June 30, 2008

Columbia River Crossing Project
C/O Heather Gundersen, Environmental Manager
700 Washington Street, Suite 300
Vancouver, WA 98660

SUBJECT: URBAN DESIGN ADVISORY GROUP COMMENTS TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Ms. Gundersen:

G-002-001 The Urban Design Advisory Group (UDAG) began meeting in early 2007 for the purpose of ensuring that urban design aspects of the Columbia River Crossing (CRC) project are fully addressed. There has been a significant contribution of time and enthusiasm by Vancouver and Portland citizen representatives to the CRC project. UDAG members determined they should formulate clear design recommendations in the form of design guidelines for the CRC design team to use for project development from conceptual through final design to construction.

UDAG requests the Design Guidelines be included into the comment process as a recommendation for use in guiding further development of the physical, landscape and aesthetic design elements of the project. We recognize the guidelines are dynamic and will be refined by UDAG through continued project development efforts as the project moves through the design process.

Attached is a copy of the Draft Design Guidelines as reviewed by UDAG on June 27, 2008. Edits made at the June 27 meeting will be made after the comment period closes and will be posted on the CRC web page when approved.

Thank you for the opportunity to comment and we look forward to continued involvement by the Urban Design Advisory Group in reviewing the CRC project design development.

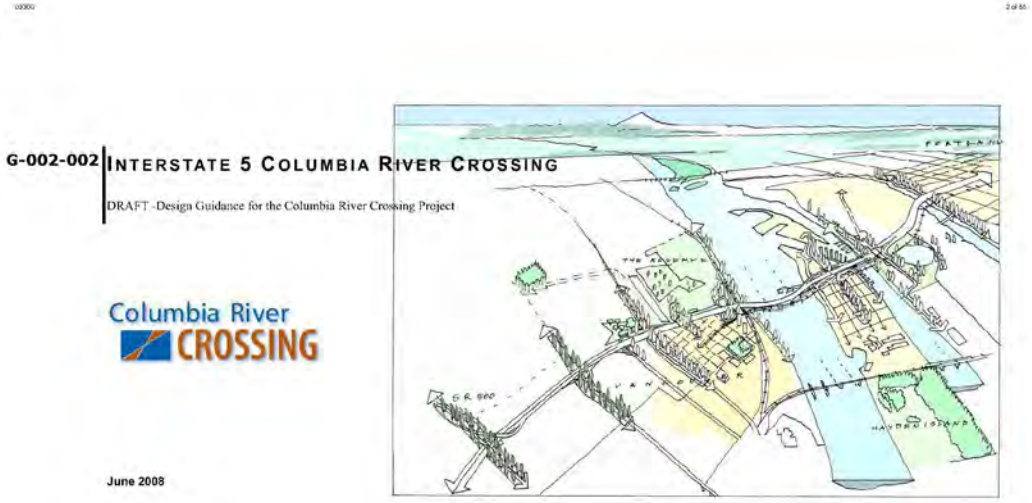
Sincerely,

Royce Pollard, Mayor
City of Vancouver

Sam Adams., City Commissioner
City of Portland

G-002-001

Thank you for taking the time to lead this important effort.



G-002-002

Thank you for leading UDAG and for providing these materials. The guidelines are in use now, as the designs for the project are refined. And, the guidelines will provide even greater direction when specific light rail stations, gateways, and park and ride structures are in design.

Title VI

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

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Cover Sheet

Interstate 5 Columbia River Crossing

DRAFT -Design Guidance for the Columbia River Crossing Project

Submitted By:
CRC Urban Design Advisory Group

Abstract:
This report outlined the purpose, activities and recommendations of the Urban Design Advisory Committee.

Comments Due:
Initial comments are due by June 20th.

Signature _____ Date _____

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List of Exhibits

Appendices

ACRONYMS

Acronym	Description
CRC	Columbia River Crossing
DEIS	Draft Environmental Impact Statement
PBAC	Pedestrian and Bicycle Advisory Committee
UDAG	Urban Design Advisory Group

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Section 1. Introduction

1.1 Executive Summary

The Urban Design Advisory Group (UDAG) is charged with ensuring that urban design aspects of the Columbia River Crossing project (CRC) are fully addressed throughout the five-mile extent of proposed improvements.

As the design challenges at each location along the five-mile project were addressed, it became clear to members of the Urban Design Advisory Group that architecture, landscape architecture and urban design should be integral with civil and structural engineering; disciplines which are all too frequently considered separately, or worse still, sequentially. The group determined that it should formulate clear design recommendations in a form that the design team could use consistently as project design is advanced from conceptual through preliminary and final engineering to implementation.

The principal product of the UDAG effort is a set of design guidelines. These are organized to address the whole project (the "universal design guidelines") and specific parts of the project, including bridges, interchanges and overpasses. It is intended that design concepts for specific features of the project will be derived from the design guidelines. Examples are prototypical landscape treatments at interchanges, designs for retaining walls and noise walls.

Exhibit 1-1. Columbia River Crossing Looking North

The focus of the public at large is on the half-mile span across the Columbia River, but the work of the Urban Design Advisory Group extends over five miles of freeway improvements. The UDAG purpose is to ensure that the project fits appropriately into the context of adjoining properties and places.

1.2 Background and Purpose of This Report

In December 2006, the Urban Design Advisory Group (UDAG) was formed, including 14 government and non-government representatives* from Vancouver and Portland under the joint chairmanship of Mayor Royce Pollard and Commissioner Sam Adams. At the first meeting, Columbia River Crossing (CRC) staff presented the defined alignment of the five mile I-5 corridor and intersections and outlined constraints imposed by river and air traffic on the envelope within which a replacement bridge over the Columbia River would have to fit.

UDAG members determined that one of their primary functions would be to develop design guidelines for implementation by CRC staff throughout the design process. These design guidelines should pertain to the main span across the Columbia River, but also to the urban design of all other elements of the five mile corridor. The guidelines are detailed later in this document.

The Columbia River Crossing consultant design team had published a draft technical report in the fall of 2006 entitled Architectural Guidelines and Aesthetic Assessment Framework. The report included a set of universal design goals, including environmental, architectural, context-sensitive and sustainable design goals. UDAG took these design goals as its starting place: they are reproduced in the Appendix.

The purpose of this report is to summarize the context, process and content of the Urban Design Advisory Group's recommendations. The summary is intended to provide CRC designers with a practical manual of design guidelines that reach beyond engineering parameters to respond to community, environmental and aesthetic values.

*Members of the UDAG are listed in the Appendix.

1.3 CRC Overall Project Purpose

Redefinition of I-5 from Columbia Way in Portland to its intersection with State Route 500 and Highway 99 north of Vancouver is necessitated by worsening delays due to congestion and interruptions at the pair of lift bridges over the main navigation channel on the Columbia River. Possible actions include complete replacement of the Columbia River bridges, supplementing the existing bridges with a new bridge to increase capacity, or doing nothing beyond routine maintenance of the existing pair of bridges. Inclusion of mass transit brings the total number of options to five examined in the Draft Environmental Impact Statement published in May 2008. The work of the Urban Design Advisory Group has been focused on any new bridge structures, and on all other improvements along the defined highway corridor.

When the UDAG began its work, the CRC team had already identified an area of influence on either side of the highway corridor, and had identified key viewpoints from and towards the highway and the river crossing, documenting these views with photographs.

The engineering design of the main span, highway interchanges and other I-5 improvements had been developed to approximately 10 percent completion when the Urban Design Advisory Group began its work. The scope of this engineering design effort was to determine the general layout of facilities, verify geometry and critical dimensions. This degree of completion is necessary to fulfill the demands of the DEIS and to enable the UDAG and others to understand intended features of the project.

Throughout development of the engineering, public consultation was made through citizen and stakeholder groups and special interest committees.

1.4 CRC Bridge Type Recommendations

A design envelope was defined within which a replacement bridge across the Columbia River could be constructed. The location of any new bridge near the north bank would be determined by the alignment of the existing highway, by height, width and alignment clearances necessary for river traffic, and by arrival and departure surfaces designated by the FAA relative to Pearson Field. These parameters described a slender deck section for the bridge with little or no superstructure except for lighting and signage structures. This ruled out consideration of several bridge types, such as suspension and cable-stay bridges. For the bridge replacement option, bridge types were swiftly narrowed to variations within the segmental box-girder family of structures. Although the design envelope for the rest of the Columbia River span was less constrained than at the north bank, it was accepted that a single bridge type should be used consistently across the river.

The remainder of the project, with five miles of alignment and frequent interchanges, includes almost sixty lesser bridge structures. Design constraints for these differ widely, and the Urban Design Advisory Group recognized that it would be necessary to use generalized guidelines to direct their design. There remained interest in reaching beyond the typology of box-girder bridges for some of the more conspicuous bridges, such as the four spans over the North Portland Harbor.

Exhibit 1-2. View of Mt. Hood from the Interstate Bridge

Eastward views towards Mt. Hood are valued by bridge and river users

1.5 Urban Design Advisory Group Purpose and Process

The Urban Design Advisory Group interpreted its purpose as design watchdog on behalf of community, landscape and urban design interests that may not otherwise be fully represented in engineering solutions being developed by the CRC team. While there was clearly sensitivity to these issues among CRC designers, there were circumstances in which default solutions favored vehicular traffic over other interests. UDAG members determined that all relevant issues should be considered, and that engineering design should balance vehicular and non-vehicular needs; that free movement of highway traffic, though of central importance to the whole project, should not be permitted to compromise the activities and qualities of communities and neighborhoods through which it passes.

UDAG members visited each of the intersections and explored the bridgehead areas so that local needs could be understood, and consequences of implementing the nascent structure designs could be visualized. Between formal monthly meetings, many members of the Urban Design Advisory Group met in workshop sessions in Vancouver and in Portland, dividing research tasks between them. Although they were volunteers, UDAG members spent considerable time between formal meetings investigating issues and formulating recommendations. Aided by CRC staff, recommendations were refined and illustrated, and shared with others, including City and agency representatives.

1.6 Interaction with Other CRC Committees

In parallel with the Urban Design Advisory Group other committees were at work, evaluating the project from the perspectives of community and environmental justice, pedestrian and bicycle safety and access. All of these groups shared a number of interests in common. For example, original construction of I-5 had severed established neighborhoods and made passage between them inconvenient and more dangerous than it had been. Each citizen committee was determined that reconstruction of highway crossings and interchanges should result in safer and more convenient local access.

A summary of the PBAC findings is included in the Appendix.

Exhibit 1-3. Marine Drive Interchange

From an Oregon perspective, the CRC project begins with a reconstructed Marine Drive interchange. Involves multiple spans across North Portland Harbor and a major new interchange on Hayden Island before the main spans over the Columbia River spring from the north bank of the island. UDAG members have investigated ways in which the properties beneath these structures can be configured to optimize their value and usefulness

Section 2. UDAG Scope of Work

2.1 Overall Project Design Considerations

The Architectural Guidelines and Aesthetic Assessment Framework drafted by CRC staff in 2006 identified four "universal goals", which were elaborated under three categories, reflecting their particular relevance to each topic. The intention was that specific objectives would be derived from each as it was applied to different elements of the five mile-long project.

The four universal goals were:

1. Improve travel safety and traffic operations on the Interstate crossings and interchanges.
2. Improve connectivity, reliability, travel times and operations of public transportation in the Bridge Influence Area.
3. Improve highway freight mobility and address interstate travel and commerce needs in the Bridge Influence Area.
4. Improve the I-5 river crossing structural integrity.

2.2 Columbia River Main Span Design Goals and Guidelines

In spring 2006, the CRC design team prepared a draft aesthetic assessment paper. This included eleven urban design goals, nine environmental goals, four architectural goals, and fourteen context and sustainability goals. These were subsequently used by the UDAG as a starting place in their evaluation of emerging designs for the highway bridges, intersections and associated improvements. They are reproduced in full in the Appendix.

The aesthetic assessment document also included general design guidelines pertaining to aesthetics, historical and cultural context, functionality-use of space, and community and environmental impacts. These were accepted by UDAG members as part of the design basis of their work, and commentary was added to each to clarify its intent and application. These too are included in the Appendix.

Exhibit 2-1. CRC Location Map

2.3 Comprehensive Summary of Design Elements Addressed

Examining components of the five-mile I-5 corridor project, it became evident that some places are more significant than others. The most conspicuous are those associated with the main Columbia River Crossing. The appearance of the main span structures is of primary importance, and several public viewpoints from which the bridge could be seen are identified in the Architectural Guidelines and Aesthetic Assessment Framework.

Next in importance are the highway interchange structures which form the bridgeheads on Hayden Island and on the north bank where SR 14 joins the highway. These two interchanges are important because of their visual significance, but also because they define the interface between the bridge and the communities beneath and on either side of the bridge.

Third tier features within the purview of the main span are the North Portland Harbor crossing, the 7th Street pedestrian bridge and the landscaped deck over the highway at Evergreen Boulevard. These features have the potential to express the signature of adjacent communities due to their symbolic importance as well as the vital functions that they perform.

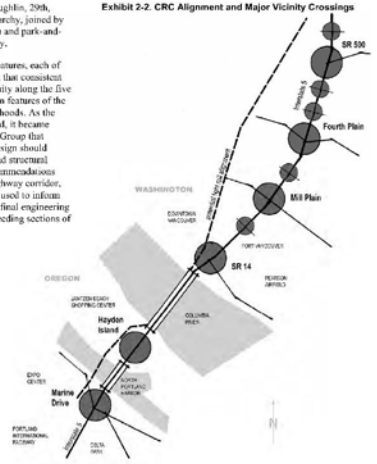
Features not directly associated with the main span across the Columbia River are the other interchanges and crossings throughout the five-mile length of the highway corridor project. First among these are the other four major interchanges:

- The Marine Drive interchange, made conspicuous by the public open space that almost surrounds it;
- Mill Plain interchange, principal gateway to downtown Vancouver;
- Fourth Plain interchange, marking the principal point of entry to the Port of Vancouver for freight vehicles; and
- SR 500 interchange, spanning Leverich Park and weaving together interstate and state highway traffic with 39th, Main Street, and Highway 99 at Kiggins Bowl.

Over- and under-passes of the highway at McLoughlin, 29th, 33rd and 39th constitute a second tier in the hierarchy, joined by other features such as the proposed transit station and park-and-ride north of McLoughlin and east of the highway.

Besides their places in the hierarchy of project features, each of these places provides a landscape opportunity, in that consistent landscape treatment can create a sense of continuity along the five mile project, and can forge a relationship between features of the highway corridor and those of adjacent neighborhoods. As the design challenges at each location were addressed, it became clear to members of the Urban Design Advisory Group that architecture, landscape architecture and urban design should necessarily be inextricably involved with civil and structural engineering. A set of observations and clear recommendations should be prepared for each feature along the highway corridor, presented clearly and simply so that they will be used to inform the design of structures through preliminary and final engineering and implementation. That is the purpose of succeeding sections of this report.

Exhibit 2-2. CRC Alignment and Major Vicinity Crossings



Section 3. UDAG Recommendations

3.1 Universal Urban Design Recommendations

The UDAG developed a number of urban design recommendations that are applicable throughout the CRC project. These are given below. Other recommendations that relate to specific parts of the project appear on the following pages. Each design guideline is followed by a concise statement of purpose in italics.

1. Be sensitive to existing communities by ensuring that each component of the bridge and highway structures complements nearby buildings in scale, materials and color. Respect the needs of established neighboring uses. *Be sensitive to design context.*

2. Improve the safety and convenience of connections between communities on the east and west sides of the highway. *Improve connections across I-5.*

3. Develop a design vocabulary of distinctive elements (e.g. retaining walls, fences, finishes, landscape materials) that are abstractly derivative of the natural landscape and history of their setting. *Reflect the region in location.*

4. Signal transitions from land to water and between structure types (e.g. with changes in lighting or materials; changes in fence or barrier design; marking with pylons). *Mark bridgeheads.*

5. Design all bridges and other structures to be seen from above and below. *Design bridges from all viewpoints.*

6. Protect valued views from the highway and its structures, especially towards Mount Hood. *Protect important views.*

7. Use color to highlight key structural elements. Use light to highlight form and color after dark. *Use color and light to illuminate.*

8. Use tall-growing conifers and other native plants in a distinctive and consistent landscape marking interchanges and intersections throughout the alignment. *Distinguish each intersection with big conifers.*

9. Design highway landscapes to retain, treat, or otherwise manage storm-water runoff. *Design landscape to treat stormwater.*

10. Treat noise walls, retaining structures and berms as integral components of landscape. *Unify highway and landscape settings.*

11. Use sustainable materials and practices throughout, demonstrating cost effective design over the long term. Measure the cumulative effects of such initiatives. *Practice sustainability throughout.*

12. Ensure a good fit for transit by relating the design of platforms, furnishing, landscape, lighting and signage to adjacent neighborhoods and structures. *Make transit design integral.*

13. Coordinate the design, scale and color of signs with the design of highway-related structures and landscape and with other elements such asuch as light poles. *Coordinate colors and signs.*

14. Request adoption of these recommendations as conditions of approval by all relevant government bodies. *Formally adopt these design guidelines.*

15. Establish an independent authority to be responsible for design oversight of the Columbia River Crossing, including these urban design recommendations through completion of construction. *Monitor design compliance.*

16. Continue engagement of the Urban Design Advisory Group to ensure continuing design review and compliance with agreed recommendations. *Continue UDAG involvement.*

3.2 Place Specific Design Recommendations

3.2.1 Marine Drive Interchange

1. Investigate alternative reconfigurations of the Marine Drive intersection to vacate waterfront land for public and development uses, to improve ramp geometry and to improve interconnection of green spaces that converge at the interchange. *Improve waterfront access and interconnect adjacent spaces.*

2. Investigate realignment of Marine Drive south of Expo Center, with Marine Drive crossing MAX tracks south of the station to simplify northward transit alignment. *Improve transit alignment and access.*

3. Configure and design green space under the Marine Drive intersection structures to interconnect an expanded Delta Park to the Expo transit station and to open spaces to the southwest and along the North Portland Harbor. *Interconnect open spaces under the interchange.*

4. Integrate direct and safe bicycle and pedestrian circulation trails through and between these spaces. *Create a trail access network.*

Exhibit 3-1. North Portland Harbor Crossing

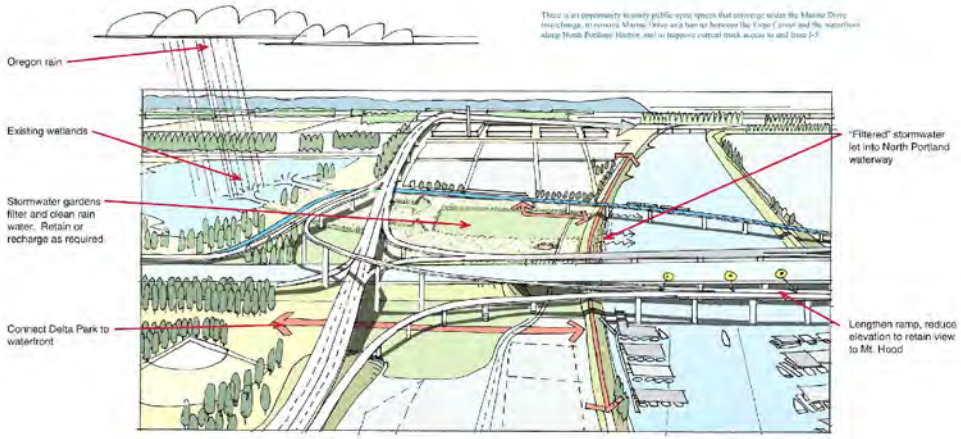
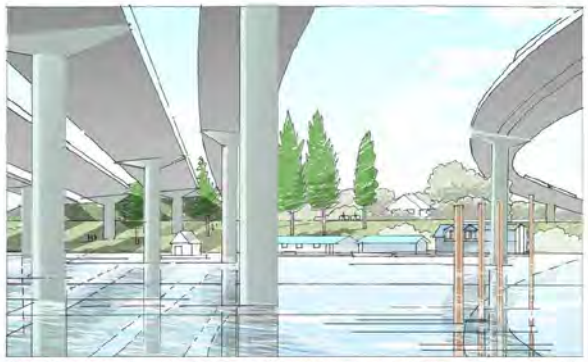


Exhibit 3-2. North Portland Harbor Crossing



The single I-5 span that currently crosses North Portland Harbor will be replaced by five structures at varying heights, spread out over a larger area of the Harbor. UDAG has focused on creating pleasant and usable spaces beneath them and encouraging elegant and appropriate design of the bridges.

3.2.2 North Portland Harbor Crossing

5. Improve pedestrian and bicycle access along the south bank of the North Portland Harbor under the highway with adequate headroom and lighting, thus connecting Bridgeton to the 40-mile loop. Provide safe and convenient access to the Expo transit station. *Improve waterfront trails.*

6. Minimize piers in North Portland Harbor and consider bridge types independent of the constraints that shape the bridge over the Columbia River. *Consider other bridge types with fewer columns in the water.*

7. Construct the highway ramp and transitway spans over the North Portland Harbor as light and elegant bridges. Their architecture need not reflect that of the main highway spans. *Make detached bridges light and elegant.*

8. Preserve highway views towards Mount Hood. *Preserve views to Mt. Hood.*

3.2.3 Hayden Island

9. Identify the locations and type of gateway acknowledgements that announce arrival in the State of Oregon for southbound motorists. *Create an scenic entrance to Oregon*

10. Locate the Hayden Island transitway and station on the west shoulder of the interchange structure, with landscaped terraces connecting it to ground level. *Integrate transit and interchange structures.*

11. Locate the station directly above Tomahawk Drive, aligning access and landscape with the planned east-west corridor. *Align transit station with Tomahawk Drive.*

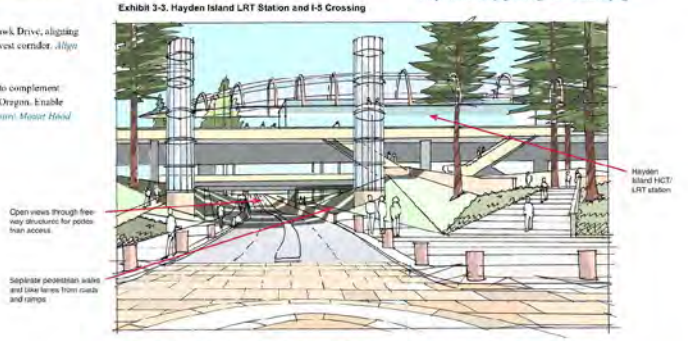
12. Design the Hayden Island transit station to complement features that announce arrival in the state of Oregon. Enable views of Mount Hood from the platform. *Ensure Mount Hood views from transit platform.*

13. Locate transient boat docks under the highway on the north and south sides of North Portland Harbor and on the north side of Hayden Island to facilitate public boat access. *Locate boat docks for visitors under the highway.*

14. Plan for future addition of a local traffic, bicycle and pedestrian bridge across North Portland Harbor east of the highway, location to be determined (This is not seen as part of the CRC project, but something that should be planned for now). *Anticipate a local traffic bridge over North Portland Harbor.*

15. Increase separation between ramps at the Hayden Island interchange to enable creation of generously planted landscaped terraces. Use this landscape also for natural treatment of storm-water runoff. Design noise walls and berms integral with the interchange to reduce noise trespass to the east and west. *Space ramps to admit daylight and generous landscaping.*

Exhibit 3-3. Hayden Island LRT Station and I-5 Crossing



As Tomahawk Island Drive is extended under the Hayden Island interchange, it will be important to provide clear sight lines and plenty of daylight so that it can fulfill its intended function as a local connection for vehicular and foot traffic. It will be a principal access route to and from the elevated transit station, bikeway and footbridge.

Exhibit 3-4. Hayden Island CRC Bridgehead

Because of the horizontal curve in the alignment of the replacement bridge structures, and to allow phased construction, the new Bridgehead will be located west of the existing pair of bridges across the Columbia River. This will provide an opportunity to create a landscaped park at the bridgehead, a green landing place on the Oregon side of the river, consistent with recommendations of the Hayden Island Plan

3.2.4 Hayden Island Bridgehead

No specific recommendations were developed for the Hayden Island bridgehead of the main river spans. However, several of the recommendations made for the *Columbia River Spans* (notably #21) and the *North Bank and SR 14 Interchange* are directly applicable. UDAG members discussed the possibility of creating public open space under the bridge structures between North Hayden Island Drive and the south bank of the Columbia River, as proposed in the Hayden Island Concept Plan.

Summary descriptions of applicable design guidelines include:

Consider other bridge types south of the Pierson Airfield constraints.

Reconfigure the under-bridge as destination public open space.

Investigate different under-bridge designs.

Include continuation of the waterfront trail.

Restore original topography and realign streets under the new bridges.

Provide visual and physical connections between under bridge structures.

3.2.5 Columbia River Spans

16. Members of the UDAG recommend that the FAA be approached to consider a greater height allowance for the north end of the CRC span, permitting consideration of bridge types other than girder and box-girder. (It has been suggested that an element of interpretation by FAA staff has been involved in setting the imaginary surface height restrictions, and that a different interpretation might change the limits on bridge type). *Challenge aviation height limits.*

17. Use constraints on height and clearance over the water to inspire a great and unique design solution. (Explore the feasibility of a composite box girder bridge with open webs). *Find skyscene and downward constraints.*

18. Minimize the number of piers in the river, consistent with reasonable economy. *Locate fewer piers in the river.*

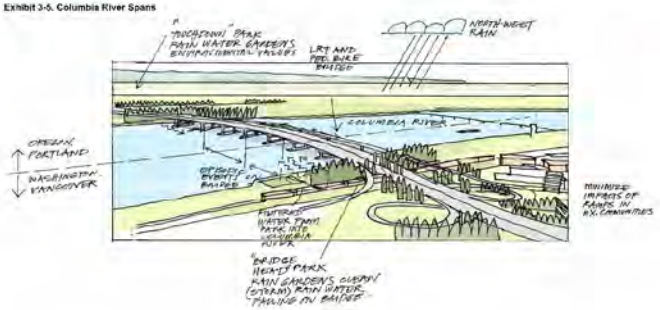
19. Give expression to the integration of pier and deck structures (e.g. consider deep haunches and slender mid-span deck). *Express function with form.*

20. If a pair of box girders is to be used for the main span, a composite construction with open webs should be used, accommodating light rail in one, bicycle and pedestrian facilities within the other. *Make transit, bike and footbridges open and airy.*

21. Consider design opportunities on the south parts of the span that are relatively unconstrained in height. (FAA height limitations related to Pearson Field have effectively reduced bridge type selection to a single choice: box girder bridge. This might suggest a non-symmetrical bridge design or inclusion of an iconic object associated with the river crossing. Astoria Bridge demonstrates use of two distinct bridge types, one of limited height, the other much higher. Such options do not appear to have been considered for CRC). *Consider other bridge types south of the Pearson Airfield constraints.*

22. Use landscape and controlled views to build anticipation of the river crossing in those approaching the main span. *Design dramatic approaches to the cross connection.*

Exhibit 3-5. Columbia River Spans



3.2.6 North Bank & SR 14 Interchange

23. Redesign the river bank at the former bridgehead under I-5 and the Red Lion site as urban park space in which people can meet, enjoy views, and otherwise use this shoreline destination. Reconfigure the under-bridge as destination public open space.

24. Investigate options for regrading and redesign of the river bank under the highway, including options for retention of fragments of the old bridges. Investigate different under-bridge designs

Exhibit 3-6. North Bank & SR 14 Interchange

25. Designate a continuation of the regional trail through this space. Include continuation of the waterfront trail.

26. Regrade land between the railroad embankment and the river bank. Realign Columbia Way as a continuation of the alignment to the east which roughly parallels the railroad. Restore original topography and realign streets under the new bridges.

27. Extend Main Street south with clear sight lines to the river and connect it with Columbia Way for vehicular, bicycle and pedestrian traffic. Restore views of the river from Downtown along Main Street

28. Define with appropriate easements active open spaces and other uses that would flank the Main Street extension. Activate the edges of Main Street extended to the river.

29. Reconnect 5th Street east and west of the highway for pedestrians and vehicles with trail connections to Apple Tree Park and the Land Bridge. Ensure local access under I-5 on 3rd Street.

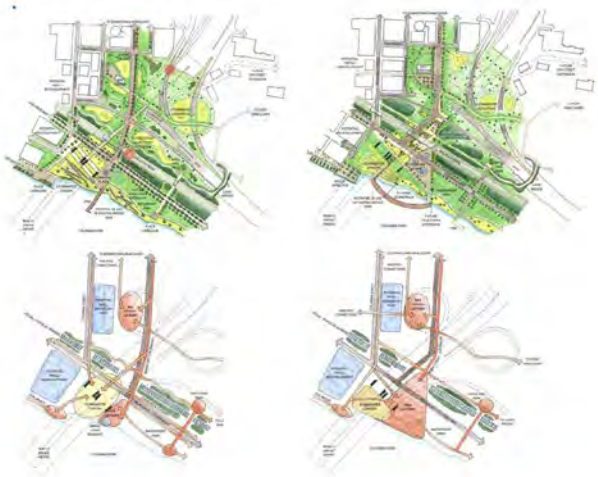
30. Connect the Land Bridge and Apple Tree Park with downtown Vancouver by combining improved sight lines, improved access and integrating landscape design. *Provide visual and physical connections between under-bridge structures.*

31. Extend landscape treatment associated with the Land Bridge all the way to the river via the BNSF underpass. Also provide a landscaped trail to Main Street extended south to Columbia Way. *Extend Land Bridge landscaping under the bridges.*

32. Design open space within the SR 14 interchange to treat but not detain storm water runoff, reduce broadcast of traffic noise, integrate structures into the landscape, accommodate active open space and provide integral security for structures. *Introduce active and functional uses under the SR 14 interchange.*

Because the spans of the new Columbia River Bridges must be high enough for commercial river traffic near the north bank, and because of clearances required above the railroad embankment, the bridge structures will pass high above the north bank. Open spaces and commercial development could connect new waterfront development downstream with bars and restaurants already established upstream of the bridgehead. New east-west connections beneath the bridges and ramps will restore connections between Downtown and the Historic Reserve of Fort Vancouver.

Exhibit 3-7. Vancouver Waterfront and CRC Bridgehead Alternatives



An important long term objective is to restore visual as well as physical access to the waterfront from Main Street in downtown Vancouver. Configuration of the railroad will prevent this from being achieved as part of the CRC project, but column placement and other elements can be located to preserve the opportunity of eventually re-uniting Downtown and its waterfront.

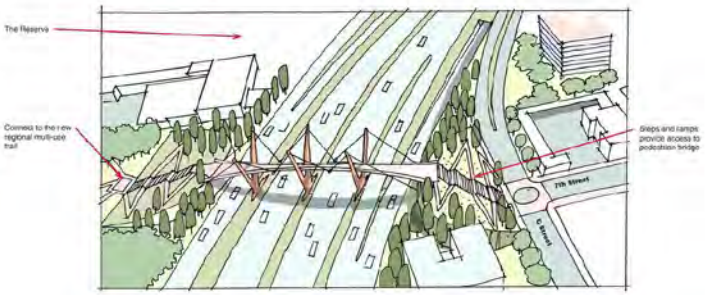
3.2.7 Seventh Street Footbridge

33. Construct a footbridge connection over the highway at 7th Street. *Connect 7th Street over I-5.*

34. Consider the design of the 7th Street footbridge as an opportunity to announce approach to the bridge with an elegant and colorful structure. *Make the footbridge a colorful gateway.*

35. All of the Downtown highway crossings should be addressed functionally and visually as an integrated system. *Consider the collective appearance and function of Downtown crossings.*

Exhibit 3-8. Seventh Street Footbridge



A new footbridge connection between downtown Vancouver and the historic reserve offers an opportunity for a signature structure as well as an important link.

3.2.8 Evergreen Highway Park

36. Develop a landscaped lid over I-5 at Evergreen Blvd. (This could make an apt entry marker to the Evergreen State if landscaped appropriately). *Create a highway park over I-5 at Evergreen.*

37. Treat the covered portion of the highway as an arrival gateway for drivers. *Mark arrival in the Evergreen State with a dramatic park view.*

Evergreen Boulevard is the only street that bridges the highway south of Mill Plain, and provides the main access between central Vancouver and the Historic Reserve. Addition of a landscaped lid over the highway will give continuity between landscapes on either side of I-5.

Exhibit 3-8. Evergreen Highway Park

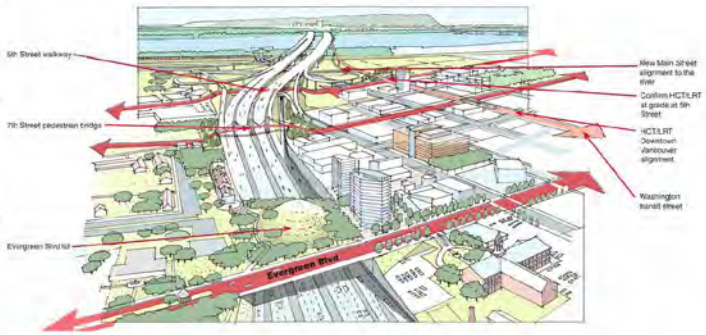


Exhibit 3-10. Mill Plain Interchange

3.2.9 Mill Plain Interchange

38. Acknowledge through urban design and landscape that Mill Plain is the principal point of access to Downtown from the north and east. *Distinguish the Mill Plain interchange as the principal entrance to Downtown.*

39. Provide safe and direct passage for pedestrians and cyclists on Mill Plain Blvd traveling between destinations east and west of I-5. (The current design appears to address only vehicular traffic needs. Prepare another design that accommodates all modes equitably). *Improve pedestrian and bicycle safety under I-5.*

40. Investigate landscape options for surplus land at the four corners of the Mill Plain interchange that acknowledge views from Evergreen underpass. *Create a memorable landscape around the interchange.*

41. At Mill Plain, design the long ramp bridge east of the interchange as an artifact in the landscape, visually distinct from the massive highway: *Design the ramp bridge as a sculptural feature.*

It is anticipated that a park-and-ride facility for an interim terminus for light rail will be constructed east of I-5 with access off McLoughlin Boulevard. This will increase peak hour traffic at the underpass and will increase the numbers of pedestrians and bicycles in the traffic mix. Facilities design will be challenged by greater safety risks.

3.2.10 McLoughlin Boulevard Crossing

42. Where McLoughlin Boulevard dips under I-5, maintain level sidewalks through the underpass for safety and clear sightlines. *Keep underpass sidewalks level as roadway dips.*

43. Provide east-west passage for all modes that improve safety and convenience over existing access. *Accommodate transit, pedestrians, bicycles and local vehicular traffic.*

At the McLoughlin Boulevard underpass, the urban design emphasis will be on creating an airy and open pathway for bicycles and pedestrians integrated with a cohesive landscape designed in concert with that of the other interchanges and freeway crossings. Provisions will be made for a light rail terminus at a park-and-ride facility north and east of the underpass.

Exhibit 3-11. McLoughlin Boulevard Crossing

3.2.11 Fourth Plain Interchange

44. Redesign the Fourth Plain interchange to accommodate safe access and movement of pedestrians and bicycles, including access to and from local streets. *Improve safety and convenience for all modes across I-5.*

45. Provide sidewalk access along the north side of Fourth Plain adjacent to the cemetery (as stipulated by the Vancouver Central Park policy document). *Improve sidewalks on both sides of Fourth Plain overpass.*

Exhibit 3-12. Fourth Plain Interchange

(Image to be included at a later date.)

3.2.12 The 29th and 33rd Street Overpasses

46. Design visible portions of the bridges over the highway at 29th and 33rd Street with input from the neighborhood facing each end of the bridges. *Ensure compatibility of bridge approaches with neighborhoods.*

3.2.13 SR 500 Interchange

47. Consider shared artistic themes in the designs of bridges over I-5 between 39th Street and the Columbia River. (The bridges could recount stories of historic places or events nearby). *Consider a local design theme for bridges.*

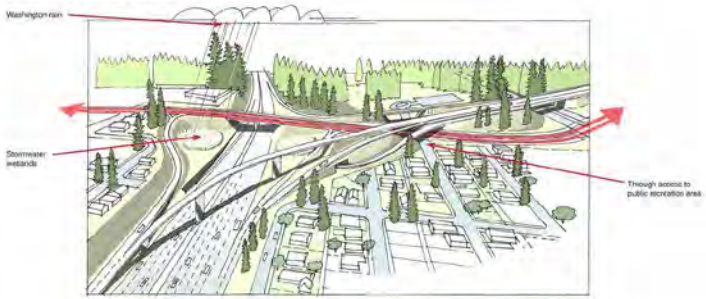
48. Widen sidewalks and slow traffic on 39th between the school and NE 15th Ave. *Calm traffic on 39th Street.*

49. Design the northbound ramp overpass to appear from below as an entry to Leverich Park. *Create a grand entry to Leverich Park.*

3.2.14 Highway 99 Interchange

No specific recommendations were made for the interchange with Highway 99, mainly because only minor changes to the existing configuration are contemplated. The universal design guidelines at the beginning of this section are of course relevant here. This interchange marks the northern limit of the CRC project.

Exhibit 3-13. SR 500 Interchange



The SR 500 interchange makes the arrival of I-5 in Vancouver from the north. 39th Street connects the school on the west side of I-5 to the residential community to the east. Pedestrian safety is of the utmost importance.

G-002-003

G-002-003

Thank you very much for your participation in UDAG and for providing these materials. Existing plans and the UDAG guidelines are being used in project decision making, and will be further utilized during the final design of transit stations, scenic lookouts, etc.

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Appendix A. UDAG Members

Columbia River Crossing
Urban Design Advisory Group

Mayor Royce Pollard,
City of Vancouver
City Commissioner
Sam Adams,
City of Portland
Co-Chairs

Rob Barrentine
Ed Carpenter
Jeanne Caswell
Jane Hansen
Dick Pokornowski
Mark Masciarotte
Carrie Schilling
Dave Smith
Jeff Stuhr
Michelle Tworoger
Marcia Ward
Walter Valenta

Columbia River Crossing
Project Team

Ron Anderson,
Scott Danielson,
Tom Cooper,
Lynn Rust,
Gavin Olen,

Paddy Tillett,
Robert Wood,
Nolan Lienhart,
Trent Thelen

City Assistance

Patrick Sweeney, *City of Portland, Office of Transportation*
John Gillam, *City of Portland, Office of Transportation*
Mark Raggett, *City of Portland, Bureau of Planning*
Matt Ransom, *City of Vancouver, Transportation Planning*
Phil West, *City of Vancouver, Transportation Planning*

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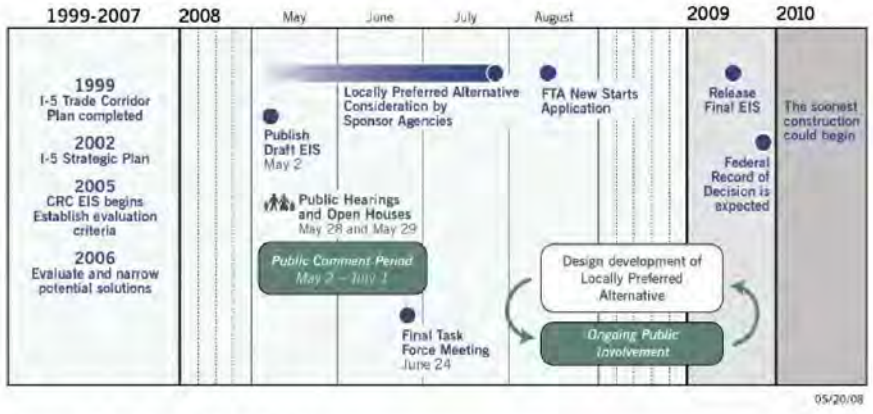

Appendix B. Overall CRC Schedule

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Appendix C. Schedule of UDAG Meetings

Kick-off Meeting	Full Committee Meetings	Sub-Committee Work Sessions
December 13, 2006	March 9, 2007	May 1, 2007
	April 6, 2007	May 29, 2007
	May 11, 2007	November 9, 2007 (2 tours)
	June 15, 2007	November 20, 2007
	August 17, 2007	November 29, 2007
	October 19, 2007	December 4, 2007
	December 14, 2007	January 16, 2008
	January 25, 2008	January 22, 2008
	June 27, 2008	February 12, 2008
		February 13, 2008
		March 21, 2008
		April 21, 2008
		April 25, 2008
		May 19, 2008
		May 28, 2008

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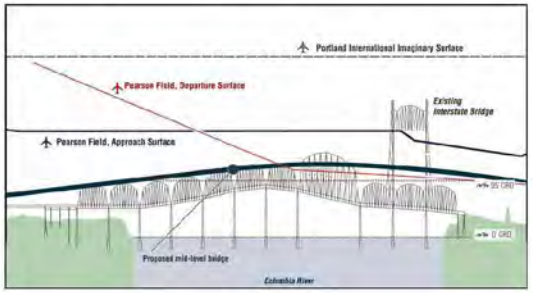
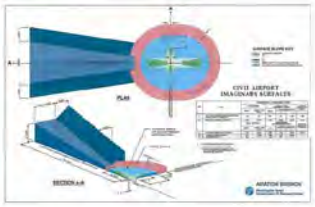
Appendix D. Pearson Field UDAG Charter Surfaces





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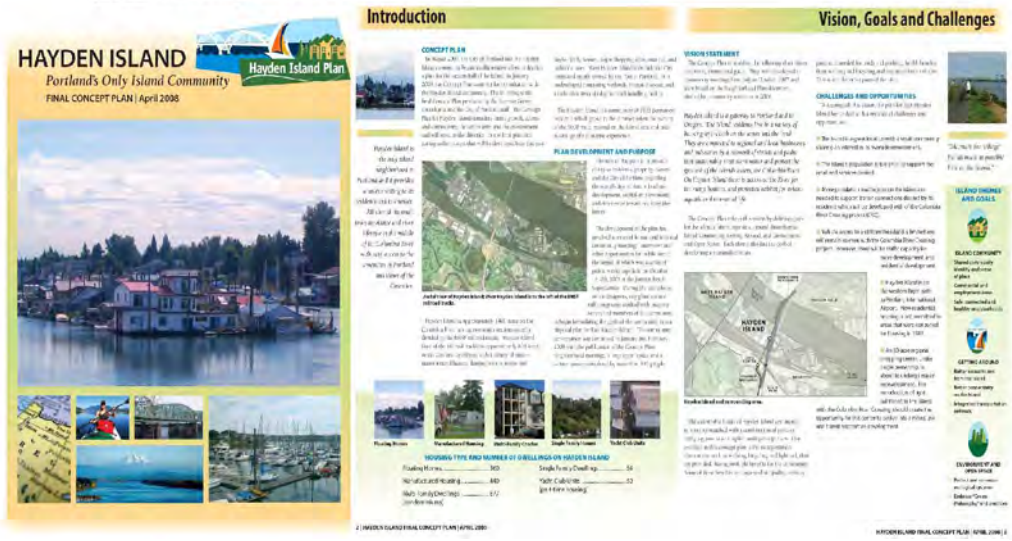
Appendix E. Hayden Island Plan Summary



Island Community

RIVER LIFESTYLE

TRANSIT-ORIENTED DEVELOPMENT

CENTRAL CORE

Hayden Island Proposed Plan


Hayden Island Plan
Shoreline habitat to be restored and protected
New Habitat Open Space
All I-5 noise contour limits development north of the line


Getting Around
EXTENSION OF EXPO CENTER LIGHT RA
DRAMATIC CHANGES TO CORE
PREFERRED LOCATION


ARTERIAL BRIDGE—TWO OPTIONS
LOCAL STREETS—UNIQUE AND GREEN STREETS


Environment and Open Space
OPEN SPACE PROTECTION PLAN
ISLAND TRAILS, WILDLIFE TO BE CONNECTED
CENTRAL PLAZA DESIGN SEEK MAX LIGHT RAIL STATION
Next Steps
Hayden Island Plan
PROPOSED FINAL PLAN TO BE PRESENTED TO THE PLANNING COMMISSION SUMMER 2008
HAYDEN ISLAND COMMUNITY DESIGN WORKSHOP TEAM
WRITING AND EDITING
GRAPHIC DESIGN

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Appendix F. Vancouver Central City Vision Summary

Relevant passages of the VCCP are contained in pages 9, 10 and 12 of the final report, and are reproduced here for reference.

TRANSPORTATION RECOMMENDATIONS

Policies:

Street Network

- Maintain collector and arterial capacity and continuity.
- Maintain and restore the 200-foot grid pattern for all travel modes.
- Discourage closures of local streets.
- Require a thorough review and analysis of any proposed change to the existing street system prior to recommending a street closure to City Council.
- Encourage the provision of interior walkways where the roadway network grid is interrupted or discontinuous, such as in the case of superblock development.

Traffic Signalization

Traffic volume growth should be monitored and new traffic signals installed where warranted. In addition, the traffic signal system should be fully interconnected to improve efficiency for typical operations and for special events.

Pedestrian and Bicycle Systems

Increase sidewalk width and remove safety and convenience conflicts on designated pedestrian streets, including 6th, 8th, Evergreen, 13th, Mill Plain/15th and McLoughlin. Bike lane striping and signing should be provided on major bike corridors, except where motorized traffic is light.

Parking Caps

Current City code requires minimum numbers of parking spaces for new buildings in downtown. City should consider replacing parking minimums and capping parking maximums thereby encouraging tighter, more pedestrian-friendly development.

Public Transit

High Capacity Transit to Oregon in conjunction with the I-5 Partnership should be considered.

Trolley Circulator: A transit service with headways of 10 minutes or less should be considered to link major downtown destinations and major transit stops.

Trolley Circulator for the downtown area

Traffic signalization

Promoting and bicycle systems

On-street parking

VCCV I-5 Expansion and River Crossing Goals for the CRT:
The I-5 expansion process and alternatives are in the early stages of development. The environmental impact process began in the summer of 2004. The CRT developed goals that can be utilized as the City participates in the I-5 process as follows:

- Analyze proposed engineering designs that could potentially affects adjoining properties negatively and result in wasteful use of downtown land.
- Enhance existing connections between the Vancouver National Historic Reserve and downtown.
- In addition to the I-5 southbound ramp to 6th Street, explore other opportunities to improve access to downtown.
- Integrate the Heritage Way Bridge concept into the I-5 improvements project.
- Integrate all modes of transportation, including high-capacity transit, bicycle and pedestrian circulation, to achieve a true regional multi-modal corridor.
- Coordinate I-5 improvements with city center access and circulation needs.

WSDOT I-5 web cam


One option for I-5 south bound ramp to 6th Avenue


Existing Columbia River crossing

Longer Term Projects
North-South Arterial Street Improvements

Many downtown arterials have been identified for new construction or capacity improvements. Among them are:

- Improve and extend Jefferson/Kaufman south to waterfront.
- Improve Columbia Street multi-modal capacity.
- Improve and preserve Franklin as an arterial street.
- Consider Grant Street for improvement and extension to south waterfront.

East-West Arterials & Historic Reserve Connections

- Construct a new arterial route south of the railroad berm and approximately parallel to it, extending from east of I-5 to Jefferson, and connecting with Columbia, Esther and Jefferson Streets.
- Improve Esther Short Park arterials, including 6th Street and Esther Street.
- Construct a new Heritage Way pedestrian Bridge across I-5 as a continuation of 7th Street.
- Enhance Evergreen Boulevard with wider sidewalks and improved way-finding signage to reinforce pedestrian linkages.
- Construct a southbound I-5 off-ramp to 6th Street.


7th Street transit Center


6th Street crossing BNSF Rail lines


Extend downtown streets under the BNSF rail lines

Appendix G. Architectural Guidelines & Aesthetic Assessment Framework

Preceding UDAG Formation:

Early in 2006, a multi-disciplinary team was assembled by the bi-state Columbia River Crossing design team (CRC) for the purpose of examining non-engineering aspects of the project and its area of influence. Part of this team focused on urban design aspects, and drafted an aesthetic assessment of the project based on preliminary engineering drawings, and on evaluation of existing conditions along the 5.2 miles of the project, reaching from Columbia Way in Oregon to the intersection of Highway 99 with I-5 in Washington.

By June, 2006, a complete draft of the CRC Aesthetic Assessment had been completed. It included a list of stakeholders who should be included in public consultation on urban design aspects of the project. Meanwhile, assessment of different bridge types for the main crossing of the Columbia River continued, as outlined in the overall project schedule.

In November 2006, a presentation of the project and the aesthetic assessment was made to a group of stakeholders, and the concept was developed of an appointed group of individuals appropriately qualified to comment on all aspects of urban design.

The first formal meeting of the Urban Design Advisory Group took place on March 9, 2007. A presentation was made by CRC staff on the bridge type alternatives analysis, and on prior work done in preparation for urban design input to project design. The most explicit results from this effort were the design goals and guidelines, given below, which the bi-state UDAG took as the basis for its work. They are reproduced in full in the following pages for reference.

Urban Design Goals:

1. Respect the variety of mobility options required by the Purpose and Need Statement to achieve a connected, functional, efficient, and integrated transportation system.
2. Achieve design excellence that can be embraced by affected communities and users.
3. Develop design elements that are sustainable economically, socially, physically, and ecologically.
4. Achieve unity of design that also reflects the unique qualities of the surrounding communities.
5. Provide better community connectivity on Hayden Island and in Vancouver.
6. Fully integrate the design elements of the project with its architecture, urban design, and landscape design.
7. Respect community values vested in buildings and landscape features affected by the project.
8. Provide a landmark bridge that is both inspired and inspiring and fully integrates the design and function of the structure with the urban design elements.
9. Integrate the Columbia River bridge structure into the approaches, taking into consideration the experiences of all users and surrounding communities.
10. Strengthen the gateways to Oregon and Washington by providing a sense of entry and exit.
11. Comply with design guidelines established by the cities of Vancouver and Portland with special consideration for community specific guidelines.

Environmental Goals

12. Integrate roadways, ramps and associated structures into the environments through which they pass so that neither local nor interstate functions are compromised.
13. Respect the heritage of land forms, distant views and natural features that preceded human intervention.
14. Sustain the uncontaminated qualities of air, water and earth with all demolition and construction activities.
15. Sustain the direction and flow of natural watercourses unless there are compelling reasons to modify them.
16. Respect the needs of established land uses and activities adjacent to the project.
17. Respect the community values vested in structures and natural features affected by the project.
18. Minimize the overall footprint of the project.
19. To the extent possible, the project should re-connect communities on either side of it, rather than compounding divisions made by past Interstate-related construction.
20. Treat all modes of transportation equitably; for example, ensure that pedestrians and bicycles can cross the highway where they need to and without undue detour.

Architectural Goals

21. Use a consistent vocabulary of architectural, urban design and landscape elements throughout the project. Use a limited palette of materials, details and colors.

22. Fully integrate the design of engineering elements of the project with its architecture, urban design and landscape design. For example, use forms and details in columns and beams that relate them to the project- wide architectural vocabulary.

23. Complement the architectural scale, materials and colors of significant structures nearby.

24. Respect community values vested in buildings and landscape features affected by the project.

Context Sensitive and Sustainable Solution Goals

25. Repair the fabric of built and natural environments affected by demolition or construction activities associated with the project.

26. Frame views with structure and landscape.

27. Use sustainable and low-energy-use materials and practices.

28. Re-use recyclable materials, including materials from demolition.

29. Consider life cycle costs as well as initial construction cost when selecting materials and systems.

30. Use trees and other shadow producers wherever practicable to reduce heat build-up in paved areas.

31. Use native compatible and drought-tolerant plant materials.

32. Minimize the extent of impervious surfaces, capture and treat all run-off (subject to findings and recommendations of the project Water Quality Team).

33. Detain, filter and cool water using bio-swales and other natural systems before returning storm water to watercourses.

34. Make maximum use of sustainable power sources for lighting and other purposes.

35. Minimize interference with the river bed, fisheries and navigation.

36. Use landscaping to re-unite the project with adjacent, established landscape, and to create meaningful features as part of the integrated project design; not as a means of using remnant areas of land.

37. Preserve historical, archeological and cultural features of the Bridge Influence Area.

38. Support the long-term economic viability of adjacent properties.

Appendix H. General Design Guidelines

The foregoing goals and guidelines from the Aesthetic Assessment of 2006 gave rise to the following general design guidelines. These too were accepted by the Urban Design Advisory Group as part of their background material. They prompted discussion of specific aspects of the project, thus contributing to development of the UDAG recommendations in the body of the report.

The design guidelines were written with the intention that they would evolve as the design is refined, rather than being prescriptive. The guidelines are given in bold followed by relevant commentary from the Urban Design Advisory Group in plain text.

Guideline 1. Aesthetic Elements and Signature Details

1.1 Open up the sightlines to the entries into Vancouver and Portland; be able to take in the grandeur of the landscape.

The natural arch of the alignment should give approaching bridge users excellent views of downtown Vancouver (northbound) and of Hayden Island (southbound).

Viewing platforms for pedestrians and bicyclists should be provided at strategic points on the main spans to accommodate views without impeding through traffic.

1.2 Use pure and structurally honest expression of form in bridge design – elegant design.

The sculpting of design details, use of materials, and the scale of all the structural elements should create a harmony of form with the bridge and its setting.

1.3 Use colorful architectural lighting artistically and dramatically with potential for responding to special events.

The lighting standards and fixture housings should complement the main bridge and the adjacent interchanges.

Lighting should consider roadway design requirements, pedestrian and bike needs, life cycle costs and sustainability.

Lighting should be used in a subtle, elegant way.

Architectural and road lighting will have to conform to lighting and night sky ordinances, aviation, and any environmental restrictions governing spilled light on the land and water.

Address both bridge users and more distant lateral views with lighting design.

1.4 Make use of materials that can be colorful and adaptable.

The design team will develop design options for the Columbia River Bridge, viaducts, interchanges, piers, abutments, etc. and present them to the UDAG for comment.

1.5 Break the bridge-crossing experience down into episodic events to illustrate the transition from land to water and back to land; avoid one long uniform structure

Designs for the pedestrian and bikeway should recognize the episodic transitions involving lookouts, and multiple vertical access points to the land below

Transitions from the long bridge spans over the Columbia River to the landside structures should be fluid and create a variation of structural form that adds to the sculptural opportunity of the crossing.

1.6 Use features and themes on walls, ramps and surfaces

Designs should integrate the design elements of the project with its architecture, urban design, and landscape design.

Designs should consider use of cultural and context-related design motifs for their possible incorporation into the structural elements of the project.

Opportunities for interpretive sites should be considered.

1.7 Use landscaping to add color, texture and reflect environmental values

Landscape architecture should be a vital part of the design. Particular attention will be paid to the ground plane under the Vancouver Landing.

Landscaping should be designed with the structures; not added later.

1.8 Give equal treatments to approaches and landings to the bridge

All the planning and design elements of the project are important. The approaches and landings to and from all the bridges should relate to and flow into those bridges, and should be compatible with the urban context of landing places.

Guideline 2. Historical & Cultural Context

2.1 Reflect the regional heritage.

This includes gateways, the Columbia Gorge, Lewis and Clark, Native American culture, Mt Hood, Vancouver, Portland, and many aspects of river history.

Designs should incorporate regionally relevant design motifs in the structures.

2.2 Use colors that reflect the Pacific Northwest and are derivative of the natural landscape.

The Design Team will study the use of colors reflective of the cultures of the Pacific Northwest and the natural landscape for the physical structures of the CRC project.

2.3 Provide designs that represent the partnership between Washington and Oregon, Vancouver and Portland.

Designs should create an iconic statement of the cooperation between the states and the two cities.

Frame significant views of urban and natural features to be seen by all users as they enter, use and leave the bridge and its approaches.

Guideline 3. Functionality and Use of Space

3.1 Create opportunities for public space around the bridgeheads.

Designs should incorporate potential waterfront development opportunities under the river crossing landings in both Vancouver and Hayden Island.

Designs should consider land use plans for Hayden Island and the resulting street network.

3.2 Be creative in the design of bicycle and pedestrian connections.

The Design Team should look at options for bicycle and pedestrian routes and improvements, including indentified viewpoints for review by the UDAG.

Treat transit, pedestrians and bicyclists as primary users of the bridge and its approaches along with motor vehicles. Resist compromise of the quality of accommodation for these functions.

Guideline 4. Community and Environmental Impacts

4.1 Provide definition to the underside of the Columbia River Bridge and give consideration to those that live near it.

Designs should consider articulation of the structural elements of the bridge and interchange spans. The placement and proportions of the columns, and the integration of utilities and lighting as seen from below are key to creating a pleasing visual "environment" for those living near, or passing by, these structures.

4.2 Emphasize sustainable design and consider future maintenance needs.

Every effort should be made to incorporate sustainable design elements in the crossing facilities. Reuse of demolished structural materials (concrete and steel), development of water quality facilities, use of energy efficient lighting fixtures and of solar powered emergency roadside phones, maximum use of concrete for long term maintenance savings, use of advanced coatings (20-30 year life) for any exposed steel required.

4.3 Consider the pedestrian experience – safety, views, access, noise, and motion.

Designs should consider opportunities for unobstructed views of the Columbia River and Mt. Hood from the Columbia River Bridge. The experience of pedestrians under the bridge and views of the bridge from the river and its banks are also important.

Designs should accommodate convenient pedestrian and bicycle access to the bridge, to existing pathways and local destinations.

Noise should be a significant consideration in the evaluation of alternative locations for the pedestrian and bicycle facilities. Related to this is the distance from moving vehicles in the nearest lanes.

Protection from the weather should be considered when evaluating alternative locations for pedestrian and bicycle facilities with each bridge type.

4.4 Design bridge and associated structures to minimize generation and projection of noise towards occupied buildings and open spaces.

This guideline must reconcile noise protection with other guidelines concerning views, aesthetic compatibility etc.

4.5 Minimize the physical impact of on and off ramps on views and local access.

Special care should be taken on the SR 14 connections as they reach grade near the Vancouver Land Bridge. It will be important to protect newly created infrastructure and connections to Old Apple Tree Park.

Coordinate ramp geometry with local access needs, such as reconnection of 5th street beneath the SR 14 interchange.

4.6 Deter invasive species and encourage native plants.

Detail structures to minimize the likelihood of perching and nesting birds.

Use plant materials that are non-invasive, native or native-compatible.

Appendix I. Summary of PBAC Recommendations

The Pedestrian and Bicycle Advisory Committee (PBAC) has been working in parallel with the Urban Design Advisory Group. Thus far, its primary focus has been on accommodation of pedestrian and bicycle facilities on the bridges across the Columbia River and North Portland Harbor. A draft paper on PBAC recommendations to the Columbia River Crossing Task Force suggests that the bridges should include a world class pathway, which it describes as providing safe and supply designed facilities that promote use through universal and aesthetic design for non-motorized transportation. It recommends separate pathways for recreational and faster commuter traffic. Assuming a separate bridge for transit, bicycle and pedestrian traffic, a 12' wide recreational pathway is recommended, separated from a pair of 6-foot bike lanes. In addition, an 8-foot wide sidewalk is recommended on the east side of the eastern (northbound) bridges. This would afford unobstructed views of Mount Hood. Also recommended are belvederes and access to parks and waterfront trails.

PBAC anticipates preparing recommendations for pathway and sidewalk design and inter-connections. It will also examine pedestrian and bicycle treatments within each of the six interchanges, and will advise on local street facilities for pedestrians and bicycles.

Columbia River CROSSING

Pedestrian and Bicycle Facilities in Portland and Vancouver

Columbia River CROSSING

Pedestrian and Bicycle Advisory Committee Recommended Pathway