

4. DRAFT SECTION 4(F) EVALUATION

This chapter provides analysis and information to comply with Section 4(f) of the U.S. Department of Transportation Act (49 U.S. Code [USC] 303 and 23 USC 138).

4.1 Introduction

Section 4(f) of the Department of Transportation Act (49 USC 303 and 23 USC 138) and its implementing regulations at 23 Code of Federal Regulations (CFR) Part 774 require U.S. Department of Transportation (USDOT) agencies, such as the Federal Transportation Administration (FTA) and Federal Highway Administration (FHWA), to avoid any use of Section 4(f) property unless there is no feasible and prudent alternative to using the land, or unless the impact will be *de minimis*. Where there is no feasible and prudent alternative to the use of Section 4(f) property, USDOT may approve only the alternative that causes the least overall harm, which is determined by balancing various factors as described in 23 CFR § 774.3(c).

A Section 4(f) property is one that includes any publicly owned parks, recreation areas, and wildlife and waterfowl refuges of national, state, or local significance, as determined by the federal, state, or local officials having jurisdiction, or any land from a historic site of national, state, or local significance, as determined by the State Historic Preservation Officer. The latter include historic properties or archaeological sites listed or eligible for listing in the National Register of Historic Places (NRHP), though archaeological sites must warrant preservation in place to be subject to Section 4(f) requirements.

Once Section 4(f) properties have been identified in the study area, it is necessary to determine whether any of them would be used by the Program activities. A Section 4(f) use is defined and addressed in the FHWA/FTA regulations in 23 CFR 774.17 and the term has a very specific meaning. A “use” of Section 4(f) property occurs when one of the following occurs:

- Land is **permanently incorporated** into a transportation facility.
- There is a **temporary occupancy** of land that is adverse in terms of the Section 4(f) statute’s preservationist purposes (23 CFR 774.13(d)).
- There is a **constructive use** of land as determined by criteria in 23 CFR 774.15.
- Permanent incorporation, temporary occupancy, and constructive use are further described in FHWA’s *Section 4(f) Policy Paper* (FHWA 2012) and FTA’s Standard Operating Procedure No. 18 (FTA 2016).

USDOT agencies may not approve the use of Section 4(f) property with greater than *de minimis* impact unless the agency determines that (1) there is no prudent or feasible alternative, and (2) the project includes all possible planning to minimize harm to these resources resulting from such use (23 CFR 774.3).

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If a project will use Section 4(f) property, the first consideration is whether the use of a Section 4(f) property would be so negligible as to constitute a *de minimis* impact or qualify as a temporary occupancy.

A Section 4(f) evaluation must be completed when a project requires the use of Section 4(f) property that will result in a greater than *de minimis* impact. This evaluation considers whether a feasible and prudent avoidance alternative exists and identifies a reasonable range of project alternatives, including those that avoid using Section 4(f) property. For each potential avoidance alternative identified, this chapter evaluates whether avoiding the Section 4(f) property is feasible and prudent. See 23 CFR 774.17.

If there are no prudent and feasible alternatives that can avoid all Section 4(f) properties, then the Section 4(f) analysis must determine which alternative, after measures to minimize harm, results in the least overall harm to Section 4(f) properties. Assessment of least overall harm must consider seven factors—ability to mitigate adverse impact (including any measures that result in benefits to the property); relative severity of the remaining harm, after mitigation, to the protected activities, attributes or features of each Section 4(f) property; relative significance of each Section 4(f) property; views of the officials with jurisdiction over each Section 4(f) property; degree to which the alternative meets the Purpose and Need of the Program; impacts on other important non-Section 4(f) properties after reasonable mitigation; and whether there are substantial differences in cost between the alternatives. See 23 CFR 774.3(c)(1).

Project effects on a Section 4(f) property may be so negligible as to constitute a *de minimis* impact or qualify as a temporary occupancy. Temporary occupancy exceptions are defined under 23 CFR 774.13(d) as occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f) given that five conditions detailed in 5.1.3 are satisfied.

Permanent incorporation, temporary occupancy, and constructive use are further described in FHWA's *Section 4(f) Policy Paper* (FHWA 2012) and FTA's Standard Operating Procedure No. 18 (FTA 2016).

4.1.1 Permanent Incorporation

Land is permanently incorporated into a transportation project when it has been purchased as right of way or when sufficient property interests have been otherwise acquired for the purpose of project implementation. An example would be a permanent easement that is required for project construction or that grants a future right of access onto Section 4(f) property, such as for the purpose of routine maintenance by the transportation agency.

4.1.2 *De Minimis* Impact

Title 23 USC Section 138 and Title 49 USC Section 303 allow for a simplified process and approval for projects that have only *de minimis* impacts on lands subject to protection under Section 4(f). *De minimis* impacts are of such a minor extent they do not require a full Section 4(f) evaluation. Section 4(f) use is assessed in terms of the magnitude of impact to determine whether the use is "*de minimis*" or not "*de minimis*." For historic sites, a *de minimis* impact means that the Administration has determined, in accordance with 36 CFR part 800 (a.k.a. Section 106) that no historic property is affected by the project or that the project will have "No Adverse Effect" on the historic property question. For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is defined under 23 CFR 774.17 as "one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)." Avoidance, minimization, mitigation, and enhancement measures must be considered in assessing the net impact to the Section 4(f) property to make a *de minimis* determination. FHWA/FTA is required to consider the net impact after measures to minimize harm are applied.

A finding of *de minimis* impact must include concurrence by the officials with jurisdiction. After providing an opportunity for public comment, the official(s) with jurisdiction issues their concurrence in writing for the proposed *de minimis* impact determination. *De minimis* impact determinations can be made for permanent incorporations or temporary occupancies.

The requirements of Section 4(f) are satisfied if it is determined that a transportation project would have only a *de minimis* impact. Therefore, if a project would have only a *de minimis* impact on a Section 4(f) property, there is no obligation to analyze feasible and prudent avoidance alternatives or all possible planning to minimize harm to the property because, by definition in 23 CFR 774.17, impacts on the Section 4(f) property are reduced to a *de minimis* level.

4.1.3 Temporary Occupancy

Temporary occupancy occurs when a property is required for a limited amount of time for project construction-related activities. There is no permanent acquisition of property, but the temporary use of the property is adverse to the preservation purpose under Section 4(f). In some situations, temporary occupancy may not constitute a use under Section 4(f) if it meets the following five conditions of the temporary occupancy exception criteria in 23 CFR 774.13(d):

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

In cases where the five conditions of the temporary occupancy exception criteria are met, there is no use of Section 4(f) properties. If one or more of the conditions for the exception cannot be met, then the temporary occupancy becomes a use of the Section 4(f) property even though the duration is temporary. Documented concurrence of the official(s) with jurisdiction is necessary to demonstrate that the temporary occupancy exception criteria are met and must be kept on file as part of the project. Concurrence documentation is typically included in the Final Section 4(f) evaluation.

4.1.4 Constructive Use

Constructive use occurs when there is no physical use of a Section 4(f) property, as would be the case when there is a permanent incorporation or temporary occupancy, but there are proximity impacts on an adjacent or nearby Section 4(f) property, after incorporation of impact mitigation, that are so severe that they result in a substantial impairment of the property's activities, features, or attributes that qualify it for protection under Section 4(f). Constructive use includes proximity impacts such as noise, access restrictions, vibration, ecological intrusions, and visual impacts. Not all proximity impacts result in a constructive use—only those that will “substantially diminish” the activities, features, and attributes of a Section 4(f) property. For instance, a park whose central features include views and quiet where a transportation project would block views and devalue the serenity of the park due to noise could be a proximity impact, whereas merely a change in views or incremental increases in noise likely would not be a proximity impact.

For historic sites, a constructive use does not occur when compliance with the requirements of 36 CFR 800.5 (Assessment of adverse effects) for proximity impacts of the proposed action, on a site listed in or eligible for the NRHP, results in an agreement of “No Effect” or “No Adverse Effect” (23 CFR Section 774.15). Therefore, where permanent incorporation or nonexempt temporary occupancy occurs for a given Section 4(f) property and/or there is “No Effect” or “No Adverse Effect,” this evaluation does not further discuss constructive use. Constructive use is an extremely rare occurrence.

The evaluation to determine whether there is a constructive use is subject to the criteria in 23 CFR 774.15(e). These criteria are provided below and are referenced for constructive use evaluations in Section 4.3 of this evaluation. These criteria focus on noise, aesthetics, access, vibration, and ecological intrusion.

(e) The Administration has reviewed the following situations and determined that a constructive use occurs when:

- (1) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a property protected by Section 4(f), such as:
 - (i) Hearing the performances at an outdoor amphitheater;*
 - (ii) Sleeping in the sleeping area of a campground;*
 - (iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site’s significance;*
 - (iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or*
 - (v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such viewing.**
- (2) The proximity of the proposed project substantially impairs esthetic features or attributes of a property protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the property. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a Section 4(f) property which derives its value in substantial part due to its setting;*
- (3) The project results in a restriction of access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;*
- (4) The vibration impact from construction or operation of the project substantially impairs the use of a Section 4(f) property, such as projected vibration levels that are great enough to physically damage a historic building or substantially diminish the utility of the building, unless the damage is repaired and fully restored consistent with the Secretary of the Interior’s Standards for the Treatment of Historic Properties, i.e., the integrity of the contributing features must be returned to a condition which is substantially similar to that which existed prior to the project; or*
- (5) The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes with the access to a wildlife and waterfowl refuge when such access is necessary for established wildlife migration or critical life cycle processes, or substantially reduces the wildlife use of a wildlife and waterfowl refuge.*

4.1.5 Summary of 2011 Final Section 4(f) Findings

Where details of the CRC Final Section 4(f) Evaluation for a given property are still relevant and accurate, they have been included to support the Draft Section 4(f) Evaluation for the IBR Program.

The CRC project's Final Section 4(f) evaluation identified 11 park and recreation facilities and 36 historic sites.

- The CRC evaluation analyzed the use of Section 4(f) properties for five different alternatives: The CRC LPA: Included a new river crossing over the Columbia River and the I-5 highway improvements, including improvements to seven interchanges, north and south of the river and enhancements to the local street network, as well as light-rail extension from the Expo Center to Clark College, bicycle and pedestrian improvements throughout the corridor, tolling for the river crossing, and transportation demand management measures.
 - LPA Option A included local vehicular access between Marine Drive and Hayden Island on a multimodal bridge.
 - LPA Option B did not have traffic lanes on the light-rail bridge, but would provide direct auto access between Marine Drive and Hayden Island with collector-distributed lanes on two new bridges adjacent to I-5.
- Alternative 2: Included a full replacement crossing downstream (west) of the current I-5 alignment. The new crossing would include three bridges (two northbound and southbound traffic and a third for transit, bicycles, and pedestrians) or a stacked, two bridge configuration with transit, bicycle and pedestrian decks suspended beneath the vehicle deck. This alternative would use bus rapid transit; it would not include light-rail transit (LRT).
- Alternative 3: Similar to Alternative 2 except that LRT would be used instead of bus rapid transit.
- Alternative 4: Retained both existing I-5 bridges and add one new bridge. Existing bridges would be restriped to provide two northbound lanes on each bridge and provide safety shoulders for disabled vehicles. A new, wider bicycle and pedestrian facility would be added to the east side of the existing northbound (eastern) bridge. A new supplemental bridge would be constructed downstream of the existing bridges and would include four southbound traffic lanes, safety shoulders, and bus rapid transit; it would not include LRT
- Alternative 5: Similar to Alternative 4 except that LRT would be used instead of bus rapid transit.

The CRC Section 4(f) evaluation determined that:

- Land from 36 Section 4(f) properties (10 park and recreation properties and 26 historic sites) would be used under the CRC LPA, with 11 properties experiencing a use with greater than *de minimis* impact and 25 experiencing a *de minimis* impact. One park and recreation property (East Delta Park) and ten historic sites would not experience a use under Section 4(f).
- As part of the CRC LPA, no park and recreation properties or historic sites would experience a constructive use.

There were no prudent and feasible alternatives that would avoid all Section 4(f) resources. All prudent and feasible alternatives would use Section 4(f) properties. The CRC Final Section 4(f) evaluation analyzed several alternative options to evaluate avoidance and minimization of impacts to some of the Section 4(f) properties.

The evaluation considered the following measures to minimize harm to Section 4(f) properties in Portland:

- Moving the Marine Drive/I-5 Interchange ramps farther east or west.
- Other measures specified in the Section 106 Memorandum of Agreement, including:
 - Documenting a historic property prior to deconstruction using the Historic American Building Survey/ Historic American Engineering Record standards,
 - Attempting to relocate and adaptively reuse elements of a historic property,

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- Developing interpretive materials, and
- Developing multiple property documentation for postwar boat and automobile dealership showroom buildings.

Measures to avoid or minimize harm to the northbound Interstate Bridge included:

- Reusing the existing bridge and crossings in alternative locations and keeping the existing bridge and providing a supplemental crossing. These were determined not to meet the Purpose and Need.
- Documenting the bridge; preparing a marketing plan to find alternative uses for the bridge or individual spans; incorporating decorative or interpretive elements of the existing bridge into the new bridge; communicating the structure’s history through interpretive programs and a web site; and developing multiple property documentation for bridges in Oregon and Washington.

The evaluation identified measures to minimize harm to properties in Vancouver—in particular, the Waterfront Renaissance Park and Trail and Marshall Community Center and Park—including:

- Reduce harm to the west edge of the Vancouver National Historic Reserve (VNHR), by selecting the supplemental crossing, shifting the replacement crossing alignment to the west, or stacking northbound I-5 on-ramps from SR 14 vertically instead of aligning them horizontally.
- Reduce harm to the west edge of the VNHR and the Barracks Post Hospital, by reducing I-5 lane width or shoulder widths below standards, or eliminating one or more of the proposed auxiliary lanes from I-5 between SR 14 and Mill Plain.
- Reduce acquisitions of VNHR and to reduce harm to the Fort Vancouver Village area and Old Apple Tree Park, select the SR 14 left-loop interchange design, refine its design, or reorient the I-5/SR 14 interchange.
- Assist with the redevelopment and relocation of Waterfront Park and Trail.
- Minimize impacts to Marshall Community Center and Park, realign and narrow the Mill Plain to Fourth Plain interchange ramps, restripe the Community Center parking lot to reduce off-street parking spaces lost, and enter into a shared agreement with Clark park and ride to reduce lost on-street parking.

Several of the alternatives evaluated required design deviations within the study area and often resulted in (1) additional impacts to properties that would otherwise not be affected, (2) unacceptable safety or operational problems, or (3) were not consistent with the project’s Purpose and Need. Reasonable minimization measures were identified during the CRC evaluation and were incorporated into the LPA. The CRC project team coordinated with parties that had jurisdiction over identified Section 4(f) properties, including Portland Parks and Recreation (PP&R), the National Park Service (NPS), Vancouver-Clark Parks and Recreation Department, Vancouver Public Schools, Washington State Department of Archaeology and Historic Preservation, Oregon State Historic Preservation Office, and the City of Vancouver to refine the proposed project footprint that reduced the number of Section 4(f) uses and resulted in a *de minimis* determination for many of the Section 4(f) uses. The CRC project team analyzed the LPA, Alternatives 2 and 3 (Replacement Crossing), and Alternatives 4 and 5 (Supplemental Crossing) following the seven factors in 23 CFR 774.3(c) to determine which alternative would cause the least overall harm. After evaluating each CRC alternative, FHWA and FTA determined that the LPA would result in the least overall harm of all alternatives, for the following reasons:

- *Ability to mitigate impacts to Section 4(f) properties, including any benefits to properties:* All alternatives were found to have similar ability to mitigate impacts, but the LPA and Alternatives 2 and 3 would provide the most benefit to Section 4(f) properties.
- *Severity of remaining harm after mitigation:* All alternatives were found to have generally equivalent severity of impacts after mitigation.

- *Relative significance of each Section 4(f) property:* Relative significance of 4(f) properties was found to be similar for all alternatives.
- *Views of officials with jurisdiction:* Officials with jurisdiction who expressed a preference generally preferred the LPA (modified version of Alternative 3).
- *Degree to which alternative meets the purpose and need for the project:* The LPA was found to best meet the project's Purpose and Need. Alternatives 4 and 5 were found to be considerably less effective at meeting the Purpose and Need.
- *Magnitude of impacts to non-Section 4(f) properties after mitigation:* The magnitude of non-Section 4(f) impacts was found to be lowest for Alternatives 2 and 3 (fewer acquisitions) and generally equivalent for the LPA and Alternatives 4 and 5.
- *Substantial cost difference among alternatives:* No substantial cost difference among alternatives was found.

4.1.6 IBR Draft Section 4(f) Evaluation

In 2011, FHWA issued a Final Section 4(f) determination on park and recreation properties and historic sites for the Columbia River Crossing (CRC) project. There were no wildlife or waterfowl refuges in the CRC project study area and there are none in the IBR Program study area. Where details of the CRC Final Section 4(f) Evaluation for a given property are still relevant and accurate, they have been included in the Draft Section 4(f) Evaluation for the IBR Program.

The analysis included in this Draft Section 4(f) Evaluation for the IBR Program incorporates relevant information for Section 4(f) properties from CRC to the degree that information is still accurate, but a new evaluation was prepared due to changes in:

- The affected environment, including changes in the eligibility of properties for protection under Section 4(f). The addition of sites due to sites aging in to historic eligibility account for the majority of changes.
- Regulations or guidance that have occurred since the 2011 determination including clarifications regarding *de minimis* impacts provided in FHWA's 2012 Section 4(f) Policy Paper.
- The use of properties by the IBR Modified LPA with all design options as a result of changes in eligibility or other conditions described in Chapter 2.

This Section 4(f) Evaluation is being made available to the public to review and comment concerning the effects on the protected activities, features, and attributes for park and recreation properties and historic sites and preliminary *de minimis* impact findings for these properties as required by 23 CFR 774.5(b)(2) during the review period for the IBR Program's Draft Supplemental Environmental Impact Statement (SEIS) to provide an opportunity for wide public distribution.

4.2 IBR Section 4(f) Properties

4.2.1 Section 4(f) Park and Recreation Properties in the IBR Program Study Area

This section provides an overview of the Section 4(f) properties that were evaluated for potential use by the IBR Program Modified LPA with all design options, hereafter referred to as the Modified LPA, within the IBR Program study area for Parks and Recreation. The Park and Recreation Study Area is defined in the Parks and Recreation Technical Report. The IBR Program Parks and Recreation Technical Report discusses additional recreational properties in the IBR Program study area that are not subject to protection under Section 4(f) properties.

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Table 4-1 summarizes the Section 4(f) park and recreation properties in the IBR Program study area. There are a total of 11 park and recreation facilities in the IBR Program study area including one park and recreation property in Portland and nine park and recreation properties in Vancouver.

Table 4-1. Summary Information about Section 4(f) Park and Recreation Properties in the IBR Program Study Area

State	Name	Facility Type	Location	Agency with Jurisdiction	Protected Site Features, Attributes, or Activities
Oregon	Marine Drive Trail	Regional Trail	Portland, Oregon	City of Portland	5-mile multiuse trail that includes sections with both transportation and recreational primary purposes. Only recreational sections are protected.
Oregon	East Delta Park	Regional Park	10737 N Union Court, Portland, OR	City of Portland	<ul style="list-style-type: none"> • 85 acres. • Softball and soccer fields, control-line flying field, sand volleyball courts, playground.
Washington	Vancouver Landing at Terminal 1	Public Dock and Park	100 Columbia Street, Vancouver, WA	Port of Vancouver	<ul style="list-style-type: none"> • Public dock and park located on the Columbia River to the west of I-5. • Updated in 2022 to include link to the Columbia River Renaissance Trail and a new “Rotary Way” walkway. • Also includes a small boat dock and serves river cruise vessels. • The Port plans to replace the dock with one that will support a public market.
	Vancouver Waterfront Park	Regional Park	Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 7.3 acres. • Includes public open spaces, benches, a fountain, and 0.5 miles of trail connecting to the Columbia River Renaissance Trail. • Completed in 2018 as part of the Waterfront Vancouver development.

State	Name	Facility Type	Location	Agency with Jurisdiction	Protected Site Features, Attributes, or Activities
	Fort Vancouver NHS	National Park	800 Hathaway Road, Building 722, Vancouver, WA	NPS	<ul style="list-style-type: none"> • 209 acres (largely overlapping with the VNHR). • Historic interpretive sites and replica structures, multiuse trails, picnic tables, event and recreation fields, and reservable picnic shelter. • Newly constructed main visitor parking lot and improvements to E 5th Street, including repaving, new sidewalks, reoriented parking spaces, and bicycle and pedestrian routes completed in fall 2022. • NPS has reconstructed two replica village dwellings in the western portion of the property and maintains a tree alley that visually buffers the area.
	Old Apple Tree Park	Urban Natural Area	112 Columbia Way, Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 1.3 acres. • Passive recreation, bicycle parking, and viewing; was the site of possibly the oldest apple tree in the Northwest (Heritage Apple Tree), which died in 2020—the tree was removed, leaving a stump and newly planted saplings that share a genetic makeup with the original tree. • The park is accessible from the Fort Vancouver NHS and using the Confluence Land Bridge.
	Marshall Community Center, Luepke Senior Center, and Marshall Park	Community Center and Public Swimming Pool, Senior Center, and Community Park	1015 E McLoughlin Boulevard, Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 19 acres. • Community center, play equipment, community gardens, loop trail, picnic tables, horseshoe pits, and ball fields and the Marshall and Luepke Centers. • The community center contains a swimming pool, fitness center, two basketball courts, commercial kitchen, meeting rooms, offices, and studios for aerobics and arts and crafts. Luepke is a full-service senior center with multipurpose and meeting rooms. • The City of Vancouver installed new accessible play equipment in the park in fall 2022.

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State	Name	Facility Type	Location	Agency with Jurisdiction	Protected Site Features, Attributes, or Activities
	Clark College Recreational Fields	Sports Fields and Courts	1500 E Mill Plain Boulevard, Vancouver WA	Clark College	<ul style="list-style-type: none"> • 13.5 acres. • Sports fields, courts.
	Leverich Community Park	Community Park	39th and M Streets, Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 16 acres. • Disc golf course, picnic tables, paved walkways, reservable picnic shelter, restroom, and play equipment.
	Arnada Neighborhood Park	Neighborhood Park	610 E 25th Street, Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 3-acre park. • Includes a gazebo, picnic shelter, play equipment, sport court, benches, and a paved walkway.
	Burnt Bridge Creek Trail	Multiuse Trail	Vancouver, WA	City of Vancouver (VPR&C)	<ul style="list-style-type: none"> • 8-mile paved multiuse trail that passes through the Burnt Bridge Creek Greenway on the east and west sides of I-5 with a pedestrian and bicycle-only bridge over the freeway.

I-5 = Interstate 5; NHS = National Historic Site; VPR&C = City of Vancouver Parks, Recreation, and Cultural Services

Complete descriptions and additional information for these facilities are available in the Parks and Recreation Technical Report, and further descriptions are contained in Section 4.3 of this evaluation. Figure 4-1 maps the locations of park and recreation properties in the IBR Program study area.

Figure 4-1. Section 4(f) Park and Recreation Properties: IBR Program Study Area



Figure 4-2 through Figure 4-5 provide more detailed maps of the Section 4(f) park and recreation properties in Oregon, of the Fort Vancouver National Historic Site (NHS), between Mill Plain Boulevard and Fourth Plain Boulevard, and north of Fourth Plain Boulevard (respectively).

Figure 4-2. Section 4(f) Park and Recreation Properties: Oregon

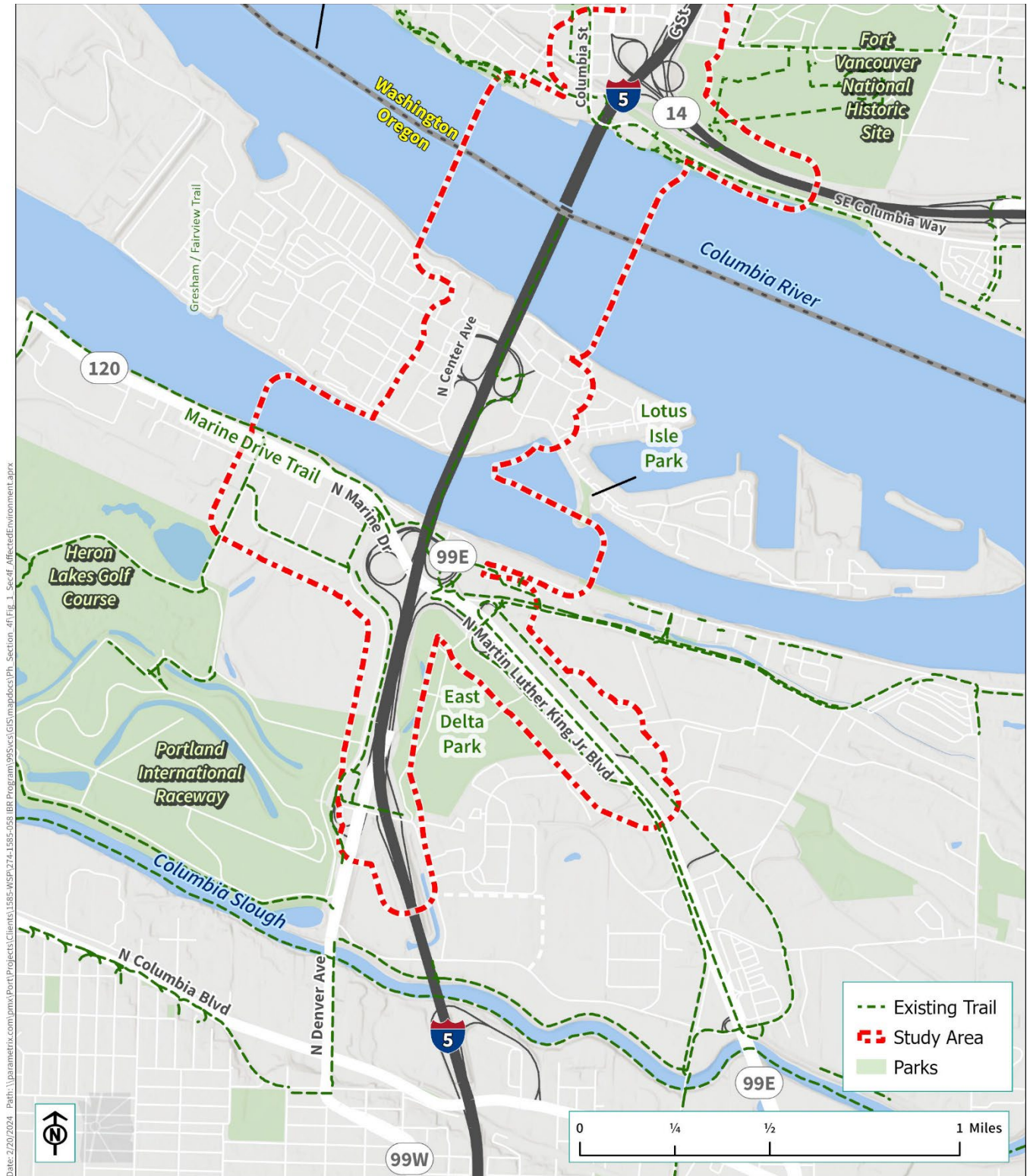


Figure 4-3. Section 4(f) Park and Recreation Properties: Fort Vancouver National Historic Site



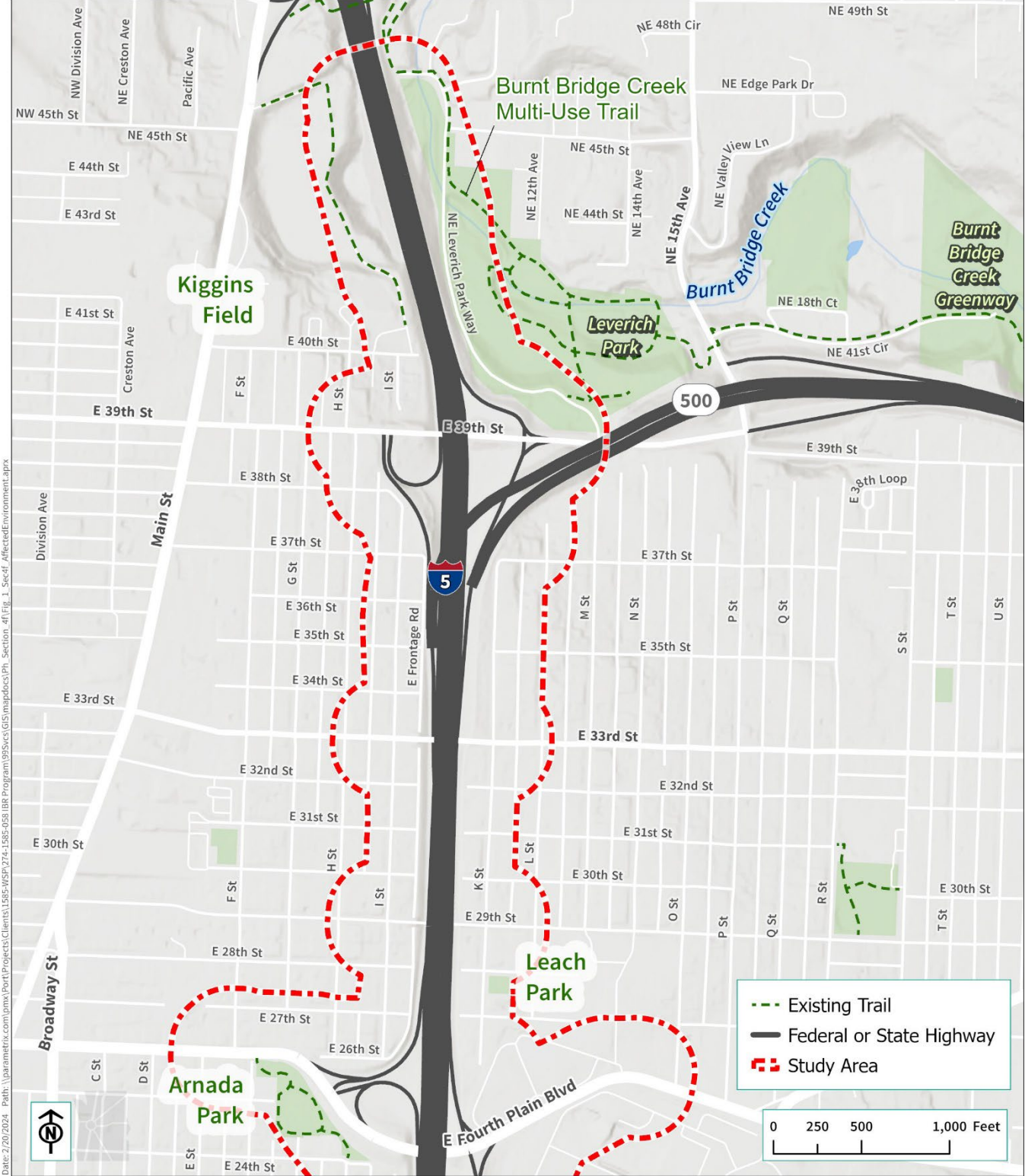
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Source: Clark County, ODOT, WSDOT, Mapbox, OpenStreetMap

Figure 4-4. Section 4(f) Park and Recreation Properties: Mill Plain Boulevard to Fourth Plain Boulevard



Figure 4-5. Section 4(f) Park and Recreation Properties: North of Fourth Plain Boulevard



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Source: City of Portland, Clark County, ODOT, WSDOT, Mapbox, OpenStreetMap

The VNHR was created by Congress in 1996 and includes the Fort Vancouver NHS and related properties. The VNHR is cooperatively managed by the NPS, the Washington State Department of Archaeology and Historic Preservation, the Department of the Army, and the City of Vancouver.

A portion of the VNHR was listed as a historic district on the NRHP in 2008, whereas the NPS identifies the Fort Vancouver NHS as a park. For these reasons, the IBR Program's Draft Section 4(f) Evaluation treats the VNHR Historic District as a historic site inclusive of the Fort Vancouver NHS and treats the Fort Vancouver NHS separately as a park and recreational property to explicitly address both the public park and the historic significant activities, features, and attributes of the property. Table 4-1 provides summary information on Section 4(f) park and recreation properties in the IBR Program Study area.

Facilities within the study area that qualify for an exception under 23 CFR 774.13 and are not evaluated further for a use under Section 4(f) in Section 4.3 of this document are described below.

Wy' East Way Path: The Wy' East Way Path is a 2-mile path located in Gresham that runs along the light-rail line from Ruby Junction Station in Rockwood south to Cleveland Station in downtown Gresham. The City of Gresham's website emphasizes the Wy' East Way Path as a connection to the Gresham/Fairview Trail and Springwater Corridor, creating a continuous 6-mile loop through Gresham. The path is described as being an alternative transportation route to get around Gresham; the path provides easier access to local parks, trails, public transit, schools, and businesses. Per 23 CFR 774.13(f)(4), trails that are part of the local transportation system and function primarily for transportation are not required to receive Section 4(f) approval; therefore, the Wy' East Way Path, as trail that functions primarily for transportation, is not subject to Section 4(f).

Gresham-Fairview Trail: The Gresham-Fairview Trail is a 3.29-mile trail in Gresham that connects to the Springwater Trail at SW 10th Avenue and can also be accessed at Northeast Halsey Street at 201st Avenue from the north. Oregon Metro (Metro), the Portland area's regional government, emphasizes the purpose of the trail as connecting origins and destinations. The trail connects town centers, schools, employment centers, and housing in east Multnomah County with the MAX light-rail, provides access to the Columbia River for residents in Gresham and Fairview, connects to six other regional trails (including Springwater Corridor, Marine Drive Trail and Sandy River Connection), and provides access to major recreational and scenic resources including the Columbia River and local parks. The Gresham-Fairview Trail is part of the Metro's 40-Mile Loop Trail, which connects more than 30 parks in Multnomah County along the Columbia, Sandy, and Willamette Rivers, Johnson Creek, and the Tualatin Mountains.

Per 23 CFR 774.13(f)(4), trails, paths, bicycle lanes, and sidewalks that are part of the local transportation system and that function primarily for transportation do not require Section 4(f) approval. The Gresham-Fairview Trail primarily serves as a trail for movement of people through active transportation modes and connecting origins and destinations in the area and, therefore, does not require approval under Section 4(f).

Lower Columbia River Water Trail: The Lower Columbia Water Trail traverses the Columbia River, running underneath both the new and proposed bridges. Guidance provided by FHWA in the *Section 4(f) Policy Paper*, Question 21A indicates that Section 4(f) generally does not apply to rivers, but that it would apply to portions of publicly owned rivers, which are designated as recreation trails. The Lower Columbia Water Trail is not designated as part of the National Water Trail System. Because the Lower Columbia River Water Trail is informally designated by the Lower Columbia River Partnership, a nonprofit organization, and not an official with jurisdiction over a park and recreation area (which is an agency as defined under 23 CFR 774.17), the water trail is not protected under Section 4(f).

Columbia River Renaissance Trail (formerly referred to as Waterfront Renaissance Trail): The Columbia River Renaissance Trail is a 5-mile-long, 14-foot-wide multiuse paved trail starting at the intersection of Columbia Way and Columbia Street and extending east to Marine Park and Wintler Park. The trail is open from 7:00 a.m. to dusk, connects Vancouver’s downtown to the Columbia River waterfront, and offers multiple benches for viewing. The Columbia River Renaissance Trail is a portion of the Discovery Historic Loop Trail and connects to the Fort Vancouver NHS. The portion of the trail in the study area is designated along the public sidewalk on the south side of Columbia Way. After construction is complete, the trail and Columbia Way would be realigned and reconstructed. The newly constructed portion of trail would continue to be located within City of Vancouver right of way for Columbia Way. In accordance with 23 CFR 774.13(f), and as per Question 15A of the *Section 4(f) Policy Paper*, “Section 4(f) would apply to a publicly owned, shared-use path or similar facility (or portion thereof) designated or functioning primarily for recreation...” (FHWA 2012). While considered in the CRC Final Section 4(f) Evaluation, because the affected portion of trail is located within public right of way that is a sidewalk and functions primarily for an active transportation purpose connecting to and between downtown Vancouver, the Vancouver waterfront, and several parks in the region, and the trail would remain as a sidewalk after construction, the Columbia River Renaissance Trail is not subject to Section 4(f).

Discovery Historic Loop Trail: The Discovery Historic Loop Trail is a 2.9-mile trail that connects the Fort Vancouver NHS and the VNHR with the Vancouver waterfront and downtown. The trail is located within and is a feature of the Fort Vancouver NHS Park for much of its extent. It also overlaps with the Columbia River Renaissance Trail along the waterfront. Because it is contained within the Fort Vancouver NHS and overlaps the Columbia River Renaissance Trail, it is not counted as a separate recreational property. The trail follows sidewalks on local streets in downtown Vancouver outside of the Fort Vancouver NHS and the Renaissance Trail. While considered in the CRC Final Section 4(f) Evaluation, per 23 CFR 774.13(f)(4), trails that are part of the local transportation system and function primarily for transportation, such as the Discovery Historic Loop Trail, are not subject to Section 4(f) approval.

Kiggins Bowl Sports Fields/Stadium: Located northwest of the I-5 and E 39th Street interchange, the Kiggins Bowl Sports Fields/Stadium is a Vancouver Public Schools facility that sits on the same property as Discovery Middle School. The Discovery Middle School property contains the school, parking lots bordering the school entrance on E 40th Street, internal vehicle circulation areas, and recreational facilities. The recreational facilities include sports fields, natural areas, a trail connecting to the Burnt Bridge Creek Trail, a track around an artificial turf soccer field, a football field, a 4,000-square-foot field house at the northern end of the football field, team rooms, public restrooms, and locker rooms. Planned improvements include modernizing the existing stadium to include seismic upgrades, a secondary press box, a new traffic surface over the seating risers, and upgrades to the lower-level locker rooms. Only the track surrounding the football fields is open to the public, with the remaining facilities requiring a contract with Vancouver Public Schools for their use.

Where public properties are managed for multiple purposes, such as for the Discovery Middle School property that contains the Kiggins Bowl Sports Fields/Stadium, Section 4(f) only applies to the portions of these lands that “function for, or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl refuge purposes” as per 23 CFR 774.11(d). Thus, only the portion of the property that contains the sports fields, natural areas, trail connection, track, football field, field house, team rooms, restrooms, and locker rooms are subject to Section 4(f), and not the portion of the property containing the school, as shown on Figure 4-6. Both the permanent land acquisition and the temporary easement needed by the Modified LPA, including all design options, would be small portions of the Discovery Middle School property that are located at the far southeastern corner, which is not within the area managed for recreational use.

Interstate Bridge Replacement Program

While considered in the CRC Final Section 4(f) Evaluation, due to the shared use on the property, Discovery Middle School is not a Section 4(f) property under 23 CFR 774.11(d). The acquisition area and temporary easement from the facility would be located on the portion of the property used for school purposes and therefore would not meet the applicability criteria for Section 4(f).

Nearby Parks: The IBR Program Park and Recreation Technical Report notes that Lotus Isle Park, Esther Short Park, Leach Park, and Ike Memorial Dog Park “are located near to, but outside of the IBR Program study area and would not be affected by the Modified LPA or design options.” These parks are not further discussed in this evaluation.

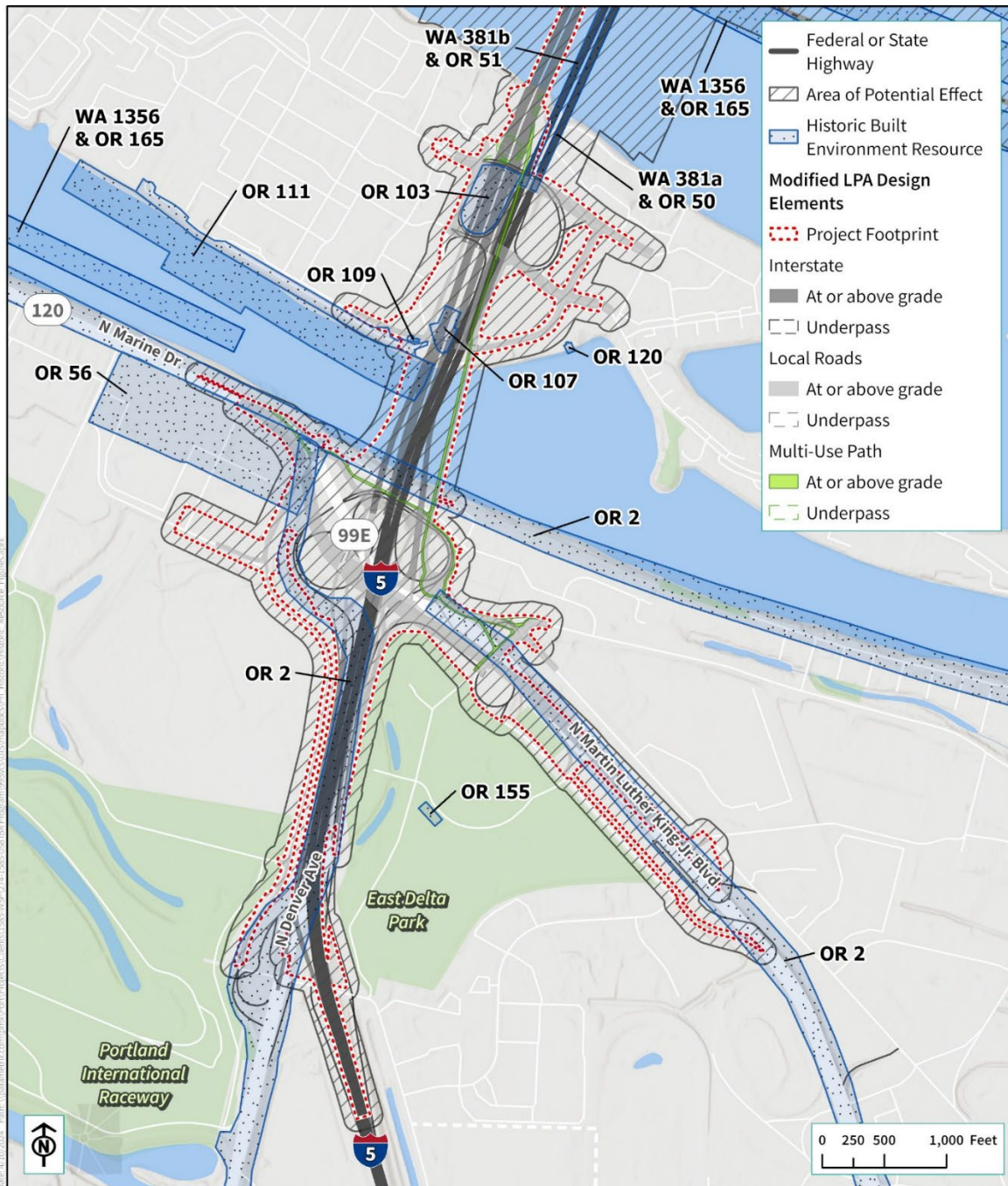
Figure 4-6. Kiggins Bowl Sports Fields/Stadium Modified LPA with Design Options



4.2.2 Section 4(f) Historic Sites in the IBR Program Study Area

This section summarizes the Section 4(f) historic sites evaluated for potential use by the IBR Program Modified LPA, including all design options, within the Section 106 cultural resources area of potential effect (APE), which is the Section 4(f) study area boundary for historic sites. See Section 3.8, Cultural Resources, of the Draft SEIS, which discusses how the cultural resources APE boundary was established. There are a total of 32 historic sites including four historic districts that include multiple sites eligible or listed under the NRHP within the cultural resources APE. Of these, 10 historic sites are in Portland and 22 historic sites are in Vancouver. Figure 4-7 through Figure 4-9 depict the geographic location of Section 4(f) historic sites in the IBR Program cultural resources APE, and Table 4-2 provides a summary description of these historic sites.

Figure 4-7. Summary of Section 4(f) Historic Sites in the IBR Program Study Area – Oregon



Source: ODOT, WSDOT, Mapbox, OpenStreetMap

Figure 4-8. Summary of Section 4(f) Historic Sites in the IBR Program Study Area – Downtown Vancouver

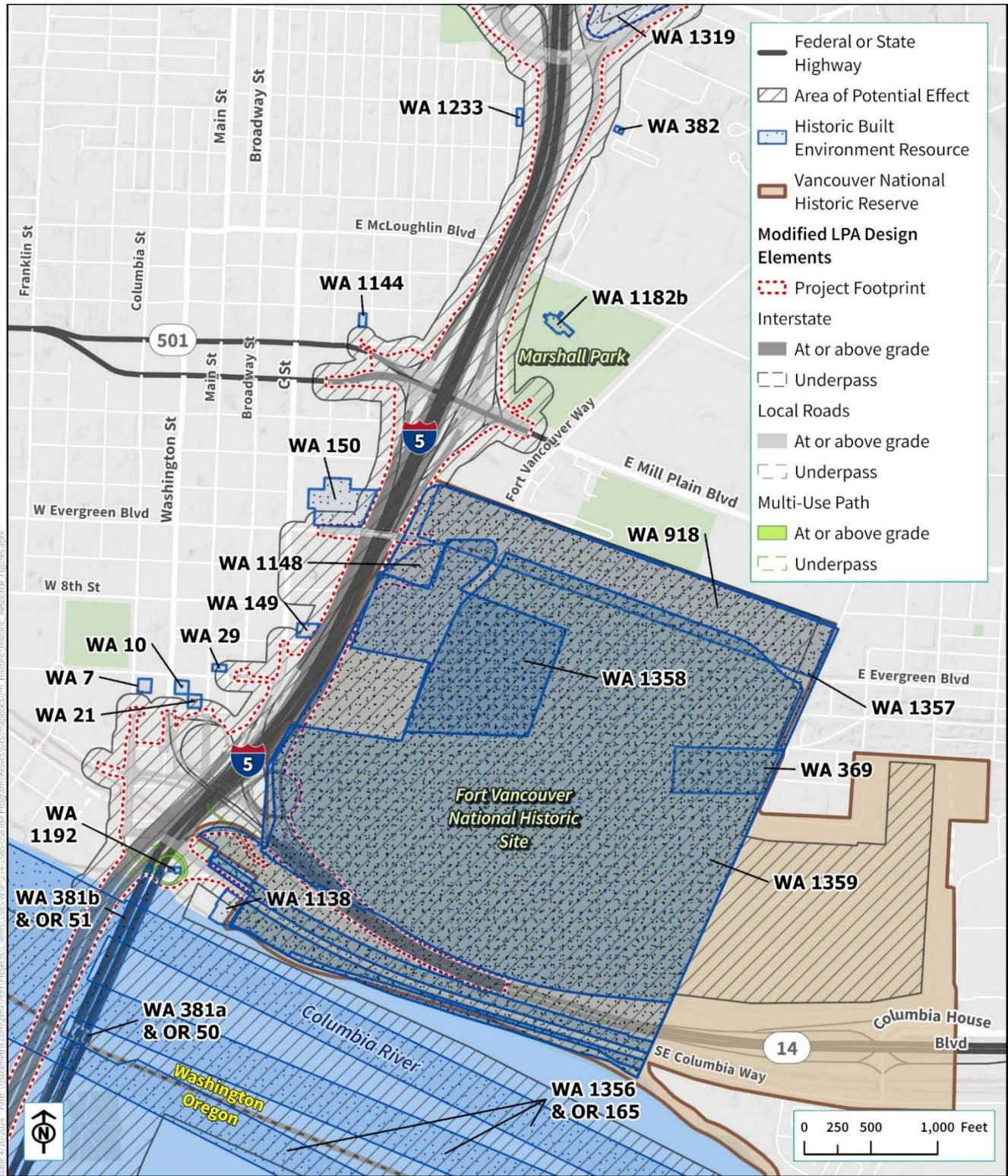


Figure 4-9. Summary of Section 4(f) Historic Sites in the IBR Program Study Area – Upper Vancouver



Source: ODOT, WSDOT, Mapbox, OpenStreetMap

Table 4-2. Summary Information about Section 4(f) Historic Sites in the IBR Program Study Area

State ID	Name	Location	Description
OR 2	Columbia Slough Drainage Districts Historic District, Portland		The district consists of a group of four geographically contiguous Columbia Slough drainage districts that are located on the Columbia River floodplain between the Willamette and Sandy Rivers, occupying approximately 10,000 acres. Within the Columbia Slough Drainage Districts Historic District are six resource types: sloughs, canals, levees/fills, pumping plants, weirs/dams, and ditch systems. The Columbia River Levee, North Denver Avenue Cross Levee, and Union Avenue/Martin Luther King Fill/Cross Levee are each an historic contributing element to the Columbia Slough Drainage Districts Historic District within the IBR Program study area.
OR 50	Northbound Interstate Bridge		The northbound Interstate Bridge is a steel truss bridge that crosses the Columbia River between Portland and Vancouver. Completed in 1917 and modified in 1958, the bridge is composed of a span across the Columbia River that measures 3,538 feet in length. The main span of the bridge in Vancouver is a steel through truss vertical lift span of the Pennsylvania-Petit type. The vertical lift span, when fully raised, creates a waterway clearance channel that measures 250 feet laterally and 178 feet vertically (OLW). The bridge is also composed of 10 steel through Pennsylvania truss secondary spans that range in length from 266 to 531 feet. The bridge was retrofitted in 1958 to mimic the design of the westerly, southbound bridge.
OR 56	Portland Assembly Center	2060 N Marine Drive, Portland	The Portland Assembly Center is a 1919 Georgian Revival and Modern building that is a complex of five interconnected exposition halls built between 1924 and 2001 and commonly known as the “Portland Expo Center.” The period of significance for the NRHP-eligible Portland Assembly Center is limited to 1942, corresponding to the period of Japanese American incarceration at the site.
OR 103	Toll Administration Building/ODOT Permit Center	12348 N Center Avenue, Portland	The Toll Administration Building/ODOT Permit Center is a Modern-style two-story building with a penthouse. The building was constructed in 1959 to administer tolling of vehicular traffic across the 1917 northbound Interstate Bridge and 1958 southbound Interstate Bridge and is located at the southern end of Hayden Island.
OR 107	Harbor Shops	11915 N Center Avenue, Portland	The Harbor Shops building is a Postmodern-style strip mall located at 11915 N Center Avenue in Portland. Constructed in 1978, this one-story building features an irregular footprint with an elongated “zigzag shape” and a flat roof with a high parapet.
OR 109	Jantzen Beach Water Tank	N Center Avenue, Portland	The Jantzen Beach Water Tank and Pump House are utilitarian structures located near the intersection of North Center Street and North Jantzen Avenue on Hayden Island in Portland. Initial construction of the water tank was completed in 1968.
OR 111	Jantzen Beach Moorage	1501 N Jantzen Avenue/1525–2055 N Jantzen Avenue, Portland	The Jantzen Beach Moorage is located at North Portland Harbor in the Columbia River. Originally built in 1935, the moorage offered leasable and—eventually—privately owned slips for floating homes starting in 1958. The property is 27.3 acres, and encompasses a linear dock, multiple finger piers, a parking lot, and associated hardscaping and landscaping. The moorage is host to approximately 175 floating homes located on the water of North Portland Harbor.

State ID	Name	Location	Description
OR 120	Hayden Island Yacht Club Clubhouse	12050 N Jantzen Drive, Portland	The Hayden Island Yacht Club Clubhouse is a yacht club clubhouse constructed in 1972. The building has a rectangular footprint measuring approximately 75 feet from north to south and approximately 60 feet from east to west. It has a split-level form, with the southern two-thirds of the building being single-story and the northern one-third structured as one-and-one-half stories.
OR 155	East Vanport Commercial Center	10850 N Denver Avenue, Portland	The East Vanport Commercial Center at 10850 North Denver Avenue was constructed in 1943 as the commercial core for the wartime housing project of East Vanport in the East Columbia neighborhood of Portland. The one-story building features a concrete slab foundation and a generally rectangular footprint measuring approximately 216 feet from northwest to southeast by approximately 64 feet from northeast to southwest.
OR 165	Lower Columbia River Federal Navigation Historic District	Columbia River from River Mile (RM) 3 to RM 145	The Lower Columbia River Federal Navigation Historic District (LCR Nav Historic District) is a series of structures built and maintained by USACE since in 1873. The boundary for the LCR Nav Historic District encompasses a series of noncontiguous structures, including navigation channels, six turning basins, 41 pike dike systems, and nine landforms created from dredge materials.
WA 7	Fendrich's Furniture	209 W 6th Street, Vancouver	Fendrich's Furniture is a two-story, square-in-plan commercial building constructed in 1947 with elements of Stripped Classical, Art Deco, and Streamline Moderne styles. It is constructed of reinforced concrete clad in brick veneer on the street-facing elevations, and it has a metal-capped parapet on its flat roof.
WA 10	Smith Tower	515 Washington Street, Vancouver	The building at 515 Washington Street, known as Smith Tower, is a Modern-style residential apartment complex constructed in 1966 and located in the Esther Short neighborhood of Vancouver. The principal form of the building is a 15-story cylindrical tower measuring approximately 100 feet in diameter and 158 feet in height; the distinctive building is visible from many areas of downtown Vancouver.
WA 21	Evergreen Hotel	500 Main Street, Vancouver	The Evergreen Hotel is an Italian Renaissance-style hotel located in downtown Vancouver and was constructed in 1928. The hotel has not undergone any major alterations and retains its character-defining features. These features include the site's central downtown location, two primary entrances with six broad bays (on the south and east elevations), marble balconies, arched motifs, sandstone style finish, projecting roof forms clad in Spanish tile, and expansive interior spaces with a large staircase and mezzanine.
WA 29	U.S. National Bank Building	601–603 Main Street, Vancouver	The U.S. National Bank Building was constructed in 1912 in downtown Vancouver. It is a five-story, steel-framed commercial building with Renaissance and Classical Revival style ornamentation.
WA 61	Porter House	3000 K Street, Vancouver	The Porter House is a circa 1912 Craftsman bungalow in the Rose Village neighborhood of Vancouver. The building has a T-shaped plan and a concrete foundation with a partial basement. The wood-framed exterior walls rise one and a half stories to a low-pitched, side-gabled roof with wide, overhanging eaves with exposed purlins and a wide fascia under the gable.

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State ID	Name	Location	Description
WA 62	Hall House	903 E 31st Street, Vancouver	The Charles W. and Margaret B. Hall House is a Craftsman bungalow in the Shumway neighborhood of Vancouver. Constructed in 1912, the building has a rectangular plan and a full concrete basement. Its wood-framed exterior walls rise two stories in height to a front-gabled roof with a deep overhang, wide wood bargeboards, and wood knee braces.
WA 149	Normandy Apartments	318 E 7th Street, Vancouver	The Normandy Apartments building is a Tudor Revival style, multifamily housing complex. The building was originally constructed in 1928 and modified in 1960.
WA 150	House of Providence (Providence Academy)	400 E Evergreen Boulevard, Vancouver	The House of Providence (Providence Academy) is an institutional property. The property, constructed between 1873 and 1874, contains an ornate, three-story building that is clad in brick and shows the influence of the Georgian/Federal and French Colonial architectural styles.
WA 191	William H. and Myrtle Hood Residence	3405 K Street, Vancouver	The Hood Residence is a circa 1919 Craftsman bungalow in the Rose Village neighborhood of Vancouver. The building has a rectangular plan with a concrete foundation and a full basement. Its wood-framed exterior walls are clad in lapped wood siding and rise one story in height to a front-gabled roof with unenclosed eave overhangs and decorative knee brackets
WA 368, 369, 918, 109	VNHR	The district was listed in the NRHP in 2007 under Criteria A, C, and D with a period of significance beginning in 2,500 BP and ending in CE 1966.	The VNHR is an NRHP-listed historic district that encompasses 397.7 acres and includes a total of five historic properties—four listed or determined eligible historic districts and one historic site. Of the 397.7 acres within the VNHR boundary, 49.74 acres were WSDOT highway right of way at the time of listing of the reserve and do not contribute to eligibility. The Fort Vancouver site was first established as a national historic site in 1966 to preserve and interpret historically significant and exceptionally complex overlapping areas associated with Native American, Hudson’s Bay Company, U.S. military, and NPS uses of land that have occurred over time.
WA 381a	Northbound Interstate Bridge		See description under OR 50.
WA 382	Radio Transmission Building	1601 E Fourth Plain Boulevard, Vancouver	The Radio Transmission Building at 1601 E Fourth Plain Boulevard is a Stripped Classical style building constructed in 1940. Within the city, the building is situated along the eastern edge of I-5 inside the campus of the Vancouver Veteran’s Affairs Medical Center. The Radio Transmission Building has an L-shaped footprint constructed atop a concrete slab foundation that measures approximately 40 feet from north to south and 60 feet from east to west.
WA 900	Covington House	4201 Main Street, Vancouver	The Covington House at 4201 Main Street is an 1846 hall-and-parlor-pioneer log style, side-gabled single dwelling that presently functions as an events space. The building’s T-shaped footprint is constructed atop a modern concrete masonry unit foundation.

State ID	Name	Location	Description
WA 1138	Who Song & Larry's	111 SE Columbia Way, Vancouver	The Who Song & Larry's Restaurant is a roadside style commercial building constructed in 1981. The building has a highly irregular plan and is constructed atop a concrete foundation. The walls of the building are clad in wood clapboard siding with corner boards and rise one to three stories in height.
WA 1144	Office Building	1514 E Street, Vancouver	The office building at 1514 E Street is a Postmodern/Northwest Regional-style office building constructed in 1977. The building is rectangular in plan with a reinforced concrete foundation and wood-framed walls that rise one story in height to a distinctive, steeply pitched roof that is hipped on three sides and gabled on one side.
WA 1148	Washington State Patrol District Five Headquarters	605 E Evergreen Boulevard, Vancouver	The Washington State Patrol District Five Headquarters (now the Vancouver Police Headquarters) is a two-story, Late Modern-style building constructed in 1975.
WA 1168	Duplex Residences	2901 K Street, Vancouver	The buildings at 2901-03 and 2905-07 K Street are single-story, Contemporary-style duplexes constructed in 1968 and located on a single tax lot in the Rose Village neighborhood of Vancouver.
WA 1182	Rudy Luepke Center for Senior Citizens	1009 E McLoughlin Boulevard, Vancouver	The Rudy Luepke Center for Senior Citizens at 1009 E McLoughlin Boulevard is a Northwest Regional-style building located in the Central Park neighborhood of Vancouver constructed in 1979. The building possesses an irregular footprint constructed atop a concrete foundation that measures approximately 93 feet from north to south and 164 feet from east to west.
WA 1192	Bridge Substation	100 SE Columbia Street, Vancouver	The Bridge Substation is a utilitarian electrical substation building. The building was originally constructed circa 1918.
WA 1233	Earls House	815 E 22nd Street, Vancouver	The Earls House is a World War II-Era cottage constructed in 1938 in the Arnada neighborhood of Vancouver. The building has a T-shaped footprint, a hipped roof with no eaves, and wood-framed walls with wood drop siding and fenestration including fixed corner windows.
WA 1258	Mickler House	901 E 29th Street, Vancouver	The Mickler House is a Workingman's Foursquare single-family dwelling located in Vancouver. The residence was constructed in 1907.
WA 1319	Vancouver Barracks National Cemetery	1200 E Fourth Plain Boulevard, Vancouver	The Vancouver Barracks National Cemetery, also referred to as the Army Post Cemetery, is a cemetery located near the southwestern corner of the Rose Village neighborhood in Vancouver. The property was established in 1882 as a permanent cemetery for the Vancouver Barracks, the earliest U.S. Army post in the American Pacific Northwest.
WA 1320	St. James Acres Cemetery	1401 E 29th Street, Vancouver	The St. James Acres Cemetery is a cemetery located at the southern edge of the Rose Village neighborhood in Vancouver.

AD = Anno Domini; BP = before present; I-5 = Interstate 5; NHS = National Historic Site; NPS = National Park Service; ODOT = Oregon Department of Transportation; OR = Oregon; USACE = U.S. Army Corps of Engineers; VNHR = Vancouver National Historic Reserve; VPR&C = City of Vancouver Parks, Recreation, and Cultural Services; WA = Washington; WSDOT = Washington State Department of Transportation

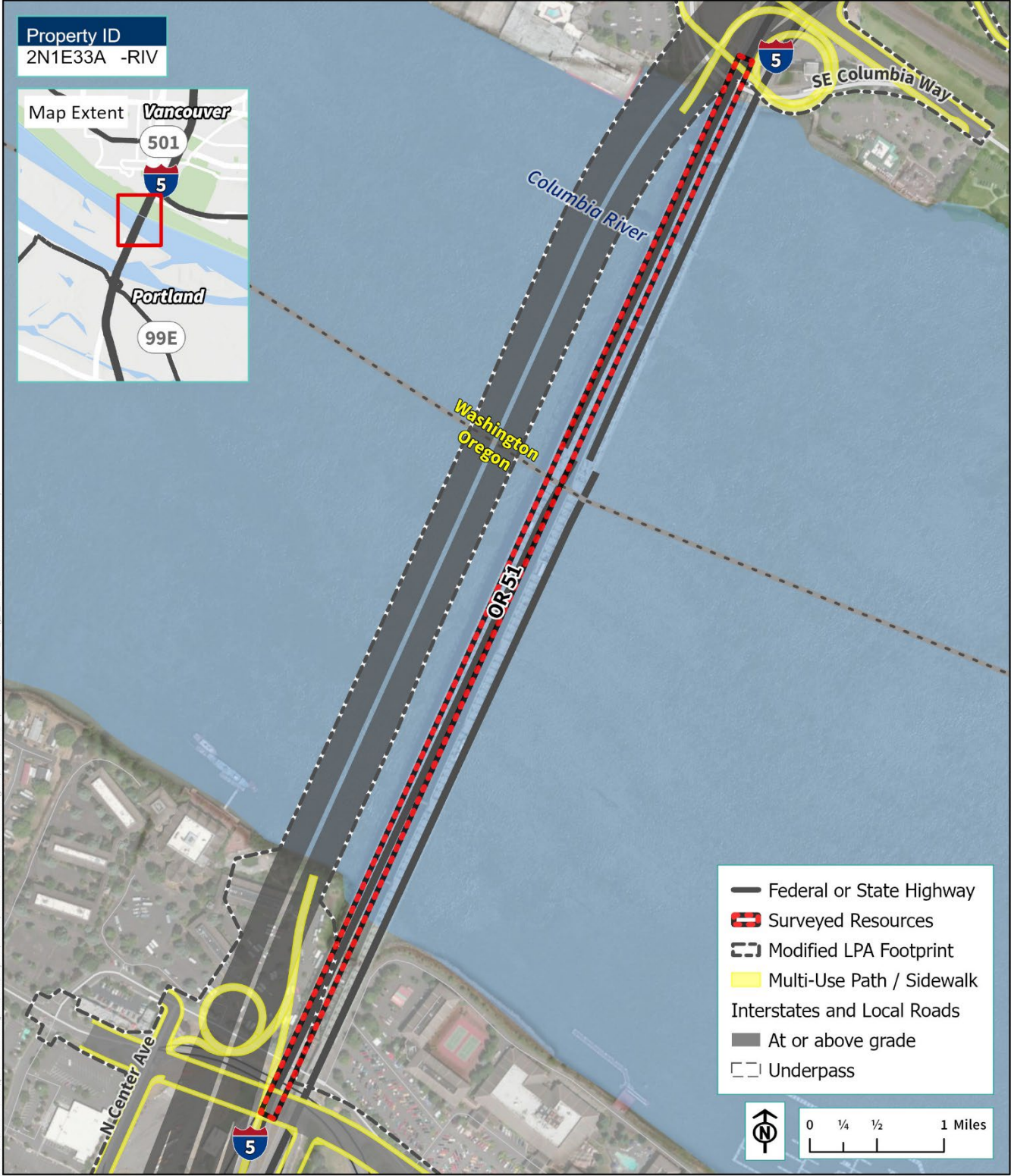
Southbound Interstate Bridge (Map ID – OR 51 and WA 381b)

The southbound Interstate Bridge is a steel truss bridge that crosses the Columbia River between Portland, Multnomah County, Oregon, and Vancouver, Clark County Washington (see Figure 4-10). Completed in 1958, the bridge spans the Columbia River and measures 3,538 feet in length. The bridge consists of 16 spans, 12 piers, and five bents, and it has a distinctive “humpback” raised form in the middle to allow for an alternate shipping channel in addition to the channel through the lift spans.

The southbound Interstate Bridge was determined eligible for the NRHP under Criteria A and C at the state level of significance in the areas of transportation and architecture. The bridge is significant under Criterion A because it is the second bridge to cross the Columbia River at this location between Vancouver and Portland. The bridge is also significant under Criterion C as a notable example of the bridge builder’s art. It maintains its integrity of location, design, materials, workmanship, setting, feeling, and association, and its boundary is the entirety of the southbound bridge structure and also includes approach spans, sidewalks, and other appurtenances related to the transportation use of the bridge.

The Finding of Effect (FOE) documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the Modified LPA and its design options. This finding received concurrence from the Washington Department of Archaeology and Historic Preservation (DAHP) and Oregon State Historic Preservation Office (SHPO) on October 13, 2023, and March 19, 2024, respectively.

Figure 4-10. IBR Program Improvements and Area of Permanent Incorporation for the Southbound Interstate Bridge



The Section 106 FOE for the southbound Interstate Bridge documented that the Modified LPA with all design options would result in a finding of “Adverse Effect.” This finding received concurrence from the Washington DAHP on October 13, 2023, and from the Oregon SHPO on March 19, 2024. While the bridge has been determined eligible for listing on the NRHP as part of the Section 106 process, pursuant to 23 USC 103(c)(5) and 70 Federal Register (FR) 11,928 (March 10, 2005), the southbound Interstate Bridge is exempt from Section 4(f) review because the bridge was constructed without federal funding and incorporated into the Interstate Highway System after it was constructed and does not otherwise meet the exception to the exemption under 23 USC 103(c)(5). Because the southbound Interstate Bridge is exempt from Section 4(f) review, it is not evaluated for use.

4.3 Evaluation of Use of Section 4(f) Properties

4.3.1 Section Organization

This section evaluates the use of each property protected under Section 4(f). The use evaluation begins by addressing potential uses of Section 4(f) properties that would result from the IBR Program’s Modified LPA and the design options with a brief summary of use in tabular format (see Table 4-3). Following the summary of use under Section 4(f) are detailed descriptions of each property and how it could be used, including permanent incorporation, temporary occupancy, and the potential for constructive use for properties that could experience proximity impacts. The evaluation for each property concludes with a Section 4(f) preliminary use determination.

No Section 4(f) properties are located in the vicinity of the Ruby Junction Maintenance Facility expansion.

This section is organized geographically from south to north and discusses uses of Section 4(f) properties located in the following areas:

- Properties in Oregon
- Properties in Washington

4.3.2 Summary of Use of Park, Recreational Areas, Waterfowl Refuges by the IBR Program Modified LPA with All Design Options

Table 4-3 summarizes the use of Section 4(f) properties for the design options of the Modified LPA. Of the 11 park and recreational facilities located in the study area that are subject to protection under Section 4(f), one would have a use with greater than *de minimis* impact, three would experience *de minimis* impacts and seven would experience no use of Section 4(f) properties under the Modified LPA or the design options.

Following the table are detailed descriptions of each Section 4(f) property, an evaluation of its use, and a preliminary determination. The use evaluation includes figures depicting areas of temporary occupancy and permanent use for each park and recreation property (to). The figures are at different scales, as noted.

All design options of the Modified LPA would result in use under Section 4(f) and, with the exception of small differences for the Fort Vancouver NHS, would result in the same area of use for the park and recreation facilities evaluated. Table 4-3 summarizes the area used and preliminary Section 4(f) evaluation for the park and recreation facilities evaluated under the Modified LPA and each design option.

At the Fort Vancouver NHS, the Modified LPA with all design options would result in slightly different levels of acquisition and temporary occupancy of the park as shown in Table 4-3. The different design options would permanently acquire area ranging from 17,000 to 20,000 square feet and would temporarily use area up to 50,000 square feet.

The Modified LPA park-and-ride design options would not use any additional Section 4(f) park and recreation properties beyond those identified for the Modified LPA and, therefore, is not discussed further.

Construction noise impacts for the Modified LPA with all design options would occur at various times throughout the approximately 9-year construction period. The construction measures discussed in Section 3.11.7 of this Draft SEIS would be applied to avoid, minimize, and mitigate temporary adverse noise impacts.

Noise and vibration effects on individual properties are discussed under the use evaluations, below. FHWA guidance (FHWA-HEP-10-025) states that all Section 4(f) properties should be analyzed as noise abatement activity category C, whether or not the underlying use is noise sensitive. Overall, many of the park and recreation properties do not rely on a quiet setting to convey their significance, and the Program's introduction of new atmospheric and audible intrusions would not diminish or impact the use and enjoyment of the property.

Table 4-3. Summary of Section 4(f) Evaluation for IBR Program Modified LPA Design Options for Park and Recreational Properties

Property, Property Size	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, and Centered I-5	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
Marine Drive Trail 5 miles, including sections with both transportation and recreational primary purposes	<ul style="list-style-type: none"> No permanent incorporation. Temporary occupancy of approximately 122 linear feet of recreational trail on levee. Based on 23 CFR 774.13(d), temporary occupancy of the trail would meet the exception criteria. Preliminary Determination: No Section 4(f) use per 23 CFR 774.13(d). 					
East Delta Park 3,811,500 square feet	<ul style="list-style-type: none"> Acquires approximately 9,300 square feet of park land, including approximately 2,700 square feet of land from the western edge of the main park parcel and 6,700 square feet of vacant land for construction of the eastbound Martin Luther King Jr. Boulevard to North Union Court ramp and new shared-use path. Temporary occupancy of approximately 8,200 square feet for construction access to build a fill wall. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because the project will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). 					
Vancouver Landing at Terminal 1 Approximately 38,000 square feet	<ul style="list-style-type: none"> No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the park. Preliminary Determination: No Section 4(f) use. 					
Vancouver Waterfront Park 317,988 square feet	<ul style="list-style-type: none"> No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the park. Preliminary Determination: No Section 4(f) use. 					
Fort Vancouver NHS 8,886,240 square feet	<ul style="list-style-type: none"> Acquires approximately 12,500 square feet of narrow strips of park land along the park’s southern and western edges associated with modifications to the I-5/SR 14 interchange and the widening of I-5. Temporary occupancy of approximately 43,400 square feet for construction of a retaining wall. Visual quality changes to five contributing historic resources that are part of the available recreational opportunities. Preliminary Determination: Section 4(f) use because of permanent incorporation. 	<ul style="list-style-type: none"> Permanent Incorporation: Approximately 13,800 square feet Temporary Occupancy: 33,900 square feet Visual quality changes same as for the Modified LPA Preliminary Determination: Section 4(f) use because of permanent incorporation. 	<ul style="list-style-type: none"> Permanent Incorporation: Approximately 13,600 square feet Temporary Occupancy: 34,200 square feet Visual quality changes same as for the Modified LPA Preliminary Determination: Section 4(f) use because of permanent incorporation. 	<ul style="list-style-type: none"> Permanent Incorporation: Approximately 12,500 square feet Temporary Occupancy: 35,200 square feet Visual quality changes same as for the Modified LPA, but single-level configuration would be less prominent and less adverse to contributing historic resources and recreational opportunities. Preliminary Determination: Section 4(f) use because of permanent incorporation. 	<ul style="list-style-type: none"> Permanent Incorporation: Approximately 13,100 square feet Temporary Occupancy: 34,700square feet Visual quality changes same as for the Modified LPA, but single-level configuration would be less prominent and less adverse to contributing historic resources and recreational opportunities. Preliminary Determination: Section 4(f) use because of permanent incorporation. 	<ul style="list-style-type: none"> Permanent Incorporation: Approximately 13,100 square feet Temporary Occupancy: 34,700square feet Visual quality changes same as for the Modified LPA Preliminary Determination: Section 4(f) use because of permanent incorporation.
Old Apple Tree Park 56,628 square feet	<ul style="list-style-type: none"> Acquires approximately 3,500 square feet of park land to construct a new shared-use path. A permanent airspace easement would also be required, of approximately 4,400 square feet, for the maintenance of the I-5 northbound to SR 14 elevated ramp. Temporary occupancy of approximately 7,200 square feet for construction access for the elevated ramp. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because the project will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). 					
Marshall Community Center, Luepke Senior Center, and Marshall Park 827,640 square feet	<ul style="list-style-type: none"> Acquires approximately 25,200 square feet for placement of a fill wall. Displaces up to four horseshoe pits, as well as trees located in state right of way and within park boundary. Temporary occupancy of approximately 19,100 square feet along the western boundaries of the park parcel. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because the project will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). 					
Clark College Recreational Fields 566,280 square feet	<ul style="list-style-type: none"> No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the park. Preliminary Determination: No Section 4(f) use. 					
Leverich Community Park 696,960 square feet	<ul style="list-style-type: none"> No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the park. Preliminary Determination: No Section 4(f) use. 					

Property, Property Size	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, and Centered I-5	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
Arnada Neighborhood Park 130,680 square feet	<ul style="list-style-type: none"> Temporary occupancy of approximately 2,800 square feet at the north boundary of the park (land would be restored following construction). Based on 23 CFR 774.13(d), temporary occupancy of the park would meet the exception criteria. Preliminary Determination: No Section 4(f) use per 23 CFR 774.13(d). 					
Burnt Bridge Creek Trail 42,240 linear feet	<ul style="list-style-type: none"> No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the trail. Preliminary Determination: No Section 4(f) use. 					

Note: The square footages presented in this table were rounded to the nearest hundred.
 I-5 = Interstate 5; LPA = Locally Preferred Alternative; NHS = National Historic Site; SR = State Route

4.3.3 Use of Section 4(f) Park and Recreation Properties (Oregon)

Marine Drive Trail

Description

The Marine Drive Trail is a 5-mile trail located along North Portland Harbor, connecting I-5 and the Marine Drive interchange with Kelley Point Park. The Marine Drive Trail extends from the North Portland Harbor bridge through the Marine Drive interchange, then merges with a public sidewalk on the north side of Marine Drive before veering slightly north onto a levee located on private property. The portion of the Marine Drive Trail closest to the study area is a sidewalk located on Metro-owned property through an easement held by the City of Portland running from the east side of the study area to the western edge of the Red Shores LLC property.

Based on available parcel ownership information from the Multnomah County Assessor, the majority of the length of the trail is located within ODOT right of way or City of Portland right of way and is a sidewalk adjacent to Marine Drive and the Marine Drive interchange from the eastern edge of the study area until the trail turns north onto the levee. In addition, Metro, the Portland area's regional government, designates the Marine Drive Trail a regional trail. Metro's regional trails web page emphasizes the trails purpose as connecting origins and destinations. The web page states that regional trails "connect pedestrians and cyclists to their favorite places across the region" and that "trails are designed to serve a variety of functions." (Metro n.d.). Metro describes the 40-Mile Loop Trail, of which the Marine Drive Trail is a part, as connecting more than 30 parks in Multnomah County along the Columbia, Sandy, and Willamette Rivers; Johnson Creek; and the Tualatin Mountains. The web page also emphasizes linking recreation areas to local communities (e.g., a transportation purpose).

The majority of the length of the trail within the IBR Program study area is located on a public sidewalk adjacent to Marine Drive and meets the exception in 23 CFR 774.13(f)(4) as part of the local transportation system. The FHWA *Section 4(f) Policy Paper* Question 1A provides further guidance on this issue, stating that the primary purpose of a park or recreation area is related to the property's primary function: "Incidental, secondary, occasional or dispersed activities...do not constitute a primary purpose within the context of Section 4(f)" (FHWA 2012). The Marine Drive Trail's emphasis on connecting origins and destinations in the region identify it primarily for active transportation purposes and secondarily for recreation. Therefore, the trail serves a function that is primarily the movement of people through active transportation modes (walking, biking, running, etc.) while also serving a recreational purpose and a purpose secondarily for recreation. All Marine Drive Trail segments that are located in public roadway right of way or are sidewalks, are part of local transportation system, and function primarily for transportation meet the exception under 23 CFR 774.13(f)(4) and are not a Section 4(f) recreational property.

PP&R maintains the trail segment on the levee and considers it to be a recreational facility and is therefore subject to protection under Section 4(f).

Use Evaluation for the Modified LPA

The Modified LPA with all design options would realign and reconstruct Marine Drive which would require approximately 3,000 linear feet of the 5-mile Marine Drive Trail to be closed, detoured, and demolished during bridge construction, then rebuilt in a similar location to current regional trail standards.

Under the Modified LPA with all design options, this realignment and reconstruction would occur east of the recreational trail segment on the levee. However, the recreational trail segment on the levee would be temporarily occupied for the construction of a stormwater pond. A 122 linear-foot segment of trail would be temporarily closed and occupied in this area during the stormwater facility construction.

Temporary Occupancy

The temporary occupancy (see Section) of the trail segment on the levee would meet the exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f) as described below:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The construction of the Marine Drive recreation trail segment is anticipated to take up to 6 years which is less than the 9-year construction of the Columbia River bridges. The portion of the trail that would be temporarily occupied is owned by Metro and maintained by PP&R and would continue to be owned by Metro following construction.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

The Marine Drive Trail is 5 miles long. The temporarily occupied and reconstructed trail segment is less than 1% of the entire trail length. During construction, bicycles, pedestrians, and other trail users would be detoured to the other side of Marine Drive and, at times, along the south side of the Portland Expo Center, for approximately 2,000 to 4,000 feet, depending on the stage of construction. Trail users would connect back to the existing alignment of the Marine Drive Trail at the signalized intersection with Force Avenue west of the construction area. The detour of 2,000 to 4,000 linear feet would be 8% to 15% of the total trail length. The trail detour would provide similar functionality as the portion that would be reconstructed on the north side of the road. For portions not affected by construction east and west of the IBR Program footprint, trail users would continue to be able to use the trail during construction with no additional effects. Therefore, the work would be minor and the nature and the magnitude of the changes to the trail would be minimal.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

The temporary detour would maintain continuous trail access during construction and would not diminish or interfere with the protected activities, features, or attributes of the trail on permanent or temporary basis.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

Following construction, the IBR Program would reconstruct the trail to a condition similar to that which existed prior to construction.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Agreement from the official with jurisdiction, the City of Portland, is pending.

The temporary effects on the Marine Drive Trail meet the requirements of 23 CFR 774.13(d) for an exception from Section 4(f) use.

Preliminary Determination

The IBR Program Modified LPA with all design options would temporarily occupy 122 linear feet of the trail; the temporary occupancy would meet the temporary occupancy exception criteria in 23 CFR 774.13 and therefore would not be a use under Section 4(f). Based on the analysis described above, preliminary determination is that neither the Modified LPA nor design options would result in a use under Section 4(f).

East Delta Park

Description

East Delta Park (Figure 4-11) is a 3,811,500-square-foot neighborhood/regional park located adjacent to I-5 between Martin Luther King Jr. Boulevard and N Denver Avenue. Facilities at East Delta Park include a sports complex with seven lighted softball fields, five grass soccer fields, four synthetic soccer fields, six sand volleyball courts, a playground, picnic tables, restrooms, a parking lot, support buildings, and nature trails. The park has received Section 6(f) funds (Section 3.21, Section 6[f] and Federal Lands to Parks).

Figure 4-11. East Delta Park



Immediately to the north of the 3,811,500-square-foot main park parcel located south of North Union Court, the City of Portland owns a 63,000-square-foot parcel between North Union Court and Martin Luther King Jr. Boulevard that sits vacant and serves no recreational purpose, 43,560 square feet of which was transferred to PP&R under the Federal Lands to Parks (FLP) Program (Section 3.21, Section 6[f] and Federal Lands to Parks). Immediately east of the 63,000 square-foot City-owned parcel was an off-leash dog park installed within ODOT's Martin Luther King Jr. right of way; the dog park is temporarily closed for maintenance. While the dog park is closed, PP&R intends to reopen it once they can restore and maintain it. Because the former off-leash dog park location is ODOT right of way, no agreement exists between ODOT and the City of Portland for its recreational use, and it has never been designated as recreational by the property owner, it is not park or recreational land subject to protection under Section 4(f).

The Owen Softball Complex within the park is the location of the Delta Park Powwow and Encampment, an annual celebration of Native American culture. The Powwow celebrated its 50th year in 2023.

Use Evaluation for the Modified LPA

Permanent Incorporation

The Modified LPA, inclusive of all design options, would acquire approximately 2,600 square feet of land from the western edge of the main park parcel, which is a vegetated slope adjacent to I-5 and serves no recreational purpose. The Modified LPA would also permanently incorporate an approximately 6,700-square-foot portion of the 63,000-square-foot vacant parcel between North Union Court and Martin Luther King Jr. Boulevard for the eastbound Martin Luther King Jr. Boulevard to North Union Court ramp to construct a new shared-use path. The total permanent incorporation of East Delta Park would be approximately 9,300 square feet of the 3,811,500-square-foot park, or less than 1%. The use of 6,700 square feet of vacant land north of the main park parcel and 2,600 square feet along the western edge of the park neither serves nor is planned for a recreational purpose.

The vacant parcel is not used by PP&R and neither it nor the acquired areas on the western edge of the main park parcel provides a recreational function. The equivalent land area, which was converted to transportation use, would be replaced (see Section 3.21.6 for more information); therefore, the Modified LPA would not adversely affect the activities, features, or attributes that qualify East Delta Park for Section 4(f) protection.

Temporary Occupancy

The Modified LPA would also temporarily occupy approximately 8,200 square feet from the northern corner of East Delta Park (Table 4-3) to gain construction access to the I-5 right of way to build a fill wall. The temporarily affected area of the park contains grass that is periodically mowed, as well as trees and shrubby vegetation. As part of Program construction activities, approximately 10 trees along the western edge of the park may require removal or their root systems impacted. The IBR Program will obtain a Tree Removal Permit from the City of Portland and removed trees would be replaced. Construction of the retaining wall on the western edge of the park would take six months or less, and construction in the 63,000-square-foot vacant park land north of Union Court may take up to 5 years.

The park and its recreational features would remain open during construction, including the sports fields, nature trail, play structure, and picnic tables. Following construction, the vegetated slope would be revegetated and restored to equivalent prior conditions. There would be No Adverse Effect on the activities, features, or attributes of the park from the temporary occupancy.

Preliminary Determination

The IBR Program Modified LPA with all design options would permanently incorporate 9,300 square feet from Delta Park. The permanent incorporation would constitute a use of Delta Park under Section 4(f). Temporary occupancy under the Modified LPA with all design options would be an additional 8,200 square feet. Based on the analysis described in this section, neither the Modified LPA nor the design options would adversely affect the activities, features, or attributes that qualify East Delta Park for Section 4(f) protection, pending concurrence of the official with jurisdiction.

The Modified LPA with all design options would result in temporary and permanent Section 4(f) *de minimis* impact to East Delta Park consistent with the definition in 23 CFR Part 774.17.

Based on the analysis described in this section, the preliminary determination is that neither the Modified LPA nor the design options would adversely affect the activities, features, or attributes that qualify East Delta Park for Section 4(f) protection, pending concurrence of the official with jurisdiction.

4.3.4 Use of Section 4(f) Park and Recreation Properties (Washington)

Park and Recreation Properties Evaluated to Have No Use under Section 4(f)

Vancouver Landing at Terminal 1

Description

Vancouver Landing at Terminal 1 (Landing) is a public dock and park located on the Columbia River to the west of I-5. The Landing is owned and maintained by the Port of Vancouver. In 2022, the Port completed an upgrade to the Landing, which included removing the old amphitheater, rebuilding the landing, linking the existing Renaissance Trail to the Landing, and adding a walkway called Rotary Way. The park occupies a portion of the overall Landing and includes landscaped gardens, benches, interpretive signage, walkways, views of the Columbia River, and space for large events or concerts in its upper portion. The Landing also includes a lower portion that consists of a small boat dock and serves river cruise vessels. The Port of Vancouver recently deconstructed and removed the old Red Lion Hotel and Quay Restaurant and will remove the 100+ year-old dock that remains. A new dock will eventually be built in its place to support a new public market. Figure 4-12 depicts Vancouver Landing.

Figure 4-12. Vancouver Landing at Terminal 1



Note: Boundary is based on input from the Port of Vancouver and is approximate.

Use Evaluation for the Modified LPA

No permanent incorporation of Vancouver Landing is proposed as a result of construction of the Modified LPA, inclusive of all design options.

There would be no temporary occupancy of the Vancouver Landing as a result of the Modified LPA, inclusive of all design options.

Constructive Use

The thresholds for constructive use are described in Section 4.1.4 of this evaluation. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA with all design options for constructive use on Vancouver Landing consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

FHWA applies the noise abatement criteria of 67 A-weighted decibels (dBA) Leq(h) for activity category C to Section 4(f) properties. The Modified LPA would not result in operational noise exceedances of these criteria (see Figure 3.11-7 in Section 3.11, Noise and Vibration). Construction noise would be temporary. As such, noise levels would not substantially diminish the use and enjoyment of the park. Noise levels for the Modified LPA with I-5 shifted west design option are expected to be slightly greater than for the Modified LPA because this design option would be located closer to Vancouver Landing, but would continue to be under the noise abatement criteria.

Impairment of Aesthetic Features

Users of Vancouver Landing enjoy views of the Columbia River to the west and south. Eastward views are of the river and the existing Interstate Bridge. The number of in-water piers for the existing Interstate Bridge limits eastward views along the river from Vancouver Landing. The visual analysis in Section 3.9, Visual Quality, discusses effects for the Modified LPA at one key viewpoint (KVP) in Vancouver Waterfront Park, designated as KVP 20, located approximately 1,500 feet west of Vancouver Landing. Table 3.9-6 documents the visual impact as “adverse” at that location due to the higher bridge deck and obstructions of eastward views changing project coherence.

The new bridges, under the Modified LPA and the design options, would be located immediately east of Vancouver Landing, changing southward views of the river, but would open up eastward views under the bridge because the bridge deck would be higher and there would be fewer in-water piers. Westward views would remain unchanged. Eastward views would change under the Modified LPA and the design options by having the bridge located closer, while opening up views under the bridge along the river. These changes in views, while identified as adverse because they would affect project coherence, would not substantially impair the aesthetic enjoyment of Vancouver Landing because views would remain unchanged to the west and south, while views to the east would replace the existing bridges with the new bridges in the viewshed. Aesthetic impacts would vary by bridge configuration. Neither the movable nor fixed-span configurations would substantially impair views from Vancouver Landing.

Restricted Access

The Modified LPA would not directly impact vehicular, pedestrian, or bicycle access to Vancouver Landing. Vehicles access the park from SE Columbia Way through the Vancouver Waterfront Development and would continue to do so after construction of the new Columbia River bridges. SE Columbia Way would be realigned and reconstructed east of Vancouver Landing and underneath the new Columbia River bridges. The reconstructed SE Columbia Way would contain sidewalks, bicycle lanes, and vehicular lanes, and Main Street would also be extended south from downtown to connect to SE Columbia Way, providing overall access enhancements in the vicinity of Vancouver Landing.

During construction of the Modified LPA and associated improvements to the local street network, there could be temporary street closures and increases in traffic due to rerouting from I-5 to local streets that may result in temporary access restrictions to Vancouver Landing, but local street connections to the park would remain open and the park would be accessible.

Therefore, changes to access in the vicinity of Vancouver Landing would not substantially impair its activities, features and attributes.

Vibration Impacts

As described in the *IBR Program Noise and Vibration Technical Report*, Vancouver Landing is not a vibration-sensitive facility; vibration would not damage or substantially impair use of the park.

Ecological Intrusion

Vancouver Landing is not a wildlife or waterfowl refuge. This criterion does not apply.

For these reasons, a constructive use would not occur for the Vancouver Landing park.

Preliminary Determination

The Modified LPA and the design options would not result in long-term direct effects on the Vancouver Landing at Terminal 1 Park, other than changes in eastern and southern views toward the new Columbia River bridges. These changes in views are not expected to adversely affect the function or enjoyment of Vancouver Landing. Land from Vancouver Landing would not be permanently incorporated or temporarily occupied under the Modified LPA or design options. Nor would there be constructive use of the park due to proximity impacts resulting from the Modified LPA or the design options. Neither construction of the Modified LPA nor the design options would result in a Section 4(f) use of Vancouver Landing park.

Vancouver Waterfront Park

Description

Completed in 2018, Vancouver Waterfront Park is one of the newest parks in the city located at the north end of the Interstate Bridge (Figure 4-13). It covers 317,988 square feet that is part of the 1,524,600-square-foot Vancouver Waterfront Development, which is under ongoing development. The park is open from 5 a.m. to 10 p.m. and includes public open spaces overlooking the Columbia River with expansive views east, south, and west along the river. The park includes benches, walking paths, a fountain, landscaped open areas, and a 0.5-mile trail extension connecting to the Columbia River Renaissance Trail farther east.

Use Evaluation for the Modified LPA

No permanent incorporation of Vancouver Waterfront Park would result from the Modified LPA, inclusive of all design options.

The Modified LPA, inclusive of all design options, would not result in a temporary occupancy of Vancouver Waterfront Park.

Constructive Use

The thresholds for constructive use are described in Section 4.1.4 of this evaluation. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA with all design options for constructive use of the Vancouver Waterfront Park consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

The Modified LPA would not result in noise exceedances of the FHWA noise abatement criteria of 67 dBA (see Figure 3.11-7 in Section 3.11, Noise and Vibration). Construction noise would be temporary. The projected noise levels would not interfere with the use and enjoyment of the park. Therefore, noise levels would not substantially impair the use and enjoyment of the park. Noise levels for the Modified LPA with I-5 shifted west design option are expected to be slightly greater than for the Modified LPA because this design option would be located closer to Vancouver Waterfront Park, but would be under the threshold of 67 dBA.

Impairment of Aesthetic Features

Vancouver Waterfront Park is located farther west than Vancouver Landing at Terminal 1; however, the effects discussed for Vancouver Landing at Terminal 1 would also apply at Vancouver Waterfront Park, only to a lesser magnitude because the visual changes would be at a greater distance. Aesthetic impacts would vary by bridge configuration. Neither the movable nor fixed-span configurations would substantially impair the activities, features, or attributes of the Vancouver Waterfront Park.

Restricted Access

Neither the Modified LPA nor the design options would directly impact vehicular, pedestrian, or bicycle access to Vancouver Waterfront Park.

During construction of the Modified LPA and local street network, there could be temporary street closures and increases in traffic due to rerouting from I-5 to local streets, but local street connections to the park would remain open and the park would be accessible.

Vibration Impacts

As described in the *IBR Program Noise and Vibration Technical Report*, Vancouver Waterfront Park is not a vibration-sensitive facility; vibration would not damage or substantially impair use of the park.

Ecological Intrusion

Vancouver Waterfront Park is not a wildlife or waterfowl refuge. This criterion does not apply.

For these reasons, a constructive use would not occur for the Vancouver Waterfront Park from the Modified LPA or design options.

Preliminary Determination

Land from Vancouver Waterfront Park would not be permanently incorporated or temporarily occupied. Nor would there be a constructive use of the park due to proximity impacts. Construction of the Modified LPA or the design options would not result in a Section 4(f) use of Vancouver Waterfront Park.

Figure 4-13. Vancouver Waterfront Park



Clark College Recreation Fields

Description

The Clark College Recreation Fields depicted in Figure 4-14, located north of McLoughlin Boulevard and west of Fort Vancouver Way, are a 566,280-square-foot facility owned and maintained by Clark College and open to students and staff. The softball field, tennis courts, and open fields are open to the public and are subject to protection under Section 4(f). The baseball and soccer field are not open to the public and are excluded from protection under Section 4(f). Immediately to the west of the Clark College Recreation Fields is another parcel of land, approximately 4.5 acres, consisting of landscaped areas (grass and trees), and buildings, that was formerly a rest stop and is owned by the State of Washington but used by Clark College for non-recreational purposes and not open to the public. The 4.5-acre parcel does not qualify as a park and recreational facility and is not subject to protection under Section 4(f).

Figure 4-14. Clark College Recreation Fields Modified LPA with All Design Options



Use Evaluation for the Modified LPA

There would be no permanent incorporation of land by the Modified LPA, inclusive of all design options, from the Clark College Recreation Fields.

There would be no temporary occupancy of land under the Modified LPA, inclusive of all design options, from the Clark College Recreation Fields. Although it would be used for staging, the 4.5-acre parcel used for athletic offices, storage, and parking is not designated for recreational use and would not be subject to approval under Section 4(f) under the exception specified in 23 CFR 774.11(d) for use of non-recreational land in a facility used for multiple purposes.

Constructive Use

A constructive use may occur when a transportation project does not incorporate land from a Section 4(f) property, but the proximity impacts are so severe after incorporation of impact mitigation, they result in a substantial impairment of the property's protected activities, features, or attributes. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA with all design options for constructive use on the Clark College Recreation Fields consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

The Modified LPA would not result in noise exceedances of the FHWA noise abatement criteria of 67 dBA (see Figure 3.11-9 in Section 3.11, Noise and Vibration). Construction noise would be temporary. Therefore, noise levels would not substantially impair the activities, features, and attributes of the Clark College Recreation Fields.

Impairment of Aesthetic Features

Aesthetic features or attributes are not important contributing elements to the value of the Clark College Recreation Fields. No substantial impairment of visual or aesthetic qualities would result from the location of the Modified LPA.

Restricted Access

Neither the Modified LPA nor the design options would result in either temporary or permanent access changes to Clark College Recreation Fields. The recreation fields are accessed from Fort Vancouver Way, and parking is provided in a lot adjacent to this road. Users of the recreation fields may experience delays from additional traffic resulting from I-5 freeway reconstruction under the Modified LPA and the design alternatives, but the delays would not diminish the utility of the facility.

Vibration Impacts

As described in the *IBR Program Noise and Vibration Technical Report*, the Clark College Recreation Fields are not a vibration-sensitive facility; vibration would not damage or substantially impair use of the park.

Ecological Intrusion

Clark College Recreation Fields are not a wildlife and waterfowl refuge. This criterion does not apply.

For these reasons, a constructive use would not occur for Clark College Recreation Fields.

Preliminary Determination

Construction of the Modified LPA, including all design options, would not result in permanent incorporation or temporary occupancy of land at the Clark College Recreation Fields. There would be no constructive use of the park. The Modified LPA, including all design options, would result in no use under Section 4(f) for the Clark College Recreation Fields.

Leverich Community Park

Description

Leverich Community Park is a 696,960-square-foot community park located on the east side of I-5 in the northeast corner of the I-5/SR 500 interchange. The park is owned and maintained by the City of Vancouver Parks, Recreation, and Cultural Services (VPR&C) and is open to the public between 5 a.m. and 10 p.m. Site facilities include a disc golf course, picnic tables, paved walkways, a picnic shelter, restrooms, and play equipment.

Use Evaluation for the Modified LPA

No permanent incorporation of land in Leverich Park would result from the Modified LPA, inclusive of all design options.

No temporary occupancy of land in Leverich Park would result from the Modified LPA, inclusive of all design options.

Constructive Use

The thresholds for constructive use are described in Section 4.1.4 of this evaluation. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA, including all design options, for constructive use on the Leverich Community Park consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

The IBR Program Noise and Vibration Technical Report modeled noise levels in Leverich Park below the 67 dBA FHWA criteria (see Figure 3.11-10 in Section 3.11, Noise and Vibration of this SEIS and Figure 4-6 in the Noise and Vibration Technical Report). Construction noise would be temporary. The Modified LPA and the design options would result in barely perceptible differences in noise levels of up to 3 dBA within Leverich Park. Because noise levels would be less than those listed in the FHWA noise abatement criteria, no substantial impairment of the activities, features, or attributes of Leverich Park would occur as a result of noise from the Modified LPA or any of the design options.

Impairment of Aesthetic Features

Aesthetic features or attributes are not important contributing elements to the value of Leverich Community Park. The visual character of Leverich Community Park consists of adjacent residential development, busy roads, open space, and other natural environmental elements such as water, riparian vegetation, and natural banks and hillsides. Views of I-5 to the west include the freeway and tall trees in WSDOT's right of way. The visual analysis in Section 3.9, Visual Quality, discusses effects for the Modified LPA at one key viewpoint (KVP 41) in Leverich Park. Table 3.9-9 documents the visual impact as "neutral" at this location. There would be no substantial impairment to the aesthetic features or attributes from construction of the Modified LPA. In the vicinity of Leverich Community Park, Program

improvements for the other design options would be the same as for the Modified LPA and not substantially impair the aesthetic qualities of Leverich Community Park.

Restricted Access

Neither the Modified LPA nor the design options would result in temporary or permanent changes to vehicular, pedestrian, or bicycle access to Leverich Community Park. Vehicular access is currently available from three parking lots in the park (Figure 4-15), which can be accessed from NE Leverich Park Way connecting to 39th Street. Park access points also exist for cyclists and pedestrians along adjacent roadways surrounding the park. Cyclists and pedestrians can access the Burnt Bridge Creek Trail, which parallels the northern boundary of the park from access points at NE 15th Avenue or NE Leverich Park Way.

Vibration Impacts

As described in the *IBR Program Noise and Vibration Technical Report*, Leverich Park is not a vibration-sensitive facility. Vibration would not substantially impair the use of Leverich Park.

Ecological Intrusion

Leverich Park is not a wildlife or waterfowl refuge. This criterion does not apply.

For these reasons, a constructive use would not occur for Leverich Community Park.

Preliminary Determination

Construction of the Modified LPA and the design options would not result in a Section 4(f) use of Leverich Community Park. The Modified LPA, including all design options, would not permanently incorporate or temporarily occupy land within Leverich Community Park and would not substantially impair the activities, features, and attributes that qualify the park for protection under Section 4(f) or result in a constructive use of the park.

Figure 4-15. Leverich Community Park and Burnt Bridge Creek Trail



Arnada Neighborhood Park

Description

Arnada Neighborhood Park is a 130,680-square-foot public park located on the west side of I-5 and south of W Fourth Plain Boulevard. The park is open from 5 a.m. to 10 p.m. The site facilities include a gazebo, picnic shelter, play equipment, a sports court, benches, a paved walkway, and open, grassy areas. As depicted in Figure 4-16, the park is accessible from pedestrian connections to adjacent residential areas to the west and south and from the sidewalk on E Fourth Plain Boulevard.

Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would not result in permanent incorporation of land in Arnada Neighborhood Park.

Temporary Occupancy

Construction of the Modified LPA, inclusive of all design options, would result in temporary occupancy of 2,800 square feet of land in Arnada Neighborhood Park associated with the reconstruction of E Fourth Plain Boulevard and freeway ramps immediately north of the park. The temporarily occupied area would be needed for a temporary construction easement to provide room for construction activities associated with the reconstruction of E Fourth Plain. Landscaping consisting of grass and small trees may be removed within this area but would be replaced upon completion of construction. Temporary occupancy of land within Arnada Neighborhood Park would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

Construction of improvements to E Fourth Plain Boulevard and freeway ramps proposed as part of the Modified LPA may last up to 5 years, less than the total 5- to 7-year duration of construction for the Columbia River bridges. Arnada Neighborhood Park is owned and maintained by VPR&C and would remain so after construction.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal.

During construction, trees that are close to the construction limits would be protected in accordance with the City of Vancouver's standards in its municipal code (Vancouver Municipal Code 20.770.090, Tree Vegetation, and Soil Protection During Construction). A small amount of vegetation at the park's northern boundary adjacent to Fourth Plain Boulevard would be temporarily affected for the reconstruction of the roadway and sidewalk and would be replaced upon completion of construction. The park's recreation features, including the gazebo, picnic shelter, play equipment, a sports court, benches, and a paved walkway, and open, grassy areas, would continue to be available during construction. The scope of the work within the park would be minor, and there would be no permanent changes to the property.

Figure 4-16. Arnada Neighborhood Park



There are no anticipated permanent adverse physical impacts, nor would there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis.

The park's protected activities, features, and attributes would continue to be publicly available during construction, including the gazebo, picnic shelter, play equipment, sports court, benches, and a paved walkway. Landscaping would be replaced upon construction completion, if affected. There would be no adverse physical impacts or interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.

Upon completion of construction, landscaping would be restored to its original condition.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Agreement from the official with jurisdiction, VPR&C, is pending.

The temporary effects on Armada Neighborhood Park meet the requirements of 23 CFR 774.13(d) for an exception from Section 4(f) use; therefore, temporary occupancy of the park during construction of the Modified LPA would not constitute a Section 4(f) use.

Constructive Use

The thresholds for constructive use are described in Section 4.1.4 of this evaluation. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA, including all design options, for constructive use on the Arnada Community Park consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

Arnada Neighborhood Park is an active recreational facility located within 200 feet of I-5, and freeway noise is prevalent. Both the existing and projected noise levels meet FHWA noise abatement criteria for highway projects (see Figure 3.11-9 in Section 3.11, Noise and Vibration). Construction noise would be temporary. Noise levels for the design options would be similar to those of the Modified LPA.

Arnada Neighborhood Park is approximately 0.75 miles north of the proposed terminus of the transit line that would be located at Evergreen Boulevard and therefore would not experience increases in transit noise. This would be the same for all design options.

The projected noise levels would not substantially interfere with the use and enjoyment of the park.

Impairment of Aesthetic Features

Aesthetic features or attributes are not important contributing elements to the value of Arnada Neighborhood Park. Arnada Neighborhood Park is a small neighborhood park surrounded by residential developments to the west and south and E Fourth Plain Boulevard to the north and east. Views from the park toward surrounding areas are generally blocked by existing vegetation and land cover. The visual analysis in Section 3.9, Visual Quality, discusses effects for the Modified LPA at one key viewpoint (KVP 34) in Arnada Park. Table 3.9-7 documents the visual impact as "neutral" at this location from the Modified LPA. The Modified LPA would not substantially impair the aesthetic features or attributes of the park.

Impacts from the Modified LPA design options are anticipated to be the same as or similar to those of the Modified LPA.

Restricted Access

Existing pedestrian access to Arnada Neighborhood Park is available from various access points surrounding the park. Pedestrians can access the park via the sidewalk along E Fourth Plain Boulevard, as well as from E 25th Street and G Street. Interchange upgrades for the Modified LPA with all design options at E Fourth Plain Boulevard may result in temporary impacts to pedestrian access to Arnada Neighborhood Park from sidewalks along E Fourth Plain Boulevard, but access from surrounding neighborhood streets to the park would remain unaffected by the proposal. Pedestrian access along E Fourth Plain Boulevard would be restored upon construction completion.

There is no vehicular access to the park. As a neighborhood park, the park is intended for access by pedestrians, with no vehicular access areas provided.

Because pedestrian access to the park would be temporarily impacted, but restored upon completion of construction, the Program effects on access would not substantially diminish the utility of the park.

Vibration Impacts

As described in the *IBR Program Noise and Vibration Technical Report*, Arnada Park is not a vibration-sensitive facility; vibration would not damage or substantially impair use of the park.

Ecological Intrusion

Arnada Neighborhood Park is not a wildlife or waterfowl refuge. This criterion does not apply.

For these reasons, a constructive use would not occur for Arnada Neighborhood Park from the Modified LPA and the design options.

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of Arnada Neighborhood Park by the Modified LPA or the design options. The Modified LPA with all design options would temporarily occupy 2,800 square feet of land in the park; the temporary occupancy would meet the exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). Neither the Modified LPA nor the design options would result in permanent incorporation of park land, nor would they lead to a constructive use of the park.

Burnt Bridge Creek Trail

Description

The Burnt Bridge Creek Trail is an 8-mile paved multiuse trail that passes through the Burnt Bridge Creek Greenway located on the east and west sides of I-5, north of the I-5/SR 500 interchange. The trail passes over I-5 on a pedestrian and bicycle-only overcrossing south of the I-5/Main Street interchange.

Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would not result in permanent incorporation of any portion of the Burnt Bridge Creek Trail.

No temporary occupancy of the Burnt Bridge Creek Trail would result from construction of the Modified LPA, inclusive of all design options.

Constructive Use

The thresholds for constructive use are described in Section 4.1.4 of this evaluation. Because there would be no permanent incorporation or temporary occupancy that rises to the level of use under Section 4(f), the following analysis evaluates the IBR Program Modified LPA with all design options for constructive use on the Burnt Bridge Creek Trail consistent with the criteria in 23 CFR 774.15(e) as listed in Section 4.1.4 of this evaluation.

Noise Level Increase

The Burnt Bridge Creek Trail runs through an active recreational facility, Leverich Community Park. The trail is located within 250 feet of I-5, and freeway noise is prevalent in this location. The IBR Program Noise and Vibration Technical Report models existing noise levels for the Modified LPA at several locations near the trail, including points VE-005, VE-008, and VE-016. Existing noise levels range from 60 to 65 dBA at these locations. The model projects that noise would rise to a range of 61 to 66 dBA for the No-Build Alternative and the Modified LPA, with no observation point increasing more than 1 dBA, a less than perceptible amount. Both the existing and projected noise levels for the Modified LPA meet FHWA noise abatement criteria for highway projects. Program improvements for each design option would be largely the same near the Burnt Bridge Creek Trail and, therefore, noise levels are expected to be the same as for the Modified LPA. The analysis shows that the Burnt Bridge Creek Trail is not a noise-sensitive facility, and the design options would not substantially interfere with use of the trail.

Impairment of Aesthetic Features

The visual character of the Burnt Bridge Creek Trail consists of adjacent residential development, open space, and natural environmental elements such as water, riparian vegetation, and natural banks and hillsides. Views of I-5 to the west are framed by tall trees, curving roads, and hilly topography. The visual analysis in Section 3.9 discusses effects for the Modified LPA at one key viewpoint (KVP 41) for the Burnt Bridge Creek Trail. Table 3.9-9 documents the visual impact as “neutral” at this location. The proximity of the Modified LPA would not substantially impair the aesthetic features or attributes of the Burnt Bridge Creek Trail. Visual impacts from the design options experienced by users of Burnt Bridge Creek Trail would be largely similar to the Modified LPA.

Restricted Access

Construction of the Modified LPA and the design options would not impair temporary or permanent access to the Burnt Bridge Creek Trail. Current trail access points are located along adjacent roadways surrounding the multiuse trail, which provides access for biking, walking, and running. Trail users can access the trail from access points at NE 15th Avenue or NE Leverich Park Way. Additional paths are also accessible to reach the trail through Leverich Park. These accesses would remain available during and after construction.

Vibration Impacts

The Burnt Bridge Creek Trail is not a vibration-sensitive facility. Vibration from the Modified LPA or any of the design options would not substantially impair the use of the Burnt Bridge Creek Trail.

Ecological Intrusion

The Burnt Bridge Creek Trail is not a wildlife or waterfowl refuge. This criterion does not apply.

For those reasons, a constructive use would not occur for the Burnt Bridge Creek Trail from the Modified LPA and the design options.

Preliminary Determination

Based on analyses described above, construction of the Modified LPA or the design options would not result in a Section 4(f) use of the Burnt Bridge Multiuse Trail. None of the design options would permanently incorporate or temporarily occupy land for Burnt Bridge Creek Trail nor would they result in a constructive use.

Park and Recreation Property Evaluated to have a Use with Greater Than *de minimis* Impact Under Section 4(f)

Fort Vancouver NHS

Description

The Fort Vancouver NHS is a 204-acre park located almost entirely within the VNHR Historic District and is managed by the NPS. Within this area are approximately 0.5 miles of waterfront south of SR 14 and SE Columbia Way, separate from the remainder of Fort Vancouver NHS. This separated section contains passive and active recreation opportunities including grass-landscaped areas, picnic areas, a segment of the Columbia River Renaissance Trail, and views of and access to the Columbia River for swimming.

The Fort Vancouver NHS was designated as a National Monument in 1948 and enlarged with its name changed to “Fort Vancouver National Historic Site” in 1961 concurrent with its designation as a park under the jurisdiction of the NPS. The NHS was listed on the NRHP as a historic site in 1966. The Fort Vancouver NHS meets the criteria for Section 4(f) protection as a public park. The VNHR Historic District, which overlaps the NHS, is a historic district that was listed in the NRHP in 2007. As an NRHP-listed historic district, the VNHR Historic District meets the Section 4(f) definition of a historic site and is evaluated as such under Section 4(f) separately from the Fort Vancouver NHS park property. The VNHR Historic District, which includes all of the historic features of the NHS, is evaluated in Section.

The NPS identifies various recreational activities, features, and attributes within the Fort Vancouver NHS, including bringing dogs to the park, watching sunrises and sunsets, picnicking, birdwatching, bicycling, playing in the playground, becoming a junior ranger, visiting the reconstructed fur trade fort, and interpretive walking trails to the Fort Vancouver Village, Japanese Castaways’ Memorial, Fort Vancouver Garden, and the Spruce Mill Trail. These recreational activities, features, and attributes including passive and active recreational opportunities further described below.

Active Recreational Activities and Features

Active recreational features of Fort Vancouver NHS include trails, walking paths, and sidewalks throughout the park, as well as a playground and open spaces. The Discovery Historic Loop Trail is a 2.9-mile trail that extends east on Evergreen Boulevard over I-5 through Fort Vancouver NHS on multiuse paths and local streets, over SR 14 at the Confluence Land Bridge or under SR 14 at the Columbia Way interchange connecting to the Columbia River Renaissance Trail. The Discovery Historic Loop Trail is used for organized walks throughout the year, including the Discovery Walk Festival held in April.

Approximately 0.6 miles of the 5-mile-long Columbia River Renaissance Trail runs parallel to SE Columbia Way through the waterfront area within Fort Vancouver NHS and offers active recreational opportunities such as biking and walking. The segment of the Columbia River Renaissance Trail located on the west side of the waterfront area, is also a portion of the Discovery Historic Loop Trail.

Other active recreational opportunities within Fort Vancouver NHS include various paths and trails connecting areas of the Fort. The City of Vancouver maintains all roads, sidewalks, paths, and landscaped areas along the park borders, which includes 0.2 miles of concrete paths and 0.6 miles of decomposed granite trails, an unpaved path leading from East 5th Street to a maintenance storage area in the Hudson's Bay Company (HBC) Village in the southwest corner of the fort, 0.7 miles of concrete sidewalk along Columbia Way, and 0.3 miles of concrete/asphalt bordering the waterfront area. The paths around the reconstructed HBC Fort connect it to open fields surrounding the Fort, Village House 1 and Village House 2, the garden area immediately north of the central Fort, and the Spruce Mill Trail that connects to the Headquarters Building and the Pearson Air Museum. The gravel paths and trails in the NHS offer biking, walking, and jogging activities, and the paved paths are available for skateboarding and roller skating in addition to biking, walking, and jogging activities.

The "Confluence Land Bridge," a landscaped pedestrian walkway that spans SR 14 and connects Fort Vancouver to the waterfront, was constructed in 2008. The Confluence Land Bridge landing is located southwest of the reconstructed HBC Fort and connects the existing Fort Vancouver NHS facilities through extensions to the existing trail system. On the south side of SR 14, the bridge links to Old Apple Tree Park via a new trail from the bridge landing. The earth-covered and landscaped bridge follows a curving, multimodal path and includes artwork and interpretations of the site's importance in tribal history. The Confluence Land Bridge was created through a partnership of the nonprofit Confluence Project (the NPS, the City of Vancouver, and WSDOT) and was funded through federal, state, and private sources.

The Fort Vancouver NHS Playground is located in the northeastern part of the Fort and offers active recreation for children and includes two play structures.

Passive Recreational Activities and Features

The fort includes numerous historical buildings from different periods associated with Native American, HBC, U.S. military, and NPS uses of the land that occurred over time. Fort Vancouver NHS includes the Vancouver Barracks Historic District determined eligible in 1984. It includes the HBC ("Kanaka") Village, and the East and South Barracks, the Pearson Air Museum, Fort Vancouver Visitors Center, NPS Administration building, Japanese Memorial, a garden immediately north of the HBC Kanaka Village, and other historic and cultural components. The historical buildings, monuments, and cultural landscapes of the Fort Vancouver NHS are not solely valuable for their historic significance, but also serve as the subject of interpretive programs and the junior ranger program offered at the park. The historic and cultural landscape is an integral setting to the recreational attributes, features, and activities of the NHS. While Section 4(f) requires evaluating park and recreational features separately from historic sites, in the case of Fort Vancouver NHS, the historical context is part of the recreational experience and viewing the historic and cultural landscape is a passive recreational activity of the NHS.

Several structures within the NHS support operation of the park and its visitor experience. The administrative area of the Fort Vancouver NHS contains four buildings: the visitor center, administration building, employee residence, and maintenance shop. There are 16 structures at the reconstructed HBC Fort: the Fort Palisade, the Bastion, the Chief Factor's House, the Kitchen, the Bakehouse, the Blacksmith Shop, the Indian Trade Shop, the Fur Store, the Wash House, the Jail, the Carpenter Shop, the Belfry, the Flagpole, House 1, House 2, and the Wellsweep. The Proulx House is planned for future reconstruction as a major interpretive element.

NPS plans to complete a replica historic village (HBC Village) in the western portion of the NPS property. Construction of two of the village houses is complete. Planned extensions to the trail system within the Fort would be tied to the historic village and the Confluence Land Bridge in the southwestern portion of the Fort Vancouver NHS near the I-5/SR 14 interchange. This development would occur on land owned by the NPS.

Although separated from Fort Vancouver NHS by the BNSF Railway tracks and SE Columbia Way, the waterfront area is a 217,800-square-foot portion of the Fort Vancouver offering passive recreational activities such as picnicking and viewing the Columbia River. Waterfront Park includes grass-covered open spaces, picnic tables and portions of the Columbia River Renaissance Trail that offers active recreation such as walking, running, and bicycling. The Columbia River is also accessible to swimmers and nonmotorized watercraft from paths and stairs leading to the water's edge within the waterfront area. Parking areas adjacent to SE Columbia Way serve the waterfront area and Columbia River Renaissance Trail. The waterfront is open from 7:00 a.m. to dusk.

Use Evaluation for the Modified LPA

Use of the Fort Vancouver NHS by the Modified LPA inclusive of all design options would include permanent incorporation for right-of-way acquisition along I-5 and SR 14, temporary occupancy for construction of project components in these same areas, and changes to noise and views that would be experienced by visitors to the Fort Vancouver NHS.

Permanent Incorporation

The Modified LPA with double-deck fixed-span configuration would acquire approximately 12,500 square feet of the entire 204-acre park, representing less than 1% of the park area. The acquisitions would be narrow land strips along the Fort Vancouver NHS's southern and western edges associated with the modifications to the I-5/SR 14 interchange and the widening of I-5. The acquisitions would be located west of the Confluence Land Bridge along SR 14 and adjacent to I-5 near 5th Street (see Figure 4-18). The acquired land adjacent to SR 14 is composed of existing and planned landscaping and would also be near the partial reconstruction of the HBC Village but would not interfere with the NPS's plans for reconstruction of this area. The areas proposed for acquisition do not have specific designated recreational use and are not developed with trails, sports fields, benches, or other recreational features.

There would be changes in views to the south and west from the Confluence Land Bridge and the HBC Village due to changes in the heights of the interchange ramps and the new bridges across the Columbia River.

The Modified LPA without C Street ramps design option would acquire approximately 13,800 square feet of land within the park, while the Modified LPA with I-5 shifted west design option would acquire approximately 13,600 square feet. The Modified LPA (any bridge configuration) with two auxiliary lanes design option would acquire slightly more land than the Modified LPA—13,100 square feet—due to the wider right of way needed to accommodate the additional lanes. The Modified LPA single-level fixed-span or movable-span configuration with one auxiliary lane design option would acquire the same amount of land as the Modified LPA—12,500 square feet. As with the Modified LPA, the areas acquired under the design options would be narrow strips of land adjacent to SR 14 and I-5 for construction of the freeway ramp and widening of I-5.

Visual and Auditory Effects

As identified in the Section 106 process, the Modified LPA would adversely affect five of the contributing resources within the boundaries of the Fort Vancouver NHS. These resources include the Munitions Storehouse (Building 102), Original Pearson Hangar (Building 189), Pearson Field Office (Building 194), Work Shop (Building 786), and the Fort Vancouver NHS Visitor Center. Affects to these resources would include indirect auditory and visual effects.

Aesthetic Features

Section 3.9, Visual Quality, notes that there would be visual changes with the construction of the Modified LPA and the SR 14 interchange inclusive of all design options. The visual changes would be most prominent for the Modified LPA with double-deck fixed-span configuration. The upper-roadway deck height of the new double-deck bridge would be 166 feet high (NAVD88), 76 feet taller than the existing bridge deck. The lift span tower of

the existing bridge is 247 feet tall. Visual changes would also result from construction of the single-level fixed-span configuration and the single-level movable-span configuration, which have decks of 137 feet and 122 feet high (NAVD88), respectively. The tower height of the single-level movable-span configuration would be approximately 243 feet. Existing views in the Greater Central Park Landscape Unit (the unit that the Fort Vancouver NHS is located within) would include noticeable view changes resulting in changes to visual quality affecting the setting of the Fort Vancouver NHS. The visual character of these resources themselves would remain unchanged. Fort Vancouver NHS contributing historic resources that are part of the cultural landscapes and recreational opportunities and include: (1) Munitions Storehouse (Building 102); Original Pearson Hangar (Building 189); Pearson Field Office (Building 194); Work Shop (Building 786); and Fort Vancouver NHS Visitor Center. The visual impacts associated with the movable-span configuration when closed would be less adverse than those of the Modified with LPA double-deck fixed-span configuration and the single-level fixed-span configuration; however, the towers for the movable-span configuration would be visible. shows the visual changes between existing conditions and the Modified LPA as simulated for Fort Vancouver NHS as documented in the Visual Quality Technical Report.

Interstate Bridge Replacement Program

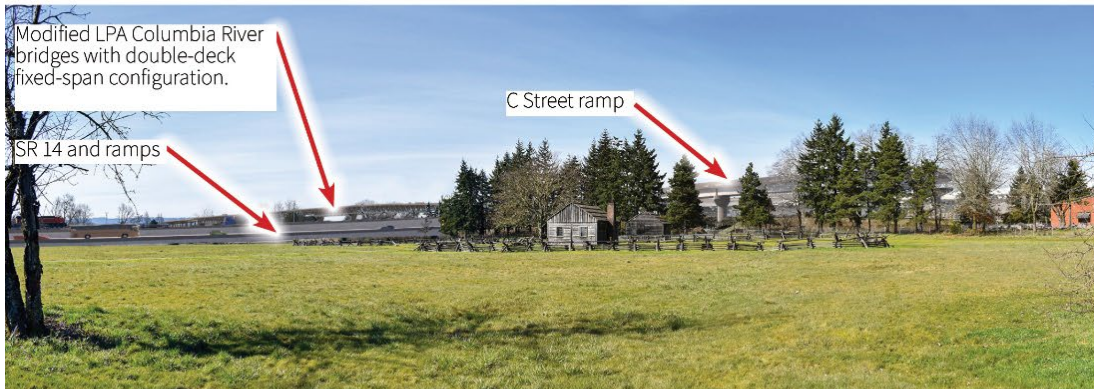
Figure 4-17. Fort Vancouver National Historic Site - Visual Change Comparison between Existing Conditions and the Modified LPA



Existing Interstate Bridge and three lift towers

SR 14

Existing Conditions

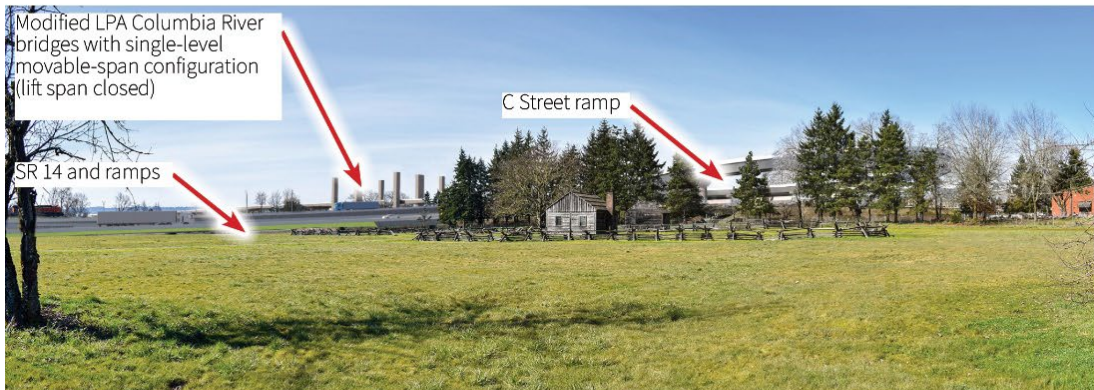


Modified LPA Columbia River bridges with double-deck fixed-span configuration.

SR 14 and ramps

C Street ramp

Photographic simulation of Modified LPA with double-deck fixed-span configuration with C Street Ramp

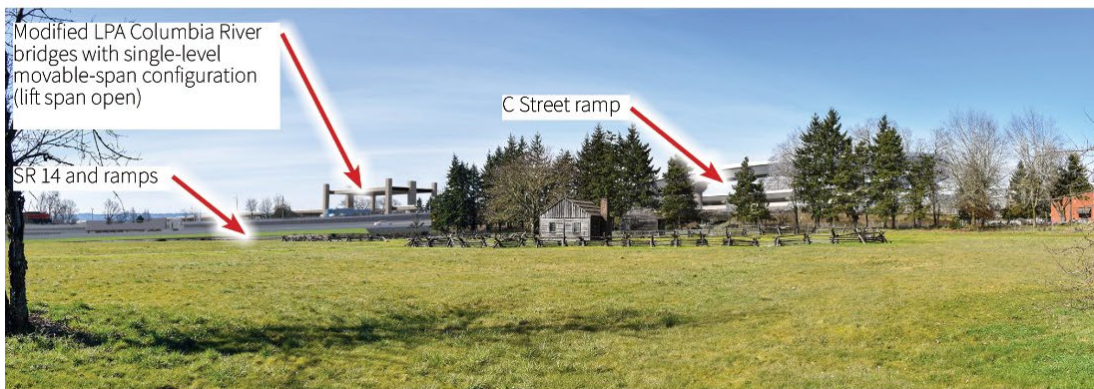


Modified LPA Columbia River bridges with single-level movable-span configuration (lift span closed)

SR 14 and ramps

C Street ramp

Photographic simulation of Modified LPA with single-level movable-span closed configuration with C Street ramp



Modified LPA Columbia River bridges with single-level movable-span configuration (lift span open)

SR 14 and ramps

C Street ramp

Photographic simulation of Modified LPA with single-level movable-span open configuration with C Street ramp

Noise Level Increase

As documented in Section 3.11, Noise and Vibration, existing modeled traffic noise ranges from 53 to 75 dBA within the Fort Vancouver NHS. The highest noise levels, which are adjacent to I-5 and SR 14, approach or exceed the noise abatement criteria of 67 dBA. These levels would be expected to increase between 0 and 8 dBA under the Modified LPA because of the IBR Program and traffic growth (see Figure 3.11-18 in Section 3.11, Noise and Vibration). Per FHWA *Section 4(f) Policy Paper* Question 7A, constructive use of Section 4(f) property is only possible in the absence of a permanent incorporation of land or a temporary occupancy of the type that constitutes a Section 4(f) use; therefore, it would not occur.

Temporary Occupancy

Construction of the Modified LPA would require temporary occupancy of approximately 35,300 square feet of the Fort Vancouver NHS for construction of a retaining wall along I-5 in the western portion of the fort, representing less than 1% of the 204-acre park.

Construction of the Modified LPA design options would temporarily occupy land for construction of a retaining wall along I-5 (and). The occupied land would range from 33,900 square feet under the Modified LPA without C Street ramps design option to 35,200 square feet for the Modified LPA single-level configuration with one auxiliary lane design option. The other design options would temporarily occupy 34,200 square feet (Modified LPA with I-5 shifted west) and 34,700 square feet (Modified LPA with single-level bridge [fixed- or movable-span configuration] with two auxiliary lanes and double-deck fixed-span configuration with two auxiliary lanes). The proposed temporary occupancy would include larger impacts to areas around E 5th Street and the FHWA building parking lot.

Construction would increase noise, vibration, and dust that may temporarily affect recreational activities, but the effect would not be adverse to the extent that it interferes with use of the park.

Fifth Street may be closed or have restricted access, thereby affecting access to the FHWA Western Federal Lands Building, which is outside of the park and not part of the recreational attributes or features of the park. Construction near the SR 14 westbound to I-5 northbound elevated ramp would occur near, but outside of, areas planned for construction of the HBC Village, and would not interfere with NPS's plans for reconstruction of this area. The recreational activities, features, and attributes of the park, including viewing the historic landscape, walking or rolling along recreational trails, picnicking, and attending events at Fort Vancouver, would remain available during construction and would not be substantially affected during construction; therefore, the additional area of temporary occupancy during construction is included in the overall use determination for the park. shows the area of permanent incorporation and temporary occupation for the Modified LPA and each design option.

Table 4-4. Permanent and Temporary Use under the IBR Program Design Options for the Fort Vancouver National Historic Site

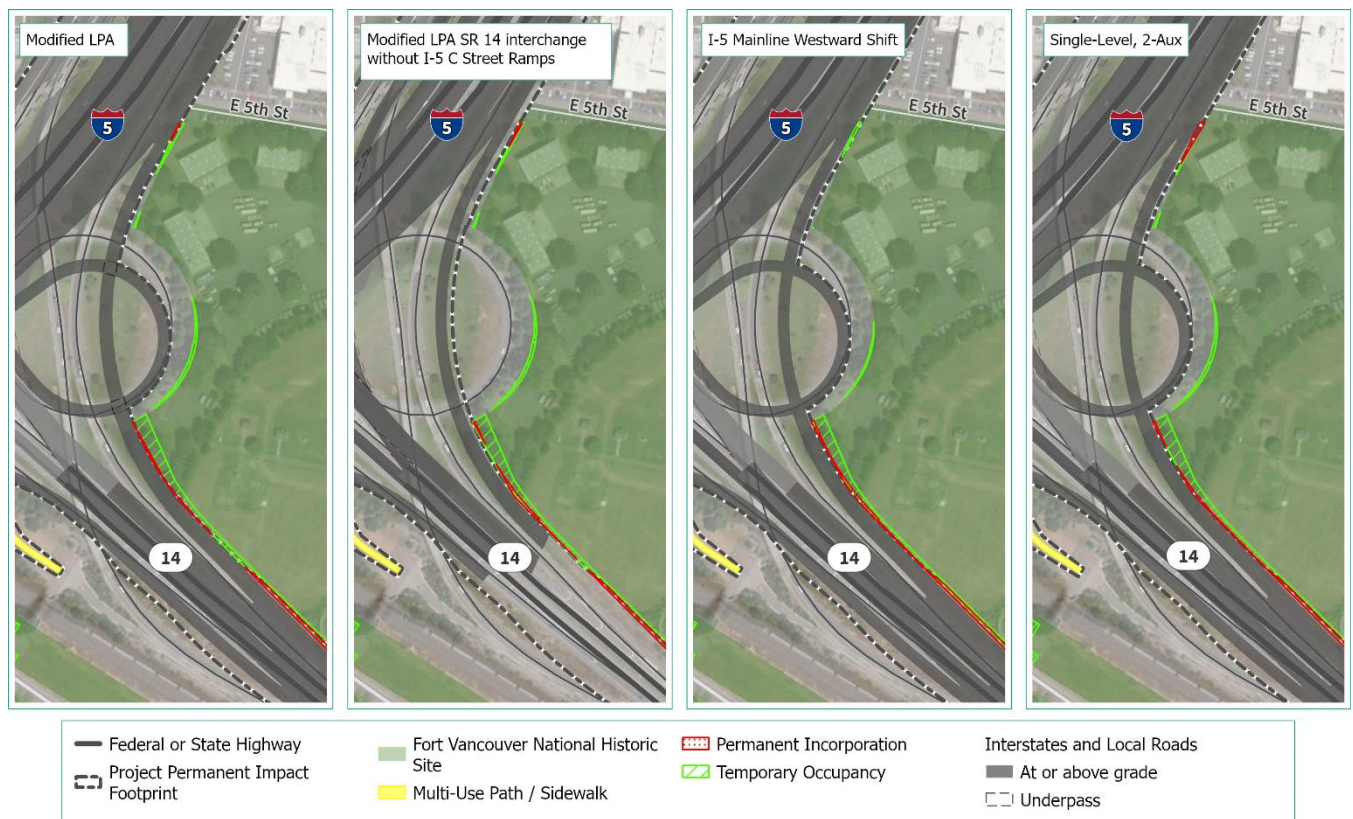
Design Options	Permanent Incorporation	Temporary Occupancy
Modified LPA Double-Deck Fixed-Span Configuration with One Auxiliary Lane, C Street Ramps, and Centered I-5	Approximately 12,500 square feet	Approximately 35,300 square feet
Modified LPA SR 14 Interchange without C Street Ramps	Approximately 13,800 square feet	Approximately 33,900 square feet
Modified LPA I-5 Shifted West	Approximately 13,600 square feet	Approximately 34,200 square feet

Design Options	Permanent Incorporation	Temporary Occupancy
Modified LPA Single-Level Fixed- or Movable-Span Configuration with One Auxiliary Lane	Approximately 12,500 square feet	Approximately 35,200 square feet
Modified LPA Single-Level Fixed- or Movable-Span Configuration with Two Auxiliary Lanes	Approximately 13,100 square feet	Approximately 34,700 square feet
Double-Deck Fixed-Span Configuration with Two Auxiliary Lanes	Approximately 13,100 square feet	Approximately 34,700 square feet

Preliminary Determination

The Modified LPA with all design options would permanently incorporate 12,500 to 13,800 square feet of land and temporarily occupy approximately 33,900 to 35,300 square feet of land in the southern and western reaches of the Fort Vancouver NHS adjacent to SR 14 and I-5. This incorporation would result in a use under Section 4(f). This area is also included in the area calculated for incorporation from the VNHR Historic District.

Figure 4-18. Fort Vancouver National Historic Site – Comparison of Modified LPA Design Options



Park and Recreation Properties Evaluated to Have a Use with *de minimis* Impact under Section 4(f)

Old Apple Tree Park

Description

Old Apple Tree Park, depicted in Figure 4-19, is a 56,628-square-foot community park located north of the Columbia River and BNSF Railway and south of SR 14 and within the boundaries of the VNHR. Old Apple Tree Park can be accessed from the Fort Vancouver NHS waterfront beneath the railroad or from the Fort Vancouver NHS using the Confluence Land Bridge over SR 14. The Old Apple Tree from which the park derives its name died in 2020 at the age of 194, but its history lives on through saplings that share its genetic makeup planted in the same location. Old Apple Tree Park still provides passive recreational space, viewing, and bicycle parking for the Confluence Land Bridge.

Figure 4-19. Old Apple Tree Park



Date: 2/25/2024 Path: \\patentmrx.com\jmu\pwr\Projects\Clients\13155\WDR\224\13155_058\BIR Program\99\945\GIS\mapdocs\PH_Schedule_40\Fig_1_Sec4f_AffectedEnvironment.aprx

Source: Clark County, ODOT, WSDOT, Mapbox, OpenStreetMap

Use Evaluation for the Modified LPA

The Modified LPA would construct a new shared-use path through the lawn on the west side of the park, which would require approximately 3,500 square feet of land. The path would link the park to Main Street and downtown Vancouver. Users of the Confluence Land Bridge would travel through Old Apple Tree Park to reach the Fort Vancouver NHS. Under an agreement with WSDOT, VPR&C may own, operate, and maintain the trail and provide WSDOT a construction easement to build the trail as part of the Modified LPA which would enhance recreational activities of the park. The final path alignment in this park is being coordinated with VPR&C and would meet *de minimis* impact requirements.

In addition to the shared-use path connection, the Modified LPA would also require a permanent airspace easement, of approximately 4,400 square feet, over the northwest corner of Old Apple Tree Park for maintenance of the I-5 northbound to SR 14 elevated ramp. This easement would provide WSDOT with the right to enter Old Apple Tree Park with equipment to perform routine inspections of the ramp structure. This easement would not affect landscape on the park and would only be temporarily used for inspection and potentially maintenance of the ramp. It is anticipated that during the ramp inspection when the easement would be in use, access to the park would remain open and would not affect the activities, features, or attributes of the park property. The new I-5 northbound to SR 14 interchange ramp would be located closer to Old Apple Tree Park than the existing ramp, coming within 5 to 10 feet of its northern boundary. The ramp would not adversely impact user experience since the forested buffer along the northern edge of the park would remain, reducing the visual presence of the ramp. The airspace easement would not adversely affect the activities, features, or attributes of Old Apple Tree Park and would result in a *de minimis* impact.

Construction of the elevated ramp would occur immediately north of the park under the Modified LPA and would require access to and temporary occupancy of an approximately 7,200-square-foot portion of, but no permanent acquisition of land from, the park. Construction activities and equipment would be confined to the western and northern portion of the park and immediately adjacent to the new shared-use trail that is a grassed, landscaped, passive recreational area. This portion of the open landscaped area would be unavailable during elevated ramp construction, which would last up to 6 years. The existing shared-use path through the park, which is a segment of the Discovery Historic Loop Trail, and the Old Apple Tree monument, which are the primary recreational features of the park, would remain open and accessible to the public. The temporary occupancy for construction work is included in the *de minimis* impact determination for the park.

Preliminary Determination

The Modified LPA with all design options would enhance 3,500 square feet of land from Old Apple Tree Park for the construction of a shared-use path and require 4,400 square feet for an air space easement. The permanent incorporation would constitute a use of Old Apple Tree Park under Section 4(f). Additionally, the Modified LPA with all design options would temporarily occupy a 7,200-square-foot portion of the park to provide access for elevated ramp construction. Pending consultation with the VPR&C, USDOT has determined that the Program would have a *de minimis* impact to the protected activities, features, and attributes of the park.

Marshall Community Center, Luepke Senior Center, and Marshall Park

Description

The Marshall Community Center and Park is an 827,640-square-foot community park located on the east side of I-5 south of McLoughlin Boulevard. The park, which was renovated in 2006, is owned by the City of Vancouver and maintained by VPR&C and is open from 5:00 a.m. to 10:00 p.m. The park facilities include a large, fully accessible playground with multiple features, community gardens, a loop trail, picnic tables, horseshoe pits, ball fields, the Marshall and Luepke Centers, and the Ruby Luepke Center for Senior Citizens (WA 1182b).

The City completed a playground restoration in 2022. In 2010, a large group picnic shelter was added to Marshall Park. The property was originally transferred to the City of Vancouver in 1986 through the FLP Program, as administered by the NPS. The FLP parcel is described in the original Application for Federal Surplus Property as a grassy area that is used by the public. It is adjacent to a horseshoe pit area and is gently sloping from south to north. The existing parcel also contains a few medium-sized trees that provide a partial vegetative buffer between Marshall Park and I-5.

The Marshall Community Center, open weekdays from 6:00 a.m. to 8:00 p.m., with shortened hours on Fridays and weekends, has a swimming pool, a fitness center, two basketball courts, a commercial kitchen, meeting rooms, administrative offices, an aerobics dance studio, and an arts and crafts studio. The parking lot contains 272 parking spaces, including 26 spaces accessible under the American with Disabilities Act.

The Luepke Senior Center is a full-service senior center with a multipurpose room and meeting rooms.

Use Evaluation for the Modified LPA

The Modified LPA would acquire approximately 25,200 square feet of property from Marshall Park, which includes the Marshall Community Center and Luepke Senior Center. As illustrated in Figure 4-20, the permanent property acquisition would occur along the western edge of the parcel for the fill wall for the I-5 northbound to Fourth Plain Boulevard elevated off-ramp. The permanent acquisition would displace up to four horseshoe pits, as well as trees located in state right of way and within the park boundary that currently serve as a visual buffer between the community center campus and I-5. The fill wall would be located along the border of the parking lot and would be up to 20 feet high.

Trees removed within the park would be subject to the City of Vancouver's replacement requirements during the tree removal permitting process. Landscaping would be restored to its original condition once construction is complete. Under an agreement with the City of Vancouver (VPR&C), the IBR Program would replace the four displaced horseshoe pits within the park. The four new pits would be located near the other horseshoe pits with no loss of recreational function.

The 25,200-square-foot permanent acquisition of land within the park represents a small portion (approximately 3%) of the overall park area. Approximately 6,300 square feet of the 25,200-square-foot acquisition could be replaced with surplus WSDOT right of way. WSDOT would construct a new shared-use path from E Mill Plain Boulevard, providing a southern connection and enhancing pedestrian access to the park. Because the Modified LPA would replace a portion of the acquired land and horseshoe pits and would replant trees that would be removed, it would not adversely impact the activities, features, or attributes qualifying the park for protection under Section 4(f) consistent with 23 CFR 774.17.

The Modified LPA would require the temporary use of approximately 19,100 square feet along the western boundaries of the parcel. Access to and from the Marshall Community Center would be maintained for the duration of construction. It is possible that one of the two access points may need to be closed for short periods to complete construction. During potential access closures, the one-way access between the two main parking lots would likely be signed for two-way traffic to allow for full use of the parking facility; this would likely require flaggers or some other mitigation as this access is currently only one lane. Access closures would be coordinated with the City of Vancouver (VPR&C) and facility users. As discussed in Sections 3.11.4 and 3.9.4, facility users would experience temporary increased levels of noise and construction lighting during the construction of the Fourth Plain off-ramp. However, because access to the facilities would remain open throughout construction, there would be no adverse effects on the activities, features, or attributes of the park that qualify the park for protection under Section 4(f).

Figure 4-20. Marshall Community Center, Luepke Senior Center, and Marshall Park – Modified LPA with All Design Options



As per 23 CFR 774.15, constructive use of Section 4(f) property is only possible in the absence of a permanent incorporation of land or a temporary occupancy of the type that constitutes a Section 4(f) use. The Modified LPA and the design options would permanently incorporate and temporarily occupy land during construction. Therefore, no constructive use would occur.

Preliminary Determination

Construction of the Modified LPA and the design options would result in acquisition and permanent incorporation of approximately 25,200 square feet of land from Marshall Park, which houses the Marshall Community Center and Luepke Senior Center and would also remove trees screening the park from I-5 and up to four horseshoe pits. The permanent incorporation would constitute a use of Marshall Park under Section 4(f). The land, trees, and horseshoe pits would be replaced under the Modified LPA, resulting in both a permanent and a temporary construction-phase *de minimis* impact to the park, community center, and senior center pending concurrence from VPR&C.

4.3.5 Summary of Use of Historic Sites by the IBR Program Modified LPA with All Design Options

This section is organized based on Section 106 determinations of effects to historic sites and discusses uses of Section 4(f) historic sites located in the following areas:

- Sites in Oregon
- Sites in Washington

Historic sites meeting the criteria for protection under Section 4(f), and subject to review under Section 106, are grouped into four categories of use for the historic sites evaluation.

- i. **Historic sites within the Section 106 Area of Potential Effect (APE) that would have no Section 4(f) use.** Sites within this category may have a Section 106 determination of “No Effect” or “No Adverse Effect” as well as no permanent or temporary use of the property. This category can also include sites that have a Section 106 determination of “Adverse Effect” but would not have permanent incorporation of land. Therefore, these sites are evaluated for constructive use. There are 15 sites under this category.
- ii. **Historic sites for which the temporary occupancy exception applies under Section 4(f), and for which, therefore, there is no Section 4(f) use.** Sites in this category, which is a subcategory of historic sites that would have no Section 4(f) use, have a Section 106 determination of “No Adverse Effect.” There are four sites with a preliminary determination of “No Adverse Effect” under Section 106 for which the temporary occupancy exception applies under Section 4(f), with regard to the Modified LPA, including all design options. Additionally, there is one site for which the temporary occupancy exception applies with regard to the Modified LPA, including all design options except for the Modified LPA with I-5 shifted west design option.
- iii. **Historic sites evaluated to have a use with greater than *de minimis* impact under Section 4(f).** Generally, these sites have a Section 106 determination of “Adverse Effect.” There are eight sites with an “Adverse Effect” determination and a use with greater than *de minimis* impact under Section 4(f) for the Modified LPA with all design options, including a group of contributing resources that are part of the VNHR Historic District and are evaluated as one historic site.
- iv. **Historic sites evaluated to have a *de minimis* impact under Section 4(f).** As with the previous category, these sites generally have a Section 106 determination of “No Adverse Effect.” There are four sites with a preliminary determination of “No Adverse Effect” under Section 106 and an anticipated *de minimis* impact under Section 4(f) for the Modified LPA with all design options; additionally, there is one site with a preliminary determination of “No Adverse Effect” under Section 106 and an anticipated *de minimis* impact under Section 4(f) for the Modified LPA with I-5 shifted west design option only.

Interstate Bridge Replacement Program

The Modified LPA, including all design options, would result in the use of certain historic sites under Section 4(f). Table 4-5 summarizes the preliminary use determination for the historic sites evaluated for the Modified LPA and for each design option. The Modified LPA park-and-ride design option would not use any of the Section 4(f) historic sites and, therefore, is not discussed further.

Of the 32 historic sites within the Section 106 APE identified as Section 4(f) properties, two historic sites in Oregon and 18 in Washington would have no Section 4(f) use for the Modified LPA with all design options (this includes five sites in Washington for which the temporary occupancy exception applies); two historic sites in Oregon, one in Washington, and one in the Columbia River between Oregon and Washington would have a *de minimis* impact for the Modified LPA with all design options; and four historic sites in Oregon, three in Washington, and the northbound Interstate Bridge between the two states would have a Section 4(f) use for the Modified LPA with all design options.

Table 4-5. Summary of Section 4(f) Evaluation for Historic Sites for IBR Program Modified LPA Design Options

State	Historic Site	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, Without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
Oregon	Columbia Slough Drainage Districts Historic District (OR 2), Portland	Permanent incorporation of approximately 182,300 square feet and temporary occupancy of approximately 140,800 square feet of the more than 150-square-mile historic district. No changes to location of contributing resources or the overall character of the surrounding setting. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because there would be No Adverse Effect under Section 106.					
	Northbound Interstate Bridge (OR 50 / WA 381a)	Permanent incorporation of the entire site (approximately 85,600 square feet) and removal of the NRHP-listed bridge. Preliminary Determination: Section 4(f) use because the bridge would be demolished.					
	Portland Assembly Center (OR 56), 2060 N Marine Drive, Portland	Permanent incorporation of approximately 244,800 square feet from the far southern, eastern, and western edges of the site and temporary occupancy of approximately 1,408,700 square feet. No substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because there would be No Adverse Effect under Section 106.					
	Toll Administration Building/ODOT Permit Center (OR 103), 12348 N Center Avenue, Portland	Permanent incorporation of the entire site (approximately 163,700 square feet) and removal of the NRHP-eligible building and landscape features. Preliminary Determination: Section 4(f) use because of permanent incorporation.					
	Harbor Shops (OR 107), 11915 N Center Avenue, Portland	Permanent Incorporation of the entire site (approximately 52,200 square feet) and removal of the NRHP-eligible building and landscape features. Preliminary Determination: Section 4(f) use because of permanent incorporation.					
	Jantzen Beach Water Tank (OR 109), N Center Avenue, Portland	Permanent incorporation of the entire site (approximately 3,200 square feet) and removal of the NRHP-eligible structures and landscape features. Preliminary Determination: Section 4(f) use because of permanent incorporation.					
	Jantzen Beach Moorage (OR 111), 1501 N Jantzen Avenue/1525-2055 N Jantzen Avenue, Portland	Permanent incorporation of approximately 85,900 square feet and removal of a section of dock, at least two finger piers, and approximately 20 floating shelters from the NRHP-eligible moorage. Additionally, temporary occupancy of approximately 19,400 square feet. Preliminary Determination: Section 4(f) use because of permanent incorporation.					
	Hayden Island Yacht Club Clubhouse (OR 120), 12050 N Jantzen Drive, Portland	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the historic site. Preliminary Determination: No Section 4(f) use.					
	East Vanport Commercial Center (OR 155), 10850 N Denver Avenue, Portland	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the historic site. Preliminary Determination: No Section 4(f) use.					
Washington	Lower Columbia River Federal Navigation Historic District (OR 165)	Permanent incorporation of approximately 2,000 square feet from the Upper Vancouver Turning Basin and temporary occupancy of area up to approximately 1,000 feet east of the existing bridge and up to approximately 1,000 feet west of the proposed bridges. Overall, no substantial impairment of the protected activities, features, or attributes of the more than 140-mile-long historic district. Preliminary Determination: Section 4(f) use. Based on CFR 774.17, this would be a <i>de minimis</i> impact because there would be No Adverse Effect under Section 106.					
	Normandy Apartments (WA 149), 318 E 7th Street, Vancouver	Permanent incorporation of approximately 700 square feet and temporary occupancy of 300 square feet along the eastern boundary of the historic site for construction of noise and retaining walls and elevated LRT alignment. Landscape elements would be removed and new construction would be in proximity to the NRHP-eligible building. Preliminary Determination: Section 4(f) use because of permanent incorporation.	Permanent incorporation of the entire site (approximately 14,690 square feet) and removal of the building and landscape features. Preliminary Determination: Section 4(f) use because of permanent incorporation.	Permanent incorporation of approximately 700 square feet and temporary occupancy of 300 square feet along the eastern boundary of the historic site for construction of noise and retaining walls and elevated LRT alignment. Landscape elements would be removed and new construction would be in proximity to the NRHP-eligible building. Preliminary Determination: Section 4(f) use because of permanent incorporation.			
	Bridge Substation (WA 1192), 100 SE Columbia Street, Vancouver	Permanent incorporation of the entire site (approximately 3,200 square feet) and removal of the NRHP-eligible building. Preliminary Determination: Section 4(f) use because of permanent incorporation.					

State	Historic Site	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, Without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
	Vancouver National Historic Reserve Historic District (WA 368, 369, 918, 109), Vancouver	Permanent Incorporation: Approximately 65,600 square feet Temporary Occupancy: Approximately 110,100 square feet Preliminary Determination: Section 4(f) use.	Permanent Incorporation: Approximately 66,900 square feet Temporary Occupancy: Approximately 108,700 square feet Preliminary Determination: Section 4(f) use.	Permanent Incorporation: Approximately 53,400 square feet Temporary Occupancy: Approximately 121,600 square feet Preliminary Determination: Section 4(f) use.	Permanent Incorporation: Approximately 63,700 square feet Temporary Occupancy: Approximately 111,900 square feet Preliminary Determination: Section 4(f) use.	Permanent Incorporation: Approximately 68,400 square feet Temporary Occupancy: Approximately 107,300 square feet Preliminary Determination: Section 4(f) use.	Permanent Incorporation: Approximately 68,400 square feet Temporary Occupancy: Approximately 107,300 square feet Determination: Section 4(f) use.
	Fendrich's Furniture (WA 7), 209 W 6th Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Evergreen Hotel (WA 21), 500 Main Street, Vancouver	Temporary occupancy of approximately 400 square feet requiring temporary closure of south entrance to the NRHP-eligible building. Based on 23 CFR 774.13(d), temporary occupancy of the park would meet the exception criteria. Preliminary Determination: No Section 4(f) use.					
	House of Providence (Providence Academy) (WA 150), 400 E Evergreen Boulevard, Vancouver	Temporary occupancy of approximately 4,700 square feet from the southern boundary of the historic site. Based on 23 CFR 774.13(d), temporary occupancy of the historic site would meet the exception criteria. Preliminary Determination: No Section 4(f) use.	Permanent incorporation of approximately 9,800 square feet from the eastern boundary of the historic site and temporary occupancy of approximately 2,100 square feet from the southern boundary. Preliminary Determination: Section 4(f) use. <i>De minimis</i> impact because there would be No Adverse Effect under Section 106.	Temporary occupancy of approximately 4,700 square feet from the southern boundary of the historic site. Based on 23 CFR 774.13(d), temporary occupancy of the historic site would meet the exception criteria. Preliminary Determination: No Section 4(f) use.			
	William H. and Myrtle Hood Residence (WA 191), 3405 K Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Office Building (WA 1144), 1514 E Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Duplex Residences (WA 1168), 2901 K Street, Vancouver	Temporary occupancy of approximately 300 square feet at the southwest corner of the historic site, the possible removal of grass lawn (this would be replaced in-kind following construction), and preservation in place of one ornamental shrub. Based on 23 CFR 774.13(d), temporary occupancy of the historic site would meet the exception criteria. Preliminary Determination: No Section 4(f) use.					
	Earls House (WA 1233), 815 E 22nd Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Mickler House (WA 1258), 901 E 29th Street, Vancouver	Temporary occupancy of approximately 48 square feet at the north boundary of the historic site and possibly disturbance of a fence and walkway (these would be restored following construction). Based on 23 CFR 774.13(d), temporary occupancy of the historic site would meet the exception criteria. Preliminary Determination: No Section 4(f) use.					
	Vancouver Barracks National Cemetery (WA 1319), 1200 E Fourth Plain Boulevard, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					

State	Historic Site	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, Without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
	St. James Acres Cemetery (WA 1320), 1401 E 29th Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Smith Tower (WA 10), 515 Washington Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	U.S. National Bank Building (WA 29), 601-603 Main Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Porter House (WA 61), 3000 K Street, Vancouver	Subsurface easement for installation of subterranean tie-back anchors (per Question 28A of the <i>Section 4(f) Policy Paper</i> , Section 4(f) would not apply). No other permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Hall House (WA 62), 903 E 31st Street, Vancouver	Subsurface easement for installation of subterranean tie-back anchors (per Question 28A of the <i>Section 4(f) Policy Paper</i> , Section 4(f) would not apply). No other permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Radio Transmission Building (WA 382), 1601 E Fourth Plain Boulevard, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Covington House (WA 900), 4201 Main Street, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					
	Who Song & Larry's (WA 1138), 111 SE Columbia Way, Vancouver	Temporary occupancy of approximately 200 square feet. Based on 23 CFR 774.13(d), temporary occupancy of the historic site would meet the exception criteria. Preliminary Determination: No Section 4(f) use.					
	Washington State Patrol District Five Headquarters (WA 1148), 605 E Evergreen Boulevard, Vancouver	Permanent Incorporation of approximately 800 square feet and temporary occupancy of approximately 600 square feet. No substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: Based on CFR 774.17, this would be a <i>de minimis</i> impact because there would be No Adverse Effect under Section 106.					
	Rudy Luepke Center for Senior Citizens (WA 1182), 1009 E McLoughlin Boulevard, Vancouver	No permanent incorporation or temporary occupancy, and no substantial impairment of the protected activities, features, or attributes of the site. Preliminary Determination: No Section 4(f) use.					

4.3.6 Use of Section 4(f) Historic Sites (Oregon)

Historic Sites Evaluated to Have No Use under Section 4(f)

Permanent Incorporation and Temporary Occupancy (Modified LPA with All Design Options) – No Use

The two historic sites listed in Table 4-6 were evaluated under Section 106 to have a finding of “No Effect” for the Modified LPA, including design options. Neither of these historic sites would be permanently incorporated or temporarily occupied by the Modified LPA or the design options. Therefore, there would be no direct use under Section 4(f) of these sites.

Constructive Use

A constructive use occurs when a transportation project does not incorporate land from a Section 4(f) property, but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired (23 CFR 774.15[a]). A constructive use does not occur when compliance with the requirements of 36 CFR 800.5 (Assessment of adverse effects) for proximity impacts of the proposed action, on a site listed in or eligible for the NRHP, results in an agreement of “No Effect” or “No Adverse Effect” (23 CFR Section 774.15[f][1]). The Section 106 evaluation for the Program determined that there would be “No Effect” to the historic sites listed in Table 4-6. Because the Program would have “No Effect” to the historic sites, it would not substantially impair the protected activities, features, or attributes of the Section 4(f) properties and, therefore, it would not result in a constructive use of either historic site.

Table 4-6. Historic Sites (Portland) – No Use under Section 4(f)

Site ID	Historic Site
OR 120	Hayden Island Yacht Club Clubhouse
OR 155	East Vanport Commercial Center

Historic Sites Evaluated to Have Use with a Greater than *de minimis* Impact under Section 4(f)

Harbor Shops Building (Map ID – OR 107)

Description

The Harbor Shops building is a Postmodern-style strip mall located at 11915 N Center Avenue in Portland. Constructed in 1978, this one-story building features an irregular footprint with an elongated zigzag shape and a flat roof with a high parapet. The Harbor Shops Building is eligible for inclusion in the NRHP under Criterion A, at the local level of significance, in the areas of commerce and community planning and development. The Harbor Shops Building is also eligible, at the local level of significance, under Criterion C in the area of architecture as an intact example of a strip mall property type. Although it has experienced minor alterations to its interior configuration and exterior signage related to tenant turnover, the strip mall generally retains integrity of location, design, setting, materials, workmanship, feeling, and association to this period. The boundary of the historic site coincides with the boundary of the tax lot and includes the Harbor Shops Building as well as the associated parking lot and planted medians.

The Harbor Shops Building was determined eligible for the NRHP in 2023, in an evaluation process carried out as part of the IBR Program. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the IBR

Program Modified LPA and its design options. This finding received concurrence from the Oregon SHPO on March 19, 2024.

Use Evaluation for the Modified LPA

The Modified LPA, including all design options, would acquire and permanently incorporate the Harbor Shops Building into right of way to construct the proposed northbound and southbound Columbia River bridges (see Figure 4-21). Construction of the bridges would require the demolition of extant features on the NRHP-eligible historic site, including the primary commercial building, surface parking lots and circulation, and planted medians. The Modified LPA would remove the features that convey the Harbor Shops Building's significance under NRHP Criteria A and C and would eliminate the site's integrity of location, design, setting, materials, workmanship, feeling, and association; as recommended in the Section 106 FOE, the Modified LPA would have an "Adverse Effect" on the site. The Modified LPA would permanently incorporate the entirety of the approximately 52,200-square-foot Harbor Shops Building site and would constitute a use of the site under Section 4(f).

As the entire site would be permanently incorporated, there would be no temporary occupancy of the Harbor Shops Building site by the Modified LPA, inclusive of all design options.

Preliminary Determination

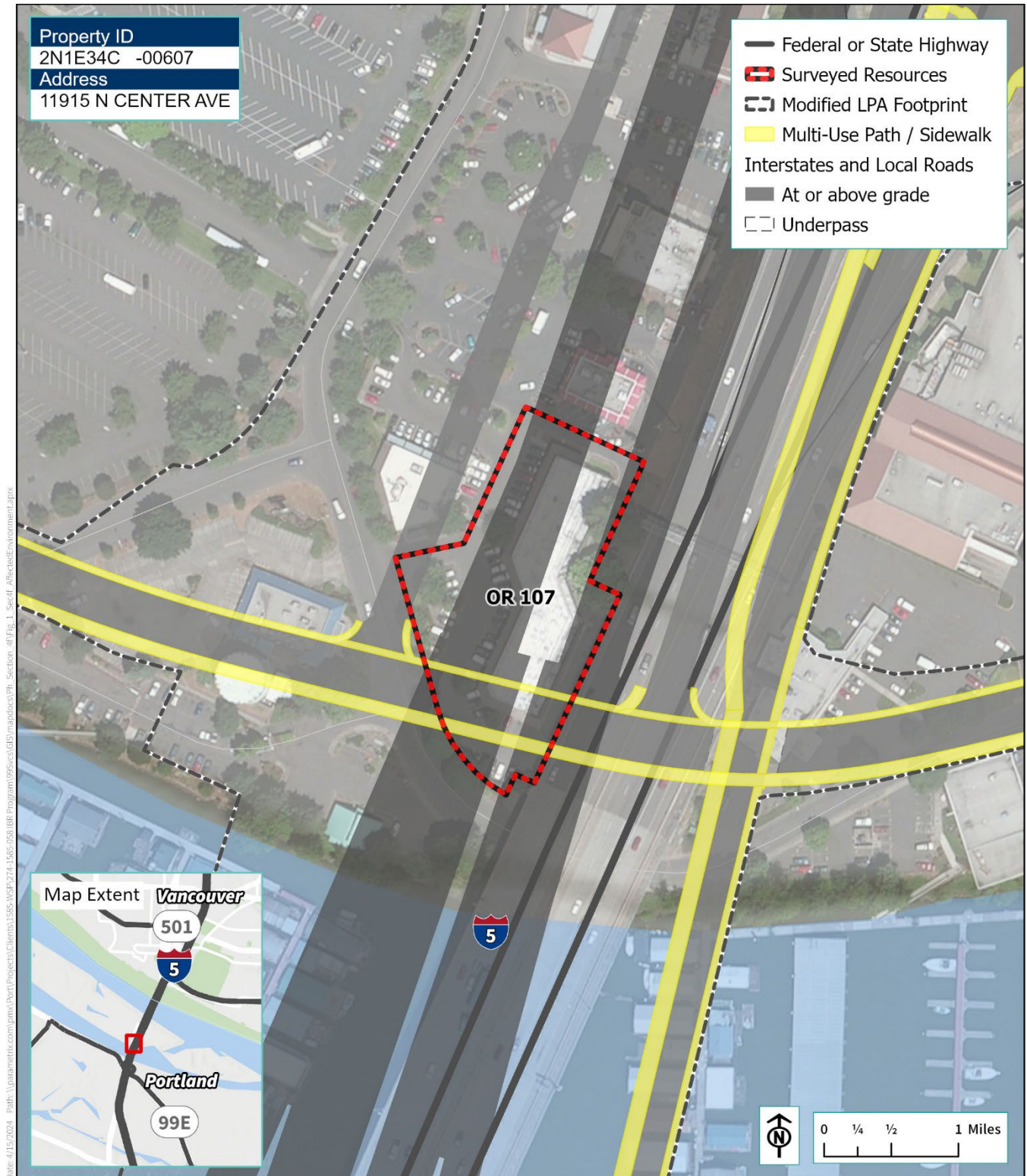
The Modified LPA and its design options would all require the acquisition of the Harbor Shops Building and the subsequent removal of all its extant features, which would render the historic site no longer eligible for the NRHP. Consistent with the definition of use set forth in 23 CFR 774.17, which states that a use of Section 4(f) property occurs "when land is permanently incorporated into a transportation facility," FHWA and FTA have determined that the Modified LPA and its design options would result in a use under Section 4(f) for the Harbor Shops Building.

Jantzen Beach Water Tank and Pump House (Map ID – OR 109)

Description

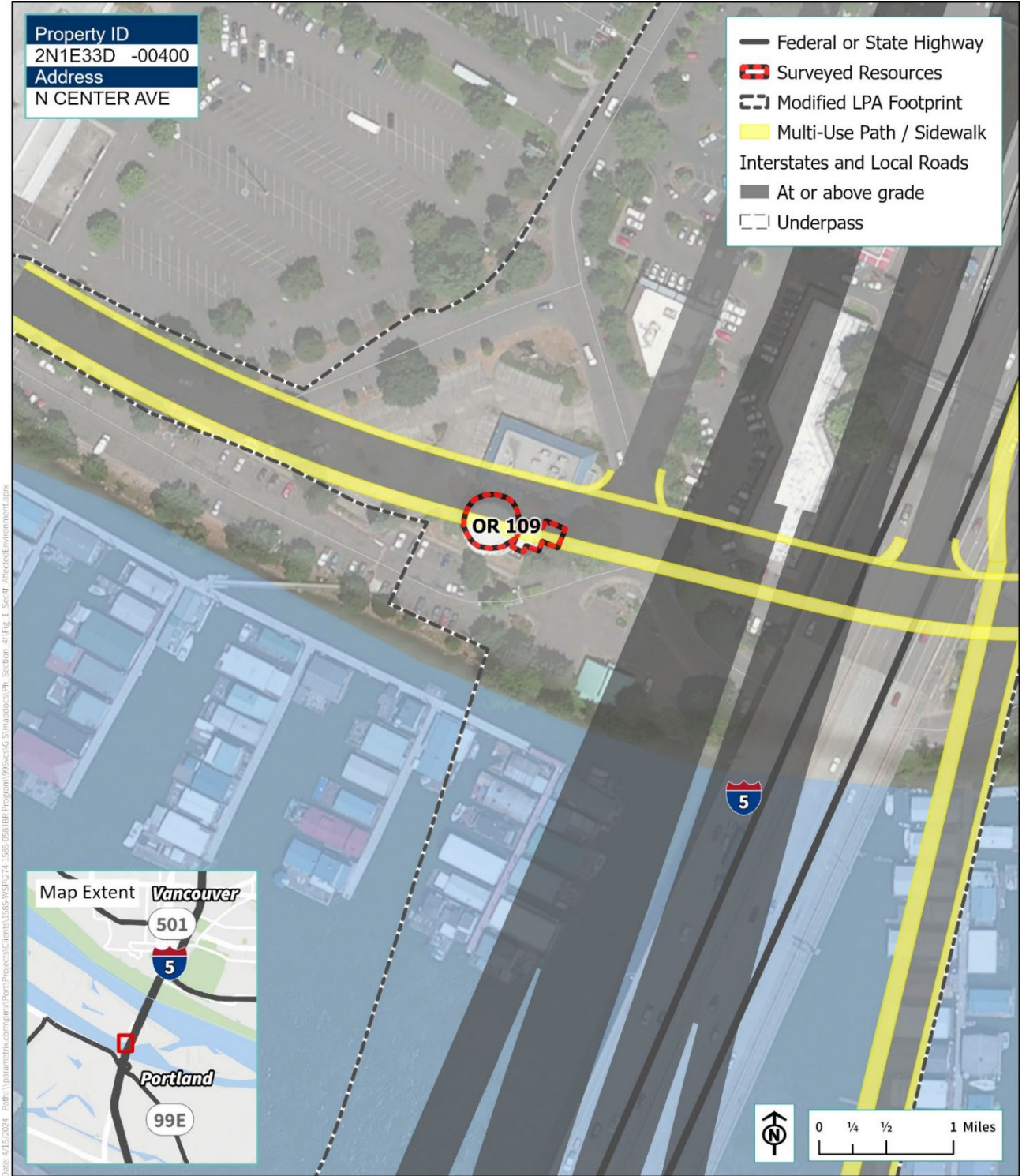
The Jantzen Beach Water Tank and Pump House are utilitarian structures located near the intersection of North Center Street and North Jantzen Avenue on Hayden Island in Portland. Initial construction of the water tank was completed in 1968. The Jantzen Beach Water Tank and Pump House are eligible for inclusion in the NRHP under Criterion A at the local significance level in the area of community planning and development, and under Criterion C at the local significance level in the area of engineering. The historic site is a good example of a welded steel water tank that remains intact and continues to convey its original construction method and materials. Overall, the Jantzen Beach Water Tank and Pump House retain integrity of location, materials, workmanship, feeling, and association; however, the site's integrity of design has been diminished by the changes to the pump house, and its integrity of setting has been diminished by the addition of various site features (fencing, sidewalk, etc.) after the period of significance. Due to the changes to the setting, the historic site's boundary is limited to the extent of the respective footprints of the water tank, pump house, and the associated back-up diesel generator. The Water Tank and Pump House is not currently functioning.

Figure 4-21. IBR Program Improvements and Area of Permanent Incorporation for the Harbor Shops Building



The Jantzen Beach Water Tank and Pump House was determined eligible for the NRHP in 2023, in an evaluation process carried out as part of the IBR Program. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the IBR Program Modified LPA and its design options. The finding received concurrence from the Oregon SHPO on March 19, 2024.

Figure 4-22. IBR Program Improvements and Area of Permanent Incorporation for the Jantzen Beach Water Tower and Pump House



Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would permanently incorporate the entirety of the approximately 3,200-square-foot Jantzen Beach Water Tank and Pump House site as right of way to construct a new road that would join the existing North Jantzen Avenue alignment west of the subject property (see Figure 4-22, above). Construction of the new road would require the demolition of all extant features of the property, including the water tank, pump house, and the associated back-up diesel generator. The Modified LPA would remove the features that convey the property’s significance under NRHP Criteria A and C and would eliminate the property’s integrity of location, design, setting, materials, workmanship, feeling, and association, resulting in a Section 106 FOE of “Adverse Effect” to the NRHP-eligible property. The Modified LPA would therefore constitute a use of the Jantzen Beach Water Tank and Pump House site under Section 4(f).

As the entire site would be permanently incorporated, there would be no temporary occupancy of the historic site by the Modified LPA, inclusive of all design options.

Preliminary Determination

The Modified LPA and its design options would all require the acquisition of the Jantzen Beach Water Tank and Pump House historic site and the subsequent removal of all its extant features, which would render the historic site no longer eligible for the NRHP. Consistent with the definition of use set forth in 23 CFR 774.17, which notes that a use of Section 4(f) property occurs “when land is permanently incorporated into a transportation facility,” FHWA and FTA have determined that the Modified LPA and its design options would result in a use under Section 4(f) for the Jantzen Beach Water Tank and Pump House.

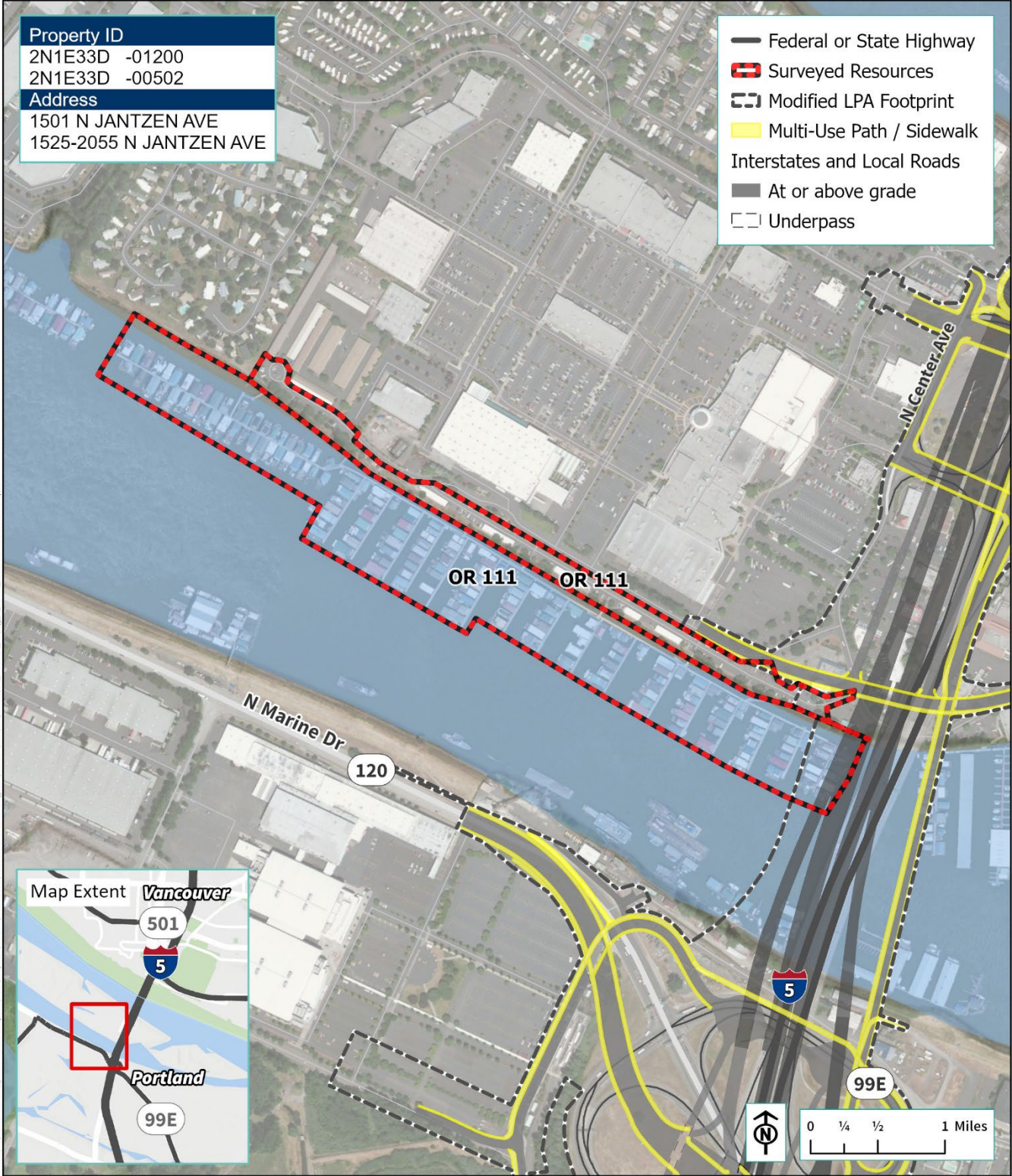
Jantzen Beach Moorage (Map ID – OR 111)

Description

The Jantzen Beach Moorage is located at North Portland Harbor in the Columbia River. Originally built in 1935, the moorage offered leasable and—eventually—privately owned slips for floating homes starting in 1958. The property is 27.3 acres and encompasses a linear dock, multiple finger piers, a parking lot, and associated hardscaping and landscaping. The moorage is host to approximately 175 floating homes located on the water of North Portland Harbor. Figure 4-23 depicts the identified boundary of the historic site. The property is eligible for inclusion in the NRHP under Criterion A for its significance at the local level in the area of community planning and development, and at the local level in the area of maritime history.

The Jantzen Beach Moorage was determined eligible for the NRHP in 2023, in an evaluation process carried out as part of the IBR Program. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Oregon SHPO on March 19, 2024.

Figure 4-23. Aerial Map of Jantzen Beach Moorage (1501, 1525-2055 North Jantzen Avenue), Showing Boundary in Red



Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would replace the existing North Portland Harbor bridge with new bridges. A new LRT bridge would also cross North Portland Harbor to the west of the new North Portland Harbor bridges. Construction of these two structures would permanently incorporate approximately 85,900 square feet of the Jantzen Beach Moorage historic site and result in removal of a section of dock, at least two finger piers, and approximately 20 floating shelters. The Modified LPA, under all design options, would also temporarily occupy 19,400 square feet of the Jantzen Beach Moorage during construction. This occupancy is considered in the “Adverse Effect” determination under Section 106. The temporary occupancy of the site by the Modified LPA is incorporated in the use determination. Figure 4-23, above, depicts how the Modified LPA would intersect with the property. These structures are contributing elements of the NRHP-eligible Jantzen Beach Moorage. Removal of these elements would reduce the resource’s integrity of location, design, setting, materials, workmanship, and feeling, resulting in a finding of “Adverse Effect” for the NRHP-eligible Jantzen Beach Moorage under Section 106. Thus, the permanent incorporation would constitute a use of the historic site under Section 4(f).

Preliminary Determination

The Modified LPA and its design options would all permanently incorporate approximately 85,900 square feet of the Jantzen Beach Moorage historic site and the subsequent removal of character-defining features including a section of dock, at least two finger piers, and approximately 20 floating shelters. FHWA and FTA have determined that the Modified LPA and its design options would result in a use under Section 4(f) for the Jantzen Beach Moorage.

Historic Sites Evaluated to Have Use with a *de minimis* Impact under Section 4(f)

Columbia Slough Drainage Districts Historic District (Map ID – OR 2)

Description

The Columbia Slough Drainage Districts Historic District comprises four geographically contiguous drainage districts on the Columbia River floodplain between the Willamette River and the Sandy River, occupying more than 10,000 acres. Within the Columbia Slough Drainage Districts Historic District are elements including levees and cross levees, pump stations, weirs/dams, canals, sloughs, and drainage ditch systems and flood walls. The district is eligible for the NRHP under Criterion A for its association with early drainage district development in Oregon, which reflected the national reclamation movement that began in the 1880s, and under Criterion C as a major engineered drainage system that was initially constructed in the early 20th century. Its boundary is delineated by the levees, major drainages evaluated to be contributing, as well as reasonable immediate areas surrounding pump stations, weirs, and dams; the interior areas within the district’s drainage districts are not included within the boundaries.

The Columbia Slough Drainage Districts Historic District was identified as eligible for the NRHP in a draft nomination prepared for the U.S. Army Corps of Engineers (USACE) in 2019. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “No Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Oregon SHPO on March 18, 2024.

Figure 4-24. IBR Program Improvements and Area of Permanent Incorporation for the Columbia Slough Drainage Districts Historic District

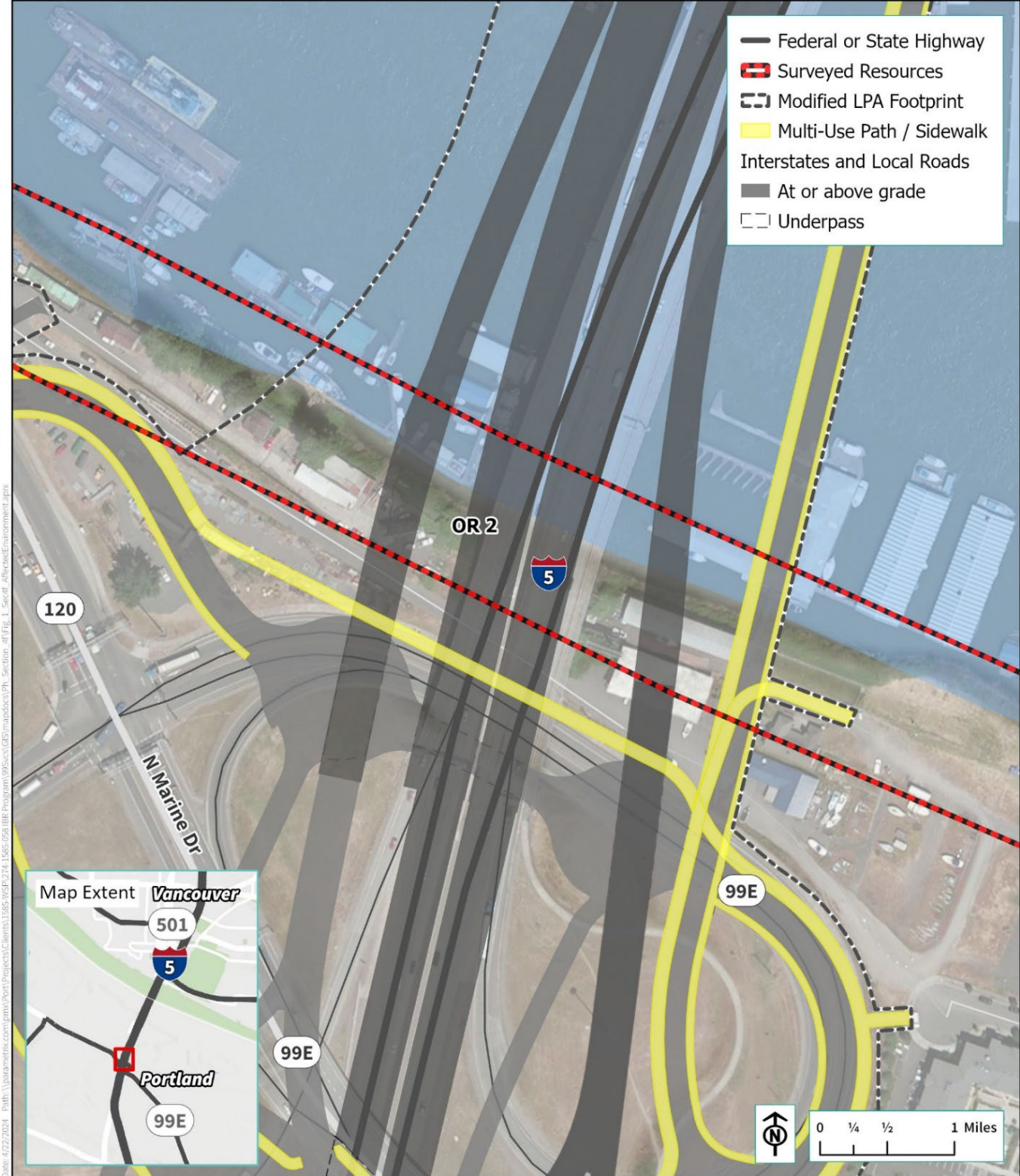
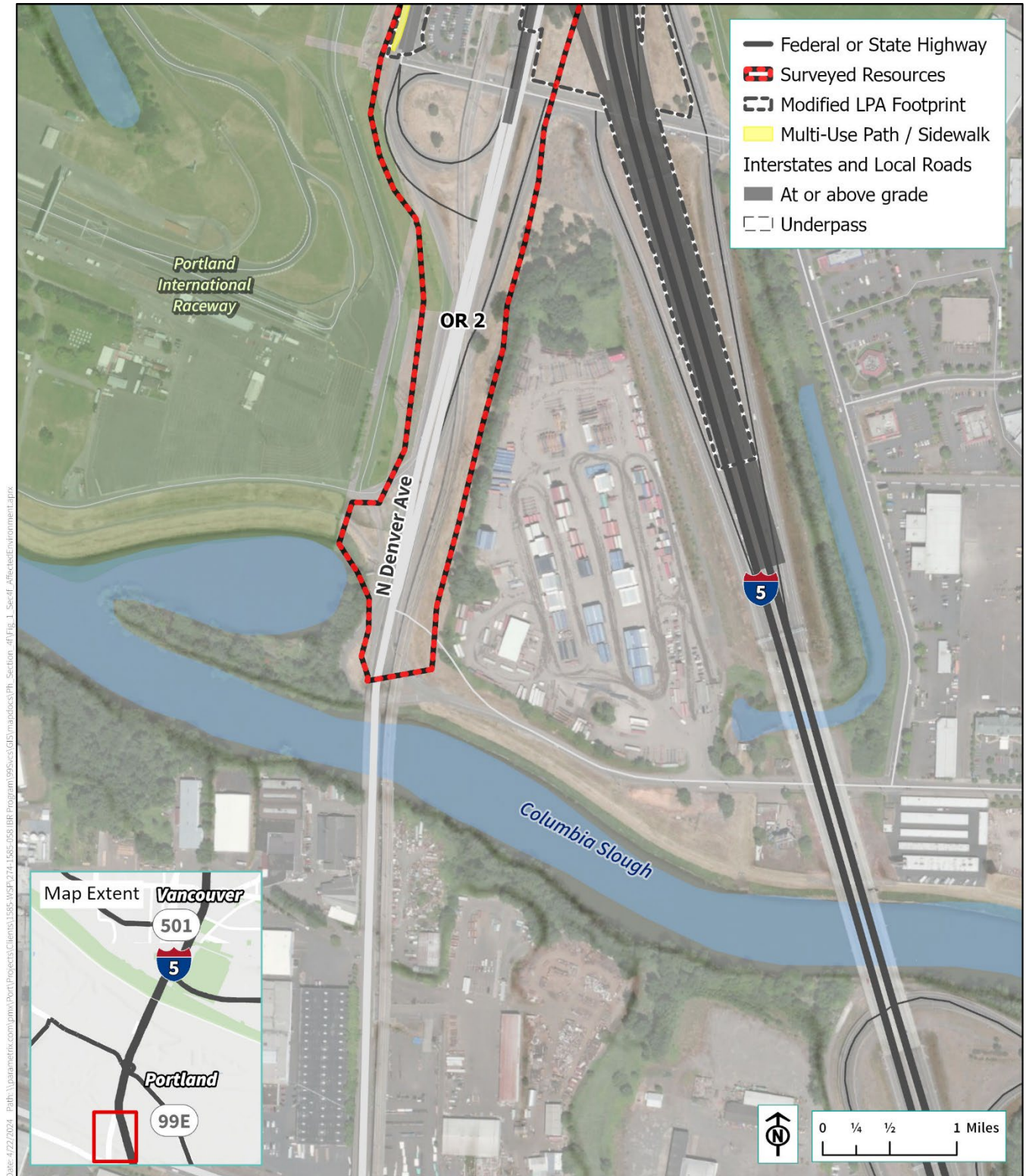


Figure 4-25. IBR Program Improvements and Area of Permanent Incorporation for the Columbia Slough Drainage Districts Historic District



Use Evaluation for the Modified LPA

The Modified LPA straddles the boundary between Peninsula Drainage District No. 1 and Peninsula Drainage District No. 2 and includes portions of four resources that are contributing to the Columbia Slough Drainage Districts Historic District: the Columbia River Levee (Figure 4-24), the Union Avenue/Martin Luther King Jr. Boulevard Cross Levee, the N Denver Avenue Cross Levee, and the Mud Slough Drainage. The Modified LPA, inclusive of all design options, would acquire approximately 182,300 square feet from the historic district, including portions of these four contributing resources. Within the permanent acquisition, the Modified LPA would:

- Reconstruct and widen I-5 between N Victory Boulevard and the Columbia River, on and over portions of the N Denver Avenue Cross Levee, the Mud Slough Drainage, and the Columbia River Levee (Figure 4-25).
- Construct new LRT alignment, new Columbia River bridges, and a new arterial bridge across the North Portland Harbor and over the Columbia River Levee.
- Conduct roadway improvements and create a new shared-use path along N Marine Drive to the west of I-5, on the Columbia River Levee.
- Conduct roadway improvements and create new shared-use paths along N Martin Luther King Jr. Boulevard, NE Union Court, and N Vancouver Way to the east of I-5, on and beside the Union Avenue/Martin Luther King Jr. Boulevard Cross Levee.
- Conduct roadway improvements and create a new shared-use path along N Expo Road, at the west side of the N Denver Avenue Cross Levee.
- Conduct roadway improvements along N Denver Avenue to the north of N Victory Boulevard, on the N Denver Avenue Cross Levee.
- Create new stormwater facilities near N Victory Boulevard and N Denver Avenue and around the I-5 Martin Luther King Jr. Boulevard overpass.

The Modified LPA would not require major changes to the alignments, heights, or widths of the Columbia River Levee, the Union Avenue/Martin Luther King Jr. Boulevard Cross Levee, or the N Denver Avenue Cross Levee, nor would it require infill of the Mud Slough Drainage. As such, the Modified LPA would not substantially impair the character-defining features of the contributing levees and slough, and it would therefore not diminish the Columbia Slough Drainage Districts Historic District's integrity of location, materials, design, or workmanship such that the district could no longer convey its significant development history and engineering merit. While the Modified LPA would alter approximately 182,300 square feet of infrastructure within and around the historic district, it would not change the location of contributing resources or the overall character of the surrounding setting. The Columbia Slough Drainage Districts Historic District would, overall, retain integrity of setting, feeling, and association during construction and after the Program is completed.

Temporary occupancy of other areas within the Columbia Slough Drainage Districts Historic District during construction of the Modified LPA, inclusive of all design options, would include approximately 140,800 square feet for a temporary construction easement to accommodate construction activities, in addition to the area of permanent incorporation. The temporary occupancy area, which was considered in the Section 106 FOE for the historic district, would be a small portion of the overall district and would not adversely affect the qualities of the district that make it eligible for the NRHP.

In conclusion, the Modified LPA would not substantially impair the activities, features, or attributes that contribute to the Columbia Slough Drainage Districts Historic District's NRHP eligibility. The Section 10 FOE for the district therefore includes a finding of "No Adverse Effect" for the Modified LPA. Based on this finding,

and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have found that the Modified LPA would result in a *de minimis* impact for permanent incorporation to this site.

Preliminary Determination

The acquisition of right of way within the Columbia Slough Drainage District Historic District, including from contributing resources, would constitute a use under Section 4(f). The Section 106 FOE for the Columbia Slough Drainage Districts Historic District is “No Adverse Effect” for the Modified LPA, including all design options; the Oregon SHPO concurred with this finding on March 18, 2024. Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have determined that the Modified LPA and its design options would have a *de minimis* impact on the Columbia Slough Drainage Districts Historic District.

Portland Assembly Center (Map ID – OR 56)

Description

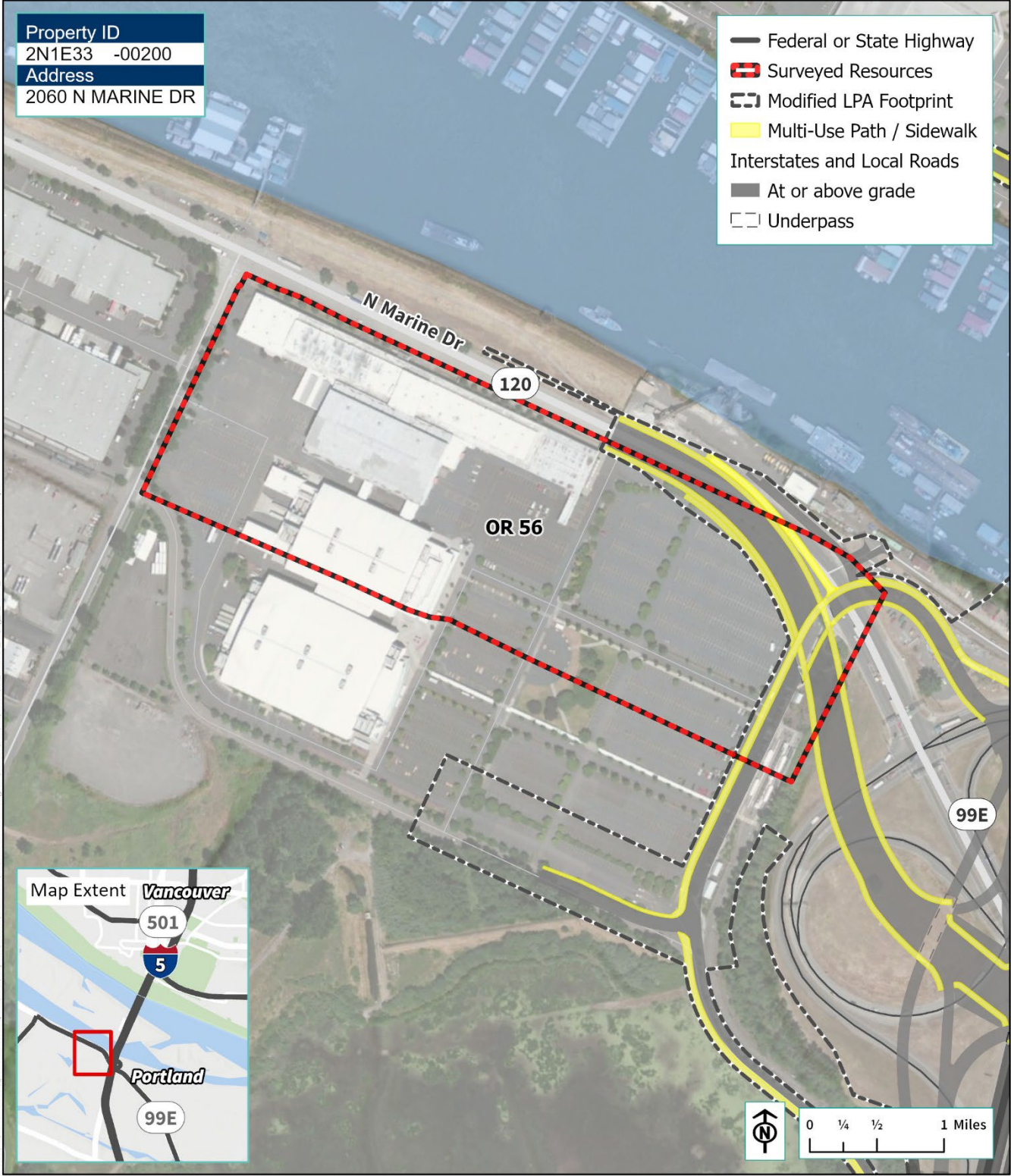
The Portland Assembly Center, located at 2060 North Marine Drive in Portland, is a Georgian Revival and Modern building comprising five interconnected exposition halls built between 1924 and 2001. It is commonly known as the “Portland Expo Center.” The Portland Assembly Center is eligible for the NRHP under Criterion A for its association with the World War II Homefront and the events of Japanese American incarceration. The period of significance for the NRHP-eligible Portland Assembly Center is limited to 1942, corresponding to the period of Japanese American incarceration at the site. The historic site is one of only 16 Temporary Assembly Centers originally designated by the Wartime Civil Control Administration and is the only such site in Oregon, making it unique in its association with this period. Its boundary is the area that was contained within the barbed wire fence of the 1942 facility; this is contained within the larger tax lot (R323452). Within the boundary, character-defining features of the site include the essential physical features of Halls A, B, and C that date to the period of significance and those aspects of setting and location that were conducive to its selection as an assembly center: namely the site’s flat topography; orientation along the Columbia River; views of North Portland Harbor and the Columbia River Levee; proximity to nearby population centers and transportation infrastructure including the roadway, waterway, and rail lines; its semi-industrial land use, which allowed for immediate availability of energy and water; and its spatial arrangement including the open east half of the site and covered space for shelter and recreation.

The Portland Assembly Center was determined eligible for the NRHP in 2023, in an evaluation process carried out as part of the IBR Program. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “No Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Oregon SHPO on March 18, 2024.

Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would permanently acquire 244,800 square feet of property from the far southern, eastern, and western edges of the Portland Assembly Center site within and adjacent to the parking lot. Within the area of permanent acquisition, activities would include modifications to Marine Drive West, along the eastern side of the Portland Assembly Center’s historic boundary, and the construction of a new light-rail vehicle overnight facility to the south of the property, outside of its historic boundary (see Figure 4-26).

Figure 4-26. IBR Program Improvements and Area of Permanent Incorporation for the Portland Assembly Center



Interstate Bridge Replacement Program

Both of these areas have been substantially altered since the site's 1942 period of significance by the installation of a surface parking lot and various landscaping features such as sidewalks and vegetated islands. The permanent acquisition and effect of the Modified LPA upon the Portland Assembly Center would not further reduce the site's integrity because the incorporated area has no remaining integrity from the period of significance.

Temporary occupancy of the Portland Assembly Center during construction of the Modified LPA, inclusive of all design options, would include 1,408,700 square feet. Proposed activities would not adversely affect the features of the site that make it eligible for the NRHP. Specifically, these activities would not alter the essential physical features of Halls A, B, and C that date to the 1942 period of significance, nor would they alter the site's spatial arraignment, relatively flat topography, orientation along the Columbia River, views of North Portland Harbor and the Columbia River Levee, proximity to nearby population centers and transportation infrastructure, or semi-industrial land use.

The permanent acquisition and the temporary occupancy of the Portland Assembly Center would result in a Section 106 finding of "No Adverse Effect" for the Modified LPA.

Preliminary Determination

The acquisition of right of way from the Portland Assembly Center would constitute a use under Section 4(f). The Section 106 FOE for the Portland Assembly Center is "No Adverse Effect" for the Modified LPA and its design options; the Oregon SHPO concurred with this finding on March 18, 2024. Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have determined that the Modified LPA, including all design options, would have temporary and permanent *de minimis* impacts on the Portland Assembly Center.

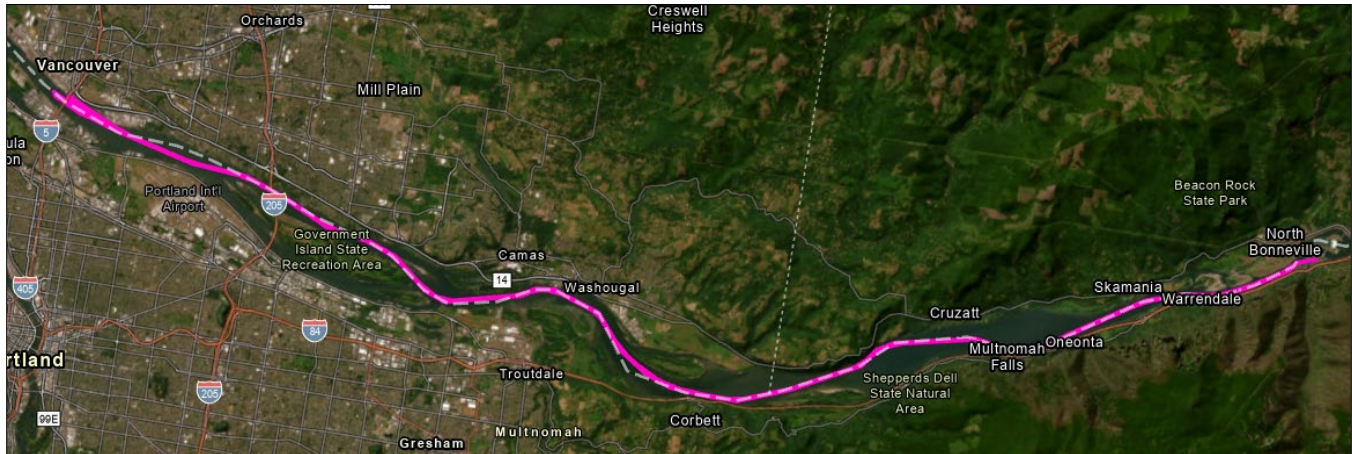
Lower Columbia River Federal Navigation Historic District (Map ID – OR 165)

Description

The Lower Columbia River Federal Navigation Historic District (LCR Nav Historic District), located along the Columbia River from its mouth (River Mile [RM] 3) to the Bonneville Lock and Dam (RM 145), is a series of structures built and maintained by USACE starting in 1873. USACE's federal navigation system along the LCR has helped develop the Pacific Northwest and build its economy by allowing for safe transport of imports and exports, and it also represents a major engineering feat. The boundary for the LCR Nav Historic District encompasses a series of noncontiguous structures, including navigation channels that extend from RM 3 to RM 145, six turning basins, 41 pike dike systems, and nine landforms created from dredge materials. Figure 4-27 depicts the extent of the Lower Columbia River Federal Navigation Channel (LCR FNC), which is one of the district's contributing structures.

The LCR Nav Historic District was determined eligible for the NRHP under Criterion A in the areas of commerce and maritime history and under Criterion C in the area of engineering, in a draft nomination prepared for the USACE in 2023. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is "No Adverse Effect" for the Modified LPA and its design options. The finding received concurrence from the Washington State DAHP on October 13, 2023, and from the Oregon SHPO on March 18, 2024.

Figure 4-27. Aerial Map of the Lower Columbia River Federal Navigation Channel



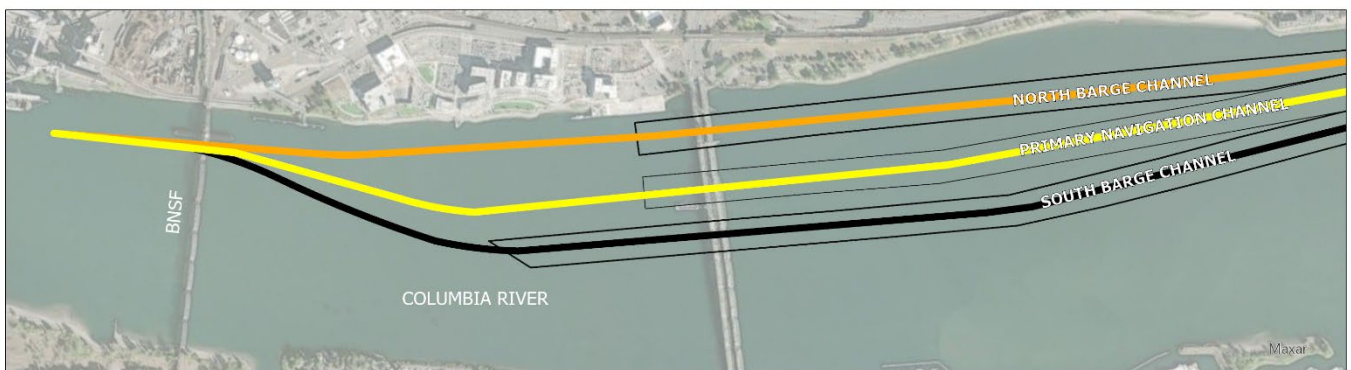
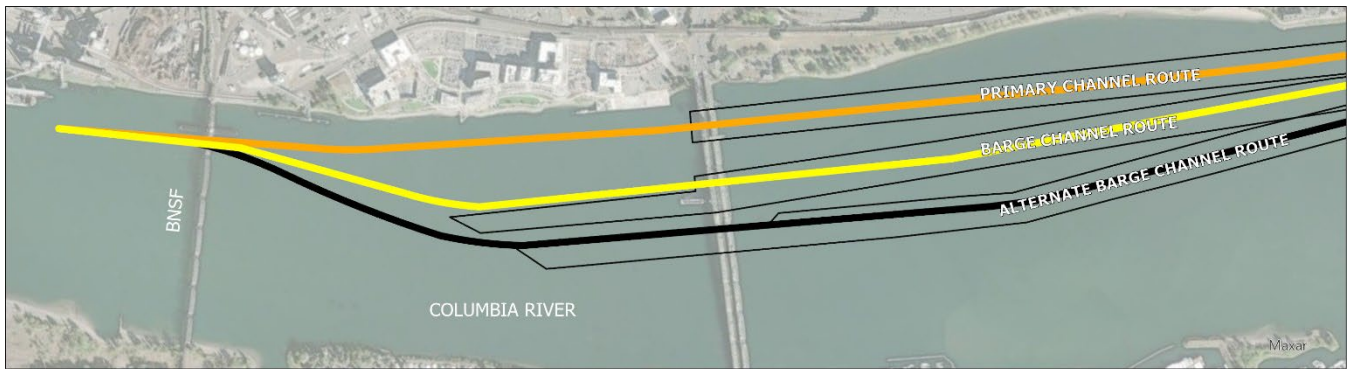
Source: USACE 2023

Use Evaluation for the Modified LPA

The Modified LPA would construct two adjacent bridges carrying I-5 across the Columbia River located immediately downstream (west) of the existing Interstate Bridge, and temporary in-water staging/work areas extending up to approximately 1,000 feet upstream (east) of the existing bridges and up to approximately 1,000 feet downstream (west) of the proposed bridges. These activities would occur over a small portion of two of the district's contributing resources: the LCR FNC from Vancouver to Bonneville Lock and Dam and the Upper Vancouver Turning Basin. The LCR FNC from Vancouver to Bonneville Lock and Dam contains three navigation channel routes (primary, barge, and alternate barge) which would be revised to correspond with the maximum vertical clearance and air draft provided by the proposed bridges. Subject to approval by USACE and U.S. Coast Guard (USCG), the channel routes would be slightly realigned, and the relative locations of the primary navigation channel (currently the northernmost route) and the barge channel (currently the middle route) would be switched so that the north barge channel would become the northernmost route and the primary navigation channel would become the middle route; the relative location of the alternate barge channel (the south barge channel) would remain the same, as would the width of the overall FNC (Figure 4-28). The Upper Vancouver Turning Basin, which marks the west end of the FNC, would shift downstream between approximately 300 and 325 feet to maintain its approximately 2,000 feet of length under the Modified LPA with all design options; its existing width of approximately 800 feet also would be maintained (Figure 4-29).

While these Program-related activities would result in alterations to the district, they would be minor, limited to the margins of two of the contributing structures within the more than 140-mile-long district, and would not reduce the integrity of location, setting, materials, design, workmanship, feeling, and association of either structure or of the district as a whole. Both the contributing structures and the district would retain their integrity and character-defining features under the Modified LPA.

Figure 4-28. Existing and Proposed Channel Routes within the Lower Columbia River Federal Navigation Channel



Note: Top figure shows the Existing Channel Routes within the LCR FNC from Vancouver to Bonneville Lock and Dam. Bottom figure shows the Proposed Channel Routes within the LCR FNC from Vancouver to Bonneville Lock and Dam. The proposed exchange of the relative location of the barge channel route (orange) and the primary channel route (yellow) (IBR, "Navigation Impact Report," rev. May 2022, 2-21) subject to approval by USACE and USCG.

Figure 4-29. Upper Vancouver Turning Basin



NOTE: The red outline denotes the boundary of the Upper Vancouver Turning Basin. The green outlines denote the location of the Lower Columbia River federal navigation channel (including its three channel routes) from Vancouver, Washington (RM 106.5) to Bonneville Lock and Dam (RM 145) (USACE 2023).

Temporary occupancy of the LCR Nav Historic District under the Modified LPA would include temporary in-water staging/work areas extending up to approximately 1,000 feet upstream (east) of the existing bridge and up to approximately 1,000 feet downstream (west) of the proposed bridges. This was considered in the Section 106 FOE for the historic site and was determined to not adversely affect the qualities of the site that make it eligible for the NRHP.

The Section 106 FOE for the historic district includes a finding of “No Adverse Effect” for the Modified LPA.

Preliminary Determination

The acquisition of right of way within the LCR Nav Historic District, including from contributing resources, would constitute a use under Section 4(f). The Section 106 FOE for the LCR Nav Historic District is “No Adverse Effect” for the Modified LPA, including all design options; the Washington DAHP and Oregon SHPO concurred with this finding on October 13, 2023, and March 18, 2024, respectively. Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have determined that the Modified LPA and its design options would have a *de minimis* impact on the district.

4.3.7 Use of the Interstate Bridge

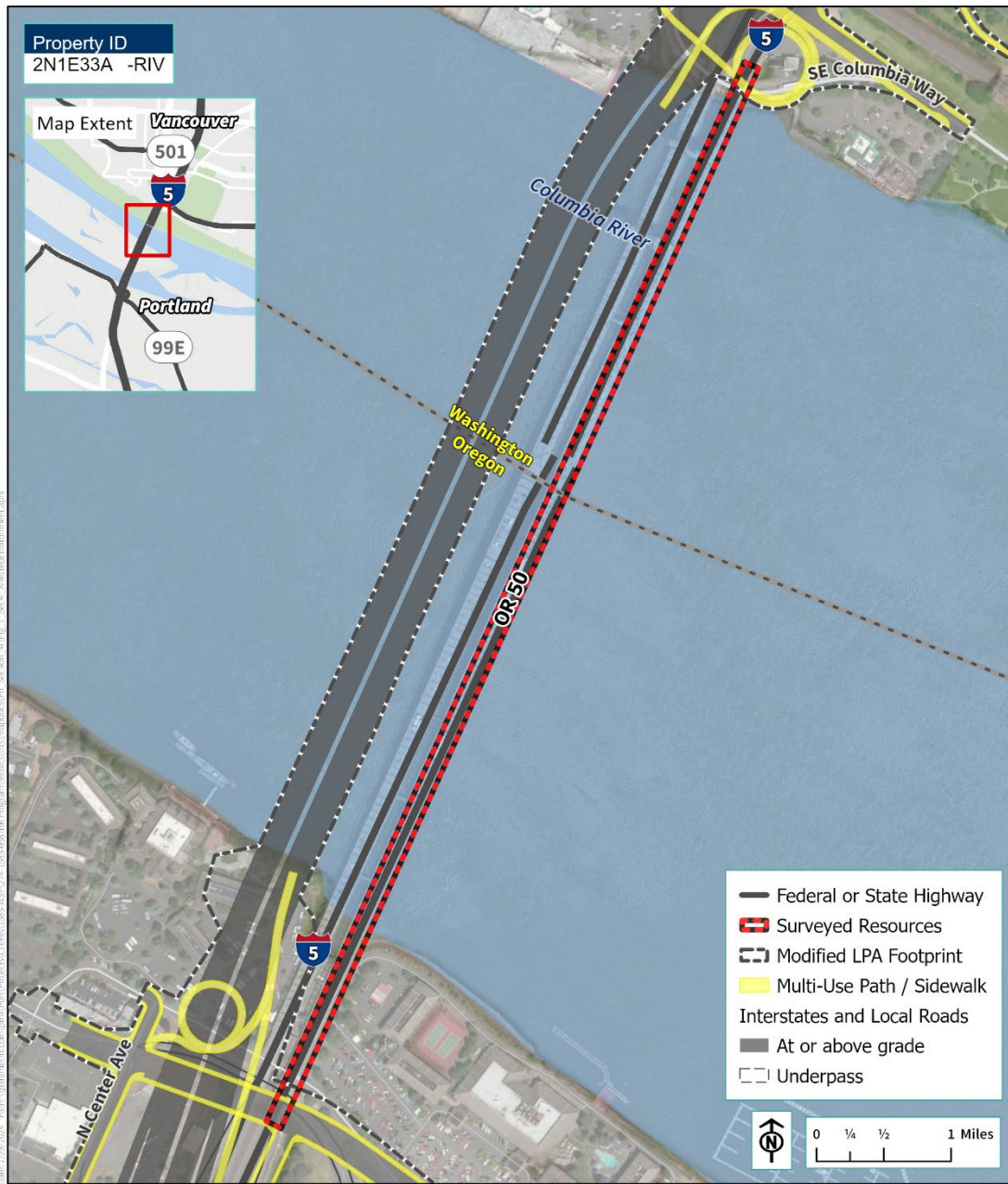
Northbound Interstate Bridge (Map ID – OR 50 and WA 381a)

Description

The northbound Interstate Bridge is a steel truss bridge (see Figure 4-30) that crosses the Columbia River between Portland and Vancouver. Completed in 1917 and modified in 1958, the bridge spans the Columbia River and measures 3,538 feet in length. The main span of the bridge in Vancouver is a steel through truss vertical lift span of the Pennsylvania-Petit type. The vertical lift span, when fully raised, creates a waterway clearance channel that measures 250 feet laterally and 178 feet vertically (above ordinary low water). The bridge is also composed of 10 steel through Pennsylvania truss secondary spans, which range in length from 266 to 531 feet. The bridge was retrofitted in 1958 to mimic the design of the westerly, southbound bridge.

The northbound Interstate Bridge was listed in the NRHP in July 1982 under Criteria A and C. The bridge is listed under Criterion A as a major engineering and financial accomplishment being the first highway bridge across the Columbia River to connect between the states of Oregon and Washington and is listed under Criterion C as an early example of a vertical lift steel bridge and an example of a bridge built by the engineering firm Harrington, Howard and Ash—renowned bridge engineers during the 20th century. The bridge maintains its integrity of location, design, materials, workmanship, and setting, and its boundary is the entirety of the northbound bridge structure and also includes approach spans, sidewalks, and other appurtenances related to the transportation use of the bridge. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023, and from the Oregon SHPO on March 19, 2024.

Figure 4-30. IBR Program Improvements and Area of Permanent Incorporation for the Northbound Interstate Bridge



Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would replace the existing Interstate Bridge with new bridges, which would necessitate the removal of the existing northbound Interstate Bridge (see Figure 4-30). The demolition of the existing bridge would destroy the structure’s integrity of location, design, setting, materials workmanship, feeling, and association, and would therefore constitute an “Adverse Effect” to this NRHP-listed structure under Section 106. The northbound Interstate Bridge would be permanently incorporated by the demolition, removal, and replacement for the Modified LPA, constituting a use of this historic site under Section 4(f).

As the entire historic site would be permanently incorporated, there would be no temporary occupancy of the northbound Interstate Bridge by the Modified LPA, including all design options.

Preliminary Determination

The Modified LPA and its design options would all require the acquisition of the northbound Interstate Bridge and its subsequent removal, which would render the historic site no longer eligible for the NRHP. Consistent with the definition of use set forth in 23 CFR 774.17, which notes that a use of Section 4(f) property occurs “when land is permanently incorporated into a transportation facility,” FHWA and FTA have determined that the Modified LPA and its design options would result in a use under Section 4(f) for the northbound Interstate Bridge. None of the exceptions under 23 CFT 774.13 would apply.

4.3.8 Use of Section 4(f) Historic Sites (Washington)

Historic Sites Evaluated to Have No Section 4(f) Use

Permanent Incorporation and Temporary Occupancy (Modified LPA with All Design Options) - No Use

Sites with No Effect under Section 106

Eleven historic sites listed in Table 4-7 were evaluated under Section 106 to have a finding of “No Effect” in Vancouver. None of these historic sites would be permanently incorporated or temporarily occupied by the Modified LPA or the design options. Therefore, there would be no direct use under Section 4(f) of these resources and the sites are not evaluated further for permanent incorporation or temporary occupancy.

Sites with Subsurface Easements

Two historic sites listed in Table 4-7, the Porter House and Hall House, were evaluated under Section 106 to have a finding of “No Adverse Effect” in Vancouver. These sites would require subsurface easement on portions of the site for installation of subterranean tie-back anchors (see Appendix D of the Historic Built Environment Technical Report for FOEs). No other permanent or temporary use of these properties would occur. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling or other subsurface-only activities if they:

- Disturb archaeological sites that are on or eligible for the NRHP, which warrant preservation in place;
- Cause disruption that would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impair the historic values of a historic site; or
- Otherwise do not meet the exception for temporary occupancy.

Of these, only the third and fourth bullets (historic sites and temporary occupancy) are relevant to analysis of built historic sites such as those in Table 4-7, none of which have associated known archaeological sites or function as public parks. Installation and use of tie-back anchors would neither result in a change to the property’s physical, auditory, or visual setting; cause vibration sufficient to damage these sites; or inhibit access to the sites. Therefore, subterranean installation of tie-back anchors would not substantially impair the historic integrity of these sites. Section 4(f) would not apply to the subterranean easements to accommodate tie-back anchors. Surface-level constructive activities would not enter the historic boundary of these sites. Therefore, the Modified LPA or design options would not permanently incorporate or temporarily occupy lands within the boundary of these sites or alter their character-defining features to construct the project.

Constructive Use

A constructive use does not occur when compliance with the requirements of 36 CFR 800.5 (Assessment of adverse effects) for proximity impacts of the proposed action, on a site listed on or eligible for the NRHP, results in an agreement of “No Effect” or “No Adverse Effect” (23 CFR Section 774.15). The Section 106 evaluation for the Program determined that there would be “No Effect” or “No Adverse Effect” on the historic sites listed in Table 4-7. Because the Program would have “No Effect” or “No Adverse Effect” on the historic sites, it would not substantially impair the activities, features, or attributes of the Section 4(f) properties and, therefore, it would not have a constructive use of the historic sites.

Table 4-7. Historic Sites (Vancouver) – No Use under Section 4(f)

Section 106 Determination	Site ID	Historic Site
No Historic Properties Affected (“No Effect”)	WA 7	Fendrich’s Furniture
	WA 10	Smith Tower
	WA 29	U.S. National Bank Building
	WA 191	William H. and Myrtle Hood Residence
	WA 382	Radio Transmission Building
	WA 900	Covington House
	WA 1144	Office Building
	WA 1182	Rudy Luepke Center for Senior Citizens
	WA 1233	Earls House
	WA 1319	Vancouver Barracks National Cemetery
	WA 1320	St. James Acres Cemetery
No Historic Properties Adversely Affected (“No Adverse Effect”) – Historic Sites with Subsurface Easements Only	WA 61	Porter House
	WA 62	Hall House

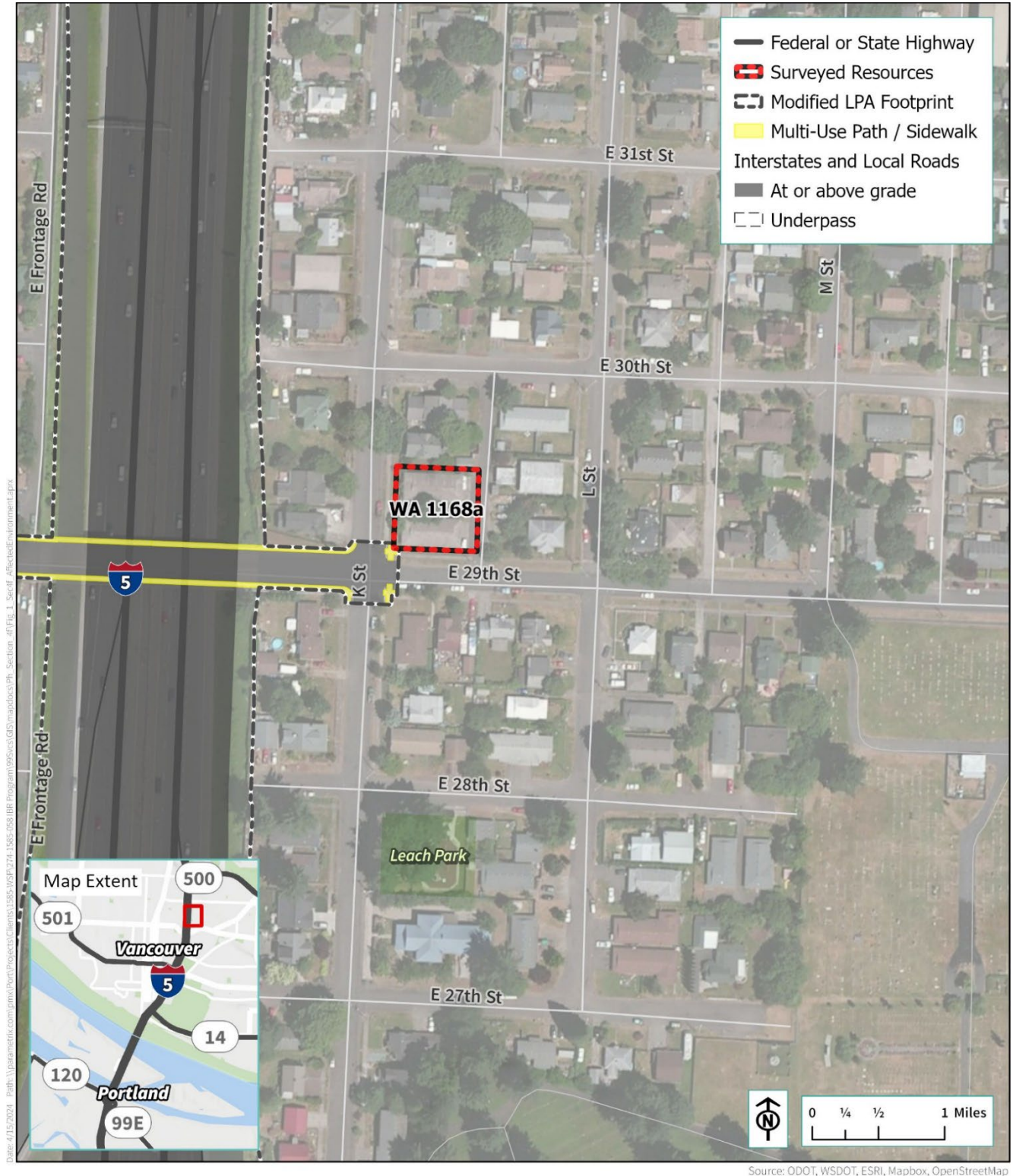
Historic Sites Evaluated to Have Temporary Occupancy Exception under Section 4(f)

2901 K Street (Map ID – WA 1168)

Description

The buildings at 2901–03 and 2905–07 K Street (collectively referred to as 2901 K Street) are single-story, Contemporary-style duplexes constructed in 1968 and located on a single tax lot in the Rose Village neighborhood of Vancouver, Washington (see Figure 4-31). The duplexes are eligible for listing in the NRHP under Criterion A at the local level of significance in the area of community planning and development, as well as under Criterion C in the area of architecture.

Figure 4-31. IBR Program Improvements and Area of Permanent Incorporation for 2901 K Street



The boundary for the historic site is defined by the tax lot boundary and includes both buildings, their shared courtyard, grass lawn, and rear concrete driveways. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “No Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023.

Use Evaluation for the Modified LPA

The Modified LPA would require widening the I-5 roadway to the west of the 2901 K Street site and the reconstruction of the I-5 overcrossing at E 29th Street. In all design options, the construction of new pedestrian and bicycle facilities at the E 29th Street overcrossing would involve improvements to the K Street and E 29th Street intersection, which is immediately southwest of the 2901 K Street site. The replacement of the overcrossing and improvements to pedestrian and bicycle facilities would result in negligible visual changes and would not alter the residential character of the historic site and its association with development history or Contemporary-style architecture. Furthermore, these activities would not require any permanent right of way from the historic site. As such, there would be no permanent incorporation of the 2901 K Street site.

The Modified LPA would, however, require an approximately 300-square-foot temporary construction easement that extends to the site's southwest corner, which presently contains a portion of the site's grass lawn and a single mature ornamental shrub. The temporary occupancy of the 2901 K Street site for the Modified LPA, inclusive of all design options, would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The easement would be needed for a duration less than the construction period for the project.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

Surface-level construction activities are not anticipated to enter the tax lot of 2901 K Street, which is the boundary for the historic site, nor would any additional structures or elements be constructed within the boundary. Overall, the Modified LPA would not substantially impair the site's character-defining features or reduce its integrity and ability to convey its significance. For these reasons, the temporary occupancy of the 2901 K Street site would result in minimal changes to the property in both nature and magnitude.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

There are no anticipated permanent adverse physical impacts to the 2901 K Street site as a result of construction of the Modified LPA, nor would there be interference with the site's character-defining features. These features include its linear massing, Dutch gable roofs, covered parking, shared courtyard, and landscaping elements, including grass lawns and shrubs growing against the building's walls. While the lawn within the temporary construction easement may be removed for construction, it would be restored following completion of construction. The ornamental shrub located in the temporary construction easement would be preserved in place, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The historic site would therefore maintain its ability to convey its significant development history and association with the Contemporary style, for which it is eligible for the NRHP. This is supported by the Section 106 FOE for the historic site, which includes a finding of "No Adverse Effect" for the Modified LPA.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

The Modified LPA would not construct any additional structures or elements within the boundary of the 2901 K Street site. If construction activities within the temporary construction

easement should require the removal of a portion of the lawn, this landscape feature would be restored to its original state when construction completes. The ornamental shrub located in the temporary construction easement would be preserved in place.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Consultation with the official with jurisdiction, the Washington SHPO, is ongoing.

For these reasons, the temporary occupancy of the 2901 K Street site during construction of the Modified LPA satisfies the temporary occupancy exemption criteria and would not constitute a use under Section 4(f).

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of the 2901 K Street site by the Modified LPA, including all design options. The Modified LPA, including all design options, would require a small temporary easement at the southwest corner of the historic site, but this would meet the temporary occupancy exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). The Modified LPA, including all design options, would not result in permanent incorporation of any portion of the site, nor would they lead to a constructive use of the site.

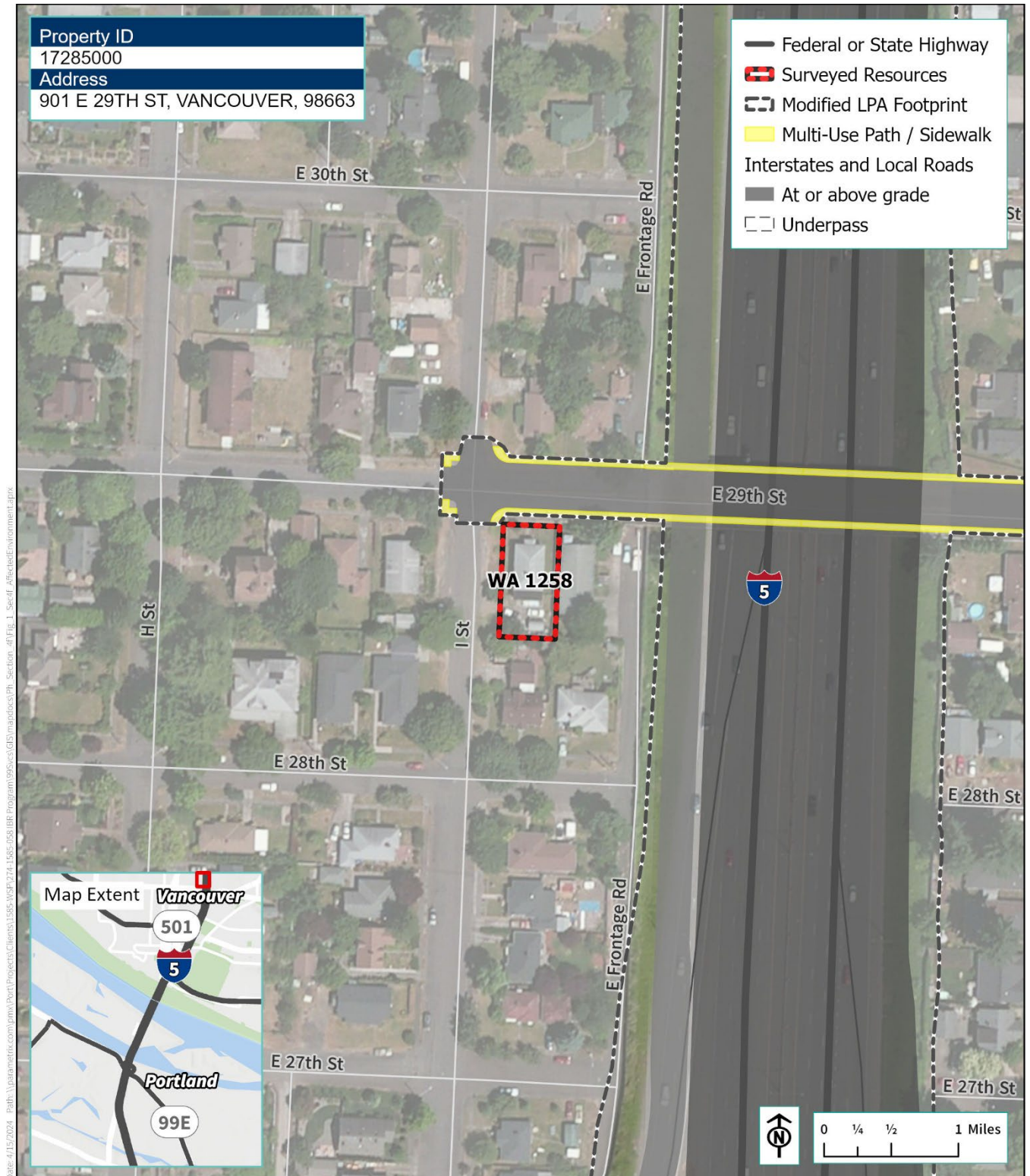
Mickler House (Map ID – WA 1258)

Description

The Mickler House is a Workingman’s Foursquare single-family dwelling located at 901 E 29th Street in Vancouver, Washington (see Figure 4-32). Constructed in 1907, the Mickler House is eligible for inclusion in the NRHP under Criterion A at the local level of significance in the area of community planning and development. The dwelling is a particularly early example of development in the area and is also representative of the first wave of urban residents to occupy the Vancouver Heights subdivision, which is now part of the Shumway neighborhood. The building retains its integrity of location, design, workmanship, feeling, and association; however, it has somewhat diminished integrity of setting and materials.

The boundary of the Mickler House site coincides with its tax lot boundaries, which have remained unchanged since the end of the period of significance. Within the boundary, only the residence and the front walkway contribute to the site’s significance. All other elements, including the paved driveway, shed, fence, and deck, are noncontributing. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “No Adverse Effect” for the IBR Program Modified LPA and its design options. The finding received concurrence from the Washington DAHP on October 13, 2023.

Figure 4-32. IBR Program Improvements near 901 E 29th Street



Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would reconstruct and widen the I-5 corridor, which is currently separated from the NRHP-eligible Mickler House by one residential parcel, J Street, and a concrete noise wall. Adjacent to the site, the Modified LPA would construct improvements to E 29th Street between the I-5 overcrossing and the I Street intersection. These improvements would potentially include enhancements to pedestrian and traffic access (e.g., sidewalks, curb ramps, signage), but they would not include the reconfiguration of the current roadway or the construction of additional traffic lanes; this section of E 29th Street would remain a two-lane, two-way road. It is anticipated that the Modified LPA would not require any permanent right of way from the Mickler House site. As such, there would be no permanent incorporation of the Mickler House site.

The Modified LPA would, however, require a temporary construction easement of approximately 50 square feet from the northern edge of the Mickler House site. Construction activities within the temporary construction easement could potentially interfere with or require the removal of an existing wood fence that delineates the historic site's tax lot boundary and/or disturb the northern edge of a concrete-paved walkway connecting the north elevation of the Mickler House to the sidewalk along E 29th Street. The temporary occupancy of the site for the Modified LPA, inclusive of all design options, would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The easement would be needed for a duration less than the construction period for the project.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

Surface-level construction activities at the Mickler House would be located at the northwest corner of the site. The Modified LPA would not modify any character-defining features of the Mickler House, including its one-story height, hipped roof with boxed eaves, wood tongue and groove siding with flat wood corner boards, double-hung wood windows, or setback from the adjacent streets; nor would it construct additional structures or elements within the boundary of the historic site. Overall, the Modified LPA would not substantially impair the site's character-defining features or reduce its integrity or ability to convey its significance. For these reasons, the temporary occupancy of the Mickler House site would result in minimal changes to the property in both nature and magnitude.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

There are no anticipated permanent adverse physical impacts to the Mickler House site as a result of construction of the Modified LPA, nor would there be any modification of the site's character-defining features. While the existing wood fence and concrete-paved walkway may be disturbed by construction, the fence does not contribute to the historic site's significance and the fence and walkway would be restored following completion of construction (see below). The historic site would therefore maintain its ability to convey its significant development history, for which it is eligible for the NRHP. This is supported by the Section 106 FOE for the historic site, which includes a finding of "No Adverse Effect" for the Modified LPA.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project.

The Modified LPA would not construct any additional structures or elements within the boundary of the Mickler House site. If construction activities within the temporary construction easement should disturb the northern edge of the concrete-paved walkway or require the removal of the wood fence, these landscape features would be restored to their original state once construction completes.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Consultation with the official with jurisdiction, the Washington SHPO, is ongoing.

For these reasons, the temporary occupancy of the Mickler House site during construction of the Modified LPA would meet the conditions required for exceptions (23 CFR 774.13(d)) and not constitute a use under Section 4(f).

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of the Mickler House site by the Modified LPA or its design options. The Modified LPA with all design options would require a small temporary easement at the northern edge of the historic site, but this would meet the temporary occupancy exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). Neither the Modified LPA nor the design options would result in permanent incorporation of any portion of the site, nor would they lead to a constructive use of the site.

House of Providence (Map ID – WA 150)

Description

The House of Providence (Providence Academy) is an institutional property located at 400 East Evergreen Boulevard in Vancouver, Washington (see Figure 4-33). The property, constructed between 1873 and 1874, contains an ornate, three-story building that is clad in brick and shows the influence of the Georgian/Federal and French Colonial architectural styles. The House of Providence is eligible for listing in the NRHP under Criteria A, B, and C, in recognition of the property's close association with the achievements of Mother Joseph of the Sacred Heart, who was the leader of the Sisters of Providence in the late 19th century and the architect of the House of Providence's primary building.

Figure 4-33. IBR Program Improvements and Area of Permanent Incorporation for House of Providence



The boundary for the House of Providence is defined by the tax lot boundary that contains the NRHP-eligible building and encompasses all extant historic features that convey the institution's original campus-like qualities. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is "No Adverse Effect" for the IBR Program Modified LPA and its design options. This received concurrence from the Washington DAHP on February 14, 2024.

Use Evaluation for the Modified LPA

The Modified LPA would reconstruct and widen the I-5 roadway to the east of the House of Providence. Although the widened interstate right of way would not encroach into the boundary of the historic site, the Modified LPA would construct a new retaining wall along the parcel's eastern boundary where no such wall currently exists. This would require one subsurface easement along the eastern edge of the historic site's boundary to accommodate tie-back anchors for the proposed retaining wall along I-5. The subsurface easement would extend approximately 100 feet into the boundary but would remain more than 100 feet from the primary building and its associated landscaping. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling or other subsurface-only activities if they:

- Disturb archaeological sites that are on or eligible for the NRHP, which warrant preservation in place;
- Cause disruption that would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impair the historic values of a historic site; or
- Otherwise do not meet the exception for temporary occupancy.

Of these, only the third (historic sites) and fourth (temporary occupancy) bullets are relevant to analysis of this historic site. At the House of Providence, installation and use of tie-back anchors under the Modified LPA would not result in a change to the site's physical, auditory, or visual setting because they would be entirely underground; cause vibration sufficient to damage the site because they are small diameter anchors drilled into the ground; or inhibit access to the site. Therefore, subterranean installation of tie-back anchors would not substantially impair the historic integrity of the site, and Section 4(f) would not apply to the subterranean easement to accommodate tie-back anchors.

In addition to the subterranean easement at the House of Providence, the Modified LPA would require a 4,700-square-foot temporary construction easement along the site's southern boundary at E Evergreen Boulevard. The easement would extend approximately 10 feet into the House of Providence's boundary, where no character-defining landscape features remain extant. The temporary occupancy of the site for the Modified LPA would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The easement would be needed for a duration less than the construction period for the project.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

The proposed road improvements along E Evergreen Boulevard are limited to the southern edge of the House of Providence Site and would occur more than 100 feet away from the site's primary contributing building. Overall, the improvements would not substantially impair the site's character-defining features or any of the aspects of the site's location or setting that

enable it to convey its significance. For these reasons, the temporary occupancy of the House of Providence would result in minimal changes to the property in both nature and magnitude.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

There are no anticipated permanent adverse physical impacts to the House of Providence as a result of construction of the Modified LPA. Construction would not require the permanent use of this portion of the House of Providence site. The site's character-defining features would remain intact and unaltered, and the Modified LPA would not diminish the site's integrity of location, design, setting, materials, workmanship, feeling, or association despite the proposed temporary construction easement and the adjacent infrastructure improvements. This is supported by the Section 106 FOE for the historic site, which includes a finding of "No Adverse Effect" for the Modified LPA.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

The Modified LPA would not construct any additional structures or elements within the boundary of the House of Providence site and would restore to pre-construction conditions the hedge and curb within the temporary construction easement.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Consultation with the official with jurisdiction, the Washington SHPO, is ongoing.

For these reasons, the temporary occupancy of the House of Providence site during construction of the Modified LPA would meet the conditions required for exceptions (23 CFR 774.13(d)) and not constitute a use under Section 4(f).

Use Evaluation for the Modified LPA with I-5 Shifted West Design Option

The Modified LPA with I-5 shifted west design option would have a different impact to the House of Providence than the Modified LPA and other design options. The Modified LPA with I-5 shifted west design option would permanently incorporate approximately 9,800 square feet of land from the east side of the House of Providence historic site. Because the east portion of the site has already been heavily altered and does not retain integrity to its period of significance, the permanent acquisition would not impact contributing elements of the site and would not substantially impair the site's ability to convey its significance. This design option would also include approximately 2,000 square feet of temporary occupancy, which was considered in this finding.

Because neither the permanent acquisition nor the temporary occupancy of the House of Providence would substantially impair the activities, features, or attributes that contribute to its NRHP eligibility, the Section 106 FOE for the historic site includes a finding of "No Adverse Effect." Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have found that the Modified LPA with I-5 shifted west design option's permanent acquisition and temporary occupancy would have a *de minimis* impact to this site

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of the House of Providence site by the Modified LPA with or without C Street ramps, with any bridge configuration, with one or two auxiliary lanes, or with centered I-5. The Modified LPA and these design options would each require a temporary easement along the southern boundary of the historic site, but these easements would meet the temporary occupancy

exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). The Modified LPA and these design options would not result in permanent incorporation of any portion of the site, nor would they lead to a constructive use of the site.

The Modified LPA with I-5 shifted west would require the permanent incorporation of 9,800 square feet from the eastern edge of the House of Providence site, as well as temporary occupancies at the southern edge of the site. The Section FOE for the House of Providence is “No Adverse Effect” for the Modified LPA with I-5 shifted west; the Washington DAHP concurred with this finding on February 14, 2024. Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have determined that the Modified LPA with I-5 shifted west would result in temporary and permanent *de minimis* impacts under Section 4(f) for the House of Providence site.

Evergreen Hotel (Map ID – WA 21)

Description

The Evergreen Hotel, located at 500 Main Street, is an Italian Renaissance–style hotel located in downtown Vancouver (see Figure 4-34).

The hotel was constructed in 1928. The Evergreen Hotel was listed in the NRHP in 1979 under Criterion A, at the local level or significance, in the area of community planning and development and commerce. The hotel has not undergone any major alterations and retains its character-defining features. These features include the site’s central downtown location, two primary entrances with six broad bays (on the south and east elevations), marble balconies, arched motifs, sandstone style finish, projecting roof forms clad in Spanish tile, and expansive interior spaces with a large staircase and mezzanine. Overall, the site retains integrity of location, materials, workmanship, feeling, and association; however, its integrity of design has been slightly diminished by infill to some of the exterior bays, and its integrity of setting has been diminished by the surrounding development of downtown Vancouver after the period of significance. The boundary for the Evergreen Hotel coincides with its tax lot boundary, which is contiguous with the building footprint.

The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “No Adverse Effect” for the IBR Program Modified LPA and its design options. The finding received concurrence from the Washington DAHP on October 13, 2023.

Figure 4-34. IBR Program Improvements in Relation to the Evergreen Hotel



Use Evaluation for the Modified LPA

The Modified LPA activities adjacent to the site would consist of improvements to the intersection of Main Street and E 5th Street, within existing right of way at the southeast corner of the property. Additional activities located near the property would include the construction of a new, elevated on-ramp connecting SR 14 westbound to I-5 southbound and a new bridge supporting LRT; both of these structures would be constructed to the south of the Evergreen Hotel and would be clearly visible from the property. The elevated on-ramp would come within approximately 70 feet of the Evergreen Hotel's boundary but would not require any permanent incorporation of land from the historic site.

A constructive use does not occur when compliance with the requirements of 36 CFR 800.5 (Assessment of adverse effects) for proximity impacts of the proposed action, on a site listed in or eligible for the NRHP, results in an agreement of "No Effect" or "No Adverse Effect" (23 CFR Section 774.15).

The Modified LPA would, however, require a temporary construction easement along the historic site's southern boundary for the improvements to the intersection of Main Street and E 5th Street. Construction activities would not contact the Evergreen Hotel building and would not alter any of its character-defining features, but one of the primary entrances (located on the south elevation) would potentially be inaccessible during construction. However, the building's other primary entrance, located on the east elevation, would remain unobstructed and continue to function as normal. Access signage and instrumentation, such as vibration or noise monitors, may be placed in the hotel during construction.

The temporary occupancy of the Evergreen Hotel for the Modified LPA including design options, would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The signage and instrumentation and the south access limitation to the hotel would occur for a duration less than the construction period for the project.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

Construction activities would not contact the Evergreen Hotel and would not alter any of its character-defining features, but the south entrance would be rendered inaccessible during construction. Any temporary signage or instrumentation would not permanently alter the site and would be removed at the end of construction. The hotel's east primary entrance would remain unobstructed and continue to function as normal. As the east entrance would remain accessible during construction, the building would retain its ability to convey its significance during construction despite the temporary obstruction of the primary entrance on the south elevation.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

There are no anticipated permanent adverse physical impacts to the Evergreen Hotel as a result of construction of the Modified LPA, nor would there be interference with the Evergreen Hotel's character-defining features related to the development history of downtown Vancouver. While the south primary entrance would potentially be inaccessible during construction, the east primary entrance would remain accessible, and the site would maintain its ability to convey its significant development history and role in the development of downtown Vancouver. This is supported by the Section 106 FOE for the historic site, which includes a finding of "No Adverse Effect" for the Modified LPA.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

Upon completion of construction, the primary entrance on the south elevation would be returned to regular use. Any temporary signage or instrumentation would be removed, and the site would thus be fully restored to its condition prior to the Modified LPA.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Consultation with the official with jurisdiction, the Washington SHPO, is ongoing.

For these reasons, the temporary occupancy of the Evergreen Hotel site would meet the requirements of 23 CFR 774.13(d) for an exception from Section 4(f) use; therefore, temporary occupancy of the site during construction of the Modified LPA or options would not constitute a use under Section 4(f).

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of the Evergreen Hotel by the Modified LPA or the design options. The Modified LPA with all design options would temporarily close the southern entrance of the hotel, but the temporary occupancy would meet the exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). Neither the Modified LPA nor the design options would result in permanent incorporation of any portion of the site, nor would they lead to a constructive use of the site.

Who Song & Larry's Restaurant (Map ID – WA 1138)

Description

Who Song & Larry's Restaurant at 111 SE Columbia Way is a roadside style commercial building constructed in 1981 and located along the north shore of the Columbia River in Vancouver, Washington (see Figure 4-35). Who Song & Larry's Restaurant is eligible for inclusion in the NRHP under Criterion C, at the local level of significance, in the areas of architecture and commerce. It is the best-known example of the roadside style's use within the corporate limits of Vancouver and demonstrates its hallmarks including a distinctive eye-catching design meant to attract and serve customers traveling by car on the adjacent interstate. Character-defining features include the building's general form and massing, its complex roof forms, intricate fenestration and detailing, and its associated parking area. The building's outdoor dining area, river-facing viewsheds, and visibility to I-5 are also important features of its original design and are considered character-defining.

The boundary of the Who Song & Larry's Restaurant site is defined by the southern edge of the outdoor dining deck to the south, the eastern boundaries of the subject parcels (marked on site by a concrete dwarf wall) to the east, the southern edge of the SE Columbia Way sidewalk to the north, and the western boundaries of the subject parcels to the west, excluding the northwest extension. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is "No Adverse Effect" for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023.

Figure 4-35. IBR Program Improvements in Relation to the Who Song & Larry's Restaurant



Use Evaluation for the Modified LPA

The Modified LPA would involve road improvements along the existing SE Columbia Way to the north, a proposed new shared-use path and bridge to the west, and a construction impact area within the Columbia River waterway to the east. Road improvements along SE Columbia Way would potentially include enhancements to pedestrian and traffic access (e.g., sidewalks, curb ramps, signage), but they would not include the reconfiguration of the current roadway or the construction of additional traffic lanes; this section of SE Columbia Way would remain a two-lane, two-way road. This narrow easement would only be temporary and would be located approximately 150 feet away from the site's primary building. As a result, the Modified LPA, inclusive of all design options, would not require any permanent right of way from the Who Song & Larry's Restaurant.

The Modified LPA, inclusive of all design options, would require a temporary construction easement along the site's northern boundary for improvements to SE Columbia Way. Construction activities would not contact the principal Who Song & Larry's Restaurant building and would not alter any of its character-defining features, but the primary vehicular entrance to the north would potentially be rendered inaccessible during construction. However, the site would still be made accessible from the eastern side of the boundary. Access signage and instrumentation, such as vibration or noise monitors, may be placed in the restaurant during construction.

The temporary occupancy of the Who Song & Larry's site for the Modified LPA would meet the conditions required for exceptions (23 CFR 774.13(d)), including:

Temporary duration, i.e., less than the time needed for construction of the project, and there would be no change in ownership of the land

The easement would be needed for a duration less than the construction period for the project.

Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal

While the proposed road improvements along SE Columbia Way would be partially visible from the north side of the Who Song & Larry's site, activities would occur 150 feet away from the site's primary building. Additionally, there are two rows of mature trees—with a sidewalk in between them—running along SE Columbia Way that would partially visually obscure the proposed road improvements. Overall, the improvements would not substantially impair the site's character-defining features or any of the aspects of the site's location or setting that enable it to convey its significance. For these reasons, the temporary occupancy of the Who Song & Larry's site would result in minimal changes to the property in both nature and magnitude.

There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis

There are no anticipated permanent adverse physical impacts to the Who Song & Larry's Restaurant site as a result of construction of the Modified LPA, nor would there be modification of the site's character-defining features. The historic site would therefore maintain its ability to convey its significance as the best-known example of the roadside style's use within the corporate limits of Vancouver, for which it is eligible for the NRHP. This is supported by the Section 106 FOE for the historic site, which includes a finding of "No Adverse Effect" for the Modified LPA.

The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

Upon completion of construction, access to the site along the northern boundary would be returned to regular use. Any temporary signage or instrumentation would be removed, and the site would be fully restored to its condition prior to the Modified LPA.

There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) property regarding the above conditions.

Consultation with the official with jurisdiction, the Washington SHPO, is ongoing.

For these reasons, temporary occupancy of the Who Song & Larry Restaurant site during construction of the Modified LPA would meet the conditions required for exceptions (23 CFR 774.13(d)) and not constitute a use under Section 4(f).

Preliminary Determination

Based on the analysis above, there would be no Section 4(f) use of the Who Song & Larry's Restaurant by the Modified LPA or the design options. The Modified LPA with all design options would temporarily close the northern entrance of the restaurant site, but the temporary occupancy would meet the exception criteria in 23 CFR 774.13(d) and would not constitute a use under Section 4(f). Neither the Modified LPA nor the design options would result in permanent incorporation of any portion of the site, nor would they lead to a constructive use of the site.

Historic Sites Evaluated to Have Use with a Greater than *de minimis* Impact under Section 4(f)

Normandy Apartments (Map ID – WA 149)

Description

The Normandy Apartments building is a Tudor Revival style, multifamily housing complex located at 318 E 7th Street in Vancouver (see Figure 4-36). Originally constructed in 1928 and modified in 1960, the historic site is eligible for listing in the NRHP under Criteria A and C, at the local level of significance, in the areas of community planning and development and architecture. The Normandy Apartments building retains integrity of location, materials, workmanship, feeling, and association, and has slightly reduced integrity of design and setting.

The boundary of the historic site is defined by the right of way of I-5 to the east, the sidewalk paving of E 7th Street to the south, and an adjacent parcel to the north. The western portion of the original tax lot has been repaved as part of the surface parking lot; no walkways or other historic features are intact. Because of this, the western boundary of the property is aligned with the western edge of the building footprint. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is "Adverse Effect" for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023.

Figure 4-36. IBR Program Modified LPA Improvements in Relation to the Normandy Apartments



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Figure 4-37. IBR Program Modified LPA with I-5 Shifted West Design Option in Relation to the Normandy Apartments



Use Evaluation for the Modified LPA

The Modified LPA would reconstruct and widen the I-5 corridor to the east of the Normandy Apartments. Related activities would include the construction of a new, elevated LRT alignment; a ramp connecting I-5 to SR 14; and retaining and noise walls immediately east of the building. These activities would require one narrow, approximately 700-square-foot permanent acquisition paralleling the eastern margin of the boundary of the historic site, as well as one approximately 5,000-square-foot subsurface easement extending under the southern portion of the apartment building's east wing to accommodate for tie-back anchors on the retaining wall.

These tie-back anchors would have no permanent surface disturbance within the boundaries of the historic site. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling or other subsurface-only activities if they:

- Disturb archaeological sites that are on or eligible for the NRHP, which warrant preservation in place;
- Cause disruption that would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impair the historic values of a historic site; or
- Otherwise do not meet the exception for temporary occupancy.

Of these, only the third (historic sites) and fourth (temporary occupancy) bullets are relevant to analysis of the Normandy Apartments. Installation and use of the tie-back anchors would neither result in a change to the property's physical, auditory, or visual setting; cause vibrations sufficient to damage the property; nor inhibit access to the property. Subsurface installation of the tie-back anchors would not substantially impair the historic values of the property. Therefore, Section 4(f) would not apply to the subsurface easements to accommodate tie-back anchors.

Section 4(f) would, however, apply to the permanent acquisition and temporary construction easement paralleling the eastern boundary of the Normandy Apartments (see Figure 4-36). The Modified LPA with or without C Street ramps, with any bridge configuration, one or two auxiliary lanes, and centered I-5 would all have the same acquisition requirements. For the Modified LPA and these design options, the permanent acquisition would measure 705 square feet, while the temporary easement would include an additional 300 square feet. Both would include landscaping elements that currently screen the apartment building from I-5, though neither would include any portion of the apartment building itself. Activities within and around the acquisition and easement, including construction of the proposed noise and retaining walls and elevated LRT alignment, would be located in proximity to the building. The retaining wall would be located approximately 5 feet from its southeast corner; this would considerably reduce the approximately 33-foot-wide buffer that currently separates the building from the western edge of the pavement for the I-5 off-ramp connecting to SR 14. Furthermore, the proposed noise and retaining walls and elevated LRT alignment would be new intrusions, not replacing any preexisting elements of a similar design or function. The proposed elevated LRT alignment, which would rise to the approximate height of the apartment building, would block views of the property from the east. Collectively, the permanent incorporation, temporary occupancy, and effects of the Modified LPA would change the current setting of the historic site and reduce the Normandy Apartments' integrity of setting, feeling, and association to an extent that it would no longer be able to convey its significant association with the interwar development of Vancouver, for which it has been determined NRHP-eligible under Criterion A. The Modified LPA would therefore constitute an "Adverse Effect" to the Normandy Apartments under Section 106.

Interstate Bridge Replacement Program

I-5 shifted west would result in the same use determination, though the effects would be different (see Figure 4-37). The Modified LPA with I-5 shifted west design option would shift the I-5 mainline and ramps approximately 40 feet west of its current location. This option would require the permanent right-of-way acquisition of the Normandy Apartments property and removal of the building and the landscaping elements to the east of the building and in the courtyard. The I-5 shifted west design option would, therefore, permanently incorporate approximately 14,700 square feet of the property. This would be a greater incorporation and greater harm to the historic site than would occur under the other Modified LPA design options.

Preliminary Determination

The Section 106 FOE for the Normandy Apartments includes a finding of “Adverse Effect” for the Modified LPA, including all design options; the Washington DAHP concurred with this finding on October 13, 2023. The Modified LPA with I-5 shifted west design option would require the permanent right-of-way acquisition of the entire Normandy Apartments historic site and the removal of all of its historic features resulting in a use under Section 4(f). The Modified LPA and all other design options (excluding I-5 shifted west design option) would require a permanent incorporation of 705 square feet and a temporary occupancy of 300 feet paralleling the eastern boundary of the historic site. The Modified LPA and all other design options would therefore result in a use under Section 4(f). Therefore, FHWA and FTA have determined that the Modified LPA, including all design options, would result in a Section 4(f) use of this historic site.

Bridge Substation (Map ID – WA 1192)

Description

The Bridge Substation is a utilitarian electrical substation building located at 100 SE Columbia Way in Vancouver, Washington (see Figure 4-38). The two-story portion of the Bridge Substation was originally constructed in 1911 as the Mount Hood Railway and Power Company Vancouver Substation. This substation was located approximately 1 mile to the east of 100 SE Columbia Way and was relocated to its present location in 1913. The Bridge Substation is eligible for inclusion in the NRHP under Criterion C, at the local level in the area of architecture. The building is significant as a relatively rare surviving example of the electrical substation building type constructed between the late 1880s and early 1920s.

The building retains most of its character-defining features indicative of its utilitarian style and electrical substation building type. However, a one-story, west addition was constructed in 1927, and an entrance pavilion was subsequently added to the same part of the building. The primary setting of the building consists of the BNSF Railway embankment to the north and east, SE Columbia Way to the southeast and south, the 1917 Interstate Bridge to the southwest, and I-5 to the west. The setting has changed little from the 1960s and is consistent with the period of significance. As a result, the building retains its integrity of location, setting, workmanship, and feeling, while its integrity of materials, design, and association have been somewhat diminished. The boundary of the site is delineated by the original, eastern portion of the building located at its present site since 1913. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is “Adverse Effect” for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023.

Figure 4-38. IBR Program Modified LPA Improvements in Relation to the Columbia Street Bridge Substation



Use Evaluation for the Modified LPA

The Modified LPA, inclusive of all design options, would acquire and permanently incorporate the Bridge Substation site into right of way, to construct a proposed shared-use path and shared-use path bridge. Construction of the path and bridge would include demolition of the Bridge Substation. As a result, no features that allow the site to convey its historic significance as a NRHP-eligible site under Criterion C would remain following the completion of construction. As described in the Section 106 FOE, the Modified LPA would have an “Adverse Effect” on the site. The Modified LPA would permanently incorporate the entirety of the Bridge Substation site.

As the entire site would be permanently incorporated, there would be no temporary occupancy of the Bridge Substation site by the Modified LPA, inclusive of all design options.

Preliminary Determination

The Modified LPA with all design options would require the acquisition of the Bridge Substation and the subsequent removal of all its extant features, rendering the historic site no longer eligible for the NRHP. Consistent with the definition of use set forth in 23 CFR 774.17, which states that a use of Section 4(f) property occurs “when land is permanently incorporated into a transportation facility,” FHWA and FTA have determined that the Modified LPA and its design options would result in a use under Section 4(f) for the Bridge Substation.

The use of the Bridge Substation would be a greater than *de minimis* impact, which for historic sites requires a Section 106 finding of “No Adverse Effect” (23 CFR 774.17). Due to the extent of proposed activities at the Bridge Substation, including the demolition of the primary building and its site features, the Section 106 FOE for the historic site includes a finding of “Adverse Effect” for the Modified LPA with all design options; the Washington DAHP concurred with this finding on October 13, 2023.

VNHR Historic District (Multiple)

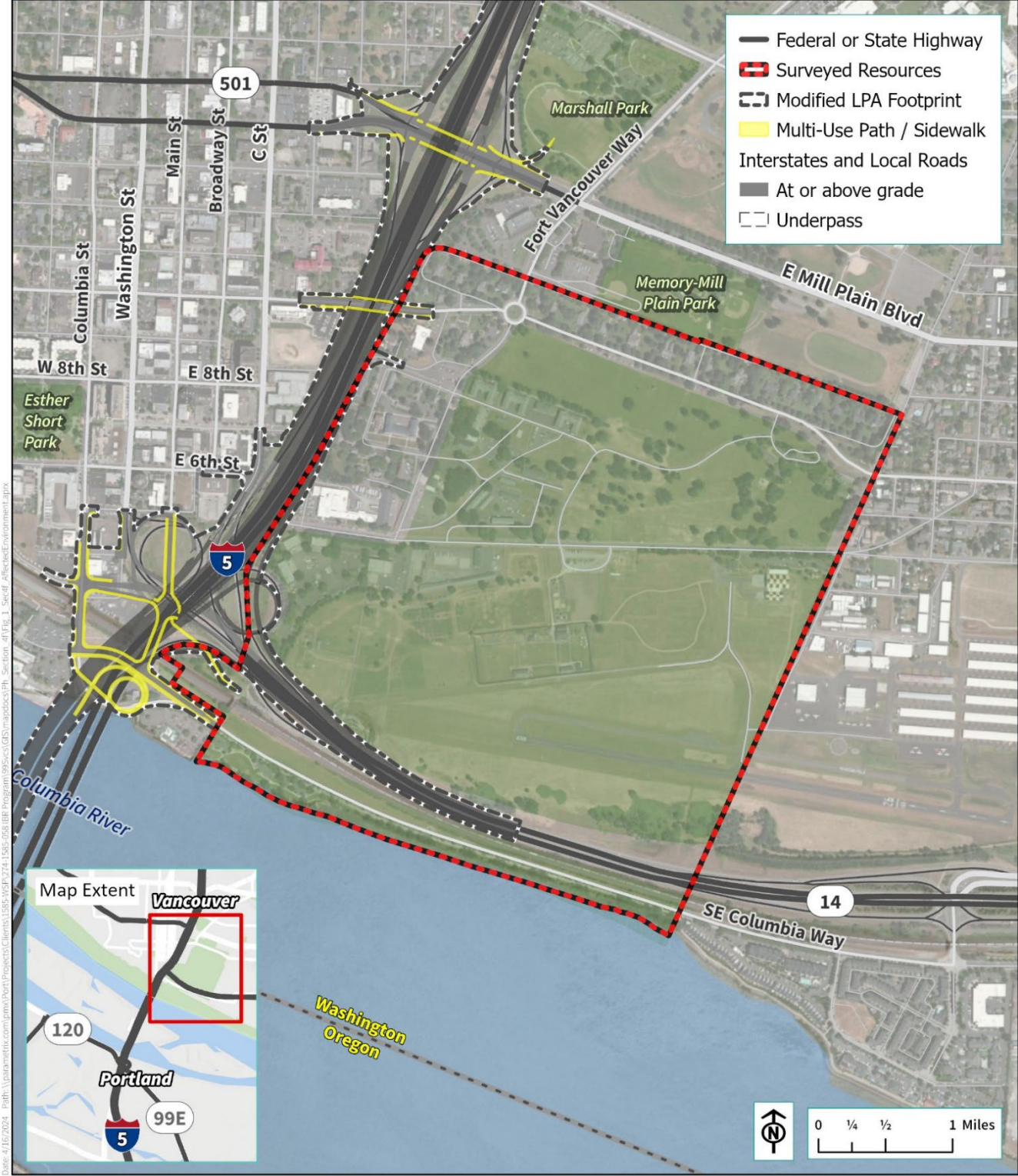
Description

The VNHR Historic District is an NRHP-listed historic district that encompasses 397.7 acres and includes a total of five historic properties, including four NRHP-listed or determined eligible historic districts and one historic site (see Figure 4-39). Of the 397.7 acres within the VNHR Historic District boundary, 49.7 acres were WSDOT highway right of way at the time the district was listed and do not contribute to eligibility. The Fort Vancouver site was first established as a National Monument in 1948 and redesignated as a national historic site in 1961 to preserve and interpret historically significant and exceptionally complex overlapping areas associated with Native American, HBC, U.S. military, and NPS uses of land that have occurred over time. The originally recognized Fort Vancouver NHS’s boundaries have expanded over time, and the original site was encompassed by the NRHP-listing of the VNHR Historic District in 2007.

The VNHR Historic District includes 74 contributing historic built environment resources, as well as an additional 12 contributing archaeological sites and two objects. The district was listed in the NRHP in 2007 under Criteria A, C, and D with a period of significance beginning 2,500 years before present (BP) and ending in 1966 of the common era (CE). Other NRHP individually eligible or listed historic districts encompassed within the boundary, and considered collectively in this Section 4(f) evaluation, of the VNHR Historic District include:

- Pearson Field Historic District (Determined NRHP-Eligible District, 1990)
- Vancouver Barracks Historic District (Determined NRHP-Eligible District, 1984)
- Officers Row Historic District (NRHP District, 1974)
- Fort Vancouver NHS (NRHP Site, 1966)

Figure 4-39. IBR Program Modified LPA Improvements in Relation to the VNHR Historic District



Source: ODOT, WSDOT, ESRI, Mapbox, OpenStreetMap

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The boundary of the VNHR Historic District is delineated by the alleyway behind Officers Row to the north, I-5 to the west, the north shore of the Columbia River to the south, and a boundary corresponding to the alignment of East Reserve Street to the east. Within these bounds, the site encompasses approximately 207 acres within the VNHR Historic District in three noncontiguous sections. The sections are divided by the alignment of SR 14 and the SE Columbia Way creating a large northern section and two elongated narrow sections to the south. The boundary is generally defined by existing linear features, including roadways or extant property lines; however, its southwest corner runs into the alignment of the I-5 and SR 14 interchange and includes over four acres of noncontributing property that is owned and managed by WSDOT.

The Fort Vancouver NHS is also a unit in the National Park System and qualifies for protection of its recreational activities, features, and attributes under Section 4(f) as a public park in addition to its protection as a historic site. The use of the Fort Vancouver NHS under the provisions of a public park is evaluated in Section 4.3.4

Use Evaluation for the Modified LPA

The Modified LPA would reconstruct and widen the I-5 corridor to the west of the VNHR Historic District. The boundary of the VNHR Historic District includes approximately 50 acres of right of way owned and operated by WSDOT for transportation purposes. Because a portion of the VNHR Historic District was already being used as a transportation facility when the district was listed and does not contribute to the district, the Modified LPA, including all design options, within that boundary does not constitute a Section 4(f) use and is not included in the incorporation areas. Within the VNHR Historic District, the Modified LPA would require the permanent acquisition of a narrow strip of land (less than 1 acre in total) along the district's western edge, small segments (less than 0.05 acres in total) along the alignment of SR 14, as well as additional segments in the district's southwestern corner near the Old Apple Tree (less than 0.3 acres in total) and the embankment of the BNSF Railway alignment. These permanent acquisitions of approximately 65,600 square feet would constitute a use of the VNHR Historic District under Section 4(f).

The Modified LPA with the I-5 shifted west design option would move the I-5 mainline and ramps 40 feet west of its current location.

The Modified LPA also would require a subsurface easement extending approximately 50 feet beneath the site's northwest corner to accommodate tie-back anchors for a new retaining wall within the Historic District's Boundary. These tie-back anchors would have no permanent surface disturbance within the boundaries of the historic district. Per Question 28A of the *Section 4(f) Policy Paper* (FHWA 2012), Section 4(f) applies to tunneling or other subsurface-only activities if they:

- Disturb archaeological sites that are on or eligible for the NRHP, which warrant preservation in place;
- Cause disruption that would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impair the historic values of a historic site; or
- Otherwise do not meet the exception for temporary occupancy.

The tie-back anchors would not disturb archaeological sites within the VNHR Historic District that warrant preservation in place. The tie-backs would not impair the historic value of the site, nor would they require additional temporary occupancy for their installation. For these reasons, the subsurface easements for tie-backs would not constitute additional use of the VNHR Historic District under Section 4(f) beyond the permanent incorporation identified above.

As identified through the Section 106 process, the IBR Program would adversely affect 14 of the contributing resources within the boundaries of the VNHR Historic District. Contributing resources to the NRHP-listed historic district constitute activities, features, or attributes of the district that qualify it for protection under Section 4(f). The 14 resources are:

- House (Building 1)
- House (Building 2)
- Duplex (Building 3)
- Duplex (Building 4)
- Munitions Storehouse (Building 102)
- Original Pearson Hangar (Building 189)
- Pearson Field Office (Building 194)
- Post Hospital (Building 614)
- Non-Commissioned Officer (NCO) Family Quarters (Building 635)
- NCO Family Quarters (Building 644)
- NCO Family Quarters (665)
- Work Shop (Building 786)
- Army Road System
- Fort Vancouver NHS Visitor Center

Adverse effects on these resources include direct effects through incorporation and anticipated construction vibrations, as well as indirect effects, including auditory and visual effects. These effects constitute potential harm to the district.

Permanent Incorporation of Land

The Modified LPA requires the permanent incorporation of approximately 65,600 square feet of the VNHR Historic District, including a small portion of the Army Road System, a contributing feature of the district, at the west end of E 5th Street; small segments along the alignment of SR 14; segments at the southwestern corner of the historic district; and the embankment of the BNSF Railway alignment. Although the site's integrity of setting has already been substantially diminished by the surrounding urban context and construction of I-5 during the early 1950s, the Modified LPA would further diminish its integrity of setting, feeling, and association. The Modified LPA with the I-5 shifted west design option would decrease the incorporation and demolition of a segment of the Army Road System between three and nine feet.

The single VNHR Historic District contributing resource incorporated under the Modified LPA is the Army Road System.

Vibration Effects

As noted in Section 3.11, Noise and Vibration, unmitigated ground-borne vibration could exceed FTA damage risk criteria to resources within the VNHR Historic District. Potential for structural damage was identified to the Post Hospital (Building 614) and NCO Family Quarters (Buildings 635 and 644).

The Modified LPA with I-5 shifted west would reduce the potential risk of vibration damage to both of the NCO Family Quarters Buildings (Building 635 and 644) by moving construction activities more than 100 feet from the building's footprint. Construction would still occur within 100 feet of the Post Hospital building's footprint; therefore, vibration damage risk to the Post Hospital would continue to occur under the Modified LPA with I-5 shifted west design option.

The Section 106 process, once completed, will result in a Programmatic Agreement on the treatment of historic properties that will identify provisions to reduce and mitigate adverse effects to historic properties. It may include requirements to reduce the potential for harm from vibration during construction, such as condition inspection, monitoring vibration during construction, preemptive maintenance and repair, and limits on certain equipment or activities. Damage caused by construction vibration would be repaired in accordance with the Secretary of the Interior Standards for the Treatment of Historic Properties (36 CFR 68).

Archaeological Resources

Archaeological sites that are NRHP eligible and that meet certain conditions, such as warranting preservation in place, are subject to the provisions and protections of Section 4(f). Archaeological sites are not considered worthy of preservation in place if their primary importance is for the information that can be learned from data recovery.

As referenced above, 12 significant archaeological sites, or archaeological contributing elements to the VNHR Historic District, are located in the APE. Previous construction of I-5 and SR 14 likely affected several sites. The APE also includes an area where a historic military cemetery was located. While graves were exhumed and re-interred at another cemetery during the late 1800s, archaeological research has indicated that not all of the remains were relocated. During the construction of I-5, unmarked graves were reportedly discovered, and other potential grave shafts have been identified in the vicinity of the historic cemetery. The exact location of the cemetery is not included in this document because of the sensitive nature of the resource.

Three of HBC Village archaeological resources within the VNHR Historic District—Kanaka House, Tayenta's House, and House 4—qualify as Section 4(f) properties because they warrant preservation in place, based on consultation with the officials with jurisdiction. None of the other affected archaeological sites in the APE, either inside or outside the VNHR Historic District, were determined to warrant preservation in place under CRC (CRC 2011). Consistent with 23 CFR 774.13(b)(2), as part of the CRC project the officials with jurisdiction over the Section 4(f) properties were consulted and agreed with the Administration finding that each of the other archaeological resources within the VNHR Historic District are "important chiefly because of what can be learned by data recovery and has minimal value for preservation in place." While the Section 106 process for the IBR Program has not yet identified any new information that would change this determination, identification of resources and related consultation is ongoing. Data recovery excavations or other appropriate mitigation would be conducted for these sites in accordance with the Section 106 Programmatic Agreement, once executed.

The Washington DAHP reviewed and concurred with the determinations of Section 4(f) (in)eligibility as part of the CRC project consultation. Concurrence from the Washington DAHP on the findings of effect was obtained in January of 2011. The prior consultation is currently being confirmed as part of the IBR Program and the NPS, a consulting party, has expressed consistent views with the prior consultation regarding these resources. Though the exact extent of the three sites warranted for preservation in place is unknown, they may be adversely affected by the construction of the IBR Program, which would constitute a Section 4(f) use.

Aesthetic Features

The proximity of the Modified LPA would not substantially impair the aesthetic features or attributes of the Section 4(f) property that contribute to its integrity of setting, feeling, and association to the extent that the property's historic value is substantially diminished. Section 3.9, Visual Quality, notes that there would be visual changes with the construction of the Modified LPA elevated structure. Existing views in the Greater

Central Park Landscape Unit (the unit that VNHR Historic District is located within) would include noticeable view changes. As a result, visual quality changes within the VNHR Historic District would affect the setting of the district; however, the visual character of the resources themselves would remain unchanged.

VNHR Historic District contributing resources affected by visual setting include:

- Munitions Storehouse (Building 102)
- Original Pearson Hangar (Building 189)
- Pearson Field Office (Building 194)
- Work Shop (Building 786)
- Fort Vancouver NHS Visitor Center

In comparison to the Modified LPA with double-deck fixed-span configuration, the Modified LPA with single-level fixed-span configuration would be slightly wider and would have a slimmer vertical profile.

The Modified LPA single-level movable-span configuration would include two side-by-side, single-level steel girder bridges with a movable span between Piers 5 and 6. The movable-span configuration would be a vertical lift span with counterweights. Similar to the No-Build Alternative, permanent visual impacts would be associated with the lift towers that would protrude into the skyline for areas in Vancouver and Fort Vancouver (Figure 4-39). Because it would have a lower bridge deck (122 feet [NAVD88]) in the closed position, the single-level movable-span configuration would have fewer visual effects than the fixed-span configurations. Even with the higher lift towers, visual impacts associated with the lower bridge deck of the Modified LPA with movable-span configuration would be less adverse than those of the Modified LPA with double-deck fixed-span and single-level fixed-span configurations.

Noise Level Increase

According to the analysis provided in Section 3.11, Noise and Vibration, existing traffic noise levels modeled at the VNHR Historic District range from 52 to 75 dBA, with the highest levels at unshielded areas along I-5 and SR 14. Existing noise levels approach or exceed the noise abatement criteria of 67 dBA and noise levels would range from 54 to 72 dBA with the Modified LPA. VNHR Historic District contributing resources affected by noise include:

- House (Building 1)
- House (Building 2)
- Duplex (Building 3)
- Duplex (Building 4)
- NCO Family Quarters (Building 665)

Program activities would increase existing noise levels at these contributing resources within the VNHR Historic District boundary from existing levels of between 60 dBA and 65 dBA. The increase in value is dependent on the selected design option but would increase from 65 dBA to 72 or 73 dBA at House (Building 1), from 62 dBA to 72 dBA at House (Building 2), from 60 dBA to 66 dBA at Duplex (Building 3), from 63 dBA to 66 dBA at Duplex (Building 4), and from 61 to 66 dBA at NCO Family Quarters (Building 665).

Temporary Occupancy

Temporary occupancy of the VNHR Historic District during construction would include approximately 110,100 square feet for temporary construction easements adjacent to each permanent acquisition. The temporary occupancy areas include property along a narrow strip of land (less than 2 acres in total) along the district's western edge, small segments (less than 0.1 acres in total) along the alignment of SR 14, as well as additional segments in the district's southwestern corner near the Old Apple Tree (less than 0.6 acres in total) and the embankment of the BNSF Railway alignment.

The temporary occupancy of the VNHR Historic District varies by each of the design options from 107,300 to 121,600 square feet, as shown in Table 4-5.

Preliminary Determination

Based on application of the Criteria of Adverse Effect as defined in 36 CFR 800.5, the permanent incorporations required by the Modified LPA would alter the character-defining features of VNHR Historic District and consequently reduce its eligibility for inclusion in the NRHP. Therefore, the Section 106 FOE for the VNHR Historic District includes a finding of "Adverse Effect" for the Modified LPA, including all design options; the Washington DAHP concurred with this finding on October 13, 2023. Additionally, the Modified LPA would result in permanent incorporation and temporary occupancy use of land within the VNHR Historic District as described above. Therefore, FHWA and FTA have determined that the Modified LPA would result in a Section 4(f) use of the VNHR Historic District. All design options would constitute an "Adverse Effect" to the VNHR Historic District under Section 106. The selection of the Modified LPA with I-5 shifted west design option would reduce harm to contributing elements to the district; however, this design option would still use land from the 4(f) property. The temporary occupancy of the site by the Modified LPA is considered in the "Adverse Effect" determination under Section 106 and incorporated in the use determination under Section 4(f) that is described above.

Historic Sites Evaluated to Have Use with a *de minimis* Impact under Section 4(f)

Washington State Patrol District Five Headquarters (Map ID – WA 1148)

Description

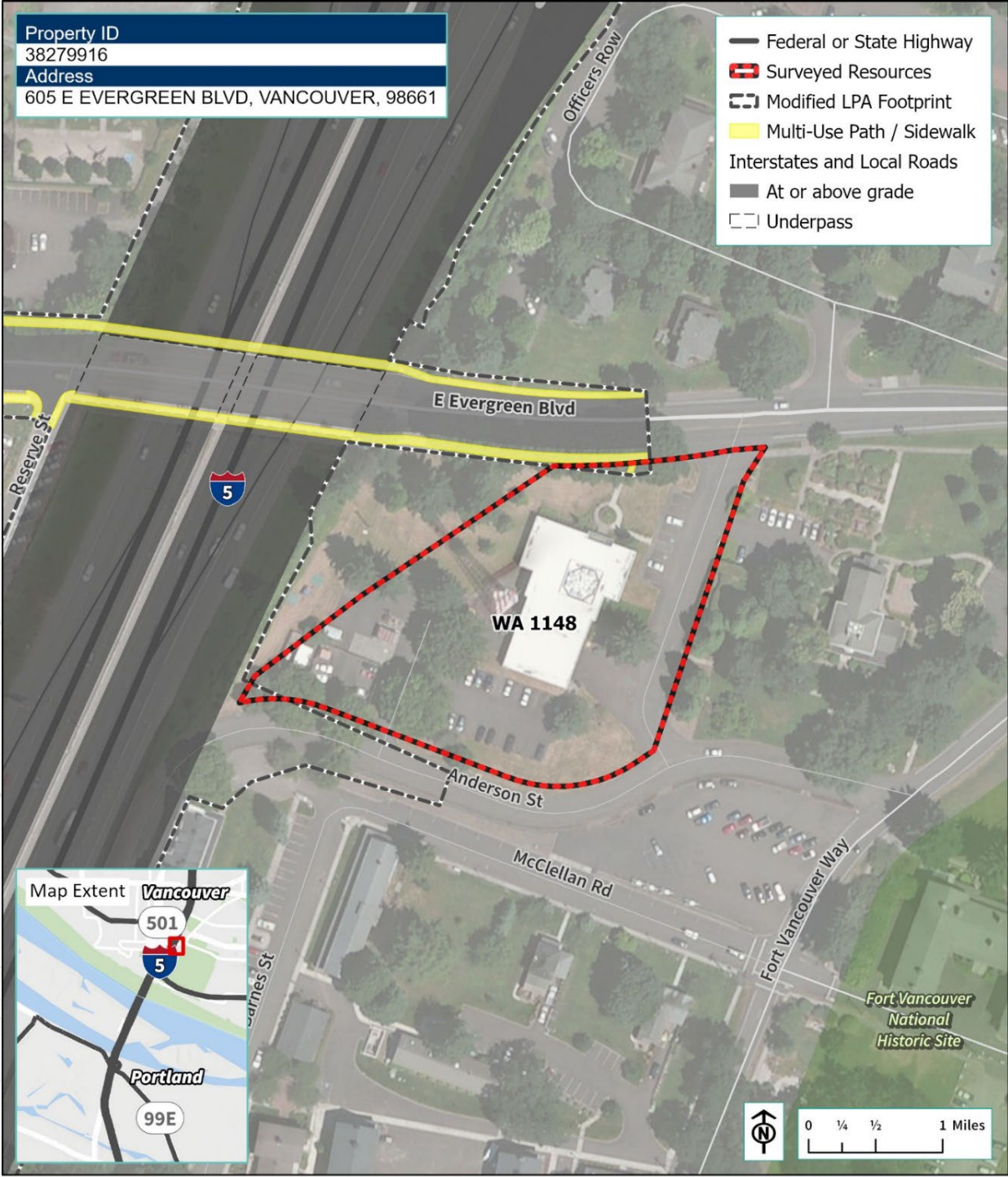
The Washington State Patrol (WSP) District Five Headquarters (now the Vancouver Police Headquarters) is a two-story, Late Modern-style building located at 605 E Evergreen Boulevard on the west edge of the VNHR in Vancouver, Washington (see Figure 4-40). The WSP District Five Headquarters is eligible for inclusion in the NRHP under Criterion A, at the local level of significance, in the areas of community planning and development and politics and government. The site is eligible for inclusion under Criterion A for its association with the transition of the VNHR from military to civilian use, as well as continued development and expansion of the WSP presence in Vancouver and Southwest Washington. The resource is also significant under Criterion C at the local level of significance in the area of architecture as a representative example of the Late Modern style. Overall, the resource retains its integrity of location, design, workmanship, feeling, and association while its integrity of setting and materials has only been slightly diminished. The principal building, walkways, circular planting box, landscaping, parking areas, and communications tower contribute to the site's historic significance. The radio equipment shelter and a new fueling station do not contribute to the site's historic significance.

The boundary of the historic site is defined by the boundary of the tax lot. The FOE documented in the Section 106 Level of Effect form for this site, which is contained in Appendix D of the Historic Built Environment Technical Report, is "No Adverse Effect" for the IBR Program Modified LPA and its design options. This finding received concurrence from the Washington DAHP on October 13, 2023.

Use Evaluation for the Modified LPA

The Modified LPA would construct additional interstate lanes to the west of the WSP District Five Headquarters, as well as improvements along the existing Anderson Street alignment to the south and the E Evergreen Boulevard alignment to the north (see Figure 4-40).

Figure 4-40. IBR Program Improvements and Area of Permanent Incorporation for the Washington State Patrol District Five Headquarters



The various infrastructure improvements proposed by the Modified LPA would alter the current setting of the WSP District Five Headquarters site through the introduction of new visual, atmospheric, and audible elements. However, because the site does not rely upon a quiet setting to convey its significance, the Modified LPA would not reduce any significant atmospheric or audible qualities. The radio equipment shelter and asphalt-paved parking lot, both of which are enclosed by a fence, distance the site from the proposed construction activity on Anderson Street to the south. To the north, the principal building and associated features are deeply set back from the public right of way. The Program would not diminish the site's integrity of location, design, materials, workmanship, feeling, or association in a manner that would diminish its ability to convey its significance. The Modified LPA, inclusive of all design options, would permanently acquire approximately 800 square feet of property from the WSP District Five Headquarters from the southwest corner of the site, adjacent to Anderson Street, and from the northern boundary of the property, adjacent to E Evergreen Boulevard. The permanent acquisition and effect of the Modified LPA upon the WSP District Five Headquarters would occur along the extreme boundary edges at the southwest and northwest corners, and would not substantially impair the site's principal building, walkways, circular planting box, landscape features, parking areas, or communications tower. Thus, the Modified LPA would not remove or alter any character-defining features or contributing elements that allow the site to convey its significance as a Late Modern municipal building associated with the VNHR and WSP.

Temporary occupancy of the WSP District Five Headquarters during construction of the Modified LPA, inclusive of all design options, would include approximately 600 square feet for temporary construction easements adjacent to each permanent acquisition. The temporary occupancy areas are minor and distant from the site's contributing elements and character-defining features, including the principal building, walkways, circular planting box, landscaping, parking areas, and communications tower.

Because neither the permanent acquisition nor the temporary occupancy of the WSP District Five Headquarters would substantially impair the activities, features, or attributes that contribute to its NRHP eligibility, the Section 106 FOE for the historic site includes a finding of "No Adverse Effect" for the Modified LPA.

Preliminary Determination

The acquisition of right of way from the WSP District Five Headquarters would constitute a use under Section 4(f). The Section 106 FOE for the WSP District Five Headquarters is "No Adverse Effect" for the Modified LPA, including all design options; the Washington DAHP concurred with this finding on October 13, 2023. Based on this finding, and consistent with the definition of *de minimis* impact in 23 CFR 774.17, FHWA and FTA have determined that the Modified LPA and its design options would have temporary and permanent *de minimis* impacts under Section 4(f) for the WSP District Five Headquarters.

4.4 Avoidance Alternatives

In accordance with 23 CFR 774.3, FHWA cannot approve the use of Section 4(f) property unless it is determined that there is no feasible or prudent avoidance alternative to the use of the land from a 4(f) property and the action includes all possible planning to minimize harm resulting from such use, or the use of the property will have only a *de minimis* impact. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. An alternative may not be prudent, according to 23 CFR 774.17(3), for multiple reasons, including if it compromises the project to a degree that it is unreasonable to proceed with the project considering its stated Purpose and Need. In other words, alternatives that do not adequately meet the project's Purpose and Need can be dropped from further Section 4(f) consideration.

A comprehensive alternative analysis was completed during CRC. In early phases of the CRC alternative development and screening process, the project team evaluated a wide range of potential alternative crossing corridors up and downstream of the existing I-5 bridge summarized in Chapter 2 of the CRC project Final EIS (Figure 4-41) and described below:

- A Western Highway crossing 2 to 3 miles west of I-5 that would connect suburban Clark and Multnomah counties.
- A Bi-State Industrial Corridor crossing near the BNSF Railway bridge, 1 mile west of I-5.
- A new crossing at 33rd Avenue in Portland, 2 to 3 miles east of I-5.
- Improvements to I-205 only.
- A new Columbia River crossing 10 to 12 miles east of I-5, that would connect Camas/East Clark County in Washington to Troutdale, Oregon.

Potential avoidance alternatives evaluated during screening also included a package of transportation demand management (TDM) and transportation system management (TSM) measures. The TSM/TDM alternative included very limited capital construction and therefore did not directly result in impacts to Section 4(f) properties, but was determined not to meet fundamental elements of the project's Purpose and Need.

The screening process evaluated how well each alternative crossing corridor would meet the Purpose and Need and determined that, while most of these alternatives could provide transportation benefits, they would do little to address the mobility, transit or safety problems in the I-5 corridor or to serve the proposed action's targeted travel markets. These five alternative crossing corridors failed to meet most or all of the elements of the CRC project's Purpose and Need. Although, these alternatives would have avoided affecting the Section 4(f) properties impacted by the alternatives evaluated in the CRC Draft EIS and Final EIS, because they would be located in other corridors, given the density and distribution of historic and recreational resources within the north Portland and Vancouver areas, these corridors would very likely result in use of different Section 4(f) properties. Alternatives and options that avoid one or more of the Section 4(f) properties (23 CFR 77.17) but have use of other Section 4(f) properties, are not avoidance alternatives. Therefore, the five alternative crossing corridors were not feasible and prudent avoidance alternatives.

Figure 4-41. Alternative Corridors Evaluated during the CRC Initial Screening Process



Source: CRC 2011

After eliminating the alternatives outside the I-5 corridor, the screening process selected a No-Build Alternative (Alternative 1) and four potential build alternatives (Alternatives 2 through 5) located in the immediate vicinity of the existing I-5 bridge summarized in Table 2-1 of Chapter 2, Description of Alternatives, none of which avoided all Section 4(f) resources.

The CRC Section 4(f) analysis concluded with a determination that “there are no alternatives that can simultaneously meet the project’s Purpose and Need while also avoiding all Section 4(f) resources” (CRC 2011, page 5-60). Specifically, all alternative corridors evaluated as part of CRC would require substantial out-of-direction travel for transit passengers, bicyclists and pedestrians, and would do nothing to address the identified I-5 safety deficiencies, high crash rates, and seismic vulnerability. The conclusion in the CRC determination that none of the alternative corridors were feasible and prudent avoidance alternatives continues to be applicable because none of the alternatives would meet the Purpose and Need for the IBR Program.

During the early planning phase for the IBR Program, feedback from partner agencies, tribes, organizations, and the public identified changed conditions within the study area that have occurred since the issuance of the CRC project Record of Decision (ROD) in 2011 and the preparation of the two NEPA re-evaluations in 2012 and 2013 (CRC LPA). In response, the IBR Program identified that several components of the CRC LPA required design modifications. Potential options for each of these components went through a multitiered screening process that included input from Program partners, tribes, and community members. The components evaluated were Hayden Island and Marine Drive interchange configurations; the configurations of the replacement bridge over the Columbia River; transit mode, transit alignment, and transit termini; and auxiliary lanes. As the IBR Program conceptual design progressed, additional design options emerged in response to agency and public input and to improve operations or safety or to avoid or reduce impacts, including new interchanges, options for park-and-ride locations, and different bridge configurations.

Within each design area, the IBR Program collaborated with agency partners to develop high-level design options to respond to changes while incorporating current regional values and priorities. These options were subsequently screened for their ability to meet the Program's Purpose and Need statement and to achieve other desired outcomes related to changed conditions, including avoidance and minimization considerations related to the built environment. The design options that performed the best in the screening process were then combined to create the Modified LPA and its design options. The Modified LPA with all design options is fully described in Chapter 2 of this Draft SEIS. The design options include:

- A second auxiliary lane in each direction of I-5 from approximately Marine Drive to Mill Plain Boulevard.
- Different bridge types and configurations across the Columbia River including single-level fixed-span configurations and a single-level movable-span configuration.
- A shift of I-5 up to 40 feet westward in downtown Vancouver near the SR 14 interchange.
- Elimination of the existing C Street ramps in downtown Vancouver.
- Potential site options for park and rides to serve LRT riders in Vancouver include three site options near the Waterfront Station and two near the Evergreen Station (up to one park and ride would be built for each station).

Compared to the CRC LPA, the IBR Modified LPA with all design options reduces the amount of necessary right-of-way acquisitions from the Fort Vancouver NHS and the VNHR Historic District, reduces residential and nonresidential building displacements, reduces the overall bridge and construction footprint, and reduces the visual complexity of the I-5 structures on Hayden Island; however, none of these options fully avoid Section 4(f) properties.

The central findings from CRC's avoidance alternatives evaluation continue to apply to the IBR Program: (1) there are no alternative corridors either up or downstream from the I-5 corridor that can avoid all Section 4(f) properties; (2) there are no alternatives or design options within the I-5 corridor that avoid all Section 4(f) properties; and (3) while a TSM/TDM alternative would avoid all Section 4(f) properties, it would not meet the Purpose and Need. This preliminary 4(f) analysis shows that none of the Modified LPA design options would entirely avoid 4(f) uses either; therefore, there are no feasible and prudent alternatives that can simultaneously meet the IBR Program's Purpose and Need while also avoiding all Section 4(f) properties as required by 23 CFR 774(a)(1) and 774.17(4).

Section 4.5 evaluates measures to minimize harm to Section 4(f) properties from the IBR Program Modified LPA, including all design options, and Section 4.6 analyzes which of the feasible and prudent alternatives and options would have the least overall harm on Section 4(f) properties.

4.5 Measures to Minimize Harm

FHWA and FTA cannot approve the non-*de minimis* use of Section 4(f) properties unless there is no feasible and prudent avoidance alternative and the action includes all possible planning to minimize harm to the property resulting from the use (23 CFR 774.3). Differences in remaining harm between the Modified LPA design options are address in Section 4.6.

In accordance with 23 CFR 774.17, a *de minimis* impact determination subsumes the requirement for all possible planning to minimize harm by reducing the impacts on the Section 4(f) property to a *de minimis* level. All possible planning includes measures to minimize harm. Properties with use that would be greater than *de minimis* under Section 4(f), as documented in Section 4.3, are listed in Table 4-8.

For the historic sites that were evaluated under CRC and are included within the IBR Program cultural resources APE, the avoidance and minimization measures that applied under CRC also generally apply to the IBR Program Modified LPA with minor modifications and are summarized below. Historic sites determined NRHP eligible that would have a use under Section 4(f) for the IBR Program Modified LPA are included in and are discussed in this section. The Section 106 consultation process is ongoing for the IBR Program and will result in a Programmatic Agreement to resolve adverse effects under Section 106. All measures committed to in the Section 106 Programmatic Agreement will become committed measures to minimize harm under Section 4(f). Public parks with a use under Section 4(f) for the IBR Program Modified LPA also are included in and are discussed in this section.

Table 4-8. Section 4(f) Properties with Use with a Greater than *de Minimis* Impact by the IBR Program Modified LPA with All Design Options

Property Type and Location	Historic Site Identifier	Section 4(f) Property
Historic Sites in Portland	OR 103	The Toll Administration Building/ODOT Permit Center
	OR 107	The Harbor Shops
	OR 109	The Jantzen Beach Water Tank and Pump House
	OR 111	The Jantzen Beach Moorage
The Interstate Bridge	OR 50 and WA 381a	The Northbound Interstate Bridge
Historic Sites in Vancouver	WA 149	The Normandy Apartments
	WA 1192	The Bridge Substation
	WA (multiple)	Vancouver National Historic Reserve Historic District
Public Parks	N/A	Fort Vancouver NHS

Avoiding and minimizing adverse impacts to Section 4(f) properties has been an integral part of identifying, developing, and refining the IBR Program design options. These measures include efforts to avoid known historic resources and sensitive cultural areas, to minimize the physical footprint of the Modified LPA, including all design options, and, where possible, to locate the Program within existing transportation right of way. This is illustrated through the properties listed in Table 4-6 and Table 4-7 that are within the Section 106 APE but are avoided by the project design. The following general measures would minimize harm incorporated into the Modified LPA, including all design options:

- Reducing the overall project footprint through use of retaining walls with tie-back anchors rather than fill slopes and acquisition of additional area adjacent to the freeway for all Section 4(f) properties, including the Fort Vancouver NHS and the VNHR Historic District.

- Reducing the footprint of the replacement bridge over land.
- Reducing the construction footprint and visual complexity of I-5 structures over Hayden Island and scaling them to their surroundings.

As outlined in the previous section, there are no alternatives that can meet the project's Purpose and Need and avoid all Section 4(f) properties. However, a variety of design options and refinements avoid at least some of the Section 4(f) properties and minimize harm to others. This section evaluates how well the alternatives, options, and other potential minimization measures could avoid one or more of the Section 4(f) properties, reduce the effects on one or more Section 4(f) properties, or potentially mitigate harm to Section 4(f) properties.

In consultation with PP&R, NPS, Vancouver Parks, Recreation & Cultural Services Vancouver Public Schools, Washington DAHP, Oregon SHPO, and the City of Vancouver, the proposed Modified LPA footprint has been refined and the number and severity of Section 4(f) uses has been reduced, and in many cases only a *de minimis* impact remains. Program planning and design actions to minimize harm to public park and historic Section 4(f) properties in the study area are discussed below. For historic sites, the Section 106 process is ongoing and will culminate in a Programmatic Agreement to resolve adverse effects to historic properties. The stipulations in the Programmatic Agreements will constitute commitments under NEPA and Section 4(f) to implement the identified measures to avoid, minimize, and mitigate harm to historic properties.

As outlined in the definition section at 23 CFR 774.17:

All possible planning means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project.

(1) With regard to public parks, recreation areas, and wildlife and waterfowl refuges, the measures may include (but are not limited to): design modifications or design goals; replacement of land or facilities of comparable value and function; or monetary compensation to enhance the remaining property or to mitigate the adverse impacts of the project in other ways.

(2) With regard to historic sites, the measures normally serve to preserve the historic activities, features, or attributes of the site as agreed by the Administration and the official(s) with jurisdiction over the Section 4(f) resource in accordance with the consultation process under 36 CFR part 800.

(3) In evaluating the reasonableness of measures to minimize harm under § 774.3(a)(2), the Administration will consider the preservation purpose of the statute and:

(i) The views of the official(s) with jurisdiction over the Section 4(f) property;

(ii) Whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property, in accordance with § 771.105(d) of this chapter; and

(iii) Any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.

*(4) All possible planning does not require analysis of feasible and prudent avoidance alternatives, since such analysis will have already occurred in the context of searching for feasible and prudent alternatives that avoid Section 4(f) properties altogether under § 774.3(a)(1), or is not necessary in the case of a *de minimis* impact determination under § 774.3(b).*

Interstate Bridge Replacement Program

For the IBR Program, all measures agreed to by the Administration¹ and the official(s) with jurisdiction to resolve adverse effects to historic properties will be included as stipulations in the Section 106 Programmatic Agreement and be commitments of the Program as measures to reduce harm under Section 4(f) recorded in the Final 4(f) Approval and ROD. A draft of the Section 106 Programmatic Agreement will be distributed for public review prior to the Final SEIS.

This section is organized geographically from the south end to the north end of the I-5 corridor and discusses the options and measures in the context of the Section 4(f) properties located in each geographic area of the project. These resources include the following:

- Resources in Portland
- The northbound Interstate Bridge (located in both Portland and Vancouver)
- Resources in Vancouver

All reasonable minimization measures have been incorporated into project design or mitigation commitments and compose the least harm alternative. The following analysis describes the different options or alternatives that were considered to minimize harm to Section 4(f) properties that would be used by the IBR Program, but may or may not have been implemented depending on whether they are reasonable or met the Purpose and Need. Many of the measures discussed were dismissed as either not reasonable, would not reduce harm, and/or would not meet the Purpose and Need.

4.5.1 Minimizing Harm to Resources in Oregon

There are four historic sites located in Portland that would have use with a greater than *de minimis* impact by the IBR Program Modified LPA with all design options under Section 4(f) which are listed in Table 4-8, above.

Historic Sites in Portland

Four historic sites are located within the right of way for the Modified LPA in Oregon and identified as having a greater than *de minimis* impact from the IBR Program. These historic sites include:

- The Toll Administration Building/ODOT Permit Center (OR 103): The Modified LPA with all design options would require the acquisition of the building and FHWA and FTA have determined that this would result in a use under Section 4(f).
- The Harbor Shops (OR 107): This site would be permanently incorporated under the Modified LPA with all design options, resulting in a use under Section 4(f).
- The Jantzen Beach Water Tank and Pump House (OR 109): The Modified LPA with all design options would permanently incorporate this site as right of way, resulting in a use under Section 4(f).
- The Jantzen Beach Moorage (OR 111). The Modified LPA with all design options would permanently incorporate approximately 85,900 square feet of the site and reduce the resource's integrity, resulting in a use under Section 4(f).

¹ "Administration" is defined in 23 CFR 774.17 as: "The FHWA, FRA, or FTA, whichever is approving the transportation program or project at issue."

For constructability reasons, the mainline in the area of these Section 4(f) resources would be wider and shifted off the existing I-5 alignment for the Modified LPA, including all design options. The new freeway ramps in a different configuration, the arterial bridge at the Marine Drive interchange, and transit all combine to change where the widest points in the project are situated, leading to new property impacts along the corridor in Portland. The Program improvements under the Modified LPA, including all design options, would connect to roadways and intersections to provide better overall circulation and mobility on and leading to I-5 for automobiles, bicycles and pedestrians. The Modified LPA with I-5 shifted west design option would shift the I-5 mainline approximately 40 feet west of the existing I-5 mainline over Hayden Island and North Portland Harbor to connect to the new Columbia River bridges that would be built west of the existing bridge and more westerly than the existing alignment in part to reduce impacts to Fort Vancouver NHS and the VNHR Historic District north of the river, which are nationally significant park and historic properties.

The wider footprint of the Modified LPA with all design options, in combination with the more westerly location of I-5 on the Oregon side of the Columbia River, will use the four other historic sites that are located immediately to the west of the existing I-5 improvements on Hayden Island and in North Portland Harbor. Measures to minimize harm on Portland historic sites, therefore, include measures to reduce the right-of-way width of I-5, realigning the Modified LPA farther east or west to avoid these sites, or eliminating certain Program elements. The following analysis groups these four historic sites into common measures to minimize harm, because the analysis and findings are the same for each resource.

Reducing the Right-of-Way Width of I-5 under the Modified LPA with All Design Options

Measures to reduce the right of way of I-5 from Hayden Island south to approximately Marine Drive could include reducing or eliminating project elements such as shoulders, travel lanes, or LRT tracks. The Modified LPA, including all design options, must meet federal and state highway design requirements for safety, to avoid substandard roadway design, and maintain or improve traffic operations. The project could potentially reduce the number of through travel lanes from three to two in each direction or eliminate the wider shoulders on I-5 from Marine Drive through Hayden Island that would accommodate bus-on-shoulder service. Another option would include eliminating auxiliary lanes. These measures could reduce, but would not eliminate, impacts to the Jantzen Beach Moorage, would not substantially reduce harm to the other three historic sites in Portland with Section 4(f) use, and they would not meet the Program's Purpose and Need. Each auxiliary lane is 8 feet wide; the one- or two-auxiliary-lane design options would add width to the Program improvements as compared to the existing condition. It is important to note, however, that the existing condition contains entrance and exit ramps over Hayden Island proximate to the historic sites.

The IBR Program purpose is "to improve I-5 corridor mobility by addressing present and future travel demand and mobility needs in the IBR study area." Specific objectives include: "a) improve travel safety and traffic operations on the Interstate Bridge and associated interchanges; b) improve connectivity, reliability, travel times, and operations of public transportation modal alternatives in the study area; c) improve highway freight mobility and address interstate travel and commerce needs in the study area; and d) improve the Interstate Bridge's structural integrity (seismic stability)." Eliminating project elements such as travel lanes, auxiliary lanes, shoulders, or LRT tracks would not improve traffic operations; connectivity, reliability, travel times, or operations of public transportation modes, nor would it improve highway freight mobility. Because eliminating these project elements would affect the IBR Program's ability to meet its Purpose and Need, their elimination is not a reasonable measure to minimize harm.

The Modified LPA footprint on Hayden Island is determined by local street improvements and would not be affected by a second auxiliary lane; therefore, the use of historic properties on Hayden Island would not change among the design options. Because reducing or eliminating auxiliary lanes would not reduce harm to the properties, it is not a reasonable measure to minimize harm.

Interstate Bridge Replacement Program

Reducing the width of project elements such as shoulders, and travel lanes would not meet federal and state highway design requirements and could compromise safety. For these reasons, reducing the width of the project is not a reasonable measure to minimize harm.

Realigning Program Elements East or West

The IBR Program Modified LPA with all design options sought to minimize harm to other Section 4(f) properties, as well as non-Section 4(f) resources including businesses and residences in North Portland and on Hayden Island by using the existing I-5 alignment and right of way to the maximum degree possible. Shifting the Modified LPA or design options alignments to the east or west would create large-scale impacts to businesses and residents in North Portland and Hayden Island and to other Section 4(f) properties. A shift to the east would potentially displace East Delta Park. A shift to the west would potentially displace the Smith-Bybee Wetlands, Portland Assembly Center, and a larger area from the Jantzen Beach Moorage.

In addition, an eastward or westward alignment shift would displace non-Section 4(f) resources including existing residences and businesses. A shift to the east would potentially displace Tipp Top Marine, Courtyard by Marriott North Portland, Residence Inn by Marriott Portland North, Red Lion on the River Jantzen Beach, and multiple shopping centers on North Portland and Hayden Island. A shift to the west would potentially displace the Roadway Inn and Suites Portland – Jantzen Beach, Jantzen Beach Center (a regionally important shopping center), and residential areas including Hayden Island Mobile Home Village/Hayden Island Manufactured Home Community, a likely concentration of low-income residents.

For these reasons, an eastward or westward alignment shift is not a reasonable measure to minimize harm to the four historic sites in Portland. Expanding the footprint of the existing alignment to the minimum extent needed to meet Purpose and Need for the project would have the least overall harm to the totality of Section 4(f)-protected properties within Portland.

Eliminating Program Elements

Eliminating project elements such as travel lanes, auxiliary lanes, safety shoulders, connecting roadways, or surface street improvements would narrow the project alignment and could reduce or avoid use of the Toll Administration Building/ODOT Permit Center (OR 103), and the Harbor Shops (OR 107), and the Jantzen Beach Moorage (OR 111), but would not meet the Program's Purpose and Need including: improving mobility along the I-5 corridor by addressing current and future travel demand; improving travel safety and traffic operations on the Interstate Bridge and associated interchanges; improving connectivity, reliability, travel times, and operations of public transportation modal alternatives in the study area; and improving highway freight mobility and addressing interstate travel and commerce needs in the study area. As discussed in Chapter 2, the project elements have been designed to provide mobility and safety improvements as identified in the Purpose and Need. Reducing the number of travel or auxiliary lanes would not improve mobility along the I-5 corridor. Eliminating safety shoulders would not improve travel safety. Eliminating connecting roadways and surface street improvements would not improve connectivity. Eliminating these elements would not be reasonable measures to minimize harm because doing so would be contrary to the Purpose and Need for the Program.

If the realignment of Jantzen Drive were eliminated from the Program, the Jantzen Beach Water Tank could be avoided, but the reconstructed Jantzen Drive would provide connectivity across the island on the south shore that does not currently exist to meet the Program's Purpose and Need related to improving connectivity. The location of Jantzen Drive is driven by the 100-year flood elevation, climate resiliency, roadway geometric design requirements, and structural design considerations for the Interstate Bridge and the North Portland Harbor bridge. Therefore, the roadway cannot be moved or eliminated from the design.

4.5.2 Minimizing Harm to the Northbound Interstate Bridge

The IBR Program Modified LPA would remove the northbound Interstate Bridge. Pursuant to 23 USC 103(c)(5) and 70 FR 11928 (March 10, 2005), the southbound Interstate Bridge is exempt from Section 4(f) review as further explained in Section 4.2.2 of this evaluation. Thus, the southbound bridge is not evaluated for measures to minimize harm.

As discussed in Section 4.4 the CRC project evaluated a range of potential river crossings that would avoid the removal of the northbound Interstate Bridge, none of which met the project's Purpose and Need and were therefore dropped from further consideration. The CRC project team also evaluated a range of I-5 crossing options that would reuse rather than remove the northbound Interstate Bridge. These crossing options were also eliminated from further consideration because they either did not meet the project's Purpose and Need or performed poorly when measured against screening criteria developed for the project (see Section 2.7 of the CRC Final EIS for a discussion of alternative screening [CRC 2011]). Of the alternative river crossings, the Supplemental River Crossing (CRC Alternatives 4 and 5), would have had less harm on the 1917 bridge. However, the supplemental crossing had an accumulation of performance deficiencies, adverse impacts, and other factors that would have made it an unreasonable alternative and, therefore, an unreasonable measure to reduce harm to the northbound Interstate Bridge (see Section 5.5.2 of the CRC Final EIS for a discussion of the supplemental crossing [CRC 2011]). If the 1917 bridge were left in place, it would continue to be at risk of mechanical failure or damage from a seismic event.

The conclusion of the CRC evaluation for measures to minimize harm that none of the alternative river crossings were reasonable remains applicable because all identified reasonable alternatives, including the IBR Program Modified LPA with all design options, would remove the northbound Interstate Bridge.

Consultation under the Section 106 process for the Modified LPA is ongoing and will culminate in a Programmatic Agreement to resolve adverse effects to historic properties. The Programmatic Agreement will stipulate measures to address the removal of the northbound Interstate Bridge. Once agreed upon through the Section 106 consultation process, all measures identified in the Programmatic Agreement will be included as committed measures to minimize harm under Section 4(f).

4.5.3 Minimizing Harm to Resources in Washington

Three historic sites and one park and recreation property are located near the Modified LPA with all design options adjacent to both sides of I-5 in Vancouver. Several additional sites were avoided using retaining walls to limit the width of the improved I-5 (Table 4-7). The Modified LPA or design options would result in a use with greater than *de minimis* impact under Section 4(f) of the following historic sites in Vancouver:

- The Normandy Apartments (WA 149):
- The Modified LPA with all design options (excluding the with I-5 shifted west design option) would require a narrow, 705-foot acquisition paralleling the eastern property boundary and would remove the landscaping screening the building from I-5. The site's setting would also be changed with retaining walls placed 5 feet from the building and the construction of elevated LRT tracks that would rise to the height of the building, blocking views to the east. These Program improvements would result in an adverse effect under Section 106 and a use under Section 4(f).
- Under the Modified LPA with I-5 shifted west shift design option, the building would be demolished, resulting in an adverse effect under Section 106 and a use under Section 4(f) in the Modified LPA with I-5 shifted west design option.
- The Bridge Substation (WA 1192): This site would be permanently incorporated under the Modified LPA with all design options, resulting in a use under Section 4(f).

- The VNHR Historic District and Fort Vancouver NHS (WA Multiple): Land within this historic district and park and recreation property would be permanently incorporated and temporarily occupied under the Modified LPA with all design options, resulting in a use under Section 4(f).

The resources above would be affected by the highway widening, I-5/SR 14 interchange improvements, and the elevated LRT alignment in downtown Vancouver. The following discussion highlights measures to minimize harm by resource.

The Normandy Apartments (WA 149)

The Normandy Apartments are located at 318 7th Street in downtown Vancouver immediately west of the existing I-5 improvements. While the Modified LPA with all design options would incorporate land from the Normandy Apartments, the Modified LPA with I-5 shifted west design option would require demolition of the entire property. Balancing of harm between Section 4(f) properties is discussed in Section 4.6.

Potential measures to minimize harm for the Modified LPA with all design options, including the I-5 shifted west design option, include reducing the dimensions of or eliminating project elements including travel lanes, shoulders, auxiliary lanes, or LRT tracks. For reasons, described below, eliminating Program elements would not meet the Program's Purpose and Need because it would not address present and future travel demand and mobility needs; would not improve traffic operations; would not improve connectivity, reliability, travel times, and operations of public transportation modal alternatives in the study area and would not improve highway freight mobility:

- **Eliminating Program Components:** The Modified LPA, including all design options, would have three northbound and three southbound travel lanes in downtown Vancouver, as does the existing interstate. I-5 through the Program study area frequently experiences bottlenecked traffic in which speeds are less than 45 miles per hour for large portions of the day as summarized in Table 3.1-13 in Section 3.1, Transportation. Southbound, the Interstate Bridge experiences a bottleneck from 6:00 a.m. to 9:00 a.m. extending up to 3 miles long northward into downtown Vancouver. The northbound bridge experiences a bottleneck from 11:15 a.m. to 8:00 p.m. for 10+ miles. As discussed in Chapter 2, the project elements have been designed to provide mobility and safety improvements as identified in the Purpose and Need. Reducing the number of travel lanes, shoulders, auxiliary lanes, or LRT tracks would only exacerbate bottlenecks and would not address the Program's Purpose and Need because it would not improve traffic operations or travel times. Eliminating safety shoulders would not improve travel safety. Because eliminating lanes or shoulders would not meet the Program's Purpose and Need, it would not be a reasonable alternative to minimize harm to the Normandy Apartments. Due to its more westerly location and greater impact on the Normandy Apartments, eliminating Program components would be least effective for the Modified LPA with I-5 shifted west design option.
- **Reducing the Width of Program Components:** All components of the Modified LPA with all design options, including travel lanes, auxiliary lanes, shoulders, and LRT tracks, have been designed to meet federal and state highway design requirements. Reducing the width of project components would be contrary to the Program's Purpose and Need because it would compromise safety, traffic, freight, and transit operations depending on the component and is therefore not a reasonable measure. For example, reducing shoulder width would prevent disabled vehicles from pulling out of and away from the travel lanes, reducing the safety benefit of the shoulders.

The Bridge Substation (WA 1192)

The Bridge Substation is located immediately east of the northbound Interstate Bridge and would be demolished under the Modified LPA with all design options to construct a shared-use path and shared-use path bridge. The shared-use path bridge would provide access from the elevated bridge deck immediately north of the Columbia River shoreline to the downtown Vancouver street network at grade level. Potential measures to minimize harm include moving, modifying the design of, or eliminating the shared-use path and shared-use path bridge.

- **Modifying the Design of the Shared-Use Path and Shared-Use Path Bridge:** Potential design modifications to the shared-use path bridge would include elongating or enlarging the circular shared-use path bridge to be more of an oval shape, while leaving the Bridge Substation in place. Enlarging the shared-use path bridge would require the redesign of Columbia Way to follow the current street alignment which would also conflict with on-land structural supports for the bridge and would not be a structurally feasible design for the new Columbia River bridges.
- Elongating the shared-use path bridge would require additional permanent property acquisition from Who Song & Larry's (another Section 4(f) protected historic site) and a viable business. Therefore, modifying the design of the shared-use path and bridge would not be a reasonable measure to minimize harm.
- **Eliminating the Shared-Use Path and Shared-Use Path Bridge:** The Program's Purpose and Need statement includes improving "the I-5 corridor mobility by addressing present and future travel demand and mobility needs in the IBR study area." The mobility of bicycles and pedestrians through the I-5 corridor would not be improved without the shared-use path and shared-use path bridge and, therefore, eliminating these elements from the Program design would not meet the Purpose and Need and would not result in a reasonable alternative. Without the shared-use path, there would be no bicycle and pedestrian connection across the Columbia River in the I-5 corridor.

The Vancouver Barracks National Cemetery (WA 1319)

Initial designs for the Modified LPA, including all design options, would have required removal of historic contributing elements of the Vancouver Barracks National Cemetery. Design refinements explored alignment revision and narrowing of roadway and sidewalk areas to remain outside of this property entirely, which reduced the effects under Section 106 on the historic property to less than adverse resulting in no use under Section 4(f). These refinements were incorporated as measures to minimize harm to a property that would otherwise be used.

VNHR Historic District and Fort Vancouver NHS (WA Multiple)

The Modified LPA with all design options would result in permanent incorporation and temporary occupancy of land within VNHR Historic District and Fort Vancouver NHS as described in Sections 4.3.8 and 4.3.4 of this evaluation. The Modified LPA with I-5 shifted west and Modified LPA without C Street ramps design options were developed to minimize acquisition from the VNHR Historic District and Fort Vancouver NHS. The effects of those design choices on other resources and measures of system performance are discussed in the least overall harm analysis (Section 4.6). The permanent incorporations for the Modified LPA with double-deck fixed-span configuration, Modified LPA without C Street ramps, and Modified LPA with single-level with two auxiliary lanes design options would incorporate approximately 100, 200, or 700 square feet of the Army Road System, which is a contributing feature to the VNHR, respectively, resulting in a use of the VNHR Historic District. The Modified LPA with I-5 shifted west design option would avoid the area of incorporation of a segment of the Army Road System and reduce the area of permanent incorporation from the VNHR Historic District compared to the other design options by between 10,000 and 15,000 square feet to approximately 53,400 square feet (Table 4-5).

In addition to permanent incorporation of land, the IBR Program Modified LPA with all design options would adversely affect 11 of the contributing resources within the VNHR Historic District NHS under Section 106, as discussed in Section 4.3.8. Adverse effects to these resources include:

- **Vibration:** Within the VNHR Historic District, the Post Hospital and NCO Family Quarters (Buildings 635 and 644) could experience ground-borne vibration exceeding FTA damage risk criteria that could result in the potential for structural damage. The Modified LPA with I-5 shifted west design option would reduce the risk of vibration damage to both of the NCO Family Quarters Buildings by moving construction 100 feet west of the buildings, but vibration risk for the Post Hospital would still occur.
- **Three HBC archaeological resources,** Kanaka House, Tayenta's House, and House 4, that have been considered worthy of preservation in place are located within this area. Though the exact extent of these three sites is not known, they may be adversely affected by the construction of the Modified LPA, including all design options, which would constitute a Section 4(f) use.
- **Aesthetic features:** The Munitions Storehouse, Original Pearson Hangar, Pearson Field Office, Work Shop, and Fort Vancouver NHS Visitor Center, all of which are located in both the VNHR Historic District and the Fort Vancouver NHS, would experience affects to their visual setting resulting from the higher bridge heights. In particular, the movable-span configuration would have lift towers that would protrude into the skyline and would have a bridge deck height of 122 feet (NAVD88), whereas the Modified LPA with double-deck fixed-span configuration would have a second deck height of 166 feet (NAVD88). Therefore, the Modified LPA with single-level movable-span configuration would have fewer visual effects than with the double-deck fixed-span configuration.
- **Noise level increases:** House (Building 1), House (Building 2), Duplex (Building 3), Duplex (Building 4), and NCO Family Quarters (Building 665) would experience noise increases from 60 to 65 dBA to between 66 and 72 dBA, under the Modified LPA. These sound levels would approach or exceed the noise abatement criteria of 67 dBA under the Modified LPA. The Modified LPA with I-5 shifted west would slightly reduce noise by moving I-5 to the west.

Evaluated measures to minimize harm to the VNHR Historic District and Fort Vancouver NHS from the Modified LPA with all design options include eliminating project elements or shifting the Program alignment further west as evaluated under the Modified LPA with I-5 shifted west design option. Measures to minimize harm to the VNHR Historic District and the Fort Vancouver NHS include eliminating project elements, and standard mitigation measures for noise and vibration effects.

Eliminating Program Components

Eliminating project elements such as travel lanes, auxiliary lanes, or safety shoulders may reduce or eliminate permanent incorporation of the VNHR District and Fort Vancouver NHS required under the Modified LPA with all design options, but, in most cases would not meet the project's Purpose and Need as described in the analysis for the Normandy Apartments above. For these reasons, eliminating project elements, including travel lanes, auxiliary lanes, and safety shoulders, is not reasonable for any design options of the Modified LPA.

The Modified LPA without C Street ramps design option eliminates the C Street loop ramp from I-5 northbound into downtown Vancouver that would require approximately 15,000 additional square feet of land acquisition from the VNHR Historic District and the Fort Vancouver NHS as compared to the Modified LPA. While this design option would not provide as high a level of access and connectivity to downtown Vancouver, it would meet the Program's Purpose and Need and is a reasonable measure to minimize harm to the VNHR Historic District and the Fort Vancouver NHS and is further considered in Section 4.6.

Shifting the Program's Alignment Farther West

The Modified LPA with I-5 shifted west design option would shift the Program alignment approximately 40 feet farther west. This design option would reduce permanent incorporation and, therefore, use of the VNHR Historic District and the Fort Vancouver NHS, as well as meet the Program's Purpose and Need. This design option would require permanently incorporating the Normandy Apartments (WA 149), another Section 4(f) resource, as discussed in Section 4.6.6, displacing the residents of 33 apartment units and would not be a reasonable measure to minimize harm.

Standard Minimization Measures for Noise, Vibration, and Visual Effects

House (Building 1), House (Building 2), and NCO Family Quarters (Building 665) would experience noise increases from 61 to 65 dBA to between 66 and 72 dBA under the Modified LPA. This would approach or exceed the noise abatement criteria. As noted in the IBR Program Noise and Vibration Technical Report, for noise mitigation to be feasible, WSDOT requires that it be physically constructable; reduce noise levels by at least 5 dBA for a minimum of three first-row impacted receivers; and at least one receiver must achieve the design goal of a 7-dBA noise reduction. The Modified LPA with I-5 shifted west design option would cause slightly lower increase in noise for House (Building 1) and House (Building 2) than the other design options, but would require demolition of the Normandy Apartments. Noise mitigation is not reasonable in this area, per WSDOT noise abatement policy as detailed in Section 3.11.6.

The Section 106 process will result in a Programmatic Agreement with mitigation or other commitments to resolve adverse effects to historic properties. For contributing historic resources affected by vibration, such as the Post Hospital, these are expected to include condition inspection; monitoring vibration during construction; pre-emptive stabilization, maintenance, and repair; limits on certain equipment or activities; and repair of construction damage in accordance with the Secretary of the Interior Standards for the Treatment of Historic Properties (36 CFR 68).

For any noted adverse visual effects to the VNHR Historic District and Fort Vancouver NHS, such as to the Munitions Storehouse (Building 102), the Original Pearson Hangar (Building 189), the Pearson Field Office (Building 194), the Work Shop (Building 786), and the Fort Vancouver NHS Visitor Center, the Modified LPA with I-5 shifted west design option would be less prominent as viewed from these resources although effects would still be adverse. Tradeoffs between the remaining harm on various resources between the design options is addressed in Section 4.6.

4.6 Least Overall Harm Analysis

In accordance with 23 CFR 774.3, if there are no prudent and feasible alternatives that avoid the use of all Section 4(f) properties, then FHWA can approve only the alternative that causes the least overall harm. Replacing the existing bridges on the same alignment would not be a prudent and feasible alternative because it would require complete demolition of at least one bridge prior to reconstruction; therefore, traffic could not be maintained during the multiyear construction period. Section 4(f) properties on which the project would have only *de minimis* impacts, or for which the project would result in no use, do not need to be considered in the least overall harm analysis (23 CFR 774.17). The IBR Program would have use with greater than *de minimis* impact of eight historic sites and one park property subject to protection under Section 4(f) and is therefore subject to the requirement to identify the alternative with least overall harm. The single park property, the Fort Vancouver NHS, is located within the VNHR Historic District, which is one of the eight historic sites with use that is greater than *de minimis*. Each of the Modified LPA design options is considered to be an “alternative” solely for purposes of the least overall harm analysis under Section 4(f).

Table 4-9 summarizes the use of Section 4(f) properties by design option. The Modified LPA without C Street ramps design option would have the smallest area of use of Section 4(f) historic sites, with 12.0 acres permanently incorporated. The remaining Modified LPA design options have similar overall use of Section 4(f) properties ranging from approximately 12.4 to 12.5 acres.

The park-and-ride location options would not result in a use of any Section 4(f) property beyond what is already considered for the Modified LPA with all design options and are therefore not considered in the least overall harm analysis.

Table 4-9. Use with Greater than *de Minimis* Impact of Section 4(f) Properties by Alternative

Alternative	Number of Section 4(f)-Protected Properties with Use Greater than <i>de Minimis</i>	Section 4(f) Properties with Permanent Use Greater than <i>de Minimis</i>	Section 4(f) Properties with Temporary Use Greater than <i>de Minimis</i>
Modified LPA with Double-Deck Fixed-Span Configuration with One Auxiliary Lane, C Street Ramps, and Centered I-5	8 historic sites and 1 park	12.4 acres, including 0.3 acres that are both a public park and historic site	3.0 acres
Modified LPA SR 14 Interchange without C Street Ramps	8 historic sites and 1 park	12.5 acres, including 0.3 acres that are both a public park and historic site	3.0 acres
Modified LPA with I-5 Shifted West	8 historic sites and 1 park	12.5 acres, including 0.3 acres that are both a public park and historic site	3.2 acres
Modified LPA Single-Level Fixed- or Movable-Span Configuration with One Auxiliary Lane	8 historic sites and 1 park	12.4 acres, including 0.3 acres that are both a public park and historic site	3.0 acres

Alternative	Number of Section 4(f)-Protected Properties with Use Greater than <i>de Minimis</i>	Section 4(f) Properties with Permanent Use Greater than <i>de Minimis</i>	Section 4(f) Properties with Temporary Use Greater than <i>de Minimis</i>
Modified LPA with Single-Level Fixed- or Movable-Span Configuration with Two Auxiliary Lanes	8 historic sites and 1 park	12.5 acres, including 0.3 acres that are both a public park and historic site	2.9 acres
Modified LPA with Double-Deck Fixed-Span Configuration with Two Auxiliary Lanes	8 historic sites and 1 park	12.5 acres, including 0.3 acres that are both a public park and historic site	2.9 acres

As discussed in Section 4.5, there are no prudent and feasible alternatives that would avoid all Section 4(f) properties. Therefore, it is necessary to analyze which alternative would cause the least overall harm. Section 4.6 identifies all reasonable measures to minimize harm or mitigate adverse impacts. This is an important consideration in determining the least harm alternative. In addition, regulations in 23 CFR 774.3(c) provide the following direction for determining the alternative that would cause the least overall harm:

(c) If the analysis ... concludes that there is no feasible and prudent avoidance alternative, then the Administration may approve only the alternative that:

(1) Causes the least overall harm in light of the statute's preservation purpose. The least overall harm is determined by balancing the following factors:

- i. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);*
- ii. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;*
- iii. The relative significance of each Section 4(f) property;*
- iv. The views of the official(s) with jurisdiction over each Section 4(f) property;*
- v. The degree to which each alternative meets the purpose and need for the project;*
- vi. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and*
- vii. Substantial differences in costs among the alternatives.*

The following section addresses each of the factors in the least overall harm analysis.

4.6.1 Ability to Mitigate Adverse Impacts to Each Section 4(f) Property, Including Any Measures That Result in Benefits

All of the alternatives have a similar ability to mitigate impacts to Section 4(f) properties in Washington, with the exception of the Modified LPA with I-5 shifted west and the Modified LPA without C Street ramps. The Modified LPA design options would have similar impacts on the VNHR Historic District and the Fort Vancouver NHS, requiring relatively small acquisitions ranging from approximately 1.2 to 1.6 acres on the western and southwestern edges of the VNHR Historic District or 0.3 acres for Fort Vancouver NHS adjacent to I-5 and SR 14. The Modified LPA with I-5 shifted west design option would have greater impacts to the Normandy Apartments (WA 149) in downtown Vancouver than any of the other Modified LPA design options and would require complete removal of this historic site with no ability to mitigate this impact. The Modified LPA with I-5 shifted west design option would have less impact on the VNHR Historic District than all other design options, including approximately 0.3 acres less than the Modified LPA with single-level (fixed- or movable-span) configuration with two auxiliary lanes and the double-deck fixed-span configuration with two auxiliary lanes and approximately 0.2 to 0.3 acres less than the other Modified LPA design options. All design options would have approximately 0.3 acres of use of Fort Vancouver NHS. The Modified LPA with I-5 shifted west design option would have severe impacts on the Normandy Apartments (WA 149) and would have no ability to mitigate adverse impacts on this historic site.

For Oregon historic sites, all Modified LPA design options would have the same effect on historic resources, with no ability to mitigate impacts to these sites.

Section 4.5 analyzes the measures that could be used to minimize impacts to Section 4(f) properties and determines which measures would be reasonable.

Modified LPA with all Design Options

The Modified LPA with all design options would provide all of the reasonable measures to minimize harm listed in Section 4.5 of this evaluation. Program-wide, measures to minimize harm primarily include:

- Reducing the overall project footprint through use of retaining walls with tie-back anchors rather than fill slopes and acquisition of additional area adjacent to the freeway.
- Reducing necessary right-of-way acquisitions from the VNHR Historic District and Fort Vancouver NHS.
- Reducing the footprint of the existing Interstate Bridge over land.
- Reducing the construction footprint and visual complexity of I-5 structures over Hayden Island and scaling them to their surroundings.
- Incorporate commitments agreed upon through the Section 106 Programmatic Agreement consultation process to resolve adverse effects to historic properties.

In addition, the Modified LPA with all design options would provide the measures to minimize harm listed for the CRC LPA in Section 4.1.5, except that the Modified LPA mitigations would not include transit access to Marshall Park since transit would not occur along McLoughlin Boulevard. The Columbia River Renaissance Trail is not protected under Section 4(f), as discussed in Section 4.2.1.

Key differences in adverse impacts between the Modified LPA and its design options are that the Modified LPA with I-5 shifted west design option would require complete removal of the Normandy Apartments in downtown Vancouver with no ability to mitigate this impact on this Section 4(f) historic site. The Modified LPA would have less overall impact on historic sites than the other design options due to a smaller footprint within the Fort Vancouver NHS (Table 4-3).

All Modified LPA design options have the ability to mitigate harm to the VNHR Historic District and Fort Vancouver NHS using the measures identified above and the measures identified in the CRC LPA (see Section). In particular, the Modified LPA with I-5 shifted west design option would result in less harm to the VNHR Historic District than the other Modified LPA design options.

However, the Modified LPA with I-5 shifted west design option would also result in severe harm to the Normandy Apartments through demolition of the structure, with no ability to mitigate that harm. The other Modified LPA design options would reduce harm to the Normandy Apartments to a partial acquisition of land, as discussed in the use evaluation in Section 4.3.8.

The Modified LPA with any of the design options would not have the ability to fully mitigate impacts to historic sites in Oregon, as discussed in Section 4.5.1 of this evaluation.

4.6.2 The Relative Severity of the Remaining Harm after Mitigation to the Protected Activities, Attributes, or Features That Qualify Each Section 4(f) Property for Protection

Section of this evaluation discusses measures to minimize harm after including the effects of reasonable mitigation measures. For all design options, the footprint of improvements and the use of Section 4(f) properties is the same south of the Columbia River.

The footprint over the Columbia River would differ across design options based on bridge configuration and the number of auxiliary lanes. The northbound Interstate Bridge would be completely removed by all design options, resulting in severe remaining harm for this Section 4(f) historic site and little ability to mitigate it. The only other Section 4(f) property within the Columbia River is the Lower Columbia River Federal Navigation Channel with a *de minimis* impact, which is not subject to all possible planning to minimize harm under 23 CFR 774.17.

North of the Columbia River, the Modified LPA design options have substantially the same alignment and footprint and would have similar use of Section 4(f) properties, with the exception of the VNHR Historic District, Fort Vancouver NHS, and the Normandy Apartments, which are discussed below.

Normandy Apartments

Except for the Modified LPA with I-5 shifted west design option, the Modified LPA and other design options would have the same use and relative severity of remaining harm to the protected activities, features, and attributes that qualify the Normandy Apartments for protection under Section 4(f) (Figure 4-37). The protected attributes and features of the Normandy Apartments include its eligibility as a historic site under Criteria A and C at the local level of significance in the areas of community planning and development and architecture. The Normandy Apartments building retains integrity of location, materials, workmanship, feeling, and association and has slightly reduced integrity of design and setting due to the original construction of I-5.

The Modified LPA with all design options would result in permanent incorporation of land from the Normandy Apartments site. Except for the Modified LPA I-5 with I-5 shifted west design option, this would include removal of landscaping and placement of a soundwall within 5 feet of the building, which would compromise the site's setting, feeling, and association. In addition, the elevated LRT tracks would be located near the building, affecting views to the east. These Program improvements would result in remaining harm to the Normandy Apartments site.

The Modified LPA with I-5 shifted west design option would shift the I-5 mainline and ramps 40 feet west of its current location. This option would require permanent right-of-way acquisition of the Normandy Apartments property and removal of the building and the landscaping elements to the east of the building and in the courtyard. The Modified LPA with I-5 shifted west design option would permanently incorporate approximately 14,700 square feet of the property and require demolition of the apartment building. This would be a greater incorporation and greater harm to the historic site than would occur under the Modified LPA and all other design options; it would completely remove all protected attributes and features that qualify the site for protection under Section 4(f).

Therefore, removal of the Normandy Apartments under the Modified LPA with I-5 shifted west design option would cause substantially greater harm to this resource than the Modified LPA and all other design options.

The VNHR Historic District and Fort Vancouver NHS

The Modified LPA with all design options would adversely affect 14 contributing resources within the VNHR Historic District under Section 106 (Table 4-5). They would incorporate land from the Fort Vancouver NHS (Table 4-4). Adverse effects on the VNHR Historic District include incorporation of land from the Army Road System, thereby resulting in a use of the district. However, acquisitions within the VNHR Historic District and Fort Vancouver NHS would primarily be of noncontributing resources, including landscaping along SR 14. The Modified LPA without C Street ramps design option would result in less use of the VNHR Historic District than the other Modified LPA design options, including the Modified LPA with I-5 shifted west option. However, changes would occur to the same noncontributing resources and would not change the use of, or harm to, contributing resources discussed in Section 4.3.8. Other potential harm identified for contributing resources includes visual, noise, and vibration effects, as discussed in Section 4.3.4. There would be visual and noise effects on recreational users of the Fort Vancouver NHS.

The single-level movable-span configuration with either one or two auxiliary lanes would be visually less prominent than the fixed-span configurations, but the vertical lift span would introduce vertical lift towers of a height similar to that of the existing bridge. The lift towers would have a greater maximum height than any of the other alternatives.

The Modified LPA with I-5 shifted west design option would result in less use of the VNHR Historic District than the Modified LPA and all other design options, with the exception of the Modified LPA without C Street ramps design option. This option would decrease the incorporation and demolition of a segment of the Army Road System by 3 to 9 feet. The Modified LPA with I-5 shifted west design option would slightly reduce the potential risk of vibration damage to both of the NCO Family Quarters Buildings (Buildings 635 and 644) by moving construction activities to more than 100 feet from the building's footprint. Construction would still occur within 100 feet of the Post Hospital building's footprint; therefore, there would still be a risk of vibration damage to the Post Hospital under the Modified LPA with I-5 shifted west design option. Although this design option would reduce use of and risk to VNHR Historic District contributing resources, use of, and risk to, contributing resources would still occur.

The Modified LPA with I-5 shifted west design option would result in the smallest remaining harm to the protected features and attributes that qualify the VNHR Historic District for protection than the Modified LPA and all other design options. Although total use of the VNHR Historic District would be less under the Modified LPA without C Street ramps design option, severity of remaining harm to contributing resources would be identical to the Modified LPA and greater than with the Modified LPA with I-5 shifted west design option (Figure 4-39).

The Modified LPA with one auxiliary lane design option would result in the least permanent incorporation of Fort Vancouver NHS (Table 4-5). All of the design options would have the same visual and auditory effects on contributing resources in the Fort.

4.6.3 Relative Significance of Each Section 4(f) Property

Modified LPA with All Design Options

The majority of historic sites that would be used by the Modified LPA or design options are NRHP eligible at the local significance level (Table 4-10). As a National Historic District, the VNHR Historic District is of greater significance as a whole than the individually eligible historic properties that would also be affected by the Modified LPA with all design options. The Fort Vancouver NHS is a National Park Unit, making it a nationally significant park property. It is also listed on the NRHP as a nationally significant historic site and is included in the VNHR Historic District.

Table 4-10. Relative Significance of Section 4(f) Properties with Use with a Greater than *de Minimis* Impact

Property	Significance
Northbound Interstate Bridge (OR 50 and WA 381a)	NRHP-listed at the regional significance level
The Toll Administration Building/ODOT Permit Center – 12348 N Center Avenue (OR 103)	NRHP-eligible at the state significance level
Harbor Shops – 11915 N Center Avenue (OR 107)	NRHP-eligible at the local significance level
Jantzen Beach Water Tank – N Center Avenue (OR 109)	NRHP-eligible at the local significance level
Jantzen Beach Moorage – 1501 N Jantzen Avenue/1525-2055 N Jantzen Avenue (OR 111)	NRHP-eligible at the local significance level
Normandy Apartments – 318 E 7th Street (WA 149)	NRHP-eligible at the local significance level
Bridge Substation – 100 SE Columbia Street (WA 1192)	NRHP-eligible at the local significance level
Vancouver National Historic Reserve Historic District (WA Multiple)	NRHP-listed district at the national significance level
Fort Vancouver National Historic Site	National Park Unit

NRHP = National Register of Historic Places; ODOT = Oregon Department of Transportation

4.6.4 Views of Officials with Jurisdiction over Each Section 4(f) Property

Discussions with officials with jurisdiction are ongoing for the IBR Program, as described in Section 4.7, Coordination. Discussions with the NPS, City of Portland, City of Vancouver, and Port of Vancouver confirmed that park properties identified as protected under Section 4(f) are significant. PP&R requested additional details and coordination about trail connections in and around Delta Park. VPR&C expressed general agreement with preliminary *de minimis* and temporary occupancy findings, pending public comment. Consultation under Section 106 identified the historic sites eligible for Section 4(f) protection within the IBR APE. NPS expressed that the portion of the VNHR Historic District that is also within the NRHP-listed boundary of the Fort Vancouver NHS is more significant than other parts of the VNHR Historic District because it was established by an act of Congress. The Oregon SHPO and Washington DAHP concurred with the Section 106 FOE for historic architecture on March 19, 2024, and October 13, 2023, respectively.

4.6.5 Degree to Which Each Alternative Meets the Purpose and Need for the Program

The Purpose and Need for the IBR Program is detailed in Chapter 1 of this Draft SEIS. As summarized below for each element of the Purpose and Need, the Modified LPA, including all design options, would meet the Purpose and Need; however, the degree to which each alternative addresses the Purpose and Need would vary as discussed for each element of the Purpose and Need.

Growing Travel Demand and Congestion and Impaired Freight Movement

The Modified LPA (with any design options) would improve congestion, safety issues, and freight movement. However, there are some differences in their performance, and certain design options would perform better than others. Compared to the No-Build Alternative, the Modified LPA would decrease travel (measured by vehicle miles traveled) by 1% in both the Portland metropolitan region and traffic subarea and travel times (measured by vehicle hours traveled) by 1% in the Portland metropolitan region and up to 3% in the subarea. The subarea is defined as a ring around I-5 and I-205 from where they meet in Vancouver to where they both intersect with I-84 in Portland. The Modified LPA (with either one or two auxiliary lanes) would result in an 11% decrease in delay (measured in vehicle hours of delay) in the Portland region and a 30% (one auxiliary lane) to 32% (two auxiliary lanes) decrease in delay in the subarea, compared to the No-Build Alternative.

The Modified LPA single-level movable-span configuration would involve periodic bridge openings and gate closures that would interrupt traffic operations (including freight and buses), LRT, and active transportation. Daytime bridge openings could impact traffic congestion for an hour or more, while nighttime bridge openings would have less impact to traffic congestion and transit operations (approximately 12 minutes would be needed for the bridge opening/closure, with the remainder of the hour needed for traffic operations to return to pre-opening conditions). The restrictions on when bridge openings would be permitted may change to reduce interruptions to all modes of transportation on the new Columbia River bridges. The fixed-span configurations would reduce congestion, improve vehicular and transit safety, and improve truck freight movement slightly more than the movable-span configuration. However, when open, the movable-span configuration would provide vertical clearance for river navigation than would the other bridge configurations. The higher vertical navigation clearance of the fixed-span bridge options compared to the No-Build Alternative would enable more vessels to pass under the bridges without requiring a bridge opening, resulting in fewer restrictions on the time needed to pass under the fixed-span configuration.

The Modified LPA has 10 intersections that do not meet agency performance standards for level of service (LOS) during either the AM and/or PM peak hours. An additional nine study area intersections would operate below agency standards during the AM and/or PM peak hours for the design option without C Street ramps. Removal of the C Street ramps would redirect trips between downtown Vancouver and I-5 to the Mill Plain Boulevard interchange, resulting in higher volumes compared to the other design options.

Overall, the Modified LPA without C Street ramps design option would perform less well than the other design options in meeting the project need to address growing congestion. The design options with two auxiliary lanes would perform slightly better than the options with one auxiliary lane at addressing growing congestion.

Safety and Vulnerability to Incidents

The Modified LPA under all design options would reduce the number of crashes in the corridor compared to the No-Build Alternative, with some differences among the options. The Modified LPA with double-deck fixed-span configuration, one auxiliary lane, and C Street ramps design option is predicted to experience 23% fewer crashes than the No-Build Alternative.

The Modified LPA with two auxiliary lanes design option is predicted to reduce crashes compared to the one auxiliary lane option by up to 6%. Under the Modified LPA without C Street ramps design option, more traffic would travel through the Mill Plain Boulevard interchange, which may increase the likelihood of crashes on the affected ramps and intersections; however, the removal of the C Street northbound off-ramp and southbound on-ramp is likely to offset these crashes and have a safety performance similar to that of the Modified LPA with C Street ramps design option.

While the impacts of the movable-span configuration cannot be quantified within the predictive analysis, the movable span is associated with a higher likelihood of crashes. It is therefore likely that the single-level movable-span configuration would perform slightly worse (i.e., experience more crashes) than the two fixed-span configurations but better (i.e., experience fewer crashes) than the No-Build Alternative.

Overall, the Modified LPA without C Street ramps design option and the design options with a movable span would perform less well than the other design options in meeting the project need to address safety. The design options with two auxiliary lanes would perform slightly better than the options with one auxiliary lane at addressing safety.

Substandard Bicycle and Pedestrian Facilities

The Modified LPA includes a shared-use path over North Portland Harbor and the Columbia River, as well as various improvements along connecting facilities. The alignment of the shared-use path in the Modified LPA ties into planned active transportation projects in Portland and Vancouver.

The effects of the Modified LPA design options would be similar because they offer either the same or similar improvements for active transportation. The single-level movable-span configuration would involve delays in active transportation due to bridge openings, whereas the other two bridge configurations would not. It is possible that openings could be limited to nighttime hours to reduce conflicts with active transportation, vehicular traffic, and transit; however, changes to bridge opening restrictions have not been determined.

The shared-use path across the Columbia River on all bridge configurations under the Modified LPA would be at a higher elevation over the Columbia River than the No-Build Alternative. In the single-level fixed-span configuration, the shared-use path would be at an elevation of 137 feet, while the single-level movable-span configuration would be 122 feet. The path transition from the I-5 northbound bridge down to Columbia Way would require extensive ramp lengths to span the vertical distance at a grade that meets or exceeds Americans with Disabilities Act requirements. The Modified LPA design incorporates a helix ramp to make this transition, but this design introduces considerable additional path length. While lower than the Modified LPA with double-deck fixed-span configuration, the paths in these configuration options would still be higher than under the No-Build Alternative, requiring all users to climb longer distance to get over the peak. In both options, users would experience a level of security similar to the No-Build Alternative by being separated from traffic. The Modified LPA with double-deck fixed-span configuration would provide active transportation users on the lower deck some shelter from weather conditions while making them not visible to traffic.

Overall, all of the design options would address active transportation needs to a similar degree.

Limited Public Transportation Operation, Connectivity, and Reliability

The Modified LPA with all design options would improve transit operations, connectivity, and reliability. In general, the Modified LPA design options would provide similar improvements to the public transportation system (i.e., extend LRT from Expo Center Station to Evergreen Boulevard, construct an LRT station on Hayden Island, provide bus-on-shoulder service, etc.). The single-level movable-span configuration would require delays to transit operations due to bridge openings. It is possible that openings could be limited to nighttime hours to reduce conflicts with active transportation, vehicular traffic, and transit; however, changes to bridge opening restrictions have not been determined.

There would be small routing changes to access downtown Vancouver in the Modified LPA without C Street ramps design option and travel time improvements for express bus transit in the two-auxiliary-lane design option. The other design options would all have similar effects on transit service.

Overall, all of the design options would address transit needs to a similar degree.

Seismic Vulnerability

The Modified LPA (including all design options) would improve seismic resiliency in the corridor by replacing the Interstate Bridge and North Portland Harbor bridge with a modern, seismically resilient crossing. There are additional structural considerations for a single-level movable-span configuration. While the bridge would be designed for seismic event(s), a movable span with moving parts and machinery is more likely to suffer misalignment and/or damage from a seismic event that would be detrimental to resuming operations without significant cost and down time. While the movable-span design option would meet seismic vulnerability safety requirements, it would be less resilient than the fixed-span options because it would likely require substantially greater time and effort to restore full operation after a substantial seismic event.

Overall, the Modified LPA movable-span design options would perform less well than the other design options in meeting the project need related to seismic resiliency.

4.6.6 After Reasonable Mitigation, the Magnitude of Any Adverse Impacts to Resources Not Protected by Section 4(f)

The Modified LPA was developed in part to reduce impacts to various resources. The primary differences in impacts and benefits to non-Section 4(f) resources between the alternatives are compared below.

Acquisitions and Displacements

The new transportation facilities and their long-term operation and maintenance would require permanent property acquisitions and displacements (Section 3.3, Property Acquisitions and Displacements). The number and location of acquisitions would generally be the same for all Modified LPA design options, except that the Modified LPA with I-5 shifted west design option would require additional acquisitions amounting to 1 acre, and the displacement of a 33-unit apartment complex and three commercial businesses in downtown Vancouver. The proposed locations for park and rides would require a total of 1.6 acres between sites 2 and 3 and displace one business. Two alternative park-and-ride locations are proposed for the Evergreen Station, which would require the full acquisition of an additional 3.16 acres. See Section 3.3, Property Acquisitions and Displacements, for additional information about acquisitions and displacements.

Transportation

The Modified LPA would reduce travel times and congestion along I-5 and improve traffic safety, multimodalism, freight mobility and access, and pedestrian and bicycle infrastructure compared to the No-Build Alternative. The Modified LPA with two auxiliary lanes design option has the potential to further reduce travel times and the duration of congestion by improving the efficiency of traffic flow. Transportation impacts are similar between the Modified LPA and the remaining design options (single-level fixed-span configuration, I-5 shifted west design option, and park-and-ride locations design option), with the exception of a slightly greater reduction to northbound PM peak travel time with the elimination of the C Street ramps and delays to all transportation modes during bridge openings with the single-level movable-span configuration. An additional nine study area intersections would not meet agency LOS performance standards under the Modified LPA without C Street ramps design option. See Section 3.1, Transportation, for additional information about transportation benefits and effects.

Aviation and Navigation Safety and Efficiency

The fixed-span bridge configurations proposed under the Modified LPA would improve aviation safety compared to the No-Build Alternative by reducing intrusion into the Pearson Field protected airspace. The single-level movable-span configuration would penetrate the Pearson Field protected airspace, when in the open and closed position, due to the lift span tower heights. All bridge configurations would reduce the potential for bird nesting and roosting.

The new crossing would also reduce the number of piers across the Columbia River and increase horizontal clearance. The Modified LPA fixed-span configurations (single-level or double-deck) would have a lower vertical navigation clearance than the single-level movable-span configuration, which is the only bridge option that provides a vertical navigation clearance of at least 178 feet (OLW, in the open position) per the USCG's Preliminary Navigation Clearance Determination (USCG 2022). The Modified LPA with either the double-deck or single-level fixed-span configurations (all bridge type options) would reduce the maximum clearance from 178 feet to 116 feet (OLW), requiring adjustments to some vessels or business operations.

The Modified LPA with double-deck fixed-span configuration would shift the 2,000-foot-long Vancouver Upper Turning Basin downstream approximately 300 feet compared to the No-Build Alternative, while the single-level configurations would shift it approximately 325 feet. Likewise, construction of the Modified LPA west of the existing Interstate Bridge would also reduce the distance between the proposed Columbia River bridges and the BNSF Railway bridge by 300 to 325 feet, resulting in a shorter available distance for vessels to align with the openings of the two bridges. See Section 3.2, Navigation, and Section 3.22, Aviation, for additional information about navigation and aviation benefits and effects, respectively.

The Modified LPA would increase the number of piers in North Portland Harbor because it would increase the number of bridges crossing the waterway.

Land Use, Circulation, and Development

The Modified LPA would alleviate capacity and mobility constraints along I-5, improve multimodalism, and address the need for regional high-capacity transit in a manner consistent with state, regional, and local plans. Interchange improvements at Denver/Interstate, Marine Drive, Hayden Island, SR 14/City Center, Mill Plain, Fourth Plain, and SR 500/Main Street would improve access and connectivity within the region.

Land use patterns would remain largely unchanged under the Modified LPA, with some differences in circulation and development between design options. The Modified LPA with two auxiliary lanes design option would require slightly more acquisition of property at Fort Vancouver but would further improve mobility and access for freight and employment compared to the Modified LPA. Approximately 35 businesses and 580 employees

would be displaced under the Modified LPA and most design options. The Modified LPA with I-5 shifted west design option would displace an additional three businesses and approximately 140 employees because the alignment would require more acquisitions in downtown Vancouver.

The reduced highway grade associated with the single-level fixed-span configuration (all bridge type options) would benefit freight vehicle speed and have corresponding economic benefits for the region. The Modified LPA without C Street ramps design option would create additional traffic delay near the Mill Plain Boulevard interchange and in downtown Vancouver, potentially having an economic impact to local businesses. The park-and-ride locations would all have similar effects. See Section 3.4, Land Use and Economic Activity, for additional information about land use benefits and effects.

Neighborhood Access and Mobility

The design options would have neighborhood impacts similar to those of the Modified LPA, with the exception of reduced transportation reliability due to bridge backups under the single-level movable-span configuration. Specifically for Hayden Island, the improvements to a more continuous street system, pedestrian and bicycle facilities, and transit connections could benefit residents and community cohesion. See Section 3.5, Neighborhoods and Equity, for additional information about neighborhood benefits and effects.

Natural Environment Impacts

The Modified LPA with all design options would improve water quality through updates to stormwater management and treatment. The replacement bridges and existing bridge removal would physically change the benthic and overwater footprint over the Columbia River and North Portland Harbor.

All design options would result in similar ecosystem effects but would differ in quantity and intensity. The Modified LPA with two auxiliary lanes design option would require an additional 4.8-acre (2.3%) increase in elevated overwater shading and contributing impervious area compared to one auxiliary lane. The single-level fixed-span configuration requires structural changes that would increase benthic impacts (net loss of 0.03 acres) and shading (additional 4 acres), but without meaningfully different effects on habitat function or water quality. The single-level movable-span configuration would bring similar increases to benthic habitat impacts (net loss of 0.07 acres) and overwater shading (additional 1.58 acres) at a slightly higher level than the fixed span due to a larger number of drilled shafts and shaft caps and a larger bridge deck. The Modified LPA with single-level fixed-span and single-level movable-span configurations would have wetland impacts similar to those of the double-deck fixed-span configuration (0.58 acres). The Modified LPA with I-5 shifted west design option and the Modified LPA without C Street ramps design option would have similar impacts to the natural environment. For additional information about these resources, see Section 3.14, Water Quality and Hydrology, for water quality, Section 3.15, Wetlands and Other Waters, for wetlands and waters, and Section 3.16, Ecosystems, for ecosystems.

Environmental Justice

The Modified LPA with all design options would have both beneficial and adverse effects on environmental justice (EJ) populations. There are no notable differences in effects among the design options, with the exception of increased residential displacements under the Modified LPA with I-5 shifted west design option. Beneficial effects include improved air quality; transit connectivity and service frequency; active transportation connectivity and safety; and vehicle travel reliability. For adverse effects, construction of the Modified LPA and any design option(s) would displace residences and businesses in high-priority and meaningfully greater EJ neighborhoods,² impacts from tolling, and noise impacts. The Modified LPA with I-5 shifted west would result in the displacement of an additional 33 residential units (Normandy Apartments) and three businesses. Although the Normandy Apartments are not identified by the U.S. Department of Housing and Urban Development as a low-income housing tax credit property, the 33 displacements would occur within the Esther Short neighborhood, a high-priority EJ area for low-income populations.

² See Section 3.20, Environmental Justice, for an explanation of what constitutes a “high-priority” and “meaningfully greater” EJ neighborhood or area.

The mitigation strategies related to acquisition and displacement and noise and vibration include statutory requirements, best management practices, and obligations the IBR Program must comply with under existing law (e.g., a noise wall is currently proposed to mitigate noise impacts). The Program is evaluating including a low-income tolling program as part of IBR implementation. Once fully developed, a low-income tolling program would play a critical role in mitigating disproportionately high and adverse effects of tolling on EJ populations. See Section 3.20, Environmental Justice, for additional information about benefits and effects for EJ populations.

4.6.7 Substantial Differences in Costs Among the Alternatives

The estimated capital cost ranges for the alternatives are provided in Table 4-11. These are high-level conceptual cost estimates that will be further refined by the IBR Program in 2024. Where a comparison is provided, the comparison is to the estimated cost of the Modified LPA with double-deck fixed-span configuration, one auxiliary lane, C Street ramps, and centered I-5. Overall, while there would be substantial differences between alternatives in the cost of the bridge alone, when factored into complete program costs, the differences would be within 10%.

Table 4-11. Cost Estimates

Alternative	Capital Cost
Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and Centered I-5	Program cost: 5 to 7.5 billion (YOE \$) ^a Bridge cost alone: 860 million to 1.3 billion (YOE \$) ^a
Modified LPA with Single-Level Fixed-Span Configuration and One Auxiliary Lane	Program cost: Between 3% less and 2% more than the Modified LPA, depending on bridge type (i.e., steel or concrete segmental girder bridge, extradosed bridge, or finback bridge) Bridge cost alone: between 22% less and 13% more than the Modified LPA
Modified LPA with Single-Level Movable-Span Configuration and One Auxiliary Lane	Program cost: Program cost approximately 7% more than the Modified LPA Bridge cost alone: approximately 43% more than the Modified LPA
Modified LPA with all other design options	Program cost: Less than 1% difference from the Modified LPA

^a Cost range is a risk-loaded estimate with 80% probability that the cost will be within the range.

I-5 = Interstate 5; LPA = Locally Preferred Alternative; YOE = year of expenditure dollars

4.6.8 Conclusion of Least Overall Harm Analysis

Overall, the difference in harm between the Modified LPA design options would be small, as summarized in Table 4-12, which draws from the information and analysis in this 4(f) evaluation. The locations of that information are cited in the first column of the table. Based on the consideration and balancing of all factors, the least overall harm alternative is the Modified LPA with double-deck fixed-span configuration, as explained further in text after the table.

Table 4-12. Summary of Least Overall Harm Analysis

Factor	1	2	3	4	5	6
	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, without C Street Ramps, Centered I-5	Modified LPA with Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, and I-5 Shifted West	Modified LPA with Single-Level Fixed- or Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5	Modified LPA Single-Level Fixed- or Movable-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5	Modified LPA Double-Deck Fixed-Span Configuration, Two Auxiliary Lanes, C Street Ramps, Centered I-5
Ability to mitigate impacts to 4(f) properties, including any benefits to properties (addressed in Section 4.6.1)	Direct use of VNHR Historic District would fall in the middle of the range of all alternatives (1.5 acres; 0.3 acres for Fort Vancouver NHS) and could not be offset. Use of Oregon historic sites could not be avoided and would be the same as most Modified LPA design options (9.0 acres). No use of the Normandy Apartments.	Same use of and ability to mitigate Section 4(f) properties as Column 1; direct use of the VNHR Historic District would be 1.5 acres; 0.3 acres for Fort Vancouver NHS.	Same use of and ability to mitigate Section 4(f) properties as Column 1, with the exception that direct use of VNHR Historic District would be the smallest of all alternatives (1.2 acres; 0.3 acres for Fort Vancouver NHS) and the Normandy Apartments site would be completely acquired and the building demolished. Impacts to Normandy Apartments would be severe and unavoidable with no ability to mitigate impacts.	Same use of and ability to mitigate Section 4(f) properties as Column 1, and same remaining harm; direct use of VNHR Historic District would be 1.5 acres; 0.3 acres for Fort Vancouver NHS.	Same use of and ability to mitigate Section 4(f) properties as Column 1 and same remaining harm, with the exception that direct use of VNHR would be at the top of the range (1.6 acres; 0.3 acres for Fort Vancouver NHS).	Same use of and ability to mitigate Section 4(f) properties as Column 1, with the exception that direct use of VNHR would be at the top of the range of all alternatives (1.6 acres; 0.3 acres for Fort Vancouver NHS).
Severity of remaining harm after mitigation (addressed in Section 4.6.2)	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.4 acres. The Modified LPA area of incorporation would fall in the middle of the range of all alternatives for the VNHR Historic District (1.5 acres). Adverse effects to 14 contributing resources in the VNHR Historic District; acquisitions primarily from noncontributing resources. Severe remaining harm to the northbound Interstate Bridge and Oregon-side resources, which would be demolished.	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.5 acres, falling in the middle of the range of all alternatives. More incorporation of the VNHR Historic District than the Modified LPA with C Street ramps design option (difference of 0.03 acres); Fort Vancouver NHS would have an additional 0.03 acres of incorporation. No change to the use or harm to contributing resources within VNHR Historic District. Same remaining harm to the northbound Interstate Bridge and Oregon-side resources as Column 1, which would be severe.	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.5 acres, falling in the middle of the range of all alternatives. Less harm to the VNHR Historic District than Column 1 due to decreased demolition of Army Road System and reduced vibration risk to NCO Family Quarters Buildings. Less use of the VNHR Historic District than the Modified LPA with C Street ramps design option (difference of 0.28 acres). Same remaining harm to the northbound Interstate Bridge and Oregon-side resources as the Modified LPA, which would be severe. Severe harm to the Normandy Apartments, which would be demolished.	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.4 acres, the least of all alternatives. Less incorporation of the VNHR Historic District than Column 1 (difference of 0.05 acres). Same remaining harm to the northbound Interstate Bridge and Oregon-side resources as Column 1, which would be severe.	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.5 acres, falling near the top of the range of all alternatives. More incorporation of the VNHR Historic than Column 1 (difference of 0.1 acres). Same remaining harm to the northbound Interstate Bridge and Oregon-side resources as Column 1, which would be severe.	<i>De minimis</i> impact to three parks. Use with greater than <i>de minimis</i> impact of 8 historic sites and the Fort Vancouver NHS. Total use of 12.5 acres, falling near the top of the range of all alternatives. More incorporation of the VNHR Historic District than Column 1 (difference of 0.1 acres). Same remaining harm to the northbound Interstate Bridge and Oregon-side resources as Column 1, which would be severe.
Relative significance of each 4(f) property (addressed in Section 4.6.3)	The VNHR Historic District and Fort Vancouver NHS are nationally significant and are the most significant properties affected. The northbound Interstate Bridge is a regionally significant property. All other properties are locally significant.	Same significance of Section 4(f) properties Column 1.	Same significance of Section 4(f) properties as Column 1. The Normandy Apartments, which is a locally significant resource, would be severely harmed, while harm to the VNHR Historic District, which is nationally significant, would be reduced.	Same significance of Section 4(f) properties as Column 1.	Same significance of Section 4(f) properties as Column 1.	Same significance of Section 4(f) properties as Column 1.

	1	2	3	4	5	6
Views of officials with jurisdiction (addressed in Sections 4.7 and 4.6.4)	At the time of this Draft Section 4(f) Evaluation, discussions with officials with jurisdiction are ongoing. NPS has expressed that the Fort Vancouver NHS has the greatest significance.	Same status as Column 1.	Same status as Column 1.	Same status as Column 1.	Same status as Column 1.	Same status as Column 1.
Degree to which alternative meets the Purpose and Need for the project (addressed in Section 4.6.5)	<p>Congestion, Safety, and Freight Movement: Improved mobility and safety and reduces congestion due to design modifications that tie in to recent and planned improvements. Would have 23% fewer total crashes than the No-Build Alternative.</p> <p>Transit: Improved connectivity to existing and planned transit facilities</p> <p>Bicycle and Pedestrian Facilities: Improved connectivity to local street network</p> <p>Seismic Vulnerability: Decreased vulnerability due to replacement of the Interstate Bridge and North Portland Harbor bridge.</p>	<p>Congestion, Safety, and Freight Movement: Nine additional study area intersections would operate below LOS agency standards during the AM and/or PM peak hours, negatively affecting congestion and freight movement as compared with all other Modified LPA design options. Similar safety performance.</p> <p>Transit: Same as Column 1.</p> <p>Bicycle and Pedestrian Facilities: Same as Column 1.</p> <p>Seismic Vulnerability: Same as Column 1.</p>	Same status as Column 1.	<p>Congestion, Safety, and Freight Movement: Movable-span configuration would require periodic disruptions to all modes using the river crossing during bridge openings. May result in more crashes than fixed-span configurations because of the higher likelihood of crashes associated with bridge openings.</p>	<p>Congestion, Safety, and Freight Movement: Would reduce travel demand slightly more than Column 1 with shorter travel times for vehicles (including personal, freight, and bus). Would reduce crashes by up to 6% over the Column 1. A movable span would require periodic disruptions to all modes using the river crossing during bridge openings.</p> <p>Seismic Vulnerability: A movable span could be less resilient in returning to full operation after a seismic event.</p>	<p>Congestion, Safety, and Freight Movement: Similar to Column 1, except would reduce crashes by up to 6%.</p> <p>Seismic Vulnerability: A movable span could be less resilient in returning to full operation after a seismic event.</p>
Magnitude of impacts to non-Section 4(f) resources after mitigation (see Section 4.6.6)	<p>Reduced travel times and congestion, as well as improved traffic safety, multimodalism, freight mobility and access, and pedestrian and bicycle infrastructure.</p> <p>Improved aviation safety. Reduced vertical navigation clearance and relocated Vancouver Upper Turning Basin.</p> <p>Improved water quality through stormwater management. Physical changes in benthic habitat and overwater footprint.</p> <p>Full acquisition of 46 residential and commercial properties, 42 residential and 34 commercial displacements, including some in meaningfully greater and high-priority environmental justice (EJ) areas.</p> <p>New toll would require a higher proportion of income of low-income drivers (ODOT and WSDOT are evaluating a low-income toll program). The Modified LPA would bring new high-capacity transit service to meaningfully greater and high-priority</p>	Similar to Column 1. Removal of C Street ramps would affect local traffic circulation patterns resulting in an additional nine study area intersections that would not meet agency level of service performance standards. It would also increase traffic delay near the Mill Plain Boulevard interchange.	Similar to Column 1, but would result in displacement of an additional 33 residential units (Normandy Apartments). Although the Normandy Apartments are not identified by the U.S. Department of Housing and Urban Development as a low-income housing tax credit property, the 33 displacements would occur within the Esther Short neighborhood, a high-priority EJ area for low-income populations. Also, additional displacement of three businesses (approximately 540) jobs in downtown Vancouver.	<p>Similar to Column 1. A single-level fixed-span configuration would require 0.3 acres additional right-of-way acquisition in Portland and Vancouver and increase overwater shading by 4 acres and impacts to benthic habitat by 0.03 acres.</p> <p>A single-level movable-span configuration would require 0.3 acres additional right-of-way acquisition in Portland and Vancouver and increase overwater shading by 5.6 acres and impacts to benthic habitat by 0.07 acres.</p> <p>The increased width of the single-level configurations would relocate the Vancouver Upper Turning Basin.</p> <p>A single-level movable-span configuration would have a higher vertical navigation clearance for river users but would intrude into protected airspace.</p>	Similar to Column 1. Overwater shading and impervious surfaces increased by 0.8 acres compared to the Modified LPA with single-level, one auxiliary lane design option.	Similar to Column 1. Increased overwater shading and impervious surfaces compared to Column 1. Would require 0.1 acres additional right-of-way acquisition compared to the Modified LPA with double-deck, one auxiliary lane design option.

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	1	2	3	4	5	6
	EJ areas such as Esther Short in Vancouver.					
Substantial cost difference among alternatives (see Section 4.6.7)	Program cost: 5 to 7.5 billion (YOE \$)	Program cost less than 1% difference from Column 1.	Program cost less than 1% difference from Column 1.	Between 3% less and 7% more than Column 1, depending on bridge type.	Program cost less than 1% difference from Column 1 for the fixed-span. Program cost approximately 7% greater than Column 1 for movable-span configuration.	Program cost less than 1% difference from Column 1.

EJ = environmental justice; I-5 = Interstate 5; LPA = Locally Preferred Alternative; NCO = non-commissioned officer; ODOT = Oregon Department of Transportation; SR = State Route; VNHR = Vancouver National Historic Reserve; WSDOT = Washington State Department of Transportation; YOE = Year of Expenditure

The Modified LPA with all design options would result in remaining harm after mitigation to Section 4(f) historic sites in Oregon and Washington. In Oregon, remaining harm would be the same for all of the Modified LPA design options. In Washington, the remaining harm after mitigation would be the same for all of the Modified LPA design options to all resources except the Normandy Apartments, VNHR Historic District, and Fort Vancouver NHS, which would differ for the Modified LPA without C Street ramps design option and the Modified LPA with I-5 shifted west design option.

Impacts to non-Section 4(f) resources would also generally be similar (Table 4-12) for all Modified LPA design options, with some differences for the Modified LPA with I-5 shifted west design option, the Modified LPA without C Street ramps design option, the Modified LPA single-level fixed-span or movable-span configuration with one or two auxiliary lanes design options, and the Modified LPA with double-deck fixed-span configuration due to displacement impacts. At a Program level, differences in costs would not be substantial.

Key distinguishing factors of the least overall harm analysis between the alternatives include the following:

- Ability to mitigate impacts to 4(f) properties, including any benefits to properties: All design options of the Modified LPA have about the same ability to mitigate impacts, with the exception of the Modified LPA with I-5 shifted west design option, which would remove the NRHP-eligible Normandy Apartments. However, the Modified LPA with I-5 shifted west design option would reduce impacts to the VNHR Historic District relative to other design options, including 0.2 to 0.3 acres less area used from the district than the other design options and less harm to contributing resources, such as the Army Road System, and decreased vibration damage risk to the Post Hospital and NCO Family Quarters Building. The Modified LPA with all design options could mitigate vibration risk by repairing any damage in accordance with the Secretary of the Interior Standards but could not mitigate incorporation of the Army Road System. Overall, the Modified LPA with I-5 shifted west design option has the least ability to mitigate impacts to Section 4(f) properties due to its impact on the Normandy Apartments.
- Severity of remaining harm after mitigation: The Modified LPA with I-5 shifted west design option would acquire and demolish the Normandy Apartments resulting in severe remaining harm, while the other design options would have less severe remaining harm. All alternatives would have similar effects on contributing elements of the VNHR Historic District except for the Modified LPA with I-5 shifted west design option, which would slightly reduce harm to the Army Road System and potential for vibration effects to other contributing elements. The Modified LPA without C Street ramps design option would use less land in the Fort Vancouver NHS and the VNHR Historic District than the other design options, with the exception of the Modified LPA with I-5 shifted west design option, but in an area of the park and historic district that does not contribute to the historic site's significance.
- Degree to which alternative meets the Purpose and Need: The Modified LPA with all design options all meet the Program's Purpose and Need, but some design options meet it better than others. All of the Modified LPA design options would improve congestion, safety, freight movement, transit, bicycle and pedestrian facilities, and seismic vulnerabilities over existing conditions. The Modified LPA with single-level movable-span configuration would require periodic disruptions of all modes during bridge openings. Design options with two auxiliary lanes would reduce travel demand more than one auxiliary lane and would result in marginally shorter travel times.
- Magnitude of impacts to non-Section 4(f) resources after mitigation:
 - The Modified LPA without C Street ramps design option would have the most substantial effects on arterial traffic operations of all of the design options because it would result in LOS standards not being met for an additional nine intersections. There would be delays to all modes during bridge openings for the Modified LPA with single-level movable-span configuration.

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- The fixed-span configurations proposed under the Modified LPA would improve aviation safety by reducing intrusion into the Pearson Field protected airspace.
- Fixed-span configurations would have greater impacts on river navigation by reducing the vertical clearance under the bridge, requiring adjustments to some vessels or business operations. The Modified LPA with single-level configurations (movable or fixed span) would relocate the Vancouver Upper Turning Basin by an additional 25 feet compared with the double-deck fixed-span configuration.
- The Modified LPA with I-5 shifted west design option would result in additional impacts to an EJ population from residential displacements. The single-level configurations are wider and would result in more navigation impacts due to reduced vertical clearance, while a single-level movable-span configuration would retain the existing clearance but intrude into protected airspace. Design options with two auxiliary lanes would result in more overwater shading.
- Substantial Cost Difference Among the Alternatives: The most substantial difference in cost would be for the Modified LPA with single-level movable-span configuration, which would increase Program costs by approximately 7% (between 370 and 560 million YOE \$) compared to the Modified LPA with double-deck fixed-span configuration.

Balancing the small differences in harm, the Modified LPA with double-deck fixed-span configuration has preliminarily been identified as the alternative with least overall harm, as supported by the comparison of the seven factors considered in Table 4-12 and the discussion above. Overall, the difference in harm across the design options would be small, with the exception of demolition of the Normandy Apartments and additional residential displacements for the Modified LPA with I-5 shifted west design option. FHWA and FTA will consider public comment on this Draft Section 4(f) Evaluation prior to making a final determination on the alternative with least overall harm in the Final Section 4(f) Evaluation.

As the IBR Program continues into final design, the Program team will continue to consider ways to further reduce impacts on Section 4(f) properties, ensuring that the action will include all possible planning to minimize harm.

4.7 Coordination

The IBR Program sponsors and/or the federal co-lead agencies have coordinated with 11 Native American tribes, the Washington DAHP, the Oregon SHPO, the NPS, the City of Vancouver, the Vancouver Public School District, Clark College, the City of Portland, and other interested parties in identifying Section 4(f) properties, evaluating the use of Section 4(f) properties, and identifying measures to minimize harm to these properties. Coordination is in process and will continue with officials with jurisdiction over the park and recreation properties and historic sites regarding *de minimis* impact and temporary occupancy determinations. FHWA and FTA will obtain written concurrence from officials with jurisdiction over park and recreation properties where they intend to make a *de minimis* impact determination subsequent to a 45-day public comment period as required by 23 CFR 774.5(b). For properties where temporary occupancy exceptions are sought, FHWA and FTA will obtain written agreement that the conditions of 23 CFR 774.13(d) are met. Concurrence for *de minimis* impact determinations and agreement for temporary occupancy exceptions will be obtained prior to issuance of the Final SEIS.

During October 2023, the Draft Section 4(f) evaluation was provided to the lead agencies, the Cities of Portland and Vancouver, the Ports of Portland and Vancouver, and consulting parties for review and comment regarding the identification and significance of properties subject to Section 4(f) and evaluation of use of those properties. The IBR Program sponsors met with NPS, PP&R, VPR&C, and the Port of Vancouver regarding parks within their jurisdictions. The analysis in this chapter reflects comments received from these agencies.

The agencies confirmed that they have jurisdiction over the respective park properties identified in this chapter and that the properties are significant public parks. NPS clarified that it manages Waterfront Park as part of the Fort Vancouver NHS, clarified resource and boundary definitions between the park and historic district, and expressed that recreational experience is not separate from that of the historic site. The City of Portland provided comment on project features at East Delta Park regarding active transportation facilities within the city. The IBR Program's features and effect on Old Apple Tree Park and Marshall Park were discussed with the City of Vancouver, including ongoing need for coordination on right-of-way ownership. The City of Vancouver identified a location preference for the trail within Old Apple Tree Park; the Program is continuing to evaluate trail alignment in coordination with VPR&C. The Port of Vancouver confirmed the boundary of the public park area at their recently constructed Vancouver Landing and committed to ongoing coordinated planning of future park development in coordination with the IBR Program to reduce potential for conflicts between the two.

Consultation regarding the identification, significance, and effects on historic sites has occurred through the Section 106 process and documented in the Archaeology Technical Report and the Historic Built Environment Technical Report.

Additional coordination will occur after the Draft SEIS comment period to inform refinement of the Modified LPA during the preparation of the Final SEIS. The U.S. Department of the Interior (DOI) will formally review and comment on the Section 4(f) Evaluation during the Draft SEIS public comment period in 2024 (pending), and the DOI and other agencies will be given an opportunity to review the revised Section 4(f) Evaluation prior to publishing the Final SEIS. The U.S. Department of Transportation will make its Section 4(f) approval, under 23 CFR 774.3(a), as part of the Final SEIS or ROD.

Please see the FOE Concurrence Forms included in the appendices of the IBR Program Historic Built Environment Technical Report for further information regarding coordination with the Oregon SHPO and Washington DAHP.

4.8 Preliminary Section 4(f) Findings

The USDOT has made the preliminary determination that:

- The IBR Program would have:
 - Use with greater than *de minimis* impact of eight Section 4(f) protected historic sites and one public park (Table 4-8),
 - Use with *de minimis* impact on three public parks and four historic sites except for the Modified LPA with I-5 shifted west design option, which would have five (Table 4-3 and Table 4-5), and
 - The temporary occupancy exception would apply to five historic sites (Table 4-5).
- There is no feasible and prudent alternative that completely avoids all Section 4(f) properties;
- The Modified LPA is the alternative that causes the least overall harm; and
- The Modified LPA includes all possible planning to minimize harm.