



## Workshop Agenda

**MEETING TITLE:** Project Sponsors Council Workshop with Integrated Project Staff  
**DATE:** Friday, June 11, 2010  
**TIME:** 10:00 a.m. – 12:30 p.m.  
**LOCATION:** Washington State Department of Transportation, SW Region  
 11018 NE 51<sup>st</sup> Circle, Vancouver, Washington 98662

TIME	AGENDA TOPICS
10:00 a.m.	Welcome
10:15 a.m.	Hayden Island Interchange Design Report: <ul style="list-style-type: none"> <li>• Review Concept 1: Remove Hayden Island interchange and provide alternative access</li> <li>• Review Concept 2: Redesigned Hayden Island interchange</li> </ul>
11:30 a.m.	Break
11:40 a.m.	Metroscope: <ul style="list-style-type: none"> <li>• New RTP results</li> <li>• Potential CRC analysis</li> </ul>
12:20 p.m.	IPS Work Group Updates
12:30 p.m.	Adjourn

### TRANSIT DIRECTIONS from PORTLAND:

From Downtown Portland, take C-TRAN Express Bus #164 to the Fisher's Landing Transit Center. Transfer to Bus #80 (Van Mall/Fisher's) eastbound to 49th and 112th Avenue. WSDOT SW Region Headquarters is 2 blocks north of this bus stop.

### TRANSIT DIRECTIONS from VANCOUVER:

From Downtown Vancouver take C-TRAN Bus #4 (Fourth Plain) eastbound to the Vancouver Mall Transit Center. Other buses to Vancouver Mall are #32, 72, 44 and 78. From the Mall 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.

For detailed trip planning, please contact the two transit agencies: C-TRAN, [www.c-tran.com](http://www.c-tran.com), 360-695-0123, or TriMet, [www.trimet.org](http://www.trimet.org), 503-238-RIDE

Meeting facilities are wheelchair accessible and children are welcome. Individuals requiring reasonable accommodations may request written material in alternative formats or sign language interpreters by calling the project team at the project office (360-737-2726 and 503-256-2726) one week before the meeting or calling Washington State's TTY telephone number, 1-800-833-6388.

**WORKSHOP:** Columbia River Crossing (CRC) Project Sponsors Council and Integrated Project Staff

**DATE:** May 14, 2010, 10:00 am – 12:30 pm

**LOCATION:** Oregon Department of Transportation, Region 1  
 123 NW Flanders Street  
 Portland , Oregon

**PROJECT SPONSORS COUNCIL ATTENDEES:**

Hewitt, Henry	Co-Chair, Oregon
Horenstein, Steve	Co-Chair, Washington
Adams, Sam	Mayor, City of Portland
Bragdon, David	Council President, Metro
Garrett, Matthew	Director, Oregon Department of Transportation
Hansen, Fred	General Manager, TriMet
Harris, Jeanne	City Councilor, City of Vancouver
Leavitt, Tim	Board Member, C-TRAN
Stuart, Steve	Chair, SW Washington Regional Transportation Council

**PROJECT SPONSORS COUNCIL MEMBERS ABSENT:**

Hammond, Paula | Secretary of Transportation, Washington State

**INTEGRATED PROJECT STAFF:**

Brandman, Richard	ODOT CRC project director
Brooks, Katy	Community Planning & Outreach Manager, Port of Vancouver
Cotugno, Andy	Policy Advisor, Metro
Hamm, Jeff	Executive Director, C-TRAN
Lahsene, Susie	Regional Transportation and Land Use Manager, Port of Portland
Lehto, Alan	Director of Project Planning, TriMet
Lookingbill, Dean	Transportation Director, SW Washington Regional Transportation Council
Rorabaugh, Thayer	Transportation Director, City of Vancouver
Smith, Paul	Transportation Planning Division Manager, City of Portland Bureau of Transportation
Wagner, Don	WSDOT CRC project director

**OTHER STAFF AND PRESENTERS:**

Ransom, Matt	City of Vancouver, Department of Transportation
Rutledge, Ted	URS Corporation, Consultant to City of Portland

**Note:** Workshop materials and handouts referred to in this summary can be accessed online at: <http://www.columbiarivercrossing.org/ProjectPartners/PSCMeetingMaterials.aspx>

**Welcome**

Co-Chair Henry Hewitt welcomed everyone to the joint workshop session of the Project Sponsors Council (PSC) and Integrated Project Sponsors Council Staff (IPS). This workshop is focused on ongoing work and will include discussion of concepts that are not at a proposal state.

A June 14 public hearing has been scheduled to take place on Hayden Island that will be focused on Hayden Island project designs and traffic.

## **Integrated Project Sponsors Council Staff Progress Reports**

### **Redesigned Hayden Island Interchange**

Andy Cotugno explained that a workgroup composed of community members, port representatives, and project staff have been meeting regularly to explore the feasibility of modifications to the Hayden Island interchange design to reduce overall footprint and other impacts while preserving functionality. The workgroup's objective is to come to one option for a redesigned interchange. Mr. Cotugno described two primary options: one involving moving the northbound freeway on-ramp and southbound off-ramp connections to Tomahawk Island Drive, the other being a diamond interchange configuration with all on- and off-ramps to/from Tomahawk Island Drive.

PSC members discussed the potential for impacts associated with these options for land use development, existing business operations, North Portland neighborhoods, and freight movement. Mr. Cotugno said that the workgroup has begun to explore concept evaluation criteria. Mr. Hewitt said evaluation of the options will be the responsibility of the IPS to then present to the PSC for consideration. David Bragdon commented that one of these evaluation criteria should be the effect on mainline performance. Steve Horenstein expressed concern about the potential need to complete a Supplemental DEIS if there are major changes. Mr. Hewitt agreed and said that environmental review will be a matter for an expert to evaluate once concepts are narrowed-down.

### **Remove Hayden Island Interchange/Alternative Access**

Ted Rutledge, a consultant for the City of Portland with URS Corporation, outlined four concepts developed for alternative configurations of the Marine Drive interchange, coupled with alternative arterial access to Hayden Island. Mayor Sam Adams said that the purpose of discussing these concepts is to exhaust the options of providing separated access for trucks to and from Marine Drive and separated access to/from Hayden Island. Paul Smith added that URS is looking for options that could be better and more affordable. These concepts are at the schematic level and have not been reviewed for feasibility based on geometry and operations. Options outlined include:

- *Modified freight bypass*
- *Modified Locally Preferred Alternative (LPA) alternative SPUI*
- *Diverging diamond*
- *Braided diverging diamond*

Maps depicting off-island interchange concepts are available online.

Steve Stuart requested a common set of criteria by which to compare these options. Mr. Hewitt responded that CRC staff is fully involved in these concepts and he anticipates a comparison of options and tradeoffs.

Susie Lahsene shared a memo describing Port concerns with respect to the URS/PBOT design options. A copy of this document is available online.

The interchange removal/alternative access options will also be narrowed through workgroup discussions. The evaluation of options will be the responsibility of the IPS to then bring to the PSC for consideration.

## Alternative 10-Lane Bridge

The City of Portland has directed URS Corporation to evaluate options for a bridge design with a reduced number of lanes that also maintains effective performance. URS has been instructed to look at the mainline freeway, collector-distributors, and interchange access. Mr. Rutledge presented initial analysis around modifying the LPA design to accommodate a smaller facility.

URS used a highway capacity manual methodology to analyze peak hour AM southbound traffic conditions in 2030. Observations of this analysis show that peak volumes rise at SR 500 and decline as they reach the south end of the project area. Volumes begin to increase again south of the project area. The graph shows capacity greater than traffic volumes in the project area.

The group discussed assumptions around use of the highway capacity manual methodology and project inputs. PSC members noted that the analysis assumes certain conditions that do not exist in the project area, including the number of through lanes and distances between interchanges. Mr. Rutledge responded that the highway capacity manual methodology does assume certain general conditions and is a convenient and traditional method that was commonly used before other methods were available. He said that the highway capacity manual method was used to get initial results and see if further VISSIM traffic modeling is warranted.

Mr. Hewitt observed that the URS analysis found severe congestion is likely to occur at the Rose Quarter with or without construction of the CRC project. Mr. Horenstein also noted that there is a proposal in the Metro Regional Transportation Plan for work in I-5 from I-405 to the Rose Quarter and asked whether this assumption was built into the analysis. Mr. Rutledge responded that this work assumed current conditions for I-5 south of the project area.

Mr. Rutledge outlined several auxiliary lane reduction ideas for I-5 southbound in Washington. He noted that concepts for reductions in northbound lanes and reconfiguration of the Marine Drive/Hayden Island interchanges were still in-progress. Three concepts presented include:

- *Taper-off SR 500 auxiliary lane along collector-distributor section:* One of the auxiliary lanes that begins at SR 500 in the current design runs across the bridge to Marine Drive. This option would look at tapering-off that lane prior to the bridge.
- *Braid Mill Plain on-ramp and SR 14 off-ramp:* This option focuses on the collector-distributor road and I-5 southbound entrance at Mill Plain, and the SR 14 east exit. The transition area may be able to narrow if the ramps could be braided so the SR 14 exit goes over Mill Plain.
- *Shift Mill Plain entrance taper further to the north:* This option would help accommodate a narrower bridge structure.

Mr. Hewitt reiterated that these are concepts, not yet proposals, identified for merging on and off before the bridge. Concepts will be evaluated in an integrated way through the IPS.

Jeff Hamm requested that performance measures and the number of lanes discussions inform one another.

Tim Leavitt commented that the discussion about number of lanes should be aware of how they affect the opportunity to accommodate future managed lanes.

Katy Brooks commented that one of the limitations of the traffic modeling is related to truck movements and it is critical to include variable conditions for various freight needs. Mayor Adams commented that the project should be looking at how to extend benefits for freight as an evaluative tool.

Mayor Adams commented that Portland has seen benefits from traffic in commercial areas and encouraged the group to think about the positive aspects of taking traffic through downtown Vancouver.

## **Metroscope**

Andy Cotugno provided an update on Metroscope modeling. Metro's run of an updated Metroscope model for its own purposes is underway. Separate model runs for CRC will not proceed until a comparison has been made between these results and the previous Metroscope model used in the current Final EIS. This comparison will include discussion of the assumptions that have gone into the new Metroscope model and whether it makes sense to move forward with additional model runs. Mr. Hewitt confirmed that a work group level of review will continue and an IPS recommendation will be made to PSC.

## **Integrated Project Sponsors Council Staff Work Group Updates**

### **Performance Measures**

Katy Brooks and Andy Cotugno reported that their workgroup has met and is making progress. The workgroup is currently evaluating the results of analysis performed with CRC staff assistance. The work group's focus is on capturing truck and single-occupancy vehicle performance to compare several scenarios: existing conditions, 2030 (no build), 2030 (LPA Phase 1), and 2030 (full build). Several measures have been identified:

- Travel time: Peak hour and off-peak direction and hour.
- Queue length

Ms. Brooks noted that some of these items, such as queue length, will also be useful for the travel demand management (TDM) discussion. She added that one item this evaluation does not address is reliability for freight, which is difficult to measure. A percentile over time is the best available freight reliability measure.

Jeff Hamm inquired about measures for HOV movements. He will attend the performance measurement group's next meeting to discuss further.

### **Managed Lanes/HOV**

Mr. Hamm reported that this workgroup will meet next week and start with creating a comprehensive inventory of managed lane concepts, reviewing CRC work to-date, and looking at alternatives that could be paired with the LPA.

### **Transportation Demand Management**

Matt Ransom reported that the TDM group is currently involved in a benchmarking exercise that compares example facilities. Benchmarking will allow the group to better estimate factors driving various travel mode shares within the region. The workgroup will be looking at issues such as non-system end point parking facilities and technology acceptance.

Mr. Ransom also addressed Steve Stuart's question from a previous PSC meeting regarding use of commuter rail during construction. A 1999 RTC study found that capacity on the existing tracks doesn't exist beyond 2013/14. Commuter rail on this corridor would require additional capacity in the form of parallel tracks and/or additional tracks in the Union Pacific yard.

## **Next workshop**

**Friday, June 11, 2010 | 10:00 a.m. – 12:30 p.m.**

Washington State Department of Transportation, SW Region  
11018 NE 51st Circle  
Vancouver, WA 98682

# IPS CONCEPT #1 OFF-ISLAND ACCESS



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# IPS CONCEPT #2 ON-ISLAND ACCESS



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# REFINED LPA



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## **HAYDEN ISLAND DESIGN GROUP**

### **Hayden Island Interchange – Design Options**

The goal of this design exercise was to develop alternatives to provide access to Hayden Island with a reduction in the amount of structure overhead on Tomahawk Island Drive (TID) and overall footprint of the interchange of the proposed “Locally Preferred Alternative” but with comparable or acceptable functionality. The approach was to develop an alternative focused on maintaining an interchange “On-Island” with I-5 and an interchange “Off-Island” providing access to Hayden Island through one or more arterial bridges and a modified Marine Drive interchange. If any option resulting from this exercise looks promising, further detailed evaluation will be required.

#### **Description:**

**Locally Preferred Alternative Phase 1 (LPA)** – Overlapping split diamond interchange with ramps to/from the north connecting to Jantzen Drive (JD), ramps to/from south connecting to Hayden Island Drive (HID), ramps for Marine Drive to/from north crossing the island, and ramps directly to Marine Drive connecting to Hayden Island Drive. Tomahawk Island Drive has no ramp terminals.

**On-Island Interchange Alternative** – Single-point urban interchange focuses interchange traffic on Tomahawk Island Drive. Ramps to/from the south connect to I-5 south of Marine Drive allowing northbound Marine Drive ramps to connect to I-5 without crossing the Island. Requires inclusion of Marine Drive southbound braided ramp with Victory Blvd. southbound exit. Hayden Island Drive and Jantzen Drive have no ramp terminals. A new arterial bridge adjacent to LRT provides connection from Hayden Island to Expo Rd., continuing south to Victory Blvd. and Kenton, replacing the access to Hayden Island via the Victory Blvd. ramps to I-5.

**Off-Island Interchange Alternative** – Access to/from Hayden Island via an extension of Martin Luther King Blvd. across the North Portland Harbor connecting to Avenue C. Provides separate southbound off-ramps for movements to Hayden Island and movements to westbound Marine Drive. Includes the eastbound Marine Drive to northbound I-5 flyover ramp. Adds an arterial bridge east of I-5 from Jantzen Drive to local street network near Bridgeton.

## HAYDEN ISLAND DESIGN GROUP

### Evaluation Matrix

	Locally Preferred Alternative Phase 1 (LPA)	On-Island Interchange Alternative	Off-Island Interchange Alternative
<b>FOOTPRINT</b>			
I-5 Footprint on Hayden Island	I-5 and its ramps include 21 lanes over TID on 10 structures; and TID drops 14' below grade	I-5 and its ramps involve 9 lanes over Tomahawk Island Drive on 2 structures; 13 lanes over HID on 4 structures; 16 lanes over JD on 6 structures; TID is depressed 8-12' below grade	I-5 involves 11 lanes on 3 structures over TID; a new 5-lane arterial bridge is added across North Portland Harbor to Avenue C; TID drops 6' below grade
Combined width of I-5 mainline and ramp structures over Tomahawk Island Drive	540'	175'	210'

	Locally Preferred Alternative Phase 1 (LPA)	On-Island Interchange Alternative	Off-Island Interchange Alternative
<b>TRAFFIC</b>			
Interchange Spacing	Close interchange spacing is handled by routing Marine Drive ramps to/from the north by bypassing Hayden Island interchange	Close interchange spacing is handled by routing Hayden Island ramps to/from the south by bypassing Marine Drive interchange	Close interchange spacing is handled by removing the Hayden Island Interchange and routing traffic through Marine Drive interchange
Regional Circulation	Regional traffic to Hayden Island is distributed between Hayden Island Drive and Jantzen Drive	Regional traffic to Hayden Island is concentrated on Tomahawk Island Drive	Regional traffic to Hayden Island is through out-of-direction access via Marine Drive Interchange and concentrates traffic on Avenue C
Local Circulation Concept	Tomahawk Island Drive is a local street	Hayden Island Drive and Jantzen Drive are local streets; Adds a new local street from Jantzen Drive to Bridgeton/Expo area	Hayden Island Drive, Jantzen Drive and Tomahawk Island Drive are local streets; adds a new local street from Jantzen Drive to Bridgeton/Expo area

	Locally Preferred Alternative Phase 1 (LPA)	On-Island Interchange Alternative	Off-Island Interchange Alternative
<b>TRAFFIC (continued)</b>			
Freight Access	Marine Drive interchange provides effective freight access	Marine Drive interchange largely unaffected except truck traffic to Marine Drive mixes with traffic to/from Hayden Island on Marine Drive off-ramps	Traffic to/from Hayden Island mixes with truck traffic through Marine Drive interchange except critical truck movements to/from the north on separate ramps; new local bridge east of I-5 mixes Hayden Island traffic with local streets and truck traffic near Jubitz
Bike/Pedestrian Circulation	Pedestrian District west of I-5 is intact; Hayden Island Drive, Tomahawk Island Drive and Jantzen Drive provide access under I-5; regional bike connection from Oregon to Washington provided adjacent to LRT	Pedestrian District west of I-5 is bisected by a high volume Tomahawk Island couplet; Hayden Island Drive, Tomahawk Island Drive and Jantzen Drive provide access under I-5; regional bike connection from Oregon to Washington provided adjacent to LRT	Pedestrian District west of I-5 is impacted by a high volume Avenue C; Hayden Island Drive, Tomahawk Island Drive and Jantzen Drive provide access under I-5; regional bike connection from Oregon to Washington provided adjacent to LRT

	Locally Preferred Alternative Phase 1 (LPA)	On-Island Interchange Alternative	Off-Island Interchange Alternative
<b>IMPACTS</b>			
SuperCenter and other retail impacts	Compatible with short and long-term SuperCenter redevelopment plans	Requires further assessment and refinement to determine compatibility with SuperCenter short and long-term redevelopment plans	Threatens SuperCenter short and long-term redevelopment plans due to indirect I-5 access and high volume traffic on Avenue C; threatens viability of businesses east of I-5 due to indirect I-5 access
Is Safeway displaced?	Yes	Yes	May be partially displaced and indirect I-5 access impacts long-term viability
Likelihood of replacement of full service grocery store	Possible	Maybe	Developer states highly unlikely due to indirect access
Access to properties	Access limits on JD and HID impact businesses	Access limits on TID east and west of I-5 and on JD east and west of I-5 impacts businesses	Access limit on Avenue C may impact possible intersection/residential access at Ave. C and JD
Business displacement adjacent to I-5 on Hayden Island	29	Similar to LPA	Displacements west of I-5 dependent on LRT alignment
Floating Home / Moorage Impacts	Limits impacts to the vicinity of I-5	May have additional displacements for new street connection adjacent to LRT west of I-5	Has additional displacements and impact area at Avenue C; will have additional displacements for new street connection east of I-5

	Locally Preferred Alternative Phase 1 (LPA)	On-Island Interchange Alternative	Off-Island Interchange Alternative
<b>IMPACTS</b> (continued)			
Marine Drive land uses west of I-5	No significant impact	New bridge connection from Hayden Island to Expo Road adds traffic between LRT and Expo	Alignment and expanded footprint to accommodate weave movements west of I-5 impact Expo and <b>would</b> require relocation of Diversified Marine and Ross Island Sand & Gravel
<b>LRT Alignment</b>	Alignment partially elevated adjacent to I-5 with station focused on Tomahawk Island Drive; 14' +/- above adjacent land	Alignment elevated adjacent to I-5 with station near Jantzen Drive; 20' +/- above adjacent land	More flexibility to adjust alignment east and west
<b>Footprint in-water / Biological Assessment</b>	Three new structures in North Portland Harbor	Additional ESA impacts from six new structures in North Portland Harbor	Additional ESA impacts from five new structures in North Portland Harbor
<b>Construction schedule</b>		Overall longer construction duration due to in-water construction	Overall longer construction duration due to in-water construction
<b>Construction Cost</b>		Trending higher but requires further evaluation	Trending higher but requires further evaluation
<b>Hayden Island Plan</b>	Neighborhood retail center east of I-5 needs to be revisited in HI Plan	HI Plan would need to be revisited	HI Plan would need to be revisited

Evaluation of Interchange alternatives and their long-term impacts to the Hayden Island Community - 6-6-10					Peg
Criteria	Sub-Criteria	On-Island	Off-Island	LPA	Brad
General	Overall project footprint	Relatively smaller than LPA, without additional arterial bridge <b>Narrower N of Tomahawk; equal to LPA S of TID. Needs design refinement.</b>	May be smaller than LPA, but need to consider arterial connection <b>Narrower along main I-5 crossing; new 5-lane impact from new bridge; total impact unknown</b>	Huge, feels devastating. Ped, bike, scooter under the freeway on Tomahawk is way too big, not safe.	Tom
	Complexity and mass of project on Island	Still very complex and SPUI requires a wide grade level footprint. <b>Needs more refinement.</b>	Same	Concentrates in one corridor	Victor
	Iconic Value <b>Relatively unknown for all alts; need UDAG</b>	----- Increases # of structures over NPH, a view corridor (-). Needs fewer lanes on TID	Distractingly graceful drawing - could distract from underlying issues <b>Adds new corridor over NPH; negative impact to western view corridor for some HI, Bridgeton residents. Increases green opp'y/amenities pot'l in central island at I-5; may eliminate OS at HID/GC western edge</b>	Doesn't appear to have any iconic value	
Displacements	Residential/Floating Home Community Impacts	Significant JBMI displacements, but likely confined to east end <b>Impact of arterial added to LRT line unknown; appears equal to LPA w/ no net loss/gain. TID/Jantzen intersection moves to east, closer to homes (-)</b>	Highest impact on JBMI arterial will split moorage and prohibit left turn access to western docks - left turn restrictions will restrict direct access to public storage facility <b>Displaces add'l 16 homes at MLK crossing; may decrease permanent displacements at east end of JBMI by 7=net 9 add'l res. displacements. Pot'l increase of 100% in residential displacements at JBMI; eastern floating homes may be permanent displacements rather than temporary. Very negative compared to LPA.</b>	See on-island	
	Commercial/Retail Impacts	Less than LPA, but potential access impacts to waterfront businesses on the south shore - Access to near-freeway development sites restricted by SPUI design requirements - Tomhawk/Avenue A is not a functional local street. <b>Needs design changes to solve these issues.</b>	JB Center will likely be severely impacted & land could be used for other commercial uses - out of direction travel will impact all retail and commercial businesses on the island -DMI will be displaced <b>Lessens direct impact to neighborhood commercial on west and east sides of freeway but access issues to same businesses unknown; can they be successfully served by MLK Bridge?</b>	Lands all traffic from the north on Jantzen, forcing travel through the mall to get to the northwest. Mirror for traffic from the south.	
Hayden Island Plan	Impact on HIP Concepts and Values <b>All alternatives require changes to HIP</b>	Large unfriendly bike/ped area near SPUI - Station and TOD would need to be redesigned - Neighborhood Commercial area burdened with access problems - Pedestrian District west of freeway non-functional - circulation loop broken by relocation of Jantzen Dr <b>TID not island main street; no replacement identified.</b>	Street plan and vehicular circulation significantly different, concentrating traffic on Avenue D - reduced potential western residential footprint - eastside re-development opportunities improved vs LPA <b>Places new bridge infrastructure in center of planned residential.</b>	The notion of Tomahawk as a main street is pretty well shot because of the length of the tunnel under the freeway.	
Implementation Transition	Construction duration	Could be slightly less less than LPA <b>Unknown</b>	Probably less than LPA in time and total impact <b>Unknown</b>	Longest of the three	
	Short-term impact on Services	We're as screwed as with the LPA <b>Unknown</b>	Smaller footprint could reduce impact on adjacent businesses	Huge negative short term impact	
Access/Mobility (Vehicle, Bike/Ped/Scooter, Transit)	Vehicle Access/Mobility	Circulation loop broken - commercial area burdened with access issues - nice tie to Bridgeton neighborhood <b>Removes freeway traffic from HID and Jantzen Ave + . Design needs to include planned on-island street improvements; all of HID and Jantzen Ave.</b>	Mall access probable fatal flaw - more out of direction travel - great Bridgeton/Marine Dr, east connection <b>Probably forfeits on-island street improvements including HID, Jantzen and TID [-].</b>	Much north/south crossing of the island through the mall because of landing on the edges	
	Bike-Ped Access/Mobility	Need more info <b>Replaces below grade TID with at grade TID with multiple pedestrian/bike crossings through busy streets; corresponding improvements on HI &amp; Jantzen unknown.</b>	Need more info <b>Requires new on-island ped/bike plan west of I-5</b>	Probably not good because of the huge width	
	Transit Access	Improved vs LPA	Significantly worse than LPA		
Benefits/Land Use and Development	Potential for Improved Amenities	Improved street grid unknown compared to LPA; if less, (-). Equal to off-island.	Increases available land around I-5 for amenities, green areas; improved street grid unknown. If less (-). Equal to on-island.		
	Potential for new commercial development	Worse, East - worse, west vs LPA <b>Better than off-island. Need refinement of street alignments to open areas for development</b>	Better East, worse West vs LPA; <b>worse than on-island</b>		
	Potential for Residential development	Worsened on the west by pushing commercial/retail development away from the freeway [need more info on BH comment. Do you mean more vital business equals more residences?]; PJ thinks about equal to LPA. <b>Victor says delete</b>	Worsened on the West by arterial footprint and perceived out-of-direction access; <b>western residential now w/ inbetween freeway and arterial (-). Better for a quieter eastside</b>		

You had asked for an initial response to the three alternatives on the table for the Hayden Island Interchange. The following constitutes a summary of the SuperCenter's initial reactions to the three alternatives. The alternatives under consideration are the locally preferred alternative ('LPA'), draft concept for the off-island access dated June 3, 2010 ('Off-Island Interchange'), and the draft concept on on-island access dated June 3, 2010 ('On-Island Interchange').

Please understand that these comments are rendered quickly and can only be considered as an initial reaction to plans presented for the first time less than 24 hours ago. Further, these comments must be considered in light of the fact that there is no established criteria for evaluation of the alternatives. Thus, no more than 'shoot from the hip' response can be given. These responses focus upon the respective alternative's impacts upon the SuperCenter. Finally these comments must be considered in light of the purely conceptual graphics that exist. Details about transportation safety, capacity, compliance with state, federal, and local regulations, and basic geometry simply have not been developed at this point. Thus, comments can only be made at the most global level.

The Jantzen Beach SuperCenter has been seeking redevelopment of its site for many years and is in current conversations with tenants, the City of Portland, and others about redevelopment. In fact, the Hayden Island Plan as adopted by the City Council is a reflection of those conversations. Acting in reliance upon the Hayden Island Plan and its underpinnings, including the LPA, expectations about redevelopment on the site have been formed. Thus, alternatives to the LPA suffer from a basic problem from the SuperCenter perspective. That problem is that expectations have developed community-wide with respect to the LPA and the Hayden Island Plan and investments and planning have taken place in reliance upon those planning efforts.

Nonetheless, the following comments can be rendered about the three alternatives.

A. Impact on Hayden Island Plan

**LPA**—Consistent with the Hayden Island Plan.

**On-Island Interchange**—Inconsistent with Hayden Island Plan.

**Off-Island Interchange**—Inconsistent with Hayden Island Plan.

B. Impact on Access

**LPA**—Retains appropriate access to serve commercial and mixed-use redevelopment of the shopping center site.

**On-Island Interchange**—Retains on-island access, however, concentrates traffic in locations inconsistent with redevelopment of the shopping center and mixed-use development.



**Off-Island Interchange**—Access is unacceptable for redevelopment of a retail center and mixed-use development.

C. Building Orientation

**LPA**—Retains building orientation toward interchange and freeway to allow appropriate information to motorists about available services.

**On-Island Interchange**—Due to mobility restrictions on the east side of the shopping center, building orientation will no longer be oriented appropriately.

**Off-Island Interchange**—A lack of detailed description of on-island circulation makes a response difficult, however, it appears as if building orientation no longer would be appropriate.

D. Site Circulation

**LPA**—Appropriate on-site circulation distributes traffic appropriately across the site leaving circulation with an appropriate and understandable hierarchy of local roads. On-site circulation avoids concentration of traffic in inappropriate locations.

**On-Island Interchange**—The couplet concentrates traffic in inappropriate locations for redevelopment of the site and requires significant out of direction and irrational travel patterns on the site.

**Off-Island Interchange**—An on-site circulation plan has not been offered, however, it does not appear that appropriate distribution of traffic will be possible because of the concentration of traffic of the west island bridge. The alternative also suffers from a significant loading of noncommercial (resident) traffic being funneled through the commercial site.

E. Transportation Capacity

**LPA**—Inadequate information exists to understand transportation capacity on roadways and intersections on the SuperCenter site.

**On-Island Interchange**—Inadequate information exists to understand transportation capacity on roadways and intersections on the SuperCenter site.

**Off-Island Interchange**—Inadequate information exists to understand transportation capacity on roadways and intersections on the SuperCenter site.

F. Impact on Redevelopment

**LPA**—Allows for immediate redevelopment of the site to achieve the objectives of the Hayden Island Plan.

**On-Island Interchange**—Eliminates opportunities to redevelop the site and precludes opportunities to bring new tenants, including grocery tenants to the site.

**Off-Island Interchange**—Eliminates opportunities to redevelop the site and precludes opportunities to bring new tenants, including grocery tenants to the site.

**DRAFT CRC Interchange Alternatives Evaluation**  
**City of Portland**  
**June 4, 2010**

	LPA Refinement Option	On-Island Interchange Island Couplet with Tomahawk SPUI	Off-Island Interchange Modified Freight Bypass	Part On-Island/Part Off-Island Interchange Marine Drive-Hayden Island Hybrid
<i>Hayden Island Plan Vision</i>				
<i>Island Community</i>	<ul style="list-style-type: none"> <li>Island Community emphasized west of I-5 on Tomahawk Island Drive (TID) with the transit station as the focal point.</li> <li>Island Community continuity is compromised by large freeway footprint. Although this north-south freeway barrier exists today, the LPA adds much more structure and the intended connection provided by TID is below visual grade.</li> </ul>	<ul style="list-style-type: none"> <li>Island Community continuity is compromised by both east-west barrier (freeway) and north-south barrier (Tomahawk Island Drive 500' east and west of the freeway).</li> <li>Shopping center land uses are emphasized north and south of TID on the west side of I-5.</li> <li>Transit station is the focal point in the southwest quadrant of I-5 and is located south of TID.</li> <li>East of I-5, neighborhood retail land uses are oriented in the northeast quadrant along Hayden Island Drive and in the southeast quadrant along Jantzen Drive.</li> </ul>	<ul style="list-style-type: none"> <li>On-island continuity is enhanced due to the small freeway footprint and three east-west local street connections are feasible and nearly at-grade.</li> <li>On the east side of I-5, the local bridge connects the island to other communities.</li> <li>Island Community emphasized east and west of I-5 on Tomahawk Island Drive. The transit station is the focal point on the west side of I-5.</li> <li>The local bridge connection and neighborhood retail land uses at intersection of TID and Jantzen Beach Drive are focal points.</li> <li></li> <li></li> </ul>	<ul style="list-style-type: none"> <li>On-island continuity is enhanced due to the smaller footprint and three east-west local street connect and are nearly at-grade.</li> <li>Ramps structures to/from Vancouver cross the full length of Hayden Island.</li> <li>Island Community emphasized east and west of I-5 on Tomahawk Island Drive.</li> <li>The transit station is the focal point on the west side of I-5.</li> <li>East of I-5, the local bridge and neighborhood retail land uses along TID and Hayden Island Drive are focal points.</li> </ul>

<p><i>Getting Around</i></p>	<ul style="list-style-type: none"> <li>• TID is the focal point of the local street network.</li> <li>• Jantzen Beach Drive and Hayden Island Drive act as freeway access streets, enabling TID to accommodate local traffic and pedestrian oriented accessible land uses.</li> </ul>	<ul style="list-style-type: none"> <li>• TID is the primary freeway access street and focal point.</li> <li>• The street divides the shopping center and east neighborhood commercial area north/south.</li> <li>• Jantzen Beach and Hayden Island drives become the local pedestrian streets.</li> <li>• The bridge connection provided as part of the LRT bridge across the N. Portland Harbor to Jantzen Beach Drive enables neighborhood to neighborhood connections from HI to Bridgeton and Kenton, potential episodic conflicts with Expo and PIR event traffic.</li> </ul>	<ul style="list-style-type: none"> <li>• TID is the focal point of the local street network.</li> <li>• Jantzen Beach Drive and Hayden Island Drive act as complimentary local access streets. On-off island access is oriented to Avenue C in the Jantzen Beach Shopping Center.</li> <li>• Arterial bridge could create an access route for trucks to access industrial uses on west Hayden Island.</li> <li>• Arterial bridge in this location lengthens distance local traffic from east Hayden Island travels to get on/off island.</li> <li>• East local bridge connection at Jantzen Beach Drive enables neighborhood to neighborhood connections from HI to Bridgeton and Kenton.</li> </ul>	<ul style="list-style-type: none"> <li>• TID is the focal point of the local street network.</li> <li>• Jantzen Beach Drive becomes a freeway access street for Washington traffic.</li> <li>• Avenue C in the Jantzen Beach Shopping Center becomes the Marine Drive access street for Portland traffic. Hayden Island Drive acts as complimentary local access street to TID.</li> <li>• Arterial bridge could create an access route for trucks to access industrial uses on west Hayden Island.</li> <li>• Arterial bridge in this location lengthens distance local traffic from east Hayden Island travels to get on/off island</li> <li>• East local bridge connection to TID enables neighborhood to neighborhood connections from HI to Bridgeton and Kenton.</li> <li>•</li> </ul>
<p><i>Environment and Open Space</i></p>	<ul style="list-style-type: none"> <li>• Thunderbird Hotel site planned for park use, access restricted by IAMP.</li> <li>• Transit plaza integrated with local street network adjacent to TID.</li> </ul>	<ul style="list-style-type: none"> <li>• Thunderbird Hotel site planned for park use, fully accessible from adjacent local streets.</li> <li>• Transit plaza connected to local street network in southwest quadrant.</li> <li>• Median greenspace in TID freeway access street west of I-5 has potential for stormwater management.</li> </ul>	<ul style="list-style-type: none"> <li>• Thunderbird Hotel site planned for park use, fully accessible from adjacent local streets.</li> <li>• Transit plaza integrated with local street network adjacent to TID.</li> </ul>	<ul style="list-style-type: none"> <li>• Thunderbird Hotel site planned for park use, fully accessible from adjacent local streets.</li> <li>• Transit plaza integrated with local street network adjacent to TID</li> </ul>
<p><i>Hayden Island Plan Concept</i></p>				
<p><i>Residential</i></p>	<ul style="list-style-type: none"> <li>• Allows residential development to occur in local street network easily accessible to LRT.</li> <li>• Impacts to moorage residents focused near freeway.</li> </ul>	<ul style="list-style-type: none"> <li>• Allows residential development to occur in isolated local street network in southwest quadrant ; easily accessible to LRT.</li> <li>• Impacts to moorage residents focused near freeway.</li> </ul>	<ul style="list-style-type: none"> <li>• Allows greatest flexibility for residential development to occur in local street network and easily accessible to LRT.</li> <li>• Impacts to moorage residents spread to West Bridge location and present circulation and access issues to address.</li> </ul>	<ul style="list-style-type: none"> <li>• Allows residential development to occur in local street network easily accessible to LRT</li> <li>• Impacts to moorage residents spread to West Bridge location and present circulation and access issues to address.</li> </ul>

<i>Transit Oriented Development</i>	<ul style="list-style-type: none"> <li>• Allows potential for TOD in contiguous local street network adjacent to station. Station is focal point over TID.</li> <li>• TOD less viable east of I-5 due to widest footprint of I-5 mainline and ramps.</li> </ul>	<ul style="list-style-type: none"> <li>• Allows potential for TOD in limited local street network adjacent to station. Station focal point potential may be diminished due to limited access and visibility to station area</li> <li>• TOD less viable east of I-5 due to footprint of I-5 mainline and ramps traffic landing on TID..</li> </ul>	<ul style="list-style-type: none"> <li>• Allows optimum potential for TOD in contiguous local street network adjacent to station. Station is focal point for broader area than LPA.</li> <li>• TOD more viable east of I-5 due to minimal footprint of I-5 mainline.</li> </ul>	<ul style="list-style-type: none"> <li>• Allows potential for TOD in contiguous local street network adjacent to station. Station is focal point over TID.</li> <li>• TOD may be viable east of I-5 due to TID providing low traffic street leading to LRT station.</li> </ul>
<i>Regional Retail</i>	<ul style="list-style-type: none"> <li>• Regional retail is visible and accessible from freeway on Hayden Island.</li> <li>• Short distance from freeway ramp terminals to shopping center.</li> </ul>	<ul style="list-style-type: none"> <li>• Regional retail is visible and accessible from freeway on Hayden Island.</li> <li>• Shortest distance and most direct from freeway ramp terminals to shopping center.</li> </ul>	<ul style="list-style-type: none"> <li>• Regional retail is visible from freeway on Hayden Island and accessible via Marine MLK bridge to island.</li> <li>• Longest distance from freeway to shopping center.</li> </ul>	<ul style="list-style-type: none"> <li>• Regional retail is visible and accessible from freeway for Washington origin trips.</li> <li>• Regional retail is accessible via MLK and arterial bridge to island for Portland origin trips.</li> </ul>
<i>Neighborhood Retail Center</i>	<ul style="list-style-type: none"> <li>• Neighborhood retail center area compromised by IAMP access restrictions and wide footprint of I-5 mainline and ramps.</li> </ul>	<ul style="list-style-type: none"> <li>• Neighborhood retail center compromised by IAMP access restrictions. <ul style="list-style-type: none"> <li>• East of the freeway the loss of land south of TID is reduced and the land north of TID is reclaimed from the current loop ramp area.</li> <li>•</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Neighborhood retail center provided with full access from adjacent local streets, local bridge access to Bridgeton and mainland neighborhoods.</li> </ul>	<ul style="list-style-type: none"> <li>• Neighborhood retail center provided with access from adjacent local streets, some access limits may apply on Jantzen Avenue.</li> <li>• Development area focused at intersection of TID and Jantzen Beach Drive.</li> <li>• Local bridge access to Bridgeton and mainland neighborhoods adds to visibility and accessibility.</li> </ul>
<i>Industrial</i>	<ul style="list-style-type: none"> <li>• Provides access to industrial uses in western plan area via Jantzen Beach Drive and Hayden Island Drive, generally avoids TID.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides access to industrial uses in western plan area via TID through shopping center to Avenue C to Hayden Island Drive.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides shortest distance to access to industrial uses in western plan area via Avenue C in shopping center to Hayden Island Drive.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides shortest distance to access to industrial uses in western plan area from Portland via Avenue C in shopping center to Hayden Island Drive.</li> <li>• Industrial access from Washington will have to travel via Jantzen Beach Drive to Hayden Island Drive.</li> </ul>
Hayden Island Street Plan				

<i>Hayden Island Drive and Jantzen Avenue</i>	<ul style="list-style-type: none"> <li>Developed as part of project.</li> <li>Large streets; serve as ramp access and island collectors.</li> </ul>	<ul style="list-style-type: none"> <li>Project development status unknown.</li> <li>Become more local distribution minor collectors.</li> </ul>	<ul style="list-style-type: none"> <li>Project development status unknown.</li> <li>Likely to continue as significant collectors and traffic streets.</li> </ul>	<ul style="list-style-type: none"> <li>Project development status unknown.</li> <li>Jantzen becomes freeway access street.</li> </ul>
<i>Avenue B – core access street</i>	<ul style="list-style-type: none"> <li>Developed as part of project; completes access loop on west side.</li> </ul>	<ul style="list-style-type: none"> <li>Likely developed as part of project; key access street connecting Jantzen and Hayden Island.</li> </ul>	<ul style="list-style-type: none"> <li>Core access function may shift to Avenue C and will likely be developed as part of project.</li> </ul>	<ul style="list-style-type: none"> <li>Core access function may shift to Avenue C and will likely be developed as part of project.</li> </ul>
<i>Tomahawk Island Drive</i>	<ul style="list-style-type: none"> <li>Functions as local connector/main street.</li> <li>TID is depressed under I-5 and intermittently covered by bridge/ramp structures for over 600' creating tunnel effect and greatest east to west separation of land uses.</li> <li>Land use access restricted by grades of TID .</li> </ul>	<ul style="list-style-type: none"> <li>Functions as major freeway access street - proposed as couplet through the shopping center.</li> <li>TID is at-grade and is covered by I-5 mainline only, greatly reducing tunnel effect. Separation of land uses east to west for width of I-5 mainline and ramp terminals (500'?).</li> <li>IAMP access restrictions to land uses from TID either side of I-5.</li> </ul>	<ul style="list-style-type: none"> <li>Functions as local connector/main street.</li> <li>TID covered by I-5 mainline only greatly reducing tunnel effect. Separation of land uses east to west minimized to width of I-5 mainline (150'?).</li> <li>No restrictions to land use access either side of freeway.</li> </ul>	<ul style="list-style-type: none"> <li>TID coverage by I-5 reduced compared to LPA, reducing tunnel effect.</li> <li>Local “main street” with access points; elevation of TID may improve compared to LPA.</li> </ul>
<i>Street Connectivity and Network Connectivity</i>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>
<i>Pedestrian and Bicycle Systems and Routes</i>	<ul style="list-style-type: none"> <li>TID, Jantzen and Hayden Is. Drive provide local pedestrian and bicycle access.</li> <li>Pedestrian District is intact west of I-5.</li> </ul>	<ul style="list-style-type: none"> <li>Tomahawk Island Drive may be a high volume couplet and possibly difficult to cross for pedestrians and may impact Pedestrian District.</li> </ul>	<ul style="list-style-type: none"> <li>TID, Jantzen and Hayden Is. Drive provide local pedestrian and bicycle access.</li> <li>Pedestrian District is intact west of I-5.</li> </ul>	<ul style="list-style-type: none"> <li>TID, Jantzen and Hayden Is. Drive provide local pedestrian and bicycle access.</li> <li>Pedestrian District is intact west of I-5.</li> </ul>
<b>Hayden Island Plan Implementation</b>				
<i>Comp Plan and Zoning Map</i>	<ul style="list-style-type: none"> <li>No changes needed.</li> </ul>	<ul style="list-style-type: none"> <li>Likely no changes needed.</li> </ul>	<ul style="list-style-type: none"> <li>TBD - changes may suggest consideration of designations west of Avenue C and other areas.</li> </ul>	<ul style="list-style-type: none"> <li>TBD - changes may suggest consideration of designations west of Avenue C and other areas.</li> </ul>

<i>Zoning Code</i>	<ul style="list-style-type: none"> <li>No changes needed.</li> </ul>	<ul style="list-style-type: none"> <li>TBD - possible revisions to plan district to address changes in access, street functions and development orientation.</li> </ul>	<ul style="list-style-type: none"> <li>TBD - possible revisions to plan district to address changes in access, street functions and development orientation.</li> </ul>	<ul style="list-style-type: none"> <li>TBD - possible revisions to plan district to address changes in access, street functions and development orientation.</li> </ul>
<b>Other Considerations</b>				
<i>Freight Mobility and Truck Access at Marine Drive Interchange</i>	<ul style="list-style-type: none"> <li>Marine Drive interchange designed for freight mobility function.</li> </ul>	<ul style="list-style-type: none"> <li>Marine Drive interchange designed for freight mobility function.</li> </ul>	<ul style="list-style-type: none"> <li>Marine Drive interchange provides access to both industrial areas and Hayden Island.</li> <li>Although intended by design to separate these functions ramp congestion and weaving conflicts may occur.</li> </ul>	<ul style="list-style-type: none"> <li>Marine Drive interchange provides access to industrial areas and for south based connections to Hayden Island to/from I-5 and MLK.</li> </ul>
<i>Footprint Size and Right-of-Way Consumption</i>	<ul style="list-style-type: none"> <li>Large freeway and ramp footprint on Hayden Island.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces freeway footprint from LPA.</li> </ul>	<ul style="list-style-type: none"> <li>Least freeway footprint on Hayden Island but increases right-of-way in Marine Drive vicinity and area of arterial bridge crossing.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces freeway footprint on Hayden Island but increases right-of-way in Marine Drive vicinity and area of arterial bridge crossing.</li> </ul>
<i>Harbor Bridges</i>	<ul style="list-style-type: none"> <li>Consolidates impacts around freeway mainline</li> </ul>	<ul style="list-style-type: none"> <li>Consolidates impacts around freeway mainline</li> </ul>	<ul style="list-style-type: none"> <li>Spreads impacts in broader area</li> </ul>	<ul style="list-style-type: none"> <li>Spreads impacts in broader area.</li> </ul>
<i>Interchange Area Management Plan</i>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>	<ul style="list-style-type: none"> <li>TBD</li> </ul>

**EVALUATION CRITERIA FOR I-5 INTERCHANGES AT MARINE DRIVE AND HAYDEN ISLAND  
INPUT FROM PORT OF PORTLAND**

Criteria	Measurement	LPA Phase I	On-Island Option	Off-Island Option
Intersection Traffic Operations (1)	Level of service, average delay, v/c ratio			
	I-5/Marine Drive	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	I-5/Tomahawk Island Drive	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Marine Drive/ Force Avenue	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Accommodation of weekend peaks	Separation of weekend retail peak from special events at Expo Center and/or PIR	Separation of weekend retail peak from special events at Expo Center and/or PIR	Combined weekend peak traffic activity when special events occur
Ramp Design	Weaving distances compared to HDM	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Number of lanes needed to/from I-5 to the north	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Speed at curves	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
Ramp Operations	Level of service, average delay, v/c ratio			
	Marine Drive to I-5 NB	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Marine Drive to I-5 SB	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Potential for spillback into arterial intersections	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Potential for spillback to I-5 mainline	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
Road Design	Number of curves and speeds on Marine Drive (Force to I-5)			
	Eastbound	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Westbound	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Number of signalized intersections – T-6 to I-5			
	Eastbound	2 signals	2 signals	3 signals
Westbound	2 signals	2 signals	2 signals	
	Consistency with FHWA guidance for NHS facility	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team



Criteria	Measurement	LPA Phase I	On-Island Option	Off-Island Option
Separation of Primary Traffic Movements	By direction of traffic			
	EB Marine Drive to NB I-5	No separate ramp, mixes with other Marine Drive traffic	Flyover provided	Flyover provided
	SB I-5 to WB Marine Drive	Direct movement with separate ramp	Weaves with Hayden Island SB on-ramp	Joint ramp with Hayden Island traffic
	Hayden Island to NB I-5	Direct movement with separate ramp	Direct movement with separate ramp	Mixes with industrial traffic to SB I-5 and EB MLK
	Logical, clear and intuitive traffic movement through interchange area	Logical	Logical	MLK movement to Hayden Island requires vehicle to be on the left side to go right. Being in the right lane seems more natural.
Freeway Mainline	Number of lanes required for reasonably safe and effective traffic operations			
	North Portland Harbor	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	On Hayden Island Columbia River Crossing	Needs input from traffic team Needs input from traffic team	Needs input from traffic team Needs input from traffic team	Needs input from traffic team Needs input from traffic team
Safety	Number of sub-standard decision points entering/exiting I-5	Needs input from traffic team	Needs input from traffic team	Needs input from traffic team
	Difficulty in providing clear signage	Less complex	Less complex	More complex
	Ease of wayfinding to/from Rivergate, T-5 and T-6, potential for driver confusion	Less difficult, 2 decision points from SB I-5 to WB Marine Drive	Less difficult, 2 decision points from SB I-5 to WB Marine Drive	More difficult, 3 quick decision points from SB I-5 to WB Marine Drive (~ 1,200 feet)
Wetlands	Estimated acres that could be impacted	No impact	Potentially no impact	Greater potential for impact due to need to use Expo Road to get between Marine Drive to the west and Hayden Island
Feasibility of Future North Portland Harbor Bridge Crossings	Number of piers in water	Potentially more viable to permit	Potentially more viable to permit	Potentially less viable to permit

(1) Operations analysis must include full build-out of Rivergate and intensification of T-6 as per data previously provided to CRC staff.

NOTE: More technical evaluation is needed for On-island and Off-island access alternatives to be able to compare quantitatively more completely the differences from LPA phase 1. This matrix does not encompass all criteria for which these alternatives will be evaluated. The criteria and values below are qualitative at this time to help the Hayden Island Design Group, IPS, and PSC determine if more evaluation is needed.

	On-island access	Off-island access
<b>1 Parcel Impact</b>		
<i>Business displacements</i>	increases impact to the east of the interchange (old Zupan's, fire station, Columbia Crossing moorage); increases impact to west of interchange through supercenter mall (Target	very likely reduction on west side of highway, increase in moorage impact to Columbia Crossing, and Pier 99; increase in impact to Expo (displacement of building), RISG, DMI
<i>Residential displacements</i>	increased impact to townhouses south of TI and homes on Jantzen Beach Ave. and TI east of Jantzen Beach Ave.	increased impacts to JBMI (about 17 additional homes)
<i>Parcel access and circulation</i>	access restricted to Jantzen Drive (North of Tomahawk Island Drive) as well as Avenue A	access challenges for JBMI, majority of island traffic required to circulate through mall area
<b>2 Natural and Community Resources</b>		
<i>Piers/Construction in the water Section 4(f) (Parks)</i>	more piers - 3 additional bridges in NPH Delta Park sliver impact NW edge of park	more piers - 3 additional bridges in NPH increase in 40-mile Loop Trail impact (likely no longer de minimis); potentially small impact to Delta Park; greater impact to historic levee
<i>Historical</i>	no change	higher impact to historic levee
<i>Archeology</i>	little change	slightly higher - more earth moving, foundations
<i>Stormwater treatment options</i>	little change	potentially requires add'l treatment locations
<i>Wetland impacts</i>	no change	flyover potentially impacts wetland buffer
<i>Environmental justice</i>	little change	new displacements increases potential for impacts to EJ residents
<i>Community cohesion</i>	Similar - TI Drive would no longer be Hayden Island community's Main Street, and LRT station would not be so centrally located. Lower volume community roads would be Hayden Island and Jantzen Drive	Worse - splits the floating home community into more pieces; much more traffic adjacent to manufactured home community on N. Hayden Island Drive
<i>Endangered Species</i>	Greater hydroacoustic impacts with additional in-water structures	Greater hydroacoustic impacts with additional in-water structures
<b>3 Impacts to Community Plans</b>		
<i>MD stakeholders</i>	added local access	complete revision
<i>Hayden Island neighborhood</i>	complete revision	complete revision
<b>4 Constructability</b>		
<i>In-water duration</i>	Additional ESA impacts - potential to be 2x as long in the water	Additional ESA impacts - potential to be 1.5x as long in the water
<i>phasing complexity</i>	similar to LPA	similar to LPA
<b>5 Geometry</b>		
<i>Safety</i>	introduces weave on SB CD	Introduces several weaving sections including across East Bridge in northbound direction just prior to traffic signal
<i>Standards</i>	Traffic evaluation needed to further refine design with respect to access location and lane configuration. Some exceptions and access spacing deviations will be required.	Traffic evaluation needed to further refine design with respect to access location and lane configuration. Some exceptions and access spacing deviations will be required.
<i>truck accommodation</i>	forces trucks from I-5 Southbound to weave across local traffic on SB CD	Introduces several weaving sections - needs traffic analysis
<b>6 Traffic impacts</b>		
<i>Noise</i>	slightly higher due to local road connection nearer to floating homes.	slightly worse - source of noise on two sides of floating homes
<i>Air quality</i>	SPUI could become new hotspot. Violations are unlikely.	little change
<i>traffic movement restrictions</i>	forced left; access to/from Tomahawk Island Drive may need additional turn restrictions (TBD - traffic analysis). Victory/Denver northbound traffic forced to use local bridge due to combined off-ramp with Marine Drive braided with Victory/Denver on-ramp	HI to and from MD to the west forced out of direction, Victory/Denver northbound traffic and potentially southbound traffic (pending southbound weaving analysis) are forced to use local bridge due to combined off-ramp with Marine Drive braided with Victory/Denver on-ramp
<i>operations</i>	more delay, worse HI operations at SPUI and east of interchange on TI at Jantzen Drive and Jantzen Beach Ave.- additional lanes/turn restrictions may be required specifically left-turn at Jantzen Drive due to queuing backing into SPUI), sb weave on CD?	more delay, worse HI operations, HI out of direction travel, worse weaving operations eastbound/westbound for truck and auto traffic, new bridgeton roadway network would need additional lanes to handle east HI bridge volumes.
<i>emergency response time</i>	same as LPA	longer time to east side, shorter for west side
<b>7 Highway Policies</b>		
<i>FHWA</i>	same as LPA	same as LPA
<i>Oregon Highway Plan</i>		
<i>Mobility</i>	TBD	TBD
<i>Access spacing</i>	HI is worse than LPA, MD is no change	HI is better than LPA, MD is worse
<i>Rail Safety</i>	same as LPA	same as LPA
<b>8 Bike/Ped access and connectivity</b>		
	lower traffic volume streets are the outer roads on island, bike/ped access through the core of the island will be a higher volume traffic street that serves as the interchange ramp terminal. Limits of HI streets to be improved by the project TBD.	no change for HI, impact on MD with 40-Mile Loop Trail. Limits of HI streets to be improved by the project TBD.
<b>9 LRT impacts</b>		
	keeps rail between highway and ramp, forces station to south half of island, adds to travel time	provides flexibility for station location on island. Could add travel time.
<b>10 Cost</b>		
	more expensive	more expensive
<b>11 Other Considerations</b>		
<i>Risk for supplemental EIS</i>	low	high
<i>Risk for BO delay</i>	high	high
<i>Risk for ROD delay</i>	high	high
<i>Temporary construction impacts</i>	higher on HI to east	higher for JBMI and for shopping center to the west around Home Depot / Farr Avenue

To: CRC Project Sponsors Council  
From: Andy Cotugno, Metro  
Re.: Metroscope analysis  
Date: June 9, 2010

The question has been posed regarding whether to expand the analysis completed by the CRC project on the potential for the project having an unintended consequence of inducing growth. Such an analysis would employ the Metroscope land use allocation model for the 7-County region maintained by Metro. The model provides a basis for forecasting where market trends would tend to drive household and employment growth taking into account changing demographic and economic profiles, local zoning and investment decisions, changes over time in accessibility based upon implementing long range transportation plans and the market feasibility of different types of commercial and residential development. Metro has recently completed a Metroscope analysis incorporating updated decisions related to Urban Reserves, future UGB expansions, changes in zoning and investment plans and the newly adopted Regional Transportation plan. This framework provides a platform upon which to test several scenarios relating to the CRC project to better understand the potential for growth inducing effects. The approach that holds constant all other variables around the region would provide the ability to understand what condition these market forces would produce regardless and isolate the effects of the change that the CRC project would produce.

Observations about the updated Metro forecasts:

- In the overall 4 county region in 2030, households are projected to increase by almost 5% compared to the previous CRC forecasts, but employment in the 4 county region is projected to decrease by almost 16%.
- Other than the City of Portland, none of the three Oregon counties are forecast to be on track to meet their employment goals. Compared to the previous CRC forecasts for 2030, regional employment is projected to be down by 15%; Clark County by 18%; Washington County by 24%; and Clackamas County by 26%. Portland is projected to be lower by approximately .5%.
- Compared to the previous CRC forecasts for 2030, household growth is projected to increase by approximately 7% in Oregon and to decrease by about 2.5% in Clark County. Compared to the base year of 2005, this means that by 2030 the Tri-County area in Oregon would increase by 53% rather than 43% and Clark County would increase by 63% rather than 67%.
- Although the jobs/housing balance improves throughout the region from 2005 to 2030, compared to the previous CRC 2030 forecast, the jobs/housing balance is worse throughout the region.

The Integrated Project Staff has recommended that we should run Metroscope with the following understanding:

- Metroscope results would be used only to compare alternative Metroscope scenarios. They cannot be used to compare to previous EIS runs, as Metroscope is used primarily to inform land-use impacts.
- A workgroup should be formed to ensure consistency of the travel networks on both sides of the river.

- Use Metroscope to inform how the CRC project as currently proposed would affect the location of jobs and housing in the project corridor and the region, and if so, to what extent?
- Determine if the difference in land use allocations informs the conversation regarding the number of lanes.
- Have the IPS Metroscope workgroup be responsible for preparing the final report of this work.

To carry out the analysis, the majority recommendation of the Integrated Project Staff is to base the analysis of the following scenarios:

1. Scenario 1: No-Build.  
To what degree would the access constraint of the I-5/Columbia River Crossing bottleneck limit household and employment growth?
2. Scenario 2: Full LPA with 12-lanes, inclusion of the Marine Drive northbound flyover and southbound braided ramp, LRT to Clark College and no tolls.  
To what degree would the improvement in accessibility have a growth inducing effect?
3. Scenario 3: Phase 1 LPA with 10-lanes, no flyover or braided ramp, LRT to Clark College and DEIS level tolls.  
To what degree would the tolls have a mitigating effect and dampen the growth inducing effects of the improvement in accessibility?

There are many project variations that could also be modeled but it is recommended that these three options bracket the range of possibility and other design changes would be marginally different than Scenario 3. However, two other scenarios were also considered:

4. Scenario 4: Scenario 2 – Full 12-lane LPA - but with tolls.  
To what degree would a 12-lane project with tolls have a growth inducing effect beyond a 10-lane project with tolls? Note: This was the minority recommendation of the Integrated Project Staff for Scenario 3 in lieu of the Scenario 3 described above.
5. Scenario 5: Scenario 3 – Phase 1 10-lane LPA – without tolls.  
To what degree would the tolls have a mitigating effect and dampen the growth inducing effects of the improvement in accessibility (but without intermixing with the results the effect of 12-lanes along with the effect of tolls)?

Since the level of congestion on the I-5 bridge with 10 vs. 12-lanes is very similar, there would be a marginal difference from a Metroscope modeling exercise of these two scenarios. In other words, 10 vs. 12-lanes with tolls will produce very similar results and 10 vs. 12-lanes without tolls will produce very similar results.

An additional issue arose through these conversations. It is related to the broader issue that the new forecasts suggest the region is not on track to meet its previous employment target. The following recommendation resulted:

- There should be a bi-state and regional conversation regarding how to meet the region's overall employment goals, as Metroscope forecasts that regional employment will be 16% lower in the future than previously estimated. This would be an effort that extends beyond the scope and time frame of the CRC project.



**Public Comments Addressed to  
CRC Project Sponsors Council  
May 14, 2010 – June 10, 2010**

## Hines, Maurice

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**From:** joeyjenna2@yahoo.com  
**Sent:** Monday, May 17, 2010 4:59 PM  
**To:** Columbia River Crossing  
**Subject:** Comment for Project Sponsors Council

**Categories:** Orange Category

From: Joey Jensen  
E-Mail: joeyjenna2@yahoo.com  
Comment or Question:

I support a new basic low cost bridge with additional lanes for general traffic.

I OBJECT TO ANY TYPE OF TOLLING!!!!

All transportation money should go to building roads and bridges for cars & trucks....NOT MASS TRANSIT!!!!!! Unless of course you have plenty of money.

## Hines, Maurice

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**From:** ALOHAELECTRIC@GMAIL.COM  
**Sent:** Tuesday, May 18, 2010 5:37 AM  
**To:** Columbia River Crossing  
**Subject:** Comment for Project Sponsors Council

**Categories:** Orange Category

From: RON FULCHER  
E-Mail: ALOHAELECTRIC@GMAIL.COM  
Comment or Question:

I AM TOTALLY OPPOSED TO A RECENT PROPOSAL TO ADD A 5 LANE BRIDGE EXTENSION OF MLK TO HAYDEN ISLAND IF IT IS NOT BUILT TIGHT TO EXISTING I-5 OR WEST ADJACENT TO THE RAILROAD BRIDGE. THE PROPOSED LOCATION WILL DESTROY THE JANTZEN BEACH FLOATING HOME COMMUNITY.

## Hines, Maurice

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**From:** Liuna335@aol.com  
**Sent:** Wednesday, June 02, 2010 3:43 PM  
**To:** Columbia River Crossing  
**Subject:** Comment for Project Sponsors Council

**Categories:** Orange Category

From: Dave Ritchey  
E-Mail: Liuna335@aol.com  
Comment or Question:

I have spoke at many of the CRC Meetings in favor of the new Bridge.everybody knows we need this new bridge, the current one is to small, sitting on douglas fir pileings,and is not safe.where else do you see an interstate freeway with a draw bridge.There is to much money being wasted, take a model of the 205 bridge and get the bridge built.





P.O. Box 83719 Portland, OR 97283-0719  
(503) 289-2669 / FAX 289-2825

June 7, 2010

Project Sponsors Council  
Columbia River Crossing Project  
700 Washington Street, Suite 300  
Vancouver, WA 98660

RE: Hayden Island Interchange and Off-Island Alternatives

Dear Projects Sponsor Council members:

I am a planner representing Diversified Marine, Inc. ("DMI") at 1801 N. Marine Drive, Portland. I am writing to object to the process being used to plan off-Hayden Island Interchange alternatives for the Columbia River Crossing project. I understand that you are considering those alternatives at your upcoming meeting on June 11.

DMI builds for and services the tug and barge industry. Our business and employment have grown steadily since we acquired our site in 1991. Our site is just west of the Slough Bridge on the mainland side of the North Portland Harbor. It is unique, because it adjoins deep, calm water that is easily accessible by land and water. Such features and access are critical to our survival, as we explained during prior CRC processes.

To reiterate some key points, DMI is a \$10 million business. We employ as many as 50 highly qualified and experienced staff people. Our annual employee salaries range from \$50,000 to more than \$100,000. This makes DMI a valuable family-wage employer as well as a critical supplier of services and vessels to the local maritime community.

DMI supports the CRC. Company owner Kurt Redd was a member of the Marine Drive Interchange Stakeholders' Group in 2008-2009. We have testified about the project before the Project Steering Group, the TriMet and CTran Boards of Directors, the Vancouver and Portland City Councils, the Metro Council, the Hayden Island Hi-Noon Neighborhood Organization and CRC committees, such as the Freight Working Group.

In addition to participating on the Stakeholders' Group, DMI met repeatedly with CRC, TriMet, PDOT and ODOT staff and representatives in the last year to help flesh out plans for the Marine Drive Interchange and to fine-tune the needs for mitigation to protect the survival of our business. As a result of such responsive staff efforts, we were confident that our participation in the process would be fruitful, and DMI would survive the CRC project and continue to serve our clients and employees.

But our confidence in the process has been sorely shaken. We were shocked to learn

last week that the Portland Working Group and one of its allied committees -- without informing DMI or other members of the Marine Drive Interchange Stakeholders' Group -- has been considering plans to alter significantly CRC's plans for the Marine Drive Interchange.

DMI respectfully objects to any further consideration of off-island alternatives by the Portland Working Group, its allied committees or the Project Sponsors Council until DMI and the other members of the Marine Drive Interchange Stakeholders' Group have a meaningful opportunity to be involved in the process.

DMI did not participate in the Portland Working Group or its allied subcommittee that you headed, because we understood those groups would not affect the design of the Marine Drive Interchange. After all, the Stakeholders' Group had worked on the interchange design for more than one year before achieving a consensus in which DMI joined. You can imagine our surprise when we learned off-island plans disregarded the hard-won consensus of the Stakeholders' Group.

In the brief time we have had since learning of them, we have reviewed the various off-island plans. If implemented, all of those off-island plans, including the off-island alternative produced for the Project Sponsors Council, will shut down DMI. They will displace, destroy and supplant our storage yard, office and construction building. They will prevent access to our site from the south. Unless a bridge connecting the island and the mainland is very high or will be a draw bridge or swing bridge, it will block in-water access to our site. These off-island plans will lead to the loss of a major maritime business and family-wage jobs for 50 employees.

Although DMI supports the CRC project and the project's intention to reduce adverse impacts on the Hayden Island community, we do not offer nor will we accept alternatives that achieve such mitigation by sacrificing our existence.

We also believe that an additional bridge between the mainland and Hayden Island will require a Supplemental Environmental Impact Statement, because it was not identified as an alternative in the DEIS. This will further delay and complicate the project.

Thank you for considering our concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Epstein", with a horizontal line extending to the right.

On Behalf of Diversified Marine, Inc.  
Larry Epstein, JD, FAICP  
9930 SW Quail Post Road  
Portland, OR 97219-6367  
503-317-3182  
lepc@comcast.net