

Hines, Maurice

From: Kevin Peterson [petersondesign@centurytel.net]
Sent: Monday, October 24, 2011 8:38 AM
To: Columbia River Crossing
Subject: Alternative 3, bridge replacement transit
Attachments: Letter regarding CRC and the C-D option.docx

Dear Project Sponsor,

Please add the attached paper to feedback on the FEIS for the Columbia River Crossing project.

Thank you,

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Columbia River Crossing

EIS Alternative 3: Bridge Replacement with Rail Transit

Did the Project Office Adequately Evaluate Opportunities? *An alignment and layout that the CRC project office failed to consider*

Alternative 3; Bridge Replacement with Transit

The preferred EIS alternative calls for the replacement of the I-5 bridge with an integrated light rail line across the Columbia River into Vancouver. The CRC project office has proposed a layout and alignment for the bridge and the five miles of freeway north and south of the bridge suggesting how this alternative would be accomplished. This solution aligns the freeway on a curved bridge placed downstream of the existing bridge and employees a potpourri of ramp philosophies to cope with too closely spaced interchanges. In 2008 this layout and alignment was declared the only possible solution that satisfied requirements of this EIS alternative.

Most people felt that this solution was expensive, intrusive, impactful and unattractive. The CRC project office has since spent time trying to modify the layout to reduce impacts but has not considered other than ancillary modifications to the concept.

In early 2010 Mr. Kevin Peterson, an architect and planner who specializes in international transportation infrastructure physical design, was asked by architects and landscape architects in Portland if another solution was possible. Mr. Peterson spent the early period of 2010 researching project history and investigating ideas that were not considered by the CRC project office. By early spring Mr. Peterson discovered an alignment and layout that appeared superior to the proposed CRC Curved Alignment.

The C-D Straight Alignment Idea

In the spring of 2010 WSDOT and ODOT was presented with an alignment and layout different from any other alignment and layout previously considered by the CRC project office. This layout proposes:

- A mainline without conflicts between Marine View Drive and Mill Plain Boulevard

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Please see responses to Mr. Peterson's other submitted comment letter, P-029.

The LPA was determined to provide the best combination of meeting the Purpose and Need, as well as addressing the other evaluation criteria, as summarized in Chapter 2 of the FEIS. Mr. Peterson's idea was reviewed by the Bridge Expert Review Panel who chose not to recommend that CRC pursue it further. It was also reviewed by the CRC staff. The proposal had significant traffic operations deficiencies and did not hold promise that it could perform as well as the LPA or provide any substantial advantages.

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- A separate collector distributor (C-D) roadway interconnecting Marine View Drive, Hayden Island and SR-14/Vancouver independent of the mainline that also acts as an urban arterial crossing the Columbia River and North Portland Harbor.

This option greatly exceeds functional needs for transit and vehicular requirements while having a smaller footprint than today's I-5 freeway. This option exceeds WSDOT Design Manual geometric standards and provides a better way to cope with the unprecedented number of interchanges that are spaced too close to one another in the urban context the freeway is placed.

This option is referred to as the C-D Straight Alignment because I-5 is essentially straight from south of Marine View Drive to north of Mill Plain Boulevard, a distance of almost three miles with the exception that the existing slight curve in the North Portland Harbor bridge is retained.

CRC Project Office knowledge of this option

The CRC project office was presented with this option in the spring of 2010 communicated using conceptual drawings and narrative. This presentation was done in a collegiate briefing in which Mr. Peterson shared the possibility with senior CRC project office staff. Months later it was apparent to Mr. Peterson that the project office had no intent to act on the possibility for they indicated that the material would simply be filed.

Concerned that the project office was not acting in the best interest of the public Mr. Peterson presented the idea to WSDOT headquarters. Mr. Jerry Lenzi, (title? – I think he is in charge of all WSDOT design) met with Mr. Peterson and reviewed the idea, found the idea most compelling, coordinated with the ODOT director and, considerate of the critical time line for the project, requested that the idea be presented to the Bridge Review Panel (BRP) for review. Most curiously he did not appear to follow-up with the CRC project office.

Mr. Peterson presented the idea to the BRP during a formal meeting as this panel was about to start a week long review of the bridge. However, after the idea was presented CRC project staff instructed the BRP not to review the idea. This directive, which I assume based on informal conversations with BRP members, limited review to only the bridge and did not consider fundamental issues like interchanges or the applicability of a collector-distributor. The C-D Straight Alignment was not reviewed, or considered, by the BRP even though the public was led to believe it was reviewed and discredited.

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The first review of the C-D Straight Alignment by the CRC project office occurred in October of 2010, almost a half year after the project office was presented with the idea. Unfortunately this review only considered one interchange, SR-14 and I-5, and was subsequently shown to be completely in error. This 'review' simply speculated that geometry might not satisfy WSDOT standards at this interchange and, therefore, was the CRC project office basis to reject the entire C-D Straight Alignment. When Mr. Peterson finally received this review, in the summer of 2011 after having to make a formal records request, was the geometric 'speculation' shown to be completely in error.

It should be noted that if the CRC project office, the BRP, WSDOT or ODOT shared with the public that the BRP did not consider the C-D Straight Alignment Mr. Peterson could have been immediately taken to bring this inaction to the attention of public officials. Also, if Mr. Peterson was informed of the CRC project office October review in a timely manner then the erroneous review would have been pointed out and corrected. As it is the CRC project office only provided this information to Mr. Peterson after a formal records request was made almost a year and a half later! At no time, from the spring of 2010 to the present, has the CRC project office provided Mr. Peterson with any feedback on the C-D Straight alignment or, more importantly, the CRC project office has never acknowledged that this option existed. **This means that the public or project sponsors were never informed that this option existed.**

Specific benefits of the C-D Straight Alignment

The following is a listing of the significant benefits of the C-D Straight alignment contrasted with the CRC project office proposed curved downstream alignment:

1. Capital costs appear to be 300 to 700 million less than the CRC curved alignment
2. One efficient transportation investment serves both interstate and local needs providing the functional benefit of two bridges - an express freeway and urban arterial. One transportation platform - one bridge - satisfies both functions. Connecting Vancouver, Hayden Island and North Portland via an urban arterial provides freight mobility and local movements without entering the high speed freeway traffic environment.

3. The idea requires slightly less land than the existing I-5 freeway. What is proposed in the CRC curved alignment requires taking a million and a half MORE square feet of precious urban or park land!
4. Compared with the CRC curved alignment, 33 to 36 fewer urban city blocks of land are not subjected to the noisy footprint of the freeway unless massive view blocking noise barriers are built.
5. Hayden Island can evolve into a meaningful and great transit friendly pedestrian community of between 35 to 40 contiguous city blocks of parks, mixed-use development and urban uses where many thousands can live and work adjacent to the Columbia River within walking distance of high capacity transit – outside the noisy footprint of the freeway. The proposed CRC curved alignment bisects Hayden Island into two halves separated by a 550' to 700' expansive freeway 'no-man's land'.
6. Vancouver and Fort Vancouver reconnect with each other and the river with park and city streets. The LRT station is a short three city block walk from Fort Vancouver Park. Third Street becomes an important surface connector and gateway to Vancouver and Fort Vancouver Park.
7. Land need in the Fort Vancouver Reserve archeological site of the historic village is +/- 130,000 square feet less than the existing freeway and +/- 150,000 square feet less than what the CRC project office proposes with its downstream alignment. This is with a straight upstream alignment! The Reserve is protected by Section 4(f) of the Department of Transportation Act of 1966 which requires identifying prudent and feasible alternatives to avoid impacts to this land and by Section 106 of the National Historic Preservation Act. Under Section 4(f), if some impact to this land is unavoidable, all possible planning to minimize harm from use should be explored. The C-D Straight Alignment is therefore the only alignment and layout choice that best satisfies federal law.
8. Bridge aesthetics are vastly superior with a single beautiful cable stay bridge likely to be less costly than the two anonymous truss bridges proposed today. Landside freeway aesthetics and landscapes are vastly superior and able to compliment an urban context with architectural treatment. The freeway across Hayden Island becomes a world model for how urban use near a freeway can be viable and attractive.

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9. Future transportation functions like commuter rail, high speed rail, additional LRT lines, 'smart' car technologies and additional vehicular capacity are more easily integrated. Capacity increases to 11,000 vehicles per hour per direction is possible with the LRT line or the 'transportation platform' infrastructure investment can be modified to add more high capacity transit including at least one additional rail line like commuter rail. The idea should provide for more than a half century of growth that is not presently considered – a period of time possibly embracing the entire span of this century. This assures today's investment buys a 'transportation platform' having optimal viability a hundred years or more into the future. This allows many future generations a 'transportation platform' that is better able to serve the mobility needs these future users will determine best serves what their needs require.
10. In-water pier disturbances are 12 to 18 piers in the Columbia River plus 11 to 15 piers in North Portland Harbor with the CRC downstream curved alignment for a total of 23 to 33 in-water disturbances. In comparison the C-D straight alignment has 4 to 10 piers in the Columbia River plus 4 piers in North Portland Harbor for a total of 8 to 14 in-water disturbances. Bridge shadows cast on the river is half that of the proposed solution. Environmental impacts are greatly reduced.
11. Conflicts on the mainline are reduced from eleven to four and curves are removed with a reduction in the accident rate on the mainline by +/- 70%. This means that commute period accident caused delay might be expected every other week for the C-D straight alignment contrasted with one or two delays per week with the CRC curved alignment. Twice as many people can be expected to die or be injured on the CRC proposed design.

Two negatives arise from this alignment and layout. These are:

- A change may cause a project delay. It should be noted that if the CRC project office acted in a responsible manner this delay may not have been required.
- The hotel on Hayden Island will place the freeway closer and this may necessitate reconstruction of the west wing of the hotel.

Process Comments

Evaluating alternatives within an EIS process requires consideration of physical layout in order to understand impacts of the idea. This vetting is valuable in two regards. First is that any physical configuration created in the very early 'discovery' of an EIS alternative must assume a reasonably 'worst case' physical consequence in order to be fully confident that the EIS evaluation does not understate impacts. This is important from a regulatory sense as many factors must be weighed and evaluated. For the CRC these regulatory factors include navigational clearances and airport airspace as the bridge and freeway is sandwiched between these 'space envelopes'. For example, the FAA put forward desirable airspace guidance that suggested the airspace is better protected if the bridge structure is lower. The project office then made an assumption as to the glide slope felt appropriate for Pearson Airport. This glide slope assumption made by the project office, as best as I can determine, is a 34:1 slope. Two possibilities exist as to why this glide slope is used. One is that this is the necessary glide slope for a precision ILS approach and the other is that this is the glide slope needed to clear existing terrain. However, the likely, and anticipated, regulatory decision is that currently used by the airport, City of Vancouver and other airports having the similar characteristics. This is a 20:1 glide slope. For this not to be the glide slope will cause the airport to make major changes and preclude the approved waterfront master plan and potentially impact thousands of utility runways throughout the United States. Unfortunately, CRC project documents do not explain why they are using a glide slope other than 20:1.

From this 'worst case' layout comes a much more informed appreciation of actual impacts and regulatory needs that, in turn, open up possibilities and opportunities that could not have been considered earlier. The project failed to 'sit back' and objectively appreciate what was 'discovered' as part of the DEIS process. Instead, the project assumed that they had identified the only reasonable solution for the alignment and layout of the project. This is placing the bridge downstream using a potpourri of interchange ramp techniques to satisfy design criteria and not bothering to seek a better layout or alignment opportunities. What changes have occurred were to mitigate negative aspects of the DEIS layout and alignment consistent with refinements for a project during preliminary design. What Mr. Peterson did was 'sit back' and evaluate project needs with the understanding brought about in DEIS discovery. He was then able to question certain erroneous assumptions and, not biased by earlier prejudice, seek an optimal layout and alignment for EIS Alternative 3: Bridge Replacement with Rail Transit.

When the CRC project office was informed of this layout and alignment they should have immediately subjected the idea to a careful and deliberate review. This could have been

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easily accomplished within a month suggesting that the CRC project office should have informed project sponsors that another layout and alignment possibility exists. By mid-summer 2010 the project office could have placed this layout and alignment idea into a parallel conceptual design track that would have allowed the project to switch focus by late fall 2010 if the idea proved to be feasible.

Feasibility

The C-D Straight Alignment has been informally evaluated by a number of transportation planners, bridge engineers and large project managers. These people, all employed by governmental agencies or consultants that work for local, state and federal governments have provided this input to Mr. Peterson confidentially. None of these people have found 'fatal flaw' errors in the idea, all have found the idea to be significantly superior to the CRC curved downstream alignment, all have shared input that might make the idea even better.

CRC Project Office Actions

The CRC project office, and WSDOT senior leaders, all claim that the C-D Straight Alignment idea was carefully considered. These statements are inconsistent with actions taken by the CRC project office if the Public Records Request of August, 2011 included all information pertaining to review of the C-D idea which uncovered the single review action - the October 2010 review of the SR-14 interchange. Note that this review was nothing more than incorrect speculation leading to a false conclusion. As best as can be determined project staff may have discussed the idea, possibly at the executive water cooler.