Columbia River CROSSING

Memorandum

August 28, 2009

TO: Columbia River Crossing Project Sponsors Council

FROM: David Parisi, Facilitator, CRC Pedestrian and Bicycle Advisory Committee (PBAC)

SUBJECT: PBAC recommendation on bridge type, maintenance and security

Background

The CRC Pedestrian and Bicycle Advisory Committee (PBAC) was established to guide the development of improvements for people who walk or cycle in the project area. The committee brings together community members and agency representatives to develop recommendations for enhanced facilities and connections.

The committee has held 28 meetings since March 2007. They have conducted field reviews, developed design guidelines, assisted in development of user projections, and researched "world class" pathways. They have held several workshop-style meetings to map out pathways and connections across the bridge, through highway interchanges, along streets, and to/from future light rail park and ride lots. Committee members will continue to advise the project on design refinements.

Recommendation on bridge type, maintenance and security

After a rigorous screening process over many meetings, PBAC recommends a two-bridge, covered path instead of the exposed path alongside highway traffic. Please see the attached matrix.

At their meeting on August 26, 2009, PBAC voted 11 to 1 in support of the following recommendation:

> *"Provided the Columbia River Crossing Project Sponsors Council makes a commitment to PBAC's recommendation for a maintenance and security program, the PBAC would support the two-bridge, covered path option."*

Most of the groups have conditioned their support on having a specific maintenance and security plan for the path. Groups are submitting individual letters outlining their recommendations. The attached PBAC document titled *PBAC's Recommendation for a Maintenance and Security Program* contains more detail outlining what they believe is necessary in order for the path to be safe, secure, and well maintained.

Members present and voting at PBAC meeting, August 26, 2009:

1. April Bertelsen, City of Portland and Portland Pedestrian Advisory Committee (on behalf of Rod Merrick)
2. Kyle Brown, Community Choices
3. Ken Burgstahler, Washington State Department of Transportation
4. Jennifer Campos, City of Vancouver
5. Basil Christopher, Oregon Department of Transportation
6. Seanette Corkill, Arnada Neighborhood Association
7. Leslie O'Rourke, National Park Service (on behalf of Bob Cromwell)
8. Joe Greulich, Clark County Bicycle Advisory Committee
9. Michelle Poyourow, Bicycle Transportation Alliance
10. Mark Ginsberg, Portland Bicycle Advisory Committee (on behalf of Shayna Rehberg)
11. Walter Valenta, Bridgeton Neighborhood Association

Members absent from meeting but voted via email (in favor of Option B):

12. Lisa Goorjian, Vancouver-Clark Parks and Recreation
13. Debbie Elven-Snyder, C-TRAN

Attachments

1. Matrix showing comparison of pathway options between Hayden Island and downtown Vancouver
2. PBAC's Recommendation for a Maintenance and Security Program

Comparison of Pathway Options for I-5 Columbia River Bridge between Hayden Island and downtown Vancouver

Pedestrian and Bicycle Advisory Committee—August 2009

	Option A: Three Bridge	Option B: Two Bridge Pathway under deck	Option C: Two Bridge Pathway on top deck	
■ SAFETY AND PERSONAL SECURITY ■				
"Eyes on the street"	◑	○	●	Option A would have some visibility from light rail. Option C would have regular visibility from the highway.
Minimize exposure of pedestrians and bicyclists to vehicles and/or transit	◑	●	○	Option A exposes pathway users to light rail. Option B would not expose pathway users to motorized traffic and transit. Option C exposes pathway users to highway traffic.
Separate pedestrians and bicyclists	◑	●	◑	Option B, the widest, would provide the most potential for separation between modes.
Separate "commuter" and "recreational" bicyclists	◑	●	○	Option B, the widest, would provide the most potential for separation between different types of bicyclists.
Reduce/eliminate at-grade crossings with vehicles and transit	S	S	S	All options would provide a grade separated pathway.
Provide railings between users and vehicles/transit and water	S	S	S	All options would provide barriers and railings that meet current height standards.
Provide sufficient pathway lighting	S	S	S	Compared to Option B, Options A and C would provide better lighting during daylight, but worse at night.
Potential to provide security cameras and phones	S	S	S	All options have the potential to provide security cameras and phones.
Potential to post ordinances, applicable laws and agency contact information	S	S	S	All options could post applicable laws, ordinances and agency contact information.
■ DESIGN ■				
Exceed ODOT/WSDOT multi-use path 'desirable' width standards (16 feet)	◑	●	○	Option A: one 16' path, Option B: one 24' path, Option C: two 12' paths. Standard ODOT/WSDOT multi-use path widths are 14'.
Comply with ADA standards for grade (≤ 5%) and cross-slope (≤ 2%)	S	S	S	All options would meet ADA standards for grade and cross-slope.
Maximizes design principles of Crime Prevention Through Environmental Design (CPTED)	◑	○	●	CPTED principles performance increases as multi-use pathway user visibility is maximized.
Minimizes elevation of path over river and changes in grade. Ability to maximize proximity to river.	○	◑	○	Option B would have the lowest multi-use pathway height that meets Coast Guard navigation standards.
Minimize travel on long grades	◑	●	○	Travel time on long grades increase as height of pathway increases.
Maintain required sight distances for applicable design speeds	S	S	S	All options would have the required sight distance for the applicable design speed.
Minimize turns and provide for comfortable turning on access/egress ramps	◑	●	◑	Option B would have fewer turning areas on ramps than Options A or C.
Meet overhead clearance standards (10 feet)	S	S	S	All options would meet the clearance standard.
Potential to be constructed with non-skid surfaces for traction	S	S	S	All options could use non-skid surfaces.
Planned for future capacity, flexibility and versatility	◑	●	○	All options could accommodate forecasted demand. Option B provides the most flexibility for accommodation.
Ability to provide emergency response/maintenance vehicle access to the pathway	◑	◑	●	Option C would provide the easiest access as it is adjacent to the highway. All options would be accessible to emergency response and maintenance vehicles.
Potential maintenance and operations costs	●	○	◑	Option B would likely have slightly higher operating costs because it would require more maintenance and security upkeep.
Overall cost	◑	●	○	Option B is the lowest cost to build because it requires less structure cost than Option A or C. Option A would be at least $50M more, and Option C would be at least $75M more.

*Option A is included for reference. The Project Sponsors Council recommended in March 2009 to move forward with a two bridge design.

S
All Similar

○ ◑ ● → Better

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Comparison of Pathway Options for I-5 Columbia River Bridge between Hayden Island and downtown Vancouver

Pedestrian and Bicycle Advisory Committee—August 2009

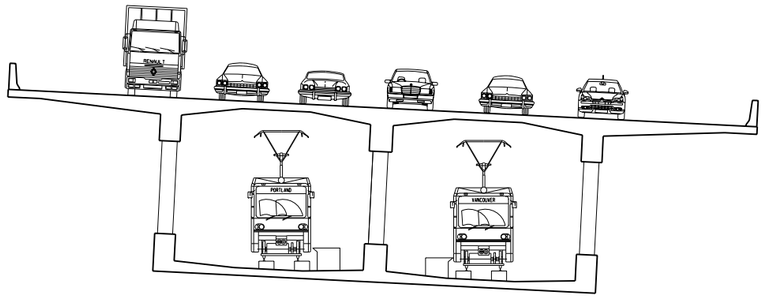
	Option A: Three Bridge	Option B: Two Bridge Pathway under deck	Option C: Two Bridge Pathway on top deck	
■ CONNECTIONS ■				
Distance from beginning of descent from path over Hayden Island to Hayden Island Drive, west of I-5	◑	●	◑	Option A: 1050', Option B: 575', Option C: 1000'.
Distance from beginning of descent from path over Hayden Island to intersection of Hayden Island Drive/Jantzen Drive, east of I-5	◑	●	◑	Option A: 2535', Option B: 2060', Option C: 2485'.
Distance from beginning of descent from path over Vancouver to Esther Short Park in downtown Vancouver	●	◑	●	Option A: 2300', Option B: 2500', Option C: 2200'.
Distance from beginning of descent from path over Vancouver to Vancouver waterfront	◑	●	○	Option A: 1400', Option B: 1200', Option C: 1700'.
Minimize river crossing time	●	●	◑	Option A: 9.30 minutes (1.55 miles), Option B: 9.12 minutes (1.52 miles), Option C: 12.12 minutes (2.02 miles). Travel times are based on an average bicycling speed of 10 mph.
Potential to provide way-finding and directional signage	S	S	S	All options would include way-finding and directional signage.
■ QUALITY OF EXPERIENCE ■				
Potential to provide amenities such as restrooms, benches, trash cans, info kiosks, public art, end of trip and park & ride facilities, etc.	◑	●	◑	All options would have the potential to provide amenities. Option B would have more potential as amenities could be designed into the infrastructure.
Minimize noise	◑	●	○	Noise measurements have shown that an under deck pathway similar to Option B would have at least a 5-10 dbA noise reduction compared to Option A, which would be similarly reduced from Option C.
Minimize exposure to vehicle exhaust	◑	●	○	Vehicle separation in Option B would minimize multi-use pathway users exposure to exhaust.
Protection from debris/"kick-up"/splatter	◑	●	○	Vehicle separation in Option B would minimize multi-use pathway users exposure to debris/kick-up/splatter.
Protection from bird droppings	S	S	S	All options would have a similar amount of protection from bird droppings.
Wind protection	○	◑	○	Option B provides the most wind protection because the under deck location and the top deck overhang reduce exposure to wind.
Rain protection	○	●	○	Option B provides the most rain protection because of the under deck location and overhang reduce exposure to rain.
Headlight glare protection	◑	●	○	Option B provides the most headlight glare protection because it is separated from vehicle and transit traffic.
Potential for natural light, open sky crossing and sense of openness	●	◑	●	Options A and C would be open to the sides and above. Option B would be open to the sides but not above.
Ability to "program the space" and provide activity areas	◑	●	○	Better opportunities to 'program the space' and involve people would exist with Option B because the design affords protection from the elements.
Provides scenic views from the bridge of: Mt. Hood, Columbia River, Hayden Island, and Downtown Vancouver	◑	○	●	All options would provide opportunities for scenic vistas, but Option C would have the most unrestricted views.
Potential for architectural detailing	○	●	○	Designs details would more likely be incorporated into Option B due to overall lower construction costs and integration of CPTED principles.
Potential to use quality materials in construction	S	S	S	All options could be built with high quality materials.
Potential to provide landscaping	S	S	S	All options could provide landscaping at appropriate locations.

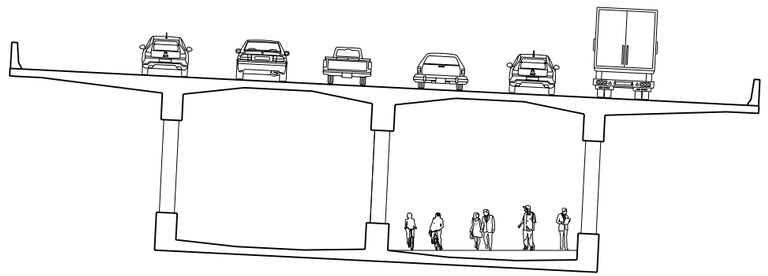
*Option A is included for reference. The Project Sponsors Council recommended in March 2009 to move forward with a two bridge design.

S All Similar ○ ◑ ● Better

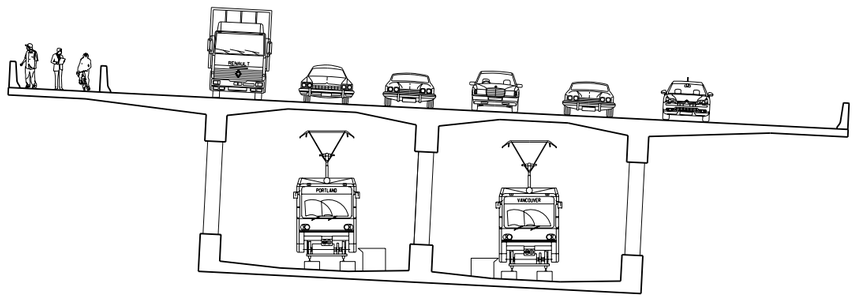
TYPICAL SECTIONS

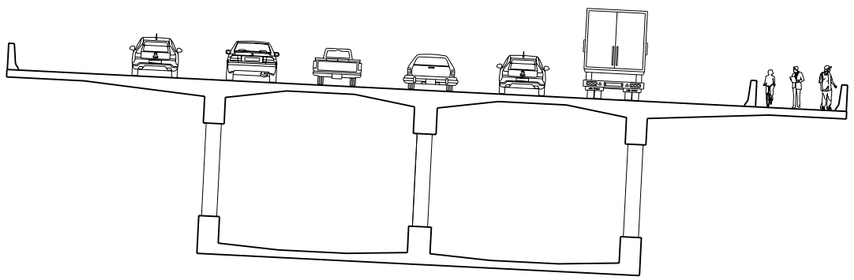
3-BRIDGE





2-BRIDGE (STACKED/UNDERDECK)





2-BRIDGE (STACKED/DECK)

DRAFT

4/22/09

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PBAC's Recommendation for a Maintenance and Security Program

The Columbia River Crossing project's Pedestrian and Bicycle Advisory Committee (PBAC) recommends a sufficient and sustainable maintenance and security program for the project's pedestrian and bicycle facilities.

The best and most effective method of enhancing maintenance and security is to design a functional facility that is inviting to and well used by the general public. Design principles that provide natural surveillance, territorial reinforcement, and natural access control will minimize on-going maintenance and security requirements. A reliable and funded program will be required. The program must recognize that a poorly maintained facility could undermine the value of good design.

The maintenance and security program shall include, but not be limited to, the following:

- Identification of reliable funding sources and responsible parties for maintenance and security
- Commitment of reliable funding sources and responsible parties for maintenance and security
- Demand responsive and prompt facility management and maintenance
- Opportunities to "program the space" and support activity (e.g., kiosks, overlooks, vendor opportunities) to provide "eyes on the pathway"
- Ensure 24 hours a day, seven days a week pedestrian and bicycle access to and across the bridge and its connecting pathways
- Visible and regular on-site monitoring by law enforcement officers or security staff
- Security cameras monitored by law enforcement officers or security staff
- Call boxes to enable bridge users to report immediate maintenance needs and security concerns
- Efficient, sufficient, vandal-proof, no glare and dark skies compliant clear, crisp, white LED lighting
- Clearly posted laws and ordinances
- Advance notification and posting of maintenance closures and detours
- Citizen and volunteer participation shall be encouraged for future maintenance, operations and programming

The above outline of maintenance and security elements shall be the basis of an agreement between the parties responsible for the final design, construction and management of the crossing. Both the design of the facilities and the conditions established by these elements in said agreement are essential for the provision of a successful pedestrian and bicycle environment. The performance of the agreement shall be regularly reviewed against measurable metrics and assessments of user satisfaction with the security and maintenance.