Association of Oregon Rail and Transit Advocates
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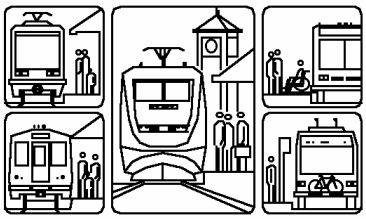

MEMORANDUM

March 22, 2007

To: Members of the Fourth Alternative Subcommittee, Columbia River Crossing Task Force
From: Jim Howell, Director and Strategic Planner
Re: Recommendation for a Fourth Alternative

Please recommend the 11/08/06 AORTA Option as the Fourth Alternative.

The "hot lane" option proposed at the Mar. 19 meeting does not discourage SOV commuting, reduce greenhouse gases, or encourage energy independence. It would be expensive to build because of additional flyover structures, paving and right-of-way and would add to downstream traffic congestion.

The AORTA Option meets the stated Project Purposes.

- It improves connectivity, reliability and travel time with aggressive public transit, local street access and improved bicycle and pedestrian facilities. Transit upgrades will reduce highway demand.

- It improves safety by reducing highway demand, reconfiguring substandard on-ramps and adding ramp metering.

- It improves highway freight mobility and commercial needs by reducing SOV commuting thereby freeing up peak highway capacity and providing an exclusive northbound truck lane from Marine Drive/MLK.

- It reduces the river crossing's seismic vulnerability by providing a new bridge that meets all current seismic standards and which would provide a seismically robust crossing for priority traffic during a major seismic event. It also upgrades the railroad bridge's opening span to the same standards.

- In addition, no bridge lifts would be required for commercial barges once the rail bridge is reconfigured. This also improves marine and rail safety. Only special equipment moves and certain large sailboats would require lifts on the existing bridges and the new multi-modal bridge. These lift openings can be scheduled when light rail is not operating.

  (48 lifts a year for vessels over 70 feet high – *CRC Fact Sheet - U.S. Coast Guard Preliminary Hearing on Bridge Alignment and Pier Placement* – Sept. 21, 2006).

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- It retains full Hayden Island access to and from I-5.

- It is the only proposal that meets the criteria of the Portland City Council's unanimously adopted recommendations in the Peak Oil Report.

- It meets the guidelines of Metro Council Resolution 07-3782A, which spurred the creation of the Fourth Option Subcommittee.

The capital cost of this proposal, including the railroad bridge retrofit and enhanced transit, would probably be in the range of 10% to 30% of the cost of the Staff's recommended alternatives.

The January 16, 2006 Memorandum to the CRC Task Force Members from John Osborn and Doug Ficco detailing the alleged failures of AORTA's option to meet the Statement of Purpose and Need contains many flaws. A point-by point rebuttal is attached. Among the major flaws of that memo is its failure to consider the effects of light rail, local street access and ramp metering on reducing and regulating traffic to and from Hayden Island. It also failed to consider the effects of aggressive transit development in Clark County and North Portland on I-5 and SR14 peak hour traffic. Disregarding the erroneous conclusions addressed above and in the attached rebuttal, staff was unable to identify any fatal flaw.

The AORTA Proposal meets the stated objective of the Fourth Option Subcommittee: to provide a low cost option to be carried forward into the EIS for the CRC Task Force's consideration at its next meeting. It is the only fully thought-through option that has already been subjected to considerable analysis, and that can meet the objectives of the Fourth Option Subcommittee. If it really had a fatal flaw, it would have been discovered by now.

Additional brainstorming may come up with ideas that do not pan out. It is prudent to go with the AORTA proposal, because the negatives are already fully known, and they are not that bad, considering the cost. Because the AORTA proposal includes multiple, parallel strategies, it can be easily optimized during the EIS process, should adjustment be necessary.

Attachments:
- Cross Sections of AORTA's Proposal
- Assessment of AORTA's Concept Plan keyed to attached critique of Staff Assessment
- Critique of Staff Assessment

Contact:
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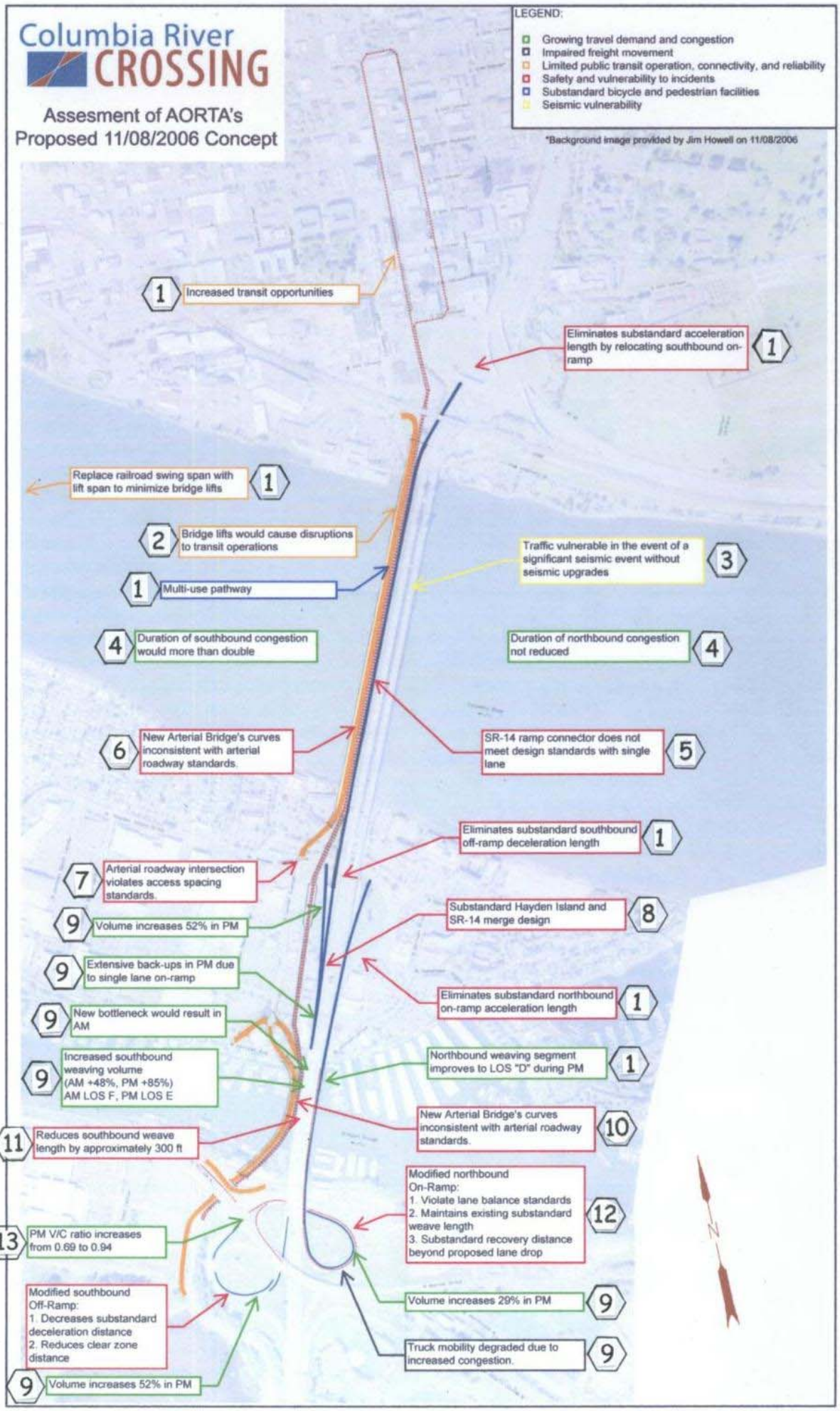
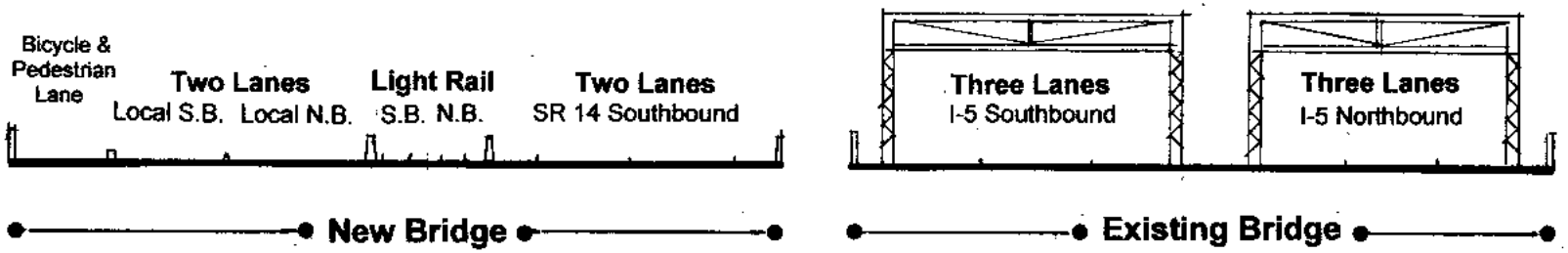
Critique of the CRC Staff Assessment of AORTA's Proposed Nov. 8, 2006 Concept for A Columbia River Crossing Emphasizing Public Transportation (keyed to Map)

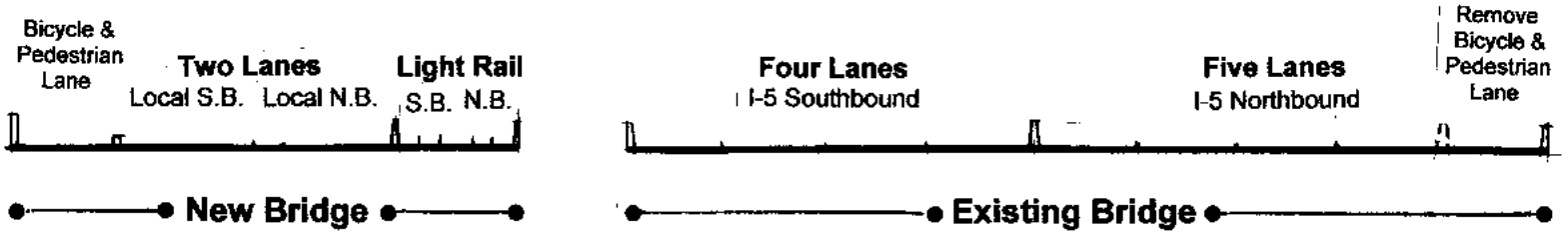
1. Correct
2. Incorrect – With the relocation of the railroad bridge's opening span, a lift span on a new multi-modal bridge would not have to be opened during transit operating hours due to infrequent movement of high vessels.
3. A significant seismic event would most likely make I-5 vulnerable throughout the metro region. To my knowledge, the relative vulnerability of all the structures on I-5 in the metro area has never been documented. Requiring the Columbia River structures alone to be seismically upgraded without this evidence is capricious since AORTA's Concept requires no other modification to the existing bridges. The purpose of improving the interstate river crossing's structural integrity would be accomplished by constructing the multi-modal bridge to modern seismic standards, providing a robust crossing for priority traffic during a major seismic event.
4. Incorrect – Light rail will more than double the river crossing capacity and aggressive expansion of effective bus service feeding light rail on both sides of the river will reduce peak hour demand and duration of freeway congestion.
5. Map is a concept, not an engineering drawing; SR-14 ramp connector on the multi-modal bridge can be two lanes up to a ramp meter on Hayden Island.
6. Map is a concept, not an engineering drawing; the local vehicle connection is not intended to be an arterial, but rather a two lane street connector between Hayden Island and Columbia Street controlled with a traffic signal at each end.
7. Map is a concept, not an engineering drawing; access spacing can be easily modified.
8. Map is a concept, not an engineering drawing; a safe merge can be designed in the 2,600 feet distance between the south end of the existing bridge and the Marine Drive off-ramp.
9. Incorrect – Traffic volumes and projected backups and bottlenecks are based on the <u>erroneous assumption</u> that all traffic to and from Hayden Island will continue to use the freeway exclusively in spite of light rail and enhanced feeder bus service in Vancouver, Portland and Hayden Island. This plus independent local street, bike and pedestrian access to and from Portland and Vancouver.
10. Map is a concept, not an engineering drawing; the vehicle connection across the Portland Harbor is not intended to become an arterial but rather a two lane local street connection between N. Center Avenue on Hayden Island and N. Expo Road. A 25-MPH speed limit is desirable.
11. Map is a concept, not an engineering drawing; safe weaves and merges (see #8 above), in any segment, are determined by traffic volumes. Traffic on the Hayden Island and SR-14 on-ramps can both be metered to allow safe merges and weaves.
12. The existing Portland Harbor Bridge gains a NB lane by moving bikes and pedestrians to the new bridge allowing trucks an un-metered access lane. See #8 and #11 above re: weaves and details.
13. Aggressive transit development will reduce demand and intersection's vehicle capacity can be increased with design modifications.

March 22, 2007 Jim Howell 503-284-7182 jimhowell89@hotmail.com


Columbia River CROSSING
Assesment of AORTA's Proposed 11/08/2006 Concept
LEGEND:
Growing travel demand and congestion
Impaired freight movement
Limited public transit operation, connectivity, and reliability
Safety and vulnerability to incidents
Substandard bicycle and pedestrian facilities
Seismic vulnerability
*Background image provided by Jim Howell on 11/08/2006
1 Increased transit opportunities
Eliminates substandard acceleration length by relocating southbound on-ramp 1
Replace railroad swing span with lift span to minimize bridge lifts 1
2 Bridge lifts would cause disruptions to transit operations
Traffic vulnerable in the event of a significant seismic event without seismic upgrades 3
1 Multi-use pathway
4 Duration of southbound congestion would more than double
Duration of northbound congestion not reduced 4
6 New Arterial Bridge's curves inconsistent with arterial roadway standards.
SR-14 ramp connector does not meet design standards with single lane 5
Eliminates substandard southbound off-ramp deceleration length 1
7 Arterial roadway intersection violates access spacing standards.
Substandard Hayden Island and SR-14 merge design 8
9 Volume increases 52% in PM
9 Extensive back-ups in PM due to single lane on-ramp
Eliminates substandard northbound on-ramp acceleration length 1
9 New bottleneck would result in AM
9 Increased southbound weaving volume (AM +48%, PM +85%) AM LOS F, PM LOS E
Northbound weaving segment improves to LOS "D" during PM 1
New Arterial Bridge's curves inconsistent with arterial roadway standards. 10
11 Reduces southbound weave length by approximately 300 ft
Modified northbound On-Ramp:
1. Violate lane balance standards
2. Maintains existing substandard weave length
3. Substandard recovery distance beyond proposed lane drop 12
13 PM V/C ratio increases from 0.69 to 0.94
Volume increases 29% in PM 9
Modified southbound Off-Ramp:
1. Decreases substandard deceleration distance
2. Reduces clear zone distance
Truck mobility degraded due to increased congestion. 9
9 Volume increases 52% in PM
N
January 23, 2007
See attached notes



Columbia River Crossing



Portland Harbor Crossing

AORTA's Proposal for the Columbia River Crossing

Not to Scale

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