PRELIMINARY

ALTERNATIVE PACKAGES

COLUMBIA RIVER CROSSING

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Updated: 11/06/06

Preliminary Alternative Packaging Process

The selected highway and transit ideas have been combined into 12 preliminary alternative packages to test how they perform together. Testing these alternative packages will highlight the strengths and weaknesses of individual components, and identify the most promising combinations. Each alternative package includes both a river crossing and transit component as well as components to improve safety, freight movement, highway operations and bicycle and pedestrian access. A "no action" package will be studied, and will serve as a baseline for comparisons. Later this year, high-performing components will be repackaged to build three to four alternatives that offer a range of strong solutions. These most promising alternatives will be analyzed in detail to determine cost, engineering design, and environmental and community impacts. A full report of this analysis, called the Draft Environmental Impact Statement, is expected to be complete at the end of 2007.

Bridge Crossing and Public Transportation Options Selected for Review

The project team is investigating many types of solutions to safety and congestion problems in the Columbia River Crossing project area. The team started with 23 ideas to improve or replace the Interstate Bridge and 14 ideas to improve transit service between Vancouver and Portland.

Staff and the 39-member task force worked to reduce the number of ideas for additional anaylsis. The following river crossing ideas are being further studied:

- Mid-level replacement bridge (RC-3, RC-4)
- Mid-level supplemental bridge downstream of existing structure (RC-9)
- Arterial crossing combined with improvements to I-5 (RC-23)

The following public transit ideas will be further studied:

- Express buses (TR-1, TR-2)
- Bus rapid transit (TR-3, TR-4)
- Light rail (TR-5)

Columbia River CROSSING

Contact Information:
700 Washington Street, Suite 300
Vancouver, WA 98660

(360) 737-2726 or (503) 256-2726
Toll Free (866) 396-2726
Email: feedback@columbiarivercrossing.org
Website: www.columbiarivercrossing.org

Updates to Alternative Package Descriptions

This third edition is revised from second edition published on August 22, 2006. This document was originally prepared for the Columbia River Crossing Task Force meeting on July 12, 2006.

Changes to this version:

In Alternative Packages 6 and 7, the Hayden Island interchange will *not* be removed, but instead will be reconfigured. Exact text changes are as follows:

Deleted Alternative Package 6–Supplemental Bridge for I-5; Bus Rapid Transit Lite on Existing Bridge
Highways: "Remove Hayden Island interchange; no direct access to Hayden Island from I-5"

Edited Alternative Package 6– Supplemental Bridge for I-5; Bus Rapid Transit Lite on Existing Bridge
Highways: "Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th"

Deleted Alternative Package 7– Supplemental Bridge for I-5 and Express Bus
Highways: "Remove Hayden Island interchange; no direct access to Hayden Island from I-5"

Edited Alternative Package 7–Supplemental Bridge for I-5 and Express Bus
Highways: "Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th"

No Action

River Crossing

No new river crossing or improvements to the existing bridges

I-5 traffic remains on existing bridges

Transit

No changes to existing local and express bus transit,
other than growth and/or reduction in service
consistent with long term plans by C-TRAN and TriMet

~

Express bus

~

Local bus

Transportation System/Transportation Demand Management

Basic level

Highways

Currently planned and programmed projects throughout the region move forward, consistent with Metro's Regional Transportation Plan and RTC's Metropolitan Transportation Plan. Planned improvements to I-5 between Delta Park and Lombard Avenue in Oregon will occur.

Freight

No freight-specific improvements

Bicycle/Pedestrian

No specific improvements

| DISCLAIMER | These maps and descriptions are for discussion purposes only and are subject to change.

Legend

- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Transit Station
- Reconfigured Interchange

Transportation System Management/Transportation Demand Management Focus

River Crossing

No new river crossing or improvements to the existing bridges

~

I-5 traffic remains on existing bridges

Transit

Existing express bus and local bus service would be increased from current levels.

Transit service would continue to use general purpose travel lanes.

~

Express bus

~

Local bus

Transportation System/Transportation Demand Management

Aggressive level

Highways

Targeted safety improvements in high accident areas

~

Currently planned and programmed projects throughout the region move forward, consistent with Metro's Regional Transportation Plan and RTC's Metropolitan Transportation Plan. Planned improvements to I-5 between Delta Park and Lombard Avenue in Oregon will occur.

~

Managed lanes on I-5 for HOV and transit between 134th and SR 500

Freight

No freight-specific improvements

Bicycle/Pedestrian

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Transit Station
- Reconfigured Interchange

Transit Emphasis

Supplemental Bridge for Arterial Traffic with Light Rail

River Crossing

New arterial bridge to the west that also carries light rail

~

Existing bridges carry I-5 traffic

Transit

Extend MAX Yellow Line light rail to north of downtown Vancouver

~

Express Bus

~

Local bus

Transportation System/Transportation Demand Management

Aggressive level

Highways

Targeted safety improvements in high accident areas

~

Arterial connections between Marine Drive, Hayden Island and downtown Vancouver

~

Remove Hayden Island interchange; no direct access to Hayden Island from I-5

Freight

Freight bypass on-ramp lanes at key interchanges to be determined

Bicycle and Pedestrian Improvements

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge
- Supplemental Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Light Rail Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Light Rail Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Supplemental Bridge for I-5; Light Rail on Existing Bridge

River Crossing

New I-5 bridge west of existing bridge

~

Existing bridges carry light rail and arterial traffic

Transit

Extend MAX Yellow Line light rail to north of downtown Vancouver

~

Local bus

Transportation System/ Transportation Demand Management

Aggressive level

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Arterial connections between Marine Drive, Hayden Island and downtown Vancouver

~

Remove Hayden Island interchange; no direct access to Hayden Island from I-5

~

Managed lanes on I-5 for HOV and/or freight use between 134th and Delta Park

Freight

Potential managed lanes for freight

~

Freight bypass on-ramp lanes at key interchanges to be determined

Bicycle and Pedestrian Improvements

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge
- Supplemental Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Light Rail Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Light Rail Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Supplemental Bridge for I-5; Bus Rapid Transit on Existing Bridge

River Crossing

New I-5 bridge west of existing bridge

~

Existing bridges carry Bus Rapid Transit and arterial traffic

Transit

Bus Rapid Transit in dedicated lanes from north of downtown Vancouver to Delta Park

~

Express bus in managed lanes across new bridge

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Arterial connections between Marine Drive, Hayden Island and downtown Vancouver

~

Remove Hayden Island interchange; no direct access to Hayden Island from I-5

~

Managed lanes on I-5 for HOV and/or freight use between 134th and Delta Park

Freight

Potential managed lanes for freight

~

Freight bypass on-ramp lanes at key interchanges to be determined

Bicycle and Pedestrian Improvements

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge
- Supplemental Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Bus Rapid Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Bus Rapid Transit Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Supplemental Bridge for I-5; Bus Rapid Transit Lite on Existing Bridge

River Crossing

New I-5 bridge (west)

~

Existing bridges carry Bus Rapid Transit Lite and arterial traffic

Transit

Bus Rapid Transit Lite service from Clark County park and ride lots to downtown Portland in general purpose and managed lanes

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Arterial connections between Marine Drive, Hayden Island and downtown Vancouver

~

Managed lanes on I-5 for HOV and/or freight use between 134th and Delta Park

Freight

Potential managed lanes for freight

~

Freight bypass on-ramp lanes at key interchanges to be determined

Bicycle and Pedestrian Improvements

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge
- Supplemental Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Bus Rapid Transit Lite Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Bus Rapid Transit Lite Station
- Reconfigured Interchange

Vehicle Capacity Emphasis

Supplemental Bridge for I-5 and Express Bus

River Crossing

New I-5 bridge west

~

Existing bridges carry arterial traffic

Transit

Express bus service from new and expanded Clark County park and ride lots to downtown Portland

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Arterial connections between Marine Drive, Hayden Island and downtown Vancouver

~

Managed lanes on I-5 for HOV and/or freight use between 134th and Delta Park

Freight

No freight-specific improvements

Bicycle and Pedestrian Improvements

Improvements on the existing bridges with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge
- Supplemental Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Transit Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Replacement Bridge for I-5 with Light Rail and Express Bus

River Crossing

New bridge (west) with light rail, general purpose lanes and managed lanes

Transit

Extend MAX Yellow Line light rail to north of downtown Vancouver

~

Express bus in managed lanes across new bridge

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Managed lanes on I-5 for transit and HOV use between 134th and Delta Park

Freight

No freight-specific improvements

Bicycle and Pedestrian Improvements

Facilities on the new bridge with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge (removed)
- Replacement Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Light Rail Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Replacement Bridge for I-5 with Light Rail

River Crossing

New bridge (west) with light rail, general purpose lanes and managed lanes

Transit

Extend MAX Yellow Line light rail to north of downtown Vancouver

~

Local Bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Managed lanes for HOV and/or freight use between 134th and Delta Park

Freight

Freight bypass on-ramp lanes at key interchanges to be determined

~

Potential managed lanes for freight

Bicycle and Pedestrian Improvements

Facilities on the new bridge with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge (removed)
- Replacement Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Light Rail Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Light Rail Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Replacement Bridge for I-5 with Bus Rapid Transit

River Crossing

New bridge (east) with general purpose lanes and managed lanes.

~

Bus Rapid Transit in separated right of way

Transit

Bus Rapid Transit service in dedicated right of way from north of downtown Vancouver to Delta Park

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Managed lanes on I-5 for transit and HOV use between 134th and Delta Park

Freight

Potential managed lanes for freight

~

Freight bypass on-ramp lanes at key interchanges to be determined

~

Direct access ramps for freight at key locations to be determined

Bicycle and Pedestrian Improvements

Facilities on the new bridge with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge (removed)
- Replacement Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Bus Rapid Transit Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Bus Rapid Transit Station
- Reconfigured Interchange

Balanced Transit/Highway Emphasis

Replacement Bridge for I-5 with Bus Rapid Transit Lite

River Crossing

New bridge (west) with Bus Rapid Transit Lite in separated right of way

Transit

Bus Rapid Transit Lite service from Clark County park and ride lots to downtown Portland in general purpose and managed lanes

~

Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor

~

Interchange reconfigurations at Marine Drive, Hayden Island, SR-14, Mill Plain, 4th Plain, SR 500 and 39th

~

Managed lanes on I-5 for transit and HOV use between 134th and Delta Park

Freight

No freight-specific improvements

Bicycle and Pedestrian Improvements

Facilities on the new bridge with enhanced connections to North Portland, Hayden Island and downtown Vancouver

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Legend

- Existing Bridge (removed)
- Replacement Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- New Potential Bus Rapid Transit Lite Alignments
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Bus Rapid Transit Lite Station
- Reconfigured Interchange

Vehicle Capacity Emphasis

Replacement Bridge for I-5 with Express Bus

River Crossing

New bridge (east) with general purpose lanes

Transit

Express bus service from Clark County
park and ride lots to downtown Portland
~
Local bus

Transportation System/Transportation Demand Management

Aggressive

Highways

Safety improvements throughout the corridor
~
Interchange reconfigurations at Marine Drive, Hayden Island,
SR-14, Mill Plain, 4th P lain, SR 500 and 39th

Freight

No freight-specific improvements

Bicycle and Pedestrian Improvements

Facilities on the new bridge with enhanced connections
to North Portland, Hayden Island and downtown Vancouver

| DISCLAIMER | These maps and descriptions are for discussion purposes only and are subject to change.

Legend

- Existing Bridge (removed)
- Replacement Bridge
- Arterial Lanes
- Managed Lanes/Freight Lane
- Safety and Capacity Improvements
- New Potential Park and Ride
- Existing/Potential Transit Station
- Reconfigured Interchange

Columbia River CROSSING

Preliminary Alternative Packages

	Existing Bridges Only		Supplemental Bridge (Downstream) with Existing Bridges					Replacement Bridge				
Alternative Package #	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Title	No Action	Trans. System Management/ Trans. Demand Management	Supplemental Bridge for Arterial Traffic with Light Rail	Supplemental Bridge for I-5; Light Rail on Existing Bridge	Supplemental Bridge for I-5; Bus Rapid Transit on Existing Bridge	Supplemental Bridge for I-5; Bus Rapid Transit Lite on Existing Bridge	Supplemental Bridge for I-5 and Express Bus	Downstream Replacement Bridge for I-5 w/ Light Rail and Express Bus	Downstream Replacement Bridge for I-5 w/ Light Rail	Upstream Replacement Bridge for I-5 w/ Bus Rapid Transit	Downstream Replacement Bridge for I-5 w/ Bus Rapid Transit Lite	Upstream Replacement Bridge for I-5 w/ Express Bus
Themes	No Action	Minimum Investment: TDM/ TSM Emphasis	Maximum Transit Ridership, Minimum I-5 improvements	Balanced Transit/ Highway Improvements w/ Light Rail	Balanced Transit/ Highway Improvements w/ Bus Rapid Transit	Balanced Transit/Highway Improvements w/ Bus Rapid Transit -Lite	Maximum Vehicle Capacity	Balanced Transit/ Highway Improvements w/ Light Rail	Balanced Transit/ Highway Improvements w/ Light Rail	Balanced Transit/Highway Improvements w/ Bus Rapid Transit	Balanced Transit/Highway Improvements w/ Bus Rapid Transit -Lite	Maximum Vehicle Capacity
High Capacity Transit Mode across Col. River	None	None	Light Rail	Light Rail	Bus Rapid Transit	Bus Rapid Transit -Lite	None	Light Rail	Light Rail	Bus Rapid Transit	Bus Rapid Transit -Lite	None
Other Transit Mode(s) across bridge	Express bus, local bus	Express bus, local bus	Express bus, local bus	Local bus	Express bus, local bus	Local bus	Express bus, local bus	Express bus, local bus	Local bus	Local bus	Local bus	Express Bus, local bus
Function of Existing Bridges	I-5 General Purpose lanes	I-5 General Purpose	I-5 General Purpose	Arterial+ Light Rail	Arterial+ Bus Rapid Transit	Arterial + Bus Rapid Transit	Arterial	N/A	N/A	N/A	N/A	N/A
Function of New Bridge	N/A	N/A	Arterial + Light Rail	I-5 w/ Managed Lane	I-5 w/ Managed Lane	I-5 w/ Managed Lane	I-5 w/ Managed Lane	I-5 w/ Managed Lane & Light Rail	I-5 w/ Managed Lane & Light Rail	I-5 w/ Managed Lane & Bus Rapid Transit	I-5 w/ Managed Lane & Bus Rapid Transit	I-5 w General Purpose lanes
Bike & Pedestrian Improvements	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTE: These are preliminary and are subject to change prior to Draft Environmental Impact Statement.

Revised: November 2, 2006