Responses to Questions from November 13 Interstate 5 Bridge Bi-State Legislative Meeting

Responses jointly provided by ODOT and WSDOT

INFORMATION REQUESTS

What information is available online and where?

The full Columbia River I-5 Bridge Planning Inventory report and supporting documentation is available at the following link: www.wsdot.wa.gov/accountability/ssb5806/.

In addition to the inventory report, this website provides access to a broad range of the environmental documents, technical reports, and other supporting documents that informed the previous process. The most significant of these are organized by topics that correspond to chapters in the inventory report (each is a link in the left navigation bar). The text of these documents can also be searched for key words using the search tool at the bottom of the left navigation bar. There is also a file repository of additional documents posted; these are less significant documents and are not searchable using the search tool.

As reference, several key documents that shaped program development are attached, including the CRC Task Force Vision and Values statement and associated screening measures, the final problem definition, and the Purpose and Need statement.

Would you please provide a list of the properties identified as historic resources?

A list of properties previously identified as historic resources is attached for reference at the end of these responses. This list was developed as part of the Draft Environmental Impact Statement and is the most comprehensive and straightforward document showing eligible and listed historic properties. Later in the process, it was determined that some of the properties initially identified were not actually eligible for listing on the National Register of Historic Places.

A total of 201 properties were ultimately determined to be eligible or already listed. The majority of these properties are located in Washington, with five properties identified in Oregon in addition to the northbound span of the Interstate Bridge itself: the Carousel at Jantzen Beach, the Columbia Slough and Levee System, the Pier 99 Building, the USS LCI-713 World War II-era amphibious landing vehicle moored at Hayden Island, and the Willamette River (Steel) Bridge.

TRANSPORTATION DATA AND ANALYSIS QUESTIONS

What transportation data was previously collected and what did it show?

The foundation of any traffic operations analysis is a clear and thorough understanding of existing conditions through the collection of detailed traffic data. The project area previously studied contains a diverse transportation network including highways, local roads, and bicycle and pedestrian facilities. This network serves a diverse mix of users, including commuters, heavy truck traffic, transit users, local business and residential traffic, and bicycle and pedestrian users.

The majority of the traffic data used in this analysis was collected from 2005-2007, with supplemental traffic data collected throughout the life of the project. Data included traffic volumes along the highway and at ramp terminals, local intersection turning movement counts, vehicle classification surveys, travel lane utilization surveys, travel speeds, vehicle occupancy counts, vehicle origin-destination data, bicycle and pedestrian counts, and collision data. The sites used to conduct the various traffic counts and surveys were identified through discussions with technical staff from ODOT, WSDOT, City of Vancouver, and City of Portland.

The data collected was used to calibrate travel demand models to predict future conditions such as traffic volumes and transit ridership. Travel demand models are tools used throughout transportation planning and are developed and maintained by the regional planning organizations, Metro and RTC. They incorporate land use information (locations and density of housing, employment and other activity centers), findings from periodically updated household trip surveys, and transportation network characteristics.

The existing traffic operations analysis and future travel demand modeling provided a wide array of data, including the duration of congestion, time it takes to travel from one location to another, person and vehicle throughput, freight delay, and collision rates.

How did traffic data and analysis inform design?

Traffic data informed numerous planning and design decisions throughout development of the previous project, from identifying the problems to be addressed to developing and evaluating alternatives. Specific design decisions informed by traffic data included, but were not limited to: number of through lanes, number of auxiliary lanes, interchange design, bicycle and pedestrian improvements, and toll revenue forecasting.

PROCESS QUESTIONS

Were the environmental constraints described (parks, historic resources, archaeological sites, tribal consultation, wetlands and habitat areas) addressed sufficiently in the previous environmental process on the previous design?

Yes, the 2011 federal Record of Decision received from the Federal Highway Administration and the Federal Transit Administration demonstrates that the environmental process was successfully completed and environmental constraints were adequately addressed in relation to previous project design.

Is it fair to say that, if we were looking at working within the previous project footprint, we generally know what the constraints are?

Generally, yes. There is a significant amount of information available on all previously analyzed technical disciplines covering environmental and community impacts. Going forward, the program will look at whether changes in regulations or changes in required analysis methods would result in the need to update previous analysis. Part of the upcoming work will also be to determine if there are additional technical areas to analyze, or if there are needed updates to past work because of changes in conditions.

If improvements move off of the previous alignment (i.e. upstream or downstream), would we have to start all over in understanding constraints and analyzing impact?

Previous planning work provided a good understanding of the river navigation and aviation constraints as well as the built and natural environment within the I-5 corridor. That information should provide a good foundation for all future development work. However, changing the alignment from what was previously studied would reduce the reusability of information and analysis that was specific to the previous footprint. The need for additional rework or new information would vary based on the degree of change.

Is a no-build alternative always considered in the NEPA process?

Yes, NEPA guidelines require that the "no-build" alternative must always be included as one of the EIS alternatives studied. Discussion of this alternative can serve two purposes. First, it may be a reasonable alternative, especially where the impacts are high and the need is relatively minor. As part of this alternative, short-term minor reconstruction, such as safety upgrading and maintenance projects, can also be considered. More often, the no-build serves as a baseline against which the impacts of the other alternatives can be compared.

The previous alternative analysis took about three years. Will it take that long again?

The process used to identify and evaluate a reasonable range of alternatives will be shaped in collaboration with bi-state program partners. Depending on the starting point and the scope and

scale of alternatives to be considered, the process to identify the locally preferred alternative could take several years. The program team will utilize much of the previous work where it makes sense to help support efficient decision making throughout the process.

How were issues of community concern, such as air quality, previously considered?

The previous process developed a community Vision and Values statement that was adopted by the CRC Task Force which included air quality, providing options for modal choice, supporting the regional economy, protecting fish and wildlife, and other items. The values identified formed screening criteria that alternatives were measured against. Air quality was included as a value and therefore as a screening criteria to help inform decisions on the Locally Preferred Alternative. As noted above, the Vision and Values statement and corresponding screening measures are attached for reference.

Many areas of community concern were further analyzed in technical reports, including air quality, water quality, community resources, utilities, ecosystems, historic properties, parks and recreation, environmental justice, and noise and vibration.

Was previous technical analysis conducted by experts in each technical area? Was the analysis conducted on previous work comparable to other projects? Is it critical to have technical analysis conducted by experts in each technical area?

The answer to all three questions is yes. Appropriate and defensible technical methods utilizing accurate data analysis and technical experts are essential to satisfactorily complete the NEPA process.

TRANSIT QUESTIONS

What factors were analyzed to inform mode decision making?

Transit alternatives were evaluated using the values that were adopted by the CRC Task Force: Mobility, Reliability, Accessibility, Congestion Reduction and Efficiency; Modal Choice; Cost Effectiveness and Financial Resources; and Bi-State Cooperation. Modeling was performed to identify the long-term operational performance for each transit mode that met the Purpose and Need. Key factors that were used to make the final decision included public input, accessibility at key destinations, travel times, ridership, operating costs and capital construction costs.

Was high speed rail considered and where?

Yes, high speed rail was considered in previous planning efforts as one of the transit components that was included in the initial screening process for the CRC project. In considering high speed rail, it was assumed it would need to operate on a separate rail system than that which runs between Portland and Vancouver today.

Current conversations in the Pacific Northwest about ultra-high-speed ground transportation focus on connections from Vancouver, British Columbia to Seattle, Washington to Portland, Oregon. In general, this work considers a feasible travel distance between stops to be between 100 and 500 miles.

BRIDGE HEIGHT/AIR AND WATER CONSTRAINTS QUESTIONS

What kinds of mitigation were anticipated for impacted businesses? Would those approaches be viable going forward?

The previous project developed mitigation strategies for three businesses whose operations would potentially be impacted by the height of the proposed bridge. The project team worked with each company to develop a strategy specific to their business operations that satisfactorily addressed their concerns with the bridge height. In general, these strategies focused on reconfiguring operations for their large marine shipments, such as assembling parts in another location or purchasing additional equipment.

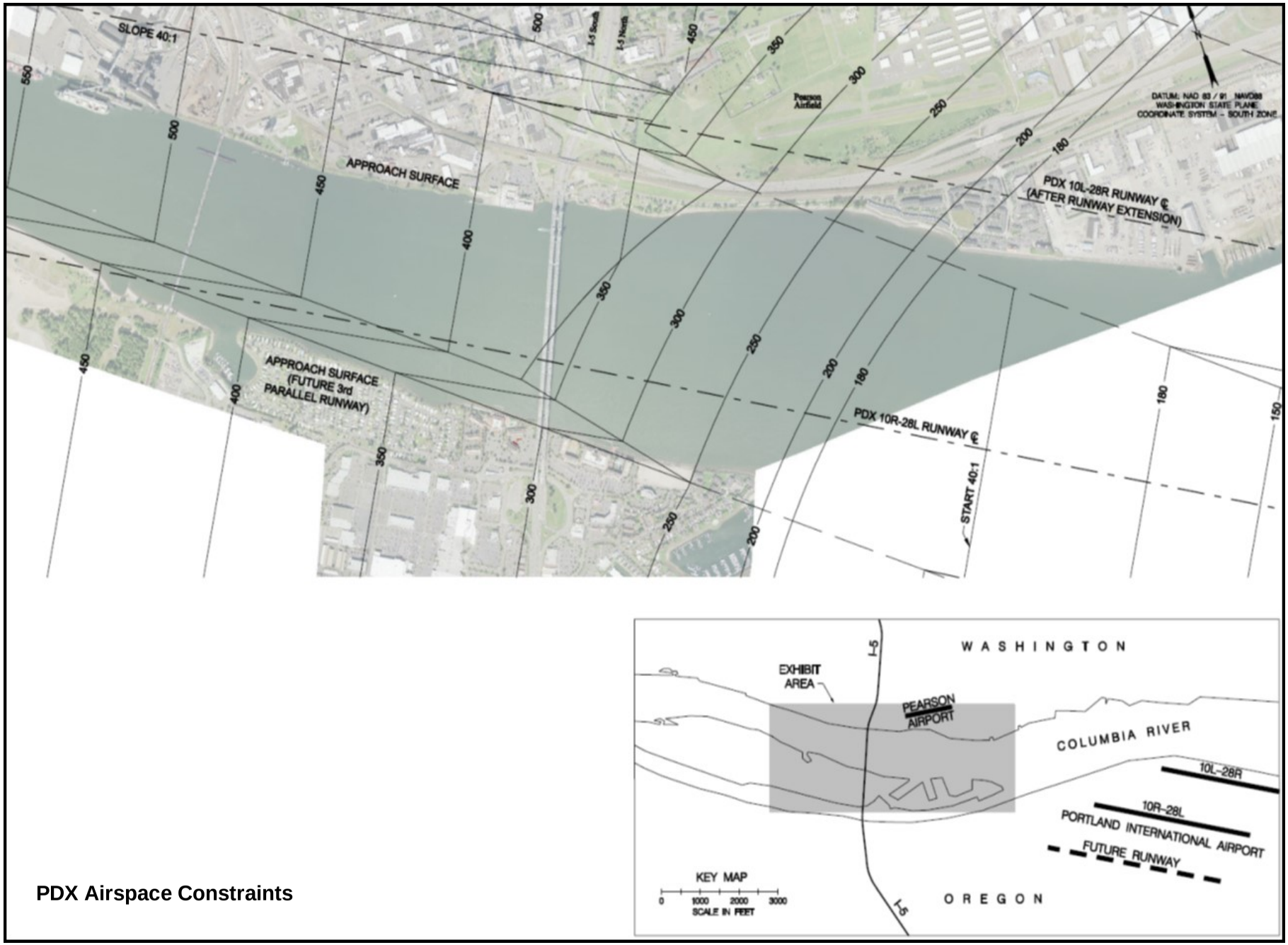
Going forward, a new survey of river users would be conducted to determine if any businesses would be impacted and how. If mitigation is determined to be warranted, strategies would be determined through discussion with the business and could potentially include operational adjustments for large shipments.

Is Pearson Airfield considered protected as a historic resource, park or otherwise?

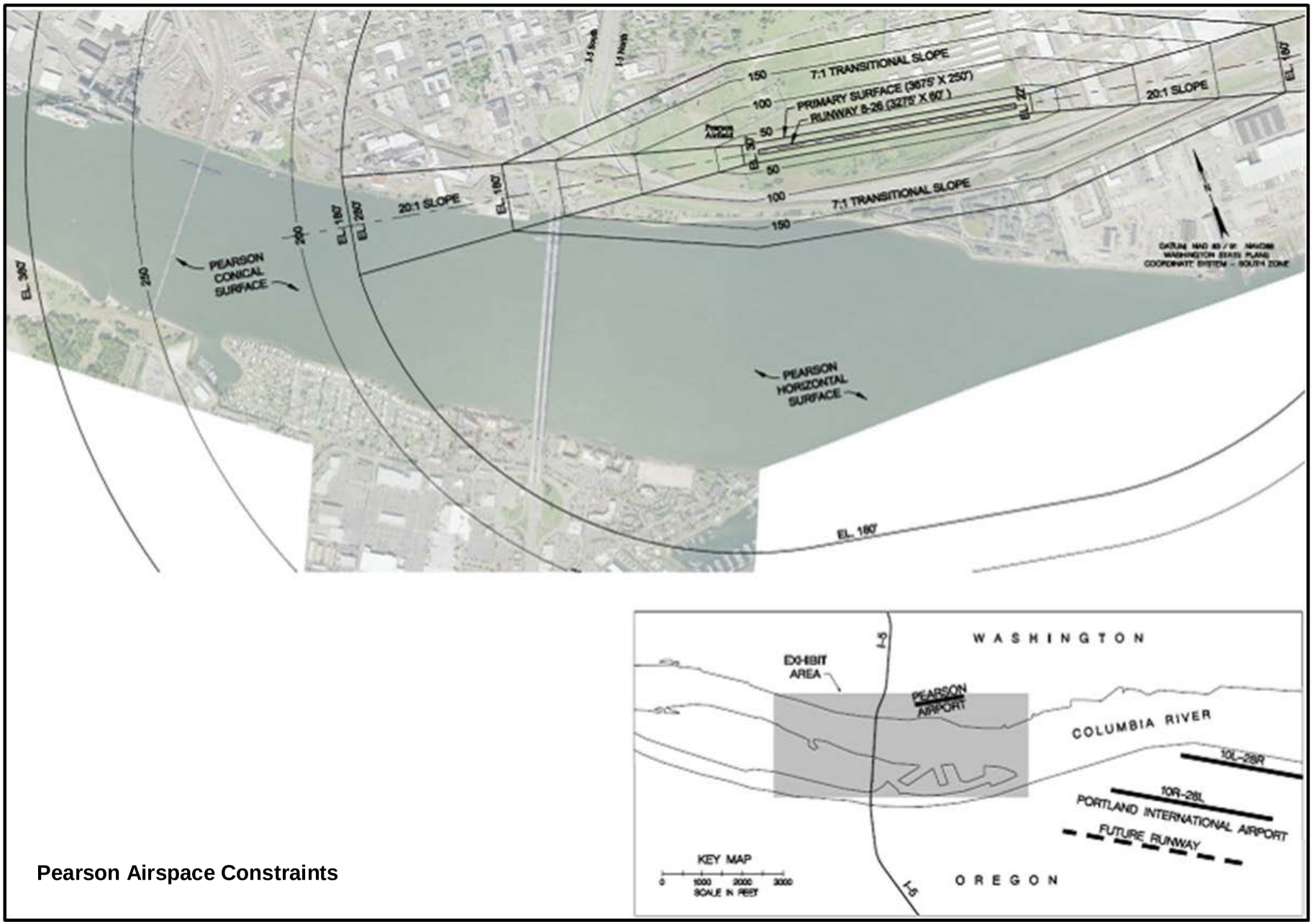
Pearson is one of the oldest operating airfields in the Pacific Northwest and the US. Pearson is located within the Fort Vancouver National Historic Reserve, which is listed on the National Register of Historic Places.

What are the airspace constraints associated with both Pearson and PDX? How far west or east would a bridge need to move to get out of airspace constraints?

Airspace constraints extend several miles in all directions from both Pearson and PDX. Constraints start at ground level at the edge of runways and rise at different rates as they extend out. Additional detail is shown in the graphics on the following pages.



PDX Airspace Constraints



Pearson Airspace Constraints

ATTACHMENTS:

1. CRC Task Force Vision and Values Statement
2. Community Values Screening Measures
3. CRC Problem Definition
4. CRC Purpose and Need Statement
5. List of Historic Resources Listed or Considered National Register of Historic Places Eligible

Columbia River CROSSING

700 WASHINGTON STREET
VANCOUVER, WA 98660
360-737-2726 | 503-256-2726

Task Force Vision and Values Statement

ADOPTED

10-12-05

PURPOSE

The Columbia River Crossing Task Force Vision and Values Statement provides the foundation for developing criteria and performance measures that will be used to evaluate the I-5 Bridge Influence Area alternatives. The Columbia River Crossing Project NEPA process will include consideration of: crossing infrastructure; multimodal transportation; connectivity; high capacity transit; land use; funding; community and business interests; under-represented, low income and minority communities; commuter and freight mobility; maritime mobility; and the environment.

VISION

The Columbia River Crossing project will be developed through an inclusive and collaborative process that considers and gives weight to the work of the I-5 Trade and Transportation Partnership and delivers a financially feasible solution that sustains and stimulates a healthy community by addressing its mobility and transportation needs, increasing its business success and family prosperity, protecting its natural resources, and enhancing its quality of life.

VALUES

The Columbia River Crossing project should reach this vision through:

Community Livability

- Supporting a healthy community.
- Supporting a healthy and vibrant land use mix of residential, commercial, industrial, recreational, cultural, and historic areas.
- Supporting aesthetic quality that achieves a regional landmark.
- Recognizing the history of the community surrounding the I-5 bridge influence area, supporting improved community cohesion, and avoiding neighborhood disruption.
- Preserving parks, historic and cultural resources, and green spaces.

Mobility, Reliability, Accessibility, Congestion Reduction and Efficiency

- Providing congestion reduction and mobility, reliability, and accessibility for all users, and recognizing the requirements of local, intra-corridor, and interstate movement now and in the future.

- Providing an efficient transportation system through transportation system management, encouraging reduced reliance on single occupant vehicles, incident management, and increased capacity measures.

Modal Choice

- Providing modal choice for users of the crossing, including highway, transit, high-capacity transit, bicycle, and pedestrian modes.

Safety

- Ensuring safety for vehicles (trucks, autos, emergency, and transit), pedestrians, bicyclists, river users, and air traffic at the crossing.

Regional Economy; Freight Mobility

- Supporting a sound regional economy and job growth.
- Enhancing the I-5 corridor as a global trade gateway by addressing the need to move freight efficiently and reliably through the I-5 bridge influence area, and allowing for river navigational needs.

Stewardship of Natural and Human Resources

- Respecting, protecting, and improving natural resources including fish, wildlife habitat, and water quality.
- Supporting improved air quality.
- Minimizing impacts of noise, light, and glare.
- Supporting energy efficiency through design, construction, and use.

Distribution of Impacts and Benefits

- Ensuring the fair distribution of benefits and adverse effects of the project for the region, communities, and neighborhoods adjacent to the project area.

Cost Effectiveness and Financial Resources

- Ensuring cost effectiveness in design, construction, maintenance, and operation.
- Ensuring a reliable funding plan for the project.

Bi-State Cooperation

- Fostering regional cooperation and planning.
- Supporting existing growth management plans in both states.
- Supporting balanced job growth.

Alternative Packages Evaluation

Columbia River CROSSING

Value	Criteria		Performance Measures
1. Community Livability and Human Resources	1.1 Avoid, then minimize adverse impacts to, and where practicable reduce, noise levels		**1.1.1** No. of residential properties within estimated FHWA noise impact contours.
			1.1.2 No. of residential properties within estimated FTA impact screening contours.
			1.1.3 Identified constraints to providing mitigation for areas with potential impacts
	1.2 Avoid, then minimize adverse impacts to, and where practicable enhance, neighborhood cohesion.		**1.2.1** No. of neighborhoods bisected by new construction
			1.2.2 No. of significantly impacted neighborhoods (> 10% of total area required for new construction)
			1.2.3 No. of neighborhoods divided from their identified resources by new construction
	1.3 Avoid, then minimize adverse impacts to, and where practicable enhance, air quality		**1.3.1** General trade offs in air quality effects of the alternatives
	1.4 Avoid or minimize residential displacements		**1.4.1** No. of residential properties crossed by alternative's conceptual footprint
	1.5 Avoid or minimize business displacements		**1.5.1** No. of commercial/industrial properties crossed by alternative's conceptual footprint
	1.6 Avoid or minimize adverse impacts to, and where practicable, preserve historic, prehistoric, and cultural resources		**1.6.1** No. of historic, archaeological and cultural (i.e., TCP) resource properties within conceptual footprint
			1.6.2 Total acreage of historic, archeological, cultural properties within conceptual footprint
			1.6.3 No. of historic, archaeological and cultural resource properties also within potential noise impact contour
			1.6.4 Total acreage of land located in high probability areas for archeological resources
	1.7 Avoid, then minimize adverse impacts to, and where practicable enhance, public park and recreation resources		**1.7** No. of 4(f) public parks (including # of parks and area of parkland) falling within conceptual footprint
	1.8 Support local comprehensive plans and jurisdiction-approved neighborhood plans including development and redevelopment opportunities, consistent with these plans.		**1.8.1** Does alternative support/uphold principles of multi-modalism and compact growth?
			1.8.2 Is alternative consistent with relevant comprehensive plans?
			1.8.3 Is alternative consistent with project-specific policies in the Vancouver City Center Vision?
			1.8.3 Amount of developable, redevelopable land to be lost under alternative.
	1.9 Incorporate aesthetic values of the community in the project design		**1.9.1** To be measured in later phases of project when design details are available to support evaluation
2. Mobility, Reliability, Accessibility, Congestion Reduction, and Efficiency	2.1 Reduce travel times and delay in the I-5 corridor and within the bridge influence area for passenger vehicles		**2.1.1** Passenger auto travel times in minutes between selected corridor points along I-5. Morning commute (SB I-5) Salmon Creek to Portland CBD; Evening commute (NB I-5) Portland CBD to Vancouver CBD
			2.1.2 Passenger auto vehicle hours of delay (VHD) on I-5 within BIA and corridor area
	2.2 Reduce travel times and delay in the I-5 corridor and within the bridge influence area for transit modes		**2.2.1** Peak period transit vehicle travel time and aggregate VHD (transit vehicle hour delay) from selected corridor points along I-5
	2.3 Reduce the number of hours of daily highway congestion in the I-5 corridor and within the bridge influence area		**2.3.1** No. of congested lane miles and daily number of hours of congestion on I-5 in the I-5 corridor and within bridge influence area
	2.4 Enhance or maintain accessibility of jobs, housing, health care and education to travel markets served by the I-5 Columbia River crossing		**2.4.1** Employment and housing accessibility- No. of jobs and households reachable in 15, 30, 45, and 60 minute trips by auto and transit from specific I-5 travel markets
			2.4.2 Change in # of existing highways/arterials that directly access I-5 within Bridge Influence Area
	2.5 Improve person throughput of I-5 Columbia River crossing		**2.5.1 & 2.5.2** Peak period and daily persons crossing Columbia River between SOV, HOV, and transit modes
	2.6 Improve vehicle throughput of I-5 Columbia River crossing		**2.6.1 & 2.6.2** Peak period and daily SOV, HOV, Bus, and Medium/Heavy Truck volumes across I-5 Columbia River crossing.
			2.6.3 Peak period volumes on east-west and north-south adjacent I-5 corridor arterial roadways within Bridge Influence Area
3. Modal Choice	3.1 Provide for multi-modal transportation choices in the I-5 corridor and within the bridge influence area		**3.1.1** Percent of population and employment with access to transit within 1/4 mile of bus lines and 1/2 mile of HCT stations
			3.1.2 Access to employment and housing within transit travel time contour in 15, 30, 45, and 60 minutes
	3.2 Improve transit service to target markets in the I-5 corridor and within the bridge influence area		**3.2.1** Transit travel times from the 7 Clark County transit markets to the 5 major transit markets in Oregon (both in vehicle and out of vehicle for a few representative pairs) (Salmon Creek, dt Vancouver, N Portland, dt Portland)
	3.3 Improve bike/pedestrian connectivity in the I-5 corridor and within the bridge influence area		**3.3.1** Provide multi-use facility designed to at least minimum design standards; providing continuous and non-circuitous north-south pathway and convenient connections -- qualitatively evaluated
	3.4 Increase vehicle occupancy in the I-5 corridor and within the bridge influence area		**3.4.1** Peak period SOV + HOV + Bus + Medium & Heavy Truck volumes across I-5 Columbia River crossing and vehicle occupancy at I-5 Columbia River crossing
4. Safety	4.1 Enhance Vehicle/Freight Safety		**4.1.1** Highway improvements to I-5 that specifically improve vehicle/freight safety
	4.2 Enhance bike/pedestrian facilities and safety		**4.2.1** Qualitative assessment of bicycle and pedestrian pathways provided within an alternative, and their affect on bike/ped safety
	4.3 Enhance or maintain marine safety		**4.3.1** Quality of navigation channel geometrics to accommodate ship movements. Does alternative improve barge turning maneuvers
	4.4 Enhance or maintain aviation safety		**4.4.1** Ability to accommodate FAA clearance zone for Pearson Airpark
	4.5 Provide sustained life-line connectivity		**4.5.1** Ability to accommodate life-line connections in the I-5 corridor across the Columbia River to be maintained in an earthquake
	4.6 Enhance I-5 incident/emergency response access within the bridge influence area		**4.6.1** Ability to accommodate incident/emergency service access to incidents on I-5 in the bridge influence area

Alternative Packages Evaluation

Columbia River CROSSING

Value	Criteria		Performance Measures
5. Regional Economy/Freight Mobility	**5.1** Reduce travel times and reduce delay for vehicle-moved freight on I-5 within the bridge influence area		**5.1.1** Peak period Medium/Heavy Truck travel times in minutes on I-5 within Bridge Influence Area.
			5.1.2 Peak period Medium/Heavy Truck vehicle hours of delay (VHD) on I-5 within Bridge Influence Area
	5.2 Reduce travel times and reduce delay for vehicle-moved freight in the I-5 corridor		**5.2.1** Peak period Medium/Heavy Truck travel times in minutes within I-5 corridor.
			5.2.2 Peak period aggregate vehicle hours of delay (VHD) for Medium/Heavy Trucks within I-5 Corridor
	5.3 Enhance or maintain efficiency of marine navigation		**5.3.1** Potential for an alternative to avert extension of "no bridge lift" periods tied to I-5 congestion
	5.4 Improve freight truck throughput of the bridge influence area		**5.4.1** Peak period Medium & Heavy Truck volumes across I-5 Columbia River crossing
	5.5 Avoid or minimize adverse impacts to the parallel freight rail corridor		**5.5.1** Peak period congestion along east-west arterials within Bridge Influence Area with at-grade crossings of westerly north-south BNSF railline
	5.6 Enhance or maintain access to port, freight, and industrial facilities		**5.6.1** Peak period Medium/Heavy Truck travel times in minutes between typical freight centers
6. Stewardship of Natural Resources	**6.1** Avoid, then minimize adverse impacts to, and where practicable enhance, threatened or endangered fish and wildlife and their habitat		**6.1.1** Total area in acres of critical and native habitat for threatened and endangered (T&E) species within conceptual footprint
			6.1.2 Relative quality of the habitat identified under Measure 6.1.1
	6.2 Avoid, then minimize adverse impacts to, and where practicable enhance, other fish and wildlife and their habitat		**6.2.1** Total area in acres of fish and wildlife habitat within alternative's conceptual footprint
			6.2.2 Impacts to wildlife crossings/passage
			6.2.3 Type and relative quality of the habitat identified under Measure 6.2.2
	6.3 Avoid, then minimize adverse impacts to, and where practicable enhance, rare, threatened, or endangered plant species		**6.3.1** Total area in acres of rare plant habitat within alternative's conceptual footprint
	6.4 Avoid, then minimize adverse impacts to, and where practicable enhance and/or restore, wetlands		**6.4.1** Total area in acres of wetlands within alternative's conceptual footprint
			6.4.2 Type and relative quality of the wetlands identified under Measure 6.4.1
	6.5 Avoid, then minimize adverse impacts to, and where practicable enhance, water quality		**6.5.1** Total area in acres of additional impervious surface created under alternative. How much existing impervious surface would remain?
	6.6 Minimize total energy consumption of construction and transportation system operations		**6.6.1** Amount of energy use
	6.7 Avoid, then minimize adverse impacts to, and where practicable enhance, waterways		**6.7.1** Identified removal/fill impacts to waterways
7. Distribution of Benefits and Impacts	**7.1** Avoid or minimize disproportionate adverse impacts on, and where practicable, improve conditions for low income and minority populations		**7.1.2** Do potential acquisitions and noise impacts cluster in areas considered high minority or low income?
			7.1.3 Is traffic diverted to census tracts considered high minority or low income?
	7.2 Provide for equitable distribution of benefits to low income and minority populations		**7.2.1** Which block groups experience improved access to I-5, downtown Vancouver, downtown Portland, or other resources?
			7.2.2 Which block groups experience the greatest improvements in transit service?
8. Cost Effectiveness and Financial Resources	**8.1** Minimize the cost of construction.	Criteria 8.1, 8.2 and 8.3 are collectively addressed by measures 8.1.1 through 8.1.6	**8.1.1** Estimated Capital Construction Cost
			8.1.2 Estimated Operations and Maintenance Cost
	8.2 Ensure transportation system construction cost effectiveness.		**8.1.3** Estimated lifecycle cost
			8.1.4 Estimate of FTA Cost Effectiveness index (as an indicator of each alternative's potential eligibility for FTA New Starts funds). This will be reported in ranges given the preliminary nature of the data
	8.3 Ensure transportation system maintenance and operation cost effectiveness.		**8.1.5** Daily Time Savings (vehicle hours) per highway alternative life cycle cost
			8.1.6 Daily reduction in congested hours of operation (hrs/day) per highway alternative life cycle cost
	8.4 Ensure a reliable funding plan for the project		**8.4.1** To be measured in later phases.
			8.4.2 To be measured in later phases.
9. Growth Management, Land Use	**9.1** Support adopted regional growth management and comprehensive plans		**9.1.1** Consistency with regional plan policies (e.g., multi-modalism, compact growth) summarized in Table 1-2 of the draft land use MDR, and other regional plan policies specific to the project. Is the alternative included in the RTP and MTP?
			9.1.2 Proximity of proposed HCT stations to areas of higher density, either existing or planned (in local comprehensive plans) and with supportive parking, pedestrian and other policies in place.
10. Constructability	**10.1** Maintain transportation operations during construction		**10.1.1** Magnitude of delays to current highway, transit, and navigation use.
	10.2 Minimize adverse construction impacts		**10.2.1** Magnitude of noise, air quality, and visual impacts to environment.
	10.3 Provide flexibility to accommodate future transportation system improvements		**10.3.1** Ease by which transportation system can be improved.
	10.4 Use construction practices and materials that minimize environmental impact		**10.4.1** To be measured in later phases.

Columbia River CROSSING

FINAL

PROBLEM DEFINITION

December 27, 2005

Introduction

Major transportation agencies in the Vancouver-Portland region have joined together to lead development of transportation improvements to the 5-mile segment of Interstate 5 (I-5) between State Route (SR) 500 in Vancouver and Columbia Boulevard in Portland, including the bridges across the Columbia River (the I-5 Bridge Influence Area). Improvements are expected to address highway, vehicular freight, transit, pedestrian, and bicycle needs.

Function and Role of the I-5 Bridge Influence Area

I-5 is the only continuous north/south interstate highway on the West Coast, providing a commerce link for the United States, Canada, and Mexico. In the Vancouver-Portland region, I-5 is one of two major highways that provide interstate connectivity and mobility. I-5 directly connects the central cities of Vancouver and Portland. Interstate 205 (I-205), a 37-mile long freeway that extends from its connection with I-5 at Salmon Creek to its terminus with I-5 near Tualatin, provides a more suburban and bypass function and serves travel demand between east Clark County, east Multnomah County, and Clackamas County.

Operation of the I-5 crossing over the Columbia River is directly influenced by the 5-mile segment of I-5 between SR 500 in Vancouver and Columbia Boulevard in Portland. Known as the I-5 Bridge Influence Area, this segment includes eight interchanges, including connections with four state highways (SR 14, SR 500, and SR 501 in Washington and OR 99E in Oregon) and with several major arterial roadways, that serve a variety of land uses, and provides access to downtown Vancouver, two international ports, industrial centers, residential neighborhoods, retail centers, and recreational areas.

The existing I-5 crossing of the Columbia River consists of two side-by-side bridges that have lift spans. They were built four decades apart and the cost of each was financed with bridge tolls. The eastern bridge (serving northbound traffic) was built in 1917 and the western bridge (serving southbound traffic) was built in 1958. The two-bridge crossing, which served 30,000 vehicles per day in the 1960s, now carries more than 125,000 automobiles, buses, and trucks each weekday. While many of these trips are regionally-oriented (average trip length is 16 miles), it is estimated that 70 to 80 percent of trips using the I-5 crossing actually enter and/or exit I-5 within the 5-mile long I-5 Bridge Influence Area.

A second interstate highway river crossing is located 6 miles east (upstream) of the I-5 crossing. The I-205 Glenn Jackson Bridge, which opened in 1982, carries about 140,000 vehicles per day and is reaching its peak-hour period carrying capacity. This bridge has a fixed span. No other river crossing options in the metropolitan area are available between the two states. The next closest bridges for automobile use are located at Longview, Washington, 46 miles to the west, and at Cascade Locks, Oregon, 40 miles east of the I-5 bridge crossing.

A rail bridge is located about a mile west (downstream) of the I-5 crossing. The Burlington Northern-Santa Fe (BNSF) rail bridge was built in 1908 and features a swinging span to accommodate river traffic. The I-5 crossing's lift spans were designed to align with the rail bridge's swing span.

The I-5 Bridge Influence Area serves several broad travel markets:

- Through travel. These users travel from outside the Vancouver-Portland region to destinations that are also outside the region—for example, a freight or tourist trip from Seattle, Washington to Eugene, Oregon. These users represent about 7 percent of the total vehicle-trips crossing the river during the peak periods.

- Regional travel. Most of these users travel between Clark County and the Portland metropolitan area (Multnomah, Washington and Clackamas counties), or vice-versa, without stopping in the I-5 Bridge Influence Area. These trips account for about 47 percent of the total vehicle-trips crossing the river during the peak periods.

  Seven percent of the total trips crossing the river originate within the region and are destined outside of the region, or originate outside of the region and are destined within the region, for example, a trip from Salem, Oregon to Clark County.

- Local travel. Most of these users travel between the I-5 Bridge Influence Area and other locations within the Vancouver/Portland metropolitan area, or vice-versa. For example, a trip from a southeast Portland neighborhood to downtown Vancouver is considered a local trip. These trips account for about 32 percent of the vehicle-trips crossing the I-5 bridge during the peak periods.

  Two percent of the total trips crossing the river originate outside the region and are destined to a location within the I-5 Bridge Influence Area, or originate within this area and are destined outside of the region, for example, a trip from Longview, Washington to Portland Meadows.

- Internal travel. These users stay entirely within the I-5 Bridge Influence Area—for example, from downtown Vancouver to Hayden Island. This constitutes about 5 percent of the trips crossing the I-5 bridge during the peak periods.

Definition of the Problem

Current Problems	Details/Background
1. Travel demand exceeds capacity in the I-5 Bridge Influence Area, causing heavy congestion and delay during peak travel periods for automobile, transit, and freight traffic. This limits mobility within the region and impedes access to major activity centers.	Heavy traffic congestion has resulted from growth in regional population and employment and in interstate commerce over the last two decades. The existing I-5 bridge crossing provides 3 lanes of capacity in each direction, with a directional capacity of about 5,500 vehicles per hour. Travel demand currently exceeds that capacity during peak periods. As a result, stop-and-go traffic conditions last 2 to 5 hours in the mornings and afternoons. These conditions are aggravated by vehicle merges, traffic accidents, and vehicle breakdowns. Due to excess travel demand in the I-5 Bridge Influence Area, many travelers take longer, alternative routes such as I-205, or circulate on local streets to less direct I-5 interchanges. In addition, spillover traffic from I-5 onto parallel arterial roadways increases local congestion. Although the lift span is used only in off-peak periods, it affects travel reliability across the river and creates extensive traffic delays. The span is opened 20 to 30 times a month, with the greatest number of lifts occurring during the winter when water levels are at their highest. Each lift takes approximately 10 minutes, creating traffic delays that can last up to an hour. During peak periods when the lifts are not allowed, river traffic must maneuver a tight S-curve route through the rail bridge opening and the highest fixed span of the I-5 crossing, creating hazardous navigation conditions.
2. Transit service between Vancouver and Portland is constrained by the limited capacity in the I-5 corridor and is subject to the same congestion as other vehicles, affecting transit reliability and operations.	The I-5 bridge is a critical bi-state transit link for transit patrons traveling between Vancouver and Portland. Bi-state transit service includes local fixed-route bus service between downtown Portland and downtown Vancouver (using the I-5 bridge), commuter-oriented peak period express routes from Clark County park-and-rides and transit centers to downtown Portland on both I-5 and I-205, and I-205 shuttle service between Fisher's Landing Transit Center and the Parkrose Transit Center. Current congestion in the I-5 Bridge Influence Area has an adverse impact on transit travel speed and service reliability. Between 1998 and 2005, local bus travel times between the Vancouver Transit Center and Hayden Island increased 50 percent during the peak period. Local buses crossing the I-5 bridge in the southbound direction currently take up to three times longer during parts of the morning

	peak period compared to off peak periods. On average, local bus travel times are between 10 percent and 60 percent longer when traveling in the peak period direction. Commuter buses also experience congestion and incident-related delays. Commuter buses traveling southbound during the morning peak period have travel times between 45 percent and 115 percent longer than commuter buses traveling during off-peak periods. Commuter buses traveling northbound during the afternoon peak period have the advantage of using the northbound High Occupancy Vehicle lane, however, these buses still experience travel times between 35 percent and 60 percent longer than commuter buses traveling during the off-peak periods.
3. The access of truck-hauled freight to nationally and regionally significant industrial and commercial districts, as well as connections to marine, rail, and air freight facilities, is impaired by congestion in the I-5 Bridge Influence Area.	I-5 is the primary supply-chain for goods moving into and out of the Vancouver-Portland region and the Pacific Northwest. Access to nationally and regionally significant industrial and commercial districts, including the Ports of Vancouver and Portland, and connections to marine, rail and air freight facilities, is adversely affected by congestion in the I-5 Bridge Influence Area. Congestion is increasingly spreading into the off-peak periods (including weekends) used by freight carriers. Declining freight carrier access slows delivery times and increases shipping costs, diminishing the attractiveness of I-5 and the uses served by I-5, and negatively affecting the region's economy. Recent forecasts indicate that truck traffic in the region will double, and the logistics requirements for freight delivery time will become increasingly "just-in-time" – placing even more pressure on travel time reliability.
4. The I-5 bridge crossing area and its approach sections experience crash rates over two times higher than statewide averages for comparable urban freeways in Washington and Oregon, largely due to outdated design. Incident evaluations attribute crashes to congestion, closely spaced interchanges, short weave and merge sections, vertical grade changes in the bridge span, and narrow shoulders. In addition, the	Over 300 reported crashes occur annually in the I-5 Bridge Influence Area. Crashes have resulted in substantial property damage and injury; some have resulted in fatalities. The causes are: **Close Interchange Spacing** The 5-mile Bridge Influence Area contains eight closely spaced interchanges. These interchanges provide access to several east-west highways and arterial roadways that serve a mix of interstate, regional, and local trip purposes. The average distance between the interchanges is 1/2 mile, as compared with a recommended minimum spacing of 1 mile between interchanges located in urban areas. **Short Weave and Merge Sections** Short weave sections for vehicles entering and exiting the freeway generate backups and delay due to difficulty in

configuration of the existing I-5 bridges relative to the downstream BNSF rail bridge contributes to hazardous navigation conditions for commercial and recreational boat traffic.	maneuvering, especially for large trucks. The proportion of trucks is high because this segment provides arterial street access to both ports. Outdated designs for entrance and exit ramps cause backups onto the mainline at exit ramps. Most of the entrance ramps do not provide enough space for vehicles to merge safely with through traffic. **Vertical Grade Changes** Vertical grade changes in the bridge span over the Columbia River create sight distance limitations that reduce speeds and create potential hazards to motorists. **Narrow Highway Shoulder Width** Several segments of the I-5 Bridge Influence Area, including the I-5 bridge, have narrow inside and outside shoulders in both travel directions. In several locations, shoulders are as little as 1-foot wide (10- to 12-foot wide shoulders are standard). The lack of shoulders positions many motorists undesirably close to physical barriers that border I-5. Many drivers respond with caution by slowing down to increase separation from vehicles ahead and behind. Increased vehicle spacing reduces vehicle throughput and contributes to freeway congestion. In addition, the lack of safe areas for incident response, disabled vehicle pullout, and driver recovery also impairs the ability to manage highway operations and recover from events that interrupt traffic flow. **Hazards for River Navigation** The I-5 crossing's lift span cannot be raised during peak traffic periods. This requires river traffic heading downstream on the Columbia River to navigate under the bridge's high fixed spans near the middle of the river, then quickly turn to line up with the narrow opening of the rail bridge on the north side of the river. This maneuver is especially difficult during high river levels and could result in a collision between a vessel and one of the bridges.
5. Bicycle and pedestrian facilities for crossing the Columbia River in the I-5 Bridge Influence Area are not designed to promote non-motorized access and connectivity across the river. In addition, "low speed	The width of the bicycle/pedestrian facility on the I-5 bridge is substandard (6 to 8 feet) and located extremely close to traffic. Separated multi-use paths should be at least 10 feet wide. Bicycle and pedestrian connections between North Marine Drive, Hayden Island, and Vancouver require out-of-direction travel. For example, no connection exists for pedestrians or bicyclists wanting to stay on the west side of

vehicles" are not allowed to use the I-5 bridge to cross the river.	the bridge between Hayden Island and North Marine Drive. In addition, many of the I-5 Bridge Influence Area's features are not in compliance with Americans with Disabilities Act design guidelines. "Low speed vehicles" can be propelled via various means, including through the use of different fuels or electric power. These vehicles must have seatbelts, windshields, turn signals, headlights, brake lights and other safety equipment. According to the National Highway Traffic Safety Administration, "low speed vehicles" are capable of speeds of up to 25 miles per hour and can be operated on streets with posted speed limits of 35 miles per hour or less. Since I-5 is posted for freeway speeds and since the bridge's multi-use pathway is narrow and permits only non-motorized vehicles, "low speed vehicles" are not allowed to use the I-5 bridge to cross the river.
6. The I-5 bridges across the Columbia River do not meet current seismic standards, leaving them vulnerable to failure in an earthquake.	Previous studies concluded that the existing structures could not be upgraded to fully meet seismic design standards without full bridge reconstruction.
7. The current configuration of I-5 within the I-5 Bridge Influence Area limits east-west connectivity across the highway for all users.	There are a limited number of overcrossings and undercrossings of I-5, particularly across I-5's approaches to the Columbia River bridge crossing, i.e., between downtown Vancouver to the west of I-5 and the numerous land uses to the east of I-5 and between Jantzen Beach and Hayden Island. Users wishing to travel across I-5 often must take circuitous routes.
Future Problems	**Details/Background**
8. As the Vancouver/ Portland metropolitan region grows, mobility and accessibility for automobile, freight, and transit will decline unless the disparity between demand and capacity in the I-5 Bridge Influence Area is addressed. The increasing disparity between demand and capacity will lead to longer delays, increased accident potential, and diminished quality of life and economic opportunity.	**Regional Growth** Consistent with regionally adopted comprehensive plans, the region's growth forecasts indicate that population, employment, and commercial trade will continue to grow, increasing regional travel demand. • Between 2005 and 2030, the population of the four-county Vancouver-Portland region is projected to increase by 44 percent, from 1.96 million to 2.82 million. • Regional trade is expected to almost double over the next 25 years to over 520 million tons. While currently 64 percent of the region's freight tonnage is hauled by truck, by 2030 it is projected that 73 percent will be carried by truck, many including container loads.

	Increased Travel Demand Daily traffic demand over the I-5 bridge is expected to increase by more than 40 percent in 20 years, from 125,000 vehicles in 2000 to 180,000 vehicles in 2020 (traffic is expected to further increase beyond 2020; new travel demand modeling is currently being conducted to predict 2030 levels). The projected increase in use of the bridge is constrained by the lack of capacity to accommodate more vehicles, resulting in an expansion of the peak period to accommodate the projected traffic increase. There will also be a potentially large and underserved transit market for trips between key regional locations traveling or connecting through the I-5 Bridge Influence Area. **Deteriorating Traffic Conditions** Unless improvements are made, traffic conditions in the I-5 Bridge Influence Area are predicted to worsen over the next 20 years: • Traffic congestion and delay will increase, with stop-and-go conditions occurring in both directions for 10 to 12 hours on weekdays. Increased delays on weekends will also result. • The current off-peak periods, which are generally uncongested and favored by freight carriers, will blend into adjacent peak period congestion, increasing freight delay throughout much of the day. • Vehicle-hours of delay during the evening commute period will increase nearly 80 percent, from 18,000 hours to 32,000 hours each day. Vehicle-hours of delay on truck routes will increase by more than 90 percent, from 13,400 hours to 25,800 hours each day. • Average travel times for buses traveling in general purpose lanes on I-5 between downtown Vancouver and downtown Portland are expected to almost double, from 27 minutes in 2000 to 55 minutes in 2020. • With an extension in the duration of congestion, there may be pressure to increase the bridge lift closure periods, further hampering river navigation and increasing the likelihood of accidents between vessels and the bridge. • As traffic demands increase, accident levels will likely rise within the Bridge Influence Area.

	Diminished Mobility and Accessibility • Slower highway speeds will reduce access to jobs, shopping, and recreational uses. • Regional truck freight is projected to increase by about 130 percent in the next 25 years; however, increasing delays between I-5 and freight centers will adversely affect freight distribution and access to ports and terminals, thereby shrinking market areas served by the Vancouver-Portland region. The current Regional Transportation Council Metropolitan Transportation Plan and the Metro Regional Transportation Plan recognize the need for additional capacity to improve the flow of people and freight in the I-5 Bridge Influence Area. Both plans include the I-5 Transportation and Trade Partnership Strategic Plan recommendations to increase mobility and accessibility in the I-5 Bridge Influence Area.

Columbia River CROSSING

I-5 Columbia River Crossing
Statement of Purpose and Need

Project Purpose

The purpose of the proposed action is to improve Interstate 5 corridor mobility by addressing present and future travel demand and mobility needs in the Columbia River crossing Bridge Influence Area (BIA). The BIA extends from approximately Columbia Boulevard in the south to SR 500 in the north. Relative to the No-build alternative, the proposed action is intended to achieve the following objectives: a) improve travel safety and traffic operations on the Interstate 5 crossing's bridges and associated interchanges; b) improve connectivity, reliability, travel times and operations of public transportation modal alternatives in the BIA; c) improve highway freight mobility and address interstate travel and commerce needs in the BIA; and d) improve the Interstate 5 river crossing's structural integrity.

Project Need

The specific needs to be addressed by the proposed action include:

- **Growing Travel Demand and Congestion:** Existing travel demand exceeds capacity in the I-5 Columbia River crossing and associated interchanges. This corridor experiences heavy congestion and delay lasting 2 to 5 hours during both the morning and afternoon peak travel periods and when traffic accidents, vehicle breakdowns, or bridge-lifts occur. Due to excess travel demand and congestion in the I-5 bridge corridor, many trips take the longer, alternative I-205 route across the river. Spillover traffic from I-5 onto parallel arterials such as Martin Luther King Boulevard. and Interstate Avenue increases local congestion. The two crossings currently carry over 260,000 trips across the Columbia River daily. Daily traffic demand over the I-5 crossing is projected to increase by 40 percent during the next 20 years, with stop-and-go conditions increasing to at least 10 to 12 hours each day if no improvements are made.

- **Impaired freight movement:** I-5 is part of the National Truck Network, and the most important freight freeway on the West Coast linking international, national and regional markets in Canada, Mexico and the Pacific Rim with destinations throughout the western United States. In the center of the project area, I-5 intersects with the Columbia River's deep water shipping and barging as well as two river-level, transcontinental rail lines. The I-5 crossing provides direct and important highway connection to the Port of Vancouver and Port of Portland facilities located on the Columbia River as well as the majority of the area's freight consolidation facilities and distribution terminals. Freight volumes moved by truck to and from the area are projected to more than double over the next 25 years. Vehicle-hours of delay on truck routes in the Portland-Vancouver area are projected to increase by more than

90 percent over the next 20 years. Growing demand and congestion will result in increasing delay, costs and uncertainty for all businesses that rely on this corridor for freight movement.

- **Limited public transportation operation, connectivity and reliability:** Due to limited public transportation options, a number of transportation markets are not well served. The key transit markets include trips between the Portland Central City and the City of Vancouver and Clark County, trips between North/Northeast Portland and the City of Vancouver and Clark County, and trips connecting the City of Vancouver and Clark County with the regional transit system in Oregon. Current congestion in the corridor adversely impacts public transportation service reliability and travel speed. Southbound bus travel times across the bridge are currently up to three times longer during parts of the am peak compared to off peak. Travel times for public transit using general purpose lanes on I-5 in the bridge influence area are expected to increase substantially by 2030.

- **Safety and Vulnerability to Incidents:** The I-5 river crossing and its approach-sections experience crash rates nearly 2.5 times higher than statewide averages for comparable facilities. Incident evaluations generally attribute these crashes to traffic congestion and weaving movements associated with closely spaced interchanges. Without breakdown lanes or shoulders, even minor traffic accidents or stalls cause severe delay or more serious accidents.

- **Substandard bicycle and pedestrian facilities:** The bike/pedestrian lanes on the I-5 Columbia River bridges are 6 to 8 feet wide, narrower than the 10-foot standard, and are located extremely close to traffic lanes thus impacting safety for pedestrians and bicyclists. Direct pedestrian and bicycle connectivity are poor in the BIA.

- **Seismic vulnerability:** The existing I-5 bridges are located in a seismically active zone. They do not meet current seismic standards and are vulnerable to failure in an earthquake.

APPENDIX A

Historic Resources Listed or Considered NRHP Eligible in the Washington APE – Survey Summary Report, Location Maps, Photo Log

HistoricID	Loc_FullAddress	DateOfConstruction	Neighborhood	National	State	Local	CRC	BuildingUse_Current	SiteNameHistoric
6	605 Esther St, Vancouver, WA 98660	ca.1853	Esther Short			X		Recreation and Culture - Outdoor Recreation	
7	209 W 6th St, Vancouver, WA 98660	ca.1935	Esther Short				X	Commerce/Trade - Business	
8	507 Columbia St, Vancouver, WA 98660	ca.1940	Esther Short				X	Commerce/Trade - Business	
10	515 Washington St, Vancouver, WA 98660	ca.1966	Esther Short				X	Domestic - Multiple Family House	
11	114 6th St, Vancouver, WA 98660	ca.1930	Esther Short				X	Commerce/Trade - Business	
13	111 W 7th St, Vancouver, WA 98660	ca.1925	Esther Short				X	Commerce/Trade - Restaurant	
14	809 Washington St, Vancouver, WA 98660	ca.1950	Esther Short				X	Commerce/Trade - Business	
16	614 Main St, Vancouver, WA 98660	ca.1906	Esther Short				X	Commerce/Trade - Business	Donegan Building
17	600-606 Main St, Vancouver, WA 98660	ca.1910	Esther Short				X	Commerce/Trade - Business	Schoefield Block
19	518 Main St, Vancouver, WA 98660	ca.1906/1926	Esther Short			X		Commerce/Trade - Business	Vancouver National Bank
21	500 Main St, Vancouver, WA 98660	ca.1928	Esther Short	X	X			Domestic - Multiple Family House	Evergreen Hotel
22	811 Main St, Vancouver, WA 98660	ca.1940	Esther Short				X	Commerce/Trade - Business	
23	801 Main St, Vancouver, WA 98660	ca.1942	Esther Short				X	Commerce/Trade - Business	
24	101 E 8th St, Vancouver, WA 98660	ca.1932	Esther Short				X	Commerce/Trade - Business	
28	605-609 Main St, Vancouver, WA 98660	ca.1908	Esther Short				X	Commerce/Trade - Business	
29	601-603 Main St, Vancouver, WA 98660	1912	Esther Short	X	X			Commerce/Trade - Business	US National Bank Building
30	916 Main St, Vancouver, WA 98660	1911	Esther Short	X	X			Commerce/Trade - Business	Elks Building
32	100 W 13th St, Vancouver, WA 98660	1884	Esther Short	X	X	X		Commerce/Trade - Business	Lowell Mason Hidden House
35	110 W 13th St, Vancouver, WA 98660	1913	Esther Short	X	X	X		Commerce/Trade - Professional	W. Foster Hidden House
37	1001 Broadway St, Vancouver, WA 98660	ca.1950	Esther Short				X	Commerce/Trade - Business	
38	112 W 11th St, Vancouver, WA 98660	1934-36	Esther Short	X	X	X		Commerce/Trade - Business	Vancouver Telephone Exchange
39	409 E Mill Plain Blvd, Vancouver, WA 98660	ca.1905	Esther Short	X				Domestic - Single Family House	
41	411 E Evergreen Blvd, Vancouver, WA 98660	1907	Esther Short	X	X			Commerce/Trade - Professional	Kiggins House
42	1511 Main St, Vancouver, WA 98660	ca.1909	Arnada	X	X	X		Recreation and Culture - Museum	Carnegie Library
44	501 E McLoughlin Blvd, Vancouver, WA 98663	ca.1929	Arnada				X	Commerce/Trade - Professional	
47	510 E McLoughlin Blvd, Vancouver, WA 98663	ca.1910	Arnada				X	Commerce/Trade - Professional	
48	502 E McLoughlin Blvd, Vancouver, WA 98663	ca.1900	Arnada				X	Commerce/Trade - Business	
50	611 E McLoughlin Blvd, Vancouver, WA 98663	ca.1880/1910	Arnada				X	Domestic - Single Family House	
54	401 E 33rd St, Vancouver, WA 98663	1948-50/1960	Shumway				X	Religion - Religious Facility	
55	3200 Main St, Vancouver, WA 98663	ca.1956	Carter Park				X	Health Care - Clinic	
59	3110 K St, Vancouver, WA 98663	ca. 1910	Rose Village				X	Domestic - Single Family House	
61	3000 K St, Vancouver, WA 98663	ca.1915	Rose Village				X	Domestic - Single Family House	
62	903 E 31st St, Vancouver, WA	ca.1910	Shumway				X	Domestic - Single Family House	
67	1001 Main St, Vancouver, WA 98660	ca.1925	Esther Short				X	Commerce/Trade - Business	
68	1011 Main St, Vancouver, WA 98660	ca.1935	Esther Short				X	Recreation and Culture - Theater	Kiggins Theatre
70	102 E Evergreen Blvd, Vancouver, WA 98660	ca.1925	Esther Short				X	Commerce/Trade - Business	
73	1300 Washington St, Vancouver, WA 98660	ca.1940	Esther Short				X	Commerce/Trade - Business	Luepke Florist
74	218 W 12th St, Vancouver, WA 98660	1885	Esther Short	X	X			Religion - Religious Facility	St James Cathedral
75	1012 Washington St, Vancouver, WA 98660	ca.1920	Esther Short			X		Commerce/Trade - Business	Greely Building
77	204 W Evergreen Blvd, Vancouver, WA 98660	ca.1920	Esther Short				X	Commerce/Trade - Business	
78	311 W 11th St, Vancouver, WA 98660	ca.1950	Esther Short				X	Commerce/Trade - Business	
79	1112 Columbia St, Vancouver, WA 98660	ca.1905	Esther Short				X	Domestic - Single Family House	Shumway House
80	208 W 13th St, Vancouver, WA 98660	ca.1930	Esther Short				X	Commerce/Trade - Business	

HistoricID	Loc_FullAddress	DateOfConstruction	Neighborhood	National	State	Local	CRC	BuildingUse_Current	SiteNameHistoric
82	1315 Columbia St, Vancouver, WA 98660	ca.1930	Esther Short				X	Commerce/Trade - Business	
83	1211 Daniels St, Vancouver, WA 98660	1918	Esther Short	X	X			Government - Post Office	Vancouver Main Post office
84	314 W 11th St, Vancouver, WA 98660	ca.1908	Esther Short			X		Domestic - Single Family House	Kettenring House
85	310 W 11th St, Vancouver, WA 98660	1903	Esther Short	X	X	X		Domestic - Single Family House	Chumasero-Smith House
86	309 W 12th St, Vancouver, WA 98660	ca.1905	Esther Short				X	Domestic - Single Family House	The Hamilton House
87	311 W Evergreen Blvd, Vancouver, WA 98660	ca.1950	Esther Short				X	Commerce/Trade - Business	
88	1515 Daniels St, Vancouver, WA 98660	ca.1925	Hough				X	Domestic - Single Family House	
89	1601 Daniels St, Vancouver, WA 98660	ca.1945	Hough				X	Domestic - Multiple Family House	
90	310 W 16th St, Vancouver, WA 98660	ca.1915	Hough				X	Domestic - Single Family House	
93	1615 Daniels St, Vancouver, WA 98660	ca.1905	Hough				X	Domestic - Single Family House	
95	1812 Columbia St, Vancouver, WA 98660	ca.1900	Hough			X		Domestic - Single Family House	Charles Zimmerman House
96	1501 Columbia St, Vancouver, WA 98660	ca.1921	Hough			X		Domestic - Single Family House	
99	1812 Washington St, Vancouver, WA 98660	ca.1940	Hough				X	Commerce/Trade - Business	
101	1411 Washington St, Vancouver, WA 98660	ca.1950	Esther Short				X	Commerce/Trade - Business	
103	1812 Main St, Vancouver, WA 98660	ca.1923	Hough				X	Religion - Religious Facility	
104	1416 Main St, Vancouver, WA 98660	ca.1920	Esther Short				X	Commerce/Trade - Business	
107	1701 Broadway St, Vancouver, WA 98663	ca.1935	Arnada				X	Commerce/Trade - Business	
108	2901 Main St, Vancouver, WA 98663	ca.1915	Shumway				X	Domestic - Single Family House	
109	SE Columbia Way,	ca.1827	Columbia Way				X	Recreation and Culture - Monument/Marker	Heritage Apple Tree
113	1500 Broadway St, Vancouver, WA 98663	ca.1925	Arnada				X	Commerce/Trade - Business	
119	415 E 17th St, Vancouver, WA 98663	ca.1925	Arnada				X	Commerce/Trade - Business	
120	301 E 19th St, Vancouver, WA 98663	ca.1905	Arnada				X	Domestic - Single Family House	
121	409 E 19th St, Vancouver, WA 98663	ca.1925	Arnada				X	Domestic - Single Family House	
123	501 E 19th St, Vancouver, WA 98663	ca.1925	Arnada				X	Domestic - Single Family House	
124	1810 F St, Vancouver, WA 98663	ca.1910	Arnada				X	Domestic - Single Family House	
125	601 E 19th St, Vancouver, WA 98663	ca.1940	Arnada				X	Domestic - Single Family House	
126	1605 F St, Vancouver, WA 98663	ca.1945	Arnada				X	Commerce/Trade - Professional	
128	304 E 15th St, Vancouver, WA 98663	ca.1945	Arnada				X	Domestic - Single Family House	
129	404-406 E 17th St, Vancouver, WA 98663	ca.1940	Arnada				X	Domestic - Multiple Family House	
130	700 E McLoughlin Blvd, Vancouver, WA 98663	ca.1902	Arnada				X	Domestic - Single Family House	
132	612 E McLoughlin Blvd, Vancouver, WA 98663	ca.1958	Arnada				X	Commerce/Trade - Business	
133	604 E 17th St, Vancouver, WA 98663	ca.1899	Arnada				X	Domestic - Single Family House	
134	604 E 16th St, Vancouver, WA 98663	ca.1909	Arnada				X	Commerce/Trade - Professional	
136	2001 H St, Vancouver, WA 98663	ca.1930	Arnada				X	Domestic - Single Family House	
140	807 E 22nd St, Vancouver, WA 98663	ca.1906	Arnada				X	Domestic - Single Family House	
143	2224 G St, Vancouver, WA 98663	ca.1916	Arnada				X	Domestic - Single Family House	
144	2223 G St, Vancouver, WA 98663	ca.1935	Arnada				X	Domestic - Single Family House	
145	2217 G St, Vancouver, WA 98663	ca.1927	Arnada				X	Domestic - Single Family House	
146	2213 G St, Vancouver, WA 98663	ca.1926	Arnada				X	Domestic - Single Family House	
147	2607 Main St, Vancouver, WA 98663	ca.1940	Shumway				X	Commerce/Trade - Business	
148	300 E 37th St, Vancouver, WA 98663	ca.1950	Lincoln				X	Health Care - Medical Business/Office	
149	318 E 7th St, Vancouver, WA 98660	ca.1925	Esther Short				X	Domestic - Multiple Family House	
150	400 E Evergreen Blvd, Vancouver, WA 98660	ca.1873	Esther Short	X	X			Commerce/Trade - Business	House of Providence - Academy

HistoricID	Loc_FullAddress	DateOfConstruction	Neighborhood	National	State	Local	CRC	BuildingUse_Current	SiteNameHistoric
151	401 E McLoughlin Blvd, Vancouver, WA 98663	ca.1916	Arnada				X	Commerce/Trade - Professional	
153	307 E Mill Plain Blvd, Vancouver, WA 98660	ca.1961	Esther Short				X	Commerce/Trade - Restaurant	Burgerville USA
155	2209 G St, Vancouver, WA 98663	ca.1925	Arnada				X	Domestic - Single Family House	
156	714 E 22nd St, Vancouver, WA 98663	ca.1930	Arnada	X				Domestic - Single Family House	
157	2208 H St, Vancouver, WA 98663	ca.1937	Arnada				X	Domestic - Single Family House	
158	2413 F St, Vancouver, WA 98663	ca.1916	Arnada				X	Domestic - Single Family House	
159	2409 F St, Vancouver, WA 98663	ca.1915	Arnada				X	Domestic - Single Family House	
160	2405 F St, Vancouver, WA 98663	ca.1925	Arnada				X	Domestic - Single Family House	
161	2401 G St, Vancouver, WA 98663	ca.1921	Arnada				X	Domestic - Single Family House	
165	1901 H St, Vancouver, WA 98663	ca.1929	Arnada				X	Domestic - Single Family House	
166	319 E Evergreen Blvd, Vancouver, WA 98660	ca.1905	Esther Short				X	Vacant/Not in Use	
167	300 E 13th St, Vancouver, WA 98660	ca.1960	Esther Short				X	Government - Government Office	
168	500 E 13th St, Vancouver, WA 98660	ca.1957	Esther Short				X	Domestic - Multiple Family House	
169	601 Broadway St, Vancouver, WA 98660	ca.1960	Esther Short				X	Domestic - Hotel	
171	110 E 13th St, Vancouver, WA 98660	ca.1965	Esther Short				X	Commerce/Trade - Business	
172	1111 Broadway St, Vancouver, WA 98660	ca.1949	Esther Short				X	Commerce/Trade - Business	
176	3305 Main St, Vancouver, WA 98663	ca.1965	Shumway				X	Commerce/Trade - Business	
177	111 W 28th St, Vancouver, WA 98660	ca.1955	Carter Park				X	Religion - Religious Facility	
178	122 E 28th St, Vancouver, WA 98663	ca.1900	Shumway				X	Domestic - Single Family House	
179	112 E 28th St, Vancouver, WA 98663	ca.1944	Shumway				X	Domestic - Multiple Family House	
180	121 E 28th St, Vancouver, WA 98663	ca.1910	Shumway				X	Domestic - Single Family House	
182	211 E 4th Plain Blvd, Vancouver, WA 98663	ca.1906	Arnada				X	Domestic - Single Family House	
184	130 W 29th St, Vancouver, WA 98660	ca.1932	Carter Park				X	Domestic - Single Family House	
185	118 W 29th St, Vancouver, WA 98660	ca.1930	Carter Park				X	Domestic - Single Family House	
186	112 W 29th St, Vancouver, WA 98660	ca.1918	Carter Park				X	Domestic - Single Family House	
187	110 W 29th St, Vancouver, WA 98660	ca.1918	Carter Park				X	Domestic - Single Family House	
188	2501 F St, Vancouver, WA 98663	ca.1925	Arnada				X	Domestic - Single Family House	
189	604 E 25th St, Vancouver, WA 98663	ca.1911	Arnada				X	Domestic - Single Family House	
191	3405 K St, Vancouver, WA 98663	ca.1920	Rose Village				X	Domestic - Single Family House	
192	3317 K St, Vancouver, WA 98663	ca.1920	Rose Village				X	Domestic - Single Family House	
195	901 E 32nd St, Vancouver, WA 98663	ca.1939	Shumway				X	Domestic - Single Family House	
197	108 W 33rd St, Vancouver, WA 98660	ca.1937	Carter Park				X	Domestic - Single Family House	
198	112 W 33rd St, Vancouver, WA 98660	ca.1930	Carter Park				X	Domestic - Single Family House	
199	102 E 31st St, Vancouver, WA 98663	ca.1927	Carter Park				X	Domestic - Single Family House	
200	108 E 31st St, Vancouver, WA 98663	ca.1920	Carter Park				X	Domestic - Single Family House	
202	4300 Main St, Vancouver, WA 98663	ca.1965	Lincoln				X	Religion - Religious Facility	
203	518 E 25th St, Vancouver, WA 98663	ca.1920	Arnada				X	Domestic - Single Family House	
204	510 E 25th St, Vancouver, WA 98663	ca.1920	Arnada				X	Domestic - Single Family House	
206	504 E 25th St, Vancouver, WA 98663	ca.1953	Arnada				X	Domestic - Single Family House	
208	408 E 25th St, Vancouver, WA 98663	ca.1926	Arnada				X	Domestic - Single Family House	
209	404 E 25th St, Vancouver, WA 98663	ca.1911	Arnada				X	Domestic - Single Family House	
210	400 E 25th St, Vancouver, WA 98663	ca.1910	Arnada				X	Domestic - Single Family House	
211	314 E 25th St, Vancouver, WA 98663	ca.1910	Arnada				X	Domestic - Single Family House	

HistoricID	Loc_FullAddress	DateOfConstruction	Neighborhood	National	State	Local	CRC	BuildingUse_Current	SiteNameHistoric
212	306 E 25th St, Vancouver, WA 98663	ca.1936	Arnada				X	Domestic - Single Family House	
213	304 E 25th St, Vancouver, WA 98663	ca.1927	Arnada				X	Domestic - Single Family House	
214	300 E 25th St, Vancouver, WA 98663	ca.1915	Arnada				X	Domestic - Single Family House	
217	426 E 4th Plain Blvd, Vancouver, WA 98663	ca.1932	Shumway				X	Religion - Religious Facility	
219	512 E 27th St, Vancouver, WA 98663	ca.1900	Shumway				X	Domestic - Single Family House	
220	419 E 28th St, Vancouver, WA 98663	ca.1926	Shumway				X	Domestic - Single Family House	
225	201 E 29th St, Vancouver, WA 98663	ca.1926	Shumway				X	Domestic - Single Family House	
227	2613 H St, Vancouver, WA 98663	1907	Shumway			X		Domestic - Single Family House	Bailey-Dickerson House
228	714 E 26th St, Vancouver, WA 98663	ca.1906	Shumway			X		Domestic - Single Family House	Swan House
229	804 E 26th St, Vancouver, WA 98663	ca.1911	Shumway				X	Domestic - Single Family House	
231	2415 F St, Vancouver, WA 98663	ca.1920	Arnada				X	Domestic - Single Family House	
232	514 E 28th St, Vancouver, WA 98663	ca.1905	Shumway				X	Domestic - Single Family House	
233	502 E 28th St, Vancouver, WA 98663	ca.1942	Shumway				X	Domestic - Multiple Family House	
246	3200 F St, Vancouver, WA 98663	ca.1928	Shumway				X	Domestic - Single Family House	
248	521 E 33rd St, Vancouver, WA 98663	ca.1945	Shumway				X	Domestic - Single Family House	
250	123 E 33rd St, Vancouver, WA 98663	ca.1940	Carter Park				X	Domestic - Single Family House	
251	119 E 33rd St, Vancouver, WA 98663	ca.1940	Carter Park				X	Domestic - Single Family House	
252	115 E 33rd St, Vancouver, WA 98663	ca.1940	Carter Park				X	Domestic - Single Family House	
254	101 E 33rd St, Vancouver, WA 98663	ca.1940	Carter Park				X	Domestic - Single Family House	
256	105 E 32nd St, Vancouver, WA 98663	ca.1940	Carter Park				X	Domestic - Single Family House	
257	111 E 32nd St, Vancouver, WA 98663	ca.1919	Carter Park				X	Domestic - Single Family House	
258	100 E 30th St, Vancouver, WA 98663	ca.1920	Carter Park				X	Domestic - Single Family House	
259	123 W 30th St, Vancouver, WA 98660	ca.1941	Carter Park				X	Domestic - Single Family House	
261	125 W 30th St, Vancouver, WA 98660	ca.1941	Carter Park				X	Domestic - Single Family House	
262	129 W 30th St, Vancouver, WA 98660	ca.1920	Carter Park				X	Domestic - Single Family House	
263	109 E 39th St, Vancouver, WA 98663	ca.1935	Lincoln				X	Domestic - Single Family House	
264	107 E 39th St, Vancouver, WA 98663	ca.1930	Lincoln				X	Domestic - Single Family House	
265	123 E 40th St, Vancouver, WA 98663	ca.1905	Lincoln				X	Domestic - Single Family House	
266	207 E 39th St, Vancouver, WA 98663	ca.1935	Lincoln				X	Domestic - Single Family House	
269	200 E 38th St, Vancouver, WA 98663	ca.1929	Lincoln				X	Domestic - Single Family House	
279	116 E 40th St, Vancouver, WA 98663	ca.1950	Lincoln				X	Domestic - Single Family House	
285	100 E 40th St, Vancouver, WA 98663	ca.1946	Lincoln				X	Domestic - Single Family House	
295	43rd and Washington St, Vancouver, WA 98660	ca.1950	Lincoln				X	Other	Tower
298	1906 Main St, Vancouver, WA 98660	ca.1950	Hough				X	Commerce/Trade - Business	
299	1908 Main St, Vancouver, WA 98660	ca.1925	Hough				X	Commerce/Trade - Business	
301	1916 Main St, Vancouver, WA 98660	ca.1915	Hough				X	Commerce/Trade - Business	
302	2006 Main St, Vancouver, WA 98660	ca.1940	Hough				X	Commerce/Trade - Business	
303	2012 Main St, Vancouver, WA 98660	ca.1910	Hough				X	Domestic - Single Family House	
304	2014 Main St, Vancouver, WA 98660	ca.1910	Hough				X	Commerce/Trade - Business	
305	2100 Main St, Vancouver, WA 98660	ca.1925	Hough				X	Commerce/Trade - Business	
306	2300 Main St, Vancouver, WA 98660	ca.1925	Hough				X	Social - Meeting Hall	
307	108 23rd St, Vancouver, WA 98660	ca.1927	Hough				X	Domestic - Single Family House	
308	114 W 23rd St, Vancouver, WA 98660	ca.1918	Hough				X	Domestic - Single Family House	

HistoricID	Loc_FullAddress	DateOfConstruction	Neighborhood	National	State	Local	CRC	BuildingUse_Current	SiteNameHistoric
309	116 W 23rd St, Vancouver, WA 98660	ca.1910	Hough				X	Domestic - Single Family House	
310	2310 Main St, Vancouver, WA 98660	ca.1920	Hough				X	Commerce/Trade - Business	
312	2219 Main St, Vancouver, WA 98660	ca.1920	Arnada				X	Commerce/Trade - Business	
317	1907 Broadway St, Vancouver, WA 98663	ca.1926	Arnada				X	Domestic - Multiple Family House	
319	3409 Main St, Vancouver, WA 98663	ca.1930/1970	Shumway				X	Social - Meeting Hall	
327	2221 Broadway St, Vancouver, WA 98663	ca.1912	Arnada				X	Domestic - Single Family House	
328	2414 Broadway St, Vancouver, WA 98663	ca.1941	Arnada				X	Domestic - Multiple Family House	
331	2312 Main St, Vancouver, WA	ca.1920	Hough				X	Commerce/Trade - Business	
332	1915 Washington St, Vancouver, WA 98663	ca.1909	Hough				X	Commerce/Trade - Business	
333	114 W 20th St, Vancouver, WA 98660	ca.1926	Hough				X	Domestic - Single Family House	
334	2005 Washington St, Vancouver, WA 98660	ca.1927	Hough				X	Domestic - Single Family House	
335	2009 Washington St, Vancouver, WA 98660	ca.1908	Hough				X	Domestic - Single Family House	
336	111 W 23rd St, Vancouver, WA 98660	ca.1925	Hough			X		Domestic - Single Family House	
337	117 W 23rd St, Vancouver, WA 98660	ca.1925	Hough				X	Domestic - Single Family House	
338	121 W 23rd St, Vancouver, WA 98660	ca.1925	Hough				X	Domestic - Single Family House	
339	111 W 24th St, Vancouver, WA 98660	ca.1924	Hough				X	Domestic - Single Family House	
342	2413 Main St, Vancouver, WA 98660	ca.1955	Arnada				X	Commerce/Trade - Business	
343	2407 Main St, Vancouver, WA 98660	ca.1950	Arnada				X	Commerce/Trade - Business	
344	1929 Main St, Vancouver, WA 98660	ca.1925	Arnada				X	Commerce/Trade - Business	
347	1914 Broadway St, Vancouver, WA 98663	ca.1921	Arnada				X	Commerce/Trade - Professional	
348	1920 Broadway St, Vancouver, WA 98663	ca.1910	Arnada				X	Commerce/Trade - Professional	
349	2000 Broadway St, Vancouver, WA 98663	ca.1914	Arnada				X	Commerce/Trade - Professional	
350	2008 Broadway St, Vancouver, WA 98663	ca.1920	Arnada				X	Domestic - Single Family House	
351	2214 Broadway St, Vancouver, WA 98663	ca.1927	Arnada				X	Domestic - Multiple Family House	
352	2218 Broadway St, Vancouver, WA 98663	ca.1929	Arnada				X	Domestic - Multiple Family House	Apartments
354	111 W 27th St, Vancouver, WA 98660	ca.1912	Arnada			X		Domestic - Single Family House	
355	112 W 28th St, Vancouver, WA 98660	ca.1910	Carter Park				X	Domestic - Single Family House	
356	110 W 28th St, Vancouver, WA 98660	ca.1916	Carter Park				X	Domestic - Single Family House	
357	123 W 29th St, Vancouver, WA 98660	ca.1928	Carter Park				X	Domestic - Single Family House	
358	121 W 29th St, Vancouver, WA 98660	ca.1937	Carter Park				X	Domestic - Single Family House	
359	115 W 29th St, Vancouver, WA 9860000	ca.1915	Carter Park				X	Domestic - Single Family House	
360	111 W 29th St, Vancouver, WA 98660	ca.1915	Carter Park				X	Domestic - Single Family House	
361	120 W 33rd St, Vancouver, WA 98660	ca.1947	Carter Park				X	Domestic - Multiple Family House	
367	Vancouver, WA 98661	start 1908	Columbia Way				X	Transportation - Rail-Related	Burlington Northern Railroad
368	610 E 5th St, Vancouver, WA 98661	ca.1903-04	Hudsons Bay	X				Defense - Military Facility	School)
369	1105 E 5th St, Vancouver, WA 98661	ca.1904-1921	Hudsons Bay				X	Transportation - Air-Related	Pearson Airfield
381	Vancouver, WA	ca.1917/1958					X	Transportation - Road-Related (vehicular)	I-5 Bridge
382	1601 E 4th Plain Blvd, Vancouver, WA 98663	ca.1941	Rose Village				X	Unknown	US Army Barnes General Hospital Communications Bldg
900	4201 Main St, Vancouver, WA 98663	ca.1848	West Minnehaha			X		Unknown	Covington House
917	4201 Main St, Vancouver, WA 98663		Lincoln				X	Unknown	Vancouver Obelisk
918	601-850 E Evergreen (also known as Officers Row), Vancouver, WA 98661	1878-1907	Hudsons Bay	X				Commerce/Trade - Professional	Officers Row
993	800 E 40th St, Vancouver, WA 98663	ca.1933	Lincoln				X	Landscape - Park	Kiggins Bowl Park