for a low-level replacement bridge, found to be disadvantageous, and were used as an excuse for ruling out all low-level alternatives. Logic would suggest that a low-level supplemental bridge might well be cheaper than a high-level supplemental bridge, but we can't know, because the DEIS analysis is non-existent on this point.

Now consider the other claimed flaws of a low-level bridge: that operation of a moveable span would disrupt traffic, cause more accidents on the bridges, and have a greater impact on navigation than a high-level bridge. These can not be substantiated by an analysis that considers the possibility of moving the river channel south and modifying the BNSF railroad bridge.

By allowing consideration of a low-level supplemental bridge, the DEIS would have been enhanced by studying an alternative that better met the reasonable desire to examine reduced capital costs and reuse of the existing bridges. Furthermore, this would have better met the reasonable requests from Metro, cited above, that suggested modifying the railroad bridge.

The Columbia River Towboat Association made a presentation to JPACT at their January 15, 2004 meeting, requesting that modification to the Burlington Northern Santa Fe Railroad bridge be made a high priority in the Regional Transportation Plan.

Following are quotes from material that they provided to JPACT:

How would changing the rail bridge improve the situation at I-5?

If a lift opening were placed at the span just to the south of the current opening, it could be about 300 feet wide and could be approached from either the I-5 wide or high spans with relative ease. There would be no need for towboat captains to use the lifts during high water. At 72 feet (at zero gauge) the high span is high enough to accommodate any towboat under any possible river condition except very high flood levels, when there would be no river traffic anyway. Thus I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge. Source: CRTA to JPACT -- FAQ page 3 [see attached BNSF_FAQ.pdf]

A [railroad bridge] lift opening placed more toward the middle of the river would allow marine traffic to nearly always avoid using the I-5 lifts. Source: CRTA memo to JPACT page 2 [see attached BNSF_Summary.pdf]

The Coast Guard has the legal ability to order a rail bridge improvement for the benefit of marine safety, but declines to use highway benefits in making its cost/benefit analysis to justify such an order. Source: CRTA memo to JPACT page 4

However, Congress can declare on its own that the bridge is an unreasonable hazard to navigation, and it can direct the Coast Guard to apply Truman-Hobbs procedures. This has been done for other bridge projects. Thus the Coast Guard would conduct the engineering study, do the EIS, and contract the entire project from beginning to end. The Coast Guard's Truman-Hobbs director at headquarters has indicated that their Congressional liaison office will work with our Congressional representatives to properly craft the necessary legislation. Source: CRTA memo to JPACT page 4 [see attached BNSF_Summary.pdf]

The significant point is this, and bears repeating: *Thus I-5 lifts from towboat traffic could be eliminated with a modification of the rail bridge.*

Clearly any low-level supplemental bridge that followed the profile of the existing bridges would also require no lifts due to towboat traffic, if the rail bridge were modified. The DEIS itself reports that non-towboat lifts are minimal. If these occasional lifts were restricted to periods of low highway traffic and low or no transit traffic, their impact would be minimal, as opposed to the major impact suggested by the DEIS.

Failure of the DEIS to report on the possibility of modifying the railroad bridge, as an adjunct to a supplemental bridge, is a fatal flaw. We know that Metro, JPACT, and the I-5 Transportation and Trade Partnership all supported modification of the railroad bridge. It was also a component of the "4th Alternative Subcommittee" recommendation, yet was inexplicably deleted from that recommendation when the two supplemental alternatives were studied as options in the DEIS.

Modification to the railroad bridge is an obvious and reasonable component of a supplemental bridge. Failure to include it, and the failure to even mention or explain why it was not included, must be regarded as a serious and fatal defect in the DEIS.

Although Alternative 4 and Alternative 5 are arguably not the supplemental bridge options that should reasonably have been studied for the DEIS, they are the only supplemental bridge options that were studied. They should not have been fatally hobbled by refusal to consider modifications to the railroad bridge. By eliminating all bridge lifts due to towboat traffic, a whole category of safety, congestion, and traffic delay impacts would have been drastically reduced for these supplemental bridge alternatives. One can only further conclude that Alternatives 4 and 5 are sham alternatives, studied pro forma in response to Metro's request, but never intended to be given serious consideration, and therefore burdened with unnecessary fatal flaws.

Conclusion:

The DEIS is defective and deficient, and must be withdrawn or supplemented by a DEIS that properly responds to law and common sense.

MINUTES OF THE METRO COUNCIL WORK SESSION MEETING

Tuesday, February 13, 2007
Metro Council Chamber

Councilors Present: David Bragdon (Council President), Kathryn Harrington, Rod Park, Robert Liberty, Rex Burkholder, Brian Newman

Councilors Absent: Carl Hosticka (excused)

Council President Bragdon convened the Metro Council Work Session Meeting at 2:04 p.m.

1. DISCUSSION OF AGENDA FOR COUNCIL REGULAR MEETING, FEBRUARY 15, 2007/ADMINISTRATIVE/CHIEF OPERATING OFFICER AND CITIZEN COMMUNICATIONS

Council President Bragdon reviewed the February 15, 2007 Metro Council agenda. Councilor Newman distributed a document related to the Zoo future vision committee (a copy is included in the meeting record).

2. COLUMBIA RIVER CROSSING DIRECTION

Councilor Burkholder talked about upcoming steps and guidance in attending next week's Columbia River Crossing (CRC) meeting. Metro was one of 39 team members. He distributed two documents (a copy of each is included in the meeting record) and mentioned some of the previous alternatives over the past two years. An important issue was the functionality of the existing bridges and whether they could be retained. Councilor Burkholder personally supported the Task Force recommendation to replace the bridges. He acknowledged that the analysis to date had not been at the level of a Draft Environmental Impact Statement (DEIS)—23 proposals was too many to do a DEIS on all of them.

Councilor Liberty offered a PowerPoint presentation (a copy is included in the meeting record). He pointed out the similarities of the two "non no-action" alternatives. He estimated the total cost at \$2 to \$6 billion. He described the weaknesses that he saw in the analyses done to date, including ways in which they did not meet our desired outcomes. He gave information about the estimated useful life of the existing bridges and how it might be longer than was assumed. Seismic standards were being used to declare the existing bridges unacceptable, but he felt that no bridge in the region met those standards. He gave an alternative seismic standard that was more realistic and an estimated cost of upgrading the existing bridges to meet that standard. He said the bridge lift limitations were being used as a means to eliminate the existing bridges. He felt that land use had not been used as either a ranking or an alternative. He said there was no system management alternative presented, as had been requested by the Metro Council. He gave some information on the potential effects of tolling in managing congestion. The amount of money spent studying just for this one project was about 10-30 times greater than the amount spent for all other regional transportation planning combined.

Councilor Newman asked if there had been another alternative that was a close second in some way, but that had not made the final alternatives. Councilor Burkholder said everyone would have preferred a less expensive alternative. There was not a well-articulated third alternative, however, not substantive enough to do a good study on it. He mentioned some of the issues that would need to be addressed, such as maintenance. Councilor Newman shared Councilor Liberty's general

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concerns about the scale and the cost of the project. If the starting assumption was that the existing bridges would be kept, then the no-build would be the best recommendation. He asked about the clarity of the need for a transit option. Councilor Burkholder felt the Council was pretty well on record as preferring a transit alternative.

Councilor Liberty thought that one of the plans did not necessarily talk about the form of the lanes. He felt incremental improvement—such as upgraded onramps—could remediate many of the safety concerns. Councilor Burkholder observed that the existing bridge had too many interchanges. Many of the fender-bender type accidents were caused by bridge lifts.

Councilor Park asked how much discussion had occurred around the issue of river traffic. Councilor Burkholder said the tugboat operators, in particular, had attended the discussions. Their concerns were about the “weave” between the vehicle bridge and the railroad bridge. The medium-height bridge alternative had been chosen to be above the barges and below Vancouver air traffic.

Councilor Burkholder said there was a mix of responses. What had been analyzed, what was part of the DEIS process? He talked about some design issues. Those were still somewhat in the future. He talked about the use of MetroScope. There had been some land use analysis, but a lot of it had been outside the scope of this project. Councilor Harrington said she had heard an expectation that the various things in the October memo had not been addressed. Councilor Burkholder agreed that some of the Council values were not addressed in the DEIS process.

Council President Bragdon asked about freight capacity, as it related to new induced single-occupancy vehicle travel. The greatest inhibition to freight in that corridor was SOV traffic. Would capacity be sucked up by more and more people traveling to Battle Ground? Councilor Burkholder stated that the performance objectives included freight. Systems management had not been addressed deep enough as of yet. He talked about some ideas that had been proposed to improve things for freight.

Council President Bragdon asked when and how the impacts to downtown Vancouver and Hayden Island would be accounted for? Councilor Burkholder said, by replacing rather than keeping the existing bridges, that was one way to reduce impacts. The height of the bridge, the interchanges, and SR-14 were all factors.

Council President Bragdon felt strongly that light rail needed to be extended. That should be a condition of Metro’s support. Councilor Liberty said there was a basic difference in understanding in what we were doing and what we were asking. If the recommendation were approved, we would get a 10-12 lane bridge with light rail; land use analysis would then be a derivative of that choice. Seismic standards were going to preclude something else. Other bridges did not meet that standard. The result would be a high, without lifts, 12 lanes, with some form of transit, and no other options were being studied. He compared it to saying Metro would do a fairly large UGB expansion or a really large UGB expansion. Our thrust should be to carry forward not just 2-3 alternatives with additional analysis, but look at the fundamentals and allow us to think about more choices. The crossing still had \$60 million of study money; we should use it to really think creatively.

Councilor Newman felt there was a lot of skepticism out there. The final recommendation simply might not be implementable. He would like to see an alternative recommended that could actually be accomplished. He’d like to see how Option 3, with the existing I-5 bridges for Interstate

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traffic, and something else with transit, functioned under all the analysis for the next stage, including the political situation and what the political leadership would support. He was not 100% comfortable with the staff recommendation. His preferences were moving forward, being explicit about our preferences, not shutting the door, but keeping Option 3 or some variation, whether the bridges were refurbished, seeing what could be done at a lower cost, and addressing local traffic.

Councilor Park asked who would pay the bridge operating costs currently borne by the states? Would that information be in the DEIS? Councilor Burkholder said that was the smart thing about keeping the bridges, because they were part of the interstate system, it was about \$4 million per year to maintain them. New bridges should be less. The state departments of transportation would not want to help maintain them. No one really wanted to take on the new responsibility.

Council President Bragdon was worried about narrowing the options down too quickly. That would be a fiscal and political mistake for a project of this magnitude. For example, he had not seen enough information on community impacts. He wanted Metro's recommendation to be consistent with our other transportation values. He did not see anything like a low-cost option and was not convinced about the longevity of the existing bridges. He'd like to see more study on some of the alternatives.

Councilor Harrington asked Councilor Burkholder if he felt the Council's issues would be addressed with the larger group. Information would be available on congestion, freight mobility, land use impacts, and air quality impacts. There would be no information on a supplemental bridge unless we put it in there. Councilor Liberty thought that the net had not been cast very wide at the very beginning of the project, due to no bridge lifts and seismic. If a supplemental bridge had to be 80 feet high, it would be rejected because of the cost. Councilor Burkholder said he did not know what the outcome would be. The studies showed a lot of negatives to a supplemental bridge, but a study of that option would provide good data.

3. BREAK

4. PROJECT UPDATES: PORTLAND STREETCAR LOOP AND LAKE OSWEGO TO PORTLAND ALTERNATIVES ANALYSIS

Richard Brandman, Transit Program Director, presented an update on two of the transit projects. The locally preferred alternative would require a new bridge. The steering committee recommended that the federal project application include the Minimum Operable Segment (MOS) all the way to the Oregon Museum of Science and Industry (OMSI). Councilor Newman said the committee was very comfortable with an application to Oregon Street. Mr. Brandman said the steering committee had submitted a transit application to go all the way to OMSI. There was a growing recognition that these projects changed the face of communities. This kind of thinking was now being allowed to influence the ranking process. He said the big issues were the financial ones. Right now, the project had an estimated cost of about \$170 million, with the hope that \$75 million of that would come from the feds, and the remainder from local government. Councilor Newman proposed that some costs might be even higher. There was some concern that the costs were being presented as unrealistically low. David Unsworth, Tri-Met, gave information saying the numbers might be a bit light in some cases. They have negotiated with the City of Portland to use a third-party estimator.

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Councilor Liberty asked how much of the likely transit system user benefit for the Willamette bridge would be contributed by the streetcar. Mr. Brandman guessed it would be high, but small relative to the light rail project, which would have far more travel time savings. He talked about potential local funding sources. Council President Bragdon wondered if we needed to reinforce our communication with other local jurisdictions to make sure the funding requests were being coordinated. Councilor Newman thought there was confusion about the process at the various legislative levels. Mr. Brandman thought Randy Tucker, Legislative Affairs Manager, would be the conduit for getting Metro's information out. He felt there was a sincere response from the project team that they did not want to get in the way of the process. There was a request from the federal administrator to submit a request on a short timeline.

Councilor Park wanted to confirm that the request had not gone through the Portland City Council in any form. Mr. Brandman was not aware of any. Council President Bragdon said the agency was Portland Streetcar, Inc. Councilor Burkholder talked about the way in which people went after the various available funds. Councilor Harrington wanted to make sure the conditions would apply to the Morrison MOS as well as the OMSI MOS. Councilor Liberty said we were in this phase, he hoped the Regional Transportation Plan (RTP) would clarify Metro's values in making them operational.

The other big issue on the finances was how to pay for operations. It could well be \$5 million per year, of which perhaps 30% could be met through fares. Councilor Park asked for more information about the operational side. In a regional project like light rail, the money was pooled, but a project like this was locally focused. Mr. Brandman said Tri-Met's share came out of their general fund. He talked about some previous inter-agency negotiations. Councilor Park followed up with some additional questions about where the money came from. Mr. Brandman replied that there was not a scientific formula. Councilor Newman commented that the concern, which was raised over and over again, was that Portland had an ambitious agenda for the streetcar; this project would be an additional, supplemental service that needed to be part of a larger discussion.

Regarding Lake Oswego, Ross Roberts, Transit Program Director, came up to the table with a project review. A lot had been going on. He talked about the history of the project, which dated back to 1988, and some of the various stakeholders. He distributed a handout (a copy is included in the meeting record). They were doing a performance analysis of the alternatives. He showed a map of some potential alignments and stations and mentioned some of the streetcar options. There had been public demand for widening Highway 43, but those options had not proven to be very feasible. River transit had been looked at; the costs were very high and there were access issues. They talked about the options for crossing over from Milwaukie to Lake Oswego.

Councilor Newman observed that the current streetcars did not have much seating. It was more of a people mover for a dense environment such as downtown. Would the cars for longer distances be different? Mr. Roberts said it would be analyzed with the existing vehicles, and changes could be looked at later. Councilor Newman wondered how the actual car design would affect capacity. Mr. Roberts added another constraint, single-car vs. two-car trains. There were ways to get the capacity up.

Councilor Burkholder wondered when there would be information on the project that would make some sense. He saw that things were still being added pretty piecemeal. Mr. Roberts said there was some work being done about potential capital funding and operating funding options. Councilor Burkholder said, what if the preferred alternative was a no-build with better bus rapid transit; would a DEIS need to be done? Mr. Roberts said not necessarily; bus rapid transit would

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be funded incrementally over time as demand accrued. He confirmed for Councilor Harrington that it would be a 6.5-mile streetcar, with no rails on Highway 43.

Councilor Park said, the sooner we got it moving forward, the better. He was skeptical about the project and wondered whether it was it fiscally responsible.

5. COUNCIL BRIEFINGS/COMMUNICATIONS

There were none.

There being no further business to come before the Metro Council, Council President Bragdon adjourned the meeting at 4:34 p.m.

Prepared by,



Dove Hotz
Council Operations Assistant

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**ATTACHMENTS TO THE PUBLIC RECORD FOR THE MEETING OF
 FEBRUARY 13, 2007**

Item	Topic	Doc. Date	Document Description	Doc. Number
1	Agenda	2/15/07	Agenda: Metro Council regular meeting, February 15, 2007	021307c-01
1	Communications	2/11/07	To: Metro Council From: Brian Newman Re: Oregon Zoo, Strategic Master Plan, Assessment Report #1, Draft #2	021307c-02
2	CRC	1/19/07	To: Columbia River Task Force From: Royce Pollard Re: City's position on the I-5 Interstate Bridge	021307c-03
2	CRC	11/21/06	To: Task Force From: CRC Project Team Re: UPDATE: Considerations for Replacing Versus Reusing the Existing Interstate 5 Bridges	021307c-04
2	CRC	undated	To: Metro Council From: Robert Liberty Re: Council Discussion of Columbia River Crossing Task Force Staff Recommendation for DEIS Alternatives	021307c-05
2	CRC	10/19/06	To: CRC Task Force From: Metro Council Re: Input from Metro Councilors	021307c-06
4	Project updates	2/13/07	To: Metro Council From: Ross Roberts Re: Lake Oswego to Portland Transit and Trail Alternatives Analysis Update	021307c-07

INDUCED TRAVEL AND EMISSIONS FROM TRAFFIC FLOW IMPROVEMENT PROJECTS

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ABSTRACT

A simulation of two traffic-flow improvement scenarios is analyzed using the VISSIM micro-simulation model and the CMEM modal emissions model. Both short-run and long-run emissions of CO, HC, NO_x, CO₂, and consumption of fuel are estimated. In the short-run, when traffic volumes are held constant, results demonstrate that the smoothing of traffic flow will result in a reduction in emissions. Simulation of long-run emissions is done by synthetically generating new trips into the simulated networks in order to represent potential induced travel. This is done until a “break-even” level of emissions for each pollutant and fuel consumption is reached that is equivalent to the base level before the traffic flow improvement was added. By also calculating short-run changes in travel time from the improvement the travel time elasticity equivalents for each pollutant can be calculated. These are compared with travel time elasticities in the literature to evaluate whether long-run emissions benefits are likely to endure. Simulations are conducted using different assumptions on vehicle soak time to simulate both cold start and hot-stabilized operating modes. Our conclusions are that in most cases long run emissions reductions are unlikely to be achieved for the two scenarios evaluated.

INTRODUCTION

Recent research has clearly established that new highway or road capacity can induce additional vehicle travel, above and beyond that which is due to population and income increases (1). This increased travel may be from new trips, mode shifts, longer trips or those generated by the development of previously inaccessible land. Modelling and estimating the details of the exact behavioral mechanisms can be quite complex and have eluded most transportation analysts. However, the basic behavioral change can be traced to traveller responses to the change in relative travel times and the change in relative accessibility of activities. Several recent studies have documented these effects using aggregate data (2, 3, 4, 5, 6, 7). Land use reactions to new road capacity have also been modelled using disaggregate data and it has been shown that this can have a major impact on the magnitude of induced travel effects (8). When the literature is reviewed, it provides strong support for the existence of a behavioral reaction to new capacity additions (1).

One unanswered question is what the environmental impact of this induced traffic may be. The air quality effects are dependent not just on the quantity of the vehicle miles of travel (VMT) but also on the dynamic characteristics of that travel and the number of trips taken. For example, congested travel conditions may result in slower and more variable travel speeds and more stop and go traffic which could result in increased emissions relative to free flowing traffic (9). It has been shown that synchronizing traffic signals can result in reduced emissions by smoothing the flow of traffic and reducing the hard vehicle accelerations that can cause major spikes in total emissions (10). The generation of new trips will result in additional cold starts that can add significantly to total emissions since under cold start conditions the emission control system is not yet functioning at optimal temperatures. For short trips, the first few minutes of vehicle operation can account for the vast majority of all emissions.

Research has evaluated the impact on vehicle emissions of variation in travel demand elasticities (11, 12). A comprehensive elasticity-based demand model was developed that enabled the to evaluation of different policy options. It was shown that suppressed demand due to congestion (i.e., the opposite of induced demand) results in lower emissions than if the suppression had not been modelled (i.e., if an elasticity of zero is assumed). One of the main conclusions was that the evaluation of emission benefits associated with a road project will be overestimated if induced travel effects are not considered (11, 12). The analyses, however, does not consider the effects of accelerations and cold starts from new trips and the dynamics of vehicle behavior. The work presented here focuses on this element while not specifying a detailed travel demand model.

Current methods for estimating the emissions from congestion reduction or traffic flow improvement projects do not adequately capture the dynamics associated with emissions. Models such as EPA's Mobile model, California's EMFAC model, and the UK *Design Manual for Roads and Bridges* method (13) rely only on average vehicle speeds derived from average driving cycles. While these embody various levels of acceleration within the driving cycle, they do not allow the evaluation of policies that can result in changes in the level and quantity of accelerations. The recently developed modal emissions model, CMEM (Comprehensive Modal Emissions Model) fills this gap (14).

The recent development of traffic micro-simulation models permits second-by-second vehicle behavior to also be modeled. VISSIM is one such package that is being widely used and that can be combined with a modal emissions database, such as CMEM (15).

This paper uses a combination of these modeling techniques to evaluate two hypothetical congestion reduction projects aimed at smoothing the flow of traffic. One is a capacity expansion of an arterial bottleneck while the other is the synchronization of traffic signals. Our method is to evaluate emissions for key pollutants before and after the change.

We then simulate the inducement of new trips until emissions for each pollutant are equivalent to their initial level. This provides us with an estimate of the amount of traffic that would need to be generated to eliminate the short-term emissions reductions from the flow improvement. Comparisons are made with estimates of induced travel elasticities as published in the literature to determine whether long term emissions benefits are obtainable.

The next section provides background on the VISSIM and CMEM models. We then specify the scenarios that were evaluated followed by the results of the simulations. We conclude with a discussion of induced travel elasticities as reported in the literature and the implications of our results for transportation and environmental policy.

BACKGROUND ON VISSIM AND CMEM

VISSIM is a microscopic, time step and behavior based simulation model developed to model urban traffic and public transport operations. The program can analyze vehicle operations under different lane configurations, traffic composition, traffic signals, and public transport stops. This makes it a useful tool for the evaluation of traffic in alternative networks and development of transportation engineering and planning measures of effectiveness (15). The VISSIM model has been validated for various real-world situations and is increasingly being used by transportation professionals (16).

VISSIM is based upon the psycho-physical car following model for longitudinal vehicle movement and a rule based algorithm for lateral movements developed by Wiedemann (17). The actual movement of the vehicles in VISSIM are based on behavioral assumptions regarding the desired speed and gap acceptance of drivers. As an initial assumption, vehicles follow each other with the same speed. If a vehicle is below its desired speed, which is determined stochastically, it will accelerate to that speed using the maximum possible acceleration for the given speed and vehicle type. As the vehicle closes on any vehicle in front, the vehicle will, after a slight reaction delay, decelerate to match the speed of

the vehicle being followed. Should the desired gap distance be too small, the vehicle will react to avoid an accident by a sharp reduction in speed. Lane changing movements are also based on human decisions that are influenced by perceptions of surrounding vehicles in a similar fashion.

VISSIM simulates traffic flow by moving “driver-vehicle units” through a network. Every driver with specified behavioral characteristics is assigned stochastically to a specific vehicle. As a consequence, driver behavior corresponds to the technical capabilities of the vehicle. Attributes characterizing each driver-vehicle unit can be discriminated into three categories; these are 1) technical specification of the vehicle, which includes length, maximum speed, potential acceleration, actual position within the network, and actual speed and acceleration; 2) behavior of the driver-vehicle unit based upon the psycho-physical sensitivity thresholds of the driver, memory of driver, and acceleration based on current speed and the driver’s desired speed; and, 3) interdependence of driver-vehicle units, including relative position of leading and following vehicles on own and adjacent travel lanes, relationship to the current link and the next intersection, and to the next traffic signal. The traffic volume that enters a specific link in a specified time period can be input and within this time period, vehicles enter the link based upon a Poisson distribution.

To determine traffic signal synchronizations, the TRANSYT 9 model can be used to specify signal timing cycles and off-sets (18). The representation of the network (link lengths, junctions and traffic signal details) in TRANSYT is the same as in VISSIM, thus making this process relatively simple. Further details of how these models were integrated is outlined in (19).

CMEM is a modal emissions model that estimates light duty vehicle emissions produced as a function of the vehicle’s operating mode. The model can predict second by second emissions for HC, CO, NO_x, and CO₂ and fuel consumption for a wide range of

vehicle/technology categories (14). CMEM is a physical, power demand model that has been developed by a team from the University of California at Riverside. It is based upon 23 vehicle technology categories and includes gross emitters with malfunctioning emission control systems.

There are also four operating conditions in the model. These are, 1) the variable soak time start; 2) stoichiometric operation; 3) enrichment; and 4) enleanment. Hot stabilized operation encompasses conditions 2 through 4 and the model determines in which mode the vehicle is operating at a given moment by comparing the vehicle power demand with two power demand thresholds. The model does not determine initial soak times. These are specified by the user and represent the amount of time the vehicle has not been operating prior to being started. The model determines when the operating condition switches from a cold start condition to fully warmed-up operation. In the simulations that follow, we assume both a soak time of 9 hours (i.e., cold start operations) and 0 hours (hot-stabilized operations).

The vehicles used in the CMEM database are representative of those in Riverside County, California, in about 1997 when the data was collected. Clearly, the actual emissions from the current and future fleet will be relatively less as stricter emissions regulations are implemented in both the US and the European Union. However, the California fleet is also generally cleaner than the US national average due to stricter emission standards. Despite these limitations, for the purposes of this analyses, this is the best and most recent modal emissions database available.

To conduct the analysis that follows we used the outputs generated from simulation scenarios specified in VISSIM and adjust these for input into the batch mode of operation for the CMEM model. The batch mode has the advantage of tracking the vehicle operating history and therefore is more accurate than using the CMEM look-up tables. Full details are available in (19).

SIMULATION SCENARIOS

Two scenarios aimed at smoothing the flow of vehicle traffic were analyzed. The first is the merger of two arterial highways with a three-lane and two-lane highway merging into a three-lane highway. This is a typical bottleneck that disrupts traffic flow when congested and a typical solution would be to add an additional lane at the point of merger and downstream from the merger. We specify the highway as an urban priority arterial of functional category III, as defined in the *Highway Capacity Manual (20)*. The width of the lanes is 3.6 meters and the length within each link is 1.5 km. Only one direction of vehicle movements is simulated. This scenario is shown diagrammatically in Figure 1.

The initial traffic volume for our “base case scenario” is 2310 vehicles per hour, equivalent to a level of service E for the merged road, which indicates a relatively congested network. The upstream traffic volume is split between the two merging roads in proportion to the number of lanes (i.e., 3:2). Traffic is normally distributed over the one-hour period of the simulation in order to approximate a one-hour peak period. Vehicles enter the simulation with a random Poisson distribution. The vehicle types are kept proportional to the sample of vehicle types used in the CMEM model (14). Specific humidity was set to 75 grains of water per pound of dry air, which corresponds with the conditions under which the vehicles were tested. The desired speed distribution in the VISSIM model was assumed to be logistic with lower and upper limits of 40 km/h and 70 km/h respectively (other desired speed assumptions are discussed and evaluated further below). A time-step of 1 second was used. Recent work has found that a 1 second time step in VISSIM best replicates macroscopic traffic flow behavior (21).

Two sets of simulations are tested for each scenario, one with soak time set to 9 hours and the other with soak time set to 0 hours. In the former case this means that all vehicles are operating under cold start conditions which would be typical of a morning commute period;

in the latter case, it implies that all vehicles are running under hot-stabilized conditions in which the emission control system is operating most efficiently. This latter case is less realistic, but does set a lower bound on the potential emissions that are simulated.

This lane configuration and the traffic conditions represent the “base case” and we estimate initial levels of emissions for CO, HC, NO_x, CO₂, and consumption of fuel from this simulation. We then add an additional downstream lane and again simulate the level of emissions with the same volume of traffic, which is now free-flowing. Traffic volumes are then incrementally increased by one percent and simulated emissions recalculated. This was repeated until we reached a “break-even” point for each pollutant. The synthetic generation of new trips that are fed into the simulation essentially assumes that these have been induced by the traffic flow improvement.

The second scenario was to test the impact of the coordination of traffic signals along a road corridor. A four lane road with two lanes in each direction was simulated. The total length was 1.5 km and lane widths were 3.6 meters. Three traffic signals were placed along the road and in the “base case” scenario the signals were not coordinated. This scenario is shown in Figure 2.

The traffic volume for the peak-hour flow direction is 1250 vehicles per hour, which corresponds to a level of service C and for the non-peak direction is 600 vehicles per hour. The travel demand is assumed to have a uniform distribution. This is because it is assumed that the presence of the other traffic signals in the network, which are not simulated, control the flow of vehicles entering the simulated link. The timings of the traffic signals are coordinated using the TRANSYT model (described previously). Other settings for VISSIM and CMEM were as described previously under scenario 1.

Since VISSIM uses stochastic simulation, when comparing simulation results it is necessary to specify a constant random seed for each simulation. This specifies the starting

point of the simulation and by keeping the same random seed for each comparable simulation the outputs can be compared. We also conducted some limited sensitivity analyses of varying the random seed and found that this resulted in less than a two percent variation in results. For more detailed analyses it would be desirable to average the results of multiple simulations with different random seeds, but this was not done for this research. The results of our sensitivity analyses suggest that this would not significantly effect the reported results.

SIMULATION RESULTS

Results for the two scenarios described above are shown in Tables 1 and 2 for the case where all vehicles are operating under cold start conditions, which would likely be the case if these vehicles were engaged in a morning commute. In each case we initially calculate “base case” conditions including the average travel time for all vehicles that travel through the simulation. As can be seen in Tables 1 and 2, the initial conditions after the capacity increase or signal synchronization results in a reduction in travel time and total emissions for each pollutant. For scenario 1 (Table 1) initial reductions in emissions range from 14.57 percent for HC to 29.46 percent for CO₂. For scenario 2 (Table 2) the emission reduction is somewhat smaller ranging from 7.85 percent for HC to 18.97 percent for CO₂. These reductions are the net result of fewer accelerations and the relative change in vehicle speeds as simulated by VISSIM.

The simulated traffic flow is then increased until we reach the same level of emissions (for each pollutant) as was in the base case simulation. Results are shown in the lower part of Tables 1 and 2 for scenarios 1 and 2 respectively. For example, for scenario 1 (Table 1), when the traffic volume reaches 2580 vehicles per hour, HC emissions are equivalent to 13.01 kg (the base case). This means that for the same level of total vehicle emissions one can achieve an increase of 14.87 percent in the number of vehicles on the simulated network. In both scenarios travel times do not decrease to the base case level until significantly more

vehicles are using the network. Clearly, if the goal is allowing more vehicles to use the network without increasing overall delay, then these type of policies can be relatively effective.

The impact on emissions is less encouraging. Emissions for each of the pollutants reaches its base case level with relatively small increases in total traffic volumes. For the synchronization of traffic signals (Table 2) this ranges from an 8.10 percent increase in traffic volumes for HC to a 19.01 percent increase for CO₂. The capacity increase (Table 1) allows somewhat larger increases in traffic volume ranging from 14.87 percent for HC to 25.12 percent for CO₂ until base case levels are reached.

These results assume that all vehicles are operating under cold start conditions (i.e., a 9 hour soak time in the CMEM model). Therefore, the simulations can be considered to represent morning peak hour traffic. The new vehicles that are input into the network all represent newly generated trips, rather than trips diverted from other times of day or other routes. More detailed simulations may be able to consider these effects more fully, however, these results do represent a major component of potential induced travel.

For comparison, both scenarios were tested using a soak time of 0 hours which is equivalent to hot-stabilized vehicle operation (i.e., with the emission control system operating at optimal performance). These results are shown in Tables 3 and 4. The total emissions in the base case are substantially lower for HC, CO, and NO_x due to the elimination of any cold starts in the simulations. In most cases the emissions are over 50% less than in the scenarios under cold start conditions (Tables 1 and 2). This clearly highlights the importance of properly accounting for cold starts in the simulation. Note that CO₂ emissions and fuel consumption are essentially the same as they are not affected by the catalytic convertor (actually, the catalyst may marginally reduce efficiency and CO₂ emissions are marginally higher in scenario 2 under hot-stabilized operations).

Breakeven points are consequently much higher as can be seen in the lower part of Tables 3 and 4. For example, the breakeven point for HC emissions under scenario 1 is now 2813 vehicles as compared to 2580 vehicles in the cold start simulation. CO₂ breakeven points are essentially the same since the catalytic convertor has no beneficial effect on CO₂ emissions.

In the scenarios with hot-stabilized emissions we are essentially not inducing new vehicle trips since we are not modelling cold start emissions. One interpretation of this could be that these vehicles are being shifted from other routes or other times of day which would not represent induced travel or increases in VMT. Therefore one would need to estimate the reduction in emissions on alternative routes or time periods to accurately assess net impacts. The scenarios with hot-stabilized emissions can only be interpreted as an upper bound on possible effects as in reality one would expect new trips to be generated and some mix of vehicle operating modes to be affected by any traffic flow improvement.

Sensitivity analysis was also performed to test various assumptions used in the VISSIM micro-simulation package. In particular, we examined the “desired speed” distribution used by VISSIM. Variation in this parameter can change the relative aggressiveness of the driving behavior simulated, in terms of the relative speeds and accelerations that are simulated. The base case simulation assumed that the desired speed is between 40-70 km/hr and that it follows a logistic distribution. This distribution would imply that most vehicles are in the mid-range of the desired speed bracket with fewer slower and faster vehicles in the extremes of the distribution. In our sensitivity analyses we examined five other speed distributions all with a linear distribution of desired speeds.

The emissions calculated with these alternative desired speed distributions using the network of scenario 1 are compared to the base case results for scenario 1 in Table 5. In general, the percent difference is relatively small, and in most cases less than 7 percent. Only

in one case does the emissions level increase by more than 10 percent for CO and over 20 percent for CO₂ and fuel consumption. This is with a desired speed distribution of 30-70 km/hr. It is not clear why this results in a larger difference other than that this case has the lowest level of desired speeds compared to the other cases. Further investigation of this has not been examined but this is an area that could be analyzed in more detail to determine how the micro-simulation parameter settings affect the absolute value of emissions that are estimated.

INDUCED TRAVEL ELASTICITIES

One of the key questions associated with policies to improve traffic flows is whether the emissions benefits achieved in the short-run will endure in the long-run. If the traffic flow improvement actually induces new trips or longer trips, then it is unclear how long these benefits may last. As can be seen by the results in Tables 1 and 2, the percent increases in traffic at which emissions reach the base case level, are not particularly large. From these values, we can estimate what elasticity of travel demand (with respect to travel time) are represented by these “break even” points. An elasticity can be interpreted as representing the percent change in travel (represented by VMT) that occurs due to a percent change in travel time. Larger absolute values represent a larger effect (in the case of travel time elasticities, which are negative, smaller real values represent a larger effect).

Elasticity values are shown in Tables 1 and 2 for the cold start scenarios. These basically represent the percent increase in the number of vehicle trips with respect to changes in average travel time and are calculated as follows:

$$\eta_v = \frac{\Delta v}{v} \div \frac{\Delta T}{T}$$

where,

v = total number of vehicle trips
 T = average travel time

Given that the trip length of the networks is constant in both cases, we can equate the number of vehicle trips with the vehicle miles of travel in the network, so these can also be interpreted as elasticities of VMT with respect to travel time.

Elasticities of VMT with respect to travel time can be about -1.0 in the long run with short-run elasticities being about -0.5 (3). The elasticities derived from our simulation results with cold start emissions for the break-even point of emissions are all within this range, with only two exceptions. This implies that long-run emissions reductions cannot be achieved if we anticipate travel to be induced by the traffic-flow improvement project. This is particularly true in the case of HC emissions where the elasticity value for the breakeven point ranges from -0.52 to -0.56 , clearly within the range of estimated elasticity values. The two exceptions are for CO₂ emissions and fuel consumption in scenario 2 (signal synchronization) which are -1.21 and -1.14 implying that if VMT increases with a long run elasticity of -1.0 , then CO₂ emissions and fuel consumption are still below the base case level.

In the scenarios with hot-stabilized operation in which there are no new trips generated, the absolute value of the elasticities are all less than 1.0, but are substantially higher than when new trips are assumed to be generated. This calculation does not include possible net reductions in emissions that would come from the diversion of this increased traffic from elsewhere. For scenario 2, the absolute value of the elasticities all exceed 1.0. These results represent a potential upper bound on the elasticity effects, although as stated previously net emission changes are not calculated.

The elasticity derived from the change in travel times is -2.86 and -3.16 for scenario 1 and 2 respectively. This implies that even though emissions are likely to increase above the base case when new trips are generated, travel time improvements will tend to endure. However, this also assumes that no additional trips are diverted from other times and routes,

which could further degrade travel times as well as have a further impact on emissions.

Therefore, while we don't count diverted emissions in the hot-stabilized scenarios we also don't count potential diverted emissions in the cold start scenarios which could actually increase total emissions.

Another source of uncertainty may actually lead to lower break-even points. Many trips will be longer if travel speeds are reduced. Our simulation does not consider extra emissions from longer trips but only new trips that are generated in response to the travel time reductions. If trip distances increase, the break-even points would be lower, further diminishing the initial reduction in emissions.

DISCUSSION AND IMPLICATIONS FOR POLICY

This research has analyzed how traffic-flow improvement projects can potentially affect pollutant emissions and fuel consumption in both the short-term and the long-term. This was accomplished by using the VISSIM micro-simulation package and the CMEM emissions database. Results clearly show that initial benefits exist, with emissions being reduced when the same volume of traffic flows more smoothly. However, the initial emission reductions would not endure if the flow improvement induces or generates new cold start trips. While the actual break-even points vary with the pollutant considered, in general if the elasticity of VMT with respect to travel time is -1.0 , then in the long-run, total emissions will be higher after the traffic-flow improvement (except in the case of CO₂ emissions and fuel consumption in our scenario 2). This occurs even when longer trips, due to the reduction in travel times, are not explicitly considered.

This has implications for what projects are selected for their emission reducing potential. If the objective is to increase total traffic on a given network, that is, to increase total mobility, then our simulations suggest that this can be achieved (since absolute travel time elasticities are much greater than 1.0). However, this is accomplished only at the

expense of more emissions. These results suggest that traffic-flow improvements and capacity expansion projects are unlikely to provide lasting emission reduction benefits.

In the US, the Congestion Mitigation and Air Quality (CMAQ) program has provided funding for many projects that expand highway capacity and improve traffic flow. These are often used as a means of attaining conformity of transportation plans with state implementation plans for achieving air quality standards. These results are based on modeling analyses that does not consider either the microscopic dynamics of traffic behavior and often do not include the induced travel effects of the project. Our analysis suggests that the use of more sophisticated micro-simulation and modal emissions data provides an alternative result. With regard to CMAQ funding, these results suggest that the funding provided to traffic-flow improvement projects has probably not resulted in long-term emissions reductions. About one-third of CMAQ funds have normally been used for traffic-flow improvement projects (22). We would recommend that these type of projects receive more detailed modeling in the future to more accurately assess their emission benefits before CMAQ funding is allocated and before these projects are used as a means of attaining conformity with state implementation plans.

In the UK and Europe, one key area of policy is the redistribution of traffic between modes, for example by using road capacity for bus lanes or for pedestrianized areas. Essentially, this an attempt to suppress demand. Research in the UK has documented many case studies showing the potential suppression of traffic from capacity reductions (23). Critics would contend that these policies would increase total emissions since traffic will now be more congested. Further analyses (not shown) suggests a parallel effect to what has been derived here for induced travel (19). That is, the long-term suppression of traffic would be enough to off-set any increases in emissions from reduced traffic flow.

Further research in this area can provide additional robustness to these results. In particular, additional sensitivity analyses to explore how various micro-simulation input parameters may vary the simulated outputs. We have examined various “desired speed” distributions but not in extensive detail. Development of more extensive networks would allow analyses of dynamic routing to capture some effects from trip diversion and also changes in trip lengths. This would also allow a fuller mix of different vehicle operating modes to be captured (i.e., cold starts and hot-stabilized operations). Analyses of different network configurations and how their relative effect on emissions may vary would also be informative. The benefits of this research is that we need no prior information on actual behavior related to travel demand but can focus purely on aggregate effects using highly disaggregate vehicle behavior simulations, as has been demonstrated by our results.

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TABLE 1 Base case, initial conditions, and breakeven results for scenario 1, under cold start conditions.

	Traffic volume (veh/hr)	Average peak hour travel time (sec)	HC (kg)	CO (kg)	NO _x (kg)	CO ₂ (kg)	Fuel consumption (kg)
Base case conditions	2246	294.66	13.01	191.09	6.03	2630.02	623.70
Initial conditions after capacity increase	2246	217.11	11.12	156.36	4.97	1855.11	452.70
Percent change	-	-26.32	-14.57	-18.17	-17.51	-29.46	-27.42
Breakeven results	Breakeven traffic volume (veh/hr)		Percent increase over base case		Breakeven travel time elasticity		
Average peak hour travel time	3937		75.29		-2.86		
HC	2580		14.87		-0.56		
CO	2633		17.23		-0.65		
NO _x	2616		16.48		-0.63		
CO ₂	2810		25.12		-0.95		
Fuel consumption	2770		23.34		-0.89		

TABLE 2 Base case, initial conditions, and breakeven results for scenario 2, under cold start conditions.

	Traffic volume (veh/hr)	Average peak hour travel time (sec)	HC (kg)	CO (kg)	NO _x (kg)	CO ₂ (kg)	Fuel consumption (kg)
Base case conditions	1786	187.00	7.96	102.78	3.11	1124.55	279.69
Initial conditions after signal synchronization	1786	157.60	7.34	91.30	2.68	911.20	231.54
Percent change	-	-15.72	-7.85	-11.17	-14.00	-18.97	-17.22
Breakeven results	Breakeven traffic volume		Percent increase over base case		Breakeven travel time elasticity		
Average peak hour travel time	2673		49.66		-3.16		
HC	1931		8.10		-0.52		
CO	1991		11.45		-0.73		
NO _x	2035		13.94		-0.89		
CO ₂	2125		19.01		-1.21		
Fuel consumption	2106		17.90		-1.14		

TABLE 3 Base case, initial conditions, and breakeven results for scenario 1, under hot-stabilized conditions.

	Traffic volume (veh/hr)	Average peak hour travel time (sec)	HC (kg)	CO (kg)	NO _x (kg)	CO ₂ (kg)	Fuel consumption (kg)
Base case conditions	2246	294.66	5.09	93.77	3.10	2529.66	547.39
Initial conditions after capacity increase	2246	217.11	3.50	68.36	2.16	1835.10	397.05
Percent change	-	-26.32	-31.32	-27.10	-30.51	-27.46	-27.46
Breakeven results	Breakeven traffic volume		Percent increase over base case		Breakeven travel time elasticity		
Average peak hour travel time	3937		75.29		-2.86		
HC	2813		25.24		-0.96		
CO	2671		18.92		-0.72		
NO _x	2777		23.64		-0.90		
CO ₂	2780		23.78		-0.90		
Fuel consumption	2792		24.31		-0.92		

TABLE 4 Base case, initial conditions, and breakeven results for scenario 2, hot-stabilized conditions.

	Traffic volume (veh/hr)	Average peak hour travel time (sec)	HC (kg)	CO (kg)	NO _x (kg)	CO ₂ (kg)	Fuel consumption (kg)
Base case conditions	1786	187.00	2.19	35.55	1.21	1156.60	246.50
Initial conditions after signal synchronization	1786	157.60	1.79	27.22	0.93	969.88	205.38
Percent change	-	-15.72	-18.22	-23.44	-23.25	-16.14	-16.68
	Breakeven traffic volume		Percent increase over base case		Breakeven travel time elasticity		
Average peak hour travel time	2673		49.66		-3.16		
HC	2111		18.20		-1.16		
CO	2158		20.83		-1.32		
NO _x	2142		19.93		-1.27		
CO ₂	2100		17.58		-1.12		
Fuel consumption	2096		17.36		-1.10		

TABLE 5 Sensitivity analysis of desired speed distributions

	Percent Difference from the "Base Case" Scenario 1 under cold start conditions				
	40-70 km/hr	50-70 km/hr	30-70 km/hr	40-80 km/hr	40-60 km/hr
HC	3.59	-0.49	10.40	2.20	3.43
CO	3.72	1.37	10.08	5.79	0.07
NO _x	1.83	6.21	6.75	6.63	-3.57
CO ₂	5.94	1.98	23.16	4.00	5.81
Fuel	5.55	1.84	20.89	4.23	4.89

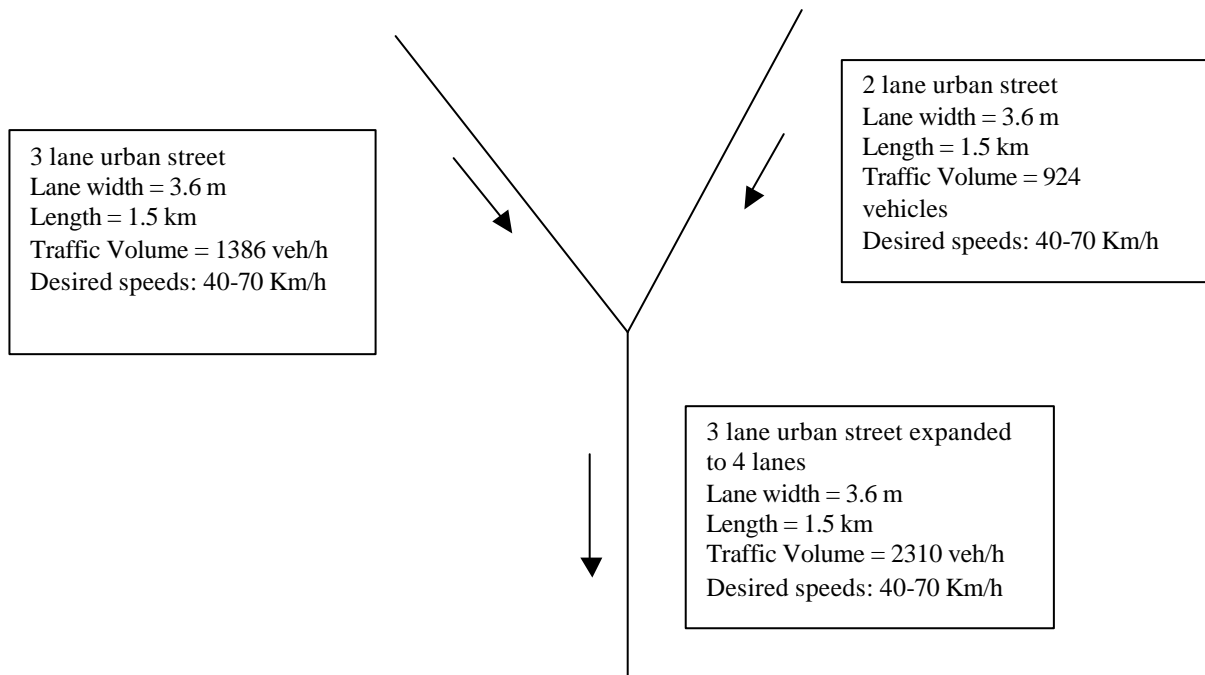


FIGURE 1 Scenario 1, two merging roads with bottleneck

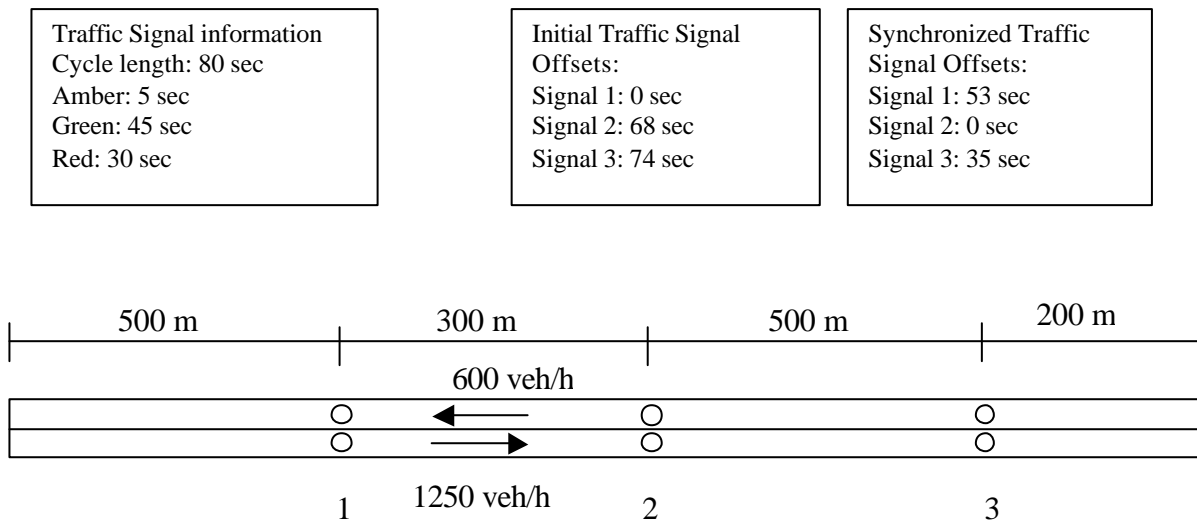


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TABLE 4 Base case, initial conditions, and breakeven results for scenario 2, hot-stabilized conditions.

TABLE 5 Sensitivity analysis of desired speed distributions

FIGURE 1 Scenario 1, two merging roads with bottleneck

FIGURE 2 Scenario 2, synchronization of traffic signals along a corridor

**A REVIEW OF THE EVIDENCE FOR INDUCED TRAVEL AND
CHANGES IN TRANSPORTATION AND ENVIRONMENTAL
POLICY IN THE UNITED STATES AND THE UNITED KINGDOM**

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ABSTRACT

This paper reviews recent research into the demand inducing effects of new transportation capacity. We begin with a discussion of the basic theoretical background and then review recent research both in the UK and the US. Results of this research show strong evidence that new transportation capacity induces increased travel, both due to short run effects and long run changes in land use development patterns. While this topic has long been debated amongst transportation planners, the fundamental hypothesis and theory has long been apparent in studies of transportation economics and planning that evaluated different issues (e.g. travel time budgets and urban economic development effects). We summarize much of this work and relate the theoretical issues to recent empirical research. We then proceed to examine recent changes in transportation and environmental policy in the US and the UK. The role of the new knowledge of induced travel effects would be expected to lead to changes in the conduct of transportation and environmental policy. Changes in policy and implementation of those policies are still occurring and we provide some suggestions on how to move forward in these areas.

1. INTRODUCTION

Transportation policy has normally been influenced by the desire to provide mobility and efficient access to alternative destinations primarily by alleviating traffic congestion. In the US this has focused around construction of the Interstate Highway System and provision of capital assistance for public transport systems in urbanized areas. The UK has followed a similar approach with a large expansion of the Trunk Road system.¹ Historically the UK has placed great emphasis on cost benefit assessment of road projects to help prioritize projects. In the US, assessment procedures have normally focused on evaluating alternative options, mainly to assess and mitigate environmental impacts. Recent research into induced travel effects, which we review, suggests that these procedures do not fully account for the impact of changes in transportation facilities.

Recently both countries have attempted to move towards more integrated transportation policies. This began in the US with enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and subsequent reauthorization as the Transportation Equity Act for the 21st Century (TEA-21) in 1998. In the UK the central government issued a White Paper in 1998 laying out a strategic direction for transportation policy (Department of Environment, Transport and the Regions, 1998a). The latter reflected research conducted by the Standing Advisory Committee on Trunk Road Assessment (1994), commonly known as SACTRA, on the impacts of induced travel as well as environmental concerns over future growth in travel (Goodwin, 1999). In the US capacity enhancing projects are increasingly being challenged as either ineffective at reducing congestion or as likely to result in the continuation of sprawl development patterns and inefficient land use.

This paper reviews the theoretical and recent empirical evidence for induced travel effects, focusing on the US and the UK. We begin with a review of the behavioral relationships underlying the theory of induced travel and review much of the recent research that documents and empirically measures induced travel effects. We then examine how transportation and environmental policy is changing in response to the

¹ Trunk roads in the UK are the responsibility of the central government and carry the bulk of long distance and through traffic.

empirical findings both in the US and the UK. We suggest areas of improvement in the decision making process to fully recognize the consequences of induced travel behavior on both transportation and environmental policy.

2. INDUCED TRAVEL: THEORY AND DEFINITIONS

The underlying theory behind induced travel is based upon the simple economic theory of supply and demand. Any increase in highway capacity (supply) reduces the generalized cost of travel, especially on congested highways, by reducing the time cost of travel.

Travel time is the major component of variable costs experienced by those using private vehicles for travel. When any good (in this case travel) is reduced in cost, the quantity demanded of that good increases.

Travel supply and demand and the induced travel effect are illustrated graphically in Figure 1. The line S1 is supply before a capacity expansion or other changes that lower the generalized cost of travel. The line S2 is supply after the change in capacity, resulting in a lower generalized cost of travel due to lower travel time costs. The quantity of travel demanded increases from Q1 to Q2 as the change in supply lowers the cost of travel from P1 to P2. Figure 1 assumes no change in underlying demand. For example, population growth is not depicted in Figure 1. The increase in the quantity of travel from Q1 to Q2 represents the induced travel effect.

In measuring the induced travel effect there are many confounding factors that also drive growth in vehicle miles of travel (VMT). Population growth, increases in income, and other demographic effects, such as increased numbers of women in the workplace, are often cited. Figure 2 shows how these effects can be graphically illustrated. The demand curve shifts outward from D1 to D2 because total demand for travel is larger at a given price when, for example, population increases in an area. The demand and supply curves shift simultaneously in Figure 2, and the resulting quantity of travel increases even more than in Figure 1 (to Q3). Empirically, it is difficult to isolate these two concurrent effects, and the relative contribution to VMT growth of different factors. In Figure 2, the induced travel effect is measured along the horizontal axis as the

difference between Q2 and Q1, while the effect from exogenous growth is the difference between Q3 and Q2.²

Induced travel naturally assumes some elasticity of demand associated with travel. That is, as the price (or time cost) of travel changes, the amount of travel demanded changes. Goodwin (1992) reviewed a number of studies of the elasticity of travel with respect to fuel prices. He concludes that elasticities of VMT with respect to gasoline prices range from about -0.16 in the short run up to -0.30 in the long run.³ However, traffic engineers have traditionally assumed that travel demand has totally inelastic demand implying that total travel will be constant irrespective of changes in the price (or time cost) of travel. This and the attribution of travel growth to exogenous factors is the source of much of the disagreement over the fundamental existence and nature of induced travel effects.

Another common source of disagreement is how to define induced travel. For example, does this just include new trips or should longer trips also be included? Litman (2001), for example, distinguishes between induced traffic and generated traffic, where the latter includes diverted traffic (from other routes), while induced traffic does not include any diverted traffic. We define induced travel to be an increase in VMT, since VMT growth is one of the primary sources of increased environmental and social costs as well as representing the potential benefits of increased mobility. In the simplest terms induced travel (or VMT) can be broadly defined as the increase in VMT attributable to any transportation infrastructure project that increases capacity.

Hills (1996) and Litman (2001) provide a useful categorization of the various behavioral effects one can expect from highway upgrades or capacity expansions. Immediate behavioral effects include: changes in the timing of departure due to rescheduling of trips (Small, 1982); switching of routes to take advantage of new capacity; switches between transportation modes such as switching to private vehicle use from public transport; longer trips; and an increase in total trips taken. The most visible of these effects (as shown by the difficulty of reducing peak period congestion) tends to be rescheduling behavior that results in travelers returning to their preferred peak travel

² The relative scale of the effects in Figure 2 do not necessarily represent actual magnitudes.

³ This is distinct from Goodwin's conclusions on the price elasticity of fuel consumption, which ranges from

times. However, this effect does not necessarily result in an increase in VMT and so would not represent induced travel.⁴ However, shifts to the peak that free up capacity at other times of the day can result in new trips being made at those times that are now less congested.

Route switching can result in either shorter or longer distances being traveled. If the net effect is more travel this is clearly defined as induced VMT. If speeds are now faster, some additional long trips (perhaps recreational in nature or to more distant shopping centers) are likely to be taken increasing total VMT.

In addition to these short run effects, various longer run effects are hypothesized to have a significant impact on total VMT growth. One long run effect would be increases in household auto ownership levels. Other long run effects occur due to changes in relative accessibility within an urbanized area and can result in the spatial reallocation of activities. If speeds are higher, many residences, employees, and businesses will tend to relocate over time often resulting in longer distance trips (Gordon and Richardson, 1994).⁵ The concentration of retail activities in “big box” stores or auto-dependent regional shopping centers (rather than centrally located business districts) further increases VMT. Finally, increases in highway capacity may lead to changes in land development patterns within a region.

The theory of induced travel is consistent with Downs (1992) theory of “triple convergence”. Downs (1992) formulated this theory to explain the difficulty of removing peak-hour congestion from highways. In response to a capacity addition three immediate effects occur. Drivers using alternative routes begin to use the expanded highway, those previously traveling at off-peak times (either immediately before or after the peak) shift to the peak (rescheduling behavior as defined previously), and public transport users shift to driving their vehicles.

Mogridge et al. (1987) extends this idea to the Downs-Thomson paradox whereby road capacity increases can actually make overall congestion on the road worse. This

about -0.25 in the short run up to about -0.8 in the long run.

⁴ Peak shifting that does not noticeably reduce aggregate travel times does suggest that the benefits of most projects are not accurately assessed. This suggests that rather than assessing benefits based only on travel times an assessment based on the ability to travel at a preferred time should be done (Small, 1992).

⁵ While the work of Gordon and Richardson is generally meant to extoll the virtues of suburban land development patterns, their analysis of stability in work travel times while travel speeds increase, provides

occurs when the shift from public transport causes a disinvestment in the mode such that the operator either reduces frequency of service or raises fares to cover costs. This shifts additional passengers into cars. Ultimately the system may be eliminated and congestion on the original (expanded) road is worse than before. Arnott and Small (1994) provide a mathematical example of this effect.

Another theoretical framework assumes that total time budgets allocated to travel remain relatively constant over time. This was shown empirically by Zahavi & Ryan (1980) and Zahavi & Talvitie (1980). Gordon and Richardson (1994) have shown that over time, relatively constant average commute travel times are maintained. The travel time savings from increased travel speeds tend to be off-set by increased travel distance, rather than actual travel time savings. Thus, individual travel time budgets tend to remain constant. One could argue that full induced travel effects could actually increase the travel time budget if the generalized cost of travel is reduced. However, even without an increase in the travel time budget, a constant travel budget could result in an increase in VMT from capacity additions and the increased travel speeds that are then possible.

Clearly, the theoretical understanding and the potential behavioural characteristics for induced travel effects is well established. Clear empirical evidence has, until recently, remained elusive. This is partly due to the difficulty of statistically separating the many effects that also increase total VMT and establishing clear causal relationships. These issues and a review of the empirical work is presented next.

3. INDUCED TRAVEL: EMPIRICAL STUDIES AND VERIFICATION OF THE THEORY

Induced travel has been a topic of research in transportation planning and economics for many years. Goodwin (1996) provides a review of some of the historical evidence in the UK going back to a report done for the UK Ministry of Transport in 1938 that evaluated a significant increase in traffic on a new road. Much of the historical literature has been based on observational traffic counts within travel corridors. These studies have generally not accounted for other exogenous effects that could also contribute to growth

good empirical evidence for induced travel.

in VMT. Pells (1989) also cited many previous publications to estimate that much of the increase in traffic flows was due to induced traffic.

The Transportation Research Board (1995) also reviewed historical literature. The methods used in many of these studies involved measuring traffic counts before and after the construction of a new facility (e.g. Jorgensen, 1947; Lynch, 1955). Adjustments were then made to control for ‘normal’ growth in the corridor and the resulting difference was attributed to the new highway capacity. While these studies are suggestive of an effect, statistically it is not possible to explicitly attribute differences in traffic to the new capacity.

While much of this historical literature is suggestive of strong induced travel effects, these studies did not use statistical models to control for other effects that cause VMT growth. In addition, much of the historical research appears within the “grey literature”, consisting of consultant reports, conference proceedings, and other sources not normally subjected to academic peer review.⁶

The remainder of this review will focus on two distinct streams of research on induced travel that have been pursued over the last several years. These parallel streams occurred in the UK and the US. We review both strands of research, most of which has been published in academic journals, and which provide persuasive empirical evidence for the existence of induced travel.

Studies in the United Kingdom

The recent spate of empirical work in induced travel was initiated by the Standing Advisory Committee on Trunk Road Assessment (1994) investigation and report to the UK Department of Transport. This study, commonly referred to as the SACTRA report, included a review of relevant theory and empirical studies. It also included a detailed review of traffic growth within specific corridors that had an increase in capacity, concluding that many corridors had seen greater than expected traffic growth and that this growth was probably not solely attributable to other impacts such as increases in income. In addition, the studies reviewed focused on traffic counts, rather than changes in VMT, which may mask the effect of some trips now being longer than they were previously. On average, actual use of a road during the first year after its completion was more than

10% greater than the forecast usage. While some of this may simply be due to inaccuracy in the forecasts (other than the lack of accounting for induced travel effects), these studies also showed that traffic flows on parallel routes that the roads were intended to relieve were also either higher or about the same as before.

The Standing Advisory Committee on Trunk Road Assessment (1994) report indicates that some of the forecast inaccuracy may be due to underestimates of the rate of increase in GDP (as used by the National Road Traffic Forecast). The UK Department of Transport considered this to be the primary effect of the underestimation of traffic growth on the schemes studied and thus discounted the evidence for induced travel occurring. The Standing Advisory Committee on Trunk Road Assessment discounted this argument for several reasons including potential problems with the timing of the measurements (taken only one year after the schemes were completed) and the lack of a broader measurement of total traffic on alternative roads. They also note that forecast traffic on motorways and bypasses was usually larger than for smaller schemes, which would be expected if induced traffic was occurring. The arguments in the SACTRA report also hint at the endogeneity of economic growth and highway capacity additions. The latter may have an impact on overall economic growth as we discuss further below. To some extent, however, the potential forecasting errors could be from numerous factors, including lack of accounting for induced travel, therefore it is difficult to draw firm conclusions from this analysis, other than to demonstrate the weakness of current forecasting procedures.

Rodier and Johnston (2001) analyzed errors in various socioeconomic forecasts and the impact on travel forecast error. This was done for the Sacramento, California region. They found that plausible errors in personal income and fuel price forecasts had no significant impact. However, errors in population and employment growth had a significant impact. Therefore it is reasonable to assume that some of the forecast errors reviewed by the Standing Advisory Committee on Trunk Road Assessment (1994) are from these type of errors, though separating the sources of errors in demographic projections and omission of induced travel effects is questionable.

⁶ These reports are not always archived in university libraries, making them difficult to find.

The Standing Advisory Committee on Trunk Road Assessment (1994) and Goodwin (1996) derive travel time elasticities with respect to VMT using fuel price elasticities with respect to VMT. This is done for the elasticity range of -0.15 to -0.30 reported by Goodwin (1992). Using an assumption of 6 pence (9 cents) per minute as the value of time, 25 minutes of average time spent traveling and 50 pence (75 cents) spent per day on fuel, he derives an elasticity range of -0.45 to -0.90 (or as he summarizes, nearly -1.00).

While it is not clear how the assumptions on time spent traveling and fuel costs were derived, it is clear that if we use US prices for gasoline, which are about 4 times less than in the UK and assume somewhat lower average vehicle efficiency, we can easily see that elasticity values in the US must be larger. Assuming a gasoline price of \$1.25 per gallon, average speed of 30 mph, and fuel efficiency of 27.5 mpg, then US elasticities would range from -0.56 (short run) to -1.18 (long run).⁷ The key result must be that if fuel prices are low, then more of a behavioural response can be expected from changes in travel speeds. That is, highway capacity effects will be larger if travel time accounts for a greater fraction of the total generalized cost of travel.

The Standing Advisory Committee on Trunk Road Assessment (1994) report had been commissioned to answer specific questions regarding induced travel. The first question was whether induced traffic is a “real phenomenon”. They concluded that induced traffic “can and does occur, probably quite significantly, though its size and significance is likely to vary widely in different circumstances.” They also concluded that induced traffic can affect the economic evaluation of a road scheme, i.e., affirmatively answering the question of whether induced traffic does matter. They also conclude that it matters most under conditions where the network is operating close to capacity, where demand elasticity is high, and in cases where a specific scheme is likely to result in large changes in travel costs. They were not able to draw any conclusions on which elements of travel behaviour are affected more or less (i.e., generation, distribution, mode choice, land use, etc.). The SACTRA report also included recommendations on how to improve appraisal and forecasting methodologies to account

⁷ Other assumptions used by Goodwin (1996) are held to be the same.

for induced travel. We address issues related to this below in our discussion of policy implementation.

Cairns et al. (1998) consider additional evidence for induced travel effects. Their study analyzed the impact of highway capacity reductions on traffic, essentially the reverse of adding new capacity. This study was commissioned in response to changes in the goals of transportation policy in the UK on finding ways of supporting alternative modes of travel while reducing total vehicle traffic levels. Improvements in public transport, pedestrian and walking facilities often require the reallocation of road space from motor vehicles. Many proposed projects would be avoided due to fears of “traffic chaos” should this occur. Cairns et al. (1998) reviewed both the theoretical evidence and over 40 specific case studies where road space had been either temporarily or permanently removed. Their overall conclusion was that “traffic chaos” did not occur, though there may be short-term transitional impacts. Overall traffic volumes were found to generally be reduced when road capacity was removed.

Studies in the United States

Shortly after the completion of the Standing Advisory Committee on Trunk Road Assessment (1994) report, the Transportation Research Board (1995) examined the issue of induced travel and the implications for air quality and energy use. This report provides extensive detail on the behavioral impacts from expanding road capacity. The primary focus of the report was on the capability of analytical models used for forecasting regional transportation growth and emissions of criteria pollutants to adequately account for induced travel effects. The consensus was that most modeling procedures are deficient and probably do not adequately capture induced travel effects or the behavioral and economic development impacts of road projects. Johnston and Ceerla (1996a, 1996b) verified this conclusion by modelling various infrastructure improvements in the Sacramento region and comparing results with and without feedback of initial travel time changes. They also showed that the lack of fully accounting for feedback effects could result in different rankings of the projects on their congestion reduction potential.

The TRB report was inconclusive on how induced travel may effect air quality. This issue is complicated by the relationship between traffic dynamics (such as changes in speed and acceleration characteristics) and emissions. However, the report clearly

concludes that reductions in travel time or generalized costs will result in both increased highway use and have a decentralizing effect on urban development.

Empirical work has attempted to separate the effects of other exogenous variables using econometric techniques. This recent body of work began with the work of Hansen et al. (1993) and Hansen & Huang (1997). They estimated econometric models using time series data on VMT and lane miles for state highways in California, by county and metropolitan area. The key innovation was the use of a fixed effects model specified as follows,

$$\log VMT_{it} = \alpha_i + \alpha_t + \sum_k \beta_k \log X_{it}^k + \sum_{l=0}^L \beta^l \log SHLM_{it-l} + \epsilon_{it} \quad (1)$$

where,

VMT_{it} is the VMT in region i in year t .

α_i is the fixed effect for region i ,

α_t is the fixed effect for year t ,

X_{it}^k is the value of explanatory variable k for region i and year t ,

$SHLM_{it-l}$ is state highway lane miles for region i and time $t-l$.

β^k, β^l are coefficients which are estimated,

ϵ_{it} is an error term, assumed to be normally distributed.

Fixed effect models with panel data include dummy (0-1) variables for each cross-sectional unit (less one) and sometimes for each year (again, less one). They are then normally estimated using ordinary least squares regression (OLS). Other variables included by Hansen & Huang (1997) in their analysis are population, personal income, population density, and gasoline prices, all of which are expected to have an effect on VMT growth.

The use of panel data and fixed effects estimation allows estimation of models when the analyst may not have data on all the causal factors that influence the dependent variable (Johnston and Dinardo, 1997). This is of critical importance in the analysis of VMT growth. Many factors have been suggested as drivers of recent growth in VMT. These include increased female participation in the work force, changing lifestyles amongst individuals, changes in family structure, levels of available public transport,

spatial patterns of development, and other factors that are either unknown or for which data is not easily available. Many of these factors may also be highly correlated with other variables such as per capita income or overall population growth, which can cause problems in estimating standard errors for the coefficients of interest.

As outlined by Johnston and Dinardo (1997), analysis of simple cross-sectional data using ordinary least squares estimation can result in biased estimates due to orthogonality between the independent variables and the time-invariant error term. Panel data allows the time-invariant terms to drop out, thereby removing the bias in estimation. Johnston and Dinardo (1997) point out that “with panel data it is possible to obtain consistent estimates of parameters of interest even in the face of correlated omitted effects when OLS on individuals’ cross sections would fail to do so!”.

Hansen & Huang (1997) estimate statistically significant coefficients on their lane mile variable using panel data and both OLS and a Prais-Winsten regression. The latter was done to correct for autocorrelated error terms that they found using OLS regression. Lane mile elasticities (with respect to VMT) of between 0.3 to 0.7 were found for models using county-level data.⁸ Elasticities of between 0.5 to 0.9 were found for models using metropolitan level data. Various lag structures were also tested and a two to four year lag structure resulted in long run elasticities that were greater than those in the unlagged models.

Noland (2001) estimated a number of similar panel regression models using nationwide data at the state level. In general, Noland finds similar elasticity values ranging from 0.3 to 0.6 in the short run and from 0.7 to 1.0 in the long run. The models estimated by Noland include a disaggregation of the data by road facility type (i.e., interstates, arterials, and collector roads by urban and rural road categories). These are estimated using Zellner’s seemingly unrelated regression and with a distributed lag (thereby allowing the derivation of a long run elasticity). Results for one of these models is displayed in Table 1. In addition, Noland (2001) estimates a growth (or difference) model. This has the beneficial effect of removing virtually any multicollinearity in the

⁸ These elasticities represent changes in VMT with respect to lane miles, therefore a positive sign implies that there is an increase in VMT with an increase in lane miles. Alternatively, travel time elasticities, as discussed by Goodwin (1992), will have a negative sign implying an increase in VMT with a decrease in travel times.

independent variables. The resulting lane mile coefficient estimates remain similar, ranging from 0.5 to 0.8, all with high levels of statistical significance.

An analysis of nationwide metropolitan level data by Noland & Cowart (2000) tells the same story. Long run elasticity values of 0.8 to 1.0 are derived using a distributed lag model estimated for VMT and lane miles specific to interstates and arterial road capacity.

One criticism of this work has been that it does not resolve the issue of causality, merely showing a correlation between lane mile expansion and VMT growth. Highway planners argue that since they have accurately forecast where individuals desire to travel they expect roads to fill up with travelers after they are built. However, this ignores the fact that they often become more congested more rapidly than initially planned, as Goodwin (1996) and the Standing Advisory Committee on Trunk Road Assessment (1994) showed for a sampling of projects in the UK. This may partially be a function of analytical forecasting tools that are not accurately capturing induced travel effects. In any case, many planners discount econometric analyses as merely proving that a correlation has been found and that these studies show that planners are putting highways where people want to travel. On the other hand, these studies certainly do not build a case for rejecting the induced travel hypothesis.

One approach for definitively addressing the issue of causality is to use an instrumental variable in the regression with a two-stage least squares estimation procedure. Noland & Cowart (2000) use a two stage least squares regression testing several instruments to use for lane miles per capita. Results are shown in Table 2. Urbanized land is tested as an instrument in model (A). This variable is not strongly correlated with per capita VMT but is significantly related to total lane miles per capita (increasing urbanized land area results in lower lane miles per capita). Model (A) has coefficient values very similar to OLS estimates. Model (B) removes population density which tends to interact with the dependent variable which is specified as a per capita variable. This reduces the value of the lane mile coefficient. Model (C) which has population / area as an instrument indicates some instability and lack of robustness in the lane mile coefficient. These results, while relatively weak, do suggest a causal linkage between increasing lane miles and increased VMT.

A study by Fulton et al. (2000) used cross-sectional time series county-level data from North Carolina, Virginia, and Maryland and estimated a two-stage least squares model. Their model is specified as a growth model with growth in VMT as a function of growth in lane miles. As an instrument they find that lane mile growth over either 2 years or 3 years is correlated with 1 year growth in lane miles, but not with 1 year growth in VMT. This is used to estimate individual state models and a model with data from all three states combined. Results are quite robust with an elasticity between 0.3 and 0.5. This model is reproduced in Table 3. Fulton et al. (2000) do not provide an estimate of long-run elasticities but one would expect these to be somewhat higher.

Cervero & Hansen (2001) estimate a two-stage least squares model with instrumental variables using county level data from California. They estimated a statistically significant lane mile elasticity of 0.559, very similar to the results of Fulton et al. (2000). They used various political and demographic variables to help explain the increase in road supply including the party of the governor (lagged by one year) and the proportion of a county's population that was white. They also found that the supply of lane miles can be explained by VMT, but with a smaller coefficient value of 0.328. Therefore their results suggest that causality may run in both directions but that the effect of lane miles on VMT is greater than the opposite effect. They also conducted a Granger test and found the results consistent with their instrumental variable model. Fulton et al. (2000) also conduct a Granger test with Maryland and Virginia data. While this test is not a basis for causality, they do confirm that VMT growth is preceded by lane mile growth, while the reverse cannot be established.

Overall the results of Fulton et al. (2000) and Cervero & Hansen (2001) are the most persuasive at showing a causal linkage between growth in lane miles and growth in VMT.

The work of Noland & Cowart (2000), Fulton et al. (2000) and Cervero & Hansen (2001) using two stage least squares estimation generally produces lower elasticity values than the studies of Hansen & Huang (1997) and Noland (2001), although the latter overlaps at the low end. This may indicate that there is some upward bias in the estimates from the latter two studies.

The studies mentioned above have all used aggregate data to test for statistical significance and to derive elasticity values. This is common practice in the economics literature, but has been criticized by transportation planners. The basis of this criticism is that we need to understand how individuals respond to changes in capacity to truly capture all the behavioural effects that might occur. A disaggregate analysis of this sort would certainly be of interest and is motivated largely by the desire of transportation planners to understand how specific projects may influence the behaviour of specific categories of individuals. This has been a goal of transportation modeling in response to criticisms of using aggregate zonal analysis. However, this does not undermine the benefits of aggregate analysis which is intended to look at aggregate effects and can provide valuable information to policy makers on the overall impact of capacity expansion.

Rodier et al. (2001) use disaggregate data from the Sacramento, California region to examine induced travel effects. Their study uses the integrated land use / transportation model, MEPLAN, to analyze the impact of various scenarios in the Sacramento region. They compare the effect of holding various modeling elements constant, such as changes in land use and trip distribution, as opposed to allowing these to be endogenously determined by the model. What they find is that allowing these inputs to be endogenous results in a large elasticity of VMT with respect to lane miles of 0.8 for a forecast out to 2015 and 1.1 for a forecast out to 2040. If land development is not endogenous, but instead is assumed constant, the elasticity values are reduced to 0.6 and 1.0 respectively. Holding population and employment location constant further reduces these values to 0.4 and 0.6 respectively. This latter is equivalent to the assumptions underlying most state of the art in regional travel demand models where trip distribution is derived through feedbacks and multiple iterations. Without feedback of the trip distribution step, which is more common amongst state of the practice travel demand models, an elasticity of 0.0 (for both future forecast years) is calculated, essentially assuming totally inelastic travel demand.

Rodier et al. (2001) make several major contributions. First, the range of elasticity values derived using a disaggregate regional integrated land use and travel demand model assuming full endogeneity gives elasticities similar to the aggregate

studies discussed previously. In fact, their elasticities are even higher than those studies that employ two stage least squares to account for causality. Second, they show that state of the art improvements to regional travel demand models can capture about 50% of the induced travel effect relative to current practice capturing no effect. Obviously, this latter result has important implications for assessment of alternative projects (which is discussed further below). Lastly, their analysis is based on individual behavioural elements establishing a clear causal link between behaviour and induced travel. Rodier et al. (2001) also show that about 50% of the long term induced travel effect is not captured by the use of travel demand models; in order to fully account for induced travel, regions would have to capture both travel and land use changes interactively.

Strathman et al (2000) combined the 1995 Nationwide Personal Transportation Survey (NPTS) data for 12,009 households with the Texas Transportation Institute (TTI) data (Schrank and Lomax, 1997) on road capacity in 48 metropolitan areas in order to produce a system of equations that include both a wide range of exogenous variables and four endogenous variables (commute mode, workplace density, residential density, and vehicle miles of travel). In addition they use three instrumental variables (likelihood of payment for parking at work, commute distance, and vehicle ownership). In this study, per capita roadway capacity was found to have a significant effect upon mode choice, residential density, workplace density, and vehicle miles of travel. Given an increase in roadway capacity, the cross-sectional analysis indicated that persons within the metropolitan area tended to be more likely to drive alone to work, live and work at lower densities, and generate higher VMT.

The direct effect of a ten percent increase in per capita roadway capacity is estimated to be a 2.9 percent increase in VMT, when all other variables are controlled for. This elasticity is consistent with the findings of Noland (2001), Noland and Cowart (2000), and Fulton et al. (2000). In addition to the direct effect of roadway capacity on vehicle miles of travel, Strathman et al. (2000) also found an indirect effect, through residential density and employment density. The estimations showed that reduced residential density results in higher vehicle miles of travel while reduced employment density results in lower vehicle miles of travel. This latter result may appear counter-intuitive unless one considers that lower density employment locations may in some

cases be closer to residential areas than higher density urban cores, though they would also tend to be less accessible by public transport. The net change of these two counteracting forces, was an estimated indirect elasticity of 0.033 between roadway capacity and VMT, which was about one-tenth of the magnitude of the direct effect.

Barr (2000) used disaggregate household data from the 1995 NPTS to examine induced travel effects. His study included 27,409 individuals from the NPTS. His key variable of interest was the amount of time spent traveling by each household. This was calculated by deriving the average travel speeds from the reported length of journeys and their reported duration. The inverse of the speed was used to derive the key variable of interest which was the average travel time. This study uses only a cross-sectional database and can only describe correlation and not causation. The use of reported measures of time and distance may also introduce potential inaccuracies in the data. However, some interesting observations can be drawn from Barr's study. Travel time elasticities ranged between -0.3 and -0.4. This is below the range suggested by Goodwin (1996). Barr (2000) also shows that elasticities are higher in urbanized areas compared to non-urbanized areas. This could be explained by higher congestion in these areas and greater access to alternative modes. While he states that urbanized areas have a higher elasticity (-0.36), it is really not much higher than for non-urbanized areas (-0.32). This may indicate no significant difference and his result that elasticities do not vary with metropolitan area size would tend to support the insignificance of the difference in these elasticities. He does show interesting elasticity differences for different family life cycles but suggests that much of this difference is due to higher income elasticities. Clearly, Barr's work shows that disaggregate analysis can offer additional information to policy makers on how capacity additions will impact various demographic groups.

A similar result on the effect of metropolitan area size was shown by Noland & Cowart (2000). They forecast the contribution of capacity additions to VMT growth for metropolitan areas of different size and areas with different congestion indexes as ranked by the Texas Transportation Institute (Schrank & Lomax, 1997). The forecasts showed that there was no difference in the contribution of capacity additions to new VMT between the different categories. Energy and Environmental Analysis, Inc. (1999) analyzed elasticity differences assuming that the ratio of VMT over lane miles was a

good proxy for congestion levels (using the same data as Fulton et al., 2000). They could not show any significant difference in elasticity values for the different models. These results are quite interesting as one would expect more congested areas to have larger elasticities. It is possible that this could indicate that land use and development effects play a larger role than existing congestion in inducing new VMT. Noland & Cowart (2000) suggest that this may be the case by analyzing the difference in the contribution of new capacity to forecast VMT growth between metropolitan areas. They conclude that areas with proportionally greater growth in lane miles can attribute more of their VMT growth to induced travel.

Chu (2000) developed a model to try to estimate elasticity changes for different levels of underlying congestion. In deriving his theoretical model of travel demand and highway supply he determines that incremental expansion in highway capacity will have smaller effects on vehicle travel. In testing this hypothesis, he also uses data from the NPTS and estimates the following model:

$$\log(q/C) = \beta_0 + \beta_1 \log(X^k) + \beta_2 \log(C) + \beta_3 (\log(C))^2 + \epsilon \quad (2)$$

where q is vehicle travel (VMT), C is a measure of capacity (lane miles), X^k refers to other variables included in the estimation, and ϵ is an error term. Using a cross-sectional database of metropolitan areas derived from the NPTS, Chu (2000) finds significant coefficients on both the β_2 and β_3 terms. He concludes that capacity does influence total traffic albeit with a diminishing effect as specified in his theoretical model.

Not all the studies cited have been able to show that induced travel is larger or more extensive when congestion is present. Chu's (2000) model provides the most convincing evidence of some correlated effects. While the empirical analysis is weak, theoretically we would generally expect more induced travel when congestion is higher and also more induced travel when land use and development controls are weak thereby allowing the market to respond to changes in the highway network. The Standing Advisory Committee on Trunk Road Assessment (1994) came to the conclusion that when large changes in generalized travel costs occur, induced travel is likely to be significant, based largely on theoretical grounds.

Our conclusion from the relevant literature is that the theory of induced travel can certainly not be refuted and is largely confirmed. Table 4 summarizes the elasticity

estimates from the studies discussed above. These coefficient values, while estimated with different data sets and different techniques, seem to suggest that lane mile elasticities are in the range of 0.3-0.6 with larger elasticities for long run effects.

A major relevant question is how important is induced travel compared to other drivers of VMT growth, or as the SACTRA report asked, “does it matter?”. Both Noland (2001) and Noland & Cowart (2000) estimate the relative contribution of induced travel to overall VMT growth. Noland (2001) applies the distributed lag model in Table 1 to forecast VMT growth out to 2010. He finds that if current trends in both lane mile increases and demographic variables continue, VMT will grow at about 2.65% annually. If lane mile growth is set to zero, this reduces VMT growth to about 1.9% annually. In other words, the induced travel effect accounts for about 28% of annualized growth in VMT. Noland & Cowart (2000) estimate this effect to average between 15-40% of annualized VMT growth (on interstates and arterials) for metropolitan areas. The lower range is probably more precise as this was derived from the better of the models that they estimated. Heanue (1998) uses data from Milwaukee, Wisconsin to estimate the contribution of induced travel to VMT growth. Using Goodwin (1996) and Hansen & Huang’s (1997) elasticity estimates, Heanue (1998) determines that between 6-22% of VMT growth is due to capacity additions. These results strongly suggest that forecasting VMT growth (and the environmental impacts of that growth) needs to include some measure of transportation infrastructure as a determining factor.

The modeling work of Rodier et al. (2001) shows that the long term land use development effects can be a large additional source of increased VMT associated with highway expansion. Another stream of research has investigated the impact of road infrastructure on overall development. Amongst these are Boarnet (1998) and Chandra & Thompson (2000) who estimate models that demonstrate that the spatial allocation of development is affected by road infrastructure. In essence, these studies indicate that development is induced by new road infrastructure. Boarnet & Chalermpong (2001) relates changes in housing values, as an indicator of the increased demand for housing, to increased road infrastructure with the implication that this induces additional VMT.⁹

⁹ These studies are also consistent with studies that suggest that public investment (which is dominated by investment in transportation infrastructure) increases overall economic productivity (see, for example,

Boarnet (1997) attempts to reconcile the literature on development impacts from highway projects. He suggests that while from a regional perspective highway projects may have little if any growth inducing impacts, they may have significant impacts within specified corridors or sub-regional areas. The result is that highway projects may simply redistribute existing growth within a metropolitan area. To a large extent, this growth will be in ex-urban areas that are receiving gains in accessibility at the expense of downtown or older suburban areas.

The theory of induced travel, whether by immediate behavioural travel adjustments or longer term land use impacts, appears to be clearly justified. Transportation planners have been reluctant to accept this conclusion that essentially challenges the notion that transportation projects can substantially reduce traffic congestion. However, the implication should not be that transportation projects have no benefit. It merely implies that the benefits cannot be attributed to changes in travel time. Going back to basic urban economic theory, induced travel effects imply that the changes in behaviour are translated through changes in land price valuation (i.e., the bid-rent curves of urban economics, see for example, Mills & Hamilton, 1994). This conclusion changes the context of transportation policy from congestion reduction to one of directing the growth of urbanized areas. We turn to a discussion of these issues and transportation policy in both the UK and the US.

4. INDUCED TRAVEL AND CHANGES IN TRANSPORTATION AND ENVIRONMENTAL POLICY

Transportation and Environmental Policy in the UK

In 1998 the UK Department of Environment, Transport and the Regions (DETR) established a new direction for UK transportation policy with the publication of the government's White Paper, *A New Deal for Transport: Better for Everyone* (Department of Environment, Transport and the Regions, 1998a). One of the key directives of this policy was that the government would no longer attempt to accommodate traffic growth through a strategy of "predict and provide." That is, road construction would not continue to meet forecast traffic growth. The level of forecast infrastructure needed to

Aschauer, 1989; Nadiri & Mamuneas, 1998; as well as critics such as Tatom, 1991, who questions the

meet an unconstrained growth assumption was seen as unsustainable both environmentally and financially.

Goodwin (1999) states that this enabled alternative options, such as increased public transport and non-motorized modes, to be seriously considered. Integration of all modes of transportation was seen as a key goal while simultaneously reducing the need for motorized single-occupant vehicles. An emphasis on maintaining existing road infrastructure, rather than increasing its capacity, was another key element. The recognition that some road pricing options would be desirable, both for moderating demand, and for raising revenue for alternatives was another key conclusion.

Goodwin (1999) outlines much of the historical context and incremental changes that preceded the publication of the White Paper. Growing concerns about the environmental impact of road transportation were seen as a primary driver. These included concerns about the health costs of air pollutants, climate change impacts, acid rain and ecological impacts. The Standing Advisory Committee on Trunk Road Assessment (1994) report on induced traffic played a major role in changing the perspective on whether “predict and provide” was an economically sensible policy and has led to changes in the process of road appraisal in the UK

The new appraisal process seeks to simplify the task for the decision maker by summarizing key information in a tabular format (Department of Environment, Transport and the Regions, 1998b). Price (1999) provides an overview of the new appraisal system, the purpose of which is to more clearly highlight environmental concerns (which tended to be lost in the volume of the detailed environmental impact assessments) against traditional cost benefit approaches which have been used in the UK since the 1970's. The cost benefit approach embodied by the COBA model measures travel time savings, changes in vehicle operating costs, and changes in accident rates. A review of planned trunk road schemes was carried out using the new appraisal methods. Of 68 schemes considered for the Targeted Program of Improvements for trunk roads laid out in Department of Environment, Transport and the Regions (1998c), 37 were withdrawn or deferred for further analysis after the new appraisal methods were applied. Nellthorp & Mackie (2000) analyzed how various appraisal factors affected the decision of whether to

methods used to come to this conclusion).

withdraw a scheme or not. They concluded that many of the environmental factors (excluding air quality) were influential while the cost benefit assessment (from COBA) was not significant in the decisions taken.

The SACTRA (1994) reported recommended new procedures of cost benefit analysis of road projects to account for induced travel effects. Interim guidance on this was published simultaneously with the SACTRA report (Department of Environment, Transport and the Regions, 1994). These procedures were updated in 1997 with an updated section of the UK Design Manual for Roads and Bridges (Highways Agency, 1997). This provided interim elasticity methods to account for induced travel effects; DETR continues to do research on updating four step modeling procedures for more complex schemes.¹⁰

Some analysis has been conducted on the differences in cost benefit results with and without the inclusion of induced travel effects. Small induced travel effects of 5-10 percent have been found to reduce the benefits of a scheme by anywhere from 20 to nearly 40 percent.¹¹ It is not clear whether any specific road schemes have either been abandoned or undergone major design changes in response to changes in the appraisal methods. However, the overall policy approach of abandoning a “wish list” of projects and announcement of a Targetted Programme of Improvements outlined in Department of Environment, Transport and the Regions (1998c) undoubtedly are in response to new qualitative knowledge on induced travel effects.

In the area of land use policy the UK has historically been able to better preserve land and avoid the sprawl development patterns of the US (though there are certainly examples of US style sprawl in the UK). Planning Policy Guidance 13 on Transport (Department of the Environment, 1994) was instituted to provide Local Authorities with guidance on better coordinating land use and transport planning. The aim is to reduce reliance on private vehicles, encourage modes with less environmental impact, and reduce both the number and length of motorized journeys. The promotion of

¹⁰ In the US the National Cooperative Highway Research Program (project number 25-21) is conducting similar research geared at looking at the air quality impacts of changes in traffic flow. The proposed methodologies are quite comprehensive and will be equivalent to updating four step travel demand models and integrating them with land use and modal emissions models to account for induced travel effects and changes in vehicle dynamics.

¹¹ Parliamentary Record of the House of Commons, Hansard column 808 - 6 December 1996, HMSO: London.

development in centralized and accessible areas (by modes other than private cars) is explicitly stated as a goal. These sort of policies are certainly consistent with the goals of the White Paper.

Interestingly, if land use policy were completely effective one would expect capacity enhancements to result in less induced travel. This assumes that land use planning can effectively disconnect the response of developers to changes in the transport network. Induced travel impacts would then be limited to changes in the number of trips, routes, destinations, and modes. Some relocation of activities could still occur, but one wouldn't expect major new sprawl development to occur (unless this is part of the land use plan). In theory, one could argue that effective land use planning would allow capacity enhancements to capture travel time reduction benefits more effectively. As shown previously, Rodier et al. (2001) estimate that 50% of induced travel effects occur if land use does not change in reaction to expanded capacity.

In July 2000 the UK government released a 10 year transport plan (Department of Environment, Transport and the Regions, 2000) following up on many of the policy documents issued in recent years. The plan outlines the proposed investment strategy for surface transport over the next 10 years. While the text of the document is generally consistent with the integrated transport policy of the original White Paper, an analysis of the actual expenditure plan is not quite consistent with the White Paper's policy. Of about £121 Billion of public expenditure proposed over the 10 year period, over 45% is devoted to trunk and local roads and slightly more devoted to rail and public transport (annex 1 of Department of Environment, Transport and the Regions, 2000). While not all of the road spending is devoted to new capacity, there is an explicit target of widening 5% of the trunk road network, construction of 30 bypasses, and 80 major schemes to reduce congestion. The Transport Plan acknowledges that construction of new road capacity is not the solution to congestion problems, but the overall investment focus appears to disregard potential induced travel effects (including stating that congestion reduction is a specific goal).

Despite this major increase in spending on road projects, the Transport Plan also includes increases in rail and public transport expenditures. Local Authorities will also be required to develop integrated Local Transport Plans to improve planning focused

around specific schemes. In addition, these Plans provide a mechanism for using transport funding to help address the needs of Air Quality Improvement Plans also required of Local Authorities.

The Transport Plan also allows Local Authorities to plan and implement congestion charging and/or workplace parking schemes. The Greater London Authority has also been empowered to implement a congestion charging scheme for which active planning is currently in progress. These ideas are consistent with a recognition of the need to price demand to relieve congestion without inducing new travel.

Overall the 10 year Transport Plan attempts to distribute substantial increases in public spending to many beneficiaries. While increases in road spending are significant, public transport and rail systems also are receiving substantial increases. Other than the potential for various congestion charging schemes, the overall plan does not appear to fully integrate much of the knowledge of induced travel effects developed in recent years.

Transportation and Environmental Policy in the US

Within the last decade, the general trend in policies of the US Federal government has been to better integrate transportation policy with environmental policy. This trend began with passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. Perhaps the two most significant examples of the integration of transportation and environmental policy has been the establishment of the Congestion Mitigation and Air Quality program which dedicates specific funding from the Highway Trust Fund for projects that improve air quality. In addition, the Clean Air Act Amendments (CAAA) of 1990 strengthened the requirement that metropolitan transportation investment programs “conform” with state implementation plans for achieving the National Ambient Air Quality Standards. This requires that the mobile source emissions “budget” can not be made worse by the planned transportation system. Naturally this involves forecasting and modeling of transportation systems and has spurred much research into developing models that can actually measure and estimate these effects.

More recently the Transportation Equity Act for the 21st Century (TEA-21) of 1998 has continued both the CMAQ program and the transportation air quality conformity requirements. In addition this legislation required the US Department of Transportation (DOT) to institute a “streamlined” process for transportation project

facilitation and delivery. The Department of Transportation has interpreted these “streamlining” provisions as a means to encourage earlier consideration of environmental issues in the transportation planning and project development process.

Review of the environmental impact of Federal projects is one of the Environmental Protection Agency’s (EPA) major roles as specified by the National Environmental Policy Act (NEPA) of 1970. Environmental Impact Statements (EIS) for Federal projects are developed by the lead agency (the Federal Highway Administration in the case of highway projects) but reviewed by EPA (as well as the general public). The role of the EIS is to provide information to decision-makers and the public about the environmental impact of projects and possible alternatives. The alternatives analyzed are generally minor (e.g. changes in routing or alternative mitigation strategies). Major decisions on project scope have already been pre-determined at earlier phases of the transportation planning process, often without undergoing significant environmental review. Projects are often delayed due to the inadequacy of early stages of decision making that preclude the consideration of a broad range of alternatives. This is the element that the “streamlining” provisions are aimed at correcting.

An EIS will generally specify and define the goal for the specific project being evaluated.¹² The goal of many transportation projects is to reduce congestion; however, the studies cited above strongly suggest that adding highway capacity will not be an effective solution for achieving long-term congestion reduction goals. Alternative approaches may be far more effective than merely adding more capacity. For example, a more realistic approach to actually controlling congestion would be to propose congestion pricing on existing road capacity (as an alternative to new capacity construction). Provision of public transport services and redevelopment of existing land (e.g. brownfields and infill development) may also lead to less regional congestion, while also serving the needs of economic development (albeit on different parcels of land).

The research reviewed above suggests that adding highway capacity will facilitate development either on previously undeveloped land or more intensive development near the proposed project. The linkage of development impacts to specific transportation projects requires an analysis of the cumulative and secondary impacts of the project.

¹² EIS terminology defines project goals under the "purpose and need" of an EIS.

Regulations promulgated by the Council on Environmental Quality (CEQ) (1987) require the assessment of cumulative impacts. Many Environmental Impact Statements for highway projects currently do not conduct a high quality analysis of cumulative effects (i.e., the land development impacts that are induced by the project). In addition, many highway projects are analyzed in segments, rather than as an entire corridor which would tend to underestimate the potential cumulative effects in the long run.

Long run development impacts from capacity expansion suggest that project goals should be defined exclusively with regard to land development objectives, not congestion reduction. This type of justification is normally avoided by transportation agencies. An assessment of transportation projects based upon their land development impacts obviously creates more political tension in the promotion of transportation projects. The business community and developers are generally very active in promoting projects that increase access to undeveloped land and resulting economic development on that land. A more detailed analysis of how transportation projects interact with land development is essential information that is needed to improve decision-making and the environmental outcomes of specific projects.

If congestion relief is not the stated goal of a project this would also imply that alternatives to capacity expansion might be more appropriate. For example, if broad economic development and sustainability goals are stated as goals within a corridor EIS, then the possible range of solutions may expand well beyond the analysis of highway options or even beyond other transportation options.

As mentioned previously, the CAAA requires transportation plans to be in conformity with State Implementation Plans for meeting the National Ambient Air Quality Standards (NAAQS). What this means is that states and metropolitan planning organizations must forecast the impact of transportation plans (i.e., a collection of many different projects) on total emissions of criteria pollutants (nitrogen oxides, hydrocarbons, carbon monoxide, and particulate matter).

Regional transportation planning agencies (or the states) generally maintain a system of models to forecast and evaluate the impact of transportation projects and plans. These models are usually deficient in accurately forecasting emissions (Transportation Research Board, 1995) partly because they do not adequately account for both short run

and long run induced travel effects. This can be partly corrected by building feedback mechanisms into the models to at least account for some of the short-run impacts (Johnston & Ceerla, 1996a). Air quality regulations already require this step for conformity analysis, though actual practice has generally not kept pace with the regulatory requirement.

Some EPA regions are working with metropolitan planning organizations to improve the state of the practice in the modeling of transportation impacts, in particular the impacts on land development. Various modeling packages (none of which are ideal) are available to provide estimates of land development changes induced by transportation and accessibility changes.¹³ Improved modeling of these impacts would provide decision makers with far better information on the short-run and long-run emissions impact of alternative transportation plans and are critical for developing State Implementation Plans that will actually help bring a region into attainment of the NAAQS. Project selection criteria would also be vastly improved, as shown by Johnston and Ceerla (1996a, 1996b) and Rodier et al. (2001)..

The Department of Transportation is also incorporating measures of induced travel demand into their Highway Economics Requirement System (HERS) which attempts to determine total financial needs for the US highway system using a cost benefit analysis approach (US Department of Transportation, 1999). This model includes travel demand elasticities of 1.0 in the short run and 1.6 in the long run with respect to total user costs. These are used as elasticities for individual links on the highway network and therefore include route shifts that may not represent induced VMT effects.

The inclusion of these user cost elasticities in the HERS model allows estimated VMT growth to respond to changes in recommended investment levels. For example, average annual VMT growth (over 20 years) for large urbanized areas is estimated to be 1.66% if annual average investments are \$46.3 Billion while an investment level of \$94.0 Billion could result in VMT growth of 2.06% annually. It is unclear, however, how this analysis actually influences the allocation of investment from the Federal government. While TEA-21 authorized spending levels for transportation, subsequent annual appropriations of funds have been linked to annual gasoline tax revenues with no

¹³ A good review of these models is contained in Parsons Brinckerhoff Quade & Douglas (1999).

consideration of how investment levels may affect VMT growth. In fact, US Department of Transportation (1999) suggests that investment needed to maintain current conditions, estimated using the HERS model, is generally higher than actual investment by both the Federal and State governments.

Therefore, while the theoretical basis of induced travel effects appears to be acknowledged by the US Department of Transportation, the actual investment of Federal dollars is still largely driven by political imperatives (such as demands for congestion reduction) and the levels of revenue collected by the Federal gasoline tax. US DOT does not make decisions on specific projects since these are made by state Departments of Transportation and sometimes by local Metropolitan Planning Organizations. However, the availability of funding and the incentives this provides to state governments by providing an 80% match to local funding can certainly bias decision making.

Boarnet & Haughwot (2000) suggest that radical reform of the Federal role in highway funding might be an effective policy for changing urban development patterns. They suggest that if local metropolitan areas spent local money (rather than Federal or even state money), that cost benefit analysis would be conducted and that ultimately local decision-makers would choose better projects.

Even without this type of radical reform, the science and economics of induced travel effects are being recognized at the project level through the requirements of NEPA and the CAAA conformity requirements. These statutory and legal requirements are beginning to have an impact on policy for certain specific projects. While Federal money may currently distort decision-making, Federal regulations may be able to improve decision-making (Downing & Noland, 1998).

The US debate on these issues is fundamentally tied to issues of community livability and sprawl development. Suburban congestion has been linked to sprawl development patterns by those promoting “livability”. It is clear from much of the induced travel research that increasing road capacity tends to encourage sprawl development while also being ineffective at solving congestion problems. Despite this clear linkage, TEA-21 still authorizes tremendous resources to new highway construction, potentially undermining other efforts to achieve “livability” goals.

5. CONCLUSIONS

The research evidence on induced travel effects clearly shows that behavioural responses are real and can have significant impacts on the congestion reduction benefits of capacity expansion projects. Regardless of the specific impact on congestion, VMT growth is likely to be larger with more highway capacity relative to less highway capacity. Both in the US and the UK research efforts are underway to improve modeling and assessment tools to measure the impacts of these effects.

Transport policy is also gradually changing in both countries. UK policy appears to have been more influenced by this research, primarily through the abandonment of forecasting based on a “predict and provide” philosophy, though the recently released 10 year Transport Plan appears to be a step backward. In the US, national policy has aimed to be more inter-modal in perspective, but in practice funding incentives and political inertia have made major change difficult. Much of the change in US policy is actually beginning to occur due to more detailed analysis at the project level of induced travel and induced development impacts. In both countries, these changes are being driven by environmental concerns. In the US environmental statutes are enabling much of the change at the project assessment level rather than from directives specified by the Federal government.

Overall, the new knowledge being developed of how infrastructure affects travel behaviour and land use patterns will hopefully lead to actual implementation of improved policies and project selection allowing greater choices for individuals using the transport network while minimizing environmental impacts.

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Table 1
Seemingly Unrelated Regression by Road Type and Urban/rural area: distributed lag model

Dependent variable is log of VMT by road type Lane miles are by road type per capita	urban interstates	urban arterials	urban collectors	rural interstates	rural arterials	rural collectors
LN(VMT, lagged one year)	0.464 (17.981)	0.370 (12.915)	0.528 (20.251)	0.669 (30.774)	0.485 (16.658)	0.649 (21.658)
LN(urban interstate lane miles, per capita)	0.439 (17.136)					
LN(urban arterial lane miles, per capita)		0.498 (18.002)				
LN(urban collector lane miles, per capita)			0.513 (15.097)			
LN(rural interstate lane miles, per capita)				0.234 (6.473)		
LN(rural arterial lane miles, per capita)					0.369 (10.621)	
LN(rural collector lane miles, per capita)						0.407 (6.726)
LN(population)	0.625 (9.561)	0.652 (10.279)	0.690 (6.645)	0.250 (4.057)	0.509 (8.159)	0.307 (2.950)
LN(per capita income)	0.748 (12.227)	0.489 (9.788)	0.328 (3.545)	0.531 (9.858)	0.630 (11.450)	0.313 (4.387)
LN(cost per BTU of fuel)	-0.085 (-4.191)	-0.047 (-2.308)	-0.019 (-0.478)	-0.064 (-3.590)	-0.035 (-1.746)	-0.033 (-1.106)
Constant	-9.149 (-9.479)	-5.908 (-7.864)	-6.219 (-4.907)	-4.702 (-6.574)	-7.349 (-10.093)	-3.350 (-2.786)
N	583	583	583	583	583	583
Long run elasticities						
Lane miles per capita	0.819	0.790	1.087	0.707	0.717	1.160
Population	1.166	1.035	1.462	0.755	0.988	0.875
Personal income	1.396	0.776	0.695	1.604	1.223	0.892
Gasoline price	-0.159	-0.075	-0.040	-0.193	-0.068	-0.094

Table 2
Instrumental Variable (2 Stage Least Squares) Regressions

	(A)	(B)	(C)
LN(vmt per capita)	Instrument = LN(area)	Instrument = LN(area)	Instrument = LN(population / area)
LN(lane miles per capita)	0.760 (18.092)	0.289 (2.873)	1.944 (6.035)
LN(per capita income)	0.315 (6.198)	0.557 (8.051)	-0.135 (-0.798)
LN(fuel cost)	-0.005 (-0.179)	-0.023 (-0.713)	0.135 (2.186)
LN(population density)	-0.160 (-7.077)		
Constant	0.476 (0.887)	-3.193 (-4.701)	3.595 (2.224)
N	1050	1050	1050
Adjusted R ²	0.975	0.967	0.902

Table 3
Instrumental Variable Regressions (with fixed effects)

Dependent Variable: Growth in VMT	All States		Maryland		North Carolina		Virginia	
	Instrument = growth in lane miles over two years	Instrument = growth in lane miles over three years	Instrument = growth in lane miles over two years	Instrument = growth in lane miles over three years	Instrument = growth in lane miles over two years	Instrument = growth in lane miles over three years	Instrument = growth in lane miles over two years	Instrument = growth in lane miles over three years
Growth in Lane Miles	0.505 (4.823)	0.457 (2.796)	0.397 (1.972)	0.290 (0.948)	0.638 (6.491)	0.479 (3.705)	0.288 (4.405)	0.444 (4.958)
Growth in Population	0.031 (0.234)	0.031 (0.214)	0.251 (0.864)	0.219 (0.726)	0.166 (0.589)	0.387 (1.293)	0.120 (1.998)	0.114 (1.694)
Growth in per capita income	0.002 (0.037)	-0.028 (-0.372)	0.255 (1.923)	0.292 (2.047)	0.114 (1.423)	0.133 (1.573)	0.088 (2.232)	0.080 (1.959)
Constant	-0.003 (-0.148)	-0.004 (-0.176)	0.009 (0.451)	0.008 (0.396)	0.038 (1.900)	0.038 (1.824)	0.040 (3.098)	0.043 (3.222)
N	1980	1760	598	575	1000	900	2400	2304
Adjusted R²	0.031	0.024	0.112	0.089	0.060	0.060	0.172	0.199

T-stats are in parentheses

County and time specific constants are omitted for brevity.

Table 4
Summary of Elasticity Estimates

Citation	Travel time elasticity	Lane mile elasticity	Type of model	Data used
Goodwin (1996); SACTRA (1994)	-0.5 - -1.0			Derived from gasoline price elasticities
Hansen & Huang (1997)		0.3 – 0.7	Time-series cross-sectional fixed effects	California County-level data
		0.5 – 0.9		California Metropolitan-level data
Noland (2001)		0.3 – 0.6 (short-run)	Time-series cross-sectional fixed effects	State-level data
		0.7 – 1.0 (long-run)		
		0.5 – 0.8	Difference model with fixed effects	
Noland & Cowart (2000)		0.8 – 1.0 (long-run)	Time-series cross-sectional fixed effects	Nationwide metropolitan-level data
		0.3	2 stage least squares with weak instrument	
Fulton et al. (2000)		0.3 – 0.5	2 stage least squares with good instrument	County level data from Maryland, Virginia, North Carolina, and DC
Cervero & Hansen (2001)		0.559	2 stage least squares with good instrument	County level data from California
Rodier et al. (2001)		0.8 – 1.1	Disaggregate modeling study	Sacramento regional data and modeling system
Strathman et al. (2000)		0.29	Cross-sectional model	NPTS data, individual-level, nationwide
Barr (2000)	-0.3 - -0.4		Cross-sectional model	NPTS data, individual-level, nationwide

Figure 1
Induced Travel

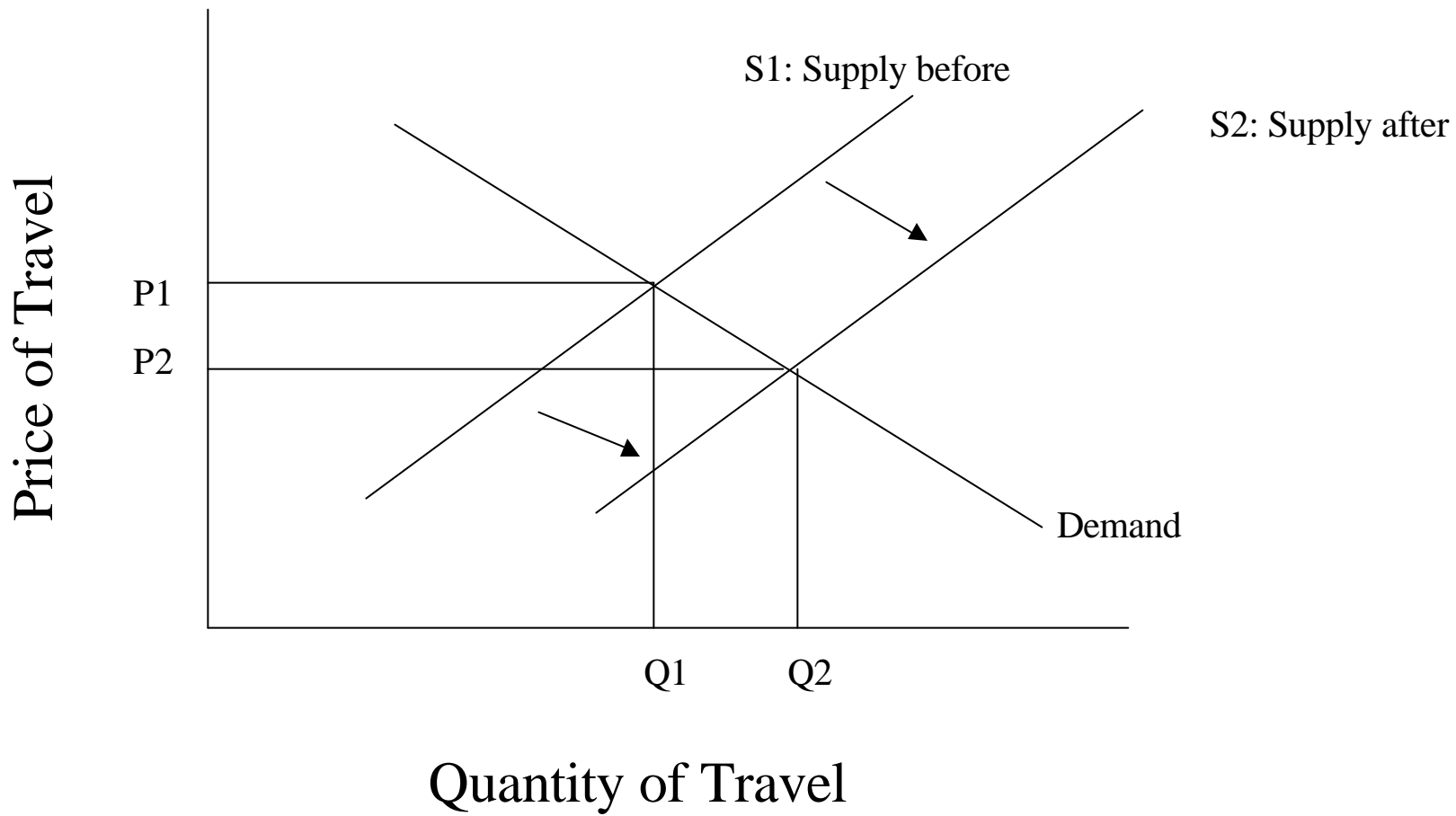
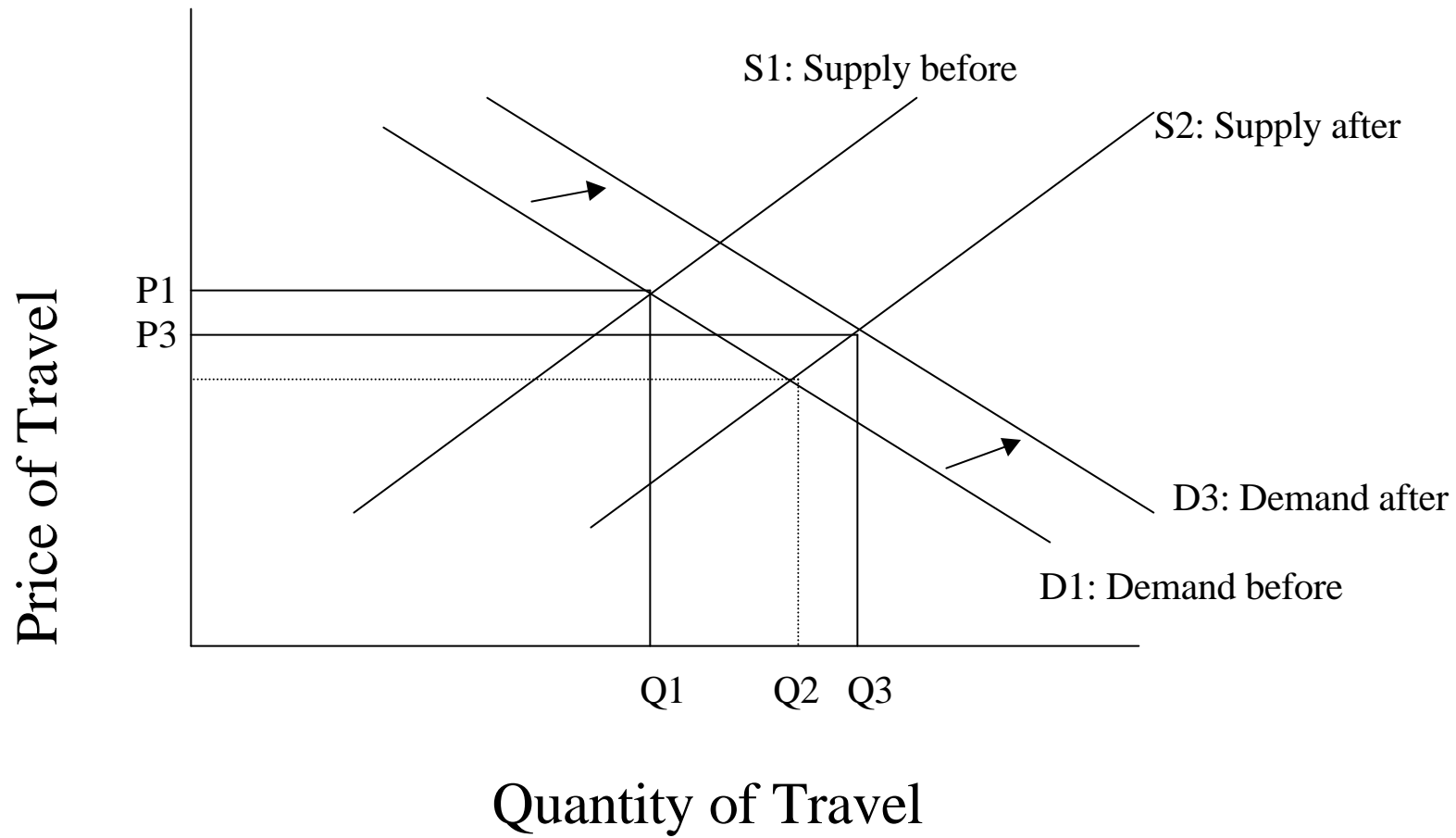


Figure 2
Induced Travel During Period of Underlying Growth in Demand



BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE I-5	)	RESOLUTION NO. 02-3237A
TRANSPORTATION AND TRADE STUDY)	
RECOMMENDATIONS	)	Introduced by Councilor Rod Monroe

WHEREAS, I-5 is the only continuous Interstate on the West Coast; and

WHEREAS, I-5, between Portland, Oregon and Vancouver, Washington experiences some of the Portland region's worst congestion; and

WHEREAS, at the Columbia River I-5 provides a key economic connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and much of the Portland/Vancouver region's industrial land; and

WHEREAS, the transportation facilities in the I-5 corridor in the vicinity of the Columbia River provide important connections to and from national and international markets for businesses throughout Oregon; and

WHEREAS, in the Portland/Vancouver area, I-5 provides one of two crossings of the Columbia River for cars, trucks and transit vehicles; and

WHEREAS, doing nothing in the I-5 corridor between Portland and Vancouver will result in unpredictable delays and congestion throughout the day, which cannot be tolerated without an adverse impact on the Portland/Vancouver region's economy and quality of life; and

WHEREAS, the Oregon and Washington Departments of Transportation jointly conducted a public planning process to develop a strategic plan for the I-5 Corridor between the Fremont Bridge in Oregon and the I-205 interchange in Washington; and

WHEREAS, the development of the I-5 Corridor Strategic Plan was guided by a bi-state Task Force representing a wide range of interests; and

WHEREAS, a thorough process of public outreach and involvement was conducted to seek public input in the development of the I-5 Corridor Strategic Plan; and

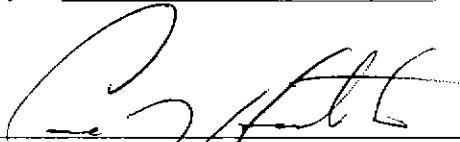
WHEREAS, recommendations of the I-5 Transportation and Trade Partnership Task Force for a I-5 Corridor Strategic Plan have statewide significance; now therefore; now therefore

BE IT RESOLVED,


1. That the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council endorse the Portland/Vancouver I-5 Transportation and Trade Partnership's "Final Strategic Plan" (June 2002) including the following improvements for the Interstate-5 corridor, as recommended by the I-5 Transportation and Trade Partnership Task Force at their June 18, 2002 meeting:
 - Three through-lanes in each direction on I-5, between I-405 in Portland and I-205 in Clark County including southbound through Delta Park including designation of one of the three through-lanes as an High Occupancy Vehicle (HOV) lane as feasible.

- A phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plain and I-205 corridors
 - An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to 2 additional lanes in each direction for merging plus 2 light rail tracks
 - Interchange improvements and additional auxiliary and/or arterial lanes where needed between SR500 in Vancouver and Columbia Boulevard in Portland. These include a full interchange at Columbia Boulevard
 - Capacity improvements for freight rail that will improve freight and intercity passenger rail services
 - Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments
 - Involving communities along the corridor to ensure that the final project outcomes are equitable and committing to establish a fund for community enhancements
 - Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system
2. That the bridge influence area (BIA) improvements be identified as illustrative projects for the purposes of federal review and certification, and therefore included in interim air quality analyses completed prior to the next scheduled RTP update;
 3. That Metro staff be directed to incorporate these recommendations into the next update of the Regional Transportation Plan (RTP), scheduled to occur in 2003-04;
 4. That I-5 Transportation and Trade Partnership Task Force recommendations for further study of the NW Highway 30 to I-5 connections be incorporated into the North Willamette Crossing Study provisions of Section 6.7 of the RTP, and that this study be elevated to a Type 2 refinement plan as part of the next RTP update.

ADOPTED by the Metro Council this 14th day of November, 2002


 Carl Hosticka, Presiding Officer

Approved as to Form:


 Daniel B. Cooper, General Counsel

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE I-5) RESOLUTION NO. 02-3237A
 TRANSPORTATION AND TRADE STUDY)
 RECOMMENDATIONS) Introduced by Councilor Rod Monroe

WHEREAS, I-5 is the only continuous Interstate on the West Coast; and

WHEREAS, I-5, between Portland, Oregon and Vancouver, Washington experiences some of the Portland region's worst congestion; and

WHEREAS, at the Columbia River I-5 provides a key economic connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and much of the Portland/Vancouver region's industrial land; and

WHEREAS, the transportation facilities in the I-5 corridor in the vicinity of the Columbia River provide important connections to and from national and international markets for businesses throughout Oregon; and

WHEREAS, in the Portland/Vancouver area, I-5 provides one of two crossings of the Columbia River for cars, trucks and transit vehicles; and

WHEREAS, doing nothing in the I-5 corridor between Portland and Vancouver will result in unpredictable delays and congestion throughout the day, which cannot be tolerated without an adverse impact on the Portland/Vancouver region's economy and quality of life; and

WHEREAS, the Oregon and Washington Departments of Transportation jointly conducted a public planning process to develop a strategic plan for the I-5 Corridor between the I-84 interchange Fremont Bridge in Oregon and the I-205 interchange in Washington; and

WHEREAS, the development of the I-5 Corridor Strategic Plan was guided by a bi-state Task Force representing a wide range of interests; and

WHEREAS, a thorough process of public outreach and involvement was conducted to seek public input in the development of the I-5 Corridor Strategic Plan; and

WHEREAS, recommendations of the I-5 Transportation and Trade Partnership Task Force for a I-5 Corridor Strategic Plan have statewide significance; now therefore; now therefore

BE IT RESOLVED,

1. That the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council endorse the Portland/Vancouver I-5 Transportation and Trade Partnership's "Final Strategic Plan" (June 2002) including the following improvements for the Interstate-5 corridor, as recommended by the I-5 Transportation and Trade Partnership Task Force at their June 18, 2002 meeting:
 - Three through-lanes in each direction on I-5, between I-405 in Portland and I-205 in Clark County including southbound through Delta Park including designation of one of the three through-lanes as an High Occupancy Vehicle (HOV) lane as feasible.

- A phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plain and I-205 corridors
 - An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to 2 additional lanes in each direction for merging plus 2 light rail tracks
 - Interchange improvements and additional merging auxiliary and/or arterial lanes where needed between SR500 in Vancouver and Columbia Boulevard in Portland. These include a full interchange at Columbia Boulevard
 - Capacity improvements for freight rail that will improve freight and intercity passenger rail services
 - Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments
 - Involving communities along the corridor to ensure that the final project outcomes are equitable and committing to establish a fund for community enhancements
 - Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system
2. That the bridge influence area (BIA) improvements be identified as illustrative projects for the purposes of federal review and certification, and therefore included in interim air quality analyses completed prior to the next scheduled RTP update;
 3. That Metro staff be directed to incorporate these recommendations into the next update of the Regional Transportation Plan (RTP), scheduled to occur in 2003-04;
 4. That I-5 Transportation and Trade Partnership Task Force recommendations for further study of the NW Highway 30 to I-5 connections be incorporated into the North Willamette Crossing Study provisions of Section 6.7 of the RTP, and that this study be elevated to a Type 2 refinement plan as part of the next RTP update.

ADOPTED by the Metro Council this _____ day of _____, 2002

Carl Hosticka, Presiding Officer

Approved as to Form:

Daniel B. Cooper, General Counsel

TRANSPORTATION COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 02-3237A, FOR THE PURPOSE OF ENDORSING THE I-5 TRANSPORTATION AND TRADE STUDY RECOMMENDATIONS

Date: November 14, 2002

Presented by: Councilor Burkholder

Committee Recommendation: At its November 7 meeting, the Transportation Committee voted 2-0 to recommend Council adoption of Resolution No. 02-3237A. Voting in favor: Councilor Monroe and Chair Burkholder. Voting against: None. Absent: Councilor Atherton.

Background: In 1999, Oregon Governor Kitzhaber and Washington Governor Locke initiated a public process to examine and make recommendations related to the I-5 Trade Corridor stretching north from the I-5/Fremont Bridge interchange in Oregon to the I-5/I205 interchange in Washington. The staff report for the proposed resolution provides a detailed review of the history and resulting recommendations from this effort which has become known as the I-5 Partnership.

Committee Issues/Discussion: Kate Dean, Oregon Department of Transportation, and Andy Cotugno, Metro Planning Director, presented the staff report. Dean presented a power point review of the history and work product of the I-5 Partnership entitled "Portland/Vancouver I-5 Transportation and Trade Partnership's Final Strategic Plan". Her review generally covered the historical material and recommendations addressed in the staff report for the resolution

She noted that the partnership included a 28-member task force and involved over 1700 citizens.

Andy Cotugno reviewed the contents of the proposed resolution. He presented an "A" version of the resolution that included several amendments proposed by the Transportation Policy Alternative Committee (TPAC). He explained that the basic purpose of the resolution was to endorse the recommendations of the I-5 Partnership. A similar endorsement will be requested from appropriate local government committees in southwest Washington. The resolution outlines several of the major recommendations. It also includes proposed actions related to bridge influence area (BIA) improvements near the current I-5 Interstate Bridge and directs Metro staff to incorporate the recommendations in the next update of the Regional Transportation Plan.

Cotugno then explained the proposed TPAC amendments. These include:

- 1) Clarification of a "Whereas" clause that the scope of the study included the area in the I-5 Corridor north of the Fremont Bridge instead of the I-84 interchange as shown in the original version of the resolution.
- 2) Including the entire title of the "Final Strategic Plan" in the "Be It Resolved" clause to clarify that the endorsement being sought applied to the entire document, not just the listed recommendations, and
- 3) Clarification that certain interchange improvements could include either auxiliary or arterial lanes.

Councilor Monroe expressed concern that the first "bullet" in the "Be It Resolved" clause related to three lanes of traffic along I-5 between I-205 in Clark County and Delta Park in North Portland did not specifically address to desire to have one of these lanes designated as a High Occupancy Vehicle

(HOV) lane. Mr. Cotugno drafted language to address this concern and his amendment language was adopted by the committee.

Key Public Testimony: None.

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 02-3237, FOR THE PURPOSE OF ENDORSING THE I-5 TRANSPORTATION AND TRADE STUDY RECOMMENDATIONS

Date: November 1, 2002

Prepared by: Tom Kloster

BACKGROUND

The I-5 Partnership brought together Washington and Oregon citizens and leaders to respond to concerns about growing congestion on I-5. Governors Gary Locke and John Kitzhaber have appointed a bi-state Task Force of community, business and elected representatives to develop a recommended Strategic Plan for the I-5 Corridor between I-84 in Oregon and I-205 in Washington.

As the only continuous Interstate on the West Coast, I-5 is critical to the local, regional and national economy. At the Columbia River I-5 provides a critical connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and much of the region's industrial land. In 1997, 14 million tons of freight (valued at \$17 billion) was shipped from the Oregon side of the metro area to locations in Washington. Shipments southbound from Washington into the Oregon side of the region totaled 28.5 million tons (worth an estimated \$7.5 billion).

Both the Ports of Portland and Vancouver are located in the I-5 Trade Corridor, as is much of the Portland/Vancouver industrial land. For residents in the Portland and Vancouver area, I-5 provides one of two crossings of the Columbia River for transit and automobiles. It connects the communities of Portland and Vancouver for work, recreation, shopping and entertainment purposes. An average of 125,000 trips are made across the I-5 Bridge every day.

In 1999, a bi-state leadership committee considered the problem of growing congestion on the highway and rail systems in the I-5 Corridor. The committee recommended that the Portland/Vancouver region initiate a public process to develop a plan for the I-5 Corridor based on the following findings:

- **Doing nothing in the I-5 Corridor is unacceptable.** While there are some transportation improvements planned in the corridor, they are insufficient to address the transportation and economic needs of the corridor. Without additional improvements, congestion in the corridor will increase to unacceptable levels. Further, the increased congestion will have a significant impact on our economy, potentially limiting attraction and retention of business throughout our industrial areas.
- **There must be a multi-modal solution in the I-5 Corridor – there is no silver bullet.** The needs of the corridor will require highway, transit, and rail improvements, and better management of traffic demand. In other words, constructing new highway capacity alone will not solve the problem; neither does constructing only new transit capacity or new rail capacity.
- **Transportation funds are limited. Paying for improvements in the I-5 Corridor will require new funds.** The scale of improvements needed in the corridor far exceeds presently available state and federal funds. These sources can contribute but cannot completely pay for the improvements. Assuming the current structure of public funding, tolling will be required to pay for a new Columbia River crossing and other corridor improvements. From a historical perspective, tolls are not new. Tolls were used to construct the original I-5 bridges.

- **The region must consider measures that promote transportation- efficient development.** This includes a better balance of housing and jobs on both sides of the river and other measures that manage additional demand. Even with improvements in the I-5 Corridor, there will be a significant capacity problem that must be managed.

In January 2001, based on the above findings, Washington Governor Locke and Oregon Governor Kitzhaber initiated the Portland/Vancouver I-5 Transportation and Trade Partnership, also known as the I-5 Partnership. A 28-member Task Force was established to guide the development of the *Strategic Plan* for the corridor. This group worked for a year and a half, hosting six rounds of public meetings to get ideas and comments from the community. In addition, a Community Forum of interested stakeholders from both states was invited to closely follow the strategic planning process and to provide input at each milestone in the study.

The overall goal of this strategic planning effort was to determine the overall level of investment needed in the corridor for highways, transit and heavy rail, and to determine how to manage the transportation and land use system to protect investments in the corridor. The Task Force's final product has been sent to the Oregon Transportation Commission, the Washington Department of Transportation, and is now being considered by the metropolitan planning organizations in Portland and SW Washington for review and potential adoption into their transportation plans. After adoption, the environmental review and project development phase may begin.

Before any improvements suggested in this plan can be made, a formal environmental process must to be conducted under the requirements of the National Environmental Policy Act (NEPA) to identify the specific design of improvements and the impacts. The NEPA process is designed to ensure public participation in the process and a thorough assessment of environmental and community impacts. Through the NEPA process, plans for mitigating impacts that cannot be avoided will need to be developed. In addition, issues of environmental justice will receive a thorough exploration.

The foundation for the *Strategic Plan* is the problem, vision and values statement. This statement was created, edited and revised based on feedback from Community Forum members and public input. The recommendations in the *Strategic Plan* document have been crafted to address the identified corridor problems and to do them in a manner that reflects the collective vision for the community.

SUMMARY OF I-5 STRATEGIC PLAN RECOMMENDATIONS

Transit:

- Provide a phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plain and I-205 Corridors.
- Provide peak-hour, premium express bus service in the I-5 and I-205 Corridors to markets not well served by light rail.
- Increase transit service in the Corridor over the next 20 years called for in regional transportation plans.

Interstate 5:

- The I-5 freeway between the Fremont Bridge in Portland and the I-205 interchange in Vancouver will be a maximum of three through lanes in each direction. This includes widening I-5 to three lanes between Delta Park and Lombard, and 99th St. to I-205 in Vancouver.
- Designate one of the three through lanes for use as a high occupancy vehicle (HOV) lane during the peak period, in the peak direction.

- Add a new supplemental or replacement bridge across the Columbia River with up to 2 auxiliary and/or arterial lanes in each direction, and 2 light rail tracks.
- Improve interchanges between SR 500 and Columbia Blvd to address safety and capacity problems -- including making Columbia Blvd into a full interchange.
- In adding river crossing capacity and making interchange improvements every effort should be made to: 1) avoid displacements and encroachments, 2) minimize the highway footprint and 3) minimize the use of the freeway for local trips.

Additional Rail Capacity:

- Pursue the rail infrastructure improvements required to accommodate anticipated 20 year freight rail growth in the I-5 Corridor and frequent, efficient intercity passenger rail service.
- Establish a public/private Bi-State rail forum to advise regional decision-makers about prioritizing, scheduling and funding of needed rail improvements.
- The rail forum and regional decision-makers should encourage funding for:
 1. Additional inter-city passenger rail service in the Pacific Northwest High Speed Rail Corridor
 2. High Speed Rail service in the Corridor; and
 3. The replacement of the existing “swing span” with a “lift span” located closer to the center of the river channel

Land Use:

- Adopt and implement a Bi-State Coordination Accord to protect existing and new capacity and support economic development.
- Jurisdictions in the Corridor will develop and agree on a plan to manage land development to avoid adversely impacting I-5 or the Region’s growth management plans.
- Commit to formation of a Bi-State Coordination Committee to review and comment on transportation and land use decisions of bi-state significance.

Transportation Demand and System Management:

- Commit to a comprehensive use of TDM/TSM strategies -- alternative modes, work-based strategies, policies and regulatory strategies, pricing and TSM strategies -- and pursue additional funding for transit and TDM/TSM strategies.
- Prepare an “I-5 TDM/TSM Corridor Plan” with guidance from the proposed “Bi-State Coordination Committee”
- Fund and implement additional TDM/TSM strategies now to encourage more efficient use of the transportation system.

Environmental Justice

- Establish a Community Enhancement Fund for use in the impacted areas in the I-5 Corridor in Oregon and Washington
- Map low-income and minority communities in the corridor.
- Take list of potential impacts identified by representatives of environmental justice communities into the EIS for the Bridge and Bridge Influence Area as a starting point for more analysis.
- Work with affected communities to explore ways to offset impacts and/or bring benefits to the community.
- Develop a public outreach plan for EIS process that includes special outreach to low-income and minority communities.
- Form and coordinate two working groups for the EIS -- one for public involvement and one for environmental justice.

Finance

- OR, WA and the Portland/Vancouver region should develop a financing plan for transit and highway capital projects
- Tri-Met and C-Tran need to increase revenues for a significant expansion of transit service, starting within the next five years.
- Establish regional transit financing commitments that will allow for:
 1. an aggressive bi-state TDM program and
 2. an expansion of transit service to support the light rail loop.
 3. Seek funding to widen I-5 to 3 lanes: Delta Park to Lombard after environmental and design work is completed.

Next Steps/Implementation

- Fall 2002: SW Washington Regional Transportation Council and Metro review and amend the Regional Transportation Plans to incorporate recommended I-5 corridor improvements.
- Delta Park to Lombard: widen I-5 to 3 lanes
 - Summer 2002-2004: Conduct environmental assessment and design work
 - Post 2004: Construction of Delta Park to Lombard
- 2003 – 2009: Environmental Impact Study on Bridge Influence Area
(new supplemental or replacement bridge, interchange improvements between SR 500 and Columbia Blvd., including light rail between Expo Center and downtown Vancouver)
- 2010+: Construct improvements in Bridge Influence Area.

RECOMMENDED ACTION

That the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council endorse the Interstate-5 corridor strategy, as recommended by the I-5 Transportation and Trade Partnership Task Force at their June 18, 2002 meeting. This endorsement, in the form of the attached resolution, would call for the needed policy and project updates to be included in the next Regional Transportation Plan (RTP) update, scheduled to begin in Spring 2003.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE I-5	)	RESOLUTION NO. 02-3237
TRANSPORTATION AND TRADE STUDY)	
RECOMMENDATIONS	)	Introduced by Councilor Rod Monroe

WHEREAS, I-5 is the only continuous Interstate on the West Coast; and

WHEREAS, I-5, between Portland, Oregon and Vancouver, Washington experiences some of the Portland region's worst congestion; and

WHEREAS, at the Columbia River I-5 provides a key economic connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and much of the Portland/Vancouver region's industrial land; and

WHEREAS, the transportation facilities in the I-5 corridor in the vicinity of the Columbia River provide important connections to and from national and international markets for businesses throughout Oregon; and

WHEREAS, in the Portland/Vancouver area, I-5 provides one of two crossings of the Columbia River for cars, trucks and transit vehicles; and

WHEREAS, doing nothing in the I-5 corridor between Portland and Vancouver will result in unpredictable delays and congestion throughout the day, which cannot be tolerated without an adverse impact on the Portland/Vancouver region's economy and quality of life; and

WHEREAS, the Oregon and Washington Departments of Transportation jointly conducted a public planning process to develop a strategic plan for the I-5 Corridor between the I-84 interchange in Oregon and the I-205 interchange in Washington; and

WHEREAS, the development of the I-5 Corridor Strategic Plan was guided by a bi-state Task Force representing a wide range of interests; and

WHEREAS, a thorough process of public outreach and involvement was conducted to seek public input in the development of the I-5 Corridor Strategic Plan; and

WHEREAS, recommendations of the I-5 Transportation and Trade Partnership Task Force for a I-5 Corridor Strategic Plan have statewide significance; now therefore; now therefore

BE IT RESOLVED,

1. That the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council endorse the following improvements for the Interstate-5 corridor, as recommended by the I-5 Transportation and Trade Partnership Task Force at their June 18, 2002 meeting:
 - Three through-lanes in each direction on I-5, between I-405 in Portland and I-205 in Clark County including southbound through Delta Park

- A phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plain and I-205 corridors
 - An additional span or a replacement bridge for the I-5 crossing of the Columbia River, with up to 2 additional lanes in each direction for merging plus 2 light rail tracks
 - Interchange improvements and additional merging lanes where needed between SR500 in Vancouver and Columbia Boulevard in Portland. These include a full interchange at Columbia Boulevard
 - Capacity improvements for freight rail that will improve freight and intercity passenger rail services
 - Bi-state coordination of land use and management of our transportation system to reduce demand on the freeway and to protect the corridor investments
 - Involving communities along the corridor to ensure that the final project outcomes are equitable and committing to establish a fund for community enhancements
 - Develop additional transportation demand and system strategies to encourage more efficient use of the transportation system
2. That the bridge influence area (BIA) improvements be identified as illustrative projects for the purposes of federal review and certification, and therefore included in interim air quality analyses completed prior to the next scheduled RTP update;
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ADOPTED by the Metro Council this _____ day of _____, 2002

Carl Hosticka, Presiding Officer

Approved as to Form:

Daniel B. Cooper, General Counsel

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 02-3237, FOR THE PURPOSE OF ENDORSING THE I-5 TRANSPORTATION AND TRADE STUDY RECOMMENDATIONS

Date: November 1, 2002

Prepared by: Tom Kloster

BACKGROUND

The I-5 Partnership brought together Washington and Oregon citizens and leaders to respond to concerns about growing congestion on I-5. Governors Gary Locke and John Kitzhaber have appointed a bi-state Task Force of community, business and elected representatives to develop a recommended Strategic Plan for the I-5 Corridor between I-84 in Oregon and I-205 in Washington.

As the only continuous Interstate on the West Coast, I-5 is critical to the local, regional and national economy. At the Columbia River I-5 provides a critical connection to two major ports, deep-water shipping, up-river barging, two transcontinental rail lines, and much of the region's industrial land. In 1997, 14 million tons of freight (valued at \$17 billion) was shipped from the Oregon side of the metro area to locations in Washington. Shipments southbound from Washington into the Oregon side of the region totaled 28.5 million tons (worth an estimated \$7.5 billion).

Both the Ports of Portland and Vancouver are located in the I-5 Trade Corridor, as is much of the Portland/Vancouver industrial land. For residents in the Portland and Vancouver area, I-5 provides one of two crossings of the Columbia River for transit and automobiles. It connects the communities of Portland and Vancouver for work, recreation, shopping and entertainment purposes. An average of 125,000 trips are made across the I-5 Bridge every day.

In 1999, a bi-state leadership committee considered the problem of growing congestion on the highway and rail systems in the I-5 Corridor. The committee recommended that the Portland/Vancouver region initiate a public process to develop a plan for the I-5 Corridor based on the following findings:

- **Doing nothing in the I-5 Corridor is unacceptable.** While there are some transportation improvements planned in the corridor, they are insufficient to address the transportation and economic needs of the corridor. Without additional improvements, congestion in the corridor will increase to unacceptable levels. Further, the increased congestion will have a significant impact on our economy, potentially limiting attraction and retention of business throughout our industrial areas.
- **There must be a multi-modal solution in the I-5 Corridor – there is no silver bullet.** The needs of the corridor will require highway, transit, and rail improvements, and better management of traffic demand. In other words, constructing new highway capacity alone will not solve the problem; neither does constructing only new transit capacity or new rail capacity.
- **Transportation funds are limited. Paying for improvements in the I-5 Corridor will require new funds.** The scale of improvements needed in the corridor far exceeds presently available state and federal funds. These sources can contribute but cannot completely pay for the improvements. Assuming the current structure of public funding, tolling will be required to pay for a new Columbia River crossing and other corridor improvements. From a historical perspective, tolls are not new. Tolls were used to construct the original I-5 bridges.

- **The region must consider measures that promote transportation- efficient development.** This includes a better balance of housing and jobs on both sides of the river and other measures that manage additional demand. Even with improvements in the I-5 Corridor, there will be a significant capacity problem that must be managed.

In January 2001, based on the above findings, Washington Governor Locke and Oregon Governor Kitzhaber initiated the Portland/Vancouver I-5 Transportation and Trade Partnership, also known as the I-5 Partnership. A 28-member Task Force was established to guide the development of the *Strategic Plan* for the corridor. This group worked for a year and a half, hosting six rounds of public meetings to get ideas and comments from the community. In addition, a Community Forum of interested stakeholders from both states was invited to closely follow the strategic planning process and to provide input at each milestone in the study.

The overall goal of this strategic planning effort was to determine the overall level of investment needed in the corridor for highways, transit and heavy rail, and to determine how to manage the transportation and land use system to protect investments in the corridor. The Task Force's final product has been sent to the Oregon Transportation Commission, the Washington Department of Transportation, and is now being considered by the metropolitan planning organizations in Portland and SW Washington for review and potential adoption into their transportation plans. After adoption, the environmental review and project development phase may begin.

Before any improvements suggested in this plan can be made, a formal environmental process must to be conducted under the requirements of the National Environmental Policy Act (NEPA) to identify the specific design of improvements and the impacts. The NEPA process is designed to ensure public participation in the process and a thorough assessment of environmental and community impacts. Through the NEPA process, plans for mitigating impacts that cannot be avoided will need to be developed. In addition, issues of environmental justice will receive a thorough exploration.

The foundation for the *Strategic Plan* is the problem, vision and values statement. This statement was created, edited and revised based on feedback from Community Forum members and public input. The recommendations in the *Strategic Plan* document have been crafted to address the identified corridor problems and to do them in a manner that reflects the collective vision for the community.

SUMMARY OF I-5 STRATEGIC PLAN RECOMMENDATIONS

Transit:

- Provide a phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plain and I-205 Corridors.
- Provide peak-hour, premium express bus service in the I-5 and I-205 Corridors to markets not well served by light rail.
- Increase transit service in the Corridor over the next 20 years called for in regional transportation plans.

Interstate 5:

- The I-5 freeway between the Fremont Bridge in Portland and the I-205 interchange in Vancouver will be a maximum of three through lanes in each direction. This includes widening I-5 to three lanes between Delta Park and Lombard, and 99th St. to I-205 in Vancouver.
- Designate one of the three through lanes for use as a high occupancy vehicle (HOV) lane during the peak period, in the peak direction.

- Add a new supplemental or replacement bridge across the Columbia River with up to 2 auxiliary and/or arterial lanes in each direction, and 2 light rail tracks.
- Improve interchanges between SR 500 and Columbia Blvd to address safety and capacity problems -- including making Columbia Blvd into a full interchange.
- In adding river crossing capacity and making interchange improvements every effort should be made to: 1) avoid displacements and encroachments, 2) minimize the highway footprint and 3) minimize the use of the freeway for local trips.

Additional Rail Capacity:

- Pursue the rail infrastructure improvements required to accommodate anticipated 20 year freight rail growth in the I-5 Corridor and frequent, efficient intercity passenger rail service.
- Establish a public/private Bi-State rail forum to advise regional decision-makers about prioritizing, scheduling and funding of needed rail improvements.
- The rail forum and regional decision-makers should encourage funding for:
 1. Additional inter-city passenger rail service in the Pacific Northwest High Speed Rail Corridor
 2. High Speed Rail service in the Corridor; and
 3. The replacement of the existing "swing span" with a "lift span" located closer to the center of the river channel

Land Use:

- Adopt and implement a Bi-State Coordination Accord to protect existing and new capacity and support economic development.
- Jurisdictions in the Corridor will develop and agree on a plan to manage land development to avoid adversely impacting I-5 or the Region's growth management plans.
- Commit to formation of a Bi-State Coordination Committee to review and comment on transportation and land use decisions of bi-state significance.

Transportation Demand and System Management:

- Commit to a comprehensive use of TDM/TSM strategies -- alternative modes, work-based strategies, policies and regulatory strategies, pricing and TSM strategies -- and pursue additional funding for transit and TDM/TSM strategies.
- Prepare an "I-5 TDM/TSM Corridor Plan" with guidance from the proposed "Bi-State Coordination Committee"
- Fund and implement additional TDM/TSM strategies now to encourage more efficient use of the transportation system.

Environmental Justice

- Establish a Community Enhancement Fund for use in the impacted areas in the I-5 Corridor in Oregon and Washington
- Map low-income and minority communities in the corridor.
- Take list of potential impacts identified by representatives of environmental justice communities into the EIS for the Bridge and Bridge Influence Area as a starting point for more analysis.
- Work with affected communities to explore ways to offset impacts and/or bring benefits to the community.
- Develop a public outreach plan for EIS process that includes special outreach to low-income and minority communities.
- Form and coordinate two working groups for the EIS -- one for public involvement and one for environmental justice.

Finance

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ESTABLISHING	)	RESOLUTION NO. 07- 3782B
METRO COUNCIL RECOMMENDATIONS)	
CONCERNING THE RANGE OF	)	Introduced by Councilor Rex Burkholder
ALTERNATIVES TO BE ADVANCED TO A)	
DRAFT ENVIRONMENTAL IMPACT)	
STATEMENT FOR THE COLUMBIA RIVER)	
CROSSING PROJECT)	

WHEREAS, the Interstate 5 freeway (I-5) is the only continuous north/south interstate freeway on the West Coast, providing a critical national and international transportation link for motor vehicles and truck-hauled freight in the western-most United States, between the Canadian and Mexican borders; and,

WHEREAS, in 1917 a bridge across the Columbia River was completed and in 1958 a second bridge was built adjacent to the first bridge, the two becoming today's I-5 north and south bound bridges. These bridges have had no significant modifications since their completion; and,

WHEREAS, for the Portland/Vancouver metropolitan region, I-5 is one of two major freeways that connect the two states and their shared metropolitan economy; and,

WHEREAS, the estimated cost of truck delay by the year 2020 is an increase of 140 percent to nearly \$34 million dollars; and,

WHEREAS, the I-5 bridge crossing the Columbia River and adjacent bridge influence area segments, known as the Columbia River Crossing (CRC), has extended peak-hour travel demand that exceeds current capacity; and,

WHEREAS, the Interstate 205 Bridge is also reaching its peak-hour period carrying capacity; and,

WHEREAS, current transit service in the I-5 corridor between Portland and Vancouver is also constrained by the limited capacity and congestion in the bridge influence area, greatly limiting transit reliability and operations; and,

WHEREAS, there are significant safety issues relating to the existing bridges with the bridge crossing area and its approach sections experiencing crash rates more than two times higher than statewide averages for comparable urban highways in Washington and Oregon. This is largely due to congestion and outdated designs including interchanges too closely spaced, weave and merge sections which are too short causing sideswiping accidents, vertical grade changes in the bridge span which restrict sight distance, and very narrow shoulders that prevent avoidance maneuvers or safe temporary storage of disabled vehicles; and,

WHEREAS, the I-5 bridges across the Columbia River do not meet current seismic standards, leaving travelers in the I-5 corridor vulnerable to bridge failure in the event of an earthquake; and,

WHEREAS, the configuration of the existing I-5 bridges relative to the downstream Burlington

Northern-Santa Fe rail bridge contributes to hazardous navigation conditions for commercial and recreational boat traffic; and,

WHEREAS, bicycle and pedestrian facilities for crossing the Columbia River along I-5 do not meet current standards; and,

WHEREAS, in 2002, the Metro Council approved Resolution 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations, including recommendations for light rail transit connecting the Portland area with southwest Washington and adding a new supplemental or replacement bridge; and,

WHEREAS, the I-5 Transportation and Trade Partnership Strategic Plan endorsed by the Metro Council in 2002 included light rail transit as the recommended transit mode and a maximum of ten lanes as the roadway improvement; and

WHEREAS, the Metro Council approved the Interstate MAX line to Expo center as the locally preferred alternative for high capacity transit in the I-5 north corridor; and,

WHEREAS, Interstate MAX light rail transit was built to Expo Center and has been in operation since May 2004; and,

WHEREAS, in February 2005, the Task Force began its study of the CRC problems and possible solutions; and,

WHEREAS, the Task Force adopted in October 2005 a CRC Project *Vision and Values Statement*; and

WHEREAS, after holding public open houses to gather public comment, in November 2005, the CRC Task Force adopted a CRC Project *Problem Definition*; and

WHEREAS, the Task Force approved a Purpose and Need statement in January 2006, which defined a discrete set of objectives; and,

WHEREAS, in February 2006, the Task Force approved project evaluation criteria against which alternatives would be evaluated; and

WHEREAS, thirty-seven transportation modes or design options were identified, analyzed and combined into alternative project packages; and,

WHEREAS, twelve alternative project packages, consisting of a No Build and eleven other transportation packages that included auto, truck freight, transit, bicycle and pedestrian investments in the CRC Project area were developed in summer 2006; and

WHEREAS, the twelve alternative project packages were screened using the approved evaluation criteria; those that met the evaluation criteria were recommended to advance; and those that did not meet the evaluation criteria were recommended to not advance; and,

WHEREAS CRC staff have recommended, consistent with the evaluation criteria, that the No Build and a Replacement Bridge and either light rail transit or bus rapid transit be advanced to a draft environmental impact statement; and

WHEREAS, any of the build alternatives would require a change to the Regional Transportation Plan and this would require Metro Council approval; and,

WHEREAS, any transportation investment decision about the Columbia River Crossing Project will have a substantial impact on the economy and livability of the Metro region; and,

WHEREAS, the CRC Project is guided, in part, by the recommendations of a 39 member Task Force, of which the Metro Council has one representative; and,

WHEREAS, the Metro Council has had CRC Project briefings or discussions on October 3 and 17, and December 5, 2006; and,

WHEREAS, the Metro Council has, through both existing policy and through public discussion by the Council, established policy concerns and objectives that should be advanced with regard to the CRC Project; and,

WHEREAS, the Metro Council desires to establish policy guidance for its representative on the Task Force concerning those alternatives to be advanced for study in a draft environmental impact statement; now therefore

BE IT RESOLVED,

that the Metro Council recommends the following policy guidance to its CRC Task Force representative:

1. The Metro Council supports the following CRC staff recommendations for alternatives to be advanced to a draft environmental impact statement (DEIS): a) a No Build option, b) a Replacement Bridge with Light Rail Transit (LRT) and express bus option and c) a Replacement Bridge with Bus Rapid Transit and express bus option.
2. In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative could include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location.
3. The Metro Council recognizes that a range of transit alternatives between the Expo Center and Vancouver, Washington in the I-5 corridor must be considered in the Columbia River Crossing DEIS and that substantial data and analysis about ridership, costs, etc. have yet to be completed. However, based on A) investments already made in this corridor by both the Metro region and the Federal Transit Administration to construct Interstate MAX; and, B) existing data that has been developed during the

Alternatives Analysis over the past two years, the Metro Council notes that light rail transit has shown to date to have more promise to cost-effectively meet the transit demand in the corridor.

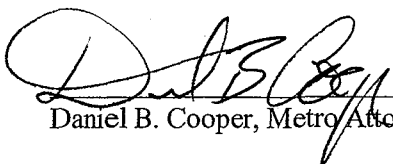
4. The alternatives advanced to the DEIS must be responsive to financial considerations. Tolling or another user pay financing source should be considered with all of the alternatives advanced to the DEIS.

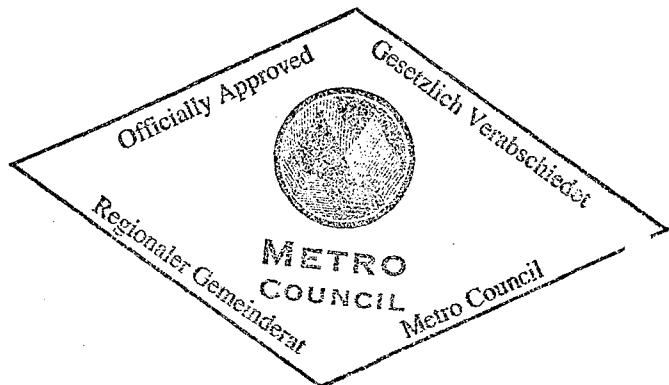
5. Given the impact of the existing transportation facility and the potential impact of any future facility, the following should be part of any DEIS analysis: a) land use changes that reduce the amount of 2035 peak-hour commuting across the Columbia River; b) mitigation programs that address existing and potential future health impacts caused by motor vehicle emissions; c) creating motor vehicle, bicycle and pedestrian links across I-5 to the two halves of Hayden Island; and d) investigation of capping I-5 in downtown Vancouver as a mitigation measure that re-connects historic elements in the City of Vancouver, e) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options, and f) other issues related to environmental justice.

ADOPTED by the Metro Council this *22nd* day of *February*, 2007.


David Bragdon, Council President

Approved as to Form:


Daniel B. Cooper, Metro Attorney



BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ESTABLISHING	)	RESOLUTION NO. 07- 3782A
METRO COUNCIL RECOMMENDATIONS)	
CONCERNING THE RANGE OF	)	Introduced by Councilor Rex Burkholder
ALTERNATIVES TO BE ADVANCED TO A)	
DRAFT ENVIRONMENTAL IMPACT)	
STATEMENT FOR THE COLUMBIA RIVER)	
CROSSING PROJECT)	

WHEREAS, the Interstate 5 freeway (I-5) is the only continuous north/south interstate freeway on the West Coast, providing a critical national and international transportation link for motor vehicles and truck-hauled freight in the western-most United States, between the Canadian and Mexican borders; and,

WHEREAS, in 1917 a bridge across the Columbia River was completed and in 1958 a second bridge was built adjacent to the first bridge, the two becoming today's I-5 north and south bound bridges. These bridges have had no significant modifications since their completion; and,

WHEREAS, for the Portland/Vancouver metropolitan region, I-5 is one of two major freeways that connect the two states and their shared metropolitan economy; and,

WHEREAS, the estimated cost of truck delay by the year 2020 is an increase of 140 percent to nearly \$34 million dollars; and,

WHEREAS, the I-5 bridge crossing the Columbia River and adjacent bridge influence area segments, known as the Columbia River Crossing (CRC), has extended peak-hour travel demand that exceeds current capacity; and,

WHEREAS, the Interstate 205 Bridge is also reaching its peak-hour period carrying capacity; and,

WHEREAS, current transit service in the I-5 corridor between Portland and Vancouver is also constrained by the limited capacity and congestion in the bridge influence area, greatly limiting transit reliability and operations; and,

WHEREAS, there are significant safety issues relating to the existing bridges with the bridge crossing area and its approach sections experiencing crash rates more than two times higher than statewide averages for comparable urban highways in Washington and Oregon. This is largely due to congestion and outdated designs including interchanges too closely spaced, weave and merge sections which are too short causing sideswiping accidents, vertical grade changes in the bridge span which restrict sight distance, and very narrow shoulders that prevent avoidance maneuvers or safe temporary storage of disabled vehicles; and,

WHEREAS, the I-5 bridges across the Columbia River do not meet current seismic standards, leaving travelers in the I-5 corridor vulnerable to bridge failure in the event of an earthquake; and,

WHEREAS, the configuration of the existing I-5 bridges relative to the downstream Burlington

Northern-Santa Fe rail bridge contributes to hazardous navigation conditions for commercial and recreational boat traffic; and,

WHEREAS, bicycle and pedestrian facilities for crossing the Columbia River along I-5 do not meet current standards; and,

WHEREAS, in 2002, the Metro Council approved Resolution 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations, including recommendations for light rail transit connecting the Portland area with southwest Washington and adding a new supplemental or replacement bridge; and,

WHEREAS, the I-5 Transportation and Trade Partnership Strategic Plan endorsed by the Metro Council in 2002 included light rail transit as the recommended transit mode and a maximum of ten lanes as the roadway improvement; and

WHEREAS, the Metro Council approved the Interstate MAX line to Expo center as the locally preferred alternative for high capacity transit in the I-5 north corridor; and,

WHEREAS, Interstate MAX light rail transit was built to Expo Center and has been in operation since May 2004; and,

WHEREAS, in February 2005, the Task Force began its study of the CRC problems and possible solutions; and,

WHEREAS, the Task Force adopted in October 2005 a CRC Project *Vision and Values Statement*; and

WHEREAS, after holding public open houses to gather public comment, in November 2005, the CRC Task Force adopted a CRC Project *Problem Definition*; and

WHEREAS, the Task Force approved a Purpose and Need statement in January 2006, which defined a discrete set of objectives; and,

WHEREAS, in February 2006, the Task Force approved project evaluation criteria against which alternatives would be evaluated; and

WHEREAS, thirty-seven transportation modes or design options were identified, analyzed and combined into alternative project packages; and,

WHEREAS, twelve alternative project packages, consisting of a No Build and eleven other transportation packages that included auto, truck freight, transit, bicycle and pedestrian investments in the CRC Project area were developed in summer 2006; and

WHEREAS, the twelve alternative project packages were screened using the approved evaluation criteria; those that met the evaluation criteria were recommended to advance; and those that did not meet the evaluation criteria were recommended to not advance; and,

WHEREAS CRC staff have recommended, consistent with the evaluation criteria, that the No Build and a Replacement Bridge and either light rail transit or bus rapid transit be advanced to a draft environmental impact statement; and

WHEREAS, any of the build alternatives would require a change to the Regional Transportation Plan and this would require Metro Council approval; and,

WHEREAS, any transportation investment decision about the Columbia River Crossing Project will have a substantial impact on the economy and livability of the Metro region; and,

WHEREAS, the CRC Project is guided, in part, by the recommendations of a 39 member Task Force, of which the Metro Council has one representative; and,

WHEREAS, the Metro Council has had CRC Project briefings or discussions on October 3 and 17, and December 5, 2006; and,

WHEREAS, the Metro Council has, through both existing policy and through public discussion by the Council, established policy concerns and objectives that should be advanced with regard to the CRC Project; and,

WHEREAS, the Metro Council desires to establish policy guidance for its representative on the Task Force concerning those alternatives to be advanced for study in a draft environmental impact statement; now therefore

BE IT RESOLVED,

that the Metro Council recommends the following policy guidance to its CRC Task Force representative:

1. The Metro Council supports the following CRC staff recommendations for alternatives to be advanced to a draft environmental impact statement (DEIS): a) a No Build option, b) a Replacement Bridge with Light Rail Transit (LRT) and express bus option and c) a Replacement Bridge with Bus Rapid Transit and express bus option.
2. In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative could include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location.
3. The Metro Council recognizes that a range of transit alternatives between the Expo Center and Vancouver, Washington in the I-5 corridor must be considered in the Columbia River Crossing DEIS and that substantial data and analysis about ridership, costs, etc. have yet to be completed. However, based on A) investments already made in this corridor by both the Metro region and the Federal Transit Administration to construct Interstate MAX; and, B) existing data that has been developed during the

RESOLUTION NO. 07- 3782A

Page 3 of 4

Alternatives Analysis over the past two years, the Metro Council notes that light rail transit has shown to date to have more promise to cost-effectively meet the transit demand in the corridor.

4. The alternatives advanced to the DEIS must be responsive to financial considerations. Tolling or another user pay financing source should be considered with all of the alternatives advanced to the DEIS.

5. Given the impact of the existing transportation facility and the potential impact of any future facility, the following should be part of any DEIS analysis: a) mitigation programs that address existing and potential future health impacts caused by motor vehicle emissions; b) creating motor vehicle, bicycle and pedestrian links across I-5 to the two halves of Hayden Island; and c) investigation of capping I-5 in downtown Vancouver as a mitigation measure that re-connects historic elements in the City of Vancouver, d) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options, and e) other issues related to environmental justice.

ADOPTED by the Metro Council this day of , 2007.

David Bragdon, Council President

Approved as to Form:

Daniel B. Cooper, Metro Attorney

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ESTABLISHING	)	RESOLUTION NO. 07- 3782
METRO COUNCIL RECOMMENDATIONS)	
CONCERNING THE RANGE OF	)	Introduced by Councilor Rex Burkholder
ALTERNATIVES TO BE ADVANCED TO A)	
DRAFT ENVIRONMENTAL IMPACT)	
STATEMENT FOR THE COLUMBIA RIVER)	
CROSSING PROJECT)	

WHEREAS, the Interstate 5 freeway (I-5) is the only continuous north/south interstate freeway on the West Coast, providing a critical national and international transportation link for motor vehicles and truck-hauled freight in the western-most United States, between the Canadian and Mexican borders; and,

WHEREAS, in 1917 a bridge across the Columbia River was completed and in 1958 a second bridge was built adjacent to the first bridge, the two becoming today's I-5 north and south bound bridges. These bridges have had no significant modifications since their completion; and,

WHEREAS, for the Portland/Vancouver metropolitan region, I-5 is one of two major freeways that connect the two states and their shared metropolitan economy; and,

WHEREAS, the estimated cost of truck delay by the year 2020 is an increase of 140 percent to nearly \$34 million dollars; and,

WHEREAS, the I-5 bridge crossing the Columbia River and adjacent bridge influence area segments, known as the Columbia River Crossing (CRC), has extended peak-hour travel demand that exceeds current capacity; and,

WHEREAS, the Interstate 205 Bridge is also reaching its peak-hour period carrying capacity; and,

WHEREAS, current transit service in the I-5 corridor between Portland and Vancouver is also constrained by the limited capacity and congestion in the bridge influence area, greatly limiting transit reliability and operations; and,

WHEREAS, there are significant safety issues relating to the existing bridges with the bridge crossing area and its approach sections experiencing crash rates more than two times higher than statewide averages for comparable urban highways in Washington and Oregon. This is largely due to congestion and outdated designs including interchanges too closely spaced, weave and merge sections which are too short causing sideswiping accidents, vertical grade changes in the bridge span which restrict sight distance, and very narrow shoulders that prevent avoidance maneuvers or safe temporary storage of disabled vehicles; and,

WHEREAS, the I-5 bridges across the Columbia River do not meet current seismic standards, leaving travelers in the I-5 corridor vulnerable to bridge failure in the event of an earthquake; and,

WHEREAS, the configuration of the existing I-5 bridges relative to the downstream Burlington

Northern-Santa Fe rail bridge contributes to hazardous navigation conditions for commercial and recreational boat traffic; and,

WHEREAS, bicycle and pedestrian facilities for crossing the Columbia River along I-5 do not meet current standards; and,

WHEREAS, in 2002, the Metro Council approved Resolution 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations, including recommendations for light rail transit connecting the Portland area with southwest Washington and adding a new supplemental or replacement bridge; and,

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WHEREAS, the Metro Council approved the Interstate MAX line to Expo center as the locally preferred alternative for high capacity transit in the I-5 north corridor; and,

WHEREAS, Interstate MAX light rail transit was built to Expo Center and has been in operation since May 2004; and,

WHEREAS, in February 2005, the Task Force began its study of the CRC problems and possible solutions; and,

WHEREAS, the Task Force adopted in October 2005 a CRC Project *Vision and Values Statement*; and

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BE IT RESOLVED,

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1. The Metro Council supports the following CRC staff recommendations for alternatives to be advanced to a draft environmental impact statement (DEIS): a) a No Build option, b) a Replacement Bridge with Light Rail Transit (LRT) and express bus option and c) a Replacement Bridge with Bus Rapid Transit and express bus option.
2. In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a low rise with lift span supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative would include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location on the railroad bridge, thereby aligning with the current lift span of the I-5 bridges.
3. The Metro Council recognizes that a range of transit alternatives between the Expo Center and Vancouver, Washington in the I-5 corridor must be considered in the Columbia River Crossing DEIS and that substantial data and analysis about ridership, costs, etc. have yet to be completed. However, based on

A) investments already made in this corridor by both the Metro region and the Federal Transit Administration to construct Interstate MAX; and, B) existing data that has been developed during the Alternatives Analysis over the past two years, the Metro Council notes that light rail transit has shown to date to have more promise to cost-effectively meet the transit demand in the corridor.

4. The alternatives advanced to the DEIS must be responsive to financial considerations. Tolling or another user pay financing source should be considered with all of the alternatives advanced to the DEIS.

5. Given the impact of the existing transportation facility and the potential impact of any future facility, the following should be part of any DEIS analysis: a) mitigation programs that address existing and potential future health impacts caused by motor vehicle emissions; b) creating motor vehicle, bicycle and pedestrian links across I-5 to the two halves of Hayden Island; and c) investigation of capping I-5 in downtown Vancouver as a mitigation measure that re-connects historic elements in the City of Vancouver, d) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options, and e) other issues related to environmental justice.

ADOPTED by the Metro Council this day of , 2007.

David Bragdon, Council President

Approved as to Form:

Daniel B. Cooper, Metro Attorney

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 07-3782, FOR THE PURPOSE OF
ESTABLISHING METRO COUNCIL RECOMMENDATIONS CONCERNING THE RANGE
OF ALTERNATIVES TO BE ADVANCED TO A DRAFT ENVIRONMENTAL IMPACT
STATEMENT FOR THE COLUMBIA RIVER CROSSING PROJECT

Date: February 14, 2007

Prepared by: Richard Brandman
Mark Turpel

BACKGROUND

The Interstate 5 Freeway (I-5) is the only continuous north/south interstate freeway on the West Coast, providing the primary corridor from Mexico to Canada for motor vehicles, including truck-hauled freight. The crossing of the Columbia River by I-5 near Hayden Island and Vancouver, Washington includes two bridges, one built in 1917 and the other in 1958. The extended peak hour demand at the I-5 Columbia River Crossing (CRC) exceeds current capacity and by the year 2020, demand is expected to grow significantly. For example, the cost of truck delay is expected to increase 140 percent by 2020.

In 1999, the Bi-State Transportation Committee recommended that the Portland/Vancouver region initiate a public process to develop a plan for the I-5 Corridor based on four principles:

- Doing nothing in the I-5 Corridor is unacceptable;
- There must be a multi-modal solution in the I-5 Corridor - there is no silver bullet;
- Transportation funds are limited. Paying for improvements in the I-5 Corridor will require new funds; and,
- The region must consider measures that promote transportation-efficient development.

Accordingly, the I-5 Transportation and Trade Partnership was constituted by Governors Locke and Kitzhaber, including a Metro Council representative. In June 2002, the Partnership completed a Strategic Plan and on November 14, 2002, the Metro Council, through Resolution No. 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations, endorsed the Strategic Plan recommendations including:

- Three through lanes in each direction on I-5, one of which an HOV lane, as feasible;
- Phased light rail loop in Clark County in the vicinity of the I-5, SR500/4th Plan and I-205 corridors;
- An additional or replacement bridge for the I-5 crossing of the Columbia River, with up to two additional lanes for merging plus 2 light rail tracks;
- Interchange improvements and additional auxiliary and/or arterial lanes where needed between SR 500 in Vancouver and Columbia Boulevard in Portland, including a full interchange at Columbia Boulevard;
- Capacity improvements for freight rail;
- Bi-state coordination of land use and management of the transportation system to reduce demand on the freeway and protect corridor improvement;
- Involving communities along the corridor to ensure final project outcomes are equitable and committing to establish a fund for community enhancement;
- Developing additional transportation demand and system strategies to encourage more efficient use of the transportation system.

Several of the recommendations from the Strategic Plan have been completed. For example, planning and environmental assessment of the I-5 Delta Park Project has been completed. Design engineering and financing are being completed currently with construction slated for initiation in the next few years to address capacity issues on I-5 between Delta Park and Lombard.

The I-5 bridge element began in February 2005 with the formation of a 39 member Columbia River Crossing (CRC) Task Force. This Task Force, which includes a Metro Council representative, developed a vision statement, purpose and need statement, screening criteria and reviewed 37 transportation modes/design options, narrowing these to 12.

Issues identified concerning alternatives in the CRC technical analysis included the following:

- Safety - the bridge crossing area and approach sections have crash rates more than two times higher than statewide averages for comparable urban highways. Contributing factors are interchanges too closely spaced, weave and merge sections too short contributing to sideswiping accidents, vertical grade changes that restrict sight distance and very narrow shoulders that prevent avoidance maneuvers or safe temporary storage of disabled vehicles.
- Seismic - neither I-5 bridges meet seismic standards, leaving the I-5 corridor vulnerable in the event of a large earthquake;
- Bridge Alignment - the alignment of the I-5 bridges with the downstream railroad bridge contributes to hazardous barge movements;
- Cost - rehabilitation of the existing bridges, bringing them to current standards would be more costly, both in money and some environmental impacts, such as water habitat conditions, than a replacement bridge;
- Traffic Impact - an arterial bridge would bring unacceptable traffic congestion to downtown Vancouver, Washington.

In October 2007, the Metro Council, after hearing CRC staff presentations and discussing the project, approved a letter to the CRC Task Force citing seven principles including:

- Recognize the I-5 Transportation and Trade Partnership Strategic Plan;
- Use desired outcomes as a guide;
- Determine project priorities;
- Recognize financial limitations;
- Coordinate with the railroad bridge;
- Provide alternatives in the DEIS that demonstrate the fundamental choices before us;
- Provide thorough public vetting before closing options.

In November 2007, CRC staff, after further consideration of technical analyses and using the approved screening criteria and project purpose and need, recommended three alternatives be advanced to a draft environmental impact statement (DEIS). These included:

- Alternative 1) No Action;
- Alternative 2) A Replacement Bridge and Bus Rapid Transit with Complementary Express Bus Service; and
- Alternative 3) A Replacement Bridge and Light Rail Transit with Complementary Express Bus Service.

The Task Force accepted the three alternatives for purposes of taking public comment. Open houses were held and the Task Force is scheduled to make a decision about what to recommend to advance to a DEIS on February 29, 2007.

In addition to Resolution No. 07-3782, FOR THE PURPOSE OF ESTABLISHING METRO COUNCIL RECOMMENDATIONS CONCERNING THE RANGE OF ALTERNATIVES TO BE ADVANCED TO A DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE COLUMBIA RIVER CROSSING PROJECT, there is Resolution No. 07-3787, FOR THE PURPOSE OF PROVIDING METRO COUNCIL GUIDANCE TO ITS REPRESENTATIVE ON THE COLUMBIA RIVER CROSSING TASK FORCE CONCERNING THE RANGE OF ALTERNATIVES TO BE ADVANCED TO A DRAFT ENVIRONMENTAL IMPACT STATEMENT. Resolution No. 07-3787 includes resolves that the three CRC recommended alternatives will not provide an adequate basis for the Metro Council to support an amendment of the RTP, that to obtain a proper basis for making choices the following should also be considered: a non-capital intensive alternative, land use alternative, supplemental bridge (as included in Resolution No. 07-3782), analysis of improvements to the railroad bridge, an alternative emphasizing transit investments. Further, Resolution 07-3787 includes resolves concerning a complete analysis of the full range of costs and benefits and that the ultimate recommended solution could be a blend of alternatives.

ANALYSIS/INFORMATION

1. Known Opposition

Concerns with the CRC staff recommendations include: 1) interest in finding a lower cost option(s); 2) concerns that either bus rapid transit or light rail transit will not provide appropriate transit service; 3) air quality, noise, environmental justice equity and other impacts to those living along the I-5 alignment; 4) increased demands on southern portions of the Portland metropolitan freeway system such as Interstate 84, I-5 through the Rose Quarter and points south; 5) concern that the CRC project could use up most or all of the transportation funds needed for projects throughout the region; 6) concern that the CRC staff recommendation was not consistent with the I-5 Transportation and Trade Partnership Strategic Plan, including maximum number of lanes and transit mode.

2. Legal Antecedents

Federal

- National Environmental Policy Act
- Clean Air Act
- SAFETEA-LU

State

- State Planning Goals
- State Transportation Planning Rule
- Oregon Transportation Plan
- Oregon Highway Plan
- Oregon Public Transportation Plan
- Oregon Bicycle and Pedestrian Plan

Metro

- Resolution No. 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations.
- Ordinance No. 04-1045A, For the Purpose of Amending the 2000 Regional Transportation Plan ("RTP") for Consistency with the 2004 Interim Federal RTP and Statewide Planning Goals.

The 2004 Regional Transportation Plan as adopted by the Metro Council includes the following in the RTP Project List: 1) Project 1002 Vancouver Light Rail Loop, Expo Center to Vancouver, 2) Projects 4002 and 4003, I-5 Interstate Bridge and I-5 widening, \$251 million for acquiring right-of-way and

"improving I-5/Columbia River bridge (local share of joint project) based on recommendations in I-5 Trade Corridor Study" and, 3) Project 4000, Vancouver Rail Bridge Replacements, to "replace rail bridge swing span based on recommendations from I-5 Trade Corridor EIS study". These projects are not presently part of the financially constrained system of the RTP.

3. Anticipated Effects

The passage of this resolution would give policy guidance to the Metro Council representative serving on the Task Force. The Task Force vote of its 39 members will be taken under advisement by the Oregon Department of Transportation, Washington State Department of Transportation, Federal Highway Administration and Federal Transit Administration. Any action to advance alternatives to a DEIS would still require a decision about a preferred alternative and amendment of the Regional Transportation Plan - which would require a separate Metro Council approval.

4. Budget Impacts

This action would not have a direct impact to the Metro budget. However, Metro Council policies about the funding of the Regional Transportation Plan could influence choices about alternatives.

RECOMMENDED ACTION

Recommend adoption of Resolution 07-3782.

In a time of global warming, we need congestion pricing over the Columbia River

In its effort to reduce congestion and move freight, the Swan Island Transportation Management Association started five vanpools from Clark County in recent years; only two are still in operation. There is not enough demand for \$70 per month seats...maybe the drive across the Columbia in the peak hour is not that bad. The price is tough to beat...its free.

Yet, with the growing consensus that global warming is real, it seems strange...in an Alice in Wonderland kind of way...that the Columbia River Crossing (CRC) group continues to recommend a big new bridge as the “solution” to congestion across the Columbia River. That “solution” would produce 80,000 new motor vehicle trips per day over the River...and through the neighborhoods of North and Northeast Portland. Any increase in trips will increase carbon emissions and undermine other efforts to address global warming and meet carbon reduction goals set by the legislature.

London solved both a congestion problem and (a transportation funding problem) by one simple act...congestion pricing for trips into Central London. They charge a fee to anyone entering Central London during the day. It works, and people love it. When this was proposed everyone thought the mayor of London was committing political suicide, but now he’s more popular than ever.

We should do the same to reduce congestion across the Columbia River. Congestion pricing, essentially variable tolls on the I-5 and I-205 Columbia River bridges...with transit, carpools/vanpools and bikes crossing free, offers a solution that:

1. Reduces congestion, give freight priority, and lowers per capita vehicle miles traveled,
2. Provides funds for expanded transportation options...light rail, bikes, vanpools, an arterial bridge,
3. Insures more efficient management of existing bridge capacity (there are currently 14 lanes across the River),
4. And, does not penalized those who have reduced their “carbon footprint” by making their homes close to work in North Portland while benefiting those who have chosen to increase their carbon footprint by living in rural Clark County, far from their workplace.

Let’s “walk the talk.” The governor, legislature and local officials have all accepted the scientific and political consensus around global warming. Now it’s time to adopt a solution to congestion over the Columbia River that helps reduce global warming instead of adding to the problem. And protects the quality of life of residents in Portland’s neighborhoods.

Swan Island TMA is ready to support as many new vanpools as congestion pricing across the Columbia will generate. \$70 per month will look like a bargain.

Lenny Anderson,
Resident, NE Portland
Project Manager, Swan Island Transportation Management Association ...”moving
freight by creating and promoting transportation options”
Member of Governors’ I-5 Task Force 200-2002

Twenty-one Bad Reasons to build a \$4 Billion Columbia Crossing:

Proponents Say the New Bridge will:	Response
1. Create jobs for construction	A given amount of Federal Pork will generate about the same amount of jobs whether it goes for highway, light rail, or intercity high speed rail, or whatever, and probably cost the same amount of “political capital.”
2. Provide congestion relief	The tolling and transit components of the CRC provide the real relief and a 12-lane bridge is not needed to achieve this. Over time, tolling plus lack of more highway capacity plus better transit creates secondary effects – changes in land use, home ownership patterns, etc. that decrease amount and length of trips, eliminating the projected growth in travel. These secondary effects may well be much larger than the immediate effects of tolls, and have more widespread benefits. (See also 20 below).
3. Get us a light rail line – light rail can use the new bridge	There are alternatives to getting LRT across the river and the CRC project does not improve the transit system overall. Getting LRT to Vancouver does not require a big freeway bridge. A separate LRT bridge can be built more cheaply as a separate project than it can as part of a new highway bridge and can be timed in keeping with regional LRT project priorities. There are other LRT projects that potentially are more cost-effective.
4. Get us improved pedestrian and bicycle facilities on a new bridge.	Just because the big bridge proposal includes pedestrian and bicycle facilities doesn't mean their inclusion provides adequate trade-off for the significant environmental damage such a highway bridge will produce. The existing bridge can be retrofitted, but better pedestrian and bicycle facilities can be provided on a new transit-only bridge.
5. Bring Federal Money to Oregon's economy.	This may not be guaranteed and may prevent other projects from being funded. This may actually be a trap, because the Feds will pay for only a portion, while this region will be on the hook for the 2/3rd's that the Feds won't pay for. This could damage the economy, the way the WPPSS fiasco did.

6. Speed freight movement:	Freight traffic is less than 10% of vehicles over the I-5 bridges, and half of the heavy duty trucks on I-5 are not local...they could be using I-205, but choose to use I-5 because even today it is faster. The greatest obstacle to moving freight are commuters in SOVs during the peak hours...though most logistics outfits know enough to avoid the peaks if possible. Remember the bridges are fine for 90% of the time. Tolls and transit can improve things during that 10% peak time.
7. Coast Guard will make us tear down the old bridges:	Coast Guard has not made such a recommendation. They do not have this authority so long as the bridges are not a hazard to navigation. They set clearance standards for any new bridge, but otherwise do not decide what is done. This belief may stem from the fact that if we built a new bridge, and did not maintain the old ones or tear them down, then the Coast Guard would step in.
8. Old bridges are too old.	Age is not the deciding factor for a well-built steel bridge. The Minneapolis bridge fell due to an identified design defect. The older of the two I-5 bridges was built to carry heavy interurban streetcars (not just horses and Model T's as suggested by CRC propaganda), and is structurally sound, according to Oregon DOT bridge inspectors.
9. Lifts on old bridges disrupt traffic and cause congestion	There was a plan advanced in 2002 by the Columbia River Towboat Association, with full support from local governments, to modify the BN Railroad Bridge so that the river channel would move south to the "hump" in the existing I-5 bridges. This would reduce lifts to perhaps a dozen (limited to middle of the night) per year for specialized equipment. 2002 cost was about \$40 million.
10. Storm water runoff from old bridges pollutes river	This may be true, but how big an issue is this? Can this be mitigated with a storm-drain retrofit? See the "supplemental bridge" option being advanced by the CRC, and use the same techniques.
11. Bridges are a hazard to navigation	See item 9. The Coast Guard determined that moving the channel was appropriate, but did not recommend "Truman Hobbs" funding because the major benefit went to the I-5 users.
12. Bridges will fall down in an earthquake	The CRC has developed a range of seismic strengthening from \$125 to \$250 million (to bring bridges up to current standards). Since the I-205 bridge was built to more modern (but not current) seismic design standards, the Willamette River bridges in Portland are actually much more critical for upgrading, and should be a higher regional priority for strengthening due to their potentially much greater economic impact if they were to fail in an earthquake.

<p>13. Bridges are unsafe for traffic for travelers (“functionally obsolete”)</p>	<p>A targeted range of highway improvements can improve traffic safety for much less cost. Slowing traffic to 45 mph while going past the tolling equipment will result in a large safety improvement, as can peak period closure or restriction of the northbound Hayden Island ramp onto I-5. Reducing peak volumes, via tolls and transit, will also improve safety greatly.</p>
<p>14. Saving the old bridges doesn’t save any money (only a few percent at most)</p>	<p>This is true only if the I-5 crossing is massively expanded and an additional highway bridge is built. Total cost can be kept below \$1 billion when the project purpose and need are met through alternatives that do not involve extensive highway construction. As stated above, an LRT bridge can be built next to the existing bridges, accommodating pedestrians and bicycles as well, for much less than one that is part of a new high highway bridge project.</p>
<p>15. Project will have an insignificant negative effect on the environment.</p>	<p>This assertion is false, and is based on incomplete and inadequate analysis. \$4 billion is too big a sum to spend without achieving a significant POSITIVE effect. Everything in creation is composed of small pieces. Achieving carbon reduction will fail if we do not apply our goals to each and every piece that we can. Nothing should be exempt without overwhelming reasons, and the effect, if properly measured is not insignificant.</p>
<p>16. This is a project requiring regional cooperation. This is a compromise between Oregon and Washington, necessary to obtain Federal funding.</p>	<p>The Bi-State Commission, which preceded the CRC, had an agreement for 10-Lanes total, 6-lanes through, approved by the two States and the local jurisdictions. This deal was hijacked by the DOT’s because they wanted more highway. So much for compromise. Washington has just as much to benefit from reducing greenhouse gas emissions as Oregon, and there is where the cooperation should be.</p>
<p>17. The preferred build option actually has less traffic than the no-build.</p>	<p>The CRC has made this projection for the case where the new bridge and I-205 are both tolled, and new transit is built, while their “no-build” has no tolls and has bad transit (including a <i>decline</i> in C-Tran service). If we were to instead apply tolls and add transit to a facility that does not significantly expand highway capacity beyond minor safety improvements, we will, of course, achieve significantly less traffic than the “preferred” option.</p>
<p>18. This project needs tolls to reduce traffic, and you can’t toll an Interstate if you don’t have a major construction project.</p>	<p>The CRC project has already assumed tolling I-205, which will not be reconstructed. Whether the decision is administrative or legislative, it fits with a growing consensus that tolls are going to be necessary on some existing facilities as an alternative to new construction. CRC staff believe that the Federal Highway Administration already has the authority to allow this when conditions warrant.</p>

<p>19. This project is a done deal, with too much momentum, so we might as well make the best of it.</p>	<p>The Mt. Hood Freeway was a “done deal” and the money for that was already appropriated. Yet citizens stopped that ill-conceived freeway project and replaced it with Light Rail. Naturally the lobbyists hired by the CRC have attempted to create this impression of a “done deal”, but an impression is all that it is.</p>
<p>20. Reducing congestion will save fuel and reduce pollution.</p>	<p>If we replace 6 congested lanes with 12 congested lanes, we will use more fuel and create more pollution on I-5, and the secondary impacts from more sprawl will compound the effect. It is doubtful that in the future there will be even short-term savings from reducing congestion, because hybrid vehicles actually get better fuel mileage in stop-and-go traffic than at boulevard or freeway speeds.</p>
<p>21. No other alternatives can meet the need.</p>	<p>In the spring of 2007, a “Fourth Alternative” subcommittee of the CRC considered and rejected option “A+” which would have met the stated purpose and need of the project to solve congestion, by building new transit, and instituting aggressive “demand management.” This, or a comparable option, should have been studied for the Draft Environmental Impact Statement, as it would have been a significant improvement over the “No Build” in terms of carbon emissions.</p>

DETAILED REPORT ON THE OBSTRUCTIVE CHARACTER OF THE
VANCOUVER RAILROAD BRIDGE, MILE 105.6 COLUMBIA RIVER
AT VANCOUVER, WASHINGTON

1.0 EXECUTIVE SUMMARY

This report is in accordance with COMDTINST M16590.5 (Series), Bridge Administration Manual and the provisions of Section 3 of the Bridge Alteration Act approved 21 June 1940, Public Law No. 647, 76th Congress, popularly known as the Truman-Hobbs Act and hereinafter referred to as such.

This report is prompted by complaints regarding frequent near collisions occurring between commercial vessels and the Vancouver Railroad Bridge and the navigational difficulties caused by misaligned functional navigation channels between the I-5 Highway Bridge and the Vancouver Railroad Bridge. The two bridges are located 0.8 miles apart with moveable spans on each bridge located along the right descending bank. Drawbridge regulations allow the I-5 Bridge to remain closed to navigation six hours per day. Vertical clearance of the moveable span prohibits vessel transits at normal river flows, so they must transit fixed approach spans that are located mid-river. The span selected depends on the water level. Use of either span forces vessels out of the aligned channel into one of two alternate channels, each of which requires extensive maneuvers to complete double turns in order to align with and transit the moveable span of the railroad bridge. The navigation span of the railroad bridge is 200 feet wide, but when approached at a severe angle its useable width is substantially decreased. When river elevations reach six feet on the I-5 Bridge gauge, tows must use the lift span of the I-5 Bridge.

The Vancouver Railroad Bridge, located at mile 105.6 Columbia River, is owned by the Burlington Northern Santa Fe Railroad Company. The bridge carries a double set of mainline tracks that is the primary north south rail corridor in the Pacific Northwest. The bridge is also used by the Union Pacific Railroad Company. The navigation draw structure consists of a 462' rim bearing through truss swing span that provides 200' of horizontal clearance in each of two drawspans. The left descending drawspan, located toward the middle of the river, is the span used by commercial navigation. The bridge was constructed in 1908.

As a result of the Preliminary Report dated October 24, 2001, and in accordance with the requirements of the Truman-Hobbs Act, the Commandant, U.S. Coast Guard authorized a Public Hearing to obtain the views of interested parties. The Public Hearing was held in Portland, Oregon at 6:30 p.m. on March 5, 2002.

At the Public Hearing, the U.S. Coast Guard Captain of the Port, Portland, Oregon testified that altering the Vancouver Railroad Bridge to be the most significant safety and traffic flow improvement to the commercial navigation man-made infrastructure of the Columbia and Snake River.

Vancouver Railroad Bridge
Mile 105.6 Columbia River
Detailed Report

November 7, 2002

1.0 EXECUTIVE SUMMARY (Cont.)

The U.S. Army Corps of Engineers (USACE) considers the Vancouver Railroad Bridge a true bottleneck in the north-south rail service between Seattle, Portland, San Francisco, and Los Angeles. Disruption of the bottleneck would cause major problems for everyone that deal with hazards to navigation. Moreover, the USACE believes relocating the navigation channel toward the middle of the river would likely result in reduced channel maintenance costs.

Numerous statements presented for the record at the Public Hearing expressed real concerns about problems caused by the obstructive nature of the Vancouver Railroad Bridge. Commercial operators emphatically concurred regarding the ever-present potential for a catastrophic collision with the Vancouver Railroad Bridge. Others stated that such a collision could result in serious environmental harm.

This report explains in detail the alleged obstructive character of the Vancouver Railroad Bridge and concludes that the bridge is an unreasonable obstruction to navigation. It documents the narrow navigation span located close to the right descending bank that requires mariners to make two turns while transiting the bridge downbound. During periods of high water, mariners much transit the lift span on the nearby I-5 Highway Bridge because the required turns become too treacherous.

The cost of opening the I-5 Highway Bridge affects navigation because vessels are restricted from transiting the bridge during specific times of the day. The opening I-5 bridge openings are also extremely burdensome to the regional vehicular traffic flow. The Washington Department of Transportation has estimated that by the year 2021, the annual regional cost related to delays to be \$12,000,000 in 2002 dollars up from \$800,000 for contemporary regional costs.

The Vancouver Railroad Bridge should be altered with installation of a lift span having a horizontal clearance of 300 feet, located one span closer to the middle of the river.

Alteration of this bridge would result in a very conservative estimated annual Navigation Benefit of at least \$529,815 excluding the vehicular costs relating to the opening of the I-5 Highway Bridge. This report concludes the Vancouver Railroad Bridge is an unreasonable obstruction to navigation and should be altered under provisions of the Truman-Hobbs Act.

Vancouver Railroad Bridge
Mile 105.6 Columbia River
Detailed Report

November 7, 2002

9.0 DISTRICT RECOMMENDATIONS AND COMMENTS

Based upon this detailed report, the Vancouver Railroad Bridge, Mile 105.6 Columbia River presents an unreasonable obstruction to navigation. The following factors and comments have also been taken into consideration:

1. A horizontal clearance of 200 feet is considerably less than the channel width of 600 feet found in each direction from the Vancouver Railroad Bridge.
2. The navigation problems caused by a navigation span location near the right descending bank 0.8 mile downstream from I-5 Highway Bridge are exacerbated by the location of a ship loading facility immediately downstream the Vancouver Railroad Bridge. When transiting the alternate channels below the fixed spans of the I-5 Highway Bridge, tows are required to make two difficult turns in a distance of less than 0.8 mile. When tows are required to transit the lift spans on the I-5 Bridges the usual impediment of waiting for other traffic in the bridge zone is made worse by the drawbridge regulations that allow the I-5 Highway Bridge to remain closed to navigation 2½ hours each morning and 3½ hours each afternoon except on weekends and federal holidays. The ever increasing highway congestion is creating greater pressure to increase the periods the lift spans on the I-5 Highway Bridge are restricted to commercial navigation. Increasing the periods of restriction will not only be detrimental to profitable operation but will increase risk by requiring a greater number of tows to transit the bridges in darkness.
3. The location of I-5 Highway Bridge located about 0.8 mile above the bridge which has an alternate navigation channel located beneath a fixed span near the middle of river. Transiting the I-5 Highway Bridge requires two sharp turns that become too hazardous to attempt when the river elevation exceeds 6 feet on the I-5 Bridge gauge.
4. When the Vancouver Railroad Bridge is altered tows will be able to transit fixed spans on the I-5 Highway Bridge. Highway vehicular delay problems will be corrected and the delays waiting for vessels in the bridge zone will be dramatically reduced because less time will be required to transit the railroad bridge span.

The Coast Guard considers the Vancouver Railroad Bridge to be an unreasonable obstruction to navigation. From a navigational standpoint, the Columbia River commercial users would be best served by a Vancouver Railroad Bridge, which would provide a properly located horizontal opening of at least 300 feet. Moreover, the regional infrastructure would also be well served when the Vancouver Railroad Bridge is altered.

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Comment on Freight Priorities

JPACT and the Metro Council have solicited comments to help develop a list of the region's highest priority projects to submit to the Oregon Freight Advisory Committee. On behalf of the Columbia River Towboat Association, we recommend that Metro put at the top of its list the Vancouver rail bridge modification project. This is a project to replace the existing "swing span" with a wider "lift span" and place it closer to the middle of the river. We urge Metro to recommend that the state share in funding this important project.

1. *The project removes identified barriers to the safe, reliable and efficient movement of goods:*
 - a) Priority is justified for critical safety as well as important freight efficiency reasons. The current configuration is a hazard to navigation. The tug & barge industry made this abundantly clear to the Coast Guard at its "Truman-Hobbs" hearing last year. The swing span was built in 1908 and is much too narrow for today's barge freight, and because of its close proximity to the I-5 crossing, the navigational difficulty is compounded. The distance between the bridges is barely adequate to allow the difficult maneuvers required to safely negotiate the bridge openings. Although the rail bridge opening is reasonably well lined up with the I-5 lifts (both are near the Washington shore), captains do not call for these lifts when they can be avoided, nor are they allowed to use them during the peak traffic periods of morning and evening "rush hour" (6:30-9 AM and 2:30-6PM). So they usually navigate under the I-5 bridges' higher spans toward the middle of the river, which require tows to make a difficult "S" turn to line up with the narrow rail bridge opening. This maneuver becomes more dangerous as river levels rise and currents increase. When the river reaches 6 feet at the Vancouver gauge, the maneuver (through the high span) becomes too dangerous, and captains use the I-5 lifts. In years of high run-off, the river can remain above 6 feet for 6 or 7 months at a time.
 - b) The dangers to tug & barge tows from a miscalculated maneuver are obvious and immediate, with the possibilities for loss of life and property a constant consideration for towboat captains. With increasing I-5 traffic, there has been increased pressure on captains to avoid using the lifts, and in 1999 the Coast Guard extended the length of rush-hour closures of the lifts. Thus the danger of a miscalculation has steadily increased. If a

tow were to hit and disable the rail bridge (the closest alternative is east of The Dalles, at Wishram), the cost to the regional economy could be enormous. We are very much concerned that if the BNSF bridge is not modified, a major incident here will inevitably be part of our future.

- c) This project would not only remove a hazard to navigation, but it would also remove an obstacle to the efficient movement of freight and surface traffic on the I-5 crossing. A lift opening on the BNSF rail bridge placed more toward the middle of the river would allow marine traffic to nearly always avoid using the I-5 lifts. WSDOT calculated that the current average annual cost of lifts in I-5 traffic delay is about \$0.8 million and will steadily increase to a projected cost of \$12 million by 2021. Currently a lift causes about 20 minutes in mid-day traffic delay, but by 2021 the mid-day delay could exceed 90 minutes. We anticipate about 275 lifts in 2004 (the current average). Clearly there will be more in the future.
- d) The I-5 lifts are truly an anachronism on the interstate highway system. Nowhere else in the country do we have an interstate highway that is closed down for such lifts. We have had three years of low water in the Columbia, so we have not had to use the lifts. However, that is changing. This year's snow pack looks to be back up to near or in some places above normal. That means we will again have lifts.

2. *The project supports public and private investment that creates or sustains jobs:*

- a) Although doing the project itself will naturally have some short-term benefits to the local economy, the real benefits come from increased transportation efficiency and the removal of a hazard to navigation. Both have significant beneficial effects to jobs in the region.
- b) The U.S. Commerce Department is forecasting a doubling of international trade by 2020. The increase will have significant impacts on our region, and economic benefits depend greatly on whether we can maintain an efficient transportation system. Census research indicates a historically high population increase over this same period, particularly in this region. Surface transportation infrastructure is already stretched to the limit. The current level of planned infrastructure improvements cannot possibly mitigate the impact of a doubling of the number of trucks and trains. The state doesn't have the estimated \$8 billion in today's dollars necessary to arrest the degradation of our roads and bridges. At \$32 million per lane mile to construct new roads, certainly less expensive options are preferable.
- c) A partial solution could be to take advantage of the barging capacity surplus. Think of it as a truck and rail multiplier. Each fully loaded grain barge contains the equivalent of 35 rail cars or 116 truckloads of grain. A typical 4-barge tow carries the equivalent of 1.4 unit trains or a string of semi-trucks stretching over five miles long. Barging is the most cost efficient mode of transportation. In order to maintain a healthy export economy, we will need to ensure that we can maintain our transportation efficiency, and to do that, we need to modify the Vancouver rail bridge and remove the I-5 lift bottleneck.

- d) Key findings of the Truman-Hobbs Coast Guard study were:
- Highway traffic congestion on I-5 will spread into the mid-day period when there is currently no restriction on bridge lifts.
 - Commercial barge traffic and the number of commercial bridge lifts will continue to increase from an average of about 275 per year to about 400 per year in 2021.
 - Bridge lifts during mid-day periods will significantly increase congestion by forming traffic queues that take a longer time to dissipate. These longer periods of traffic delay combined with a higher percentage of truck traffic in the mid-day period result in higher estimates of travel delay costs. In today's dollars, the benefits are estimated to increase from about \$.8 million in 2002 to nearly \$12 million in 2021.
 - There are nearly \$85 million in cumulative benefits in today's (real) dollars for the 20 year period from 2002 to 2021. The present value of these benefits using the federally specified discount rate of 7 percent is nearly \$32 million.
 - Given the increasing cost of congestion from bridge lifts, doing nothing could result in future pressure on elected officials to further restrict highway bridge lifts. Further restriction would add additional backup of commercial barge navigation in increase the safety risk by further limiting barge operations in daylight hours.
- e) Although the Truman-Hobbs study recognized the need to modify the rail bridge for safety reasons, Coast Guard headquarters decided that under its current interpretation of Truman-Hobbs regulations, the economic benefits to I-5 traffic could not be counted as part of the cost/benefit analysis. Thus, headquarters did not approve the study's recommendation (also noting the absence of a major barge/bridge allision in the recent past and declining to consider the increasing risk factors). Clearly, the economic impact to the I-5 corridor is highly significant, and whether or not the Coast Guard should have considered this economic factor, it is surely one of the reasons Metro should be recommending the project to the Freight Advisory Committee. Transportation efficiency translates directly into jobs, especially in this region so dependent on exports.

3. *The project supports multi modal freight movements:*

- a) The towboat industry plays an important role in the safe, reliable and efficient movement of goods, and we urge Metro to recognize the importance of the Vancouver rail bridge project not only to continued safe and reliable barge transportation, but also to the efficiency of I-5 surface transportation. Over 40% of U.S. wheat exports move on the Columbia River system. I-5 is an important crossroad for north-south and east-west freight movement. The Vancouver rail bridge is critical to north-south and east-west freight shipments and to high-speed passenger rail interests of the states of Oregon and Washington. Both crossings are key facilities connecting the Interstate system and the freight rail system with deep-water shipping and upriver barging, and this multi-modal intersection is the most significant freight center along I-5 between California and Washington.
- b) The benefits of the project are certainly multi-modal. The towboat industry benefits both from the elimination of a hazard to navigation, but also from the increased efficiency of

eliminating a bottleneck. If the project is constructed, towboat captains will no longer have to wait for lifts at I-5. There will be no restrictions at I-5, for the wide or high spans can be used at all times of the day. The morning and afternoon lift restrictions will no longer cause delays in barge traffic, no matter the river level.

- c) Certainly I-5 freight and other surface traffic will also benefit substantially from the absence of lifts, as pointed out above, but also there will be some benefit to rail traffic from the replacement of the current "swing" opening with a lift. We believe that a modern lift span can be operated with greater efficiency than the older swing-type opening, demanding less time for a tow than is currently needed. This means, of course, that the rail bridge would also be able to accommodate rail traffic more quickly. In addition, because tug captains now must arrange for lifts at both the I-5 and rail bridges, and both must be in the open position before the captain can begin the passage, the total time required for a rail bridge opening would likely be less in the future when I-5 lifts are not involved.

4. The project can be constructed beginning in 2006:

Once the region formally supports this project as a high priority freight transportation project, we expect that our Congressional delegations (both Oregon's and Washington's) will seek authorizing approvals and appropriate funding earmarks. Although the project will require specific authorizing legislation because of its continuing Truman-Hobbs characteristics, such legislation will likely be speedily crafted, since it has been done before, and the feasibility has been recognized by both the Coast Guard and Congress. As under any Truman-Hobbs procedure, this project would be a "turn-key" Coast Guard operation, with the agency supervising the project, from the environmental impact statement work to contracting the engineering and construction work. Funding may indeed be largely a federal matter, but because so much of the benefit is to I-5 freight mobility, there may well be a local (Oregon & Washington) component to the funding package.

We believe that the project could very well be built in 2006 if it is authorized in 2004.

Highway Benefits of Relocating the Movable Span on the Vancouver Rail Bridge

Executive Summary

The U.S. Coast Guard is holding a public hearing on March 5, 2002 in Portland, Oregon to receive comments concerning the alteration of the Burlington Northern Santa Fe (BNSF) railroad bridge over the Columbia River between Vancouver, Washington and Portland, Oregon (Vancouver Rail Bridge). The Washington and Oregon Departments of Transportation (WSDOT and ODOT) are joint owners of the two Interstate 5 Highway Draw Bridges located less than one mile upriver from the Vancouver Rail Bridge. The rail and highway bridges are closely linked in terms of river navigation and operations.

Many other organizations will show the benefits of the change to river commerce and rail operations. This study is narrowly focused on economical benefits to the highway users.

WSDOT and ODOT strongly support the proposed improvements for several reasons. Highway congestion resulting from commercial barge bridge lifts on the Interstate 5 Highway Bridge would be virtually eliminated. The proposed improvement would also reduce the future safety risk of a collision between a commercial barge and the three bridges. The Vancouver Railroad Bridge is critical to both the high speed passenger rail and freight mobility interests of the states of Washington and Oregon. A collision that places the rail bridge out of service could have severe passenger rail and freight mobility impacts.

Purpose

Relocating the movable span of the Vancouver Railroad Bridge to more closely align with the highest clearance of the Interstate 5 Highway Bridge would eliminate the need for commercial barge bridge lifts under nearly all water conditions except for a limited number of barges requiring a high vertical clearance. The purpose of this study is to estimate the value of travel time savings to highway traffic by eliminating commercial barge bridge lifts on the Interstate 5 Highway Bridge.

The travel time savings for automobiles and trucks are the major highway benefit of reducing congestion resulting from bridge lifts. WSDOT and ODOT developed a simple spreadsheet model to estimate these benefits. The model is based in part on the congestion and traffic engineering methodology developed for WSDOT's benefit-cost methodology. Major inputs are the ten years of hourly bridge lift data, forecasts of future hourly traffic congestion on I-5, forecasts of future commercial barge traffic, and estimates of the hourly value of travel time savings.

Findings

The key findings of the study are:

- Highway traffic congestion on I-5 will spread into the mid-day period when there is currently no restriction on bridge lifts.
- Commercial barge traffic and the number of commercial bridge lifts will continue to increase from an average of about 275 per year today to about 400 per year in 2021.
- Bridge lifts during mid-day periods will significantly increase congestion by forming traffic queues that take a longer time to dissipate. These longer periods of traffic delay combined with a higher percentage of truck traffic in the mid-day period result in higher estimates of travel delay costs. In today's dollars, the benefits are estimated to increase from about \$.8 million in 2002 to nearly \$12 million in 2021.
- There are nearly \$ 85 million in cumulative benefits in today's (real) dollars for the 20 year period from 2002 to 2021. The present value of these benefits using the federally specified discount rate of 7 percent is nearly \$32 million.
- Given the increasing cost of congestion from bridge lifts, doing nothing could result in future pressure on elected officials to further restrict highway bridge lifts. Further restriction would add additional backup of commercial barge navigation and increase the safety risk by further limiting barge operations in daylight hours.

Introduction

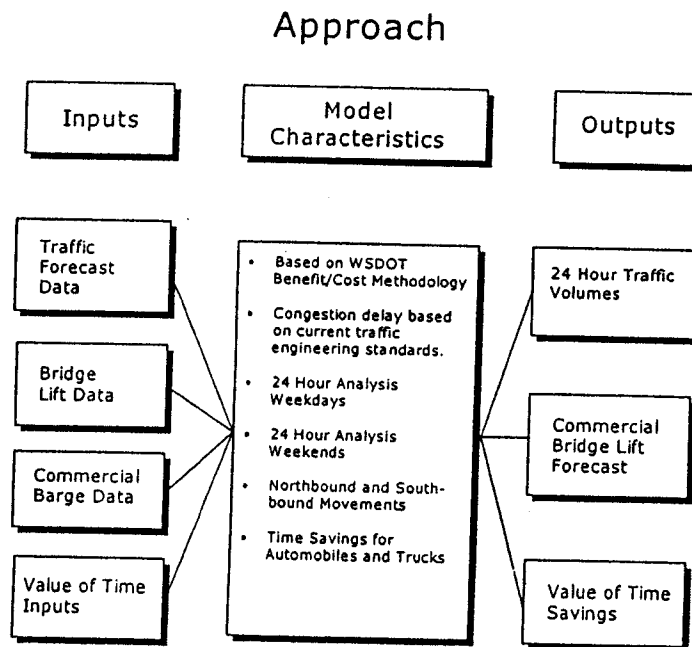
The convergence of highway, rail, upriver barge and port facilities in the Portland/Vancouver I-5 Corridor makes it a gateway to national and international markets including Canada, Mexico and the Pacific Rim countries. Congress recognized Interstate 5's national significance and economic importance in Section 1105 of the Intermodal Surface Transportation Act (ISTEA) by designating it as a High Priority Corridor. Section 1010 of the same Act designated the existing rail line between Eugene, Oregon and Vancouver, British Columbia as a High Speed Rail Corridor. River commerce is vitally important to the economies of both Washington and Oregon. Over 40 percent of U.S. Wheat exports move on the Columbia River system. I-5 is an important crossroad for south-north and east-west freight movement. The Vancouver Railroad Bridge is critical to north-south and east-west freight shipments and to the high-speed passenger rail interests of the states of Washington and Oregon. The two Interstate 5 Bridges crossing the Columbia River between Vancouver Washington and Portland Oregon and the BNSF Vancouver Rail Bridge are key I-5 facilities connecting the Interstate and freight rail system with deep-water shipping and upriver barging. This is the most significant freight center along I-5 between California and Washington.

The Washington and Oregon Departments of Transportation (WSDOT and ODOT) are joint owners of the two Interstate 5 Highway draw bridges located less than one mile upriver from the Vancouver Rail Bridge. The rail and highway bridges are closely linked in terms of river navigation and operations. The proposed alteration would significantly reduce the future safety risk of a collision between a commercial barge and the Vancouver Rail Bridge. A collision that places the rail bridge out of service could have severe passenger rail, freight rail, barge navigation, and economic impacts. Converting the swing span of the Vancouver Railroad Bridge to a draw span and more closely aligning the span with the highest clearance of the Interstate 5 Highway Bridge would also eliminate the need for nearly all commercial barge bridge lifts. WSDOT and ODOT strongly support the proposed alteration because highway congestion resulting from commercial barge bridge lifts on the Interstate 5 Highway Bridge would be virtually eliminated. If the proposed railroad bridge alteration is not made and traffic congestion resulting from commercial barge lifts increase, WSDOT and ODOT anticipate that they would support future proposals to further restrict commercial barge lifts on the I-5 Interstate Bridges during daylight hours.

The purpose of this study is to estimate the highway benefits of eliminating commercial barge bridge lifts on the Interstate 5 Highway Bridge. The next section will provide an overview of the methodology and key input assumptions for the analysis. The remainder of this paper will present the results of the analysis.

Methodology, Key Inputs and Assumptions

This analysis uses a spreadsheet model to estimate travel savings benefits. Figure 1 provides an overview of the model.



**Figure 1
Model Process**

Model Description

A spreadsheet model was developed for this analysis.¹ The traffic forecast methodology is based in part on methodology developed for WSDOT's statewide benefit-cost software that is used by WSDOT to screen and prioritize transportation projects.² A key element of the methodology distributes daily traffic volumes into each hour of the daily 24-hour period. The model has one calculation for each hour for an average weekday and another calculation for each hour of weekends and holidays. Hours during the weekday when the current bridge lift restriction is in place are not included in the benefits calculation. Traffic flows in the northbound and southbound directions are analyzed separately. When a bridge lift occurs, traffic backs up into traffic queues. A key element of the methodology is to estimate the length of time it will take after a bridge lift for the traffic queue to dissipate back to hourly traffic conditions that would have occurred without the bridge lift.

The base year for analysis is 2002 and the forecast period is from 2002 to 2021. The methodology uses a "constant dollar" approach in which all base year and forecast dollar values are in real 2002 dollars. This approach eliminates the need to forecast future rates of inflation and is consistent with the federal Office of Management and Budget (OMB) methodology. The model calculates a net present value of time savings benefits using the OMB specified real discount rate of seven percent.

Key Inputs and Assumptions

Traffic Forecasts

For this study, a traffic growth rate of 2.5% per year was used. This rate of growth for I-5 at the Interstate Bridge was developed by WSDOT's Transportation Data Office for travel analysis and forecasting. The growth rates are based on historical traffic counts and forecasts of future population growth.

Commercial Bridge Lift Inputs

The commercial bridge lift inputs are based on ten years of hourly bridge lift data collected on an hourly basis between July 1991 and June 2001. The number of bridge lifts vary from year to year, primarily as a function of water levels in the Columbia River and economic cycles. All bridge lift inputs for the model are based on ten year averages. The base year value of 275 commercial bridge lifts is the ten year average. Within the model, commercial bridge lifts are calculated separately for average weekdays and for average weekends, including holidays. The ten year weekday average is 185 commercial lifts. The ten year weekend and holiday average is 90 commercial lifts. The historic data was also used to develop an hourly average weekday and an hourly average weekend

¹ Because spreadsheet models are to a certain extent self documenting, WSDOT and ODOT will also provide a CD containing the spreadsheet model as background material supporting our comments.

² Mobility Programming Criteria and Evaluation Procedures. WSDOT. June 1998.

/holiday hourly profile. The profile is the probability of a bridge lift in each hour of an average weekday and in each hour of weekends and holidays. Figure 2 reports the hourly profile for average weekdays, excluding the morning and afternoon peak periods when bridge lifts are restricted.

Hourly profile of average weekday
Bridge Lift

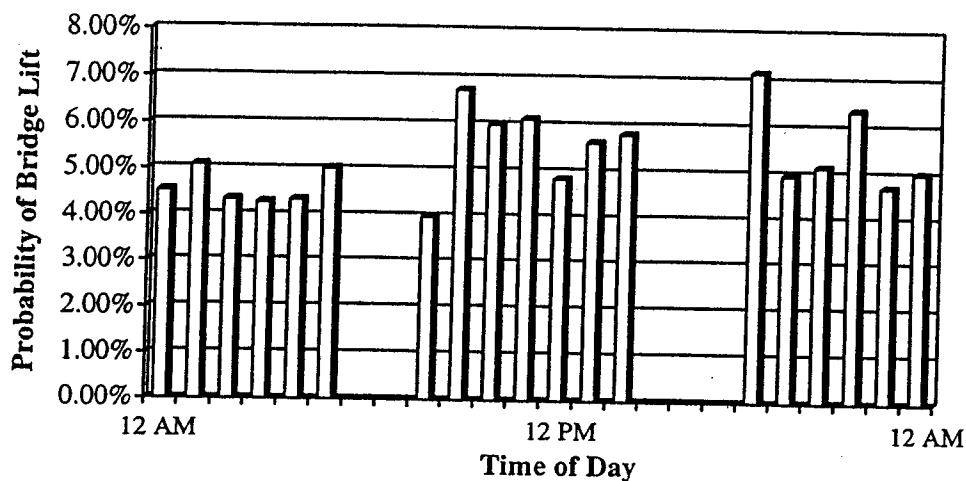


Figure 2

Bridge Lift Growth Rate Assumptions

A bridge lift forecast was developed by applying an annual growth rate to the number of commercial barge lifts in the base year. The study used a 3 percent annual rate of growth in barge container traffic for the twenty-year forecast horizon. The U.S. Army Corp of Engineers (USACE) estimated this rate of growth for its Columbia River Channel Deepening Environmental Impact Statement. Currently, approximately 10 percent of commercial barges are for containers. This 3 percent growth rate was applied to 10 percent of the commercial barge lifts in the base year. The majority of commercial barges transport grain. A growth rate of 1.8 percent was used for the remaining 90 percent of commercial barge lifts in the base year. This growth rate is based on the U.S. Department of Agriculture Baseline latest projections for U.S. Wheat Exports to 2010.³

Travel Time Savings

For this analysis, travel time savings are separated into three components, (1) The value of time saved per hour to the occupants of passenger vehicles and to trucking firms, (2) Vehicle operating costs per hour, and (3) the value of reliable travel.

³This data was reported in a memorandum dated October 23, 2001 to Mr. Bill Knutson of the US Coast Guard by Mr. Sorin Garber of HDR Engineering.

Value of time saved

The value of time saved used in this analysis is based on a study prepared by the Oregon Department of Transportation than was partly funded by the Federal Highway Administration.⁴ A copy of the study is provided as an appendix to this analysis. The ODOT study uses a methodology developed for the Federal Highway Administration in the Highway Economic Requirements System (HERS)⁵ and updated using Oregon data for the year 2000. The values are primarily based on weighted on-the-job and off-the-job costs, which in turn are a function of wage rates, including fringe benefits. Table 1 summarizes the value of time saved for automobiles and trucks from the ODOT study.

	Average Value
Automobiles	\$13.95
Light Trucks	\$15.21
Heavy Trucks	\$19.40

For purposes of this analysis we have rounded these estimates to \$14 per hour for automobiles and \$19 per hour for trucks.⁶

Vehicle Operating Costs

Automobile operating costs are for gas, oil, maintenance, and tires. These costs will vary by type, age, and speed of vehicle. Other automobile ownership costs such as insurance, depreciation, and finance costs are treated as fixed costs and are not included in this analysis. This analysis uses the American Automobile Association's average operating cost estimate of 12.2 cents per mile for new 2000 automobiles.⁷ This cost per mile value is multiplied by 42.3 (the average freeway speed in the Portland/Vancouver metropolitan area) to develop a rounded average operating cost per hour value of \$5.⁸

⁴ "The Value of Travel-Time: Estimates of the Hourly Value of Time for Vehicles in Oregon, 2000", Oregon Department of Transportation, November 2001.

⁵ "Highway Economic Requirements System, Technical Report" Federal Highway Administration, U.S. Department of Transportation, December 2000.

⁶ The truck value is an average of the light and heavy truck values in Table 1 weighted by vehicle miles traveled in Oregon. Since nearly 92% of vehicle miles traveled are heavy trucks, the weighted average is \$19.29. For this analysis, this value is rounded down to \$19.

⁷ "Your Driving Costs", American Automobile Association, 2000.

⁸ $\$.12.2 \times 42.3 = \5.16 . The average freeway speed for Portland/Vancouver is a 1999 value taken from Appendix B of the 2001 Annual Mobility Report, Texas Transportation Institute, 2001.

This analysis uses an average operating cost per mile for trucks of \$1.10. This value was based on 1998 total cost per mile data of \$1.74 reported by the American Trucking Association (ATA).⁹ The ATA value was first reduced by fixed costs of 19.5 cents for taxes, insurance, and depreciation. The remaining costs were further reduced by 45 cents per mile for labor cost based on the time value for trucks calculated above (\$19 divided by 42.3 miles). This value is reasonably consistent with a Bureau of Transportation Statistics study of carriers that estimated that the average total expenses per mile (including fixed ownership costs) for all types of for-hire truck transportation was \$1.78 in 2000.

Value of Travel Time Reliability

There is a growing body of research that recognizes that travel time reliability has a value than may be larger than travel time savings alone. For example, the World Bank's Transport Economics & Sector Policy group¹⁰ recently published an economic analysis guidebook that stated:

Reductions in travel time variability, associated particularly with the reduction of congestion, may in practice be valued even more highly than reductions in the average or expected travel time. This is particularly important for movements of high valued freight, as poor reliability increases total logistics costs by requiring higher levels of buffer stockholding.

The Federal Highway Administration and State Departments of Transportation recognize the importance of improving travel time reliability and employ a variety of strategies to improve reliability such as ramp meters, managed lanes, improving travel time predictability for travelers by using Variable Message Signs, or dispatching service patrols to clear incident congestion more rapidly. Until recently, most analysis of the benefits of reducing travel time use estimates the value of time saved and vehicle operating costs saved similar to those estimated above but have not included a benefit for improving travel time reliability. This analysis includes a factor that estimates the benefits of improving travel time reliability by eliminating the need for bridge lifts on the Interstate 5 Bridge. The factor is based on a recent study that estimated sponsored by the National Cooperative Highway Research Program (NCHRP) of the National Academy of Science¹¹ that recommended:

...segmenting traffic forecasts by time of day and applying a "mark-up" factor to value of time assumptions that apply during periods of congestion. Based in the results reported in this study, the recommended mark-up factor is 2.5.¹²

⁹ American Trucking Trends 2000, American Trucking Association, 2000

¹⁰ World Bank, Transport Economics and Sector Policy: Economic Appraisal, http://www.worldbank.org/html/fpd/transport/pol_econ/ea_docs/ea_2-3.htm

¹¹ Kenneth A. Small, Robert Noland, Xuehao Chu, and David Lewis, "Valuation of Travel-Time Savings and Predictability in Congested Conditions for Highway User Cost", NCHRP Report 431. 1999.

¹² Ibid, p 5.

In this analysis, the 2.5 mark-up factor is multiplied by the \$14 value of time estimate for automobiles and the \$19 value of time estimate for trucks in each hour of the weekday or weekend during congested periods.

Results

Highway traffic congestion on I-5 will spread into the mid-day period when there is currently no restriction on bridge lifts.

Figures 3 and 4 show the current hourly southbound morning peak period and the northbound evening peak period traffic volumes in weekdays for 2002. Figures 5 and 6 indicate that by 2021 the morning and afternoon peak periods have spread into the mid-day period.

2001 Southbound

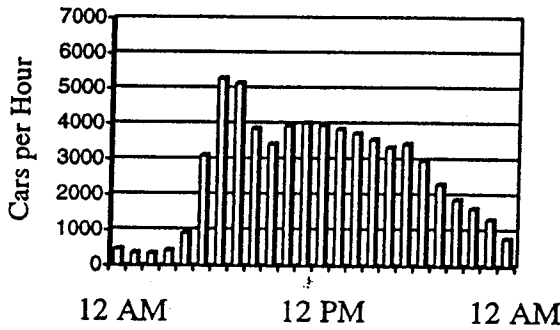


Figure 3

2001 Northbound

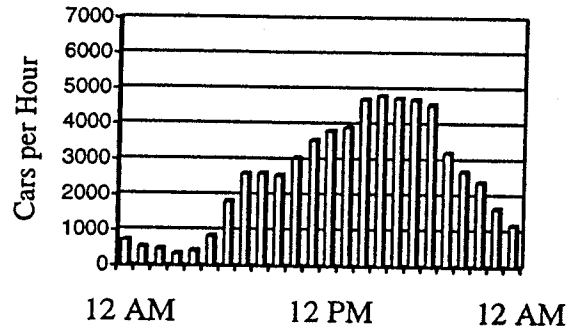


Figure 4

2021 Southbound

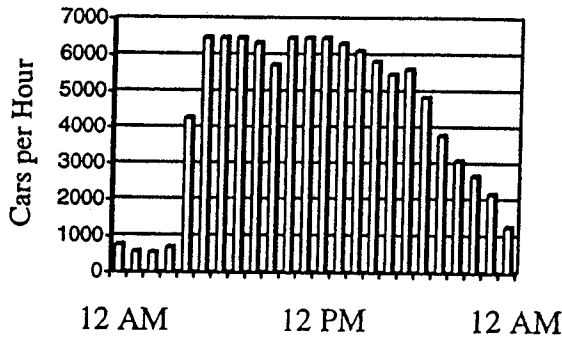


Figure 5

2021 Northbound

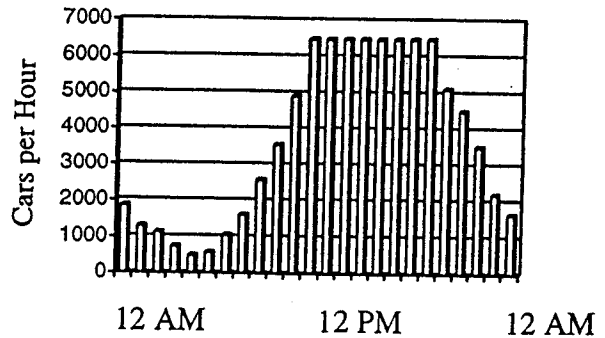


Figure 6

Commercial barge traffic and the number of commercial bridge lifts will continue to increase.

Overall, the number of bridge lifts are projected to grow by an annual rate of 2.1 percent. The number of barge lifts are forecast to increase from 275 in the 2002 base year to about 400 in 2021. Figure 7 presents the study estimate of the number of future bridge lifts

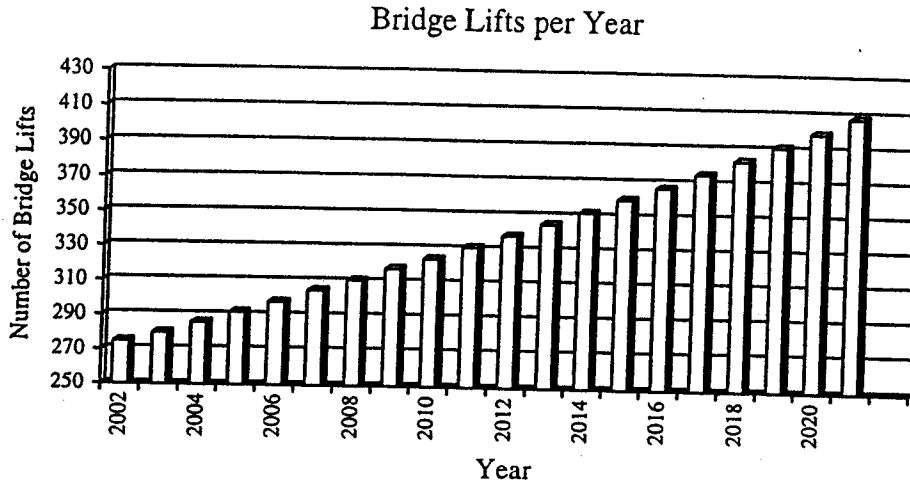


Figure 7

The time savings benefits for eliminating bridge lifts is significant.

The travel time savings highway benefits from changing the Vancouver Railroad Bridge span to eliminate commercial barge bridge lifts is significant. In Figure 8 presents savings estimates in today's (2002) dollars. Time savings increase from about \$800,000 in 2002 to almost \$12,000,000 in 2021. The cumulative total savings over the 20 year period is nearly \$85 million. The 20 year present value of savings, using the OMB real discount rate of 7 percent, is nearly \$32 million.

Yearly Time Savings Benefits

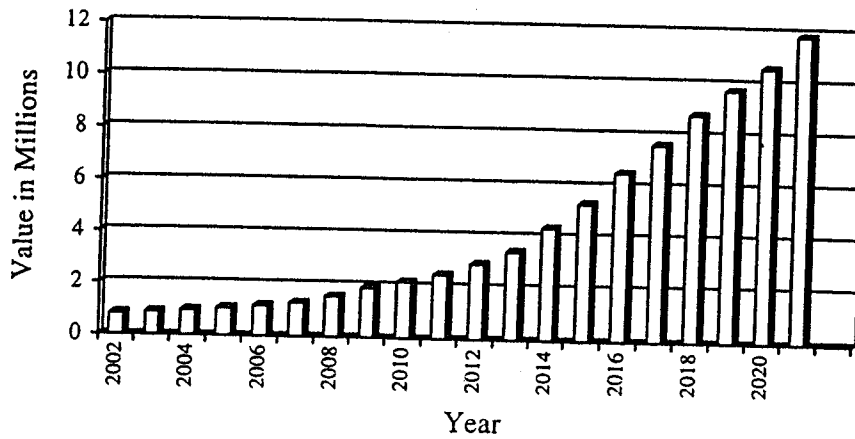


Figure 8

The cost savings per bridge lift is significantly higher than previous estimates.

Figure 9 presents estimates of the average cost savings per bridge lift. The cost savings increase from about \$2,900 in 2002 to nearly \$29,000 in 2021.

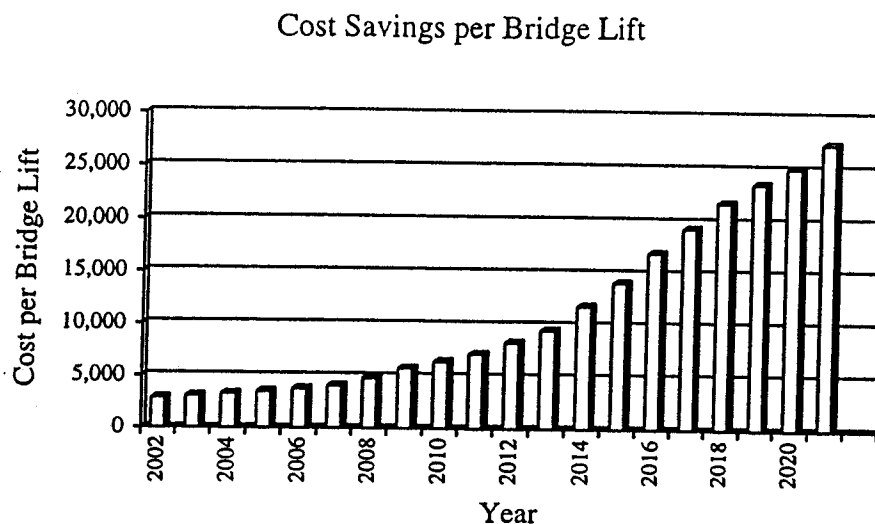


Figure 9

The values reported in Figure 9 are higher than earlier estimates of about \$2,400 per bridge lift that were provided to the U.S. Coast Guard as information to be considered in their preliminary investigation. The estimates are higher in this study for several reasons. First, the earlier values were based on the analysis of a sample of the first three days of each month of the ten years of bridge lift data. This study uses the entire bridge lift database. The average bridge lift time was higher using the full data set. Second, the preliminary estimates assumed an average vehicle delay of 7.5 minutes and a maximum delay of 15 minutes. This study calculated the bridge lift delay based on traffic engineering formulas to calculate on an hourly basis how long it would take for traffic queues to dissipate. As Figure 8 above indicates, during the mid-day period as levels of congestion increase due to peak spreading, the time delay for the added congestion from a bridge lift also increases substantially. Finally, the preliminary estimates use an \$8 per hour automobile delay cost and a \$35 per hour delay cost for trucks to calculate time savings benefits. This study uses values consistent with FHWA methodologies and updated using current wage rates and vehicle operating costs. In addition, this study adds a separate value of travel-time reliability factor that was not included in the previous estimate.

Numerical Results

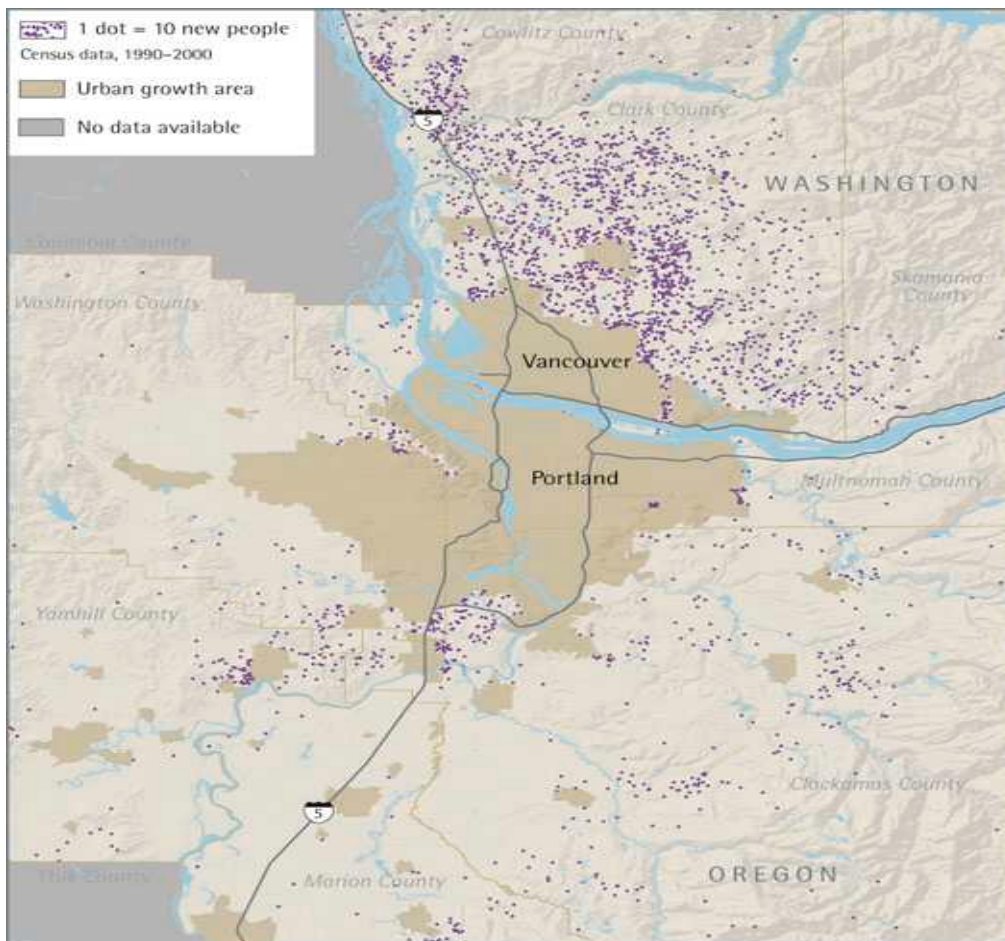
Table 2 presents a summary of the numerical results in this study. In addition, WSDOT and ODOT are providing the U.S. Coast Guard a CD containing additional numerical detail including copy of spreadsheet model and of the ten years of bridge lift data.

Year	Projected Commercial Bridge Lifts	Value of Annual Time Savings (2002 Dollars)	Average Delay Costs Per Bridge Lift
2002	275	\$801,779	\$2,919
2003	280	\$871,613	\$3,108
2004	286	\$950,686	\$3,321
2005	292	\$1,041,006	\$3,561
2006	298	\$1,145,281	\$3,837
2007	305	\$1,267,311	\$4,159
2008	311	\$1,533,669	\$4,929
2009	318	\$1,881,203	\$5,922
2010	324	\$2,142,425	\$6,606
2011	331	\$2,446,506	\$7,388
2012	338	\$2,891,881	\$8,554
2013	345	\$3,383,388	\$9,801
2014	352	\$4,321,901	\$12,263
2015	360	\$5,280,401	\$14,674
2016	367	\$6,494,270	\$17,676
2017	375	\$7,585,310	\$20,221
2018	383	\$8,742,625	\$22,827
2019	391	\$9,686,012	\$24,770
2020	399	\$10,548,438	\$26,421
2021	408	\$11,797,359	\$28,941

5/4/07

**Researched by Ron Buel & Joe Cortright
Clark County Land-Use Analysis in reference to the Columbia River Crossing**

There is no question that Clark County population has been growing steadily and rapidly through the year 2005, and has now reached 400,000 people. There is no question that Clark County has been sprawling out across the landscape – a look at this map with each pink dot representing 10 new people, from the Sightline Institute, for the period 1990-2000, shows the sprawl quite clearly:



What is at issue, in terms of the planning for the Columbia River Crossing, is what will happen if there is a 12-lane bridge built, compared to what will happen if there is no change. To this end, the staff for the Columbia River Crossing Task Force has made some projections, and has presented them to the press and to the City Planning Commission and the City Sustainable Development Commission. We believe these projections are seriously flawed, and most particularly they are flawed as to what will

happen if we do not build four lanes of additional highway capacity throughout the bridge area to serve the 65,000 Clark County commuters and those who may join them between now and 2030.

As Dean Lookingbill of the Clark County Regional Transportation Council told us, the land-use projections for the 12 lane bridge and for the No Build Option in 2030 and 2035 are **the same**, as are the projections for population growth. This forecast, frozen for both cases by federal DEIS protocol, gives everyone seriously mistaken assumptions with which to work. Clearly, population in Clark County, which is projected to grow from 400,000 to 665,000 by 2030, and the continued sprawling pattern of that development, will be significantly altered with additional capacity for 40,000 trips a day at higher speeds across the new bridge, especially when compared to what will happen without that capacity and, therefore, *with* the resulting worsening congestion on the bridge.

What this faulty comparison of projected population and travel demand does is to ignore decisions that consumers make about where to live and where to work -- what is called "induced travel." There are, in effect, **no** projections in the CRC Task Force work for such travel that will come about because of the new bridge auto capacity. A direct historical analogy is useful, using the last time that freeway capacity was added across the Columbia. The Glenn Jackson Bridge, completed in 1982, had projections for 2000 and 2005 trips that were based on the same kind of analysis, no change in trip travel from the No Build Option to the new bridge. These trip projections, according to Lookingbill, were nearly **50% below** what actually happened in terms of bridge travel in 2000 and 2005. The lesson is simple – added highway capacity generates choices about where to live and where to work in a fashion that is *independent of* other trends.

Indeed, it is very likely that the businesses who wish to benefit from growing Clark County population recognize quite well what will be the impact of a new bridge – to spur housing development and population growth in sprawling Clark County. And, the governments there desire that the population does grow so that it can pay sales taxes, the source of most government funding in Washington. As many are well aware, the State of Washington does not have strong land-use laws protecting farm and forest land. So nearly all of the cities in Clark County have hundreds of acres of land that can be developed for housing, as shown in the chart below:

City Housing Acres Now Available for Housing in City In UGA outside City

Battle Ground	447.9	427.7	767.2
Camas	384.1	539.8	469.0
La Center	167.2	67.1	369.7
Ridgefield	451.2	568.9	609.0
Three Creeks	805.4	0	2,116.9
Vancouver	858.7	747.8	1,513.0
Washougal	207.7	295.9	248.9
Yacolt	14.8	33.5	5.1
Total	3,337.0	2,680.7	6,098.8

The CRC's own analysis shows that 93% of the additional travel over the replacement bridge will come from low density development in what they call "suburban fringe" areas of Clark County Source: (CRC: 2030 Transit Travel Markets Technical Memo, 2007). This low density fringe development will generate additional single occupancy vehicle travel and be particularly difficult to serve with transit.

Perhaps even more important to the decision about the Columbia River Crossing is what we believe to be a **purposeful miscalculation** about travel demand on the existing bridge if the additional highway-auto capacity is *not* built. Keeping with what is widely recognized as a bias of such highway department projections (Government Accountability Office (2005). Highway and Transit Investments: Options for Improving Information on Projects' Benefits and Cost and Increasing Accountability for Results, Washington, DC GAO-05-172)

the traffic across the new bridge is projected to grow dramatically by 2030 with the No Build Option, by even more trips than would occur with the additional capacity on a new bridge after tolls and transit are added or imposed. There are a number of factors which are counter to this typical straight-line travel prediction, not the least of which is that the rush-hour congestion *itself* causes alternative decision-making by potential commuters – choices to take other routes, to car-pool, to live closer to the job, and to take existing transit or bicycle options. But, in this particular case, there are other important considerations which have not been properly built into the CRC Task Force Staff's No-Build Option projections.

- Traffic has been already been **declining** across the bridge over the last two years. Average daily traffic declined by 0.5% in 2006 and by an additional 1.2% in 2007.
- Gasoline prices are the part of car ownership that is most visible to most commuters. The CRC Task Force Staff projections for all alternatives are calibrated to a travel demand model based on the experience of the 1990s, when real gasoline prices were much lower, and were actually declining in inflation-adjusted terms. In effect, these models are based on behavior back when oil was less than \$30 per barrel. It is *currently* at \$113 a barrel, and the City's Peak Oil Task Force expects it to rise sharply from that figure as oil supplies begin to dwindle. Rising gasoline prices are likely to have a very large impact on demand for peak hour commuting from Clark County, and this fact is **not** part and parcel of the No Build projections. In part, the impact from gasoline prices will be higher than projected because Clark County trips to work are, on average, longer than those in the rest of the region, because of the sprawled-out land-use pattern in Clark County. Already, higher gasoline prices are reducing gasoline sales and vehicle miles traveled in the region, and the long term effect is expected to be several times larger. Attached to this memo are a map showing 2030 travel demand from each geographic segment of the county, and the numbers of persons projected to be living in those

geographic areas. These have been provided from the Clark County RTC as the land-use data for 2030 projections for the No Build Option and the Big Bridge. CRC Task Force Staff said repeatedly before the City Sustainable Development Commission that the Bridge project “promotes compact development.” A quick look at the 2030 projections for increased sprawl in Clark County, with the new bridge or without, demonstrates conclusively that such statements are **not true**.

- CRC Task Force staff has said in hearings that there is **no** calculation in the travel demand numbers for the impact of a carbon tax, or for a cap and trade policy and regime on oil. Yet, if the CRC Task Force assumption of 40% growth in regional VMT by 2030 actually begins to look like it will occur, surely Oregon and Washington will head in that policy direction in this region. After all, VMT is the largest source of greenhouse gas emissions in the region. Such policy change could have a major impact on travel demand across the Columbia.
- Economist Cortright has recently released a paper published by CEOs for Cities (Driven to the Brink, available at http://www.smarterbridge.org/sites/default/files/Driven_to_the_Brink_Cortright_Report.pdf) that demonstrates that, nationwide, demand for suburban housing is down. “The collapse of America’s housing bubble -- and its reverberations in financial markets --has obscured a tectonic shift in housing demand. Although housing prices are in decline almost everywhere, price declines are generally far more severe in far-flung suburbs and in metropolitan areas with weak close-in neighborhoods. The reason for this shift is rooted in the dramatic increase in gas prices over the past five years. Housing in cities and neighborhoods that require lengthy commutes and provide few transportation alternatives to the private vehicle are falling in value more precipitously than in more central, compact and accessible places,” he writes. This is particularly true, he says, when suburban housing is compared to housing prices in healthy inner core cities, such as that in Portland, where housing prices have remained stable despite the current credit crunch. Again, this data, if it is in response, at least in part, to rising gasoline prices, throws yet another cloud over projections of growing travel demand in the No Build that require us to spend \$4.2 million for a big new bridge.
- As Clark County Commissioner Steve Stuart pointed out at the Oregon Bus Project debate on March 25, Clark County has about 50% fewer jobs per capita than the rest of the region south of the Columbia. The CRC Task Force staff has projected dramatically increased employment in Clark County between now and 2030, a result, it has said, of the vast population increase expected. But Scott Bailey, Regional Economist for the Washington State Employment Security Department found something a little different when he spoke on April 17. The slides for his remarks are attached to this memo. Bailey projects 2030 population figures **below** 600,000, which is quite a bit different than the 665,000 figure used in the CRC presentations. Bailey also noted that Clark County housing permits

are now the lowest they have been since 1987. There is another bit of information in Bailey's presentation that can have a major impact on travel demand for commuting across the Columbia. The 185,061 persons in 2005 holding non-farm jobs and who are not self-employed, are largely aging baby-boomers and will be retiring at increasing rates. Retirement will leave thousands of jobs open in Clark County, and a fair number of those jobs are likely to be taken by the 65,000 persons who the CRC Task Force staff says are now commuting to jobs across the Columbia daily, thereby reducing further the travel demand projected in the No Build Option. Relatively minor adjustments in the projected growth rates of employment and housing in Clark County over the next 20 years would eliminate the enormous projected demand in commuting to Oregon, and the supposed need for additional transportation capacity.

We are not surprised that the CRC Task Force staff has significantly over-estimated demand for travel across the current bridge in a No-Build Option. Nor are we surprised that the Task Force staff has significantly under-estimated the induced travel to be caused by a combination of Clark County land-use and the additional freeway capacity built in the bridge area. We are, however, concerned that City Commissioners will buy their analysis.

We also feel compelled to point out additional gaps in the CRC presentations:

1) The No Build Option has not been publicly fitted with tolls and high capacity transit, to see what would happen to demand and congestion without the big new bridge. At first, CRC members and staff said it was illegal to toll the existing structure. After being repeatedly corrected on this point, they now acknowledge it is legal to do so. Obviously the \$750,000,000 for the light rail transit, bicycle and pedestrian crossing could also be applied for to FTA without a big new bridge. It is just that the Washington and Clark County members of the Task Force are better poker players than those of us on the Oregon side of the River, and they have seen that such alternatives are not presented. Nor is there an alternative presented for an arterial bridge connecting the two Ports for freight. Under the CRC analysis, the only reason that the Replacement Bridge alternative has less traffic (and therefore lower greenhouse gas emissions) than the No-Build is that it has tolls, and the No-Build does not: imposing tolls on the No-Build would result in less congestion and less greenhouse gas emissions at far lower cost.

2) The CRC Task Force staff has claimed before the City Planning Commission and the City Sustainable Development Commission that the congestion now found in the bridge area will not simply move to another area, such as the intersection of I-5 and the Banfield in the Rose Garden area, or to the areas where the traffic narrows from five lanes in the bridge area to three lanes on leaving the bridge area, going both North or South. Claims to eliminate or greatly reduce congestion on the I-5 corridor by virtue of the Big New Bridge are **not credible**, because over-all traffic and VMT in the region is increased, a fact one can ascertain by looking at the CRC's own projections. As a result, the

congestion just moves to another part of the system – this is a law of cueing theory, and is not disputed by reputable analysts and scientists.

3) Similarly, the claim of the CRC Task Force staff to reduce air pollution and greenhouse gas emissions by adding capacity to speed up traffic through the bridge chokepoint area has **fatal flaws**. It, too, ignores cueing theory and second-level effects of added capacity, which again are scientifically proven to occur within a regional highway system when major capacity is added. Induced land use changes will produce longer commutes, more vehicle miles of travel and higher greenhouse gas emissions—all effects ignored in the CRC modeling.

4) We are also greatly concerned at the tendency of the CRC Task Force staff to over-exaggerate the impact of a single light rail line to downtown Vancouver, if it is to be built with approval of Clark County and Vancouver. In cities throughout the world, it has become quite clear that transit works best when it provides a truly competitive alternative to the automobile, and when a line within a single corridor such as I-5 becomes part of a much larger transit system that competes with the automobile. Yes, we agree that transit generally “promotes compact development.” But, how well it works to achieve compact development depends on how well, for example, C-Tran co-ordinates buses with the light rail stop, with how much time is saved on transit going to desirable job locations in Oregon compared to using an automobile, with how well the transit network gets you to varying locations outside the central city in Portland. And transit promotes compact development most effectively when the region doesn’t make a massive additional investment in building additional capacity for moving single occupancy vehicles. It is possible to show numerous light rail stops in East Multnomah County, and in Washington County, that have little or no “transit-oriented development” as the Task Force staff gladly projects for downtown Vancouver and for the Hayden Island stops for light rail. Park and Ride lots in Downtown Vancouver that connect via freeway to sprawled out living locations throughout Clark County may not promote compact development at all.

5) The claims of freight growth via trucking in the region are also highly questionable. So, too, are the claims of the importance of freight to our economy. Freight movement is not a major factor in the Portland area’s economic competitiveness, and marginal improvements (or declines) in travel times within the metropolitan area will have no measurable effect on long term regional economic growth. Freight intensive industries are in decline, and growing industries move trivial amounts of freight. Freight companies already route around congestion—truck movements over the I-5 bridge are lowest in the peak hours, and 85 to 90% of all freight in the corridor moves at non-peak hours or in the non-peak direction. Higher fuel costs are affecting freight growth: truck freight per unit of GDP is declining sharply, and intermodal rail freight movements are up sharply. Most truck freight in the region is low value (fuel, gravel, logs), and moves short distances (less than 50 miles).

June 18, 2002

To: I-5 Task Force

From: Lenny Anderson, Project Manager, Swan Island TMA
 Board Member, Swan Island Business Assoc.
 Member, ICURA CAC
 Member, I-5 Task Force
 Resident, NE Portland

Subj: I-5 Task Force Recommendations

While many of the elements in the I-5 Transportation and Trade Partnership Strategic Plan for the I-5 corridor are laudable, the effort is deeply if not fundamentally flawed.

This Plan is not based on the movement of freight or on the needs of the regional economy. Despite a name that includes "Trade," the movement of freight has been a secondary consideration from the start. NO new data have been developed or presented in a timely fashion to provide a basis for these recommendations; NO effort was made to understand the character and direction of this region's economy and the infrastructure needs of that economy.* Indeed, some of the recommendations outlined in the Strategic Plan make conditions worse for trucks in N/NE Portland. (see note on Swan Island below.) Here are some specific freight movement ideas that would merit study:

- Truck bypass lanes at metered on-ramps
- Legalization of "Triples" in Washington State
- Truck exclusive use of HOV lanes in non-peak hours

The second major flaw is the Strategic Plan's suggestion that investing over \$1 billion in a new river crossing will actually provide a transportation fix. It is clear from the data provided by staff, that more bridge capacity across the Columbia River, regardless of how it is configured, will increase the number of vehicles---mostly SOVs--- coming into Portland by between 30% and 50%. This is bad for regional air quality, bad for freight movement and bad for the quality of life in Portland's north and northeast neighborhoods. We have 14 lanes of freeway across the Columbia, now we need to build more options:

- Lightrail and local transit service
- HOV lanes on existing capacity
- Bike/Pedestrian facilities

*Joe Cortright's study: "Transportation, Industrial Location and the New Economy," commissioned by the Port of Portland, might have been a good place to begin. Interestingly enough, he notes in the Executive Summary, page ii, "Interviews with local firms indicate...general satisfaction with Portland's transportation infrastructure."

Two adjustments to the existing Strategic Plan will help to reduce the negative impacts noted above:

1. rescind the decision made at the April, 2002 Task Force meeting to exclude consideration in the EIS of a reconfigured 6 lane freeway with two additional 2 lane arterial bridges, one with LRT and the other in the heavy rail or other not yet determined alignment. This option was removed from further consideration by a 10-10 vote, which suggests broad support for its inclusion.
2. include an explicit commitment that a minimum of 1% of project costs will be set aside for restoration projects in neighborhoods that existed in the Corridor prior to the construction of I-5 through Vancouver and Portland in the 1950's and 1960's.

Task Force recommendations' impact on key Swan Island businesses.

On Swan Island, where the Swan Island TMA works to create roadway capacity for freight (2 SOVs = 1 Tractor-trailer), these recommendations have the potential to negatively effect key area businesses... for example:

Freightliner is the one of, if not the, largest manufacturing concerns in the City of Portland. Currently it brings many of its subcontracted parts and assemblies to Swan Island from the Columbia Corridor via Columbia Boulevard and I-5. **The widening of the Slough Bridge southbound for the benefit of Clark county commuters will require those shipments to merge onto I-5, from Columbia where now they have a merge-free on ramp and a free flowing roadway due to the metering effect of the Slough Bridge.**

UPS has its major regional hub on Swan Island, but **has built and staffed a distribution center in Vancouver for deliveries in that area.** More bridge capacity will allow their competitors to ship out packages from their Oregon hubs and compete more effectively without comparable investment in facilities and jobs in Clark county.

adidasAmerica has relocated their North American HQ with approximately 1000 employees from Beaverton to north Portland in part in response to employees' desire to live in a city environment and have the amenities of a larger city. **No product is shipped out from their new facility, but added bridge capacity will bring 100s of additional vehicles through the very neighborhood in which they have chosen to locate and compromise the livability that drew them here in the first place.**

These recommendations do harm to Portland's neighborhoods and major employers. In addition they have the potential to restrict the expansion of businesses on Swan Island which operates under a statutory limit on PM Peak vehicles. In effect they will reverse the effort to create capacity for freight on Swan Island; **for every two additional SOVs that come to Swan Island, one Tractor-trailer will have to be parked!**

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Phased Alternatives

The following are 6 steps that can be taken after the current build alternatives are rejected because of their cost and negative impact on global climate change.

Step 1 -Tolls

Purpose:

- Modulates the flow of traffic across the existing bridges, especially during peak hours in the prime direction.
- Allows the flow of essential commercial traffic without massive infrastructure development.
- Raises revenue.

Example:

- Apply for federal demonstration grant to establish an electronic and license recognition (no tollbooths), dynamic, variable rate toll system on the existing I-5 bridges.
- I-205 Bridge could also be tolled.

Cost:

- Slight implementation costs, but would raise more than enough revenue to pay for the collection costs

Step 2 - Improve Public Transit

Purpose:

- Provides a viable travel alternative to the private automobile, especially for commuters.

Example:

- Extend MAX north to Hayden Island as part of the Milwaukie Light Rail Project in conjunction with an eastside connection between OMSI and the Rose Quarter.

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Search this site:

- Provides a 13 mile long north/south high capacity rapid transit line between Hayden Island and Milwaukie (42 minutes) with daily transfer connections to 550 east/west MAX trains and over 1,650 TriMet buses.
- Hayden Island provides a convenient location for C-Tran buses to interface with the TriMet system.
- The Portland Harbor MAX Bridge could also accommodate pedestrians, bikes and possibly local vehicle traffic.

Cost:

- Undetermined.

Step 3 - Fix the Railroad Bridge

Purpose:

- Allows tugs and their tows to pass safely under the “hump” of the Interstate Bridges eliminating the need for bridge lifts except for rare occasions.
- Provides more clearance at the Railroad Bridge for all vessels.
- Seismically upgrades the Railroad Bridge’s opening span.
- Increases rail capacity by reducing opening time.

Example:

- Re-apply for Truman-Hobbs funds to replace the old swing span with a wider lift span located closer to the center of the river as proposed by the Columbia River Tugboat Association in 2002.

Cost:

- \$ 42 million (2002 dollars)
- No local funds

Step 4 - Seismic Upgrade

Purpose:

- [Reinforce the existing structures](#) to withstand a major seismic event.

Example:

- Current CRC recommendation for the Supplemental Bridge Alternatives.

Cost:

- \$125 - 265 million (2006 dollars)
- Federal funds and Oregon’s share of toll revenues.

Step 5 - Modify ramps (Hayden Island)

Purpose:

- Reduce local traffic congestion.
- Provide fast convenient C-Tran bus access to Hayden Island
- Provide better NB truck access to I-5

Example:

- Add truck bypass lane from Marine Drive to Hayden Island. (convert existing bike/ped. lane on Portland Harbor Bridge to general traffic)
- Limit NB Hayden Island on-ramp traffic to buses and emergency vehicles in the prime direction during peak hours.

Cost:

- Minimal
- Oregon's share of toll revenue

Step 6 - Light Rail to Clark County

Purpose:

- Improves transit service to Clark County
- Reduces operating cost to meet high capacity demand in corridor
- Allows C-Tran the flexibility to expand and improve its local feeder bus network.

Example:

- Construct a downstream light rail bridge with an opening span, following the profile of the existing Interstate Bridges. (less costly than a high span; it would not normally open during hours of rail operation due to Step 3 above)
- Provide for bikes and pedestrians.
- It could also be built to provide for local vehicles (tolled?)
- It could also be built to accommodate SB SR14 traffic, (tolled) allowing the SB freeway traffic to flow more smoothly over the existing bridges.

Cost:

- Would vary because of vehicle options selected.
- Undetermined, but significantly less than current proposals because it would be much shorter and would not include interchange modifications.
- Could be funded by FTA and Washington toll revenue - FHWA, if vehicles are included.



Sustainable Development Commission

Dan Saltzman
City Commissioner

Jeff Cogen
County Commissioner

Co-Chairs

Leslie Carlson

Justin Yuen

Members

Marcelo Bonta

Mark Edlen

Christine Ervin

Mark Fitz

Mike Houck

Roy Koch

Lillian Shirley

Derek Smith

Kent Snyder

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Portland, OR 97209
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**MULTNOMAH
COUNTY**

June 2, 2008

Mayor Tom Potter
Commissioner Sam Adams
Commissioner Randy Leonard
Commissioner Dan Saltzman

RE: Columbia River Crossing

Dear Mayor and Commissioners:

On behalf of the Sustainable Development Commission (SDC), we write to express several concerns about the proposed Columbia River Crossing (CRC) preferred alternative.

The SDC's charge to "develop and advocate for programs, policies, and actions by government, citizens, and businesses leading to sustainable communities in the Portland metropolitan area" compels us to draw your attention to potential conflicts of the CRC preferred alternative with local policies on sustainability and climate change. We also note that we do not have the expertise to speak to the safety or seismic issues associated with the existing bridge or the preferred alternative, and therefore those issues will not be addressed in this letter.

While we respect the long and difficult work of the CRC task force and staff, we are concerned that the data underpinning the CRC preferred alternative may be outdated or flawed. We base this opinion on the testimony of CRC staff to the SDC as well as on our observation of the changes in driver behavior and gas consumption over the past few months.

We believe fundamental changes in behavior are occurring over a relatively short period of time because citizens are reacting to both high gas prices as well as a general increase in awareness of climate change. For example, bridge traffic over the Columbia River has decreased by at least 3 percent since February 2008.¹ In addition, gas consumption on a per capita basis has decreased to 1966 levels² and vehicle miles traveled (VMT) in Oregon are down, while transit use has increased.³

During their presentation, CRC staff told the SDC that the regional data they used to predict the need for more lanes on the bridge used gasoline prices well below what we are currently experiencing. Because of this, we respectfully recommend that an independent panel be appointed by the City to review the analysis and data used for the CRC modeling. We would like to see updated modeling that uses current gas prices (and takes into consideration that many predict gas prices to rise on a sustained basis consistent with the Peak Oil Task Force findings). It is our hypothesis that if gas prices continue to rise, VMT will fall more quickly than the CRC staff findings show, and that this might allow the region to scale back the project, saving taxpayer dollars and reducing greenhouse gas emissions.

One other critical policy issue was not addressed by CRC staff, and that is the likelihood of carbon regulation with the advent of a new administration in Washington, D.C. We believe that the emergence of a formal carbon market—nationally and/or regionally—will drive further reductions in VMT and an array of other changes that may well affect the scale of this project. In fact, we strongly believe that every transportation project undertaken now and into the future must

CRC letter to City Council – page 2

be viewed through the lens of our efforts to fight climate change and reduce greenhouse gas emissions 75 percent below 1990 levels by 2050, as required by Oregon law. This means a reduction well below current levels, and not simply a reduction below a forecasted business-as-usual future scenario.

As you know, the City and County are currently updating their joint climate-protection plan, and the initial analysis shows that the region must reduce vehicle miles per day to less than half of 2006 levels by 2050. We are concerned that such an extensive project as the CRC preferred alternative may not help us to achieve that goal, and may, in fact, increase our emissions overall despite the proposed provision of enhanced bike, pedestrian and transit features.

We want to communicate to you our strong support for the inclusion of the following into the CRC, no matter what the size and scope of the final project:

- Light rail transit (as opposed to bus rapid transit)
- Two 14-foot bike/pedestrian lanes (one line each way, rather than a single lane for bikes and pedestrians)
- Tolling and congestion pricing based upon time of day and frequency of use
- Wider area sustainable stormwater management

Finally, given the rapidly changing landscape of climate-related policies at the local, state and federal level, it would be helpful to explicitly consider the option of starting with a preliminary bridge toll prior to any construction. This user-pay approach would start generating revenues targeted for needed improvements, would yield additional insight for trip modeling and would allow more time for comprehensive transportation and land use plans to be developed to meet our climate change policies.

At a minimum, we respectfully request that an independent panel -- with expertise in, among other things, climate policy, greenhouse gas emissions modeling, and oil price/supply volatility -- review the data and analysis of the CRC project prior to the City Council vote scheduled for July 9, 2008.

Best regards,



Leslie Carlson
Co-chair



Justin Yuen
Co-chair

¹"Bridge Traffic Down," the *Vancouver Columbian*, May 7, 2008.

²"Braking News: Gas Consumption Goes Into Reverse," The Sightline Institute, April 2008

³"Portland Mass Transit Fills 'Er Up," the *Oregonian*, May 11, 2008

cc:

Jeff Cogen, Multnomah County Commissioner
Portland Planning Commission
Metro Council
CRC Task Force

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CRC Seismic Panel Executive Summary

[Tags](#)

(copied from CRC web site)

The Columbia River Crossing (CRC) project convened a panel of bridge and geotechnical engineers (the Panel) with relevant seismic design and retrofit experience to consider and discuss critical issues concerning the seismic vulnerability and retrofit possibilities of the existing I-5 Interstate Bridges.

The Panel was asked by the CRC project team to specifically address three questions. The questions and the responses from the Panel are as follows:

1. Is it feasible to retrofit the existing structures? If so, how?

Yes, it is technically feasible to retrofit the existing bridges to the current seismic safety standards. The Panel identified expected vulnerable elements of the bridges and discussed potential retrofit concepts to address these vulnerabilities. Retrofit concepts could include strengthening or replacing significant portions of the existing bridges.

2. How would a retrofit affect the existing structure with regard to 4(f) sensitivities?

For the purpose of protecting the structures' historic significance, the design effort can minimize changes in the structures appearance.

Examples of this include:

Foundation and pier strengthening could follow the outline of the existing bridge elements, and although the resulting elements would be larger, there would be minimal visual impact.

Bearing retrofit or replacement would be virtually unnoticeable to the untrained eye.

If truss member strengthening and tower reconstruction is required, member shapes could be reasonably replicated.

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3. What is the cost to seismically upgrade the existing bridges?

The Panel discussed and developed their opinion of estimated raw bridge construction costs to retrofit both bridges. This opinion ranges from \$88 million to \$190 million. This opinion of cost increases from \$125 million to \$265 million when design, permitting, right-of-way, construction inspection and management, agency oversight, and contingencies are added. (Note: The Expert Panel determined an opinion on ranges of construction costs and did not estimate the added costs.) Discussion of these issues and others, including recommended next steps for more clearly defining the retrofit, if needed, are developed in more detail in the body of this report.

[Full Report \(7 MB\)](#) (link to CRC web site)

Lenny Anderson
Transportation Options
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Phone: 503-460-0211

Arterial Bridge haunts CRC

The Arterial Bridge option has been haunting the bi-state deliberations on the Columbia River crossing for some time. I was a member of the Governors' I-5 Task Force...the so called "Trade Partnership"... (I cast the lone dissenting vote on the final report), and recall the night about mid way through our several years long discussion when someone, maybe it was me, suggested that what we really need across the River is a "Broadway Bridge." This came in the wake of staff's report that somewhere around a third of Interstate Bridge traffic was "local."

From my own perspective as resident of the eastside of Portland who crosses the Willamette River often, this was an "Ah Ha" moment, and it appeared that many colleagues on the Task Force shared this reaction. I cross the Willamette by car, bike, bus, MAX depending on time of day, trip destination, etc. Car trips may be over the Fremont Bridge or even the Marquam, but are often via the Broadway, Steel or Hawthorne Bridges. But the point is that I have lots of options and chose the one best suited to my purposes. Travelers across the Columbia have very limited options...they must use a freeway bridge, whether they drive, take transit or even bike.

As the Task Force neared the end of its work, staff reported that the "8-2" option...a new eight lane freeway bridge with a new two lane arterial bridge...performed very well. At that point I made a motion, seconded by then Portland Mayor Katz, to include in the final TF recommendations for further study a "6-2-2" option...keeping the existing bridges and adding two 2-lane arterial bridges, one adjacent to the current bridges and the other at some point within the heavy rail bridge alignment. This motion "failed" on a tie, 10-10 vote. Interestingly enough some "yes" votes came from Washington side representatives, while three "No" votes were cast by those on the Oregon side...Port of Portland, ODOT and sadly, Metro.

I was assured at the time that the "6-2-2" option would be included in any DEIS. Clearly the largely consensus based process of the Task Force had broken down and the Facilitator has simply ruled "tie means exclusion, rather than inclusion." So in the end the "6-2-2" was sort of recommended, I voted "No" on the final recommendations and the powers that be did not invite me back to the expanded Columbia River Crossing effort...for which I am grateful.

These task forces, commissions, studies, etc. are really public relations campaigns, the staffs of which are sort of like the panels of experts hired by the cigarette industry to tout the benefits of cigarettes, etc. Staffed and funded by the big DOTs, how can we expect anything but "big project solutions"...until their work is subject to truly independent review by the federal courts, which I believe will and should come to pass in this case. Until that time, we won't really know the score.

Lenny Anderson

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So how bad is the congestion on I-5? For five hours every day, AM & PM peaks, its not fun, but that is not much more than 10% of the operational time of the roadway (24 hours x two directions = 48 hours; 10 %= 4.8 hours). Most of the weekday and almost all thru the weekends, the roadway is fine. Add to this the impact of incidents, which account for 50% of congestion, and you have to wonder...is the sky really falling? I am repeatedly reminded of the predictions of our energy needs in the 70's...how many nuclear power stations did WPPSS (otherwise known as "Woops") start to build? I-5 needs to be better managed and incidents reduced; there are lots of low cost strategies to do this effectively.

But what about freight?...in the peak hours on I-5 freight represents about 10% of all vehicles; reduce the numbers of SOVs by 10% and theoretically you could double the amount of freight getting through in the peaks. For true interstate freight movement there is I-205, and indeed lots of loads from the Puget Sound area to California go via I-90 and US 97. UPS the parcel delivery company whose main hub in on Swan Island already has solved its I-5 problems...it has 100 or so employees at a Clark county sub-hub. A UPS employee commented to me that if WashDOT really wanted to help freight, they would legalized "triples." When I see raw logs hauled through Portland in the middle of the peak, I have to ask, "what freight crisis?" Another section of a bill of goods.

And is freight movement really that critical to the regional economy? Joe Cortright, a highly regarded student of this issue, was pretty clear the other night that its not. Surely no one will argue (except the Port of Portland) that the containers of frozen French fries and straw cubes moving to T-6 are the cornerstone of the regional economy. Intel did not lose market share due to whatever delays they may have in getting product to PDX. But this is not about freight...the first project endorsed by the "I-5 Trade Partnership" Task Force, Delta/Lombard, removes an existing freight advantage...the add-lane off Columbia Blvd. Southbound...for the benefit, God love 'em, of Clark county commuters driving alone into Portland.

So what happens if nothing is built? More Clark county commuters join vanpools & carpools, ridership goes up on C-Tran's new 4 and 4 Limited buses to Delta/Vanport MAX, fewer people move to Clark county, more Clark county residents opt for lower paying jobs there (sans Oregon income tax), some N. Portland businesses with a high % of Clark county employees (or whose owners live in Clark county) move their businesses north, some Clark county residents who work in Portland move to the revitalizing neighborhoods in N Portland. The sky does not fall! People adjust. Indeed property values edge up in N/NE Portland and cool off a bit in rural Clark county.

The Arterial Bridge with MAX is really a compromise...more vehicle capacity, but not so much that its overwhelms Portland, real competitive transit options, especially to North and Northeast Portland, and all at much lower costs...one small bridge now and maybe another later. Curious, but the staff opposition to this option, to even analyzing this option, appears to be based on two arguments...1. it will not carry enough traffic and 2. it will carry too much traffic. Certainly it will be a busy structure, and it will allow the

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worst offending on/off ramps on I-5 to be removed, and it will cost less. Most important, It will give Clark county residents a choice...take the freeway, take the arterial, take MAX, take a bus, ride a bike...sound familiar? To not demand a fair and impartial analysis of this option borders on the criminal.

Columbia River CROSSING *DRAFT Meeting Agenda*

MEETING TITLE: Task Force Meeting
DATE: March 27, 2007, 4:00 – 6:30 p.m.
LOCATION: WSDOT SW Region Headquarters
 11018 NE 51st Circle, Vancouver, Washington

Note: Please turn off all cell phones, handheld devices, and pagers so that they do not send or receive a signal during the meeting. Transmitted signals disrupt the audio and recording equipment. Thank you.

TIME	AGENDA ITEM	ACTION
4:00 – 4:15	Welcome & Announcements	
4:15 – 4:20	Meeting Summary	Approve Meeting Summary
4:20 – 4:35	Report from Fourth Alternative Subcommittee	Receive Report
4:35 – 5:20	Public Comment	Receive Public Comment
5:20 – 6:25	Findings of Fourth Alternative Subcommittee	Discussion / Action
6:25 – 6:30	Wrap Up and Next Steps Next Meeting June 26, 2007, 4 p.m. – 6:30 p.m. Oregon Department of Transportation 123 NW Flanders St., Portland	

BUS DIRECTIONS from PORTLAND:

From Downtown Portland (SW Salmon and 6th Avenue) take C-Tran Bus #105 (I-5 Express) or TriMet Bus #6 (MLK Jr. Blvd) to Downtown Vancouver (7th Street Transit Center). Then follow directions below from Vancouver.

BUS DIRECTIONS from VANCOUVER:

From Downtown Vancouver (7th Street Transit Center) take C-TRAN Bus #4 (Fourth Plain) eastbound to the Vancouver Mall Transit Center. Other buses to Vancouver Mall are #32, 72, 76, and 78. From the VM Transit Center, transfer to Bus #80 (Van Mall/Fisher's) eastbound to 49th and 112th Avenue. WSDOT SW Regional Headquarters is 2 blocks north of this bus stop.



Meeting Summary

Meeting: Columbia River Crossing Task Force
Date: February 27, 2007, 4:00pm
Location: Oregon Department of Transportation, Region 1
 123 NW Flanders St., Portland, OR

Members Present:

Last Name	First Name	Organization	Alternate Attending
Adams	Sam	City of Portland	
Armbruster	Grant	Portland Business Alliance	
Bennett	Mike	City of Gresham	
Brown	Rich	Bank of America	
Burkholder	Rex	Metro	
Byrd	Bob	Identity Clark County	
Caine	Lora	Friends of Clark County	
Cruz-Walsh	Serena	Multnomah County	
Dengerink	Hal	Wash. State University- Vancouver	
Eki	Elliott	Oregon/Idaho AAA	
Frei	Dave	Arnada Neighborhood Association	
Fuglister	Jill	Coalition for a Livable Future	
Grossnickle	Jerry	Columbia River Towboat Association	
Hamm	Jeff	C-TRAN	
Hansen	Fred	TriMet	
Hewitt	Henry	Stoel Rives, LLP	
Imeson	Tom	Port of Portland	
Isbell	Monica	Starboard Alliance Company, LLC	
Knight	Bob	Clark College	
Lookingbill	Dean	Regional Transportation Council	
Malin	Dick	Central Park Neighborhood Assn.	
Paulson	Larry	Port of Vancouver	
Pollard	Royce	City of Vancouver	
* Pursley	Larry	Washington Trucking Association	
Russel	Bob	Oregon Trucking Association	
Schlueter	Jonathan	Westside Economic Alliance	
* Schmidt	Karen	Washington Freight Mobility Strategic Investment Board	
Strahan	Elson	Vancouver National Historic Reserve Trust	
Stuart	Steve	Clark County	
Sundvall-Williams	Jeri	Environmental Justice Action Group	
Tischer	Dave	Columbia Pacific Building Trades	
Valenta	Walter	Bridgeton Neighborhood Association	
Walstra	Scot	Greater Vancouver Chamber of Commerce	
Zelenka	Tom	Schnitzer Group	

Number of guests present: 105

Project Staff Present:

Ron Anderson
 Danielle Cogan
 Doug Ficco
 Tonja Gleason
 Frank Green
 Heather Gunderson
 Barbara Hart
 Michael Harrison
 Zachary Horowitz
 Ryan LeProwse
 Jay Lyman
 Tom Markgraf
 Colin McConnaha
 Barbara MacKay
 Kay McLoughlin
 Linda Mullen
 John Osborn
 Peter Ovington
 David Parisi
 Lynn Rust
 Carolyn Sharp
 Lynette Shaw
 Leon Skilles
 Gregg Snyder
 Audri Streif
 Kris Strickler
 Rex Wong

Members Absent:

Halverson	Brad	Overlook Neighborhood Association
Lynch	Ed	Greater Vancouver Chamber of Commerce
Osborn	Dennis	City of Battle Ground
Phillips	Bart	Columbia River Economic Development Council
Ray	Janet	Washington AAA

* Task force members present via phone

1. Welcome & Announcements

• Welcome to new members

- Tom Imeson is the director of Public Affairs for the Port of Portland and will be the Port's new representative on the Task Force. He replaces Bill Wyatt.
- Mike Bennett, Gresham City Councilor will be representing the City of Gresham. Mayor Shane Bemis will serve as alternate.

2. Meeting Summary Approval

- **Action:** Approved – Draft summary of January 23, 2006 Task Force meeting

3. Public Comment (27 commentors)

- **Barbara Nelson** – Resident and member of board of directors for Jantzen Beach Moorage. Employee at Jantzen Beach State Welcome Center where she sees safety problems first hand. Asserted that decision is needed now so a third bridge can be considered sooner. Spoke about aspects of living at the Jantzen Beach Moorage such as resident ownership of moorage, long term residency, 90% owner occupancy rate, unusually close community ties, and the large investments residents have made in their property. Spoke in favor tolling, light rail, and an upstream replacement bridge due to it having fewer impacts on Hayden Island residents.
- **Tom Mielke** – Served as a citizen and as a Washington State legislator on transportation issues for over twelve years. Cautioned that accepting the staff recommendation was premature and argued against claims that the current bridges were unsound for seismic and age reasons. Stated that a larger bridge would not remove congestion but would have a negative impact on air quality and referred to previous work he did as a legislator which concluded that the I-5 corridor could not feasibly be fixed. Raised issues with the National Environmental Policy Act (NEPA) process of the CRC project so far such as location and frequency of meetings. Suggested that the task force slow down and take a step back.
- **Terry Parker** – (Testimony submitted, see **Appendix 1**). Stated project was set to fail by an overly rigorous Purpose and Need statement that unfairly eliminates more affordable options. Raised issues with light rail's connection not serving most commuters, discrepancies between those benefiting from and those paying for tolls, failure to recognize the diversity of drivers' needs, and a lack of bike counts to prove need for, or bike tolls to support investment in, bike lanes. Advocated stopping process to find middle ground options that retain current bridges. Gave ideas for alternatives.
- **Jim Howell** – Stated support for Metro's resolution. Spoke of need to incorporate expertise of transit and railroad engineers as well as urban planners into work already done by highway engineers.
- **Vinton Erickson** – Farmer in Vancouver who ships produce across the bridge. Commented that the bridges are overloaded and if truck traffic doubles in 20 years, there will be no room for anyone to drive. Cited an *Oregonian* article from March 20, 1989 by a Pacific University professor and member of Oregon Transportation Commission. Article proposed a western bypass of I-5 which could form a beltway with I-205. Stated that this idea was still applicable and necessary.
- **Dan McFarling** – Aloha resident. Cautioned that a focus on congested pavement would waste money, time, and lives because such an approach could only move the bottleneck and worsen air pollution. Said that approach being used by CRC is antiquated and asserted it should focus instead on finding ways to efficiently move people and freight while best conserving land and resources.

- **Sharon Nasset** – Argued that the lack of support of the staff recommendation options by various transportation groups indicated that the options would not meet NEPA criteria. Referred to Metro's session on CRC and the resolutions which passed there. Claimed that there was a void in CRC's public outreach and involvement. Stated the need for additional options but questioned the right of the task force to determine those without going back to their constituencies and groups first.
- **Jon Haugen** – Native Portlander now living in Vancouver. Stated that none of the proposals meets community needs and advised group to look outside the region for new answers. Endorsed an expressway from SR-14 to I-405 and a commuter rail line from Longview to Portland.
- **Paul Edgar** – Original Vancouver resident who commuted in corridor for 14 years. Asserted the necessity of another alternative due to the current I-5 corridor being broken. Stated that any of these options would only create more congestion. Linked congestion with emissions and air quality issues. Cited these types of emissions as the cause of many illnesses and deaths, including his father's. Asked the task force not to perpetuate this type of problem and to come up with an alternative that would not induce more vehicles into the I-5 corridor. Warned that increasing congestion would kill people and businesses and asserted that the group could do better.
- **Ray Polani** – Resident of Portland. Stated support for Metro, Coalition for a Livable Future, Clark County Commission, and other groups who wanted a change in the direction of the process. Referenced a Feb. 11 *Oregonian* article on a study which identified five major choke points on I-5, including the I-5 Bridge. Referenced Feb. 23 *Portland Tribune* article that claimed over \$9 billion was needed to fix the area's roads and highways without including the CRC project. Read from a Feb. 3, 2007 *Oregonian* letter to the editor emphasizing the need for light rail, implications of rising gas prices, and consideration of spending money elsewhere on freight and passenger rail improvements. Concluded that the group should not build an expensive project that increases congestion in light of the current concerns about global warming and dependency on foreign oil.
- **Chris Smith** – Referred to Eddington report which claimed that the most beneficial transportation planning focus is on how to best operate what is already in place (through methods such as pricing). Read excerpt which warned against making transportation projects into the "pursuit of icons," asserted that resources are better used in other, less exciting ways, and that macro-investments are huge risks which are rarely assessed against other alternatives. Insisted that the group needed to look for better ways to achieve the same or better goals by spreading the money around.
- **John Leber** – Owner of Longview mulch company that ships by trucks. Commented that even if trucks could average 30 mph, his company would save a lot of money. Stated current situation is a bottleneck which could be improved. Expressed concern for area's economic future if businesses were forced to move due to transportation issues. Urged task force to approve recommendation.
- **Jason Barbour** – Member of Sellwood Bridge community task force and part of former committee to save C-TRAN, speaking on behalf of himself. Stated that the costs are a problem and designers are not considering what the community can or wants to pay for. Also held that light rail should be Clark County's decision and that their transit agencies should be in charge of it.
- **Rev. Phil Sano** – Commented that he is excited about the amount of public input and that it shows the project is an important issue. Cited a love of Portland based in its consideration of the impacts of what is built. Asserted that a project built for cars would bring more cars to the area. Commented on the dangers of cars and that many people do not want to see more of them.
- **TJ Harrison** – Lewis and Clark College student. Mentioned environmental and social issues education which shows building more lanes only increases congestion and stated she has seen Portland do more visionary things than that. Stated that adding more lanes is an environmental justice and public health issue due to the congestion it would cause at the Rose Garden. Stated opposition to staff recommendation and urged the project to be more creative and for commuters to reconsider options.

- **Fred Nussbaum** – Testifying on behalf Assn. of Oregon Rail and Transit Advocates (AORTA). Supported Metro resolution, consideration of another alternative, and more extensive analysis. Stated no alternative considered has taken a comprehensive view and included a local traffic bridge along with interchange reconfiguration and correction of the railroad bridge swing-span. Claimed there are only two alternatives in the staff recommendation and that it is not in the spirit or legal parameters of NEPA. Also testified on behalf of self. Urged task force not to base decision on majority vote. Claimed a straight vote could divide the community and that a consensus was needed.
- **Jim Karlock** – (Appendix 2) Found the lack of cost-benefit assessment to be a fatal flaw in the process. Gave an estimate that if a four lane bridge is \$200 million, then 30 to 40 bridges could be built with the same amount of money being discussed. Brought up the success of RC-14 on all criteria except transit and bike/ped, and stated that with a small secondary bridge those could be addressed. Questioned the cost-benefit of MAX and bike/ped accommodations.
- **Kristine Perry** – Member of Community Choices 2010 for Vancouver, WA. Stated that decision will have a long term impact on health and quality life. Encouraged task force, on behalf of the Steps to a Healthier Clark County program, to find sustainable solutions that encourage physical activity, discourage single occupancy vehicles, and provide viable transportation options. Emphasized concern over lack of equitable attention to bike/ped systems. Referenced national research which proved direct relationship between individual health, community walkability, transportation systems, and the built environment and connected this to concern over the levels of obesity in Clark County. Urged task force to convene a formal bike/ped group and to include a member of the Steps to a Healthier Clark County program in it.
- **Sylvia Evans** – North Portland resident and regular commentor. Stated she was there on behalf of her family, friends and neighbors, three of whom were hospitalized from impaired lung function that weekend, and one who died earlier from heart failure and impaired lung function. Stated North Portland residents were being poisoned and that it was necessary to reconsider the project and its decisions in terms of cleaner air, not more cars.
- **Kate Iris-Hilburger** – Student at Lewis and Clark College. Commented on relationship between these types of projects and the devastating displacement of low income communities. Cited that Portland has evolved creative solutions to these problems before and urged each member of the task force to seek those types of solutions and to emphasize justice issues.
- **David Rowe** – Battle Ground resident. Talked about his family's car use patterns and the high cost of it. Encouraged development of park and ride system and stated wish to use mass transportation. Referred to a study of commuter heavy rail use from Battle Ground. Claimed it would be less costly since much of the right of way is already owned and would serve the majority of the area. Pointed out many opportunities for C-TRAN and MAX connections and that the same equipment could have multiple uses. Showed map that indicated the specific route he was referencing.
- **Corky Collier** – Executive Director of Columbia Corridor Association and Member of the CRC Freight Working Group. Stated the I-5 corridor is home to over 2,500 businesses, is Oregon's largest business corridor, and is also Portland's industrial sanctuary. Stated that it is a major economic hindrance that the most congested spot on the interstate corridor is wrapped on both sides by the region's most important economic areas. Urged task force to support staff recommendation and to use the DEIS process to look at alternatives and consider air quality.
- **Jessica Lazar** – Student at Lewis and Clark College. Referred to *Reader's Digest* naming Portland as the "cleanest city" and stated that the US looks to Portland for innovative solutions to environmental and human rights issues. Commented that human rights are at stake and it was morally impermissible to displace residents or contribute to deaths via poor air quality if alternatives existed. Affirmed belief in another alternative which would be able to set a standard for other places.
- **Carl Larson** – From Boston. Commented on the potential of CRC to become something akin to Boston's Big Dig in terms of ill-spent money. Asserted that Portland needs to look at transit as hope, that a replacement bridge was not buildable, and that the number of public commentors speaking against the recommendation was indicative of the community's feelings.

- **Megan McBride** – Stated that she did not believe staff recommendation would meet goals of improved safety, mobility, and reliability on I-5. Stated more lanes would fill up and shift bottleneck to Rose Quarter. Urged the focus of project to be on the structural causes of increasing commuter traffic. Stated support for high capacity transit options. Advised group to look at who are having their needs met and who are suffering the impacts, especially in regards to North Portland residents.
- **Susan Morton** – Commented on need to have an even sharing of costs between the states. Stated that a replacement bridge option wasn't good enough and that a new corridor is needed for freight. Also stated that Clark County should choose light rail on its own.
- **William Barnes** – Private citizen who has followed project for four months. Stated that there was a need to start over and find another alternative. Identified problems which make the current process such as a cost not being nailed down, important advocacy groups not being brought in, ignoring of advocacy groups that are involved, and the lack of consensus among stakeholders.

4. Report from the Community and Environmental Justice Group

<p>NOTE: <i>Task Force questions and comments are in italics,</i> <i>Staff responses are in plain text</i></p>
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- Letter from Community and Environmental Justice Group read by Dave Frei. Group took position that it could neither accept nor decline staff recommendation at the time of the meeting due to lack of information on health and environmental impacts, displacement impacts, and alternative corridor placement.

--Henry Hewitt – More information on the issues the group has identified will be found in the DEIS phase. They will be dealt with in great detail at that time.

--Jill Fuglister – Is the group asking the task force to defer a decision until there is more information?

--Dave Frei – That is where we are at. It feels like this is being driven home without enough information.

--Henry Hewitt– We expect to gather this information on all the alternatives that move forward.

--Jeri Sundvall-Williams – This is a group of brilliant and dedicated volunteers. We didn't have a full sense of environmental justice when I left, but you have gained it and leadership since then. I have full confidence in your not knowing how to vote because I am there too.

5. Report on Public Comment and Open Houses

- Presentation by **Danielle Cogan**

--Rex Burkholder – We had a long public comment period at the Metro Council session on the resolution I've brought. There was a misconception about a lack of public involvement. This is a good response.

--Jill Fuglister – I feel like there are missing pieces in the way that the comment form questions have been framed. I thought that we were supposed to have been given a draft of the comment form.

Danielle Cogan – There was some narrowness to the questions but open ended responses were invited too. The form went through three iterations based on public feedback. Task force review of the forms was not something that I understand to have been proposed earlier nor carried out for these.

--Hal Dengerink– Wanted to clarify that public comment is not finished.

Danielle Cogan – Public comment is involved at every level. We took on an aggressive outreach plan to make sure people were aware of the staff recommendation. As we move into the next parts dealing with issues like impacts, we will continue to do so. We will accept any feedback on how to better serve in this manner.

6. Recommendation on Transit and River Crossing Alternatives for DEIS

- Presentation recapping the *Staff Recommendation*, by **Doug Ficco** and **John Osborn**

--Sam Adams – *Could you clarify the position of the federal regulatory agencies? Coast Guard has intimated that they want a new structure. Do they have a veto?*

Doug Ficco – Yes, they are the ones who permit where piers can be built.

--Rex Burkholder – *I would like to see tolling as part of CRC's TDM as well as at the regional level.*

--Steve Stuart – *How many lanes are being recommended to move forward?*

Doug Ficco – Five or six in each direction made up of three through lanes and two or three auxiliary lanes for operational purposes.

--Steve Stuart – *The total of that number of lanes, shoulders, lanes for High Capacity Transit, and widened bike/ped facilities is approximately 228 ft wide. How could that not divide Vancouver and the Reserve?*

Jay Lyman – Only through lanes will extend further into corridor. The others dive down into Vancouver right after the bridge.

--Sam Adams – *There was a comment raised during public comments – has there been no investigation of seismic issues on the existing bridges?*

Doug Ficco – A seismic panel was put together and a report created that showed the bridges are susceptible to earthquakes because of their existing foundations.

--Sam Adams – *What is the cost of the project? Obviously, these are low confidence numbers.*

Doug Ficco – We don't know until our alternative is well defined. There are a lot of risks involved.

--Henry Hewitt – *The range depends on whether we are talking just about the bridge or interchanges as well as infrastructure. Some of the ambiguity comes from that.*

--Sam Adams – *To address comments raised during the public comment period, why are we narrowing options without a better understanding of the costs?*

John Osborn – We know supplemental and replacement are similar in costs so other aspects of the performance measures become more important.

--Sam Adams – *The staff recommendation doesn't meet a legal test of NEPA standards?*

Jay Lyman – It is the opinion of the Federal Highway Administration and other experts that we have a wide enough range. We have to use a process to consider what we will take forward, which we have done in the last year and a half, but the DEIS only needs one build and one no build.

--Royce Pollard – *We are concerned about impacts on downtown Vancouver too, about the size of the bridge and where it touches down. The right of way we have is what this will be operated within. In regards to environmental justice, I've anticipated that the DEIS will address those issues on both sides of the river.*

Motion: Henry Hewitt – *I'd like to ask for a motion to approve the staff recommendation to move forward into the Draft Environmental Impact Statement. I'd like to have this be a beginning point to discuss the motion.*

Motion to amend: Rex Burkholder – *I'd like to make a motion to amend. The Metro resolution and amendment are before you. (Appendix 3). There are pieces here that reiterate what we want to focus on and also a fourth alternative that we've brought in. The challenge has been to find a low cost alternative that might reuse the existing bridges and meet the project Purpose and Need. We want to amend that the proposed alternatives move forward into DEIS but also that a subcommittee be established to come back at the next meeting with a fourth alternative for DEIS that retains the existing bridges.*

--Eelson Strahan – *Were the 37 alternatives already considered not defined enough or is this option # 38? Will the process be held up until the feasibility of this new one is determined through the same methods that the earlier options were?*

--Rex Burkholder – Adding another alternative would allow the others to go forward. The amendment would charge the subcommittee to come back with an option based on retaining the existing bridges. It might use options already considered or a combination of them.

--Bob Russell – What is the involvement of staff in this, and what is the cost of evaluating another option? For consistency the staff should apply the same criteria as it did to the options that were already tested.

--Henry Hewitt - I took the motion to mean that the subcommittee would be staffed by staff.

--Tom Zelenka - There are components in this that have already gone through the screening process. In order to carry forward and implement, would we use the same criteria? How would we know that what emerged would be the basis of getting to some consensus?

--Rex Burkholder – Any suggestion would have to meet the Purpose and Need Statement. You would have to come up with something that in the judgment of this body would meet that. Whether we make that decision before the DEIS or after it when you have more data is up to this body.

--Jill Fuglister – Coalition for a Livable Future does not support the current recommendation in part because of a lack of information and a lack of costs. Having one big costly idea on the table is very risky. There is a lot of wisdom in trying to come up with another alternative. Who is on the committee? I like the working group model but would also like there to be experts in areas like urban design. Also, there are performance measures that have been used for evaluation which were not agreed upon. There are other measures that we could look at and add into the analysis.

--Rex Burkholder – Membership of the committee is up to task force, to the chair specifically.

--Steve Stuart – How much would it cost to put another alternative in compared to the potential cost of having an all or nothing scenario that fails? Cost we incur in creating another alternative is definitely less. We would have information to help us come up with a better Locally Preferred Alternative that is easier to reach consensus on. We have staff with that expertise to help us create something different. I don't know what the other idea would look like but I do know what we have and that we are not satisfied with it. Whoever wants another alternative needs to be involved in finding out what that is.

--Serena Cruz-Walsh – I appreciate Rex for bringing forward a compromise proposal. We assumed that something might happen to bring another option forward when we voted two months ago. The Multnomah County Board of Commissioners expressed support for the staff recommendation but also concern about the political viability of the project without including a broader range of voices.

--Jeff Hamm – Is there another alternative that meets the Purpose and Need? Of the 12 that were screened, five were supplemental options. We could add pricing or very heavy TDM and TSM too. The C-TRAN board of directors is supportive of the staff recommendation, but would like another alternative.

--Walter Valenta – I am in support of the Metro proposal. Even if you are decided, understand that we save time by listening to these other voices now. We don't know what another alternative is yet but we need to be open to the process. If we could have a strong vote here, we would get more political capital.

--Jonathan Schlueter – I would be receptive if I thought we missed something or if it would bring peace amongst the group. I don't know if I see that in this proposal. We have listened very carefully to the 37 options before and the difficulties of a supplemental option. Where is this going to meet the standards of public safety, freight mobility, commuter access, and capacity? What do we gain by retaining the existing spans or delivering an alternate span? The costs of construction go up every year we sit here. It is \$25 million a month by my calculation to have this conversation.

--Dave Frei – In regards to air quality and other factors that are based on information we don't know, the staff recommendation provides two choices. Staff leans on no-build to provide a choice. I am looking for an even based comparison between different alternatives that can meet the Purpose and Need. I'd like to have a fair decision that lets us balance quality of life of people on the corridor and road capacity.

--Sam Adams – Is the supplemental bridge an arterial bridge?

--Rex Burkholder – All it means is that there is currently not enough capacity on the existing bridges and something would be built to accommodate that. The subcommittee would figure out what that something is.

--Sam Adams – *There is a lack of specificity on what happens to the existing spans – should we be reading anything into that?*

--Rex Burkholder – *No.*

--Hal Dengerink – *We've had other alternatives considered, and nobody has come up with a decent alternative against staff recommendation. Metro basically proposes a modified Alternative #3 from the 12 packaged alternatives. Why wouldn't we take Metro's recommended alternative here?*

--Rex Burkholder – *It was a best guess at what we thought might work. I don't pretend to make this up and be sure we caught everything. I didn't want something so restrictive that a better alternative couldn't be developed. We tried to define something here, but didn't want to say that it is the only option.*

--Monica Isbell – *If we go forward with studying another alternative, what does that do in terms of federal appropriation of dollars?*

Doug Ficco – *It is important to keep on schedule to apply for the programs we are going for. There is less money in the next federal reauthorization. We will be a competitive project if we are ready to go. We have to look at funding sources besides just tolling, and this is the next best.*

John Osborn – *If we miss 2009, it is another six years before another authorization comes around. With the way the Northwest representatives are situated right now at the federal level, we are in a good place to influence things. We can't be sure what it will look like six years from now.*

--Henry Hewitt – *We would not want to interfere with this schedule by adding an alternative and I don't believe that we would. We're talking about a difference of months, not years.*

--Monica Isbell – *If we move forward with these options and then have some other option, how does that not put us off schedule? I am concerned that if we study more we aren't going to be able to get this project funded. How, in a month, can a group of people come up with something that takes precedence over the options that were already put forward?*

Motion to amend: Fred Hansen – *I might offer an amendment to this amendment. What alternatives we take into the DEIS are form issues that have to be evaluated. The tough decision is when we come out with an LPA and we should not have too much split now. I would propose an alternative that would seek to maximize the use of the existing bridges. Sub-option A would combine this with a mid-level bridge that would carry three through lanes only in each direction. For sub-option B a lower level bridge that would have a lift and not disrupt downtown Vancouver would be considered. High capacity transit would need to be included.*

--Henry Hewitt – *I don't think that we can define what this fourth alternative would look like through amendment.*

--Royce Pollard – *I like Fred's proposal less than I like Rex's. We could miss the only opportunity we have to provide for the future of our communities. I have the same concerns about cost and environmental. These things have to be looked at in the DEIS and they will be.*

--Lora Caine – *I went back to my people and they were concerned about having essentially a single option. I would support Rex's idea of going through other possibilities with staff and bringing back something to the this group so long as other recommendations go forward at the same time. We were told we had the opportunity to add back in. I would like to know that anyone could take part in the subcommittee if they like.*

--Jill Fuglister – *Coming back in a month seems like a short time frame. I am sensitive to the issues that have been raised with regard to the funding timeline, but a significant number of people are uncomfortable. I think there would be challenges with our delegation moving forward if this project is controversial. I hope that we wouldn't go forward with something too limited just to position ourselves to get money.*

--Steve Stuart – *There is a lot of concern over the money, but where is that money? FTA said that the timeline that the CRC staff has is not the one they are responsive to. Senator Murray's staff said to me that we should limit our expectations. The days of 90% share for these types of projects is over, it's more likely to be 50/50. There is a resolution in Olympia to help, but there has already been a raise in gas taxes already. I would much rather support what Rex is saying and take a month to reach consensus on this.*

--Mike Bennett-- *What happens after the month? What are the impacts on this process if we inject another option? What happens to the ones that are already started on DEIS?*

Doug Ficco-- *If something comes back in a month, we can react. 90/10 is still the interstate highway match, with less for transit. This project is not just a bridge project; it also includes transit, interchanges, and highway. We are trying to find a fourth option with just looking at the bridge. We need to look at the other portions of the project too. There are going to be impacts on schedule depending on when we get another alternative and how complex it looks. You can either extend the schedule or get more resources, and we are pretty tapped out on resources now.*

John Osborn -- *We can spend more time on this process, but the cost of the inflation per month is huge. Those are implications to face as well.*

--Walter Valenta -- *I find it a little troubling this idea that if we don't take the staff recommendation we will lose all the money. If we bring forward another reasonable option, we'll find the time and money still. We need to take time now to get a broader section of people on board so it doesn't take more time later. If the new bridge is the best choice, then it can handle another alternative being introduced.*

--Sam Adams -- *Given the scope of the charge for this subcommittee, is it doable in the next month?*

Doug Ficco -- *It is doable, we just need to make sure that it is a wise use of time.*

--Sam Adams-- *I think that there is benefit of this as an option even if it is not chosen. In spite of concerns I have about arterial impacts to local roadways, I think it is a good thing to have in this process.*

--Dean Lookingbill -- *If we support this amendment, then do we get another alternative into the DEIS?*

--Henry Hewitt -- *It means we support the staff recommendation, and then a separate committee will develop a fourth alternative and bring it back here for this group to vote on to move into the DEIS.*

--Larry Paulson -- *The alternative needs to speak to the freight issue -- not just across it but under it too. We have discussed many of the problems with a supplemental option at length. The spans' seismic state concerns me too.*

--Bob Knight -- *I have three concerns about the amendment. There is the impact on the ability to compete for federal money, a need for greater definition of the terms "low-cost" and "supplemental," and the significant environmental impacts of building another bridge on land that currently does not have a bridge on it. I think that we have taken our time so far -- if we turn this around in 30 days, it is too quick.*

--Monica Isbell -- *Can this resolution be split into a vote on the staff recommendation and another one on a different alternative? I also only feel comfortable if that one month timeline is firm. The resolution needs to be firmly written, and it isn't right now.*

--Rich Brown-- *The term "low cost alternative" has been used but that does not take into account the information we got in the presentation about the "cost of congestion."*

--Jill Fuglister-- *I'm not sure if it's feasible to have a new group form and get other experts to come in this 30 day timeline.*

--Steve Stuart -- *I do not have authority to vote for the three options moving forward if there is a possibility the fourth might not be approved. I don't want the perception that the staff may undermine a fourth alternative. If we can reach consensus on what to study, we will have more stability later.*

--Henry Hewitt- *As I understand it, if the amendment passes and the group comes back with something reasonable, it will be included.*

--Jeff Hamm -- *I wanted to clarify that the fourth alternative includes the supplemental bridge, but also TDM and TSM that haven't been applied yet.*

--Rex Burkholder- *I would want to defer to the work of the subcommittee on that.*

--Jerry Grossnickle -- *There is a fatal flaw to this alternative if we don't come back to fixing the rail bridge. Is that why it's in the Metro proposal?*

--Rex Burkholder -- *It is part of it.*

--Dave Frei – DEIS will address all the environmental justice issues I am concerned with, and will also study other issues that have been discussed like freight and capacity. I support pushing forward the current items, but I will have a tough time unless there is also something that moves forward to compare it to.

--Bob Byrd– Will it be possible to veto the fourth alternative?

--Rex Burkholder- I'd like to defer to the chair's description of the amendment. If the subcommittee comes up with something that meets the Purpose and Need statement, then it would be included.

--Henry Hewitt – We are going to discuss and debate it as well.

--Fred Hansen – I think that this amendment has to be taken in good faith. Unless there is a fatal flaw, it will move forward into the DEIS as part of the process of building consensus around the table.

--Henry Hewitt – There is tension here and I hope that we agree on something reasonable. We can't move forward without consensus.

--Elson Strahan – Is there some friendly language we could include about adding a fourth alternative developed by a subcommittee "as approved by the Task Force."

--Henry Hewitt – I don't think there is any way around us having to agree on what comes back in a month.

--Rex Burkholder – The real decision is going to be what the LPA is. I think that without another alternative we won't be able to agree. I understand that people want to move forward, but let's also work on trying to come up with a good fourth alternative. I hope this is a good faith effort. If it meets Purpose and Need, which is often a judgment call, it would go forward. I think Metro's skepticism is indicative of the general public's concerns. A lot of analysis has been done, and we can do a lot based on that work. At the end of the day, we are going to have a lot of analysis and we will still have to make a decision on this. A lot of bodies of authority will still have to agree.

--Henry Hewitt– What we are voting on is moving forward with the staff recommendation and adding a concept of a fourth alternative, that we will form a task force to form a fourth alternative, and we will have them report that back to our committee meeting in March with the expectation that if it is reasonable within the context of the conversation we are having, it will move forward into the DEIS process.

--Hal Dengerink – What the subcommittee comes up with is not going to be a terribly detailed recommendation, but what we have on the table currently staff are not either.

- **Action:** Vote on Burkholder amendment – passes with 26 for, 7 opposed, and no abstentions
- **Action:** Vote on motion as amended – passes with 33 for, none opposed, and no abstentions

7. Wrap Up and Next Steps

Subcommittee appointed to develop a fourth alternative to bring back to the Task Force in a month:

Rex Burkholder – Chair, Walter Valenta, Steve Stuart, Jeff Hamm, Dean Lookingbill, Fred Hansen, Tom Zelenka, Scot Walstra, and Fred Hansen, Hal Dengerink – ex officio, Henry Hewitt – ex officio

Dates of subcommittee meetings will be made available to group. All are welcomed to attend.

Next Task Force Meeting:

March 27, 4:00-6:30 p.m.

WSDOT, Southwest Region Office,
11018 NE 51st Circle, Vancouver, WA

Appendices to Task Force Meeting Summary

- Appendix 1** Public testimony submitted by Terry Parker
- Appendix 2** Cost-benefit article provided by Jim Karlock
- Appendix 3** Metro resolution and amendment
- Appendix 4** Letter from Westside Economic Alliance
- Appendix 5** Guide to Oregon public meetings, distributed at meeting by member of the public

DRAFT

Testimony to the CRC Tuesday February 27, 2007 from Terry Parker, P.O. Box 13503, Portland, OR 97213-0503

This committee has set itself up for FAILURE by developing an overly rigorous purpose and need statement that among other things, called for no bridge lifts and earthquake standards that are overly ambitious. This scenario has lead up to a potential six billion dollar project this region can ill afford, and knocked out other lower cost viable options that would retain use of the existing bridges in some form.

The two billion dollar light rail piece of the proposal FAILS because it only addresses the link between downtown Vancouver and downtown Portland when the majority of commuters crossing the Columbia are NOT going between those two locations.

Your current tolling agenda proposal FAILS because it does not balance the benefits with the costs as it relates to who pays the bill. If Vancouver and Clark County want light rail, then Vancouver and Clark County along with transit passenger fares need to pay for light rail - NOT Motorists. Furthermore, any tolling that takes place for only one class or mode of transport can be widely viewed as discrimination by class.

Your proposed transportation management schemes FAIL because they do not better join the two sides of the river together doing more harm to separate the two states. They also FAIL to recognize that a service technician in a mini-van making a service call is just as important as the driver of a SUV loaded with merchandise to be exhibited at the Expo Center who is just as important as a lone premise sales person driving the family car that just initiated yet another semi-truck load of important freight – all of whom support interstate commerce, and all of whom including the freight carriers must be treated with equal priority.

Your proposed bicycle infrastructure plan FAILS because there have been no bona fide daily bicyclist crossing counts provided to the public that would validate the need, because it has yet to be proven to pencil out as being cost effective, and because there is nothing in your tolling proposal to balance the benefits to bicyclists with any costs that would be paid for by bicyclists as a result of bicycle tolls or a bicycle tax. The committee is hiding behind absurd policy and excuses rather than identifying and demonstrating the most cost efficient means for bicyclists to cross the river - a means that may require bicyclists to use transit rather than spending hundreds of million dollars or more just for dedicated pedal pusher infrastructure.

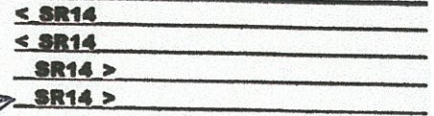
As a taxpayer, my suggestion to you as a committee is to listen to the pubic. Retreat, come up with and carry forward a comparative money saving middle ground option that retains the existing bridges and is free from the stink of any social engineering.

My preference is an option whereby any new supplemental bridge would be a new freeway bridge with six "full service" lanes that would eliminate some of the safety issues associated with freeway travel on the existing bridges. Two lanes in each direction on the existing bridges would be retained for slower speed local traffic and for the SR14 and northbound I-5 interchanges to and from Hayden Island, with the third lane in each direction reserved for combined highway and rail transit use. Lastly, the existing pedestrian sidewalks could be widened similar to what was done on the Hawthorne Bridge in Portland.

In closing, the best interests of taxpayers and the public are not being represented by supporting only the proposed staff recommendation. Instead of staying the course, it is time to change the course.

Tony Parker

Downtown
Vancouver

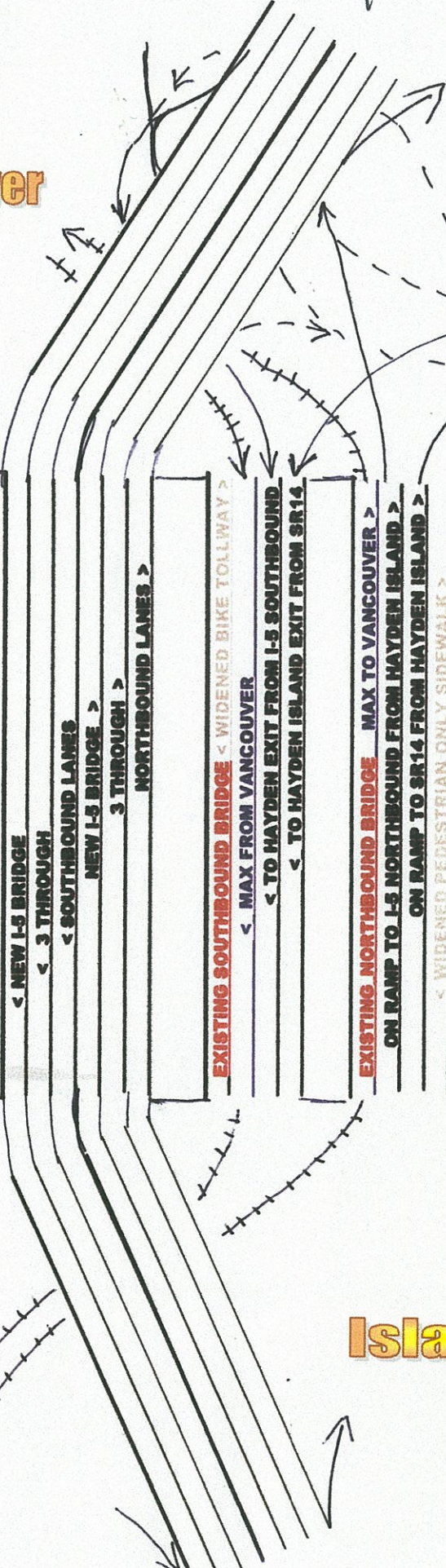


Columbia

River

Hayden

Island



< NEW I-5 BRIDGE
< 3 THROUGH

< SOUTHBOUND LANES
NEW I-5 BRIDGE >
3 THROUGH >

NORTHBOUND LANES >

EXISTING SOUTHBOUND BRIDGE < WIDENED BIKE TOLLWAY >
< MAX FROM VANCOUVER
< TO HAYDEN EXIT FROM I-5 SOUTHBOUND
< TO HAYDEN ISLAND EXIT FROM SR14

EXISTING NORTHBOUND BRIDGE MAX TO VANCOUVER >
ON RAMP TO I-5 NORTHBOUND FROM HAYDEN ISLAND >
ON RAMP TO SR14 FROM HAYDEN ISLAND >
< WIDENED PEDESTRIAN ONLY SIDEWALK >

(Not to scale)

The lack of estimated cost-benefit is a fatal flaw in this process.

Cost is critical part of any construction project, but was ignored here. Further one usually uses costs to decide what features are worth the cost. Say, for instance, you want a fully loaded new car, but decide to sacrifice certain features because of the cost of those features. Or you may decide that you really don't need a Rolls Royce after seeing the price.

One can estimate a simple, four lane crossing at under \$200 million¹. At that rate one could build 30 new bridges for the \$6 billion. If that would work it would probably be far better than one mega project. And it would be more earthquake resistant because of being in diverse locations. But it was never considered because costs were never considered.

The publically stated reason for this project is to relieve traffic congestion and option RC-14 received a passing grade for both freight mobility and traffic capacity. It only failed on the secondary measures of transit (which has been losing market share since that 30's), I5 bike & pedestrian (neither of which will relieve congestion), I5 safety and seismic. Did they look at the cost of RC-14 combined with a transit/bike/pedestrian bridge plus seismic upgrades to the existing bridge? That would satisfy the criteria and should cost a heck of a lot less than \$6 billion and would not require major ramp changes and destruction in Vancouver.

Another example of the importance of cost estimates is that the bike/ped element occupies about 1/8 of the total width, and if built to the same standards as the road, would account for 1/8 of the cost. 1/8 of one billion is about \$125 million. For a bike lane! On that will carry maybe 200 people per day!

Staff should be told to go back and get costs and cost-benefits for all of the options. Only then can the best mix be determined.

Finally, we must keep in mind Trimet's statement that MAX carries the equivalent of only 1.2 lanes of traffic. When you discount this for the fact that 2/3, or more, of those MAX riders would be on a bus, if MAX had not been built, then discount for the average auto passenger loading, MAX turns out to carry about 1/3 of one lane of traffic. That is simply not worth \$1-2 billion.

It is time to admit that light rail costs too much and does too little.

See DebunkingPortland.com

Thank You
Jim Karlock

¹(5000ft x (4 x 12+ 2 x 10=68ft) x \$500/sqft)

Facts about TriMet

Ridership

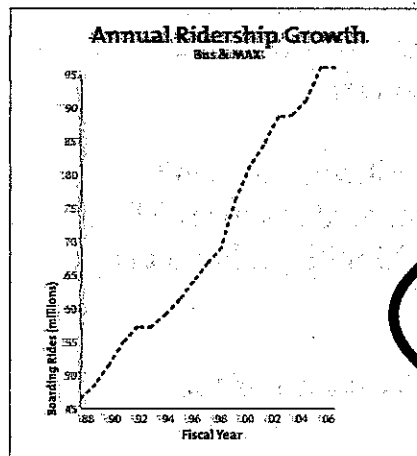
TriMet is a national leader in providing transit service. TriMet carries more people than any other U.S. transit system its size. Weekly ridership on buses and MAX has increased for 18 consecutive years.

TriMet ridership has outpaced population growth and daily vehicle miles traveled for more than a decade.

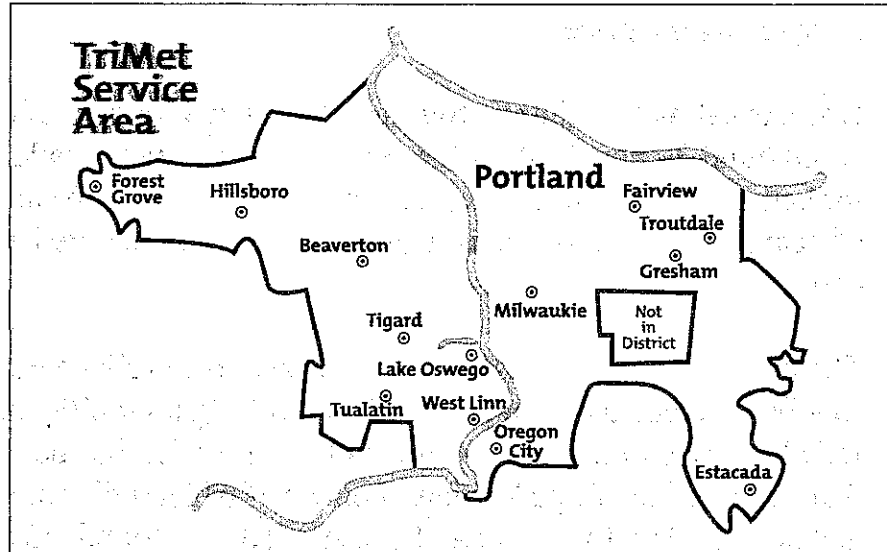
During fiscal year 2006:

Residents and visitors boarded a bus or MAX train 95.7 million times:

- 63.1 million were bus trips
- 32.6 million were MAX trips



- Weekday boardings averaged 307,300 trips:
 - 207,400 (Bus)
 - 99,800 (MAX)
- Weekend ridership:
 - Bus and MAX ridership averaged 322,300 trips.
 - More people ride TriMet than transit systems in larger cities, such as Seattle, Denver and Miami.



TriMet serves 575 square miles of the urban portions of the tri-county area.

Maintaining livability

Easing traffic congestion

MAX carries 26% of afternoon rush-hour commuters traveling from downtown on the Sunset Hwy. and Danfield Fwy. corridors.

Westside MAX provides the transportation capacity equivalent to another 1.2 lanes in each direction on the Sunset Hwy.

Most riders—70%—are choice riders: they have a car available or choose not to own one so they can ride TriMet.

43% of adults in the region use TriMet at least twice a month.

Clean air

Each weekday, MAX eliminates 69,000 car trips off our roads, easing traffic congestion and helping keep our air clean. That adds up to 22.7 million fewer car trips each year.

TriMet's MAX and buses combined eliminate 200,100 daily car trips, or 62.5 million trips each year.

In all, TriMet service eliminates about 4.2 tons of smog-producing pollutants each day.

Transit works

TriMet is a municipal corporation providing public transportation for much of the three counties in the Portland, Oregon metro area. TriMet operates a comprehensive transit network including a 44-mile, 64-station MAX light rail system, 91 bus lines, service for seniors and people with disabilities, and enhanced amenities and information.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ESTABLISHING	)	RESOLUTION NO. 07- 3782B
METRO COUNCIL RECOMMENDATIONS)	
CONCERNING THE RANGE OF	)	Introduced by Councilor Rex Burkholder
ALTERNATIVES TO BE ADVANCED TO A)	
DRAFT ENVIRONMENTAL IMPACT)	
STATEMENT FOR THE COLUMBIA RIVER)	
CROSSING PROJECT)	

WHEREAS, the Interstate 5 freeway (I-5) is the only continuous north/south interstate freeway on the West Coast, providing a critical national and international transportation link for motor vehicles and truck-hauled freight in the western-most United States, between the Canadian and Mexican borders; and,

WHEREAS, in 1917 a bridge across the Columbia River was completed and in 1958 a second bridge was built adjacent to the first bridge, the two becoming today's I-5 north and south bound bridges. These bridges have had no significant modifications since their completion; and,

WHEREAS, for the Portland/Vancouver metropolitan region, I-5 is one of two major freeways that connect the two states and their shared metropolitan economy; and,

WHEREAS, the estimated cost of truck delay by the year 2020 is an increase of 140 percent to nearly \$34 million dollars; and,

WHEREAS, the I-5 bridge crossing the Columbia River and adjacent bridge influence area segments, known as the Columbia River Crossing (CRC), has extended peak-hour travel demand that exceeds current capacity; and,

WHEREAS, the Interstate 205 Bridge is also reaching its peak-hour period carrying capacity; and,

WHEREAS, current transit service in the I-5 corridor between Portland and Vancouver is also constrained by the limited capacity and congestion in the bridge influence area, greatly limiting transit reliability and operations; and,

WHEREAS, there are significant safety issues relating to the existing bridges with the bridge crossing area and its approach sections experiencing crash rates more than two times higher than statewide averages for comparable urban highways in Washington and Oregon. This is largely due to congestion and outdated designs including interchanges too closely spaced, weave and merge sections which are too short causing sideswiping accidents, vertical grade changes in the bridge span which restrict sight distance, and very narrow shoulders that prevent avoidance maneuvers or safe temporary storage of disabled vehicles; and,

WHEREAS, the I-5 bridges across the Columbia River do not meet current seismic standards, leaving travelers in the I-5 corridor vulnerable to bridge failure in the event of an earthquake; and,

WHEREAS, the configuration of the existing I-5 bridges relative to the downstream Burlington

Northern-Santa Fe rail bridge contributes to hazardous navigation conditions for commercial and recreational boat traffic; and,

WHEREAS, bicycle and pedestrian facilities for crossing the Columbia River along I-5 do not meet current standards; and,

WHEREAS, in 2002, the Metro Council approved Resolution 02-3237A, For the Purpose of Endorsing the I-5 Transportation and Trade Study Recommendations, including recommendations for light rail transit connecting the Portland area with southwest Washington and adding a new supplemental or replacement bridge; and,

WHEREAS, the I-5 Transportation and Trade Partnership Strategic Plan endorsed by the Metro Council in 2002 included light rail transit as the recommended transit mode and a maximum of ten lanes as the roadway improvement; and

WHEREAS, the Metro Council approved the Interstate MAX line to Expo center as the locally preferred alternative for high capacity transit in the I-5 north corridor; and,

WHEREAS, Interstate MAX light rail transit was built to Expo Center and has been in operation since May 2004; and,

WHEREAS, in February 2005, the Task Force began its study of the CRC problems and possible solutions; and,

WHEREAS, the Task Force adopted in October 2005 a CRC Project *Vision and Values Statement*; and

WHEREAS, after holding public open houses to gather public comment, in November 2005, the CRC Task Force adopted a CRC Project *Problem Definition*; and

WHEREAS, the Task Force approved a Purpose and Need statement in January 2006, which defined a discrete set of objectives; and,

WHEREAS, in February 2006, the Task Force approved project evaluation criteria against which alternatives would be evaluated; and

WHEREAS, thirty-seven transportation modes or design options were identified, analyzed and combined into alternative project packages; and,

WHEREAS, twelve alternative project packages, consisting of a No Build and eleven other transportation packages that included auto, truck freight, transit, bicycle and pedestrian investments in the CRC Project area were developed in summer 2006; and

WHEREAS, the twelve alternative project packages were screened using the approved evaluation criteria; those that met the evaluation criteria were recommended to advance; and those that did not meet the evaluation criteria were recommended to not advance; and,

WHEREAS CRC staff have recommended, consistent with the evaluation criteria, that the No Build and a Replacement Bridge and either light rail transit or bus rapid transit be advanced to a draft environmental impact statement; and

WHEREAS, any of the build alternatives would require a change to the Regional Transportation Plan and this would require Metro Council approval; and,

WHEREAS, any transportation investment decision about the Columbia River Crossing Project will have a substantial impact on the economy and livability of the Metro region; and,

WHEREAS, the CRC Project is guided, in part, by the recommendations of a 39 member Task Force, of which the Metro Council has one representative; and,

WHEREAS, the Metro Council has had CRC Project briefings or discussions on October 3 and 17, and December 5, 2006; and,

WHEREAS, the Metro Council has, through both existing policy and through public discussion by the Council, established policy concerns and objectives that should be advanced with regard to the CRC Project; and,

WHEREAS, the Metro Council desires to establish policy guidance for its representative on the Task Force concerning those alternatives to be advanced for study in a draft environmental impact statement; now therefore

BE IT RESOLVED,

that the Metro Council recommends the following policy guidance to its CRC Task Force representative:

1. The Metro Council supports the following CRC staff recommendations for alternatives to be advanced to a draft environmental impact statement (DEIS): a) a No Build option, b) a Replacement Bridge with Light Rail Transit (LRT) and express bus option and c) a Replacement Bridge with Bus Rapid Transit and express bus option.
2. In addition to the CRC staff recommended alternatives, the Metro Council supports including in the DEIS for additional analysis an alternative that includes a supplemental bridge built to current seismic standards to carry cars, trucks, high capacity transit, bicycles and pedestrians. This alternative retains the existing I-5 bridges for freeway travel with incremental improvements to those bridges and the key access ramps, to improve flow and increase safety on I-5. Additionally, this alternative could include replacing the swing span of the downstream railroad bridge with a movable span located in a mid-river location.
3. The Metro Council recognizes that a range of transit alternatives between the Expo Center and Vancouver, Washington in the I-5 corridor must be considered in the Columbia River Crossing DEIS and that substantial data and analysis about ridership, costs, etc. have yet to be completed. However, based on A) investments already made in this corridor by both the Metro region and the Federal Transit Administration to construct Interstate MAX; and, B) existing data that has been developed during the

Alternatives Analysis over the past two years, the Metro Council notes that light rail transit has shown to date to have more promise to cost-effectively meet the transit demand in the corridor.

4. The alternatives advanced to the DEIS must be responsive to financial considerations. Tolling or another user pay financing source should be considered with all of the alternatives advanced to the DEIS.

5. Given the impact of the existing transportation facility and the potential impact of any future facility, the following should be part of any DEIS analysis: a) land use changes that reduce the amount of 2035 peak-hour commuting across the Columbia River; b) mitigation programs that address existing and potential future health impacts caused by motor vehicle emissions; c) creating motor vehicle, bicycle and pedestrian links across I-5 to the two halves of Hayden Island; and d) investigation of capping I-5 in downtown Vancouver as a mitigation measure that re-connects historic elements in the City of Vancouver, e) transportation demand management (TDM)/ transportation system management (TSM) policies augmenting build options, and f) other issues related to environmental justice.

ADOPTED by the Metro Council this day of , 2007.

David Bragdon, Council President

Approved as to Form:

Daniel B. Cooper, Metro Attorney

M E M O R A N D U M

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1540 | FAX 503 797 1793

**METRO**

To: Columbia River Task Force members
From: Rex Burkholder
Date: February 27, 2007
Re: For Consideration by the CRC Task Force

On February 22, 2007, the Metro Council adopted the attached resolution regarding the alternatives to be considered by the CRC Task Force for inclusion in the Draft Environmental Impact Statement.

The resolution supports:

1. Including the staff recommendation in the DEIS.
2. Adding an additional alternative that would analyze a supplemental bridge for use by autos, trucks, high capacity transit, bicycles and pedestrians and retain the existing bridges for a variety of objectives.
3. Analyzing in the DEIS a variety of issues relating to land-use, tolling, environmental justice, access issues on Hayden Island, and TDM/TSM measures.

I am, therefore, recommending to the Task Force that a subcommittee of the Task Force be formed with the charge to return at our next meeting with the more defined alternative that would be analyzed in the DEIS. I would expect that the subcommittee would work closely with CRC staff to develop an alternative that would offer the most practical alternative for reuse of the existing bridges and meet the Metro Council's objectives.

Thank you for consideration of this request.

PRESIDENT
ED TROMPKE
JORDAN SCHRADER, PC

VICE PRESIDENT
MATT FELTON
FELTON PROPERTIES, INC.

SECRETARY
JACK ORCHARD
BALL JANIK, LLP

TREASURER
STEVE CLARK
COMMUNITY NEWSPAPERS

MEMBER AT LARGE
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PACTRUST

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JIM EDWARDS
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MARK FISHER
STANCorp MORTGAGE INVESTORS, LLC

RICH FOLEY
UMPUQUA BANK

KIMBERLY FULLER
EQUITY OFFICE

TIM PARKER
THE MELVIN MARK COMPANIES

JIM PETSCH
NIKE, INC.

BRIAN RICE
KEY BANK

MIKE SCHMID
Kpff CONSULTING ENGINEERS

DAVE UNDERRINER
PROVIDENCE HEALTH SYSTEM

JONATHAN WILLIAMS
INTEL OREGON

RANDY YOUNG
NORRIS BEGGS & SIMPSON

TOM BRIAN
WASHINGTON COUNTY

CRAIG DIRKSEN
CITY OF TIGARD

ROB DRAKE
CITY OF BEAVERTON

TOM HUGHES
CITY OF HILLSBORO

LOU OGDEN
CITY OF TUALATIN

JONATHAN SCHLUETER
WESTSIDE ECONOMIC ALLIANCE

SUSTAINING MEMBERS
EQUITY OFFICE
FELTON PROPERTIES, INC.
HARSCH INVESTMENT PROPERTIES

INTEL OREGON
KAISER PERMANENTE
KG INVESTMENTS
MATRIX DEVELOPMENT
MELVIN MARK COMPANIES
NIKE, INC.
PACTRUST
PORTLAND GENERAL ELECTRIC
PROVIDENCE HEALTH SYSTEM
PS BUSINESS PARKS
QWEST COMMUNICATIONS
STANDARD INSURANCE COMPANY
TEKTRONIX, INC.
VERIZON NORTHWEST
WASHINGTON SQUARE MALL



February 27, 2007

Mr. Hal Dengerink and Mr. Henry Hewitt
Co-Chairmen, Columbia Crossing Task Force
700 Washington Street, Suite 300
Vancouver, Washington 98660

Dear Co-Chairs Dengerink and Hewitt,

Subject: Support For The I-5 Columbia Crossing Project Connecting Oregon and Washington

The public and private sector members of Westside Economic Alliance request your task force members support for a replacement bridge crossing of the Columbia River on Interstate 5, between Oregon and Washington. The importance of this project becomes more critical every day, as the growing volume of freight and the increasing population of our region now exceeds the design capacity and safety limits of the existing structures.

Westside Economic Alliance serves 150 employers, land developers and commercial property managers, as well as the local communities and public agencies serving the Westside of the Portland metro region. While WEA members are geographically removed from the bridge area, we have identified 105 companies in Washington County that regularly ship containerized freight through the Ports of Portland and Vancouver. Our local employers, in both the public and private sectors, also depend on the talents of 7,600 employees who commute daily between homes and businesses in Clark County, Washington and Washington County, Oregon.

The existing Interstate 5 bridges, constructed in 1917 and 1957, are simply inadequate to handle the growing volumes of traffic imposed by a modern transportation system. The traffic lanes on the twin bridges and their approaches are too narrow, and there are no safety shoulders on the actual bridge structures. The daily congestion that occurs on these hazardous crossings seriously impairs freight mobility, road capacity, commuter access and public safety for several miles on both sides of the river—and these problems are getting worse.

The existing spans are further hampered by their age and vulnerability to seismic events or collisions with commercial river traffic that is forced to navigate a dangerous, serpentine course beneath the Interstate 5 bridges, and a nearby railroad span owned and operated by Burlington Northern Santa Fe railroad. Retaining these existing spans, for whatever uses might be found, will seriously compromise the safety and efficiency of a new span, create unnecessary safety risks, and impose significant maintenance expenses on state and county governments, without appreciable benefits---in terms of improved freight mobility or commuter access across the river.

Columbia River Crossing Task Force
February 27, 2007
Page Two

When the Columbia River Crossing task force was appointed in 2005, an estimated 123,000 vehicles each day were reportedly using the Interstate Bridge between Portland and Vancouver. Current estimates have increased that number to 127,000 vehicles per day, and project that figure to rise to as many as 180,000 vehicles daily within 25 years. If nothing is done to address these daily challenges, congestion on the I-5 Bridge and its approaches is expected to increase from 4-6 hours each day, to as many as 16 hours each day. The resulting impact to our regional and national economy cannot be overstated. But the lost earnings, productivity, opportunities and livability for workers and their families on both side of the river, are a daily tragedy that cannot be ignored.

Westside Economic Alliance believes that a new Interstate 5 bridge will improve access to two international ports, industrial areas and employments centers, urban amenities, affordable neighborhoods, attractive schools, retail centers and recreational opportunities for residents of both states. A new bridge is needed to improve predictable travel times and allow safer trips on Interstate 5, and its tributary system of state highways, trucking corridors and commuter arterials.

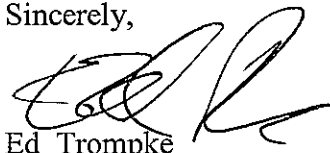
Just as the original spans created many decades ago did, the members of Westside Economic Alliance are confident that a replacement bridge at the Columbia Crossing will accelerate redevelopment opportunities in downtown Vancouver and north Portland. As our residents and customers are able to access businesses, schools, historic attractions and cultural amenities in the bridge influence area, we expect the new span will stimulate investment and important growth opportunities and create vibrant urban communities on both sides of the river.

The Columbia Crossing Project represents an exciting opportunity and a necessary investment in the growth and prosperity of the West Coast, Pacific Northwest, and Portland / Vancouver metropolitan region. It is a crucial investment in the global competitiveness of our region, and it offers a welcome investment in the lives and opportunities of over 2 million people now living within a 20-mile radius of the Columbia Crossing.

Your leadership is essential to the success of the Columbia River Crossing project, and we urge your support for a replacement bridge that will serve our region as well as the spans it will soon replace. We pledge our continued support and assistance in working with each of you---and your constituents---to support the project's innovative solutions to the traffic congestion and safety problems which plague I-5 on both sides of the river, and restore mobility and access to our region.

Timing is crucial. So we encourage you to press forward, so that we can get started in fixing an obvious problem and building a brighter future for us all.

Sincerely,



Ed Trompke
Jordan Schrader
President,
Westside Economic Alliance

cc: Columbia River Crossing Task Force

Because questions often arise about what groups must comply with the open-meetings law, it is useful to look at the definitions in the law. The law says that any "governing body" of a "public body" is required to comply. It offers these definitions:

- A "public body" is any state, regional, or local governmental board, department, commission, council, bureau, committee, subcommittee, or advisory group created by the state constitution, statute, administrative rule, order, intergovernmental agreement, bylaw or other official act.
- A "governing body" is two or more members of a public body

Example

- A school board must meet in public
- So must most advisory committees that the school board creates, such as a budget committee.
- But if the school board chair asks several business leaders to meet with him to discuss future building needs, that meeting may be held in private.

Private bodies, such as non-profit corporations do not have to comply with the open-meetings law, even if they receive public funds, contract with governmental bodies or perform public services.

Example

- A school district contracts with Blue Cross / Blue Shield to provide health insurance for district employees. The Blue Cross / Blue Shield board of directors is not required to meet in public.

Public agencies contracting with private bodies may require a private body to comply with the law for pertinent meetings. Federal agencies are not subject to Oregon's Public Meetings Law.

What is a Public Meeting?

A public meeting is the convening of any governing body for which a quorum is required to make or deliberate toward a decision on any matter, or to gather information. Decisions must be made in public, and secret ballots are prohibited. Quorum requirements may vary among governing bodies.

Example

- A county commission's goal-setting retreat is a public meeting if a quorum is present and they discuss official business.
- A training session for the commissioners is not a public meeting, unless a quorum is present and the commissioners discuss official business
- A staff meeting absent a quorum of commissioners, whether called by a single commissioner or a non-elected official, is not a public meeting.

Meetings accomplished by telephone conference calls or other electronic means are public meetings. The governing body must provide public notice, as well as a location where the public may listen to or observe the meeting.

Governing bodies must hold their meetings within the geographic boundaries of their jurisdiction. However, a

governing body may meet elsewhere if there is an actual emergency requiring immediate action or to hold a training session, when no deliberation toward a decision is involved.

Example

- A library board is free to rotate meetings at different libraries in its district, but it may not meet outside its district.

Federal and state law requires that meetings be held in places accessible to individuals with mobility and other impairments

*Information is power. Keeping meetings
and records open empowers citizens.'*

• **Phil Keisling**
Oregon Secretary of State
Honorary Co-Chair, Open Oregon

Notice of Meetings

Governing bodies must give notice of the time, place and agenda for any regular, special or emergency meeting.

Public notice must be reasonably calculated to give actual notice to interested persons and media who have asked in writing to be notified of meetings, and general notice to the public at large.

Governing bodies wishing to provide adequate notice should strive to provide as much notice as possible to ensure that those wishing to attend have ample opportunity -- a week to 10 days for example.

At least 24-hour notice to members of the governing body, the public and media is required for any special meeting, unless the meeting is considered an emergency meeting. Appropriate notice is required for emergency meetings and should include phone calls to media and other interested parties. Notice for emergency meetings must also cite the emergency.

A meeting notice must include a list of the principal subjects to be considered at the meeting. This list should be specific enough to permit citizens to recognize matters of interest. However, discussion of subjects not on the agenda is allowed at the meeting.

Example

- The State Board of Higher Education plans to discuss building a new college campus in Bend. An agenda item that says "Discussion of public works" would be too general. Instead, the agenda should say something like "Discussion of proposed Bend campus."

Executive Sessions

Governing bodies are allowed to exclude the public -- but generally not the media -- from the discussion of certain subjects. These meetings are called executive sessions.

Executive sessions may be called during any regular, special or emergency meeting. A governing body may set a meeting solely to hold an executive session as long as it gives appropriate public notice. Notice requirements for executive sessions are the same as for regular, special or emergency meetings. However, labor negotiations conducted in executive session are not subject to public-notice requirements.

Notice of an executive session must cite the specific law that authorizes the executive session. This authorization also must be announced before going into the executive session.

Governing bodies may formally specify that the media not disclose information that is the subject of the executive session. Governing bodies should not discuss topics apart from those legally justifying the executive session. Media representatives may report discussion that strays from legitimate executive session topics and are not required to inform the governing body when they intend to do so.

No final action may be taken in executive session. Decisions must be made in public session. If a governing body expects to meet publicly to make a final decision immediately after an executive session, it should try to announce the time of that open session to the public before the executive session begins.

Example

- City councilors meet in executive session to discuss the city manager's performance. A local reporter attends. During the meeting, the councilors discuss whether the city should put a bond measure on the next ballot. The reporter may write a story on the council's bond measure discussion, because that discussion was not allowed under the executive session rules. The reporter may not write about the city manager's performance.

Executive Sessions Criteria

Executive sessions are allowed only for very limited purposes.

Those include:

1. To consider the initial employment of a public officer, employee or staff member, but not to fill a vacancy in an elected office, or on public committees, commissions or advisory groups. These sessions are allowed only if the position has been advertised, standardized procedures for hiring have been publicly adopted, and the public has had an opportunity for input on the process. Executive sessions are not allowed to consider general employment policies.
2. To consider dismissal, discipline, complaints or charges against a public official, employee, official, staff or individual agent, unless that person requests a public hearing.
3. To review and evaluate the **job performance** of a chief executive officer, or other officer or staff member, unless that person requests an open hearing. Such evaluation must be pursuant to standards, criteria and policy directives publicly adopted by the governing body following an opportunity for public comment. The executive session may not be used for the general evaluation of agency goals, objectives, programs or operations, or to issue any directive to personnel on the same.
4. To deliberate with persons designated to conduct **labor negotiations**. The media may be excluded from these sessions.
5. To conduct **labor negotiations** if both sides request that negotiations be in executive session. Public

notice is not required for such meetings.

6. To consider **records that are exempt** by law from public disclosure.
7. To consult with counsel concerning **litigation** filed or likely to be filed against the public body.
Members of the media that are a party to that litigation, or represent a media entity that is a party, may be excluded.
8. To consult with persons designated to negotiate **real property** transactions
9. To discuss **matters of trade** when the governing body is in competition with other states or nations.
10. To negotiate with a private person or business regarding **public investments**.
11. To discuss matters of **medical competency** and other matters pertaining to licensed hospitals.
12. To consider information obtained by a **health professional regulatory board** as part of an investigation of licensee or applicant conduct.

'Oregon needs to protect its tradition of openness.'

◦ **Dave Frohnmayer**
President, University of Oregon
Honorary Co-Chair, Open Oregon

Media at Executive Sessions

Media representatives must be allowed to attend executive sessions, with three exceptions. Media may be excluded from:

- Strategy discussions with labor negotiators
- Meetings to consider expulsion of a student or to discuss students' confidential medical records.
- Meetings to consult with counsel concerning litigation to which the media or media representative is a party.

A governing body may require that specific information not be reported by the media. This should be done by declaration of the presiding officer or vote. In the absence of this directive, the executive session may be reported. Any discussion of topics apart from those legally justifying the executive session may be reported by the media.

The media also is free to report on information gathered independently from executive session, even though the information may be the subject of an executive session.

Example

- A reporter attends the executive session on the city councilor's discussion of the city manager's performance. Afterward, the reporter asks a councilor what she thinks of the city manager's performance. She shares her criticism. The reporter may use that interview to develop a story, even though the reporter first heard the information at the executive session.

Minutes

A Quick Reference Guide to Oregon's Public Meetings Law

The Spirit of Oregon's Public Meetings Law

Understanding the letter of the Public Meetings Law is critical. Equally important is understanding and committing to the spirit of that law. Public bodies should approach the law with openness in mind. Open meetings help citizens understand decisions and build trust in government. It is better to comply with the spirit of the law and keep deliberations open.

Oregon's Public Meetings Law

"Open government" or "sunshine" laws originally were enacted nationwide in the early 1970's because of growing public unhappiness with government secrecy. As a result, every state and the District of Columbia enacted laws requiring government to conduct its business openly, rather than behind closed doors.

Open government laws benefit both government and the public. Citizens gain by having access to the process of deliberation -- enabling them to view their government at work and to influence its deliberations. Government officials gain credibility by permitting citizens to observe their information-gathering and decision-making processes. Such understanding leads to greater trust in government by its citizens. Conversely, officials who attempt to keep their deliberations hidden from public scrutiny create cynicism, erode public trust and discourage involvement.

Policy

Oregon's Public Meetings Law was enacted in 1973 to make sure that all meetings of governing bodies covered by the law are open to the public. This includes meetings called just to gather information for subsequent decisions or recommendations.

The law also requires that the public be given notice of the time and place of meetings and that meetings be accessible to everyone, including persons with disabilities.

The Public Meetings Law guarantees the public the right to view government meetings, but not necessarily to speak at them. Governing bodies set their own rules for citizen participation and public comment.

*'Government accountability depends on
an open and accessible process.'*

• **Hardy Myers**
Oregon Attorney General

Who is Covered?

Written minutes are required for all meetings, except tape recordings are allowed for executive sessions.

The meetings law says minutes must be made available within a "reasonable time" after each meeting, but does not specify the time. Generally, this time frame should not exceed three weeks. Minutes must be preserved for a "reasonable time". This is generally interpreted to be at least one year. Minutes of many governing bodies are subject to records retention schedules established by the State Archivist.

Minutes must indicate:

- Members present.
- All motions, proposals, resolutions, orders, ordinances and measures proposed and their disposition. The result of all votes by name of each member (except for public bodies consisting of more than 25 members). No secret ballots are allowed.
- The substance of discussion on any matter.
- A reference to any document discussed at the meeting.

Minutes are not required to be a verbatim transcript and the meeting does not have to be tape recorded unless so specified by law. Minutes are public record and may not be withheld from the public merely because they will not be approved until the next meeting. Minutes of executive sessions are exempt from disclosure under the Oregon Public Records Law.

Governing bodies are allowed to charge fees to recover their actual cost for duplicating minutes, tapes and records. A person with a disability may not be charged additional costs for providing records in larger print.

Enforcement

County district attorneys or the Oregon Attorney General's Office may be able to answer questions about possible public meetings law violations, although neither has any formal enforcement role and both are statutorily prohibited from providing legal advice to private citizens.

Any person affected by a governing body's decision may file a lawsuit in circuit court to require compliance with or prevent violations of the Public Meetings Law. The lawsuit must be filed within 60 days following the date the decision becomes public record.

The court may void a governing body's decision if the governing body intentionally or willfully violated the Public Meetings Law, even if the governing body has reinstated the decision in a public vote. The court also may award reasonable legal fees to a plaintiff who brings suit under the Public Meetings Law.

Complaints of executive session violations may be directed to the Oregon Government Standards and Practices Commission, 100 High Street SE, Suite 220, Salem, OR 97310, (503) 378-5105, for review, investigation and possible imposition of civil penalties.

Members of a governing body may be liable for attorney and court costs both as individuals or as members of a group if found in willful violation of the Public Meetings Law.

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Communications Summary

February 22 – March 21, 2007

What We're Hearing

This summary is a snapshot in time and does not represent a scientific survey.

Form of Comments	Qty.
Emails, letters, comment forms	68
Outreach event mtg. summaries	9
Petition signatures (two separate petitions)	75
Total comments	179

Topic of Comments	Qty.
Process	125
Other Concepts	107
Third crossing	89
Railroad Bridge	86
Acquisitions/Right of way	50
Existing Bridge	50
Neighborhoods/business districts	46
Funding / Financing	40
Environmental Justice	42
Archaeology, Historic & Cultural Resources and Tribal Issues	39
Light Rail Transit	33
Traffic (Congestion)	14
Transit	13
TSM/TDM/Managed lanes	11
Bicycle/pedestrian access	11
Project Costs	11
Replacement Bridge	10
Air Quality	8
Tolling	8
Freight	8
Interchanges and highway alignment	6
Supplemental Bridge	6
Seismic safety	4
Natural Resources (ecosystems and water quality)	4

Note: Listed at left are only topics receiving four or more comments. Because a single commentor can comment on multiple topics, there is a greater number of comments than commentors.

Comment Themes

The greatest number of comments involved discussion of a fourth alternative. These comments generally fell under the headings of “process,” “other concepts,” “third crossing” and “railroad bridge.”

Petition comments: The results of this summary are heavily influenced by two petitions submitted by Sharon Nasset, accounting for 42 percent of comments received in this four-week period. The petitions call for a “third bridge alignment near the railroad bridge” and “declare no seizing of private property through imminent [sic] domain be used.” Of 75 unique petition signers on two different petitions with similar messages, 38 self-identified as people who live, work, or own a residence or business on Hayden Island.

A majority of **process** comments insisted the project should pursue another approach or a fourth alternative. A handful of comments praised the project’s approach or asked that fourth alternative subcommittee meetings be held at a more convenient, evening hour.

Acquisitions / right of way comments came almost entirely from stock language in the petitions regarding private property. Still, one comment was made during a Hudson’s Bay neighborhood meeting about impacts to the Historic Reserve, the Quay, and when land acquisition would begin. **Existing bridges** comments focused on the bridges’ potential reuse and inclusion in the fourth alternative.

Archaeology, Historic & Cultural Resources were the subject of comments mostly on historic buildings (Historic Reserve,

military hospital) and the I-5 bridge as an historic structure.

Transit comments continued to focus on Light Rail and tended to reflect a public not very familiar with Bus Rapid Transit. **Light Rail** comments included both supporters and opponents, but some took no position while insisting that Clark County residents should be able to vote on any extension of Light Rail into the area.

Cost of the project drew a majority of comments concerned with the dollar figures in the news. These comments tended to come from those calling for a fourth alternative.

Where We've Been

In the past four weeks, CRC project team has been to the following events. The number of people engaged is in parentheses.

Neighborhoods

Oregon:

- Hayden Island Neighborhood Network, annual general membership meeting (30)

Washington:

- Pleasant Highlands Neighborhood Association (30)
- Carter Park Neighborhood Assn. (11)
- Hudson's Bay Neighborhood Assn. (12)

Other

- WSDOT SR-502 Open House (25)
- C-TRAN Citizen Advisory Committee (20)
- Task Force meeting (100)
- WSDOT NW Region Design/Construction Training Session (n/a)
- Jantzen Beach Supercenter Meet & Greet (27)
- Lion's Club, Fort Vancouver (40)
- Trinity Lutheran Church Men's Group (30)
- CRC History Seminar (n/a)

- Kiwanis Club, Downtown Portland (21)
- CRC Fourth Alternative Subcommittee (approx. 35 at each of two meetings)

The Totals

416 people engaged in this two week period.

1,357 people engaged since January 1, 2007.

What else is happening?

History Seminar

Under the lead of the Environmental Team, Communications provided support for the CRC History Seminar on March 20. This daylong event allowed CRC staff to interact with Tribal representatives, historians, government agency officials, and others who are knowledgeable about the history of the region.

Urban Design Advisory Group

The first meeting of the Urban Design Advisory Group was held on March 9. The fourteen member group, chaired by Mayor Royce Pollard and Commissioner Sam Adams will provide guidance to CRC on the design and aesthetics of bridge, transit and highway improvements.

Task Force approves staff recommendation, appoints fourth alternative subcommittee

On Feb. 27, the CRC Task Force unanimously accepted the staff recommendation to advance three alternatives into the DEIS process and appointed a subcommittee to identify a possible fourth alternative. The subcommittee has worked to develop a viable fourth alternative that aspires to meet the goals and needs of the Columbia River Crossing project and maximizes the utility of the existing bridges. The Task Force will discuss the subcommittee findings at the March 27 Task Force meeting.



Columbia River Crossing Project in the News February 21, 2007 – March 21, 2007

Building the right bridge to our future

Ron Buel, *The Oregonian* – March 20, 2007

Panel works on option of additional I-5 bridge

Don Hamilton, *The Columbian* – March 20, 2007

Third bridge study moving forward

Don Hamilton, *The Columbian* – March 19, 2007

Columbia River Crossing more than bridge replacement

Neil Zawicki, *The Vancouver Business Journal* – March 16, 2007

Railway an issue for I-5 span fix

Jim Redden, *The Portland Tribune* – March 16, 2007

Legislators will watch Columbia crossing

The Columbian – March 13, 2007

Smaller I-5 bridge meeting set for Monday

Jim Redden, *The Portland Tribune* – March 11, 2007

Transit routes studied

Jeffrey Mize, *The Columbian* – March 6, 2007

Panel seeks another option for building new I-5 bridge

Don Hamilton, *The Columbian* – March 4, 2007

Columbia panel yet to rule out third bridge

The Columbian – February 28, 2007

Replacement bridge study will go ahead

James Mayer, *The Oregonian* – February 28, 2007

Smaller I-5 bridge option moves forward

Jim Redden, *The Portland Tribune* – February 27, 2007

We need a new I-5 bridge at Vancouver

The Daily Astorian – February 27, 2007

Lawmakers want to have say on bridge

Kathie Durbin, *The Columbian* – February 27, 2007

Crossing group takes another step

Don Hamilton, *The Columbian* – February 27, 2007

Meeting to lift debate's intensity

Don Hamilton, *The Columbian* – February 27, 2007

Next I-5 chokepoint: \$6 billion

James Mayer, *The Oregonian* – February 25, 2007

Build a bridge to better economy

The Oregonian – February 25, 2007

Columbia River Crossing Task Force I-5 bridge project must span political, logistical divides

Don Hamilton, *The Columbian* – February 25, 2007

Metro wants supplemental I-5 bridge to be studied further

Jim Redden, *The Portland Tribune* – February 23, 2007

Money can be found for bridge

The Portland Tribune – February 23, 2007

Three-bridge possibility rises again

Don Hamilton, *The Columbian* – February 23, 2007

Columbia River Crossing on Television & Radio**Replace the I-5 Bridge**

KINK FM – March 9, 2007



Memorandum

March 26, 2007

TO: Hal Dengerink and Henry Hewitt, Co-Chairs

FROM: Fourth Alternative Subcommittee (Prepared by CRC Staff)

SUBJECT: Fourth CRC DEIS Alternative Recommendation

COPY: Doug Ficco, WSDOT and John Osborn, ODOT – Co-Directors

ATTACHMENTS: Fourth Alternative Progression Diagram
Fourth Alternative Subcommittee Recommendation

BACKGROUND

At the February 27, 2007 Task Force meeting, a subcommittee was formed to develop a potential fourth alternative for analysis in the CRC project's DEIS. The subcommittee included the following members:

Metro Councilor Rex Burkholder, Co-Chair
Clark County Commissioner Steve Stuart, Co-Chair
Hal Dengerink, CRC Task Force Co-Chair, ex-officio subcommittee member
Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member
Dean Lookingbill, SW Washington Regional Transportation Council
Fred Hansen, TriMet
Jeff Hamm, C-TRAN
Walter Valenta, Bridgeton Neighborhood
Scot Walstra, Greater Vancouver Chamber of Commerce
Tom Zelenka, Schnitzer Group

Meetings were held weekly at the former Hayden Island Yacht Club, 12050 N. Jantzen Drive, Portland, Oregon. Meeting dates and times were:

March 12, 2007, 2:30 p.m. to 4:30 p.m.
March 19, 2007, 8:00 a.m. to 9:00 a.m.
March 26, 2007, 8:00 a.m. to 10:00 a.m.

The following ground rules were adopted at the initial March 12th meeting:

Ground Rules for Developing the Fourth Alternative:

1. We will produce an alternative in three weeks.
2. The alternative will aspire to meet the CRC project's Purpose and Need Statement.
3. Our job is to assemble the best possible solutions that do the following:
 - a. Maximize the utility of the existing bridges
 - b. Provides High Capacity Transit (HCT) between Clark and Multnomah counties
 - c. Provides high quality bicycle and pedestrian access
 - d. Minimizes impacts on downtown Vancouver and Hayden Island
 - e. Ensure better freight mobility
 - f. Address issues of barge and ship traffic on the Columbia River
4. The Task Force members named by the chairs will be the members of the subcommittee unless the co-chairs (Commissioner Stuart and Councilor Burkholder) and the CRC Task Force co-chairs decide more expertise is needed.

5. While subcommittee meetings will be noticed and will be open to the public, only officially designated members will participate. Given that the recommendation on including any proposed alternative will be made by the CRC Task Force, the subcommittee will not take any public testimony.
6. Our goal is to make decisions by consensus.

Evaluation Criteria for the Fourth Alternative

The subcommittee recommended the performance of the fourth alternative should aspire to achieve the following criteria in accordance with the CRC project's Purpose and Need:

- encouraging mode shift
- moving people and freight
- optimizing interchanges
- using existing bridges most effectively
- minimizing impacts to land use, minimizing footprints
- providing a lower cost alternative

PROCESS

For the initial meeting, CRC presented two "book-end" options for review by the committee. Option A was essentially a "No-Build" for I-5 with TDM/TSM and transit service. Option B added six lanes of new capacity for I-5, three in each direction, and used the existing bridges for auxiliary lanes in addition to transit service. Both alternatives addressed appropriate interchange modifications, safety improvements, TDM/TSM, freight enhancements, bicycle/pedestrian upgrades, seismic retrofits, and relocation of the railroad moveable span.

For the March 19, 2007 meeting, CRC staff was asked to provide conceptual layouts for three modifications to Options A and B along with an evaluation of their performance sufficient to begin shaping the proposed fourth alternative. The following three recommendations were optimized and evaluated by CRC staff:

- Option A+: Essentially a No-Build option for I-5 with aggressive TDM and Transit components to meet the demand to move people across the river, including a new HCT bridge across the river. I-5 improvements were targeted at improving safety and system flow.
- Option A++: The same as Option A+ with the addition of two I-5 auxiliary lanes, one in each direction, on a new bridge combined with HCT.
- Option B-: Uses the existing I-5 Bridges as auxiliary lanes and provides for two new I-5 lanes in each direction on a new bridge to carry through traffic and HCT. Appropriately sized TDM strategies and increased transit service is added to balance the demand.

Upon presentation of the performance results of the three options, CRC staff was asked to evaluate an additional option that fell somewhere between Option A++ and Option B-. CRC staff added another option for review at the March 26th meeting. These two options are described below:

- Option A++ Modified: This option uses the existing Interstate Bridges for I-5 traffic and adds two lanes, one in each direction, on a new bridge with HCT. Pricing or tolling may be used on the new or existing lanes to reduce vehicle demand. Transit service is increased sufficiently to encourage options to driving alone. A new moveable span is provided on the railroad crossing that best serves navigation needs.
- Option B- Modified: CRC staff recommended an option that uses the existing bridges for NB traffic and a new bridge for SB traffic. The total number of lanes can be limited to eight, two lanes each on the existing bridges and four lanes on the new bridge. This option has the same number of I-5 lanes as Option A++ Modified described above, but more effectively and efficiently uses existing infrastructure and alignments. SB lanes can transition directly to the new alignment without the need for additional shoulders and the fly-over. TDM and Transit is

similar to Option A++ Modified. HCT can share the SB highway bridge. This option also improves opportunities to toll all vehicles crossing the Columbia River.

At the March 26, 2007 subcommittee meeting, Option B- Modified was recommended as the fourth alternative for presentation to the Task Force at their March 27, 2007 meeting.

Following is a detailed description of the Fourth Alternative subcommittee recommendation:

FOURTH ALTERNATIVE SUBCOMMITTEE RECOMMENDATION

A total of eight I-5 lanes will be provided, four in each direction. The existing Interstate Bridges will carry northbound traffic and will be modified to carry two lanes on each bridge. The existing southbound bridge will be converted to northbound for two general purpose through lanes. The existing northbound bridge will carry two lanes, one for general purpose and the other as an auxiliary lane. Four I-5 southbound lanes will be provided on a new bridge with HCT, three general purpose lanes and one auxiliary lane. HCT lanes can either be for light rail or express bus. Transit service will be sized to meet increase demand for riders. Tolling will be used for project funding and will also reduce travel demand. Other TDM as well as TSM and freight enhancements will be included. Bicycles and pedestrians will be on a wider, retrofitted path on the existing bridges. Interchange modifications will be included in relationship to the mainline I-5 improvements to assure the best operational characteristics. A seismic upgrade of the existing bridges may be required. A new railroad moveable span may be required to benefit navigation.

Component improvements recommended include:

Highway

- The existing I-5 bridges are re-striped to provide two lanes on each bridge and allows for an outside safety shoulder for disabled vehicles. The two lanes on the NB bridge will connect with the interchanges as well as allow for through traffic. The two lanes on the SB bridge will become through NB lanes.
- Four new SB I-5 lanes are provided on a new bridge along with HCT. The new lanes will allow for three through lanes and one auxiliary lane connecting SR 14 with Hayden Island.
- Interchanges are modified to improve intersection performance in accordance with operational analysis that balances the mainline improvements. Spot safety improvements are included.
- Traffic system management tools are incorporated to improve I-5 operations.

Transit

- A new river crossing bridge for HCT is included with the new highway bridge.
- HCT capacity is increased to serve approximately 25,000 persons per day.
- Express bus service and local and feeder bus service are increased to serve the added transit capacity. Increase in transit service is based on data generated from model runs and confirmed by the transit providers.
- Park-and-ride lot capacity is increased from the existing 1,872 spaces in the I-5 corridor to approximately 7,500. Recommendations for reduction in park-and-ride spaces can be achieved based on modeling results and transit service recommendations.

TDM/TSM

- Tolling is included for both the new I-5 bridge and existing bridges with variable pricing to reflect peak hour demand. Pricing is focused on generating revenue to help fund the new improvements as well as reducing demand.
- Transit operating subsidies are provided to encourage increased transit service and use.

Freight Mobility

- Trucks have the opportunity to use the new I-5 capacity.

FOURTH CRC DEIS ALTERNATIVE

- Spot modifications at key intersections improve truck flow in the interchanges.
- Rebuilding the SB lanes allows ramp by-pass lanes for transit and trucks.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened either on the east side only to provide for a 15 foot-wide path or 10 feet on each side of the two bridges for two paths.
- Bicycle and pedestrian connections are improved throughout the corridor.

Seismic

- Seismic retrofit to “no-collapse” standards would most likely be required for this option.

Railroad Swing Span

- A new railroad marine navigation moveable span is constructed to align with primary navigation needs.

It is important to note that the description of components for the fourth alternative is much more detailed than CRC staff recommendations for the replacement bridge. All alternatives carried into the DEIS will undergo operational analysis to assure best performing elements are included and transit and interchange improvements will be carried forward that are cost-beneficial and sized to meet 2035 demand as required by FHWA and FTA.

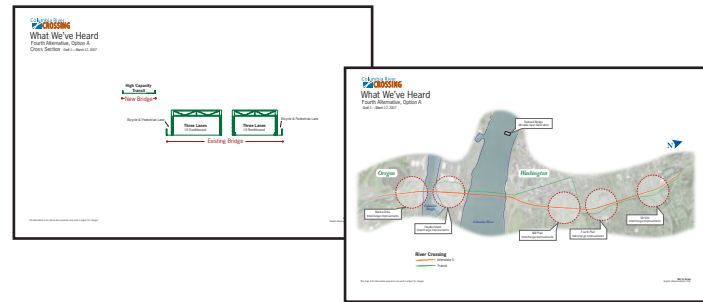
DRAFT — FOR REVIEW ONLY

What We've Heard

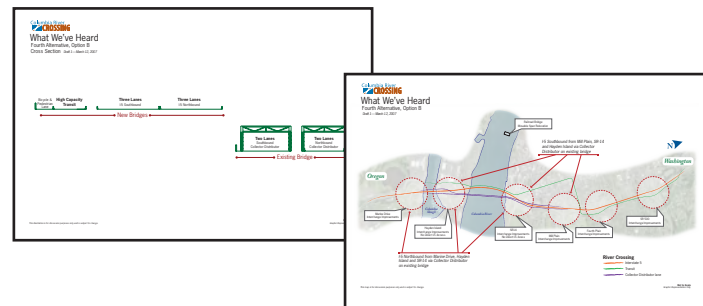
Task Force Subcommittee
Fourth Alternative Progression

Meeting Materials March 12, 2007

Option A

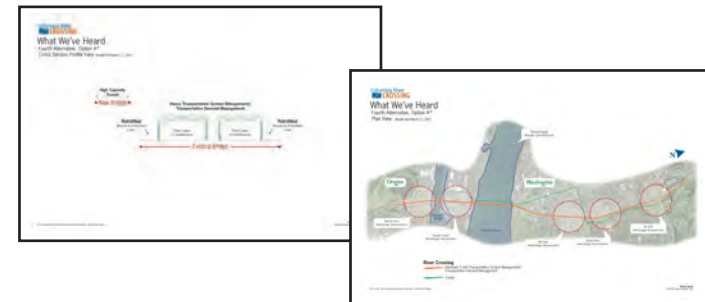


Option B



Meeting Results March 12, 2007 for presentation at March 19, 2007 meeting

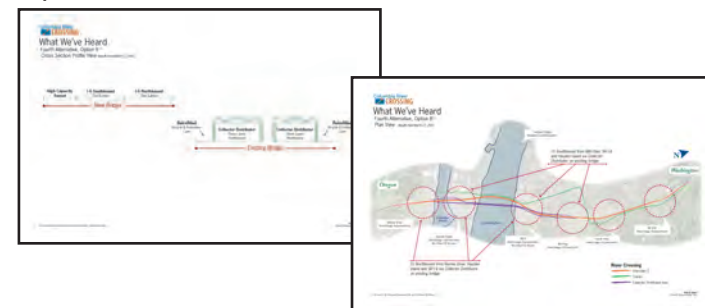
Option A+



Option A++



Option B-



Meeting Results March 19, 2007 for presentation at March 26, 2007 meeting

Option A++ modified

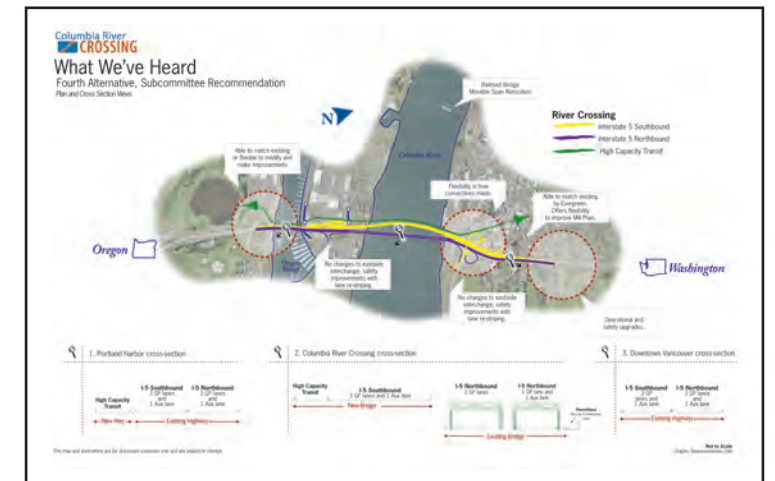


Option B - modified



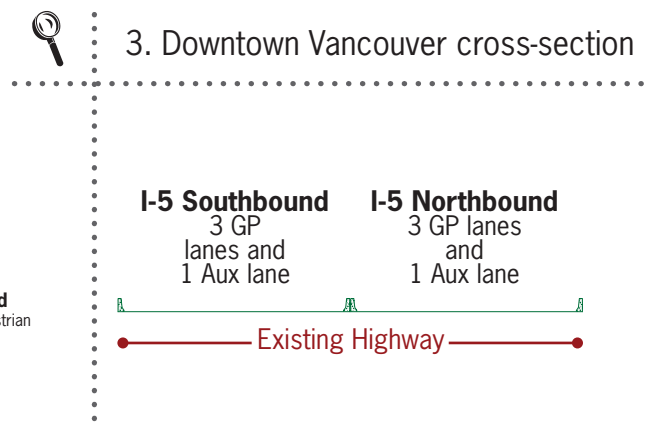
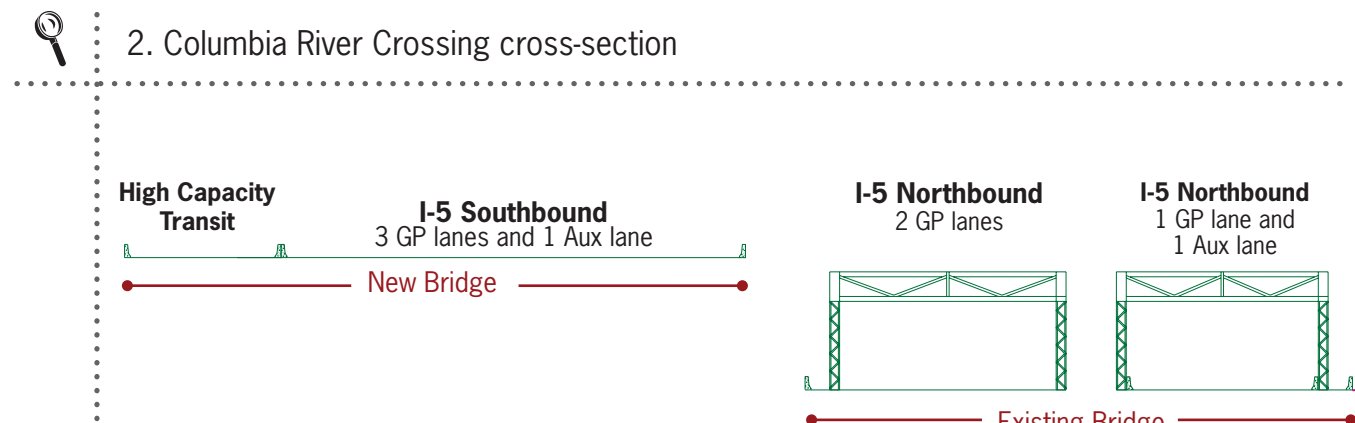
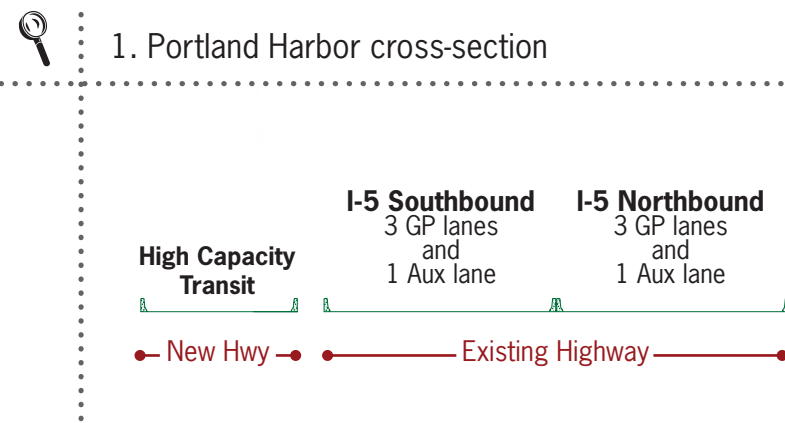
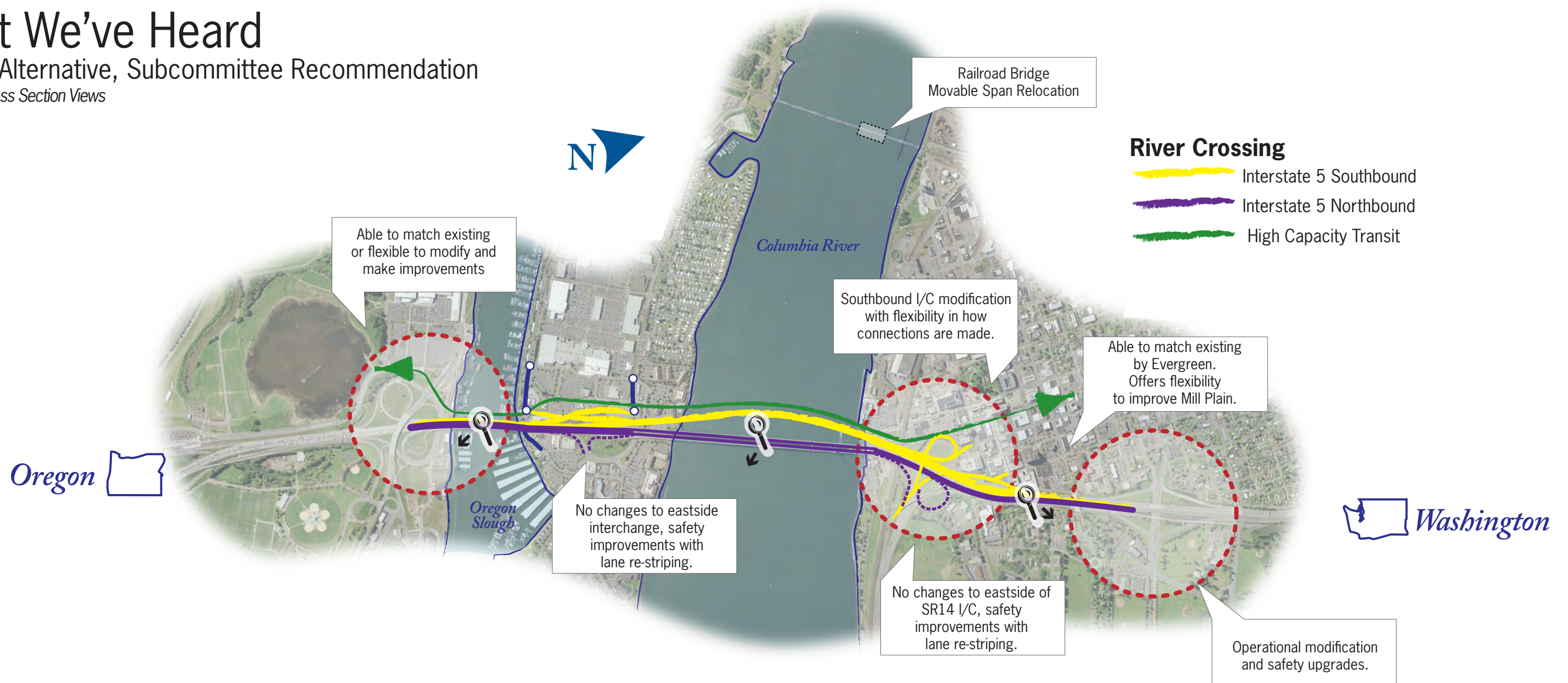
Meeting Results March 26, 2007 for presentation at March 27, 2007 Task Force meeting

Fourth Alternative Subcommittee recommendation



What We've Heard

Fourth Alternative, Subcommittee Recommendation Plan and Cross Section Views



This map and illustrations are for discussion purposes only and are subject to change.

Not to Scale
Graphic Representations Only



Oregon

Theodore R. Kulongoski, Governor

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



Nature
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 Hewitt:

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





Memorandum

March 26, 2007

TO: Task Force
FROM: Kris Strickler
SUBJECT: Summary of Public Comment Received on Fourth Alternative

Summary of Public Comment Received on Fourth Alternative

On February 27, the Columbia River Crossing Task Force agreed to accept the staff recommendation to advance three alternatives into the Draft Environmental Impact Statement (DEIS) process and appointed a subcommittee to identify a possible fourth alternative.

Between February 28, 2007 and March 23, 2007, 29 comments were received by the CRC project office regarding the identification of a fourth alternative for further analysis in the DEIS process.

As part of the Fourth Alternative Task Force Subcommittee process, CRC staff was directed by the co-chairs of the subcommittee to accept public comment via email, U.S. mail, comment forms, phone, fax, flip charts and in person at the CRC project office. Verbal public comment will be accepted at the March 27 CRC Task Force meeting where the larger Task Force will discuss the subcommittee findings.

Attachments:

- Public Comment Memo, March 16, 2007
- Public Comment Memo, March 23, 2007
- Public Comment on the Fourth Alternative



Memorandum

March 16, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: **Public Comment Received in Response to Fourth Alternative Meeting on March 12**
COPY:

This memorandum outlines the public comment received in response to the March 12 meeting of the Fourth Alternative Task Force Subcommittee. Public comment was collected in these ways:

- Public comment form completed at the meeting (1)
- E-mail messages sent to the project office (3)
- Memo submitted at the meeting (1)
- Comments written on a flipchart at the meeting (5)

The public comment received by Thursday, March 15 at 11:59 p.m., featured questions and comments about these themes:

Railroad bridge moveable span
 Supplemental bridge
 Third crossing
 Public process
 Transit
 TDM, SDM and tolling
 Single Occupancy Vehicles
 Bicycle and pedestrian improvements

Railroad bridge moveable span comments referred to the perceived need for the CRC project to include span improvements.

Supplemental bridge comments ranged from support for focus on maximizing the existing structures to the describing the fourth alternative meeting as a waste of time and money because a supplemental bridge option has already been studied three times by the project and failed each time.

Third crossing comments supported the creation of a third corridor outside of I-5. A comment recommended building a third river crossing where the railroad bridge is located.

The project's **public process** was described as unfair with deadlines not allowing for public comment.

Transit was discussed at length in a memo that advocated transit solutions over a replacement bridge. A comment about transit suggested an LRT bridge as opposed to the freeway. Questions about transit centered around demand, financing and integrating HCT into a lower cost alternative.

TDM, SDM and tolling were described as social engineering. Related questions about those measures focused on economic impacts and public willingness to support TDM and SDM. SDM is an undefined acronym.

There were also a series of questions about which types of **single occupancy vehicles** have priority on the highway and the cost effectiveness of **bicycle and pedestrian improvements**.

A Seattle Times article about the Alaskan Way Viaduct special election was submitted by a member of the public for review by the subcommittee

These comments were recorded on a flipchart during the meeting:

1. I did not fully understand that CRC is under a deadline for federal funding.
2. I'm glad that participants recognize the need for tolling (TDM).
3. Add another track to the railroad bridge (Ride Amtrak).
4. LRT bridge – forget the freeway.
5. The issue is the corridor is full! Traffic must be taken out of the corridor. A third bridge at the railroad bridge is less cost, smallest footprint. If you're not going to get real...citizens will drop out of the process and work with Feds to shut this down now! Make your choice!

A PDF copy of the public comment form, email messages and memo are enclosed for your review.



Memorandum

March 23, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: **Public Comment Received in Response to Fourth Alternative Meeting on March 19**
COPY:

This memorandum outlines the public comment received in response to the March 19 meeting of the CRC Fourth Alternative Task Force Subcommittee and other comments related to studying a fourth alternative. Public comment was collected in these ways:

- E-mail messages sent to the project office (13)
- Memos and/or petitions submitted at the meeting (2)
- Comment Forms (2)
- Audio files (2)

The public comment received by Friday, March 23 at 11:00 a.m., featured questions and comments about these themes:

Existing Bridges
 Process
 Public Process
 B- Option
 Third crossing
 Transit
 Fourth Alternative
 Staff Recommendation
 Light Rail

The ownership of the **existing bridges** was raised by one person who argued the cost of maintenance may outweigh the usefulness of maintaining the structures. Another comment recommended finding a way to use the existing bridges.

There were two comments about the **process** related to studying a viable fourth alternative. A member of the public did not think the word "possible" should be used in this sentence: The Columbia River Crossing Task Force unanimously accepted the staff recommendation to advance three alternatives into the Draft Environmental Impact Statement (DEIS) process and appointed a subcommittee to identify a possible fourth alternative." Another commenter questioned the lack of a transportation industry representative on the subcommittee.

A comment related to **public process** concerned a signed petition not being given to members of the subcommittee while the meeting was in process. The petition was not sent to the CRC project office for distribution to subcommittee members prior to the March 19 meeting. An audio file of testimony from the February 22 Metro Council hearing was submitted. The testimony claimed the CRC process did not treat environmental justice communities fairly.

The **B- Option** discussed by the subcommittee was described as flawed in one email message because the option recommend two freeway through lanes on a supplemental bridge.

There were four individual comments supporting a **third crossing**. There were also two petitions submitted each proposing a third bridge, but using different language. The petition titled "We need action NOW on a NEW, THIRD Columbia River Crossing" was brought to the attention of the subcommittee and CRC staff at the March 19 subcommittee meeting and was later emailed to the CRC project office. There are 32 signatures on the version submitted at the subcommittee meeting and 68 signatures on the version mailed to the project office. The second petition titled "We support the third bridge alignment near the railroad bridge and declare no seizing of public property through eminent domain be used." was submitted to the CRC project office via email after the March 19 meeting. This petition features 38 signatures, 15 of which also appear on the first petition. An audio file featuring former CRC project director Rob DeGraff discussing a third crossing was also sent to the project office. Mr. DeGraff did not advocate a third crossing as part of the CRC project in the recording.

Transit was described by one person as having to "share in the compromise for a lower cost solution."

Proposals for a **fourth alternative** were submitted by two members of the public. A letter signed by three people indicate there is a belief that a fourth alternative means a third crossing. An outline of the perceived failings of the options studied by the subcommittee was also submitted.

The **staff recommendation** for a replacement structure with Light Rail Transit received one supporting comment.

There was one comment in support of **Light Rail**.

A second copy of a critique of CRC staff's assessment of a proposal made by AORTA was also resubmitted.

From:
To: Columbia River Crossing;
CC:
Subject: Feedback from CRC Contact Page
Date: Wednesday, February 28, 2007 7:21:13 PM
Attachments:

From: Matt Smyth

Comment: Hey you guys, we really need planning for a third bridge. We need route redundancy, basically a large pipe is too inefficient and leaves too big a footprint.

I am sure your traffic people can advise you, all I understand is networks but it is basically the same thing!

Matt

Columbia River CROSSING

Comment Form

We need your help to shape the future of this project. Completed forms may be placed in a comment box, given to a staff member or returned to the project at the address listed below. Comments may also be emailed to feedback@columbiarivercrossing.org. Please provide your comments by **February 16, 2007**.

The Columbia River Crossing project is recommending these bridge and transit options for further analysis in the Draft Environmental Impact Statement process:

Bridge

- Replace the existing bridge with a new I-5 bridge to carry highway traffic, transit, bicycles and pedestrians.

Transit

- Bus Rapid Transit with express bus service
- Light Rail Transit with express bus service

RECEIVED

MAR 02 2007

Columbia River Crossing

	Check all that apply →	Agree	Disagree	Undecided	See comments on back
1.	Do you agree with the staff recommendation for the bridge?			✓	✓
2.	Do you agree with the staff recommendation for transit?	✓			
3.	Narrow lanes and a lack of shoulders slow traffic on the Interstate Bridge. A new bridge should feature wider lanes and shoulders to improve the safety and flow of travel.	✓			
4.	Short ramps make getting on and off I-5 difficult and unsafe. Improvements are needed to make connecting to I-5 smoother and safer for trucks and cars.	✓			
5.	Car and truck traffic on I-5 should not stop for river traffic.	✓			
6.	Public transit on I-5 should not stop for river traffic.	✓			
7.	A new bridge should be built high enough to eliminate the need to open for boats and barges.	✓			
8.	More reliable transit service with predictable travel times is needed between Clark County and Portland.	✓			✓
9.	Travelers using cars and trucks need more reliable travel times between Portland and Clark County.				
10.	Solutions for moving people, cars and trucks should be consistent with local land use plans.	✓			
11.	Solutions for moving people, cars and trucks should minimize taking additional land for right-of-way.	✓			
12.	A new bridge should improve safety and travel conditions for marine traffic in the Columbia River.			✓	

(Over)

13 Comments:

① While I believe that the Task Force may very well have narrowed the list down to the best options, I believe that they made the right decision to allow for more time to study a fourth option to bring back to the table. This is valuable in bringing a more complete consensus from the entire group and also in taking the public's advice, which was overwhelmingly in favor of another option.

The health of the people living adjacent to the new bridge sight is **EXTREMELY IMPORTANT!!!** It must be seriously taken into account when making a decision. Allowing for more cars and thus more exhaust will certainly not be the best option for these people, unless there are extraordinary precautions taken to minimize the impact of pollution.

⑧ I am heavily in favor of the addition of Light Rail to the crossing. While any form of transit is a plus, Portland has already invested a huge amount of money into the MAX system. Not taking advantage of the MAX Yellow Lines proximity to Vancouver would be a major mistake for all players involved. Portland has done all it can to bring MAX to Vancouver, and Vancouver would be foolish to not continue it over the river, as Mayor Royce Pollard has already made clear.

MAX does not pollute like cars and buses do, and thus would be beneficial to those living near the area, as well.

THANK YOU. Please send completed form to:

Columbia River Crossing Project, 700 Washington Street, Suite 300, Vancouver, Washington, 98660
 Fax: 360.737.0294
 Email: feedback@columbiarivercrossing.org

Would you like to be added to the Project mailing list? Yes No

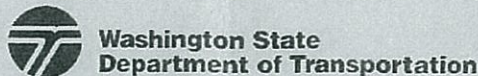
*Name: Grea Hempel Organization (Optional): PSU student

*Address: [Redacted]

*City: Portland *State: OR *Zip: 97202

Email: [Redacted] (* = Required fields)

Visit the CRC project Web site for more information: www.columbiarivercrossing.org



(Over)

From: [Bruce Holmstrom](#)
To: [Columbia River Crossing](#);
CC:
Subject: RE: CRC Task Force subcommittee to identify a fourth alternative
Date: Thursday, March 08, 2007 8:59:24 AM
Attachments:

Where is a representative from the transportation industry? This corridor is a freight bottleneck.

From: Columbia River Crossing [mailto:feedback@columbiarivercrossing.org]
Sent: Wednesday, March 07, 2007 4:37 PM
Subject: CRC Task Force subcommittee to identify a fourth alternative

CRC Task Force subcommittee to identify a fourth alternative

The Columbia River Crossing Task Force unanimously accepted the staff recommendation to advance three alternatives into the Draft Environmental Impact Statement (DEIS) process and appointed a subcommittee to identify a possible fourth alternative.

The subcommittee will work to develop a viable fourth alternative that aspires to meet the goals and needs of the Columbia River Crossing project and maximizes the utility of the existing bridges. The Task Force will discuss the subcommittee findings at the March 27 Task Force meeting.

4th Alternative Subcommittee Members

- Metro Councilor Rex Burkholder, Co-Chair
- Clark County Commissioner Steve Stuart, Co-Chair
- Jeff Hamm, C-TRAN
- Fred Hansen, TriMet

- Dean Lookingbill, SW Washington Regional Transportation Council
- Tom Zelenka, Schnitzer Group
- Scot Walstra, Greater Vancouver Chamber of Commerce
- Walter Valenta, Bridgeton Neighborhood
- Hal Dengerink , CRC Task Force Co-Chair, ex-officio subcommittee member
- Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member

4th Alternative Task Force Subcommittee Meeting Schedule

Monday, March 12, 2007
2:30 – 4:30 p.m.

Monday, March 19, 2007
8:00 – 11:00 a.m.

Monday, March 26, 2007
8:00 – 11:00 a.m.

Location

Former Hayden Island Yacht Club
12050 N. Jantzen Drive
Portland, Oregon
TriMet Bus #6

All subcommittee meetings are open to the public. Public testimony will not be taken during the meetings, but comment forms will be available and public comment is encouraged by email, mail, fax or phone. Comments received by the Wednesday after a subcommittee meeting will be collected and distributed to the subcommittee members by the end of the week before the next meeting.

Next Task Force Meeting

Tuesday, March 27, 2007
4:00 p.m. – 6:30 p.m.

From:

To:

CC:

Subject: *** Detected as Spam *** Re: CRC Task Force subcommittee to identify a fourth alternative

Date: Thursday, March 08, 2007 2:34:07 PM

Attachments:

Why is the word **Possible** fourth alternative? I thought it was stated that many CRC Task Member including Clark County Commission made it very clear no additional option and it's over.
Sharon

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

From: feedback@columbiarivercrossing.org

Sent: Wed, 7 Mar 2007 5:02 PM

Subject: CRC Task Force subcommittee to identify a fourth alternative

CRC Task Force subcommittee to identify a fourth alternative

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4th Alternative Subcommittee Members

- Metro Councilor Rex Burkholder, Co-Chair

- Clark County Commissioner Steve Stuart, Co-Chair
- Jeff Hamm, C-TRAN
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- Dean Lookingbill, SW Washington Regional Transportation Council
- Tom Zelenka, Schnitzer Group
- Scot Walstra, Greater Vancouver Chamber of Commerce
- Walter Valenta, Bridgeton Neighborhood
- Hal Dengerink , CRC Task Force Co-Chair, ex-officio subcommittee member
- Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member

4th Alternative Task Force Subcommittee Meeting Schedule

Monday, March 12, 2007

2:30 – 4:30 p.m.

Monday, March 19, 2007

8:00 – 11:00 a.m.

Monday, March 26, 2007

8:00 – 11:00 a.m.

Location

Former Hayden Island Yacht Club

12050 N. Jantzen Drive

Portland, Oregon

TriMet Bus #6

All subcommittee meetings are open to the public. Public testimony will not be taken during the meetings, but comment forms will be available and public comment is encouraged by email, mail, fax or phone. Comments received by the Wednesday after a subcommittee meeting will be collected and distributed to the subcommittee members by the end of the week before the next meeting.

Next Task Force Meeting

Tuesday, March 27, 2007

4:00 p.m. – 6:30 p.m.

Washington Department of Transportation

11018 NE 51st Circle, Vancouver, WA

C-TRAN Bus #4 transfer to #80

From: Jim Riemenschneider
To: Columbia River Crossing;
CC:
Subject: 4th Alternative & maximizing utility of existing bridges
Date: Thursday, March 08, 2007 8:30:53 AM
Attachments:

As some have stated, the maintenance of the existing bridges would seem to fall into a hole of questions larger enough to swallow the existing bridges whole.

Who's in ownership would they become and who would then maintain them is a burning question I believe should be answered before any other thoughts are entertained about them being kept in place.

Don't get me wrong, I'm a preservationist and enjoy the character of old trusses, but the costs of their maintenance will create problems for them above their usefulness here on the Columbia. Perhaps there are new crossings in suburban Vancouver or other places where some of the spans can be 'reused'. As an engineer, I understand seismic upgrades and their costs too.

Thanks and I'm excited for this process and I hope the best solution wins out.

Jim Riemenschneider, P.E.

From: Johanna Rayman
To: Columbia River Crossing;
CC:
Subject: Re: CRC Task Force subcommittee to identify a fourth alternative
Date: Thursday, March 08, 2007 11:54:34 AM
Attachments:

Thank you for developing a fourth alternative! I hope that even though they are not represented on the committee that you **strongly consider recommendations by Coalition for a Liveable Future**. As an enthusiastic resident of N/NE Portland for over 10 years, their proposals seem like they will serve my community the best. I have serious concerns about the other alternatives that have been offered up until now, and how they will affect my standard of living.

Sincerely,

Johanna Rayman, LCSW

Portland, OR 97211

Columbia River Crossing <feedback@columbiarivercrossing.org> wrote:

CRC Task Force subcommittee to identify a fourth alternative

The Columbia River Crossing Task Force unanimously accepted the staff recommendation to advance three alternatives into the Draft Environmental Impact Statement (DEIS) process and appointed a subcommittee to identify a possible fourth alternative.

The subcommittee will work to develop a viable fourth alternative that aspires to meet the goals and needs of the Columbia River Crossing project and maximizes the utility of the existing bridges. The Task Force will discuss the subcommittee findings at the March

27 Task Force meeting.

4th Alternative Subcommittee Members

- Metro Councilor Rex Burkholder, Co-Chair
- Clark County Commissioner Steve Stuart, Co-Chair
- Jeff Hamm, C-TRAN
- Fred Hansen, TriMet
- Dean Lookingbill, SW Washington Regional Transportation Council
- Tom Zelenka, Schnitzer Group
- Scot Walstra, Greater Vancouver Chamber of Commerce
- Walter Valenta, Bridgeton Neighborhood
- Hal Dengerink , CRC Task Force Co-Chair, ex-officio subcommittee member
- Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member

4th Alternative Task Force Subcommittee Meeting Schedule

Monday, March 12, 2007

2:30 – 4:30 p.m.

Monday, March 19, 2007

8:00 – 11:00 a.m.

Monday, March 26, 2007

8:00 – 11:00 a.m.

Location

Former Hayden Island Yacht Club

12050 N. Jantzen Drive

Portland, Oregon

TriMet Bus #6

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From: Chas
To: Columbia River Crossing;
CC:
Subject: 4th Alternative
Date: Thursday, March 08, 2007 9:35:35 PM
Attachments:

I'd like to propose a 4th alternative.

How about an alternative that costs less, doesn't disrupt traffic for years, saves energy, gives people the ability to come and go as they please, is scalable and can be accomplished quickly instead of waiting for years?

You have ask yourself why are we thinking of applying solutions to the commute to Portland that haven't changed in hundreds of years. Build bigger bridges and more lanes. Is that really the solution for one of most progressive parts of the country? Is that the solution to meet the needs of a future filled with energy uncertainty? Why not do something different. Something forward thinking that will give people what they really want. A sustainable system of transportation that will carry the region into the future while giving people the independence they desire.

Drive the rush hour traffic and you will see 99% of the cars with a single driver in it. Why? Even with gasoline as high as it is. It's because people want and sometimes need the flexibility a car gives them to come and go as they please. The solution isn't more lanes and a bigger bridge. The solution is small electric vehicles and dividing and segregating freeway lanes. For what we are planning on spending the government

could subsidize small one person electric vehicles that would allow dividing traffic lanes in half thereby doubling the capacity of those lanes. There are several companies that could mass produce for reasonable prices if the government provided the backing. One of them right in Spokane, WA.

Electricity is plentiful and cheap in the Northwest. Why not use our regions resources to provide a great forward thinking solution.

<http://www.commutercars.com/>

Other Options for the I-5 Committee

West Idea: Railroad Bridge

Move the opening of the railroad bridge to center span lift (not turn) adjacent to that you put a new bridge that would have mass transit rail and single HOV lane, it also would be lift. The HOV lane would be for buses and 4 or more people in vehicles. The HOV lane would change directions at midnight and noon for North and South travel.

I-5 Bridge:

Take out jersey guard railing, which reopens bridge to 4 lanes both ways and replace jersey with, titanium railing and cyclone fencing on the inside. That provides single lane access from Interstate 14 and Vancouver City Centre going South that would access Marine Drive, MLK and Jantzen Beach Center with their own lane. North bound MLK, Marine Drive and Jantzen Beach Center would enter Interstate 5 and the bridge with access to Interstate 14 and Vancouver City Center.

East Idea: Alternate Bridge

The alternate bridge would cross from Troutdale area crossing the river where the power lines are in Camas and crossing the island going up and over the aeration ponds and paralleling the current Camas bridge joining 14 where it enters the City of Camas. Of course, property would need to be purchased to do this, but the island water way would be deep enough to handle the piling structures and ship movement up and down the river.

4th Alternative Task Force Subcommittee
Public Comment – 3-12-07 Flip Chart Notes

1. I did not fully understand that CRC is under a deadline for Federal funding
2. I'm glad that participants recognize the need for tolling (TDM)
3. Add another track to RR bridge (ride amtrack)
4. LRT bridge – forget the freeway
5. The issue is the corridor is full! Traffic must be taken out of the corridor. A third bridge at the RR bridge is less cost, smallest footprint. If you're not going to get real...citizens will drop out of the process and work with Feds to shut this down now! Make your choice!

From:
To: Columbia River Crossing;
CC:
Subject: Feedback from CRC Contact Page
Date: Friday, March 16, 2007 10:27:29 AM
Attachments:

From: Daniel Drake

Portland, OR 97217

Comment: I've been reading about the Columbia Crossing bridges the past few years. With the Vancouver Rail Bridge needing repair, I think that the idea of a new bridge combination with a new freeway/bike/train and light railways should be reconsidered than an I-5 upgrade only. This would give new opportunity to N. Portland/St. John's, N Marine, W Vancouver and up to Lake Shore. It would give an alternate if I-5 is backed up and also give redevelopment that would be similiar to the more successful max west line, since it didn't parallel a freeway. I think density and redevelopment isn't going to be as successful along the I-5 corridor.

Columbia River CROSSING

Comment Form

*We need your help to shape the future of this project. Completed forms may be placed in a comment box, given to a staff member or returned to the project at the address listed below. Comments may also be emailed to feedback@columbiarivercrossing.org. Please provide your comments by **February 16, 2007**.*

The Columbia River Crossing project is recommending these bridge and transit options for further analysis in the Draft Environmental Impact Statement process:

Bridge

- Replace the existing bridge with a new I-5 bridge to carry highway traffic, transit, bicycles and pedestrians.

Transit

- Bus Rapid Transit with express bus service
- Light Rail Transit with express bus service

	<i>Check all that apply →</i>	Agree	Disagree	Undecided	See comments on back
1.	Do you agree with the staff recommendation for the bridge?				See comments on back
2.	Do you agree with the staff recommendation for transit?				
3.	Narrow lanes and a lack of shoulders slow traffic on the Interstate Bridge. A new bridge should feature wider lanes and shoulders to improve the safety and flow of travel.				
4.	Short ramps make getting on and off I-5 difficult and unsafe. Improvements are needed to make connecting to I-5 smoother and safer for trucks and cars.				
5.	Car and truck traffic on I-5 should not stop for river traffic.				
6.	Public transit on I-5 should not stop for river traffic.				
7.	A new bridge should be built high enough to eliminate the need to open for boats and barges.				
8.	More reliable transit service with predictable travel times is needed between Clark County and Portland.				
9.	Travelers using cars and trucks need more reliable travel times between Portland and Clark County.				
10.	Solutions for moving people, cars and trucks should be consistent with local land use plans.				
11.	Solutions for moving people, cars and trucks should minimize taking additional land for right-of-way.				
12.	A new bridge should improve safety and travel conditions for marine traffic in the Columbia River.				

(Over)

13. Comments:

Utilize Existing Clark County Rail line to Battle Ground. Taxpayers would vote for this corridor.

this corridor could handle LRT and DMU vehicles on separate tracks.

A new track could be laid on the Columbia River RR Bridge to take PMU to Portland Union station.

Also new track could be laid next to the BN RR track to Camas and Washougal.

LRT and DMU would feed into Amtrak station in Vancouver

TRAN would feed passengers into ~~the~~ these corridors I mentioned

THANK YOU. Please send completed form to:

Columbia River Crossing Project, 700 Washington Street, Suite 300, Vancouver, Washington, 98660
Fax: 360.737.0294
Email: feedback@columbiarivercrossing.org

Would you like to be added to the Project mailing list? Yes No

*Name: David Rowe Organization (Optional):

*Address:

*City: Battle Ground *State: WA *Zip: 98604

Email: (* = Required fields)

Visit the CRC project Web site for more information: www.columbiarivercrossing.org



(Over)

From: Cogan, Danielle
Sent: Monday, March 19, 2007 4:48 PM
To: Columbia River Crossing
Subject: FW: *** Detected as Spam *** 4th Alternative - Comments

Follow Up Flag: Follow up
Flag Status: Orange

From:
Sent: Monday, March 19, 2007 4:45 PM
To: Cogan, Danielle
Subject: *** Detected as Spam *** 4th Alternative - Comments

Dear CRC 4th Alternative Task Force Members,

Subject: Transit needs to be part of the compromise for a 4th Alt option - B Minus has a Fatal Flaw

In addition to maximizing the use of the existing I-5 Columbia River bridges, one of the primary reasons the 4th Alternative Task Force was formed was to find a compromise lower cost option to the high costs of the big bridge proposal(s). So far the task force has identified proposals whereby the pedestrian/bicycle infrastructure can be provided at a lower cost by widening the sidewalks on the existing bridges, and have discussed options that manipulate motorists and reconfigure the roadways, but the transit component is nearly identical to the one to two billion dollar crossing contained in the big bridge proposal(s). The current 4th alternative options on the table are little more than a scaled down highway only version of such a big bridge. The taxpayers deserve better from this committee; an option whereby all modes of transport share in a compromise lower cost solution. The transit component must not be perceived as exempt. Therefore the committee needs to develop an alternative that allows a complete study whereby the transit component can use lanes on the existing bridges to cross the river. There should be no fear of adopting an option of this type. Instead of having the CRC assume, and arbitrarily decide transit will not work with bridge lifts, let the study process prove it. If by relocating the lift span on the railroad bridge, and reducing the number of lifts on the existing bridges creates a too great of an obstacle for transit, the DEIS will demonstrate just that. If the DEIS can overcome the obstacles, the option is viable. On average the Federal Government pays a higher percentage portion of Interstate Highway projects than they do transit projects. Therefore, as an example, it would also cost less in local match dollars if all six lanes on the B Minus alternative supplemental bridge were all highway lanes rather constructing two of them just for transit.

Furthermore, while the various freeway options have considered road capacity, TDM, SDM and highway infrastructure usage beyond just the bridge impact area, the transit component for the most part has not addressed issues beyond the bridge impact area. Transit neither has the collector-feeder system on the Clark County side, or direct multi-destination distributor transit express routes on the Portland side to support a one to two billion dollar transit bridge investment. The transit connection on the Portland side relies on the Interstate Avenue Max line

which operates more like interurban streetcar service than a high capacity light rail trunk line. Its primary purpose is to serve downtown Portland which is NOT the destination of the majority of commuters and other I-5 bridge users crossing over from Washington into Oregon. If there is to be a heavy reliance on transit, the additional capital and operating taxpayer costs to meet this demand must be considered as part of any Columbia Crossing transit component. There is already a transit jam choke point in the Portland light rail system (not due to lifts) on the Steel Bridge. Increasing the number of light rail trains coming from Vancouver will only compound this problem that has no fix in sight. Vancouver Mayor Royce Pollard insists on having light rail come into his City, but with little discussion of the financial implications of how and when it will be expanded to serve the entire Clark County region. Such a decision also means more cars on Vancouver surface streets, and more park and ride capacity in Vancouver. Additionally, there has been little if any open discussion that conveys to the public even an estimated dollar amount price tag that it would take to subsidize transit operations for the crossing, and who would pay that subsidy, as compared to the costs of providing motor vehicle infrastructure that is maintained through taxes and fees assessed the motorist users.

Finally, in addition to not including the transit component as having a shared responsibility in any low cost compromise 4th Alternative option, the current B Minus alternative appears to have a fatal flaw. Having only two through freeway lanes on the supplemental bridge almost guarantees congestion problems similar to those that are experienced on I-5 at the Rose Quarter. The assumption at the Rose Quarter is that traffic would be split between I-5 and I-405, thereby making three lanes in each direction on the Eastbank unnecessary. It did not work there and neither will such a choice split between two lanes on a new supplemental bridge vs using the existing bridges to cross the Columbia. Three full service motor vehicle lanes, together on the same structure per direction, are absolutely necessary if there is any chance to alleviate traffic congestion on the I-5 crossing. Anything less is setting up any 4th Alternative option for failure. It would be wasting taxpayer dollars to build an obsolete bridge when it opens that creates yet another three-two lane bottleneck just to provide a transit connection.

Sincerely,

Terry Parker
Portland, Oregon

Exercise your brain! Try Flexicon.

http://games.msn.com/en/flexicon/default.htm?icid=flexicon_hmemailtaglinemarch07

Columbia River CROSSING

Event: 1-5 Committee
Date: 3-19-07

Comment Form

Thank you for taking time to give us your comments and help shape the future of this project. Completed forms may be mailed to the address listed on the other side, or given to a staff member. Comments also may be emailed to feedback@columbiarivercrossing.org.

Get back to the basics

- We need a good connection from Beaverton to I-5 at 4th Plain or Hazeldell
- We need a 3rd Bridge away from the current I-5
- The Funding may be available to replace the I-5 Bridge sooner than anything else.
- Fix I-5 now with a new bridge = light rain + Bicycle + pedestrian access.
- Has anyone on this committee actually walked across the bridge???
- Currently the I-5 bridge is scary for walking or Scooters
- A pleasant walking path on the bridge would be used
- Up Stream verse DownStream
- Up Stream is all commercial or rental property Down Stream impacts - owners (homes + business) Peoples lives and neighborhoods are important

*Name: Barbara Nelson Organization (Optional): Jantzen Beach Morage Inc
 *Address: _____
 *City: Portland *State: OR *Zip: 97217
 Email: _____ (* = Required fields)

Would you like to be added to the Project mailing list? Yes No Prefer Email

www.ColumbiaRiverCrossing.org
503-256-2726 or 360-737-2726
feedback@columbiarivercrossing.org



Failures of Options presented by CRC Staff to Task Force Subcommittee to identify a fourth alternative on March 12, 2007

If a fourth alternative is to be analyzed, it must provide a lower cost solution and still address the purpose of the project. The three options presented at the March 12 meeting appear to fail these tests.

Option A

- Requires costly changes to 5 freeway interchanges
- Does not address the SR 14 to I-5 southbound on-ramp, the major cause of traffic incidents and backups. (CRC Draft Components Step A Screening Report, Fig. 3-11 3-22-06)
- Shows a long high and expensive transit bridge.
- Provides an unnecessarily long and costly exclusive transit facility in Vancouver
- Does not provide local access to Hayden Island.
- Does not provide any improved bicycle and pedestrian facilities

Option B

- Requires costly changes to 6 freeway interchanges
- Provides no freeway access to Hayden Island
- Provides no direct SR 14 to/from I-5
- Requires construction of long, costly collector distributor roads and connections to the existing bridges.
- Provides an unnecessarily long and expensive exclusive transit facility in Vancouver.
- Puts bikes and pedestrians on a very high and long bridge.

C-Tran Staff's Option

- Does not address the SR 14 to I-5 southbound on-ramp, the major cause of traffic incidents and backups.
- Does not address the complicated and costly connections to and from the existing east bridge for the northbound managed and auxiliary lanes
- Includes costly and unnecessary managed and auxiliary lanes with queue jumps for redundant and costly express bus service running parallel to high capacity transit, (light rail).

March 18, 2007 Jim Howell

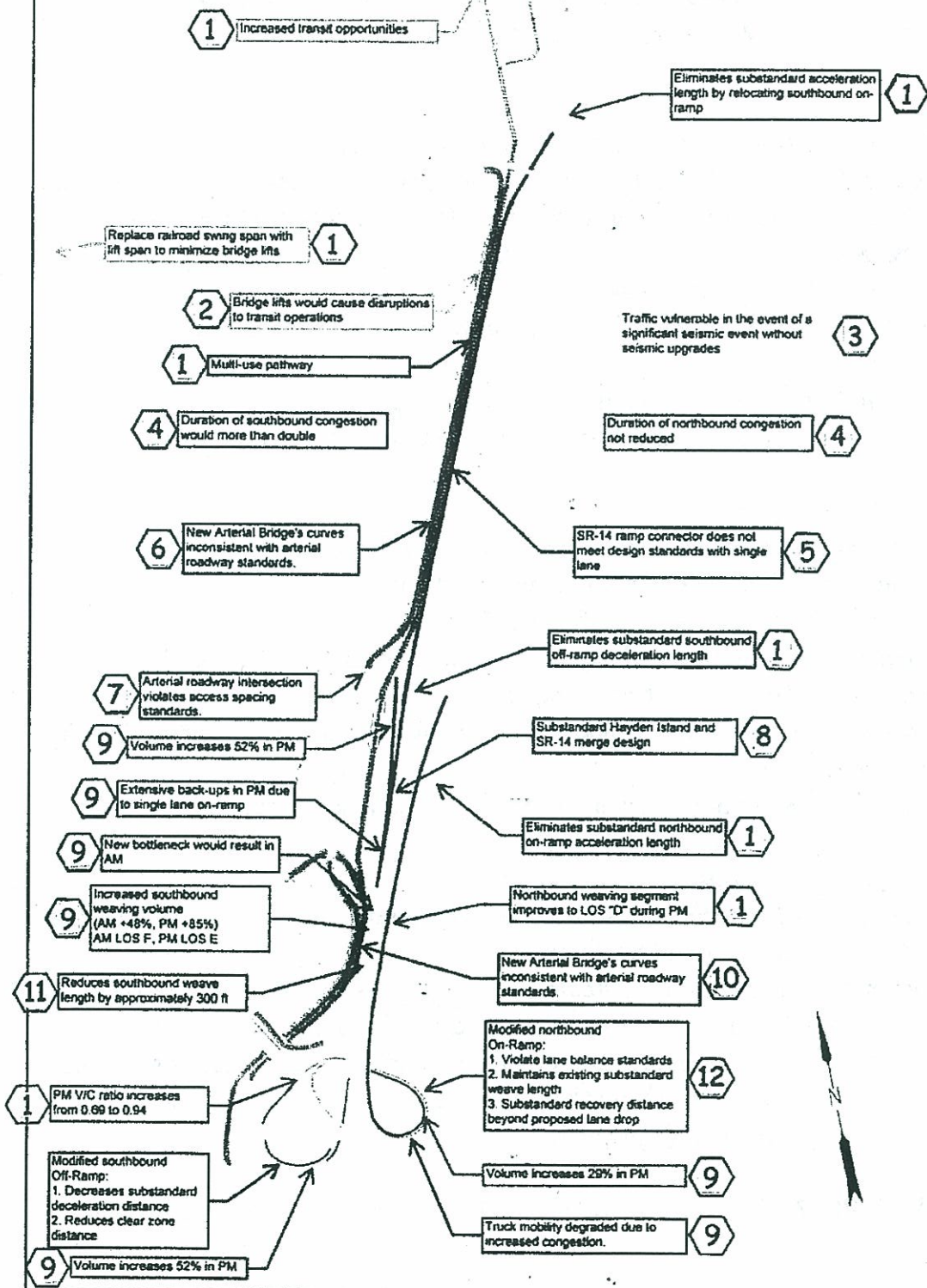
Columbia River CROSSING

Assesment of AORTA's Proposed 11/08/2006 Concept

LEGEND

- Growing travel demand and congestion
- Impaired freight movement
- Limited public transit operation, connectivity, and reliability
- Safety and vulnerability to incidents
- Substandard bicycle and pedestrian facilities
- Seismic vulnerability

*Background image provided by Jim Howell on 11/08/2006



See attached notes

January 23, 2007

Notes on CRC Staff Assessment of AORTA's Proposed Nov. 8, 2006 Concept for A Columbia River Crossing Emphasizing Public Transportation (see attached map)

1. OK
2. Incorrect - With the relocation of the railroad bridge's opening span, a lift span on a new multi-modal bridge would not have to be opened during transit operating hours due to infrequent movement of high vessels.
3. A significant seismic event would most likely make I-5 vulnerable throughout the metro region. To my knowledge, the relative vulnerability of all the structures on I-5 in the metro area has never been documented. Requiring the Columbia River structures alone to be seismically upgraded without this evidence is capricious since AORTA's Concept requires no other modification to the existing bridges. The purpose of improving the interstate river crossing's structural integrity would be accomplished by constructing the multi-modal bridge to modern seismic standards.
4. Incorrect - Light rail will more than double the river crossing capacity and aggressive expansion of effective bus service feeding light rail on both sides of the river will reduce peak hour demand and duration of freeway congestion.
5. Map is a concept, not an engineering drawing; SR-14 ramp connector on the multi-modal bridge can be two lanes up to a ramp meter on Hayden Island.
6. Map is a concept, not an engineering drawing; the local vehicle connection is not intended to be an arterial, but rather a two lane street connector between Hayden Island and Columbia Street controlled with a traffic signal at each end.
7. Map is a concept, not an engineering drawing; access spacing can be easily modified.
8. Map is a concept, not an engineering drawing; a safe merge can be designed in the 2,600 foot distance between the south end of the existing bridge and the Marine Drive off-ramp.
9. Incorrect - Traffic volumes and projected backups and bottlenecks are based on the erroneous assumption that all traffic to and from Hayden Island will continue to use the freeway exclusively in spite of light rail and enhanced feeder bus service in Vancouver, Portland and Hayden Island. This plus independent local street, bike and pedestrian access to and from Portland and Vancouver.
10. Map is a concept, not an engineering drawing; the vehicle connection across the Portland Harbor is not intended to become an arterial but rather a two lane local street connection between N. Center Avenue on Hayden Island and N. Expo Road. A 25-MPH speed limit is desirable.
11. Map is a concept, not an engineering drawing; safe weaves and merges (see #8 above), in any segment, are determined by traffic volumes. Traffic on the Hayden Island and SR-14 on-ramps can both be metered to allow safe merges and weaves.
12. The existing Portland Harbor Bridge gains a NB lane by moving bikes and pedestrians to the new bridge allowing trucks an un-metered access lane.

March 19, 2007 Jim Howell

* 3/19/07

I would like either a letter
stating you were informed of
missing citizen comments of up to
60 people + you have not
made a correction to Chair -

You can either bring it up
OR provide me a letter -

approx 20 people or more
are from Jantzen Beach -

Sharon Nasat

HERE IS your chance to do the
right thing -

Petition: We need action NOW on a NEW, THIRD Columbia River Crossing

I support studying a new, third bridge at a location downstream from the current I-5 bridge (near the current railroad bridge) INSTEAD of only studying tearing down and replacing the current I-5 bridges.

Name	address	phone	email
CHARLES TINDALL	WARREN CIR 97053 34303 BENNETT RD		CHARCUE@BLUELINETRANS.COM
Michael C Knight	8628 SE Alder St, Astor 97106		MIKE@BLUELINETRANS.COM
Lori M Knight	8533 N. C MILTON	(503) 358-8867	
Jolene E. Lutesh	1672 NE 8 th ct	(503) 348-6883	Colbydeansmom@Comcast.net
Wanda Knight	8628 SE Alder	(503) 253-6185	
Tracy Tassio	9105 NE 63rd	360-891-1088	
John Tassio	9605 NE 63rd St	360-891-6881	
JACK FOSTER	1515 NE 150 th	503-254-6029	
Marlene McCarthey	3558 SA 72nd	503-258-1617	
Jason Tindall	5136 SW EMWATTS SCAPPOOSE OR 97056	503-543-4754	
ALICIA R. Taylor	6502 OAK ST. S.E. GALENA, OR 97337	503-743-2933	TAD338@AOL.COM

Economic Transportation Alliance is sending this petition to elected official State and Federal to support the studied of a new Third Bridge corridor study NOW. More information can be found www.newinterstatebridge.com Please mail back to: ETA, 8316 N. Lombard, PMB#390, St. Johns, OR. 97203. Email thirdbridgeow@aol.com. phone 503.283.9585

Be part of the Solution.

The dead line to mail this is February 24

Petition: We need action NOW on a NEW, THIRD Columbia River Crossing

I support studying a new, third bridge at a location downstream from the current I-5 bridge (near the current railroad bridge) INSTEAD of only studying tearing down and replacing the current I-5 bridges.

Name	address	phone	email
<i>[Signature]</i>			
<i>John McEllon</i>	<i>1720 SE River Street at Holbrook St</i>	<i>503 796 4163</i>	
<i>[Signature]</i>			
<i>[Signature]</i>			
<i>[Signature]</i>			<i>info@andersonsigns.net</i>
<i>[Signature]</i>			<i>" "</i>
<i>[Signature]</i>			<i>" "</i>
<i>[Signature]</i>			<i>Rivercross@gmail.com</i>
<i>[Signature]</i>			<i>DARR@BLUELINETRANS.COM</i>
<i>[Signature]</i>			<i>Mathys@BlueLineTrans.com</i>
<i>[Signature]</i>			

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Name	address	phone	email	Initials
Nicole Young	7210 N Richards	247-8438		NY
Sharon Nasset	1113 N Baldwin	503-283-9585		SN
Rosanna Chubala	9527 N. Smith St	503-319-1829		RC
TANA Penh	7855 SE Johnson Cr. Blvd.	(503) 750-9202		TP
C. J.	9122 SE Ash St.	503-757-8298		
Jeff Shrodes	4805 SW Orchard Ln	(503) 349-4490		JS

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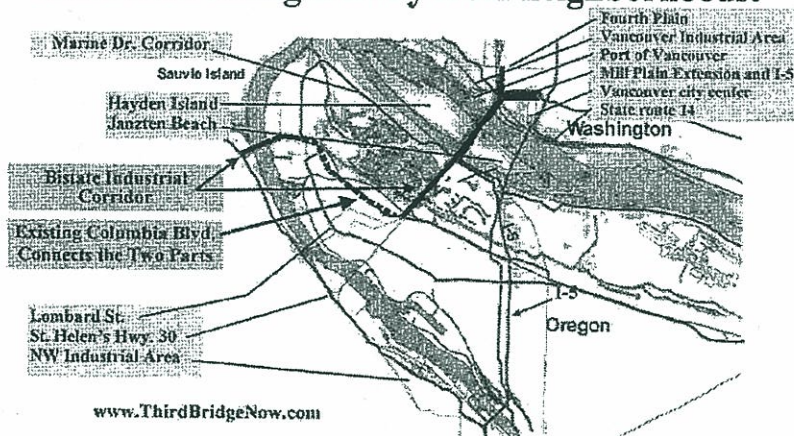
“Primary Area of Potential Impact” for Columbia River Crossing proposed project:

- Historic Ft. Vancouver
- Approximately one hundred homes
- Jantzen Beach businesses and homes
- High bridge “lands” far away from river
- Very Expensive, costs \$2-6 Billion

New Third Bridge has FAR less impact

Potential impact of new Third Bridge Proposal is outlined

The new Third Bridge at the railroad crossing is away from neighborhoods:

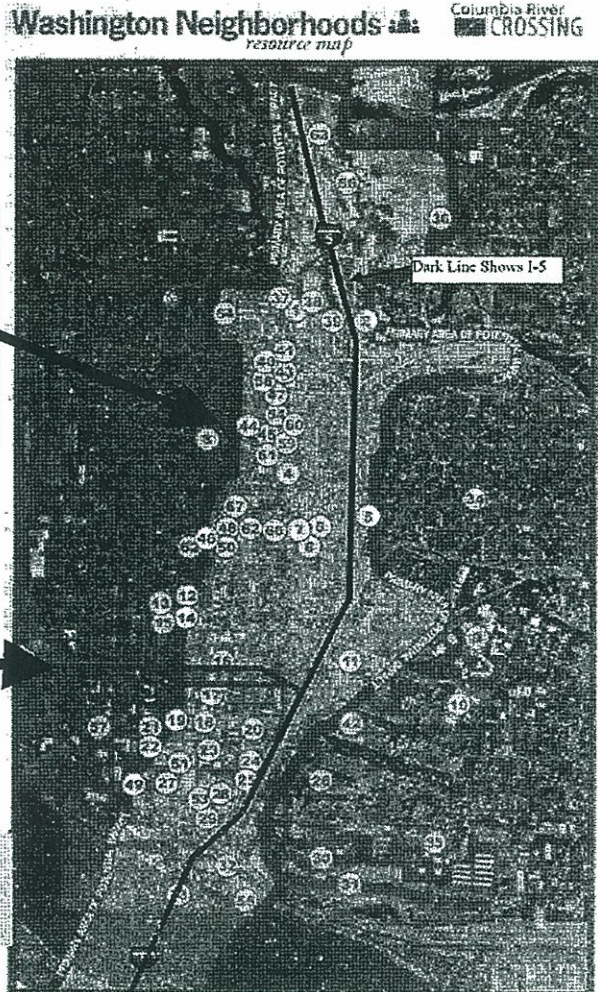


www.ThirdBridgeNow.com

FOLD HERE FOR MAILING - see other side

ETA
PMB#390
8316 N. Lombard
St. Johns, OR. 97203

ETA
PMB#390
8316 N. Lombard
St. Johns, OR. 97203



Contact Senator Murray and tell her that you want the new Third Bridge studied.

The Marshall House
1323 Officer's Row
Vancouver, Washington 98661
Phone: (360) 696-7797
Fax: (360) 696-7798

Place
Stamp
Here

Fold Here

Fold Here

Petition: We need action NOW on a NEW, THIRD Columbia River Crossing

I support studying a new, third bridge at a location downstream from the current I-5 bridge (near the current railroad bridge) in addition to the currently proposed study of tearing down and replacing the existing I-5 bridges.

Name	address	phone	email
MARRIN DENI	2401 N. Blandena	503 289-7257	
Dawn McQuinn	5724 N. Lombard St.	503-289-7220	2856994c
Melene Hayes	box 471	503-286-8641	
Margaret Miller			

Economic Transportation Alliance is sending this petition to State and Federal elected officials to support the study of a new Third Bridge corridor. More information can be found www.ThirdBridgeNow.com

Contact us for lawn signs or more petitions. You can download petitions from the website.

Please mail back to: ETA, PMB#390, 8316 N. Lombard, St. Johns, OR. 97203
Email thirdbridgenow@aol.com. phone 503.283.9585, FAX: 503.286.9969

Be part of the Solution.

Please Fold and Mail ASAP (or FAX to 503.286.9969)

Fold Here

Fold Here

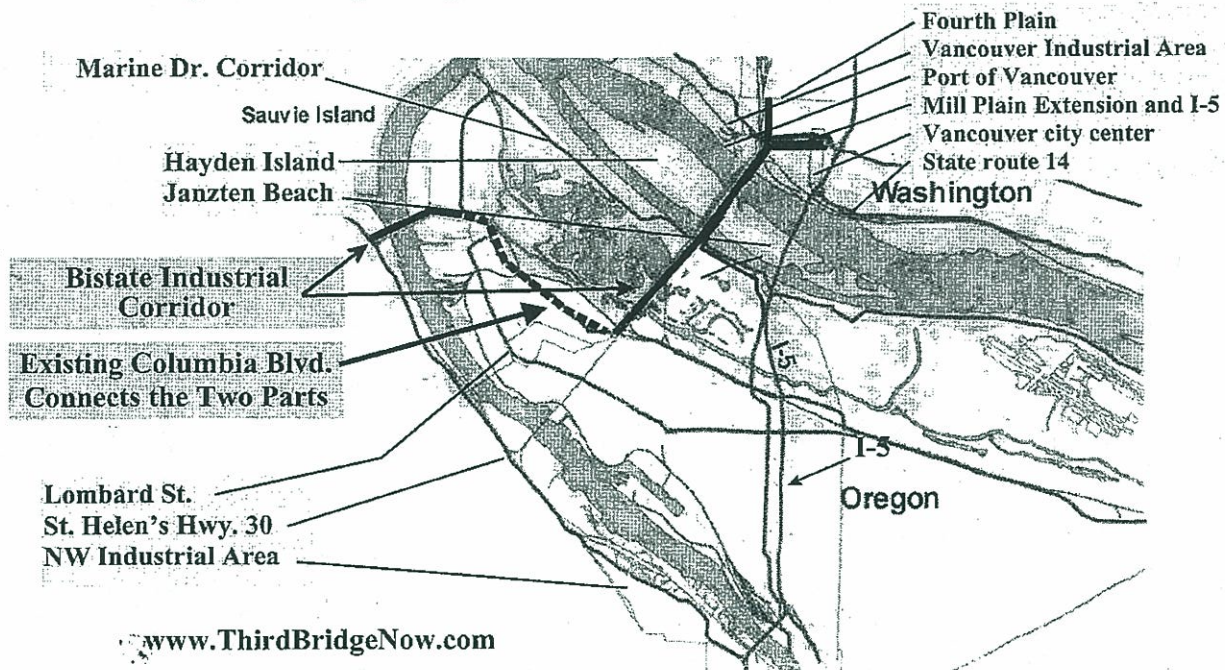
I-5 Is Full!

We Need a Third Bridge

And we need it Now!

You can help reduce congestion with a third bridge if you sign and return this petition.

The Common Sense Proposal : Keep the existing bridges and build entirely new capacity to the West near the railroad bridge.



FOLD HERE FOR MAILING - see other side

ETA
 PMB#390
 8316 N. Lombard
 St. Johns, OR. 97203

Place
 Stamp
 Here

ETA
 PMB#390
 8316 N. Lombard
 St. Johns, OR. 97203

Fold Here

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Name	address	phone	email
figure out a way to have one bridge by	using the present bridge - whatever is best	what works - or build a new bridge	then tear down old.
Lacina M Emerson	595-5323 - 5555 E. Evergreen Blvd	112.2	Vene, lead 98661
like idea of light rail			

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Please mail back to: ETA, PMB#390, 8316 N. Lombard, St. Johns, OR. 97203

Email thirdbridgenow@aol.com, phone 503.283.9585, FAX: 503.286.9969

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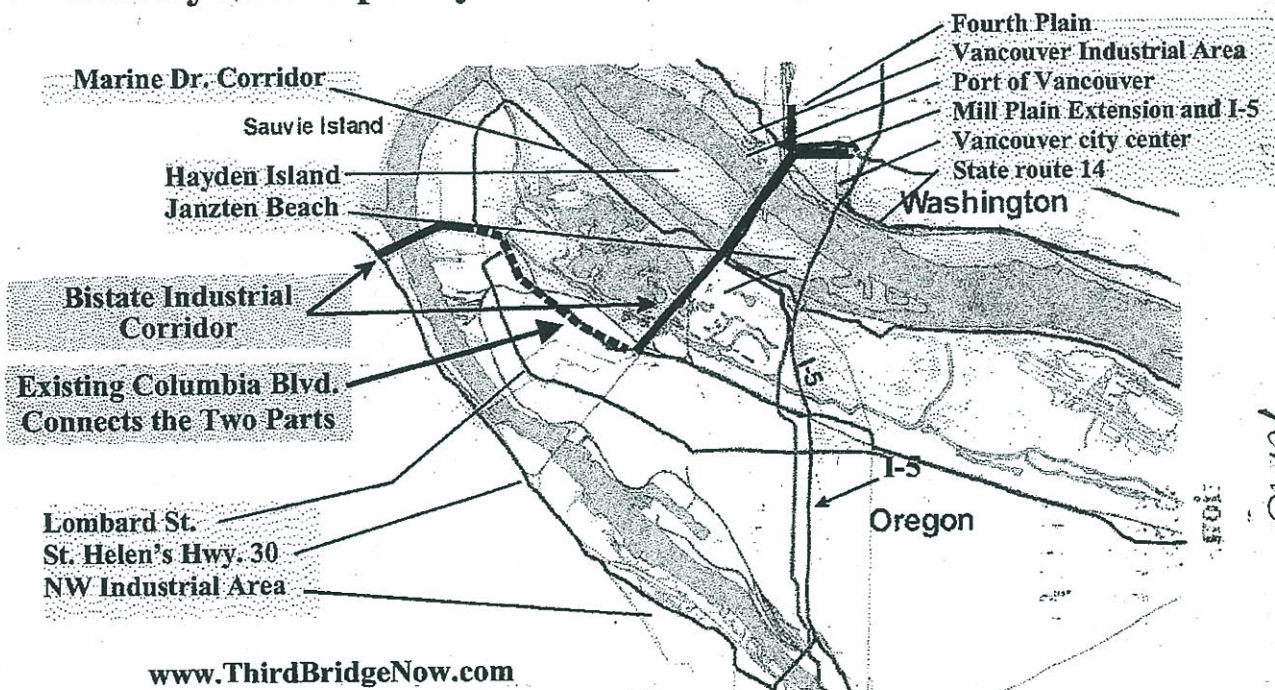
I-5 Is Full!

We Need a Third Bridge

And we need it Now!

You can help reduce congestion with a third bridge if you sign and return this petition.

The Common Sense Proposal : Keep the existing bridges and build entirely new capacity to the West near the railroad bridge.



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PMB#390
8316 N. Lombard
St. Johns, OR. 97203

9720399727 0001



From: TJ Harrison
To: Columbia River Crossing;
CC:
Subject: Suggestions for 4th Alternative
Date: Thursday, March 22, 2007 10:28:16 AM
Attachments:

Dear Committee Member,

I am writing to urge you to consider the following idea for the 4th alternative on the Columbia River Crossing:

Add space for rapid transit bus, lightrail, and bike/ped, and leave the existing number of automobile lanes. It is crucial that the mass transit bus or lightrail be fast and connect all the way to downtown Portland.

This option would allow commuters from Vancouver, including those who don't own cars, a faster option for getting to Portland. But it would not compromise the air quality and health of North Portland residents. I would suggest that significant outreach also be done to Vancouver car commuters to educate them about the viability of the new bus and/or lightrail options and the importance of sustainable transportation in our region. I don't know the Vancouver community very well - perhaps they would be more in favor of this than I imagine. I do know that significant sectors of the Vancouver community, possibly the majority, would appreciate better public transit between our two cities.

Thank you,

TJ Harrison

From:
Sent: Wednesday, March 14, 2007 3:52 PM
To: Hewitt, Henry
Cc: Steve.stuart@clark.wa.gov; Councilor Rex Burkholder; walter@harbor-properties.com
Subject: Fwd: I am requesting your immediate attention concerning the Columbia River Crossing

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

Sent: Mon, 12 Mar 2007 5:47 PM
Subject: RE: I am requesting your immediate attention concerning the Columbia River Crossing

Hi Sharon,
I am trying to get this information off to the parties that you included in your email but I keep getting a server error. Could you please pass this along for us.
Thanks

Today 3/12/07, we attended the CRC Meeting at HI Yacht Club of the task force sub committee meeting. We were appalled to learn that the citizens recommendation of a 4th option (a third bridge) wasn't even discussed. Meeting handouts and discussion were only relevant to making modification to the existing bridge not a third bridge to draw some of the congestions away from the I-5 corridor. Many citizens have recommended a bridge being built that would link HWY 30 and I-405 and onto I-5 in Northwest Vancouver which would make a similar loop as the I-205 freeway.

In addition we just became aware of the fact that there exists an oversight committee. Our concern is, does the oversight committee or any of our representatives receive the citizens input that has been sent to CRC? We feel like we are not being heard!

If this fourth option isn't given the full considerations of the citizen's input, then it's time to end the current process and go back to the drawing table.
Thank you for the opportunity to share our concerns.
Hayden Island residents and concerned citizens,
Sherre Vanegas
Sharon Rixen
Jan Hamer

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

Subject: I am requesting your immediate attention concerning the Columbia River Crossing

Dear Senator Mary Margaret Haugen and Senator Rick Metsger,

Subject: I am requesting your immediate attention concerning the Columbia River Crossing project direction. The word "possible" in the adding an additional option and the move forward by CRC staff without any open public meetings on the option takes away our ability to be heard and have a thorough comparison done of all options.

On February 16, 2007, the Joint Senate Committee for the Columbia River Crossing held a hearing at the Port of Portland. The Oregon Senate portion of the committee passed a resolution to continue with the Columbia River Crossing project and stated the passage of the resolution was not meant to show support for or against CRC staff recommendation but to show the importance of the process and its continuation. The Senators also stated that they had heard concerns publicly and privately of citizen complaints about the inability for them to be involved in the process. It was stated that as an oversight committee, they were responsible for a hands on oversight and they were obligated to do a good job of oversight.

<http://www.debunkingportland.com/Video/JointTransport070216-04.wmv>

Senator Rick Metsger - Oregon Senate
Senator Mary Margaret Haugen

On February 26, 2007, the Washington Transportation Council also stated that they had heard concerns publicly and privately of citizen concerns about the inability for them to be involved in the process. The suggestion was made that an oversight committee of Senators and Representatives may need to be set up.
<http://www.columbian.com/news/localNews/02272007news109348.cfm>

On February 22, 2007, the Metro Councilor held hearings on the CRC staff recommendations and two resolutions from Metro Councilors Rex Burkholder and Robert Liberty. After 2 hours of citizen testimony, Councilor Brain Neuman commented on obvious serious problems with the CRC public testimony.

His statement is very important. <http://www.electnasset.com/misc/Neuman-A.wmv>

On February 22, 2007, at the Metro Council hearing the CRC Environmental Justice Representative, Jeri Williams, testified about the process being the worse process she had ever been involved with after years of sitting on several committees as an Environmental Justice Representation. She stated citizen were not listened to, complained of poor treatment, and citizen complaints of feeling totally disrespected and invalid.

Her statement is very important <http://www.electnasset.com/misc/JerriWilliams-B2.wmv>

On February 27, 2007, at the Columbia River Crossing Task Force Meeting, only one hour of citizen testimony was allowed and the majority of the comments stated that citizens had not been heard or involved enough in the process. The neighborhood and Environmental Justice Representatives said the CRC staff recommendations involved the seizing of private property through eminent domain and had not involved enough citizens and that more options were needed to have a valid open process. A project that involved possible demolition of up to 100 homes or more in Vancouver, 20-30 businesses on Jantzen Beach, 2 dozen or more homes on Jantzen Beach, part of Historic Fort Vancouver, and the Historic Columbia River Crossing are just some of the concerns. It was also stated by the CRC Task Force Members that unless at least a third bridge crossing with the current bridges remaining in place and with less impacts on private property were not included in the studied options, then the process had failed and would need to stop. A vote that included a subcommittee of 8 CRC Task Force Members was set up to come back in one month with an option that can be included in CRC staff recommendations. It was stated that there would be citizen involvement and that whatever option was brought forth should have the same energy given through the entire Design and Environmental Impact Study.

CRC staff has set up meetings that make it almost impossible for most citizens to participate. CRC staff is not allowing open citizen participation in a comment period, and will only accept statements in writing. We will be allowed in the room.

March 12, 2:30-4:30

March 19, 8AM-11AM

March 26, 8AM-11AM

None of the CRC Subcommittee meeting, times or dates are on the web site; a few citizens received an email. This email is attached.

<http://www.columbian.com/news/localNews/02272007news109347.cfm>

We are asking the Joint Senate Committee to demand that the time be changed to a more acceptable time for working citizens, that citizen participation, and comment period is a part of the process. Also that the location remain near the study area for easier access.

We are also asking for a full investigation into the current lack of process.

Open Meetings Law violations

CRC subcommittee such as Freight Mobility, Sponsor Council, Environmental Justice, Community Forum Leaders, Rail Capacity, Urban Design Advisory Group, and other committees.

Who sits on these committees, dates, times, participation, materials, and meeting notes are not on the web sites or in writing form for citizens' involvement. This is an Open Meetings Law violation and has left the citizen totally out of the process.

Special meeting such as CRC's Joint Transportation Commission meetings, Joint Senate oversight Committees, seismic engineering panel, Metro and transportation committee hearing that are specifically about CRC are not on the web site and the CRC Task Force Members are not being informed so they can participate as while as no meeting notes are being brought back... It appears some of the CRC Task

Force Members are invited to these events, and they tend to agree with staff. Staff has also referred to studies and documentation that they will not provide at the meeting and have withheld studies from the CRC Task Force Member such as a 24 hour I-5 Corridor study for the Marquam Bridge in Portland to Pioneer St. April 2005 in Vancouver showing the I-5 Corridor as being F level of service at 6AM and at 7PM. CRC staff has not made the entire 24-hour study available. In September 2005 put out Congestion information clocks showing a total of 3 to 4 hour of congestion a day (using a 1998 ODOT diagram) when challenged that traffic congestion was several hours worst they stated this was the most current data. The 24-hour study exit by exit showing congestion has still not been presented to the CRC Task Force however the study states it was completed for the Columbia River Crossing project.

These Open Meetings Law violation have been reported to The Southwest Washington Regional Transportation Council, JPACT, BI-State Coordination Committee, Columbia River Crossing Task Force Meetings, Metro Council at monthly meeting for over two year. To their credit Vancouver Port Commissioner Arch Miller recommended that I contact the Governors of Washington and Oregon because it appeared I have valid points and was unable to get help from locally elected officials. Metro Council Robert Liberty also as for further information. ODOT Project manager for the I-5 Trade and Transportation Partnership, Kate Dean, has enough knowledge that she would easily be able to look over the web site and see what the citizen process is lacking and give you a very good evaluation to move forward.

... The CRC project like most will only be made better by day light, full and honest discussions with verifiable information. Please let's go forward with an honest effort and citizen involvement. I believe that we can work together inspite of what has taken place. Other citizens and I want to be part of the solution. The process will only get less "Noisy" as staff refers to us citizen, when we are adequately heard.

So the CRC Environmental Justice subcommittee meeting is tonight. Can you tell me where, or what time?

Sincerely,
Miss Nasset

Open Meetings Law, who is covered, and a few of the rules.

The law says that any "governing body" of a "public body" is required to comply.

A "public body" is any state, regional, or local governmental board, department, commission, council, bureau, committee, subcommittee, or advisory group created by the state constitution, statute, administrative rule, order, intergovernmental agreement, bylaw or other official act. A "governing body" is two or more members of a public body

Meetings accomplished by telephone conference calls or other electronic means are public meetings. The governing body must provide public notice, as well as a

location where the public may listen to or observe the meeting.

Public notice must be reasonably calculated to give actual notice to interested persons and media who have asked in writing to be notified of meetings, and general notice to the public at large. Governing bodies wishing to provide adequate notice should strive to provide as much notice as possible to ensure that those wishing to attend have ample opportunity -- a week to 10 days for example.

A meeting notice must include a list of the principal subjects to be considered at the meeting. This list should be specific enough to permit citizens to recognize matters of interest. However, discussion of subjects not on the agenda is allowed at the meeting

Written minutes are required for all meetings, except tape recordings are allowed for executive sessions.

The meetings law says minutes must be made available within a "reasonable time" after each meeting, but does not specify the time. Generally, this time frame should not exceed three weeks. Minutes must b Any person affected by a governing body's decision may file a lawsuit in circuit court to require compliance with or prevent violations of the Public Meetings Law. The lawsuit must be filed within 60 days following

The court may void a governing body's decision if the governing body intentionally or willfully violated the Public Meetings Law, even if the governing body has reinstated the decision in a public vote.

Members of a governing body may be liable for attorney and court costs both as individuals or as members of a group if found in willful violation of the Public Meetings Law.

Clip of Clark County Commissioner Betty Sue Morris getting upset with WADOT guy (27 meg):
[http://www.debunkingportland.com/Video/WDOT-CCComiss\(256kSec\).wmv](http://www.debunkingportland.com/Video/WDOT-CCComiss(256kSec).wmv)

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From:**To:**

benton.don@leg.wa.gov; Steve Stuart; BettySue.Morris@co.clark.wa.us; Marc Boldt; Cogan, Danielle; curtis.richard@leg.wa.gov; David.H.THOMPSON@odot.state.or.us; DeGraff, Rob; donn@bridgecitysystems.com; DopitaJ@wsdot.wa.gov; Columbia River Crossing; Graham, Jeff; fromhold.bill@leg.wa.gov; IvanovB@wsdot.wa.gov; Martin, Jessica; lars.larson@kxl.com; libertyr@metro.dst.or.us; larrygeorge@state.or.us; Markgraf, Tom; matthew.l.garrett@state.or.us; media@teleport.com; rmitch@news.oregonian.com; Moeller.Jim@leg.wa.gov; PogoMonroe@aol.com; morgan@wa-democrats.org; Sherry.GUSTAFSON@odot.state.or.us; janet.k.adkins@s; BoydP@wsdot.wa.gov; politicalprojects@comcast.net; pridemore.craig@leg.wa.gov; pub@stjohnssentinel.com; rep.davehunt@state.or.us; rep.georgegilman@state.or.us; rep.waynescott@state.or.us; Rian_Windsheimer@Gsmith.Senate.Gov; Uhlman, Shawn; Tom.Ryll@Columbian.com; tony@dailyinsider.info; hostickac@metro.dst.or.us; metro council@metro-region.org; newmanb@metro.dst.or.us; webmaster@metro-region.org; mclains@metro.dst.or.us; parkr@metro.dst.or.us; trans@metro-region.org;

CC:

Caitlin.McCollum@pdxtrans.org; dsaltzman@ci.portland.or.us; mayorpotter@ci.portland.or.us; gblackmer@ci.portland.or.us; Randy@ci.portland.or.us; erik@ci.portland.or.us; ksneath@ci.portland.or.us; Commissioner Sam Adams; caine@mstarz.net; Dengerink, Hal; Malin, Dick; bphilips@credc.org; bettysue.morris@co.clark.wa.us; Hansen, Fred; russell@ortucking.org; info@wtassns.com; seltzere@pdx.edu; Byrd, Bob; Mayor Royce Pollard; Sundvall-Williams, Jeri; jschlueter@wetside-alliance.org; monica@starboardaalliance.com; bill.wyatt@portofportland.com; serena@comultnomah.or.us/cc/ds; samadams@ci.portlandou.us; dfrei@teleport.com; Hewitt, Henry; sbates@babler.com; walter@harbor-properties; Paulson, Larry; Fuglister, Jill; Councilor Rex Burkholder; Walstra, Scot; Lookingbill, Dean; Grossnickle, Jerry; ed@edgarren.us; District18Rep@msn.com; mark@staroilco.net; pauloedgar@qwest.net; jbmiinc@comcast.net; BROTAX@aol.com; sylvermiche@yahoo.com; budlogan@spiritone.com; SalmonCreekCocoa@aol.com; Sharonnasset@aol.com; rswaren2002@comcast.net; Teamster37@aol.com; donnadummann@email.com; sallyrich000@yahoo.com; jkarlock@earthlink.net; Jmzweerts@aol.com; wallyh@cbnorthwest.com; susan.morton@neilkelly.com; charlie@bluelinetrans.com; Gayla@stjohnsreview.com; weyrcottage@comcast.net; soulmates34@comcast.net; jilsea@msn.com; skydvguy@teleport.com; PamPariseau@comcast.net; pjonriver@yahoo.com; LauraSCraford@hotmail.com; peteredifer@comcast.net; bet_ter@yahoo.com; Islander@222.com; WindwardConstruction@Hotmail.com; Slnpokey@aol.com; charles_hindenbug@or.mxim.com; Missyjantzen@aol.com; angie.harris@schenkerusa.com; rivers5555@comcast.net; Houseboatgrams@aol.com; alexalexander@msn.com; clownspark@comcast.net; CRACCTG@integraonline;

com; break_time@comcast.net; vanegasnw@comcast.net; oreonrail@netscape.com; Jim@leg.wa.gov;

Subject: *** Detected as Spam *** CRC 4th Alternative Bridge subcommittee PUBLIC COMMENTS FOR THE RECORD

Date: Wednesday, March 21, 2007 3:38:38 PM

Attachments: CoxOriginal Message.doc

March19th CRC 4th Alternative Bridge subcommittee

At the beginning of the subcommittee meeting it was brought to the attention of CRC staff member Danielle Cogan the citizen comments had been left out of the package presented to subcommittee. That CRC Co-chair Henry Hewitt had been email citizen comments for this meeting by Wednesday March 14, and the CRC Task Force member Walter Valenta had been copied.

I was told that emailing the CRC Co-Chair the public comment information wasn't enough and that it had to be CRC staff to count. That both Henry and Walter where out of town did not have an alternate. Danielle would not send a note to the chair to correct the missing citizen comments, or add it to the conversation of the meeting.

1. The subcommittee was missing a petition signed by 38 Jantzen Beach who live on Jantzen Beach or business owners had signed stating their CRC representative Walter Valenta to support and work hard for a Third Bridge crossing near the BNSF known as the BI-State Industrial Corridor. The signatures where to be presented at the March 12, 2007 meeting until the Manger of Jantzen Beach Moorage found out that all testimony even written had to be in on the Wednesday before.
2. A letter from the General Manager Jantzen Beach Moorage, Inc. Jan Hamer.
3. Additional petition signatures of another 40 people wanting the Third Bridge alignment studied.
4. A download of Project Manager Rob DeGraff at the 2nd CRC Task Force meeting That they had to study a Third Bridge option in this round of the NEPA process.
5. A copy of an email from FHWA with David Cox stating, "there is no question that both other projects can still stand on their own as necessary and cost effective. "Referring to bridge a new port freight corridor (BIC), and widening I-5. The email has been altered with bold lettering on some phases.
6. Three video clips of Metro councils commenting on the CRC lacking citizen involvement process. Environmental Justice representative on CRC saying people aren't being listen to and have been shut out of the process.
7. My citizen comment addressed to Henry

This information and that approximately 80 citizen where block out of the process again is appalling. I understand that the Co-chair was out of town but when the error was found out at

the beginning of the meeting to not act to correct the mistake when asked lack integrity. It is a true sign that Senate oversight committee needs to take a look at the entire CRC process. I will send this email in piece to avoid a zip download
Miss Nasset

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

From: Cox, David

Sent: Tuesday, December 20, 2005 4:44 PM

To:|

Subject: RE: Economic Development Research Group
Paul,

Thank you for your efforts to bring a regional perspective and a sense of accountability to the congestion problems in the Portland area. I agree with nearly everything you are trying to accomplish and I appreciate your efforts to "keep the pressure" on the leaders of the Region. In my opinion, we are on the same side...and we want the same things for Portland / Vancouver. If we differ at all, it's in the matters of scope and timing. Let me explain:

Scope: I think our goal should be, not to fix one corridor between Portland and Vancouver, but to fix them all. I don't want to just widen I-205, or build a new Columbia River Crossing at I-5 or to build a new third bridge connecting the Ports and better serving the western communities...I want all three, and, looking to the twenty year future, the metropolitan area will need all three. So what we are trying to do is to pursue a strategy that will give us the best chance of getting all three.

Timing: The question is...How to do this, and in what order??? Should we try for the easier (and less expensive) widening of I-205 first? Maybe, but if so, that might reduce the perceived need for an improved I-5 corridor? **Should we try for the third bridge first to improve the connection between the Ports with a new "freight" corridor? Maybe, but that might be seen as a substitute for widening I-205 and for improving the I-5 corridor.**

So, what we seem to be settling on is trying to get the most difficult project (the I-5 corridor) underway first. If we can get that project started (and funded) and prove to the public and the legislature our ability to make a positive difference at the I-5 crossing...then, it is not such a great leap to build public support for the other two, and ...**there is no question that both other projects can still stand on their own as necessary and cost effective.** The fear is, if we do I-205 or the third bridge between the Ports first, than these projects will be used by some as an excuse to not support the I-5 improvements and we will further delay the replacement of these critical bridges.

I hope that you can accept (or at least not object to) this strategy. In fact, my real hope is that you will use your considerable influence to support and help us find a way to build all three of these needed projects.

Thank you again for your active support of improved transportation in the Portland / Vancouver area.

David O. Cox

Division Administrator

FHWA - Oregon Division

From:
Sent: Wednesday, March 14, 2007 3:41 PM
To: Hewitt, Henry; walter@harbor-properties.com
Cc: Steve.stuart@clark.wa.gov; Councilor Rex Burkholder
Subject: CRC sub committee
Attachments: SKMBT_C25007031411130.pdf; SKMBT_C25007031411160.pdf;
SKMBT_C25007031411180.pdf

Hello Henry,

I hope you are well. I wanted to make sure you received these petition forms today, for Monday's meeting. I hope you understand that I have tried to work hard at this level CRC meetings, private staff meeting, local officials, and local transportation meetings. The BI-State Industrial Corridor brought in during the NEPA scoping process, was misrepresented continually in written form as well as by CRC staff. It is **inside the I-5 Corridor** west of I-5 and east of the 2 ports, in the heart of the I-5 Corridor is how the alignment of BNSF RR is described in I-5 Partnership doc's. There is no reason not study BIC. Newspaper reports, and others interested in the project call me and ask why it's not being studied right now? That they have looked closer at BIC's merits, it is only giving those involved closely with the project a black eye for not being open during the NEPA process. Studying it and we can move on. The seizing of private property through eminent domain when public land is available is unjust, and not limiting the foot print in Vancouver is a big issue too. Now I am directing my energy at the State elected official and local US officials. Out of respect I didn't start at the top. The process looks broken to those on the outside that are now paying attention. I will forward you a couple letters I was asked to sent to the Senate oversight committee. I understand their are more letters coming and meetings are being set up with the Senates. So Henry you are a practical man, this is only an advisory group. Is it worth all the division it is causing?..... studied it and let someone else decide what is really built. There is no need for this mess and things to get any uglier. Peace be with you Henry. I appreciate your light heartened energy and understand you in a spot. I truly want to be part of the solution and am in no way interested in having to do this the hard way. I do negotiation for a living and love a win, win outcome, it's what I work for.
Sharon

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3/21/2007

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Petition: We support the third bridge alignment near the railroad bridge and declare no seizing of private property through imminent domain be used.

We are happy with the recent decision of the Columbia River Crossing Task Force to add a third bridge and retain the current bridge on the list of options to be studied. We are instructing our neighborhood representative to the Columbia River Crossing Task Force, MR. Walter Valenta, to support, and work hard for, a third bridge to the west of I-5 near the current BNSF Railroad Bridge. We also declare the seizing of private property through imminent domain when publicly owned land is available to be unjust.

We the signers below live, own property, own business, and/or work on Jantzen Beach Hayden Island.

Name	address	phone	email
Roger Robison	1625 N JANTZEN	503 240 0309	
Gary Peterson	1257 NO JANTZEN RD	503 706 6869	
Valerie Newman	1301 S.E. ELLSWORTH RD APT A-3	(360) 609-8434	
Rob Sweetser	9301 N.W. 3rd Ave	Vancouver WA (541) 610-4267	
Holie Barker	13704 SE Mabey Ln	Milwaukie OR 97222	
Steve Harty	1915 N JANTZEN	PORTLAND 97217	503-289-0022
Jonathan Keseler	705 E 31st Vancouver Wa	98663	(360) 910-8912
Christina Copping	705 E 31st St Vancouver Wa	98663	(360) 910-8916

Economic Transportation Alliance is sending this petition to State and Federal elected officials to support the study of a new Third Bridge corridor. More information can be found www.ThirdBridgeNow.com

Contact us for lawn signs or more petitions. You can download petitions from the website.

Please mail back to: ETA, PMB#390, 8316 N. Lombard, St. Johns, OR. 97203

Email thirdbridgenow@aol.com. phone 503.283.9585, FAX: 503.286.9969

Be part of the Solution.

Please Fold and Mail ASAP (or FAX to 503.286.9969)

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We the signers below live, own property, own business, and/or work on Jantzen Beach Hayden Island.

Name	address	phone	email
Shirlene Vanegas	1613 N Jantzen Ave		Vanegasnw@gmail.com
Sharon Rieen	1895 N. Jantzen Ave	97217	
Janet Slack	1881 N. Jantzen Ave	97217	
Carrairie Medjfer	1891 N. Jantzen Ave		
Janet Slack	1975 N. Jantzen Ave		jmswater@hotmail.com
Burdac Flwin	1829 N Jantzen ave		BurdacFlwin@CS.com
Randall Goldenberg	1851 N Jantzen Ave	97217	

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We the signers below live, own property, own business, and/or work on Jantzen Beach Hayden Island.

Name	address	phone	email
<i>[Signature]</i>	1881 N Jantzen	503 8181506	CTP@183@comcast.net
<i>[Signature]</i>	1999 N Jantzen Hayden Island, OR 97015	(503) 285 4227	pampriser@comcast.net
<i>[Signature]</i>	1717 N. JANTZEN AVE	503-286-9076	MJULIANT@comcast.net
<i>[Signature]</i>	6115 SE FLAVEL ST	Portland, Oregon	503-775-3259 david@und110.com
<i>[Signature]</i>	159 N Jantzen		
<i>[Signature]</i>	1641 N. Jantzen	Portland Or	503-422-3340 betts-stover@or.gov
<i>[Signature]</i>	1865 N Jantzen	Portland OR	503-547-7878 ready@comcast.net
<i>[Signature]</i>	1963 N. JANTZEN	PORTLAND OR	516-2520 503-516-2520

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Email thirdbridgenow@aol.com, phone 503.283.9585, FAX: 503.286.9969

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Petition: We support the third bridge alignment near the railroad bridge and declare no seizing of private property through imminent domain be used.

We are happy with the recent decision of the Columbia River Crossing Task Force to add a third bridge and retain the current bridge on the list of options to be studied. We are instructing our neighborhood representative to the Columbia River Crossing Task Force, MR. Walter Valenta, to support, and work hard for, a third bridge to the west of I-5 near the current BNSF Railroad Bridge. We also declare the seizing of private property through imminent domain when publicly owned land is available to be unjust.

We the signers below live, own property, own business, and/or work on Jantzen Beach Hayden Island.

Name	address	phone	email
Susan O'Hollaren	2055 N. Jantzen Ave	503-289-9247	toada@ho110.com.net
Rhonda Long	1695 N Jantzen Ave	503-735-2824	Sodamete34@gmail.com
Steve Knewitz	1907 N Jantzen Ave	503-286-1297	
Shelly Brown	SA		
Tammy Gill	1771 N. Jantzen Av.	503-289-1156	Sunsgoldenmoon
Rollin Ratchler	1919 N Jantzen Av	503-289-4409	hotmail.com
Jean Russell	1691 N Jantzen Ave	503-888-7090	
Jeanne S. Nickles	1619 N. Jantzen Av	503-735-9249	

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Email thirdbridgenow@aol.com. phone 503.283.9585, FAX: 503.286.9969

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We the signers below live, own property, own business, and/or work on Jantzen Beach Hayden Island.

Name	address	phone	email
Michelle Worger	1545 N. Jantzen	503-285-8448	
Priscilla Chidassa	1109 NW 13 th Ave	500-666-1073	
Rebecca L. Benjamin	1547 N. Jantzen Ave	503-285-5668	
Susan K. Allchauer	1555 N. Jantzen Ave	503 285 735-9526	
Trai Burnett	525 N. Jantzen Ave	503-724-3584	

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Name	address	phone	email
<i>Marcell M. Johnson</i>	1619 N. JANTZEN AVE	503-735-9249	

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Petition: We need action NOW on a NEW, THIRD Columbia River Crossing

I support studying a new, third bridge at a location downstream from the current I-5 bridge (near the current railroad bridge) INSTEAD of only studying tearing down and replacing the current I-5 bridges.

Name	address	phone	email
CHARLES TINDALL	WARREN OR 97053 34383 BENNETT RD		CHARUE@BLUELINETRANS.COM
Michael C Knight	8628 S.E. Alder St. Astor 97106		MICK@BLUELINETRANS.COM
Lori m Knight	8533 N. C Milton	(503) 358-8867	
Jolene E Pukesh	2672 NE 8 th ct	(503) 348-6883	Colbydeansmom@Comcast.net
Wanda Knight	8628 S.E Alder	(503) 253-6185	
Tracy Tassio	9105 NE 63rd	360-891-1088	
John Tassio	9605 NE 63rd St	360-891-6881	
JACK FOSTER	1515 NE 150 th	503-254-8029	
Marlene McCaffrey	3558 SE 72nd	503-258-1617	
Jason Tindall	51736 SW EMWATTS SCUPPOOSE OR 97056	503-543-4754	
ARTHUR R. TAYLOR	6502 OAK ST. S.E. GALEM, OR 97317	503-745-2933	TJAD338@aol.com

Economic Transportation Alliance is sending this petition to elected official State and Federal to support the studied of a new Third Bridge corridor study NOW. More information can be found www.newinterstatebridge.com Please mail back to: ETA, 8316 N. Lombard, PMB#390, St. Johns, OR. 97203 . Email thirdbridgenow@aol.com. phone 503.283.9585

Be part of the Solution.

The dead line to mail this is February 24

Petition: We need action NOW on a NEW, THIRD Columbia River Crossing

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Name	address	phone	email
<i>[Signature]</i>			
<i>John Mullen</i>	<i>1720 SE RABBIT ST MILWAUKIE OR 503 786 4188</i>		
<i>[Signature]</i>			
<i>[Signature]</i>			
<i>[Signature]</i>			<i>info@andersonsigns.net</i>
<i>[Signature]</i>			<i>"</i>
<i>[Signature]</i>			<i>"</i>
<i>[Signature]</i>			<i>Rivers or @gmail.com</i>
<i>[Signature]</i>			<i>DARR@BLUELINETRANS.COM</i>
<i>[Signature]</i>			<i>Kathye BlueLineTrans.com</i>
<i>[Signature]</i>			

Economic Transportation Alliance is sending this petition to elected official State and Federal to support the studied of a new Third Bridge corridor study NOW. More information can be found www.newinterstatebridge.com Please mail back to: ETA, 8316 N. Lombard, PMB#390, St. Johns, OR. 97203 . Email thirdbridgenow@aol.com. phone 503.283.9585

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Name	address	phone	email	Initials
Nicole Young	7216 N Richards	247-8438		NY
Sharon Nasset	1113 N Baldwin	503-283-9585		SN
Rosanna Chubala	9527 N. Smith St	503-319-1829		RC
TANU Penh	7855 SE Johnson Cr. Blvd.	(503) 700-9202		TP
C. J.	4122 SE Ash St.	503-757-8298		CJ
Jeff Shades	4905 SW Orchard Ln	(503) 349-4440		JS

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Name	address	phone	email
Marian Hill	240 N. Blandena	503 289-7257	
Lauri McQuinn	8724 N. Lombard	503-286-9969	
Arden Hayes	6047 N. Lombard, St.	503-289-7220	
Margaret M. Miller		503-286-8641	

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Name	address	phone	email
<p>figure out a way to have one bridge by using the present bridge - whatever is best which works - or build a new bridge then tear down old.</p>			
<p>Laura M Emerson</p>			
<p>595-5323 - 5555 E. Evergreen Blvd 112.2 Vene, WA 98661</p>			
<p>I like idea of light rail</p>			

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Name	address	phone	email
Shirlene Vanegas	1613 N Jantzen Ave	97217	vanegasnw@gmail.com
Sharon Ripken	1895 N Jantzen Ave	97217	
Laura Hoffman	1881 No. Jantzen Ave	97217	
Kayanne Pedersen	1891 N. Jantzen Ave		
Bob Chypps	1975 N Jantzen Ave	97217	
Shen Myers	1975 N Jantzen Ave	97217	
Janet Slack	1931 N Jantzen Ave		jmswater@hotmail.com
Randall Goldenberg	1851 N Jantzen Ave	97217	
Betsy Ballantyne	4980 SW Landing Dr #201		betsy@ferrellrealty.com

→ New

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Name	address	phone	email
	1551 N. Jantzen Ave.	503 811 1966	cpthick3@comcast.net
David Lawrence	1999 W JANTZEN AVE	503 285-4277	pamperlaw@comcast.net
M.J. Hobbs	1717 N. JANTZEN AVE.	503-286-9096	MJHOBBS@COMCAST.NET
Amelike Hayes	1759 W Jantzen		
Jane Bette-Stoner	1641 N. Jantzen	503-422-3340	betteshower@oregon-roads.com
Frank Koolhaas	1865 W Jantzen	503 548 7854	
Dan Comfort	1763 N. JANTZEN	503 516-2520	dcomfort@comcast.net
Arthur A. Ellis	6761 SW. GARDENHOMES RD.	503-880-6809	

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Name	address	phone	email
REGER ROBSON	2625 N JANTZEN	503 240 5809	
Valerie Momen	1301 S.E. ELLSWORTH RD APTA-3	(360) 609-8434	
Rob Swabout	9301 N.W. 3 RD AVE VANCOUVER, WA	(541) 610-4267	
<i>[Signature]</i>	1915 N. JANTZEN AVE	PERMAN, OR	503-289-0022
Holie Barker	13704 SE MAWY LN	Milwaukie OR	97222
Christina Copping	705 E 31 ST ST	Vancover Wa	98663 (360) 910-8916
Janeethan Kessler	705 E 31 ST ST	Vancover Wa	98663 (360) 910-8912
Michelle Tworoger	1545 N. Jantzen	OR	503-2858448
Prescille Anderson	1109 NW 13 th AVE	Butte, WA	360-666-1073

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Steve Kneiwitz	1907 N. Jantzen Ave	503 286 1297	
Shelly Fahren	SA	SA	
Tammy Ell	1771 N. Jantzen Av.	503.289-1152	Sunsgoldenmail.com
Robin Ratchler	1919 N Jantzen Ave	503 289 4469	hotmail.com
Terry Riddell	1691 N Jantzen Ave	503-888-7090	
Samuel M. Mecklen	1619 N. JANTZEN AVE	503.735-9249	
Jeanne S mecklen	1619 N Jantzen Ave	503 735-9249	

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Name	address	phone	email
Rebecca L. Bergeron	1547 N. Jantzen Ave. 503.285.5668		
Dawn B. Bowers	1555 N. Jantzen Ave	503-735-9525	
Traci Bowers	1525 N. Jantzen Ave	503-724-3564	

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From:**To:**

benton.don@leg.wa.gov; Steve Stuart; BettySue.Morris@co.clark.wa.us; Marc Boldt; Cogan, Danielle; curtis.richard@leg.wa.gov; David.H.THOMPSON@odot.state.or.us; DeGraff, Rob; donn@bridgecitysystems.com; DopitaJ@wsdot.wa.gov; Columbia River Crossing; Graham, Jeff; fromhold.bill@leg.wa.gov; IvanovB@wsdot.wa.gov; Martin, Jessica; lars.larson@kxl.com; libertyr@metro.dst.or.us; larrygeorge@state.or.us; Markgraf, Tom; matthew.l.garrett@state.or.us; media@teleport.com; rmitch@news.oregonian.com; Moeller.Jim@leg.wa.gov; PogoMonroe@aol.com; morgan@wa-democrats.org; Sherry.GUSTAFSON@odot.state.or.us; janet.k.adkins@s; BoydP@wsdot.wa.gov; politicalprojects@comcast.net; pridemore.craig@leg.wa.gov; pub@stjohnssentinel.com; rep.davehunt@state.or.us; rep.georgegilman@state.or.us; rep.waynescott@state.or.us; Rian_Windsheimer@Gsmith.Senate.Gov; Uhlman, Shawn; Tom.Ryll@Columbian.com; tony@dailyinsider.info; hostickac@metro.dst.or.us; metro council@metro-region.org; newmanb@metro.dst.or.us; webmaster@metro-region.org; mclains@metro.dst.or.us; parkr@metro.dst.or.us; trans@metro-region.org; Caitlin. McCollum@pdxtrans.org; dsaltzman@ci.portland.or.us; mayorpotter@ci.portland.or.us; gblackmer@ci.portland.or.us; Randy@ci.portland.or.us; erik@ci.portland.or.us; ksneath@ci.portland.or.us; Commissioner Sam Adams; caine@mstarz.net; Dengerink, Hal; Malin, Dick; bphilips@credc.org; bettysue.morris@co.clark.wa.us; Hansen, Fred; russell@ortucking.org; info@wtassns.com; seltzere@pdx.edu; Byrd, Bob; Mayor Royce Pollard; Sundvall-Williams, Jeri; jschlueter@wetside-alliance.org; monica@starboardaalliance.com; bill.wyatt@portofportland.com; serena@comultnomah.or.us/cc/ds; samadams@ci.portlandou.us; dfrei@teleport.com; Hewitt, Henry; sbates@babler.com; walter@harbor-properties; Paulson, Larry; Fuglister, Jill; Councilor Rex Burkholder; Walstra, Scot; Lookingbill, Dean; Grossnickle, Jerry; ed@edgarren.us; District18Rep@msn.com; mark@staroilco.net; pauloedgar@qwest.net; jbmiinc@comcast.net; BROTAX@aol.com; sylvermiche@yahoo.com; budlogan@spiritone.com; SalmonCreekCocoa@aol.com; Sharonnasset@aol.com; rswaren2002@comcast.net; Teamster37@aol.com; donnadummann@email.com; sallyrich000@yahoo.com; jkarlock@earthlink.net; Jmzweerts@aol.com; wallyh@cbnorthwest.com; susan.morton@neilkelly.com; charlie@bluelinetrans.com; Gayla@stjohnsreview.com; weyrcottage@comcast.net; soulmates34@comcast.net; jilsea@msn.com; skydvguy@teleport.com; PamPariseau@comcast.net; pjonriver@yahoo.com; LauraSCraford@hotmail.com; peteredifer@comcast.net; bet_ter@yahoo.com; Islander@222.com; WindwardConstruction@Hotmail.com; Slmpokey@aol.com; charles_hindenburg@or.mxim.com; Missyjantzen@aol.com; angie.harris@schenkerusa.com; rivers5555@comcast.net; Houseboatgrams@aol.com; alexalexander@msn.com; clownspark@comcast.net; CRACCTG@integraonline.com; break_time@comcast.net; vanegasnw@comcast.net; oreonrail@netscape.

com; Jim@leg.wa.gov; StaceyJohnson@aol.com; billstewart@news.oregonian.com; bkoski@worldaccessnet.com; brucebro@spiritone.com; gad@ccrealtors.com; Dave@idatacon.com;

CC:**Subject:** *** Detected as Spam *** Fwd: Here is your video clip attached**Date:** Wednesday, March 21, 2007 3:54:28 PM**Attachments:** Fwd Here is your video clip attached.msg

CRC Project Manager stating that a Third Bridge corridor when brought in by NEAP must be studied with NEW information.

The Third Bridge... BI-State Industrial Corridor was brought in during the NEPA scoping. It need to be fully studied. This CRC project is not just about the Bridge Influence Area... Downtown Portland and 134th are not inside the BIA.

AOL now offers free email to everyone. Find out more about what's free from AOL at <http://www.aol.com>.

*** eSafe scanned this email for malicious content ***

*** IMPORTANT: Do not open attachments from unrecognized senders ***

Association of Oregon Rail and Transit Advocates

AORTA • P. O. Box 2772 • Portland, Oregon 97208-2772

Also known as OreARP • Oregon Association of Railway Passengers

Phone & Fax: 503-241-7185 • OregonRail@netscape.com • www.aortarail.org



MEMORANDUM

March 22, 2007

To: Members of the Fourth Alternative Subcommittee, Columbia River Crossing Task Force
 From: Jim Howell, Director and Strategic Planner
 Re: Recommendation for a Fourth Alternative

Please recommend the 11/08/06 AORTA Option as the Fourth Alternative.

The “hot lane” option proposed at the Mar. 19 meeting does not discourage SOV commuting, reduce greenhouse gases, or encourage energy independence. It would be expensive to build because of additional flyover structures, paving and right-of-way and would add to downstream traffic congestion.

The AORTA Option meets the stated Project Purposes.

- It improves connectivity, reliability and travel time with aggressive public transit, local street access and improved bicycle and pedestrian facilities. Transit upgrades will reduce highway demand.
- It improves safety by reducing highway demand, reconfiguring substandard on-ramps and adding ramp metering.
- It improves highway freight mobility and commercial needs by reducing SOV commuting thereby freeing up peak highway capacity and providing an exclusive northbound truck lane from Marine Drive/MLK.
- It reduces the river crossing’s seismic vulnerability by providing a new bridge that meets all current seismic standards and which would provide a seismically robust crossing for priority traffic during a major seismic event. It also upgrades the railroad bridge’s opening span to the same standards.
- In addition, no bridge lifts would be required for commercial barges once the rail bridge is reconfigured. This also improves marine and rail safety. Only special equipment moves and certain large sailboats would require lifts on the existing bridges and the new multi-modal bridge. These lift openings can be scheduled when light rail is not operating.

(48 lifts a year for vessels over 70 feet high – *CRC Fact Sheet - U.S. Coast Guard Preliminary Hearing on Bridge Alignment and Pier Placement – Sept. 21, 2006*).

- It retains full Hayden Island access to and from I-5.

- It is the only proposal that meets the criteria of the Portland City Council's unanimously adopted recommendations in the Peak Oil Report.
- It meets the guidelines of Metro Council Resolution 07-3782A, which spurred the creation of the Fourth Option Subcommittee.

The capital cost of this proposal, including the railroad bridge retrofit and enhanced transit, would probably be in the range of 10% to 30% of the cost of the Staff's recommended alternatives.

The January 16, 2006 Memorandum to the CRC Task Force Members from John Osborn and Doug Ficco detailing the alleged failures of AORTA's option to meet the Statement of Purpose and Need contains many flaws. A point-by point rebuttal is attached. Among the major flaws of that memo is its failure to consider the effects of light rail, local street access and ramp metering on reducing and regulating traffic to and from Hayden Island. It also failed to consider the effects of aggressive transit development in Clark County and North Portland on I-5 and SR14 peak hour traffic. Disregarding the erroneous conclusions addressed above and in the attached rebuttal, staff was unable to identify any fatal flaw.

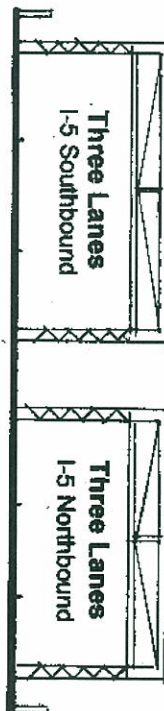
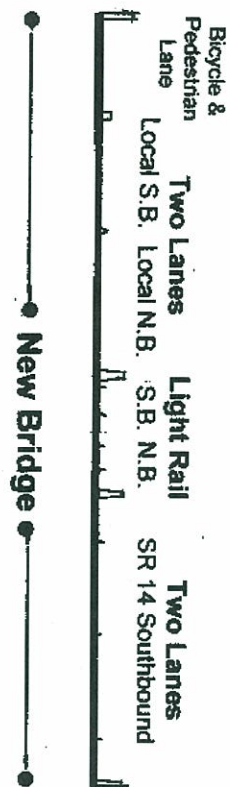
The AORTA Proposal meets the stated objective of the Fourth Option Subcommittee: to provide a low cost option to be carried forward into the EIS for the CRC Task Force's consideration at its next meeting. It is the only fully thought-through option that has already been subjected to considerable analysis, and that can meet the objectives of the Fourth Option Subcommittee. If it really had a fatal flaw, it would have been discovered by now.

Additional brainstorming may come up with ideas that do not pan out. It is prudent to go with the AORTA proposal, because the negatives are already fully known, and they are not that bad, considering the cost. Because the AORTA proposal includes multiple, parallel strategies, it can be easily optimized during the EIS process, should adjustment be necessary.

Attachments:

- Cross Sections of AORTA's Proposal
- Assessment of AORTA's Concept Plan keyed to attached critique of Staff Assessment
- Critique of Staff Assessment

Contact:
Jim Howell



Columbia River Crossing



Portland Harbor Crossing

AORTA's Proposal for the Columbia River Crossing

Not to Scale

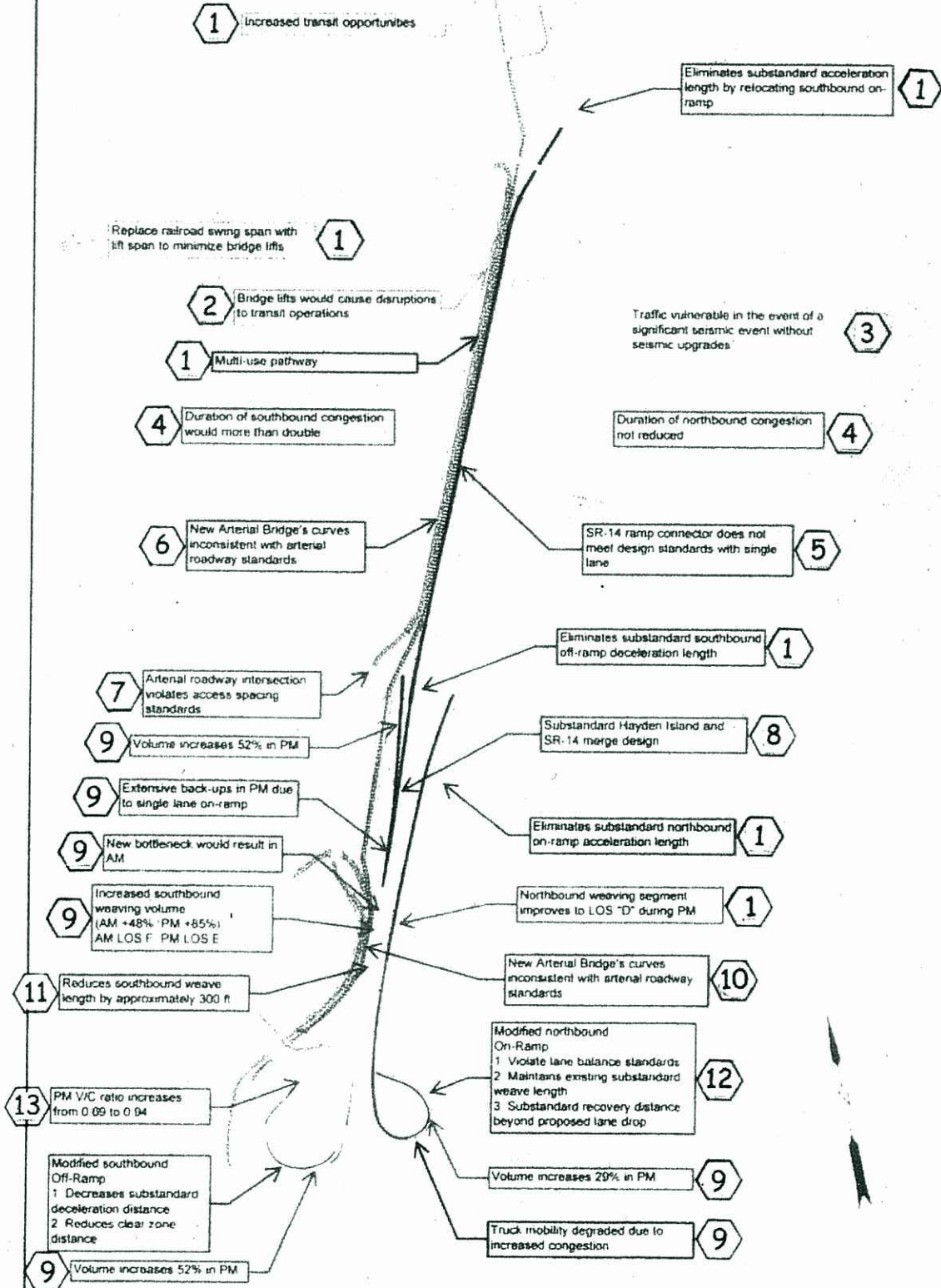
Columbia River CROSSING

Assesment of AORTA's Proposed 11/08/2006 Concept

LEGEND

- Growing travel demand and congestion
- Impaired freight movement
- Limited public transit operation, connectivity, and reliability
- Safety and vulnerability to incidents
- Substandard bicycle and pedestrian facilities
- Seismic vulnerability

*Background image provided by Jim Howell on 11/08/2006



See attached notes

**Critique of the CRC Staff Assessment of AORTA's Proposed Nov. 8, 2006 Concept for
A Columbia River Crossing Emphasizing Public Transportation (keyed to Map)**

1. Correct
2. Incorrect - With the relocation of the railroad bridge's opening span, a lift span on a new multi-modal bridge would not have to be opened during transit operating hours due to infrequent movement of high vessels.
3. A significant seismic event would most likely make I-5 vulnerable throughout the metro region. To my knowledge, the relative vulnerability of all the structures on I-5 in the metro area has never been documented. Requiring the Columbia River structures alone to be seismically upgraded without this evidence is capricious since AORTA's Concept requires no other modification to the existing bridges. The purpose of improving the interstate river crossing's structural integrity would be accomplished by constructing the multi-modal bridge to modern seismic standards, providing a robust crossing for priority traffic during a major seismic event.
4. Incorrect - Light rail will more than double the river crossing capacity and aggressive expansion of effective bus service feeding light rail on both sides of the river will reduce peak hour demand and duration of freeway congestion.
5. Map is a concept, not an engineering drawing; SR-14 ramp connector on the multi-modal bridge can be two lanes up to a ramp meter on Hayden Island.
6. Map is a concept, not an engineering drawing; the local vehicle connection is not intended to be an arterial, but rather a two lane street connector between Hayden Island and Columbia Street controlled with a traffic signal at each end.
7. Map is a concept, not an engineering drawing; access spacing can be easily modified.
8. Map is a concept, not an engineering drawing; a safe merge can be designed in the 2,600 feet distance between the south end of the existing bridge and the Marine Drive off-ramp.
9. Incorrect - Traffic volumes and projected backups and bottlenecks are based on the erroneous assumption that all traffic to and from Hayden Island will continue to use the freeway exclusively in spite of light rail and enhanced feeder bus service in Vancouver, Portland and Hayden Island. This plus independent local street, bike and pedestrian access to and from Portland and Vancouver.
10. Map is a concept, not an engineering drawing; the vehicle connection across the Portland Harbor is not intended to become an arterial but rather a two lane local street connection between N. Center Avenue on Hayden Island and N. Expo Road. A 25-MPH speed limit is desirable.
11. Map is a concept, not an engineering drawing; safe weaves and merges (see #8 above), in any segment, are determined by traffic volumes. Traffic on the Hayden Island and SR-14 on-ramps can both be metered to allow safe merges and weaves.
12. The existing Portland Harbor Bridge gains a NB lane by moving bikes and pedestrians to the new bridge allowing trucks an un-metered access lane. See #8 and #11 above re: weaves and details.
13. Aggressive transit development will reduce demand and intersection's vehicle capacity can be increased with design modifications.





Meeting Agenda

MEETING: 4th Alternative Task Force Subcommittee Meeting

DATE: Monday, March 19, 8:00 a.m.-11:00 a.m.

LOCATION: Former Hayden Island Yacht Club
12050 N. Jantzen Drive

Welcome

Review Public Comment

Review Actions Taken at the Last Meeting

Present and Discuss Options: Performance

Option A+

Option A++

Option B-

Wrap-up and Next Steps



Meeting Summary

MEETING: Fourth Alternative Task Force Subcommittee Meeting
MEETING DATE: March 12, 2007, 2:30 p.m. to 4:30 p.m.
LOCATION: Former Hayden Island Yacht Club, 12050 N. Jantzen Drive, Portland, OR

Subcommittee Members

Metro Councilor Rex Burkholder, Co-Chair
 Clark County Commissioner Steve Stuart, Co-Chair
 Hal Dengerink, CRC Task Force Co-Chair, ex-officio subcommittee member
 Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member
 Dean Lookingbill, SW Washington Regional Transportation Council
 Fred Hansen, TriMet
 John Hoefs (for Jeff Hamm), C-TRAN
 Walter Valenta, Bridgeton Neighborhood
 Scot Walstra, Greater Vancouver Chamber of Commerce
 Tom Zelenka, Schnitzer Group, was unable to attend this meeting

In addition to the above subcommittee members, there were approximately 50 in the audience that included CRC staff, agency staff, and the public.

Meeting Notes

Rex Burkholder opened the meeting with a brief statement about the aggressive schedule and challenge facing the subcommittee. He then went through the proposed ground rules which were distributed later to the members of the subcommittee:

Meeting Schedule

Future meetings will be held at the same location on the following dates:

March 19, 2007, 8:00 a.m. to 11:00 a.m.

March 26, 2007, 8:00 a.m. to 11:00 a.m.

Proposed Ground Rules

1. We will produce an alternative in three weeks.
2. The alternative will aspire to meet the CRC project's Purpose and Need Statement.
3. Our job is to assemble the best possible solutions that do the following:
 - a. Maximize the utility of the existing bridges
 - b. Provides High Capacity Transit between Clark and Multnomah counties
 - c. Provides high quality bicycle and pedestrian access
 - d. Minimizes impacts on downtown Vancouver and Hayden Island
 - e. Ensure better freight mobility
 - f. Address issues of barge and ship traffic on the Columbia River
4. The Task Force members named by the chairs will be the members of the subcommittee unless the co-chairs (Chair Stuart and Councilor Burkholder) and the CRC Task Force co-chairs decide more expertise is needed.
5. While subcommittee meetings will be noticed and will be open to the public, only officially designated members will participate. Given that the recommendation on including any proposed alternative will be made by the CRC Task Force, the subcommittee will not take any public testimony.

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6. Our goal is to make decisions by consensus.

Steve Stuart proposed the solution advanced for consideration should also be a lower-cost option and cost beneficial. There was consensus that the proposed alternative should try for something that is less expensive.

Proposals for Consideration

As a start, Kris Strickler, CRC Staff, went through proposals that were presented at the February 27th Task Force meeting. The proposals were labeled “Option A” representing a minimal approach that keeps I-5 traffic on the existing Interstate Bridges and provides a new bridge for HCT. This proposal also includes an aggressive TDM program aimed at reducing vehicle demand to meet purpose and need, interchange improvements, and relocating the moveable span on the railroad bridge.

“Option B” provides for three new freeway lanes in each direction on a new bridge, uses the existing Interstate Bridges for I-5 collector distributors, and provides a new bridge for HCT and bike/ped. This option also includes interchange improvements and relocating the moveable span on the railroad bridge.

John Hoefs, representing Jeff Hamm from C-TRAN, shared a third proposal outlined in a letter from Mr. Hamm dated March 9, 2007. The proposal included using the existing bridge for northbound, and a new bridge for southbound that included HCT. The proposal included managed lanes, TDM/TSM programs, and bike/ped remained on the existing bridges. The subcommittee characterized this proposal as somewhere in the middle between Options A&B.

Kris Strickler’s was asked whether an I-5 auxiliary lane would still be considered part of the Interstate system for ownership purposes. Kris responded yes as long as it served as part of the Interstate ramp system.

Discussion

Each of the committee members, in-turn, described their view of a potential third alternative.

Steve Stuart – discussed the need to establish aspirational goals that engineers and traffic analysts could use to develop options. Key elements included keeping I-5 traffic on the existing bridges, improving interchanges appropriately for safety and system operation, providing TDM/TSM sufficient to reduce demand and balance flow, and moving the swing arm on the railroad bridge. Transit capacity would need to be increased sufficiently to meet the cross river travel demand.

Henry Hewitt – Option A doesn’t do enough. He would prefer to see something less than Option B that came closest to meeting purpose and need.

Fred Hansen – expressed concern that the C-TRAN proposal would be hard to make work with the one-way structures. He suggested CRC build an alternative around using the existing bridges and tell us how to maximize their benefits. He is open to keeping bike/ped on existing bridges only and combining HCT and roadway on a new bridge.

Scot Walstra – Option A is problematic because it doesn’t perform as well. All options should have measurable improvements for all modes. Option B seemed to work better.

Walter Valenta – the subcommittee should focus on lower cost options that do a “1000 little things” to make it work. He suggested an alternative that keeps I-5 on the existing bridges and to consider a new bridge for HCT that may require a lift span as the profile is not important. He would relocate the railroad swing span to eliminate the need for most lifts. He would go to a very aggressive TDM program.

Dean Lookingbill – Option A doesn't get to purpose and need. He would lean towards something less than Option B, keep HOV, TDM/TSM, keep bike/ped on existing bridges, and provide a new bridge with two lanes each way. Only the new bridge would be tolled.

John Hoefs – In addition to C-TRAN's proposal, he would maximize the use of the existing bridges and agreed staff could provide how much room could be available for various uses.

Hal Dengerink – agreed that additional alternatives need to be looked at against the same criteria. There may be a need to something with the railroad bridge, seismic upgrading for the existing bridges, safety, and the decision on the number of through lanes because of the high number that get on and off the system within the BIA. He also expressed concerns and opportunities related to looking beyond the BIA.

There was additional discussion around possible project goals that an alternative should aspire to achieve in addition to purpose and need.

- encouraging mode shift
- moving people and freight
- optimizing interchanges
- using existing bridges most effectively
- minimizing impacts to land use, minimizing footprints
- providing a lower cost alternative

Proposals for Evaluation

After much discussion, the subcommittee agreed that CRC staff should take basic recommendations back for further development, enhancement, and conceptual evaluation for how they work. Then, at the next subcommittee meeting on March 19th, staff will provide conceptual layouts for the options along with performance criteria sufficient to begin shaping the proposed alternative.

The following three recommendations were proposed for CRC staff development:

- Option A+: Similar to the original Option A that keeps I-5 traffic on the existing Interstate Bridges, adds a supplemental bridge for HCT, and has an aggressive congestion pricing strategy to reduce demand sufficiently to meet purpose and need. Transit service would be increased sufficiently to meet total person trip travel demand across the river. Other TDM/TSM strategies would be included to improve efficiency.
- Option A++: Similar to Option A that keeps I-5 traffic on the existing Interstate Bridges, and adds auxiliary lanes on a supplemental bridge along with HCT. Bike/ped would be on the existing bridges along with TDM/TSM programs to reduce travel demand and improve system efficiency. Transit service would be increased to meet total person trip travel demand.
- Option B-: This would be a slimmed down Option B that uses the existing Interstate Bridges as auxiliary lanes for I-5 connecting with SR 14 and Marine Drive. There would not be an I-5 Interchange on Hayden Island. Efforts would be made to maximize the capacity of the existing bridges. A new smaller bridge would be constructed for I-5 traffic with only two lanes in each direction. The new lanes would be tolled or HOT lanes. Bike/Ped could stay on the existing bridges and the new bridge could be combined to carry both freeway lanes and HCT on one structure. TDM/TSM programs would be included.

CRC staff was asked to optimize the recommendations for best performance. CRC staff was asked to provide data on the various configurations that describes how well each option performs within the BIA under the following criteria:

- Increase vehicular capacity or decrease vehicle demand on I-5
- Improve transit performance
- Improve freight mobility

- Improve safety and decrease vulnerability to incidents
- Improve bicycle and pedestrian mobility
- Reduce seismic risk of the I-5 Columbia River Crossing

The meeting was adjourned at approximately 4:20 p.m.

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Memorandum

March 15, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: **Fourth CRC DEIS Alternative
 Description of Potential Options**
COPY:

The purpose of this memorandum is to provide CRC staff feedback on development of the three options discussed at the initial March 12th committee meeting. Options were developed based on achieving the following goals:

- a. Maximize the utility of the existing bridges
- b. Provide high capacity transit (HCT) between Clark and Multnomah counties
- c. Provide high quality bicycle and pedestrian access
- d. Minimize impacts on downtown Vancouver and Hayden Island
- e. Ensure better freight mobility
- f. Address issues of barge and ship traffic on the Columbia River

During the meeting there was additional discussion on other goals that needed to be addressed. In addition to the above, there was general agreement among the subcommittee that a fourth alternative should be lower cost and use the existing infrastructure most effectively.

CRC staff has spent an intensive three days evaluating the proposed options for best performance to meet the above goals. Please note that the descriptions and data below are based on the limited time allowed and represent reasonableness estimates that are not based on detailed analysis. The information is organized as follows:

- Description of option with additional detail on modes
- Performance evaluation based on criteria used for Step A Screening
- CRC staff observations to help inform the selection process

OPTION A+ DESCRIPTION

This option places a strong emphasis on implementing congestion pricing as a disincentive to making automobile trips across the Columbia River. No new capacity is added to I-5. Interchange improvements are intended to improve safety and system flow. Transit service is increased substantially to meet the need to move people, not vehicles. This option will aspire to meet purpose and need by reducing travel demand through aggressive congestion pricing and providing attractive alternatives to driving alone by improving transit service.

Highway

- I-5 traffic stays on existing Interstate Bridges. Peak hour directional capacity will remain in the range of 5,500 vehicles per hour.
- Hayden Island Interchange will undergo minimum changes to the dangerous short ramp connections because of the need to maintain existing profiles and alignments on I-5.
- Marine Drive Interchange will be modified to improve intersection performance.

- SR 14 Interchange will remain as is due to limited opportunities for improving safety.
- Minor improvements may be feasible between SR 14 and Mill Plain.
- Spot safety improvements will be made such as widening shoulders in Oregon.
- Traffic system management tools will be incorporated to improve I-5 operations.

Transit

- This option includes a new river crossing bridge to serve HCT.
- HCT is increased to serve approximately 30,000 to 40,000 persons per day or 4,000 to 6,000 in the peak direction during the peak hour. This includes a new bridge dedicated for HCT.
- Depending on whether HCT is Light Rail or Bus Rapid Transit, service hours are increased to meet the demand in riders.
- Express bus service is increased from the existing 19 busses per peak hour to 60. Local and feeder bus are increased substantially.
- Park-and-ride lot capacity is increased from the existing 1,872 spaces in the I-5 corridor to approximately 10,000 to 15,000 spaces in the I-5 corridor.
- Van-pool programs are added to increase vehicle occupancy for point to point service.
- Transit queue bypass lanes are added at interchange on-ramps.

TDM/TSM

- Congestion pricing is included for both I-5 and I-205 with variable pricing to reflect peak hour demand. Pricing is focused on reducing vehicle trips by 15-20 percent. A pricing range of \$5 to \$10 each direction during peak periods may be needed to achieve this goal.
- Transit operating subsidies are provided to encourage increased transit service and use.
- Mandatory parking pricing for all businesses and major public facilities in Vancouver and Portland.
- Transportation system management tools are incorporated to improve I-5 system flow.

Freight Mobility

- Modifications to the Marine Drive Interchange will be made to improve truck flow through intersections.
- On-ramp queue by-pass lanes are provided at Hayden Island, Marine Drive, SR 14 and Mill Plain Interchanges to improve traffic flow. These lanes could be reserved for transit and trucks.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened to provide 10 feet wide bike/ped lanes on each bridge.
- Bike/ped connections are improved throughout the corridor to encourage bicycles and walking.

Seismic

- Seismic retrofit to “no-collapse” standards would be left up to the State DOT’s to implement as funding becomes available.

Railroad Swing Span

- A new railroad marine navigation moveable span will be constructed to align with the main river channel.

OPTION A+ PERFORMANCE

Increase vehicle capacity or decrease vehicle demand on I-5

- Vehicle capacity on I-5 will not be increased under this option. Minor improvements in traffic flow within the Interchanges will benefit off-peak periods.
- Vehicle congestion will increase to 8-10 hours per day depending on the aggressiveness of pricing.
- A decrease in vehicle demand will be targeted at 15-20%. This is in line with the most aggressive programs currently in place worldwide.
- Increased people capacity will result from added transit service.
- Providing a movable span at mid-channel will reduce the number of bridge lifts and improve traffic flow that would normally be disrupted.

Improve transit performance

- I-5 would be the most transit-intensive corridor in the states of Washington and Oregon.
- Transit service throughout Clark County and the three county TriMet service area will be increased to improve connectivity and throughput.
- Increased transit service will impact system operation levels and may exceed capacity at spot locations throughout the system.
- Increased park-and-ride capacity will be difficult to achieve at the proposed levels due to lack of suitable sites along the I-5 corridor.
- A regionally approved vanpool program will provide more point-to-point service from park-and-ride facilities to major employment centers.

Improve freight mobility

- With no increase in freeway mainline capacity, freight throughput will be affected by freeway congestion for much of each day.
- Minor intersection improvements will aid truck movements, mainly during off peak periods.
- On-ramp queue by-pass lanes for trucks entering I-5 will help improve freight traffic flow.
- Providing a railroad movable span in mid channel will help barge traffic.

Improve safety and decrease vulnerability to incidents

- Congestion levels somewhat better than “No-Build” will result in increased accident rates compared to today.
- Spot improvements and wider shoulders will help offset the increased accident rates.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 River Crossing

- This option will not immediately address seismic risks. Seismic upgrade to a “no-collapse” level will be completed by the State DOTs when funding becomes available.

OPTION A+ CRC STAFF OBSERVATIONS

- To achieve a significant reduction in the projected hours of congestion for 2030, travel demand for Option A+ would need to be reduced about 30% which far exceeds reductions in the 15-20% range achieved through congestion pricing programs currently underway in London, Singapore, Stockholm and Germany.

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- If little or no reconstruction is done on I-5, FHWA will require a rigorous process to approve variable pricing proposals for implementation on both I-5 and I-205 aimed at relieving congestion. Ultimately FHWA will have approval authority over congestion pricing strategies.
- Transit service increases proposed for Option A+ are more than double CRC staff recommendations for the DEIS. CRC staff recommendations proposed to triple current service capacity across the Columbia River. This service level would result in more than a 500% increase compared to existing.
- Although some safety improvements would be made, the highest accident locations would not be fully addressed because the deficiencies are located on the bridge, immediately off the bridge, and some are connected with bridge lifts.
- If Option A+ is selected as the locally preferred alternative (LPA) it is unlikely that either ODOT or WSDOT would continue funding work on the project. Identified Interstate improvements would be prioritized, funded and built along with other highly needed improvements in each state.

OPTION A++ DESCRIPTION

Option A++ is exactly the same as Option A+ except for the addition of auxiliary lanes on a new bridge for I-5 connections. There would be two lanes (one in each direction) on the HCT bridge to be used as auxiliary lanes connecting Marine Drive, Hayden Island, SR 14 and Mill Plain.

Highway

- I-5 Traffic stays on existing Interstate Bridges. Peak hour directional capacity is increased by about 1,200 vehicles per hour.
- Two lanes (one lane in each direction) are added as auxiliary lanes on the HCT bridge.
- I-5 flyover ramps are required to allow for two directional auxiliary lanes to be located on one side of I-5.
- Interchange improvements are required on the Oregon and Washington side to accommodate the new ramp connections and will provide some geometric improvements.
- Marine Drive Interchange are modified to improve intersection performance.
- Remaining interchanges are upgraded to meet design standards where practicable and cost effective, including widened shoulders and improved geometrics for on-off connections.

Transit

- Transit services would be similar to Option A+, adjusted slightly if the two auxiliary lanes on the HCT bridge were shown to have a marginal affect on transit ridership.

TDM/TSM

- Congestion pricing is included for both I-5 and I-205 with variable pricing to reflect peak hour demand. Pricing is focused on reducing vehicle trips by about 15 percent.
- Transit operating subsidies are provided to encourage increased transit service and use.
- Transportation system management tools are incorporated to improve I-5 system flow.

Freight Mobility

- Interchange improvements are included that reduce congestion at key freight connections.
- On-ramp queue by-pass lanes are provided at steep grades to improve traffic flow. These lanes could be reserved for transit and trucks.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened to provide 10 feet wide bike/ped lanes on each bridge.
- Bike/ped connections are improved throughout the corridor to encourage bicycles and walking.

Seismic

- Seismic retrofit to “no-collapse” standards would be left up to the State DOT’s to implement as funding becomes available.

Railroad Swing Span

- A new railroad marine navigation moveable span will be constructed to align with the main river channel.

OPTION A++ PERFORMANCE***Increase vehicle capacity or decrease vehicle demand on I-5***

- Peak hour vehicle capacity on I-5 will be increased about 20% under this option. Minor improvements in traffic flow within the Interchanges will benefit off-peak periods.
- Total hours of congestion will remain higher than existing but less than No-Build.
- A decrease in vehicle demand will be targeted at 15%.
- Increased people capacity will result from added transit service.
- Providing a movable span at mid channel will reduce the number of bridge lifts and improve traffic flow that would normally be disrupted.

Improve transit performance

- Like Option A+, transit service increases will be increased to unprecedented levels in the I-5 corridor.
- Park-and-ride capacity will be increased to serve transit users. Capacity may be restricted by availability of suitable sites and associated access issues.
- A regionally approved vanpool program will provide more point-to-point service from park-and-ride facilities to major employment centers.

Improve freight mobility

- Minor intersection improvements will aid truck movements, mainly during off peak periods.
- On-ramp by-pass lanes for trucks entering I-5 will help improve traffic flow.
- Providing a movable span at mid channel will help barge traffic.

Improve safety and decrease vulnerability to incidents

- Congestion levels aspire to be somewhat better than Option A+, but will still result in increased accident rates compared to today.
- Spot improvements and wider shoulders will help offset the increased accident rates.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 River Crossing

- This option will not immediately address seismic risks. Seismic upgrade to a “no-collapse” level will be completed by the State DOTs when funding becomes available.

OPTION A++ CRC STAFF OBSERVATIONS

- Although Option A++ performs slightly better for I-5 than Option A+ because of the added auxiliary lanes, similar problems exist for achieving goals for congestion reduction through pricing and encouraging mode shift to transit.
- From a design/construction perspective, providing two directional auxiliary lanes along one side of I-5 will be expensive compared to other options because of the need to provide fly-over ramps. By keeping the existing traffic on I-5 and adding the auxiliary lanes, access to the new lanes will also require widening in downtown Vancouver and Hayden Island that will require expensive additional right-of-way. Aesthetically the new connections will create visual impacts because of the need for large girders across the existing lanes or large “hammer head” piers to support the fly-over structure.

OPTION B – (MINUS) DESCRIPTION

A new supplemental bridge consisting of two lanes in each direction will be constructed across the Columbia River to handle I-5 through traffic. HCT will also be on the new bridge in a barrier separated facility. This option provides for using the existing bridges as auxiliary lanes connecting Mill Plain, SR 14, Hayden Island and Marine Drive. In the northbound direction, access to I-5 and Mill Plain from Marine Drive, Hayden Island and SR 14 will be via the auxiliary lanes. In the southbound direction, access to I-5 and Marine Drive from Mill Plain, SR 14 and Hayden Island will be from the auxiliary lanes. Use of the existing bridges can be maximized by allowing some arterial connections in Vancouver and Portland. There will not be an I-5 Interchange on Hayden Island under this option because the existing bridges will provide the local connection. The added lanes and the auxiliary lanes will be tolled or priced. Bicycles and pedestrians will use the existing bridges on a widened facility. Travel demand will be reduced for vehicles through the tolling or use of pricing for HOT lanes. Transit service will be increased as needed to meet people carrying needs. Purpose and need will be achieved through a combination of reduced demand, increased number of highway lanes, and improved transit service.

Highway

- Through I-5 traffic will be on a new parallel bridge with two lanes in each direction. Peak hour directional capacity will be about 6,000 vehicles per hour.
- There will be no direct interchange with I-5 on Hayden Island. Access to the island would be via the auxiliary lanes on the existing bridges.
- The existing Interstate Bridges will serve as auxiliary lanes for I-5 connecting Mill Plain, SR 14, Hayden Island and Marine Drive. Some arterial traffic will use the auxiliary lanes to maximize capacity.
- Interchange improvements are made to accommodate access changes to serve the auxiliary lanes.
- Interchanges are upgraded to meet design standards where cost effective and practicable, including widened shoulders and improved geometrics.

Transit

- Similar to Options A+ and A++, HCT and transit service is increased and adjusted to reflect the added I-5 capacity.
- Express bus and local service is added to serve increase in demand.
- Park-and-ride lot capacity is increased by 5000 spaces.
- Van-pool programs are added.
- Queue bypass lanes are added at interchange on-ramps.

TDM/TSM

- Tolling is used to reduce demand for the four (two lanes in each direction) I-5 through lanes crossing the Columbia River. Pricing is focused on reducing vehicle trips by 10-15 percent. The auxiliary lanes on the existing bridges will be priced to assure system balance.

- Transit operating subsidies are provided to encourage transit use.
- Transportation system management tools are incorporated to improve I-5 system flow.

Freight Mobility

- Interchange improvements are included that reduce congestion at key freight connections.
- Ramp by-pass lanes are provided at steep grades to improve traffic flow. These lanes could be reserved for transit and trucks.

Bicycle/Pedestrian:

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened to provide 10 feet wide bike/ped lanes on each bridge.
- Bike/ped connections are improved throughout the corridor to encourage bicycles and walking.

Seismic

- Seismic retrofit to “no-collapse” standards will be constructed.

Railroad Swing Span

- A new railroad marine navigation moveable span will be constructed to align with the main river channel.

OPTION B – (MINUS) PERFORMANCE

Increase vehicle capacity or decrease vehicle demand on I-5

- Peak hour vehicle capacity on I-5 will be increased about 10% under this option which will still result in an increase in overall hours of congestion compared to existing.
- Using the auxiliary lanes on the existing bridges will increase travel time for vehicles moving from SR 14 to I-5.
- A decrease in vehicle demand will be targeted at 10-15% during peak hours.
- Increased capacity for moving people will result from added transit service.
- Providing a movable span at mid channel will reduce the number of bridge lifts and improve traffic flow that would normally be disrupted.

Improve transit performance

- Transit service will be increased to improve connectivity and throughput.
- Park-and-ride capacity will be increased to serve transit users..

Improve freight mobility

- Minor intersection improvements will aid truck movements, mainly during off peak periods.
- On-ramp by-pass lanes for trucks entering I-5 will help improve traffic flow.
- Providing a movable span at mid channel will help barge traffic.
- The increase in throughput capacity from about 5,500 to 6,000 vehicles per hour will result in modest improvements to daily freight throughput, but freight movements can be expected to be affected by freeway congestion for much of each day.

Improve safety and decrease vulnerability to incidents

- Congestion levels aspire to be somewhat better than Option A+ and A++, but will still result in increased accident rates compared to today.
- Spot improvements and wider shoulders will help offset the increased accident rates.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 River Crossing

- This option will address seismic risks to a “no-collapse” condition. The new parallel roadway will be constructed to meet modern seismic “serviceability” standards.

OPTION B – (MINUS) CRC STAFF OBSERVATIONS

- This Option appears to do a better job of meeting the project purpose and need compared to Options A+ and A++.
- Providing four through lanes for I-5, eliminating the interchange on Hayden Island, and using the existing bridges for auxiliary lanes changes the dynamics of traffic circulation within the SR 14, Hayden Island and Marine Drive Interchanges. Additional work will be needed by CRC staff to assess the impacts on the local street networks required to serve the new connections.
- From the March 12th subcommittee meeting it wasn't clear whether the intent was to toll or price only the four (two in each direction) I-5 lanes on a new structure. CRC staff recommends pricing all highway lanes across the Columbia River for this option to eliminate the potential for overloading the existing bridges.

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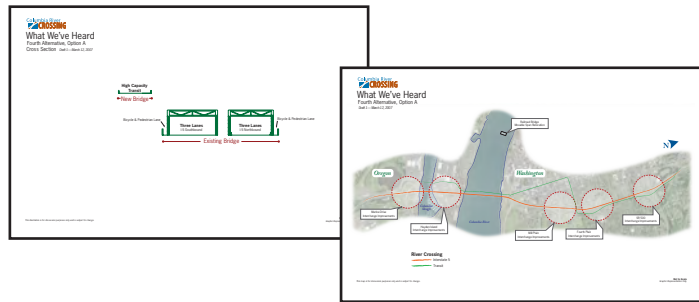
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What We've Heard

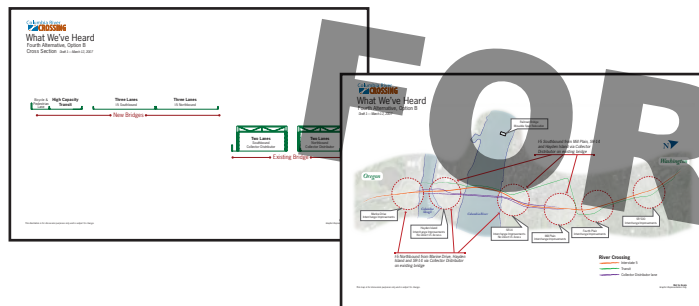
Task Force Subcommittee
Fourth Alternative Progression

Meeting Materials March 12, 2007

Option A



Option B

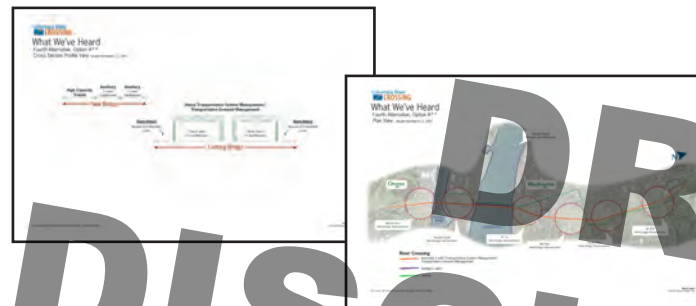


Meeting Results March 12, 2007

Option A+



Option A++



Option B-



Meeting Results March 19, 2007



Meeting Results March 26, 2007

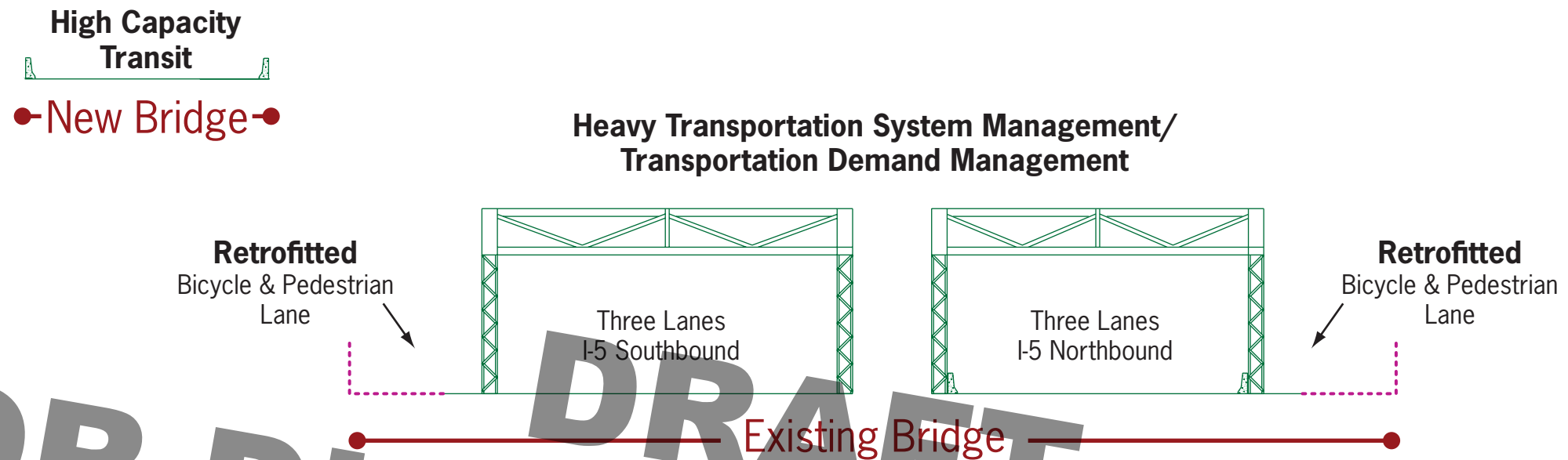


FOR DRAFT DISCUSSION ONLY

What We've Heard

Fourth Alternative, Option A+

Cross Section Profile View *Results from March 12, 2007*



FOR DISCUSSION ONLY

What We've Heard

Fourth Alternative, Option A+

Plan View Results from March 12, 2007



River Crossing

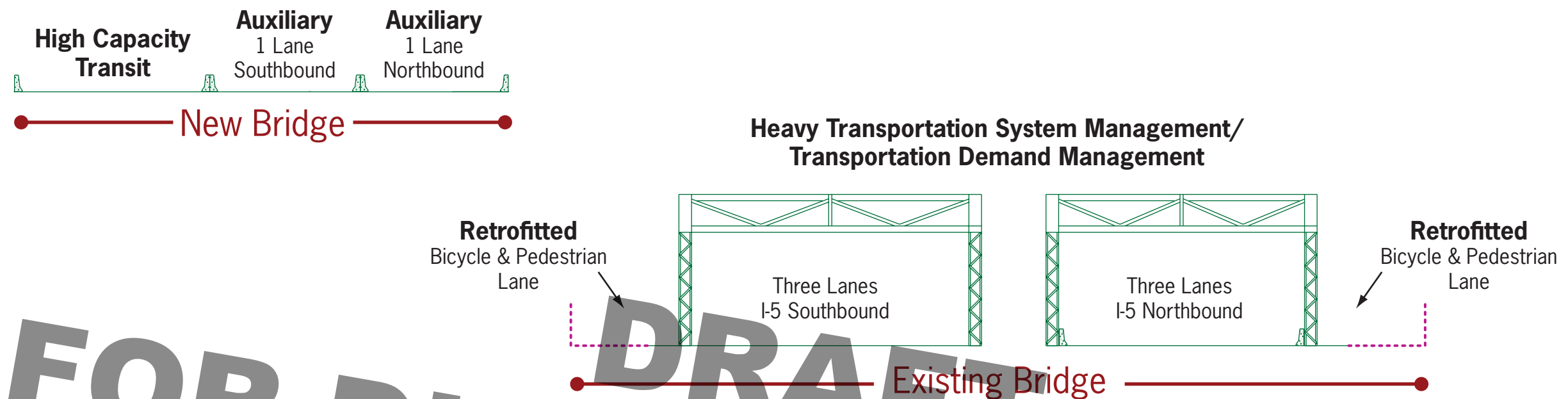
 Interstate 5 with Transportation System Management/
Transportation Demand Management

 Transit

What We've Heard

Fourth Alternative, Option A++

Cross Section Profile View *Results from March 12, 2007*



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FOR DISCUSSION ONLY

What We've Heard

Fourth Alternative, Option A++

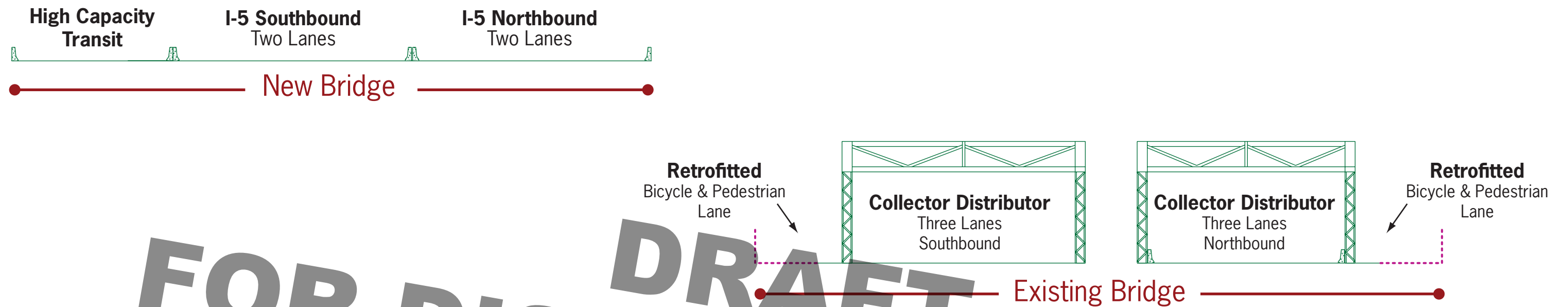
Plan View Results from March 12, 2007



What We've Heard

Fourth Alternative, Option B-

Cross Section Profile View *Results from March 12, 2007*

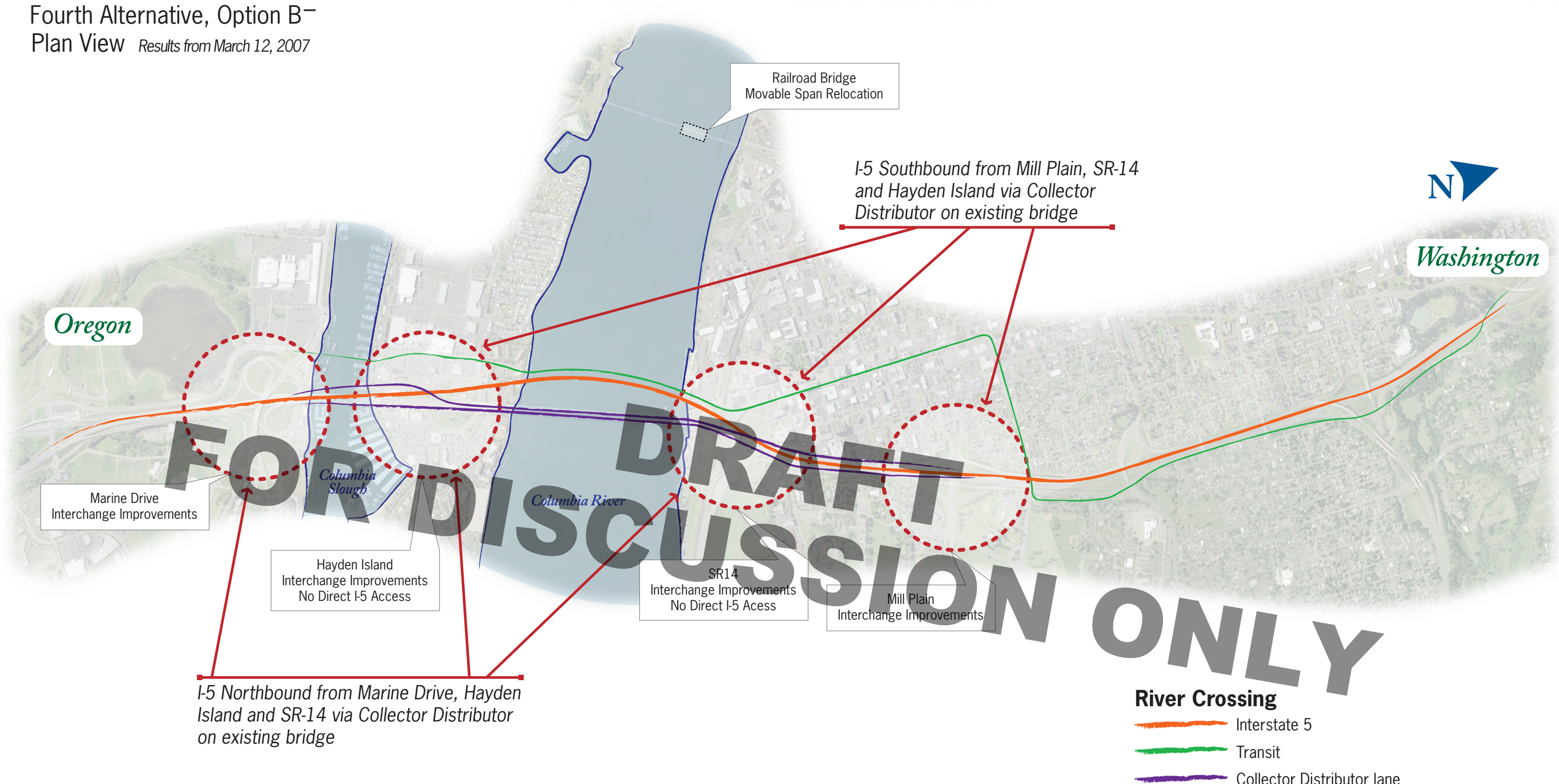


FOR DRAFT DISCUSSION ONLY

What We've Heard

Fourth Alternative, Option B-

Plan View Results from March 12, 2007





Memorandum

March 16, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: **Public Comment Received in Response Fourth Alternative Meeting on March 12**
COPY:

This memorandum outlines the public comment received in response to the March 12 meeting of the Fourth Alternative Task Force Subcommittee. Public comment was collected in these ways:

- Public comment form completed at the meeting (1)
- E-mail messages sent to the project office (3)
- Memo submitted at the meeting (1)
- Comments written on a flipchart at the meeting (5)

The public comment received by Thursday, March 15 at 11:59 p.m., featured questions and comments about these themes:

Railroad bridge moveable span
 Supplemental bridge
 Third crossing
 Public process
 Transit
 TDM, SDM and tolling
 Single Occupancy Vehicles
 Bicycle and pedestrian improvements

Railroad bridge moveable span comments referred to the perceived need for the CRC project to include span improvements.

Supplemental bridge comments ranged from support for focus on maximizing the existing structures to the describing the fourth alternative meeting as a waste of time and money because a supplemental bridge option has already been studied three times by the project and failed each time.

Third crossing comments supported the creation of a third corridor outside of I-5. A comment recommended building a third river crossing where the railroad bridge is located.

The project's **public process** was described as unfair with deadlines not allowing for public comment.

Transit was discussed at length in a memo that advocated transit solutions over a replacement bridge. A comment about transit suggested an LRT bridge as opposed to the freeway. Questions about transit centered around demand, financing and integrating HCT into a lower cost alternative.

TDM, SDM and tolling were described as social engineering. Related questions about those measures focused on economic impacts and public willingness to support TDM and SDM. SDM is an undefined acronym.

There were also a series of questions about which types of **single occupancy vehicles** have priority on the highway and the cost effectiveness of **bicycle and pedestrian improvements**.

A Seattle Times article about the Alaskan Way Viaduct special election was submitted by a member of the public for review by the subcommittee

These comments were recorded on a flipchart during the meeting:

1. I did not fully understand that CRC is under a deadline for federal funding.
2. I'm glad that participants recognize the need for tolling (TDM).
3. Add another track to the railroad bridge (Ride Amtrak).
4. LRT bridge – forget the freeway.
5. The issue is the corridor is full! Traffic must be taken out of the corridor. A third bridge at the railroad bridge is less cost, smallest footprint. If you're not going to get real...citizens will drop out of the process and work with Feds to shut this down now! Make your choice!

A PDF copy of the public comment form, email messages and memo are enclosed for your review.



Meeting Agenda

MEETING: 4th Alternative Task Force Subcommittee Meeting

DATE: Monday, March 12, 2:30 p.m.-4:30 p.m.

LOCATION: Former Hayden Island Yacht Club
12050 N. Jantzen Drive

Welcome

Review Decisions Made by the Task Force on February 27

Set the Framework

Ground Rules and Role of Subcommittee

Meeting Schedule

Review What We've Heard

Ideas Generated at the February 27 Task Force Meeting

Option A

Option B

Generating Ideas and Discussion

Wrap-up and Next Steps

What We've Heard

Fourth Alternative, Option A

Cross Section Draft 1—March 12, 2007

High Capacity
Transit
•New Bridge•

Bicycle & Pedestrian Lane

Three Lanes
I-5 Southbound

Three Lanes
I-5 Northbound

Bicycle & Pedestrian Lane

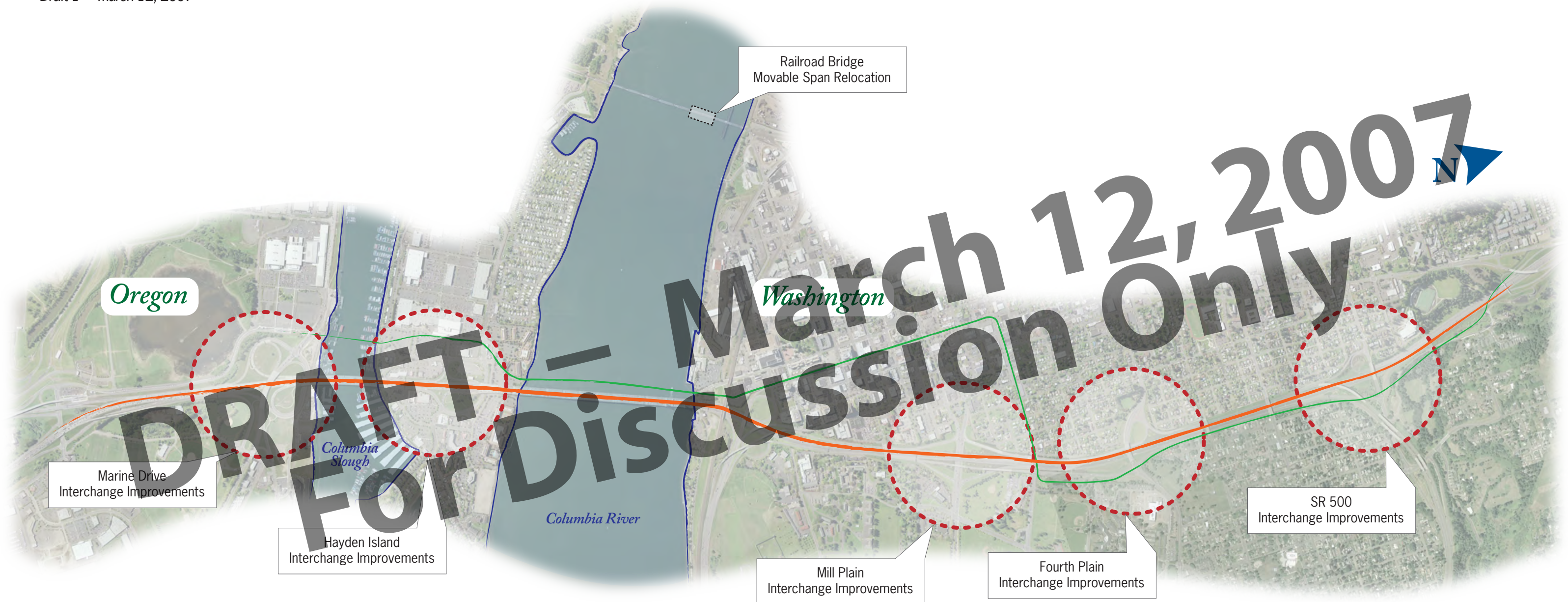
Existing Bridge

DRAFT — March 12, 2007
For Discussion Only

What We've Heard

Fourth Alternative, Option A

Draft 1—March 12, 2007



Oregon

Washington

Columbia Slough

Columbia River

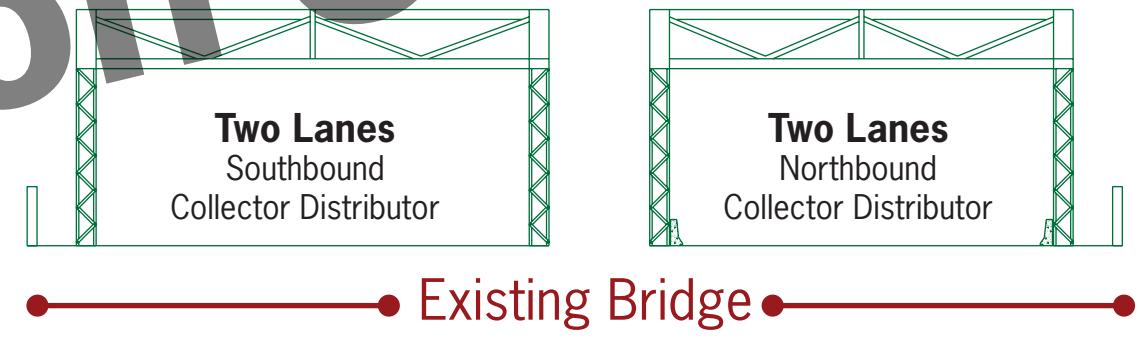
River Crossing

-  Interstate 5
-  Transit

What We've Heard

Fourth Alternative, Option B

Cross Section *Draft 1—March 12, 2007*

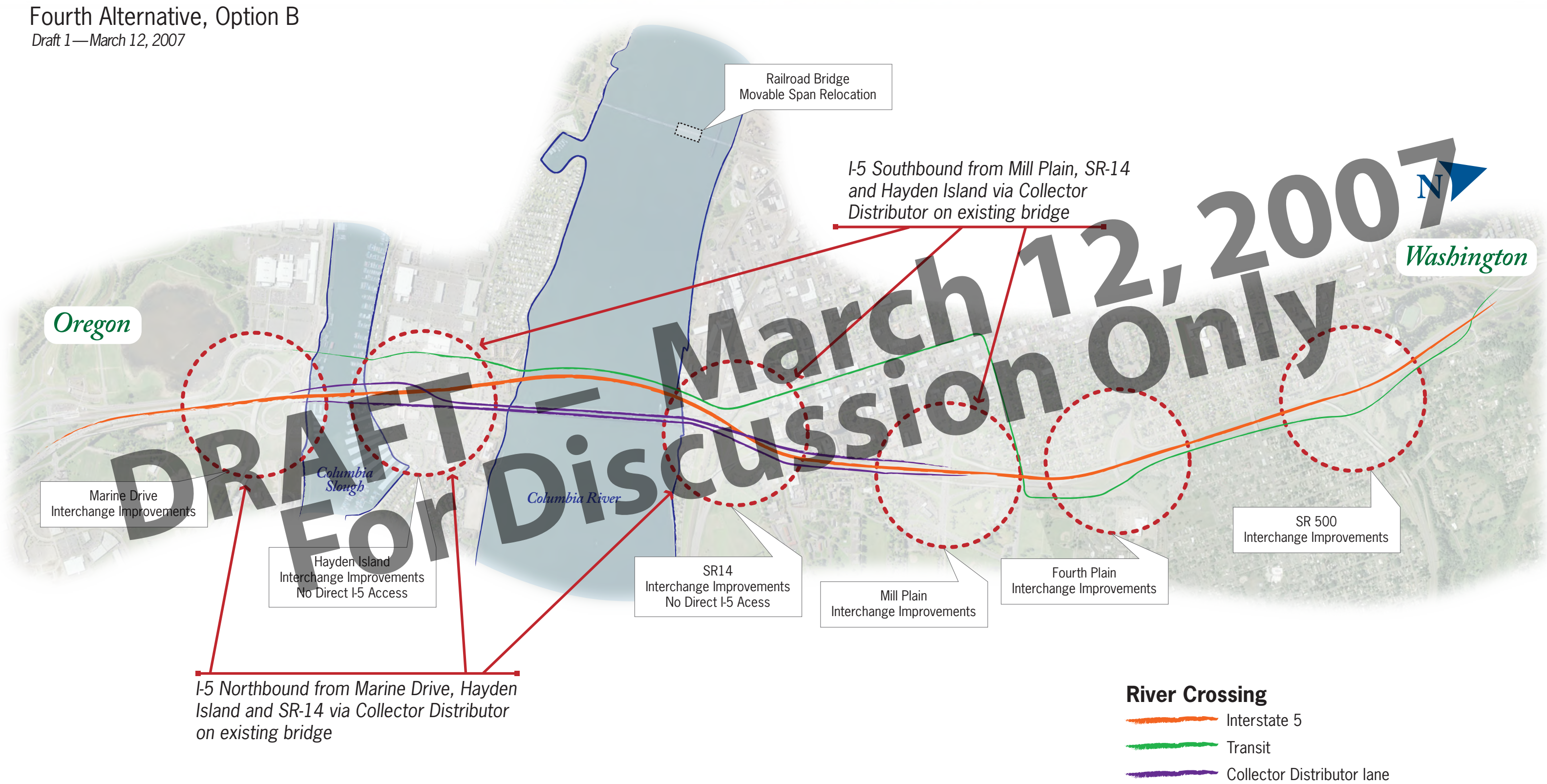


DRAFT — March 12, 2007
For Discussion Only

What We've Heard

Fourth Alternative, Option B

Draft 1—March 12, 2007



Oregon

Washington

DRAFT - For Discussion Only

Marine Drive Interchange Improvements

Hayden Island Interchange Improvements
No Direct I-5 Access

SR14 Interchange Improvements
No Direct I-5 Access

Mill Plain Interchange Improvements

Fourth Plain Interchange Improvements

SR 500 Interchange Improvements

Railroad Bridge Movable Span Relocation

I-5 Southbound from Mill Plain, SR-14 and Hayden Island via Collector Distributor on existing bridge

I-5 Northbound from Marine Drive, Hayden Island and SR-14 via Collector Distributor on existing bridge

River Crossing

- Interstate 5
- Transit
- Collector Distributor lane



Meeting Agenda

MEETING: 4th Alternative Task Force Subcommittee Meeting

DATE: Monday, March 26, 8:00 a.m.-11:00 a.m.

LOCATION: Former Hayden Island Yacht Club
12050 N. Jantzen Drive

Welcome

Review Public Comment

Review Actions Taken at the Last Meeting

Present and Discuss Options: Performance

A++ Modified

B- Modified

Wrap-up and Next Steps



Meeting Summary

MEETING: Fourth Alternative Task Force Subcommittee Meeting
MEETING DATE: March 19, 2007, 8:00 a.m. to 9:00 a.m.
LOCATION: Former Hayden Island Yacht Club, 12050 N. Jantzen Drive, Portland, OR

Subcommittee Members

Metro Councilor Rex Burkholder, Co-Chair
 Clark County Commissioner Steve Stuart, Co-Chair
 Hal Dengerink, CRC Task Force Co-Chair, ex-officio subcommittee member
 Henry Hewitt, CRC Task Force Co-Chair, ex-officio subcommittee member, unable to attend
 Dean Lookingbill, SW Washington Regional Transportation Council, unable to attend
 Fred Hansen, TriMet
 Jeff Hamm, C-TRAN
 Walter Valenta, Bridgeton Neighborhood, unable to attend
 Scot Walstra, Greater Vancouver Chamber of Commerce
 Tom Zelenka, Schnitzer Group, unable to attend

In addition to the above subcommittee members, there were between 25 and 30 in the audience that included CRC staff, agency staff, and the public.

Meeting Notes

Review of Public Comment

Rex Burkholder opened the meeting at 8:00 a.m. The first agenda item was a review of public comments. Rex provided a handout from Sharon Nasset which was a petition with approximately 33 signatures recommending CRC keep the existing bridges and build entirely new capacity to the West near the railroad bridge. Rex also referenced the CRC comment summary provided as a handout along with the actual comment sheets and emails provided to CRC concerning the Fourth Alternative.

Review of Actions Taken at the Last Meeting

Rex Burkholder and Steve Stuart reviewed the March 12, 2007 meeting summary. Included in the summary was a request for CRC staff to look at variations of Option A and Option B that were presented at the first meeting. A brief discussion was held concerning the various options. Rex summarized that the emphasis was to develop an alternative that is less expensive and optimized use of the existing structures.

Present and Discuss Options: Performance

Ron Anderson from CRC staff presented an overview of the three options as described below:

- Option A+: Essentially a No-Build option for I-5 with aggressive TDM and Transit components to meet the demand to move people across the river. I-5 improvements were targeted at improving safety and system flow.
- Option A++: The same as Option A+ with the addition of two I-5 auxiliary lanes in each direction on a new bridge combined with HCT.
- Option B-: Uses the existing I-5 Bridges as auxiliary lanes and provides for two new I-5 lanes in each direction on a new bridge to carry through traffic. Appropriately sized TDM strategies and increased transit service is added to balance the demand.

The overview summarized a memorandum dated March 15, 2007 handed out at the meeting describing

the potential options, their performance, and CRC staff observations. In general, Option B- came closest to meeting the goals outlined at the first meeting.

This was followed by a discussion among members of the subcommittee on the merits of the options, along with specific questions on their characteristics.

Wrap-up and Next Steps

Consensus was reached to ask CRC staff to develop a new option that fell somewhere between A++ and B-. There was a desire to keep some freeway on the existing bridges and also provide two lanes on a new bridge, one in each direction. The new lanes could be HOT lanes.

Staff was also asked to come back with recommendations for river navigation in regard to the lift spans and moveable span on the railroad bridge. They would also like better information on the costs for the railroad moveable span and seismic upgrade of the existing bridges.

Steve Stuart asked staff to make sure to add the petition on the Third crossing, handed to the subcommittee by Sharon Nasset, to the public comments.

The meeting was adjourned at 9:00 a.m.

Meeting Schedule

The next meeting will be held at the same location on March 26, 2007, 8:00 a.m. to 11:00 a.m.:

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Memorandum

March 26, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: Fourth CRC DEIS Alternative
 Revised Description of Potential Options based on March 19
 Subcommittee Recommendations
COPY:

BACKGROUND

At the March 19 Fourth Alternative Subcommittee meeting, CRC staff presented descriptions, performance measures and observations on three potential options for developing a fourth project alternative. The three options are briefly summarized as follows:

- Option A+: Essentially a No-Build option for I-5 with aggressive TDM and Transit components to meet the demand to move people across the river. I-5 improvements were targeted at improving safety and system flow.
- Option A++: The same as Option A+ with the addition of two I-5 auxiliary lanes in each direction on a new bridge combined with High Capacity Transit (HCT).
- Option B-: Uses the existing I-5 bridges as auxiliary lanes and provides for two new I-5 lanes in each direction on a new bridge to carry through traffic. Appropriately sized TDM strategies and increased transit service is added to balance the demand.

CRC staff was asked by the subcommittee at the March 19 meeting to develop and evaluate one additional option that would fall somewhere between Option A++ and Option B-. The major emphasis is aimed at finding the best use for two I-5 lanes, one in each direction or reversible, on a new bridge combined with HCT. The new option should aspire to meet the project's Purpose and Need.

Evaluation of this hybrid option, described below as "Option A++ Modified," created some of the same problems encountered with Option A++. Two direction or reversible lanes require added shoulders and barriers compared to one-way roadways. There would still need to be a "fly-over" to the new bridge and there would be impacts on right-of-way in downtown Vancouver.

CRC staff recommends adding another option for review that is a variation on C-Tran's proposal. The new option described below as "Option B- Modified" uses the existing bridges for northbound traffic and uses a new bridge for southbound traffic. The total number of lanes will be limited to eight, four in each direction.

Option descriptions, their performance in relationship to criteria required to meet the project's Purpose and Need, and CRC staff observations are as follows:

OPTION A++ MODIFIED

This option uses the existing Interstate Bridges for I-5 traffic and adds two lanes, one in each direction, on a new bridge with HCT. Pricing or tolling may be used on the new or existing lanes to reduce vehicle demand. Transit service is increased sufficiently to encourage options to driving alone. A new moveable span is provided on the railroad crossing that best serves navigation needs.

Highway

- The existing I-5 bridges remain at three lanes in each direction as a combination of through and auxiliary lanes. The existing bridges will provide direct connections with Marine Drive, Hayden Island, SR 14, and Mill Plain.
- Two new I-5 lanes, one in each direction, are provided on a new bridge along with HCT. The new lanes can be used as managed/HOT lanes or GP lanes. The new lanes are priced and do not have direct connections to Marine Drive, Hayden Island, SR 14, or Mill Plain.
- Interchanges are modified to improve intersection performance. Spot safety improvements are included.
- Traffic system management tools are incorporated to improve I-5 operations.

Transit

- A new river crossing bridge for HCT is included with the new highway bridge.
- HCT capacity is increased to serve approximately 25,000+ persons per day.
- Express bus service is increased from the existing 19 buses per peak hour to 40. Local and feeder bus service are increased to serve the added transit capacity.
- Park-and-ride lot capacity is increased from the existing 1,872 spaces in the I-5 corridor to approximately 7,500.
- Van-pool programs are added or new transit service is targeted to increase ridership for point to point service.

TDM/TSM

- Pricing is included for both the new I-5 bridge and existing bridges with variable pricing to reflect peak hour demand. Pricing is focused on reducing vehicle trips by 10%.
- Transit operating subsidies are provided to encourage increased transit service and use.

Freight Mobility

- Trucks will have the opportunity to use the new I-5 capacity.
- Spot modifications at key intersections will improve truck flow in the interchanges.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic is on the existing Interstate Bridges. Existing facilities are widened to provide either one 15-foot-wide bicycle and pedestrian lanes on one bridge or a 10-foot path on each bridge.
- Bicycle and pedestrian connections are improved throughout the corridor.

Seismic

- Seismic retrofit to “no-collapse” standards would be left up to the State DOT’s to implement as funding becomes available.

Railroad Swing Span

- A new railroad marine navigation moveable span is constructed to align with primary navigation needs.

OPTION A++ MODIFIED PERFORMANCE

Increase vehicle capacity or decrease vehicle demand on I-5

- Vehicle capacity on I-5 will be increased from about 5,500 peak hour trips per direction to 7,000. This falls short of the 2035 demand of approximately 9,000 vph during peak hours.
- Vehicle congestion will increase to seven to nine hours per day depending on the aggressiveness of pricing.
- A decrease in vehicle demand will be targeted at 10% through pricing.
- Increased people capacity will result from added transit service.
- Providing a new moveable span for the railroad crossing will reduce the number of bridge lifts related to barge traffic and improve traffic flow that would normally be disrupted.

Improve transit performance

- Increased transit service will need to be adjusted to maximize system operation levels without overwhelming capacity at spot locations throughout the system.
- Increased park-and-ride capacity will be difficult to achieve at the proposed levels due to lack of suitable sites along the I-5 corridor.
- Express bus and van-pools will be used to target point-to-point service outside traditional markets.

Improve freight mobility

- Modest I-5 capacity improvements will help freight throughput, especially if the new lanes are designed and priced to promote free flow.
- Minor intersection improvements will aid truck movements, but existing I-5 will still be congested during peak hours where the major truck access is required.
- New bypass lanes will not be accessible to the major trucking interchanges at Marine Drive, SR 14, and Mill Plain.
- Providing a new strategically located moveable span will help barge traffic.

Improve safety and decrease vulnerability to incidents

- Hours of congestion will be greater than existing and total number of accidents will continue to increase with increased freeway volumes.
- Spot improvements and wider shoulders will help offset the increased accident rates.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate Bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 river crossing

- This option will not immediately address seismic risks. Seismic upgrade to a “no-collapse” level will be completed by the State DOTs when funding becomes available.

OPTION A++ MODIFIED: CRC STAFF OBSERVATIONS

- The two new I-5 lanes on a new bridge, one in each direction, will require barrier separation and shoulders for each direction. For a single lane, WSDOT standards require a 14-foot-wide lane with the sum of the two shoulders at 12 feet. The resulting two lanes with barriers would need to be 58 feet wide. This wide section must be achieved on the mainline median prior to gaining enough elevation to “fly over” the existing SB lanes. The transition must start south of the Marine Drive overcrossing and extend north of Mill Plain. Therefore, access to the new lanes must be from south of Marine Drive for NB traffic and between SR 500 and Fourth Plain for SB traffic.

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- Use of pricing will be a problem for this option. In order to have a measurable impact on reducing travel demand, all lanes across the river should be priced. Pricing only the new lanes may not be an incentive because SB congestion is expected to worsen over time. Unless the new HOT lanes are extended beyond the Bridge Influence Area, it is unlikely there would be a travel time advantage to use the through lanes.

OPTION B- MODIFIED

CRC staff recommends an option that uses the existing bridges for NB traffic and a new bridge for SB traffic. The total number of lanes can be limited to eight, two lanes each on the existing bridges and four lanes on the new bridge. This option has the same number of I-5 lanes as Option A++ Modified described above, but more effectively and efficiently uses existing infrastructure and alignments. SB lanes can transition directly to the new alignment without the need for additional shoulders and the fly-over. TDM and Transit is similar to Option A++ Modified. HCT can share the SB highway bridge. This option also improves opportunities to toll all vehicles crossing the Columbia River.

Highway

- The existing I-5 bridges are re-striped to provide two lanes on each bridge and allows for an outside safety shoulder for disabled vehicles. All lanes on the existing bridges will be for northbound traffic. The two lanes on the existing NB bridge will connect with the interchanges as well as allow for through traffic. The two lanes on the existing SB bridge will become through NB lanes.
- Four new southbound I-5 lanes are provided on a new bridge along with HCT. The new lanes will allow for three through lanes and one auxiliary lane connecting SR 14 with Hayden Island.
- Interchanges are modified to improve intersection performance. Spot safety improvements are included.
- Traffic system management tools are incorporated to improve I-5 operations.

Transit

- A new river crossing bridge for HCT is included with the new highway bridge.
- HCT capacity is increased to serve approximately 25,000 persons per day.
- Express bus service is increased from the existing 19 buses per peak hour to 40. Local and feeder bus service are increased to serve the added transit capacity.
- Park-and-ride lot capacity is increased from the existing 1,872 spaces in the I-5 corridor to approximately 7,500. (Staff recommendations for a replacement bridge scenario estimated a need to add about 5,000 park-and-ride spaces.)

TDM/TSM

- Pricing is included for both the new I-5 bridge and existing bridges with variable pricing to reflect peak hour demand. Pricing is focused on generating revenue to help fund the new improvements as well as reducing demand.
- Transit operating subsidies are provided to encourage increased transit service and use.

Freight Mobility

- Trucks have the opportunity to use the new I-5 capacity.
- Spot modifications at key intersections improve truck flow in the interchanges.
- Rebuilding the SB lanes allows ramp by-pass lanes for transit and trucks.

Bicycle/Pedestrian

- Bicycle and pedestrian traffic will use the existing Interstate Bridges. Existing facilities will be widened either on the east side only to provide for a 150-foot-wide path or 10 feet on each side of the two bridges for two paths.
- Bicycle and pedestrian connections are improved throughout the corridor.

Seismic

- Seismic retrofit to “no-collapse” standards would most likely be required for this option.

Railroad Swing Span

- A new railroad marine navigation moveable span is constructed to align with primary navigation needs.

OPTION B- MODIFIED PERFORMANCE***Increase vehicle capacity or decrease vehicle demand on I-5***

- Vehicle capacity on I-5 will be increased from about 5,500 peak hour trips per direction to 7,500. This still falls short of the 2035 demand of approximately 9,000 vph during peak hours.
- Vehicle congestion will increase to six to eight hours per day depending on the aggressiveness of pricing.
- A decrease in vehicle demand will result from tolling.
- Increased people capacity will result from added transit service.
- Providing a new moveable span for the railroad crossing will reduce the number of bridge lifts and improve traffic flow that would normally be disrupted.

Improve transit performance

- Increased transit service will need to be adjusted to maximize system operation levels without overwhelming capacity at spot locations throughout the system.
- Increased park-and-ride capacity will be difficult to achieve at the proposed levels due to lack of suitable sites along the I-5 corridor.
- Express bus will be used to target point-to-point service outside traditional markets.

Improve freight mobility

- Increased I-5 capacity improvements compared to No-Build will help freight throughput, especially if the new lanes are designed and priced to promote free flow.
- Minor intersection improvements will aid truck movements, but existing I-5 will still be congested during peak hours where the major truck access is required.
- Providing a new strategically located moveable span will help barge traffic.

Improve safety and decrease vulnerability to incidents

- Hours of congestion will be greater than existing and total number of congestion related accidents will continue to increase with increased freeway volumes.
- Overall accident rates may drop due to adding safety shoulders on the existing NB bridges and design standard features on the new SB alignment.

Improve bicycle and pedestrian mobility

- Improved bike and pedestrian facilities on the existing Interstate Bridges and connecting facilities will encourage walking and use of bicycles.

Reduce seismic risk of the I-5 river crossing

- Seismic upgrade to a “no-collapse” level will be provided.

OPTION B- MODIFIED: CRC STAFF OBSERVATIONS

Using the existing bridges for NB traffic and building new SB bridges that limit the total number of I-5 lanes to eight should be a less expensive option compared to CRC staff recommendations for a replacement bridge that removes the existing structures. Right-of-way impacts to downtown Vancouver will be reduced compared to other fourth alternative options being considered for adding lanes on a new bridge. Although this option will not perform as well in meeting the project Purpose and Need as a replacement bridge, it comes closer to meeting the intent of the aspirational goals for a fourth alternative.

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What We've Heard

Task Force Subcommittee
Fourth Alternative Progression

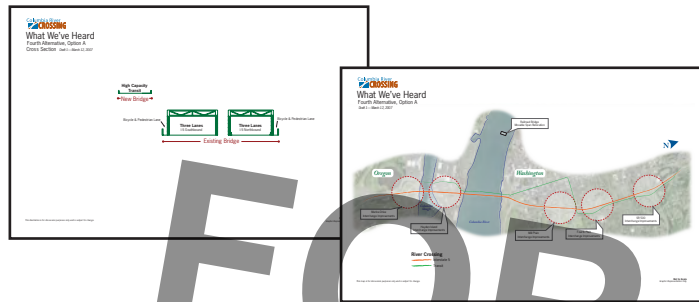
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Meeting Results March 12, 2007

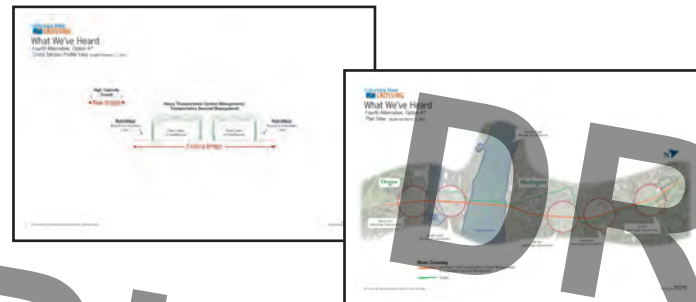
Meeting Results March 19, 2007

Meeting Results March 26, 2007

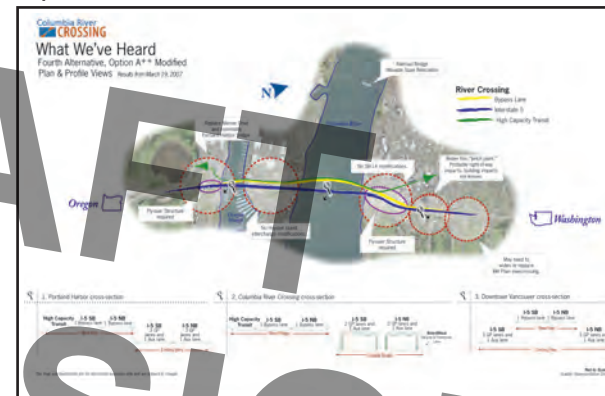
Option A



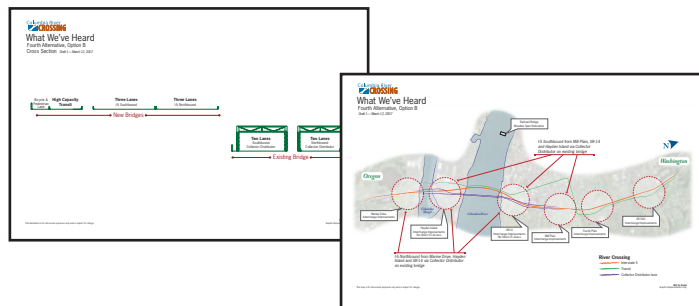
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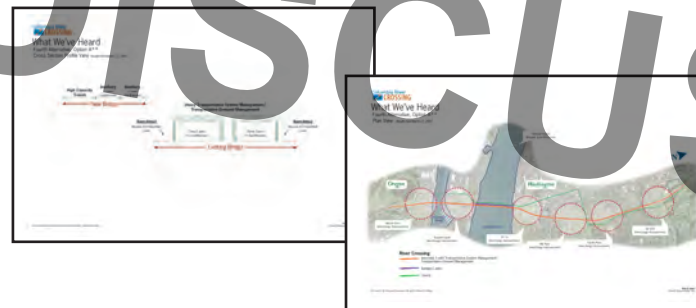
Option A++ modified



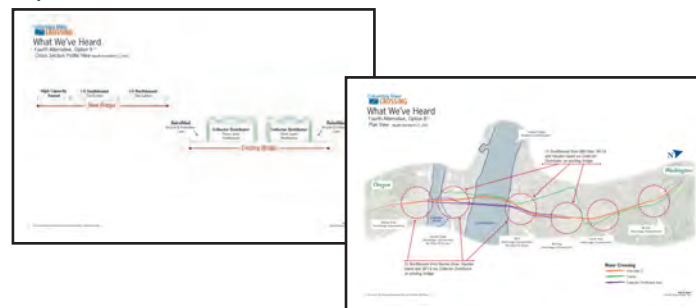
Option B



Option A++



Option B-



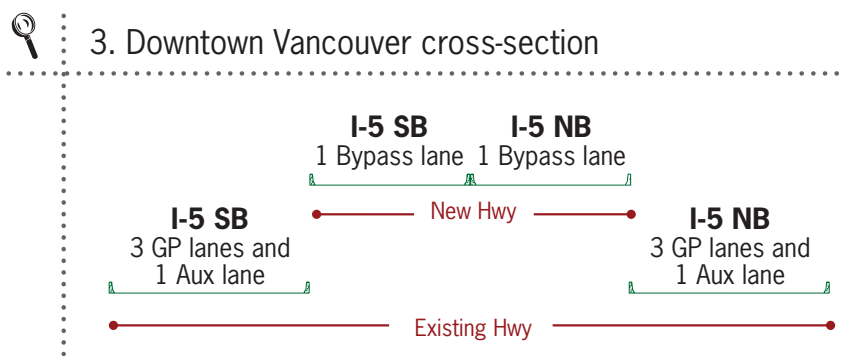
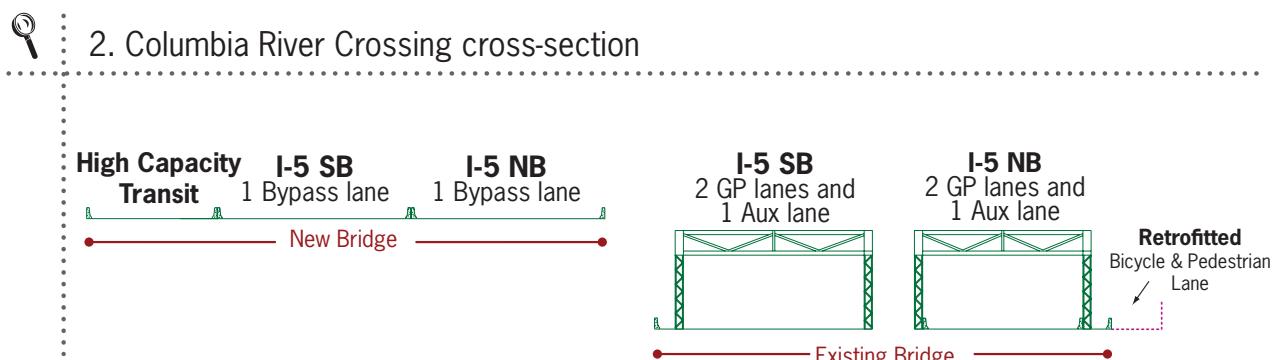
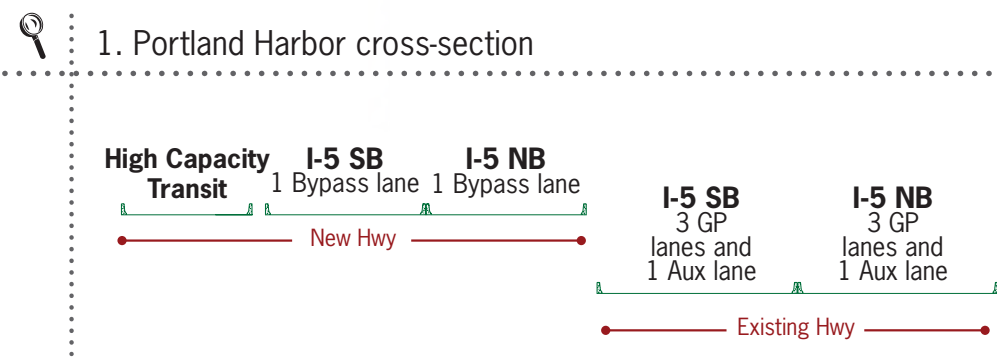
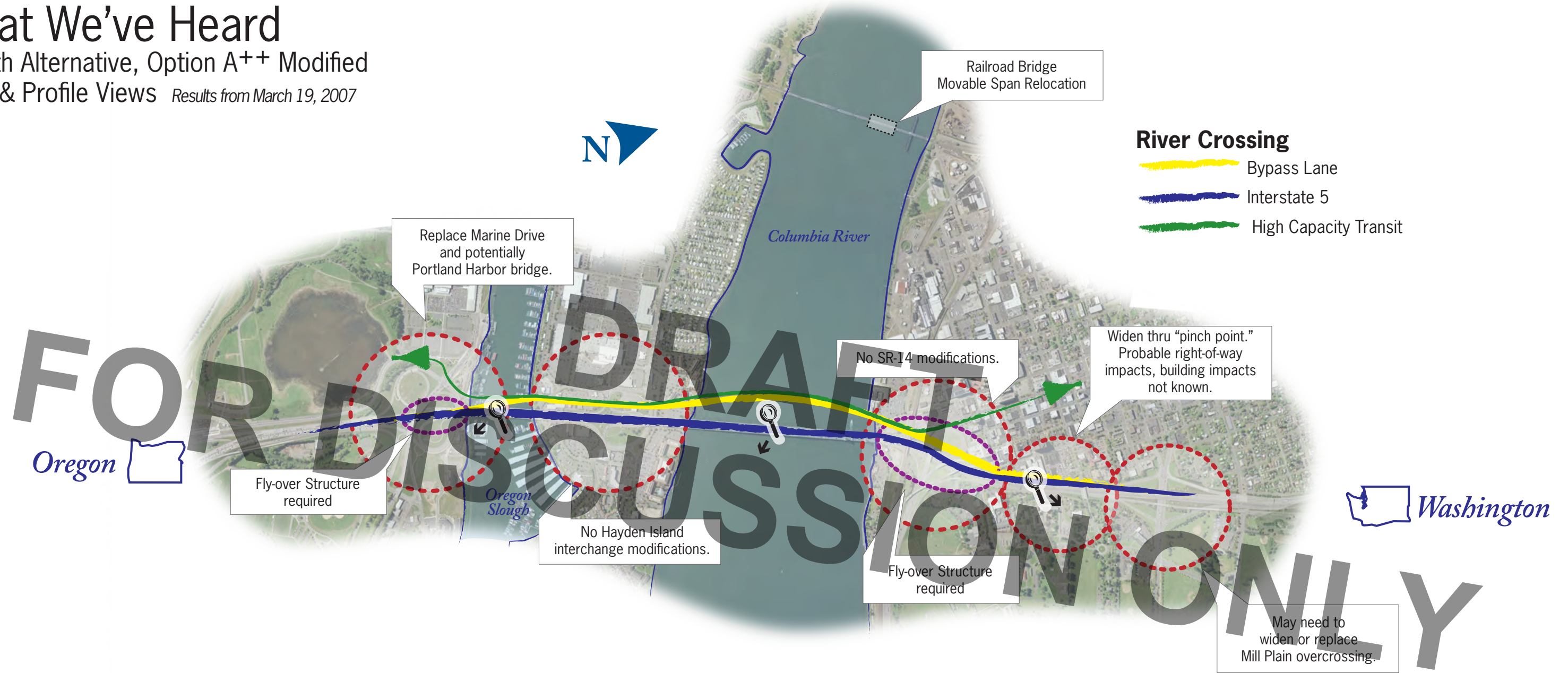
Option B - modified



FOR DRAFT DISCUSSION ONLY ?

What We've Heard

Fourth Alternative, Option A++ Modified
Plan & Profile Views Results from March 19, 2007

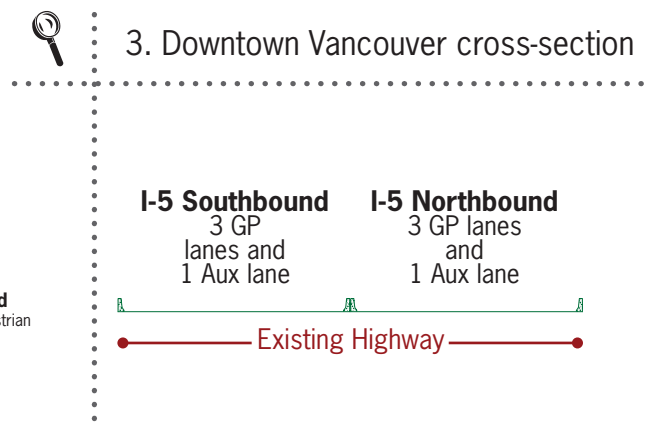
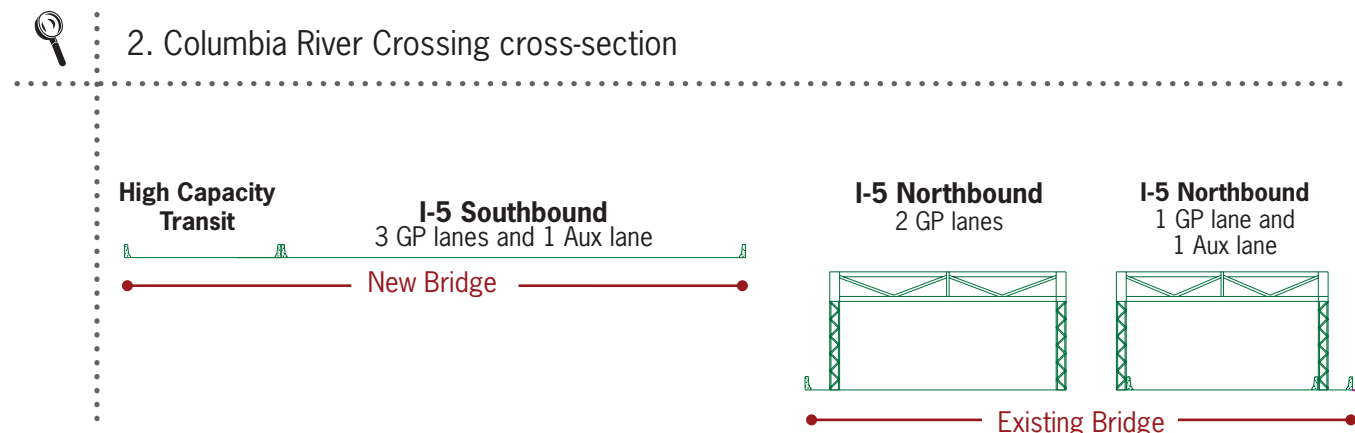
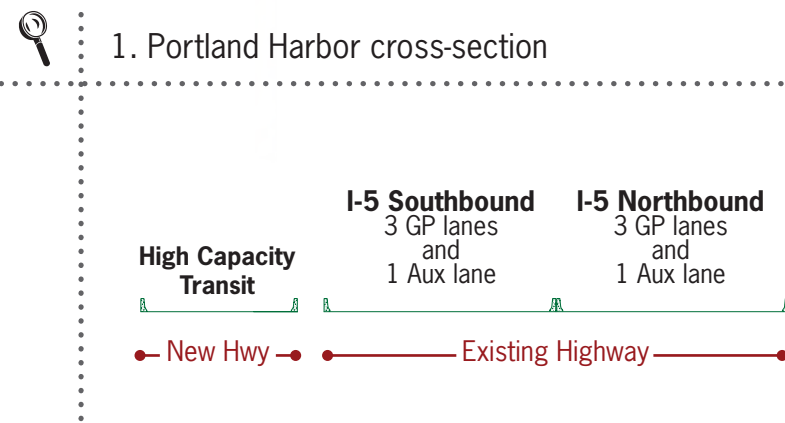
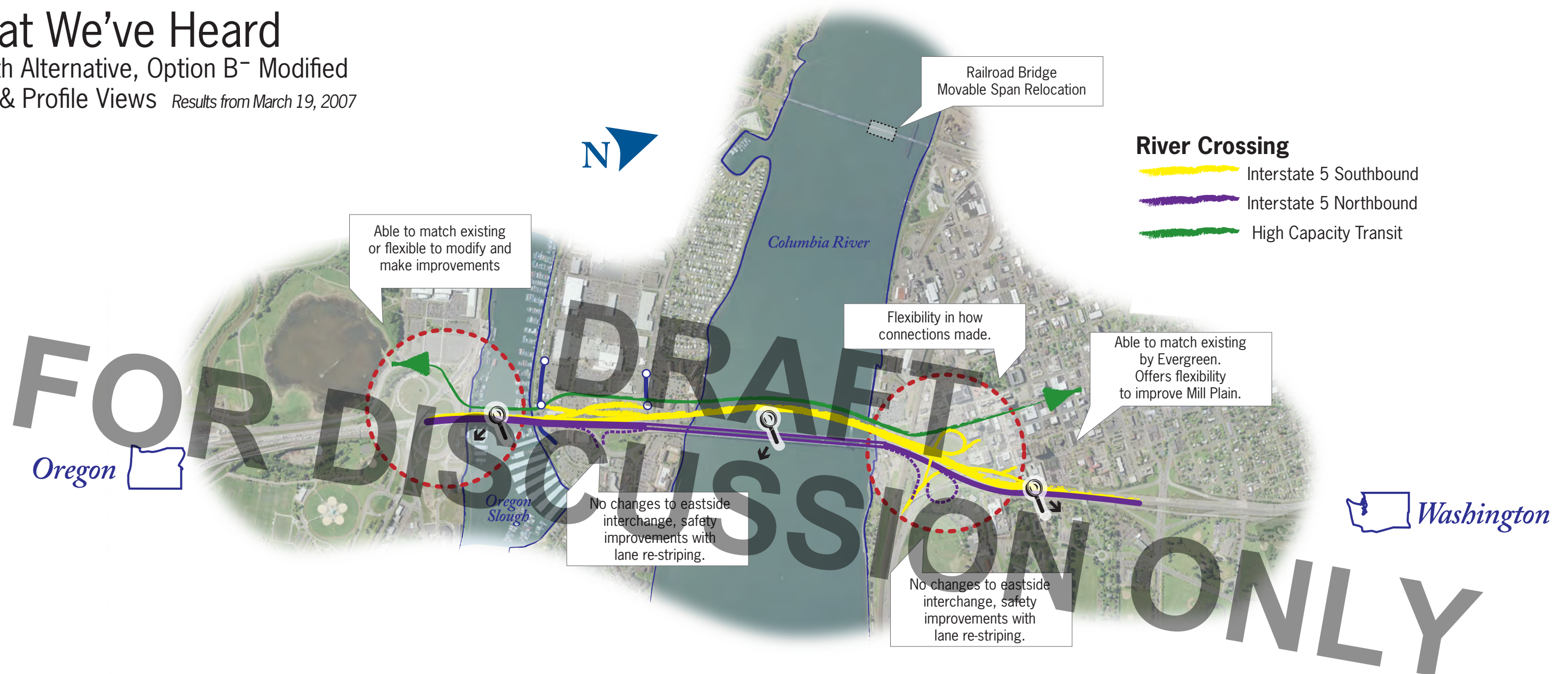


This map and illustrations are for discussion purposes only and are subject to change.

Not to Scale
Graphic Representation Only

What We've Heard

Fourth Alternative, Option B- Modified Plan & Profile Views Results from March 19, 2007



This map and illustrations are for discussion purposes only and are subject to change.

Not to Scale
Graphic Representations Only



Memorandum

March 23, 2007

TO: Fourth Alternative Subcommittee
FROM: Kris Strickler
SUBJECT: **Public Comment Received in Response to Fourth Alternative Meeting on March 19**
COPY:

This memorandum outlines the public comment received in response to the March 19 meeting of the CRC Fourth Alternative Task Force Subcommittee and other comments related to studying a fourth alternative. Public comment was collected in these ways:

- E-mail messages sent to the project office (13)
- Memos and/or petitions submitted at the meeting (2)
- Comment Forms (2)
- Audio files (2)

The public comment received by Friday, March 23 at 11:00 a.m., featured questions and comments about these themes:

Existing Bridges
 Process
 Public Process
 B- Option
 Third crossing
 Transit
 Fourth Alternative
 Staff Recommendation
 Light Rail

The ownership of the **existing bridges** was raised by one person who argued the cost of maintenance may outweigh the usefulness of maintaining the structures. Another comment recommended finding a way to use the existing bridges.

There were two comments about the **process** related to studying a viable fourth alternative. A member of the public did not think the word "possible" should be used in this sentence: The Columbia River Crossing Task Force unanimously accepted the staff recommendation to advance three alternatives into the Draft Environmental Impact Statement (DEIS) process and appointed a subcommittee to identify a possible fourth alternative." Another commenter questioned the lack of a transportation industry representative on the subcommittee.

A comment related to **public process** concerned a signed petition not being given to members of the subcommittee while the meeting was in process. The petition was not sent to the CRC project office for distribution to subcommittee members prior to the March 19 meeting. An audio file of testimony from the February 22 Metro Council hearing was submitted. The testimony claimed the CRC process did not treat environmental justice communities fairly.

The **B- Option** discussed by the subcommittee was described as flawed in one email message because the option recommend two freeway through lanes on a supplemental bridge.

There were four individual comments supporting a **third crossing**. There were also two petitions submitted each proposing a third bridge, but using different language. The petition titled "We need action NOW on a NEW, THIRD Columbia River Crossing" was brought to the attention of the subcommittee and CRC staff at the March 19 subcommittee meeting and was later emailed to the CRC project office. There are 32 signatures on the version submitted at the subcommittee meeting and 68 signatures on the version mailed to the project office. The second petition titled "We support the third bridge alignment near the railroad bridge and declare no seizing of public property through eminent domain be used." was submitted to the CRC project office via email after the March 19 meeting. This petition features 38 signatures, 15 of which also appear on the first petition. An audio file featuring former CRC project director Rob DeGraff discussing a third crossing was also sent to the project office. Mr. DeGraff did not advocate a third crossing as part of the CRC project in the recording.

Transit was described by one person as having to "share in the compromise for a lower cost solution."

Proposals for a **fourth alternative** were submitted by two members of the public. A letter signed by three people indicate there is a belief that a fourth alternative means a third crossing. An outline of the perceived failings of the options studied by the subcommittee was also submitted.

The **staff recommendation** for a replacement structure with Light Rail Transit received one supporting comment.

There was one comment in support of **Light Rail**.

A second copy of a critique of CRC staff's assessment of a proposal made by AORTA was also resubmitted.