

Appendix H

Draft Section 4(f) Evaluation

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West Seattle and Ballard Link Extensions Draft Section 4(f) Evaluation

January 2022

Sound Transit

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Attachments

Attachment H.1 Section 4(f) Status of Parks and Recreational Resources in the Study Area

Attachment H.2 City Preliminary Concurrence Request

ACRONYMS AND ABBREVIATIONS

Acronym	Definition
FTA	Federal Transit Administration
M.O.S.	minimum operable segment
National Register	National Register of Historic Places
SIFF	Seattle International Film Festival
Sound Transit	Central Puget Sound Regional Transit Authority
WSBLE	West Seattle and Ballard Link Extensions

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EXECUTIVE SUMMARY

Section 4(f) of the United States Department of Transportation Act of 1966 (United States Code Title 49 Section 303[c]) protects publicly owned parks, recreation areas, and wildlife and waterfowl refuges, as well as historic sites. Section 4(f) requires consideration of the following:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public.
- Wildlife and waterfowl refuges of national, state, or local significance that are publicly owned and open to the public to the extent that public access does not interfere with the primary purpose of the refuge.
- Historic sites of national, state, or local significance in public or private ownership, regardless of whether they are open to the public, that are listed in, or eligible for, the National Register of Historic Places (National Register) as identified according to Section 106 of the National Historic Preservation Act.
- Archaeological sites in or eligible for inclusion in the National Register, including those discovered during construction, except when the Federal Transit Administration (FTA) concludes that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, and the official(s) with jurisdiction over the Section 4(f) resource have been consulted and have not objected (Section 774.13(b)).

Under Section 4(f), the FTA cannot approve the “use” of a Section 4(f) resource unless it determines that:

- There is no feasible and prudent avoidance alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use; or
- The use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact on the property.

Potential Section 4(f) resources in the study area are described in Sections 3.1 and 4.1, and are summarized in Sections ES.1 and ES.2 below. Section 4(f) provides for some exceptions of certain types of uses when specific conditions are met. Otherwise, the use of a Section 4(f) property requires an evaluation of whether there would be a feasible and prudent avoidance alternative.

Sections 4.2.18 and 4.3.18 in Chapter 4, Affected Environment and Environmental Consequences, of the Draft Environmental Impact Statement summarize the use of Section 4(f) resources and consideration of avoidance alternatives within the West Seattle Link Extension and the Ballard Link Extension, respectively.

De Minimis Impact

An impact that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation or enhancement measures), results in either:

1. A Section 106 finding of no adverse effect on a historic property or no historic properties affected; or
2. A determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).

Section 4(f) Policy Paper (United States Department of Transportation 2012).

ES.1 West Seattle Link Extension

Table ES-1 summarizes the number of Section 4(f) resources within the West Seattle Link Extension study area by segment.

Table ES-1. Summary of 4(f) Resources in the West Seattle Link Extension Study Area

Segment	Number of Park/Recreational Resources	Number of Historic Resources
SODO	0	5
Duwamish	2	57
Delridge	4	12
West Seattle Junction	3	28
Linear resources spanning multiple segments	0	1

All alternatives in the Duwamish and West Seattle Junction segments would result in the use of at least one Section 4(f) resource, and there is no full-length project avoidance alternative for the West Seattle Link Extension. Section 3.4 of this Draft Section 4(f) Evaluation includes a discussion of feasible and prudent avoidance alternatives for all the West Seattle Link Extension Build Alternatives that would result in the individual use of a Section 4(f) resource in each segment. Based on the analysis of potential Section 4(f) resource avoidance alternatives, there are no prudent and feasible avoidance alternatives for the West Seattle Link Extension.

The Build Alternatives represent Sound Transit's best attempt to avoid and/or minimize Section 4(f) resources in the densely developed project corridor. The Build Alternatives balance the purpose and need of the project against potential impacts, while providing a range of alternatives for the public to consider and from which FTA and Sound Transit can choose. As design for the project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources.

ES.2 Ballard Link Extension

Table ES-2 summarizes the number of Section 4(f) resources within the Ballard Link Extension study area by segment.

Table ES-2. Summary of 4(f) Resources in the Ballard Link Extension Study Area

Segment	Number of Park/Recreational Resources	Number of Historic Resources
SODO	0	2
Chinatown-International District	2	53
Downtown	6	103
South Interbay	5	43
Interbay/Ballard	2	58
Linear Resources Spanning Multiple Segments	0	2

All alternatives in the Chinatown-International District, Downtown, South Interbay, and Interbay/Ballard segments would impact a Section 4(f) resource; therefore, there is no full-length project avoidance alternative for the Ballard Link Extension. Section 4.4 of this Draft Section 4(f) Evaluation includes a discussion of feasible and prudent avoidance alternatives for all the Ballard Link Extension Build Alternatives that would result in the individual use of a Section 4(f) resource in each segment.

The Build Alternatives represent Sound Transit's best attempt to minimize and avoid Section 4(f) resources in the densely developed project corridor. The Build Alternatives balance the purpose and need of the project against potential impacts, while providing a range of alternatives for the public to consider and from which FTA and Sound Transit can choose. As design for the project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources.

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1 SECTION 4(F) IMPACTS ASSESSMENT PROCESS

Section 4(f) of the United States Department of Transportation Act of 1966 (United States Code Title 49 Section 303[c]) protects publicly owned parks, recreation areas, and wildlife and waterfowl refuges, as well as historic sites. Section 4(f) requires consideration of the following:

- **Parks and recreational areas** of national, state, or local significance that are both publicly owned and open to the public. Per the *Section 4(f) Policy Paper* (United States Department of Transportation 2012), the term “significant” under Section 4(f) means that in comparing the availability and function of the park, recreation area, or wildlife and waterfowl refuge with the park, recreation, or refuge objectives of the agency, community or authority, the property in question plays an important role in meeting those objectives. Significance determinations of publicly owned land considered to be a park, recreation area, or wildlife and waterfowl refuge are made by the official(s) with jurisdiction over the property. Per Code of Federal Regulations Title 23 Section 774.11(c), consideration under Section 4(f) is not required when the official(s) with jurisdiction over a park, recreation area, or wildlife and waterfowl refuge determine that the property, considered in its entirety, is not significant. Properties are assumed to be significant in the absence of a determination.
- **Wildlife and waterfowl refuges** of national, state, or local significance that are publicly owned and open to the public to the extent that public access does not interfere with the primary purpose of the refuge.
- **Historic sites** of national, state, or local significance in public or private ownership, regardless of whether they are open to the public, that are listed in, or eligible for, the National Register of Historic Places (National Register). Within a National Register-listed or -eligible historic district, Section 4(f) applies to those properties that are considered contributing to the eligibility of the historic district, as well as any individually eligible property within the district.

In addition, Section 4(f) applies to all archaeological sites on or eligible for inclusion on the National Register, including those discovered during construction, except when the Federal Transit Administration (FTA) concludes that the archaeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place, and the official(s) with jurisdiction over the Section 4(f) resource have been consulted and have not objected (Section 774.13(b)).

Under Section 4(f), the FTA cannot approve the “use” of a Section 4(f) resource unless it determines that:

- There is no feasible and prudent avoidance alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use; or
- The use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact on the property.

De Minimis Impact

An impact that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation or enhancement measures), results in either:

3. A Section 106 finding of no adverse effect on a historic property or no historic properties affected; or
4. A determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).

Section 4(f) Policy Paper (United States Department of Transportation 2012).

The potential Section 4(f) resources in the study area, which is described in Section 2.4, were identified first, then FTA and Sound Transit proposed determinations that a few park and recreational resources are not significant and, therefore, are not Section 4(f) resources. FTA and Sound Transit have requested concurrence on the significance of resources from the officials with jurisdiction. For the remaining significant resources, FTA and Sound Transit proposed determinations about the extent to which the project would use each property. Attachment H.1 lists the parks and recreational resources in the study area and identifies which are Section 4(f) resources. All the historic resources in the study area that are included in or eligible for inclusion in the National Register are Section 4(f) resources, and are discussed in this document. There are no known archaeological sites affected by the project, but sites discovered during construction and determined eligible for the National Register will be evaluated pursuant to Sections 774.9(e) and 774.11(f). The proposed type of Section 4(f) use was determined in accordance with the following Section 4(f) use definitions and pending preliminary concurrence with the agencies of jurisdiction, where required:

- **Permanent Use.** A permanent use occurs when land from a Section 4(f) property is permanently incorporated by a transportation project. This may occur as a result of acquiring the entire parcel or a portion of the Section 4(f) property, permanent easements, or temporary easements that exceed regulatory limits (Code of Federal Regulations Title 23 Section 774.17). A permanent use wherein impacts would be greater than *de minimis* is considered an individual use and necessitates an evaluation of whether there would be a feasible and prudent avoidance alternative.
- **Temporary Occupancy.** A temporary occupancy occurs when the project temporarily uses Section 4(f) property during construction. Temporary occupancy is not a Section 4(f) use if the following criteria, as outlined in Code of Federal Regulations Title 23 Section 774.13(d), are met:
 - “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;
 - 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;
 - 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 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
 - There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.”

If these criteria are met, then the “temporary use exception” applies, meaning that the temporary occupancy of the land is so minimal that it does not constitute a use within the meaning of Section 4(f). If the criteria are not met, the use is evaluated as permanent. A temporary use wherein impacts do not meet the exception criteria and are greater than *de minimis* is considered an individual use and necessitates an evaluation of whether there is a feasible and prudent avoidance alternative.

- **Constructive Use.** A constructive use occurs when a transportation project does not incorporate a Section 4(f) property, but the project’s proximity impacts are so severe that the

protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially impaired (Code of Federal Regulations Title 23 Section 774.15(a)).

- **De minimis Use.** A determination of *de minimis* use can be made if the project would not adversely affect the features, attributes or activities that make the Section 4(f) property significant based on a consideration of impacts and mitigation measures. A *de minimis* determination for a park, recreation area, wildlife, or waterfowl refuge can only be made after receipt and consideration of public comment, and after FTA receives written concurrence from the official(s) with jurisdiction. A *de minimis* determination for a historic resource necessitates prior written concurrence from the applicable State Historic Preservation Officer (or Tribal Historic Preservation Officer) of “no adverse effect” or “no historic properties affected” under Section 106, and the State Historic Preservation Officer (or Tribal Historic Preservation Officer) must be informed of the project proponent’s intent to make a *de minimis* impact determination. If a *de minimis* determination is made for a Section 4(f) resource, an assessment of potential avoidance alternatives is not required.

The Section 106 findings as discussed in this Section 4(f) evaluation are described in Appendix N.5, Historic and Archaeological Resources Technical Report, of the Draft Environmental Impact Statement. It should be noted that a finding of “adversely affected” for a particular historic property under Section 106 does not automatically result in an individual use determination under Section 4(f). Examples of the relationship between findings of effect under Section 106 and use determinations under Section 4(f) are as follows:

- If a project alternative **does not** permanently incorporate (or temporarily occupy) land from a Section 4(f)-eligible historic resource, but there is a finding of “adversely affected” under Section 106, then an assessment of constructive use must be conducted. If it is concluded that the project’s proximity impacts are **not** so severe that the protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially impaired, then there is no Section 4(f) “use” of that historic resource, notwithstanding the finding of “adversely affected” under Section 106.
- If a project alternative **does** permanently incorporate (or temporarily occupy) land from a Section 4(f)-eligible historic resource but there is a finding of “not adversely affected” under Section 106, then the determination under Section 4(f) would be *de minimis* in accordance with Code of Federal Regulations Title 23 Section 774.17, which states: “For historic sites, *de minimis* impact means that the Administration has determined, in accordance with 36 CFR [Code of Federal Regulations] part 800 that no historic property is affected by the project or that the project will have ‘no adverse effect’ on the historic property in question.”

Several project alternatives would require tunnel easements under Section 4(f) resources. The *Section 4(f) Policy Paper* (United States Department of Transportation 2012) provides guidance on how to assess the potential use of a Section 4(f) resource in this circumstance in Question 28A (excerpted below); Sound Transit conducted preliminary Section 4(f) use assessments presented in this Draft Environmental Impact Statement in accordance with this guidance.

Question 28A: Is tunneling under a publicly owned public park, recreation area, wildlife or waterfowl refuge, or historic site subject to the requirements of Section 4(f)?

Answer: Section 4(f) applies to tunneling only if the tunneling:

1. Disturbs archaeological sites that are on or eligible for the NR [National Register] which warrant preservation in place;

2. Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
3. Substantially impairs the historic values of a historic site; or
4. Otherwise does not meet the exception for temporary occupancy (See Question 7A).

This evaluation considers the potential to impact Section 4(f) resources that are located above proposed tunnel alignments. All the Section 4(f) park resources located above proposed tunnels would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site.

2 PROJECT DESCRIPTION

2.1 Overview

Central Puget Sound Regional Transit Authority (Sound Transit) is proposing to expand Link light rail transit service from Downtown Seattle to West Seattle and Ballard (Figure 2-1). The West Seattle and Ballard Link Extensions (WSBLE) Project is an 11.8-mile corridor in the city of Seattle in King County, Washington, the most densely populated county of the Puget Sound region. The West Seattle Link Extension would be about 4.7 miles and include stations at SODO, Delridge, Avalon, and Alaska Junction. The Ballard Link Extension would be about 7.1 miles from Downtown Seattle to Ballard's Northwest Market Street area. It would include a new 3.3-mile light rail-only tunnel from Chinatown-International District to South Lake Union and Seattle Center/Uptown. Stations would serve the following areas: Chinatown-International District, Midtown, Westlake, Denny, South Lake Union, Seattle Center, Smith Cove, Interbay, and Ballard.

The WSBLE Project is part of the Sound Transit 3 Plan of regional transit system investments, funding for which was approved by voters in the region in 2016. The project would provide fast, reliable light rail in Seattle and connect to dense residential and job centers throughout the Puget Sound region, while the new Downtown Seattle light rail tunnel would provide capacity for the entire regional system to operate efficiently. The Puget Sound Regional Council (the regional metropolitan planning organization) and the City of Seattle have designated the following regional growth centers, Manufacturing/Industrial Centers, and urban villages in the project corridor:

2. **Regional Growth Centers.** The project corridor includes three regional growth centers designated by the Puget Sound Regional Council and the City of Seattle: Seattle Downtown, South Lake Union, and Uptown. The First Hill/Capitol Hill growth center is also just east of the project corridor.
3. **Manufacturing/Industrial Centers.** The project corridor includes two Manufacturing/Industrial Centers designated by the Puget Sound Regional Council: the Duwamish and Ballard Interbay Manufacturing/Industrial Centers. The City of Seattle has designated these areas as the Duwamish Manufacturing/Industrial Center and the Ballard Interbay Northend Manufacturing/Industrial Center.
4. **Urban Villages.** There are two neighborhoods in the project corridor designated by the City of Seattle as urban villages: West Seattle Junction and Ballard neighborhoods.

These designations indicate that these areas will continue to increase in residential and/or employment density over the next 30 years.

Regional transit service in the project corridor includes regional bus service, light rail, Sounder commuter rail, Washington State Ferries, and Amtrak passenger rail service. Light rail currently operates between the Angle Lake Station in the city of SeaTac and the Northgate Station in Seattle, traveling through the Downtown Seattle Transit Tunnel. Extensions of light rail are under construction north to Lynnwood, east to Bellevue and Redmond, and south to Federal Way, and are anticipated to begin operation in 2024. Planned light rail extensions would continue south to Tacoma Dome, expected to begin service in 2032, and north to Everett, planned to begin service in 2037. The West Seattle Link Extension is scheduled to open in 2032. The Ballard Link Extension is scheduled to begin service in 2037. Depending on funding availability, service from Smith Cove to Ballard Station is scheduled to open in 2037 or 2039.

Figure 2-1. West Seattle and Ballard Link Extensions Project Corridor

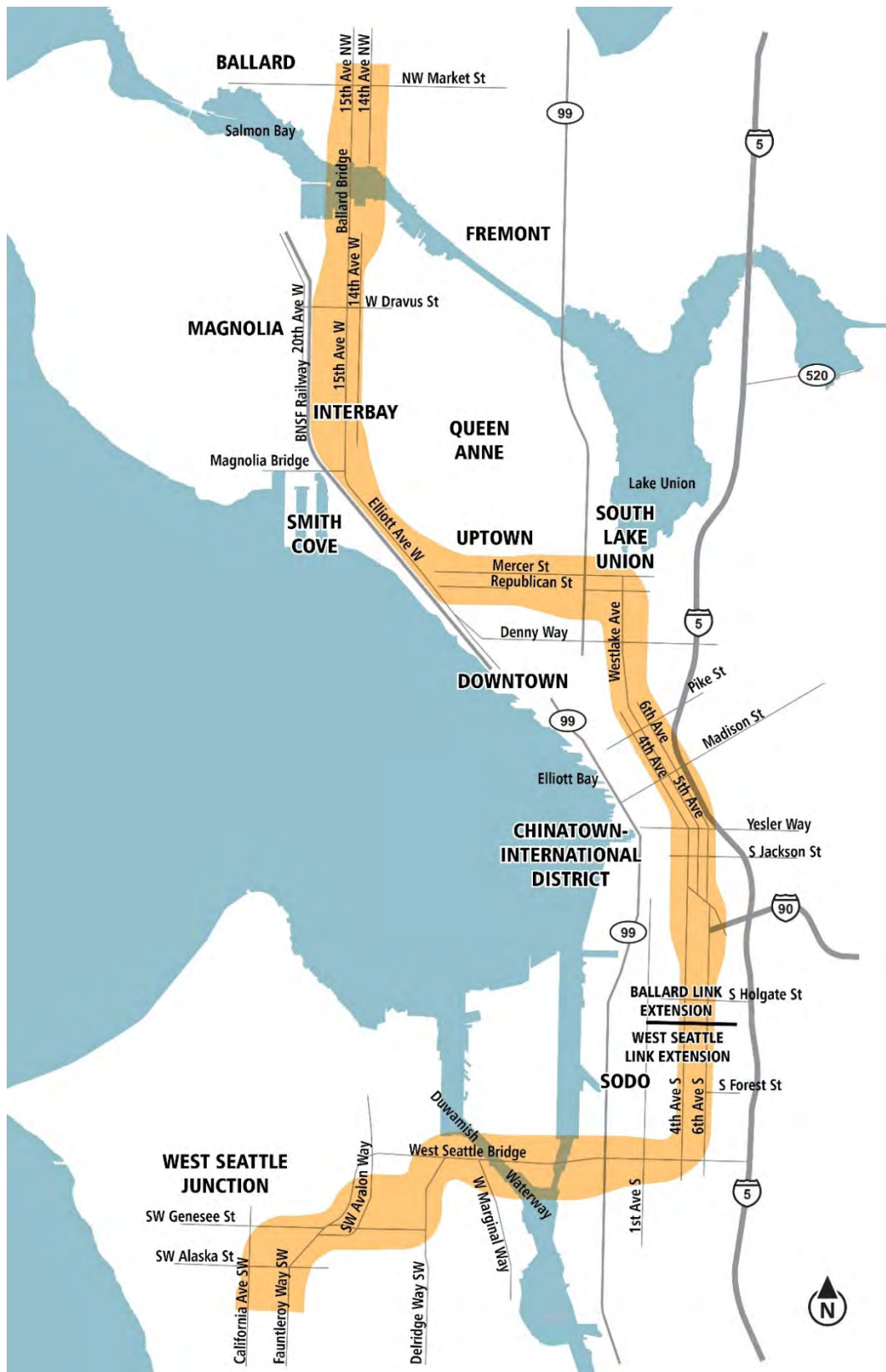


Table 2-1 lists the WSBLE Project Build Alternatives for each extension (West Seattle and Ballard).

2.2 Project Purpose and Need

The purpose of the WSBLE Project is to expand the Sound Transit Link light rail system from Downtown Seattle to West Seattle and Ballard, to make appropriate community investments to improve mobility, and to increase capacity and connectivity for regional connections in order to achieve the following:

- Provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor as defined through the local planning process and reflected in the Sound Transit 3 Plan (Sound Transit 2016).
- Improve regional mobility by increasing connectivity and capacity through Downtown Seattle to meet the projected transit demand.
- Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's *Regional Transit Long-Range Plan* (Sound Transit 2014).
- Implement a system that is technically and financially feasible to build, operate, and maintain.
- Expand mobility for the corridor and the region's residents, which include transit-dependent residents, low-income people, and communities of color.
- Encourage equitable and sustainable urban growth in station areas through support of transit-oriented development and multi-modal integration in a manner that is consistent with local land use plans and policies, including Sound Transit's Equitable Transit Oriented Development Policy (Sound Transit 2018) and Sustainability Plan (Sound Transit 2019).
- Encourage convenient and safe non-motorized access to stations, such as bicycle and pedestrian connections, consistent with Sound Transit's *System Access Policy* (Sound Transit 2013).
- Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments through sustainable practices.

In brief, the need for the project is as follows:

- When measured using national standards, existing transit routes between Downtown Seattle, West Seattle, and Ballard currently operate with poor reliability. Roadway congestion in the project corridor will continue to degrade transit performance and reliability as the city is expected to add about 135,000 people and about 150,000 jobs between 2015 and 2040 (Puget Sound Regional Council 2018a).
- Increased ridership from regional population and employment growth will increase operational frequency in the existing Downtown Seattle Transit Tunnel, requiring additional tunnel capacity.
- Puget Sound Regional Council (the regional metropolitan planning organization) and local plans call for high-capacity transit in the corridor consistent with VISION 2050 (Puget Sound Regional Council 2020) and the *Regional Transit Long-Range Plan* (Sound Transit 2014).

Table 2-1. Summary of West Seattle and Ballard Link Extensions Build Alternatives

Extension	Segment	Alternative	Alternative Abbreviation	Stations (and Station Profile)	Connections
West Seattle	SODO	Preferred At-Grade	SODO-1a	SODO (At-Grade) or SODO Staggered Station Configuration (At-Grade)	All Duwamish Segment alternatives.
West Seattle	SODO	At-Grade South Station Option	SODO-1b	SODO (At-Grade)	All Duwamish Segment alternatives.
West Seattle	SODO	Mixed Profile	SODO-2	SODO (Elevated)	All Duwamish Segment alternatives.
West Seattle	Duwamish	Preferred South Crossing	DUW-1a	None	All SODO Segment alternatives. All Delridge Segment alternatives.
West Seattle	Duwamish	South Crossing South Edge Crossing Alignment Option	DUW-1b	None	All SODO Segment alternatives. All Delridge Segment alternatives.
West Seattle	Duwamish	North Crossing	DUW-2	None	All SODO Segment alternatives. All Delridge Segment alternatives.
West Seattle	Delridge	Preferred Dakota Street Station	DEL-1a	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4*.
West Seattle	Delridge	Dakota Street Station North Alignment Option	DEL-1b	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4*.
West Seattle	Delridge	Preferred Dakota Street Station Lower Height*	DEL-2a*	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a* and WSJ-3b*.

Extension	Segment	Alternative	Alternative Abbreviation	Stations (and Station Profile)	Connections
West Seattle	Delridge	Dakota Street Station Lower Height North Alignment Option*	DEL-2b*	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a* and WSJ-3b*.
West Seattle	Delridge	Delridge Way Station	DEL-3	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2, and WSJ-4*.
West Seattle	Delridge	Delridge Way Station Lower Height*	DEL-4*	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-3a* and WSJ-3b*.
West Seattle	Delridge	Andover Street Station	DEL-5	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-1, WSJ-2 and WSJ-4*.
West Seattle	Delridge	Andover Street Station Lower Height*	DEL-6*	Delridge (Elevated)	All Duwamish Segment alternatives. Connects to WSJ-5*.
West Seattle	West Seattle Junction	Preferred Elevated 41st/42nd Avenue Station	WSJ-1	Avalon (Elevated), West Seattle Junction (Elevated)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.
West Seattle	West Seattle Junction	Preferred Elevated Fauntleroy Way Station	WSJ-2	Avalon (Elevated), West Seattle Junction (Elevated)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.
West Seattle	West Seattle Junction	Preferred Tunnel 41st Avenue Station*	WSJ-3a*	Avalon (Tunnel), West Seattle Junction (Tunnel)	Connects to DEL-2a*, DEL-2b*, and DEL-4*.
West Seattle	West Seattle Junction	Preferred Tunnel 42nd Avenue Station Option*	WSJ-3b*	Avalon (Tunnel), West Seattle Junction (Tunnel)	Connects to DEL-2a*, DEL-2b* and DEL-4*.
West Seattle	West Seattle Junction	Short Tunnel 41st Avenue Station*	WSJ-4*	Avalon (Elevated), West Seattle Junction (Tunnel)	Connects to DEL-1a, DEL-1b, DEL-3, and DEL-5.

Extension	Segment	Alternative	Alternative Abbreviation	Stations (and Station Profile)	Connections
West Seattle	West Seattle Junction	Medium Tunnel 41st Avenue Station*	WSJ-5*	Avalon (Retained Cut), West Seattle Junction (Tunnel)	Connects to DEL-6*.
Ballard	SODO	Preferred At-Grade	SODO-1a	Not applicable	Connects to CID-1a*, CID-2a, and CID-2b.
Ballard	SODO	At-Grade South Station Option	SODO-1b	Not applicable	All Chinatown-International District Segment alternatives.
Ballard	SODO	Mixed Profile	SODO-2	Not applicable	Connects to CID-1a* and CID-2a.
Ballard	Chinatown-International District	4th Avenue Shallow* ^a	CID-1a*	Stadium (existing station would be rebuilt) and International District/Chinatown (tunnel)	All SODO Segment alternatives. All Downtown Segment alternatives.
Ballard	Chinatown-International District	4th Avenue Deep Station Option*	CID-1b	International District/Chinatown (Tunnel)	Connects to SODO-1b. Connects to DT-1.
Ballard	Chinatown-International District	5th Avenue Shallow	CID-2a	International District/Chinatown (Tunnel) or International District/Chinatown Diagonal Station Configuration (Tunnel)	All SODO Segment alternatives. All Downtown Segment alternatives.
Ballard	Chinatown-International District	5th Avenue Deep Station Option	CID-2b	International District/Chinatown (Tunnel)	Connects to SODO-1a and SODO-1b. Connects to DT-1.
Ballard	Downtown	Preferred 5th Avenue/Harrison Street	DT-1	Midtown, Westlake, Denny, South Lake Union, and Seattle Center (Tunnel)	All Chinatown-International District Segment alternatives. Connects to SIB-1 and SIB-2.

Extension	Segment	Alternative	Alternative Abbreviation	Stations (and Station Profile)	Connections
Ballard	Downtown	6th Avenue/Mercer Street	DT-2	Midtown, Westlake, Denny, South Lake Union, and Seattle Center (Tunnel)	Connects to CID-1a* and CID-2a. Connects to SIB-3.
Ballard	South Interbay	Preferred Galer Street Station/Central Interbay	SIB-1	Smith Cove (Elevated)	Connects to DT-1. Connects to IBB-1a, IBB-2a*, and IBB-2b*.
Ballard	South Interbay	Prospect Street Station/15th Avenue	SIB-2	Smith Cove (Elevated)	Connects to DT-1. Connects to IBB-3 and IBB-1b.
Ballard	South Interbay	Prospect Street Station/Central Interbay	SIB-3	Smith Cove (Retained cut)	Connects to DT-2. Connects to IBB-1a, IBB-2a*, and IBB-2b*.
Ballard	Interbay/Ballard	Preferred Elevated 14th Avenue	IBB-1a	Interbay (Elevated), Ballard (Elevated)	Connects to SIB-1 and SIB-3.
Ballard	Interbay/Ballard	Elevated 14th Avenue Alignment Option (from Prospect Street Station/15th Avenue)	IBB-1b	Interbay (Elevated), Ballard (Elevated)	Connects to SIB-2.
Ballard	Interbay/Ballard	Preferred Tunnel 14th Avenue*	IBB-2a*	Interbay (Retained cut), Ballard (Tunnel)	Connects to SIB-1 and SIB-3.
Ballard	Interbay/Ballard	Preferred Tunnel 15th Avenue Station Option*	IBB-2b*	Interbay (Retained cut), Ballard (Tunnel)	Connects to SIB-1 and SIB-3.
Ballard	Interbay/Ballard	Elevated 15th Avenue	IBB-3	Interbay (Elevated), Ballard (Elevated)	Connects to SIB-2.

* As described in the introduction to Chapter 2, Alternatives Considered, of the Draft Environmental Impact Statement, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement, some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

^a The 4th Avenue Shallow Alternative (Alternative CID-1a*) would require the existing Stadium Station to be rebuilt to the west of its current location due to the tunnel portal, although the Ballard Link Extension would not connect to Stadium Station.

- The region's citizens and communities, including transit-dependent residents and low-income and minority populations, need long-term regional mobility and multi-modal connectivity as called for in the Washington State Growth Management Act (Revised Code of Washington 36.70A.108).
- Regional and local plans call for increased residential and/or employment density at and around high-capacity transit stations, and increased options for multi-modal access. VISION 2050 has a goal for 65 percent of the region's population and 75 percent of the region's employment to occur in regional growth centers and within walking distance of transit.
- Environmental and sustainability goals of the state and region, as established in Washington state law and embodied in Puget Sound Regional Council's VISION 2050 (2020) and Regional Transportation Plan (2018b), include reducing greenhouse gas emissions by prioritizing transportation investments that decrease vehicle miles traveled.

2.3 Alternatives Definition

Chapter 2, Alternatives Considered, of the Draft Environmental Impact Statement provides an extensive description of the WSBLE Project elements. This section summarizes the project alignment and Build Alternatives.

2.3.1 West Seattle Link Extension

The West Seattle Link Extension would travel south from the SODO Station across South Lander Street either at-grade or on an elevated guideway, and would travel south from south of South Lander Street toward South Spokane Street on an elevated guideway. In the vicinity of South Spokane Street, it would turn west on an elevated guideway either on the north or south side of the West Seattle Bridge, where it would cross the Duwamish Waterway (also known as Duwamish River) on a light-rail-only, high-level fixed-bridge structure. On the west side of the Duwamish Waterway, the guideway would remain mostly elevated to the west side of the Delridge valley. In the West Seattle Junction area, the guideway could be elevated or below ground. A tunnel in West Seattle was not included in the Sound Transit 3 Plan (2016) and, therefore, third-party funding could be required for alternatives that include tunnels. Three stations would be constructed in West Seattle: Delridge, Avalon, and Alaska Junction. The Delridge Station would be elevated, and the Avalon and Alaska Junction stations could be elevated or below ground. Segment-level project elements are described below.

2.3.1.1 SODO Segment

The SODO Segment includes the area between approximately South Holgate Street and South Forest Street in the SODO neighborhood. The SODO Station is the only station in this segment.

At-Grade Alternative (SODO-1a)

Heading south, Preferred Alternative SODO-1a would begin north of the existing SODO Station and travel at-grade west of and parallel to the existing Link light rail line in the SODO Busway. The height of the guideway would range between a retained cut and approximately 20 feet high and would mostly be at-grade.

The new SODO Station on the West Seattle Link Extension would be at-grade, immediately west of the existing SODO Station, north of South Lander Street. The top of the station structure would be approximately 40 feet high. Station platforms would be side platforms, one of which

would be shared between the northbound West Seattle Link Extension and the southbound Ballard Link Extension, which would continue south along the existing Link line. Preferred Alternative SODO-1a also has a staggered station configuration that was developed in order to avoid property owned by the United States Postal Service at 4th Avenue South and South Lander Street. This property is the location of the Carrier Annex and Distribution Center/Terminal Post Office (Carrier Annex/Terminal Post Office). The staggered station configuration features a narrowed center platform and staggered side platforms, with the southbound platform shifted slightly north so that it is not on the Carrier Annex/Terminal Post Office property. The existing driveway at the Carrier Annex/Terminal Post Office facility's southern access point would be connected under the new South Lander Street overpass to 4th Avenue South, which then maintains access to South Lander Street.

The existing at-grade pedestrian crossing of the light rail tracks at SODO Station would be closed, and a new pedestrian grade-separated crossing of both existing and new tracks would be used to access both stations. South Stacy Street would be extended from 4th Avenue South to a cul-de-sac on the west side of the station. A new bus turnaround would be created from 6th Avenue South, east of the station. The SODO Trail would be relocated east of the station area, adjacent to the existing light rail line.

This alternative would continue south at-grade under South Lander Street, which would be reconstructed as an overpass of the light rail tracks. The light rail would transition to an elevated guideway within the SODO Busway south of South Lander Street. Buses would be displaced from the SODO Busway.

At-Grade South Station Option (SODO-1b)

Option SODO-1b would be the same as Preferred Alternative SODO-1a except for the SODO Station location. A new at-grade station on the West Seattle Link line would be west of and approximately 200 feet south of the existing SODO Station, just north of South Lander Street. The top of the station structure would be approximately 70 feet high. The existing SODO Station would be relocated 200 feet south of its current location to be next to the new SODO Station. Pedestrian access would be from a new South Lander Street overcrossing. Station platforms would be side platforms, one of which would be shared between the northbound West Seattle Link line and the southbound Ballard Link line. A new bus turnaround would be created off 4th Avenue South, west of the station. As with SODO-1a, buses would be displaced from the SODO Busway.

Mixed Profile Alternative (SODO-2)

The height of Alternative SODO-2 would range between ground level and approximately 50 feet. It would begin at-grade north of the existing SODO Station, west of and parallel to the existing Link light rail line in the existing SODO Busway. At South Walker Street, the alignment would transition to an elevated profile and continue south over South Lander Street. The SODO Busway would be relocated to the west of the new rail line and new station and would be operational after construction.

A new SODO Station on the West Seattle Link line would be in an elevated profile north of South Lander Street. The top of the station structure would be up to approximately 70 feet high. Because this alternative would be elevated over South Lander Street, the street would remain as it is today, with a gated at-grade crossing of the existing light rail line. The existing SODO Station would be relocated as described for Option SODO-1b and would be at-grade adjacent to the new elevated station. Pedestrian access would be on the north side of South Lander Street and from 4th Avenue South and 6th Avenue South. A new pedestrian grade-separated crossing of both existing and new tracks would be used to access both the new and relocated station.

The SODO Trail would be relocated east of the station area, adjacent to the existing light rail line.

2.3.1.2 Duwamish Segment

The Duwamish Segment includes the area between South Forest Street in the SODO neighborhood and the intersection of Southwest Charlestown Street and Delridge Way Southwest in the North Delridge neighborhood. This segment would not include a station but would include a connection to the existing Operations and Maintenance Facility Central.

South Crossing Alternative (DUW-1a)

Preferred Alternative DUW-1a would continue south from South Forest Street along the west side of the existing light rail line on an elevated guideway, past the Operations and Maintenance Facility Central, before heading west to cross over the Spokane Street Bridge and the West Seattle Bridge.

This alternative would continue west on the south side of the West Seattle Bridge. Where it crosses State Route 99, the alignment would be higher than the West Seattle Bridge and would gradually increase in height as it travels west, because light rail cannot travel on grades as steep as automobiles can. The alternative would cross over the East Duwamish Waterway, Harbor Island, and the West Duwamish Waterway on a fixed, light-rail-only bridge. The height of the guideway in this segment would range between a retained cut and approximately 170 feet high. It would be at its highest when crossing the West Duwamish Waterway, where it would be at approximately the same height as the West Seattle Bridge.

West of the Duwamish Waterway crossing, this alternative would cross the northern edge of Pigeon Point in a combination of elevated guideway and retained cut and fill before turning southwest on an elevated guideway that follows Delridge Way Southwest.

A connection to the Operations and Maintenance Facility Central would be provided from tracks between South Forest Street and Spokane Street. The northbound and southbound access tracks would be parallel to each other and would span over the BNSF Railway tracks and 6th Avenue South, then transition to at-grade to enter the operations and maintenance facility.

South Crossing South Edge Crossing Alignment Option (DUW-1b)

Option DUW-1b would be the same as Preferred Alternative SODO-1a except it would cross the East and West Duwamish Waterways on the south edge of Harbor Island, south of the existing BNSF Railway drawbridge. The height of this alternative would be the same as with Preferred Alternative SODO-1a.

North Crossing Alternative (DUW-2)

Alternative DUW-2 would continue south from South Forest Street along the west side of the existing light rail line on an elevated guideway before heading west on a new fixed, light-rail-only bridge north of the existing West Seattle Bridge. The height of the guideway would range between approximately 30 feet and 170 feet high. It would be at its highest when crossing the West Duwamish Waterway.

Where it crosses State Route 99, the alignment would be higher than the West Seattle Bridge and would gradually increase in height as it travels west. At the West Duwamish Waterway, the bridge would be about the same height as the West Seattle Bridge. After crossing the West Duwamish Waterway, the alternative would cross over the West Seattle Bridge and ramps to run south on the west side of Delridge Way Southwest.

A connection to the Operations and Maintenance Facility Central would be provided from north and south access tracks between South Forest Street and South Spokane Street. Unlike the south crossing alternatives, the access tracks would not be parallel to each other because of the curve of the main alignment and the distance to the operations and maintenance facility. The northern access tracks south of South Forest Street would span 6th Avenue South and then transition to at-grade to enter the operations and maintenance facility. The southern access tracks would be elevated north of South Spokane Street and continue east from about 1st Avenue South to 6th Avenue South, and then transition to at-grade to enter the operations and maintenance facility.

2.3.1.3 Delridge Segment

The Delridge Segment includes the area between Southwest Charlestown Street and 31st Avenue Southwest and one station, the Delridge Station.

Dakota Street Station Alternative (DEL-1a)

Preferred Alternative DEL-1a would follow Delridge Way Southwest south on an elevated guideway to an elevated station. The guideway would be on the west side of Delridge Way Southwest except for in the vicinity of the Southwest Andover Street, where it would be in the roadway right-of-way.

The height of the guideway would range between approximately 70 feet and 150 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

The station would be elevated between Delridge Way Southwest and 26th Avenue Southwest, south of Southwest Dakota Street, and oriented southwest-northeast. The top of the station structure would be approximately 120 feet high.

South of the station, this alternative would curve west and cross to the south side of the Southwest Genesee Street right-of-way, north of the West Seattle Golf Course. The guideway would continue west along the south edge of Southwest Genesee Street and connect to an elevated guideway in the West Seattle Junction Segment.

Dakota Street Station North Alignment Option (DEL-1b)

Option DEL-1b would be similar to Preferred Alternative DEL-1a except it would be within the Southwest Genesee Street right-of-way between the West Seattle Golf Course and the Longfellow Creek Natural Area, then shift to the north side of Southwest Genesee Street west of 28th Avenue Southwest. The height of the guideway would range between approximately 60 feet and 150 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction. The top of the station structure would be approximately 120 feet high.

This alternative would require removal of all residential buildings on the north side of Southwest Genesee Street and many of the trees that line the south side of the street as well as some within the West Seattle Golf Course. The changes to the appearance of Southwest Genesee Street and the presence of the elevated guideway (which would be approximately 150 feet at its highest point along Southwest Genesee Street) would be seen from remaining nearby residences to the north and recreationists using the West Seattle Golf Course.

Dakota Street Station Lower Height Alternative (DEL-2a)*

Preferred Alternative DEL-2a* would follow the same alignment as Preferred Alternative DEL-1a to the station but would be at a lower elevation to connect to tunnel alternatives in the West Seattle Junction Segment. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station structure would be approximately 70 feet high.

From the station, the alternative would continue south to cross Southwest Genesee Street and run along the northern edge of the West Seattle Golf Course. A tunnel portal for connecting to tunnel alternatives in the West Seattle Junction Segment would be in the northwest corner of the West Seattle Golf Course, south of Southwest Genesee Street and east of 31st Avenue Southwest. A tunnel in West Seattle was not included in the Sound Transit 3 Plan (Sound Transit 2016), and this alternative must connect to a tunnel alternative in the West Seattle Junction Segment.

Dakota Street Station Lower Height North Alignment Option (DEL-2b)*

Option DEL-2b* would be similar to Preferred Alternative DEL-1a, except it would shift to the north side of Southwest Genesee Street west of 28th Avenue Southwest. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station structure would be approximately 70 feet high.

Access to Southwest Genesee Street from 30th Avenue Southwest would be permanently closed with a turnaround at the south end of the road. The tunnel portal to enter a tunnel in the West Seattle Junction Segment would be north of Southwest Genesee Street, between Southwest Avalon Way and 30th Avenue Southwest. A tunnel in West Seattle was not included in the Sound Transit 3 Plan, and this alternative must connect to a tunnel alternative in the West Seattle Junction Segment. Therefore, third-party funding could be required for this alternative.

Delridge Way Station Alternative (DEL-3)

Alternative DEL-3 would follow Delridge Way Southwest south on an elevated guideway to the Delridge Station. The station would be in the middle of Delridge Way Southwest, and the top of the station structure would be approximately 100 feet high. Station access would be from adjacent streets, including both sides of Delridge Way Southwest.

South of the station, this alternative would curve west and cross to the south side of the Southwest Genesee Street right-of-way, north of the West Seattle Golf Course. The guideway would continue west along the south edge of Southwest Genesee Street and connect to an elevated guideway in the West Seattle Junction Segment. The height of the guideway would range between approximately 50 feet and 140 feet high. The highest portion would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

Delridge Way Station Lower Height Alternative (DEL-4)*

Alternative DEL-4* would follow the same alignment as Alternative DEL-3 to the station but would be at a lower elevation to connect to tunnel alternatives in the West Seattle Junction Segment. The height of the guideway would range between a tunnel and approximately 60 feet high. The top of the station would be approximately 100 feet high. Station access would be the same as Alternative DEL-3.

From the station, this alternative would continue south on the west side of Delridge Way Southwest and then turn west at Southwest Genesee Street, crossing Southwest Genesee Street to run along the northern edge of the West Seattle Golf Course. A tunnel portal for connecting to tunnel alternatives in the West Seattle Junction Segment would be in the

northwest corner of the West Seattle Golf Course, south of Southwest Genesee Street and east of 31st Avenue Southwest.

A tunnel in West Seattle was not included in the Sound Transit 3 Plan, and this alternative must connect to a tunnel alternative in the West Seattle Junction Segment. Therefore, third-party funding could be required for this alternative.

Andover Street Station Alternative (DEL-5)

Alternative DEL-5 would be on an elevated guideway on the west side of Delridge Way Southwest, north of Southwest Andover Street. The height of the guideway would range between approximately 50 feet and 130 feet high. The alignment would travel west along Southwest Andover Street on an elevated guideway, then south along Southwest Avalon Way in the vicinity of Southwest Yancy Street. The guideway would continue south along Southwest Avalon Way and turn west on the north side of Southwest Genesee Street. The highest portion of the guideway would be where the alignment climbs from the station in the Delridge valley up to the West Seattle Junction.

The station would be elevated, north of Southwest Andover Street and west of Delridge Way Southwest, in a northeast-southwest orientation. The top of the station structure would be approximately 110 feet high.

Andover Street Station Lower Height Alternative (DEL-6)*

Alternative DEL-6* would be similar to Alternative DEL-5 up to and including the station. The top of the station structure would be approximately 100 feet high. The height of the guideway would range between a retained cut and approximately 120 feet high. The elevated guideway would cross over Southwest Avalon Way and then turn south in the vicinity of 32nd Avenue Southwest to travel south along the east side of the West Seattle Bridge connection to Fauntleroy Way Southwest, transitioning from elevated into a retained cut. The alignment would turn west in the vicinity of Southwest Genesee Street in a retained cut, passing below Southwest Genesee Street. This alternative would only connect with Alternative WSJ-5* in the West Seattle Junction Segment. A tunnel in West Seattle was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for this alternative.

According to Appendix N.2, Visual and Aesthetics Technical Report, with Alternative DEL-6*, lights from passing trains on the elevated guideway would be seen by residents from the multi-story residential buildings that line this part of 32nd Avenue Southwest. The lights from the trains would add to the at-grade lights from vehicles traveling on 32nd Avenue Southwest. The tree removal next to the West Seattle Bridge on-ramp would eliminate the screening value of the trees for screening lights from vehicles traveling on the on-ramp.

2.3.1.4 West Seattle Junction Segment

The West Seattle Junction Segment includes the area generally west of 31st Avenue Southwest, between Southwest Charleston Street and Southwest Hudson Street. All alternatives would have two stations: Avalon and Alaska Junction. Although tunnel alternatives are considered in the environmental review for this segment, a tunnel in West Seattle was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for the tunnel alternatives.

Elevated 41st/42nd Avenue Station Alternative (WSJ-1)

Preferred Alternative WSJ-1 alignment would be elevated along the south side of Southwest Genesee Street between 31st Avenue Southwest and Fauntleroy Way Southwest. The height of

the guideway would range between approximately 30 feet and 80 feet high. This alternative would turn southwest on the north side of Fauntleroy Way Southwest and continue south before curving southwest between Southwest Oregon Street and Southwest Alaska Street. The guideway would turn south in the vicinity of 41st Avenue Southwest and Southwest Alaska Street and continue south to Southwest Hudson Street. The guideway would end on the west side of 42nd Avenue Southwest and include a tail track south of the Alaska Junction Station. Stations would be located as follows:

- **Avalon Station.** Avalon Station would be elevated along the south side of Southwest Genesee Street, east of 35th Avenue Southwest. The top of the station structure would depend on which alternative it connects with in the Delridge Segment but would be approximately 70 feet to 90 feet high.
- **Alaska Junction.** The Alaska Junction Station would be elevated between 41st Avenue Southwest and 42nd Avenue Southwest, south of Southwest Alaska Street. The top of the station structure would depend on which alternative it connects with in the Delridge Segment, but it would be approximately 80 feet to 90 feet high.

Elevated Fauntleroy Way Station Alternative (WSJ-2)

Preferred Alternative WSJ-2 alignment would be elevated along the south side of Southwest Genesee Street between 31st Avenue Southwest and Fauntleroy Way Southwest. The height of the guideway would range between approximately 30 feet and 70 feet high. This alternative would remove street-facing commercial buildings on Fauntleroy Way Southwest and residences on nearby side streets.

The alignment would head southwest on Fauntleroy Way Southwest and continue along the north side of Fauntleroy Way Southwest. The elevated guideway would cross to the east side of Fauntleroy Way Southwest south of Southwest Oregon Street

Elevated tail tracks would begin south of the Alaska Junction Station and end within the Fauntleroy Way Southwest right-of-way just past Southwest Edmunds Street. Stations would be located as follows:

- **Avalon Station.** Avalon Station would be elevated along the south side of Southwest Genesee Street and east of 35th Avenue Southwest. The top of the station structure would depend on which alternative it connects with in the Delridge Segment, but it would be approximately 70 feet to 80 feet high.
- **Alaska Junction Station.** This station would be elevated southeast of Fauntleroy Way Southwest straddling Southwest Alaska Street. The top of the station structure would be approximately 70 feet high.

Tunnel 41st Avenue Station Alternative (WSJ-3a)*

Preferred Alternative WSJ-3a* would be in a tunnel under Southwest Genesee Street heading west from 31st Avenue Southwest then curving to the southwest between 37th Avenue Southwest and 41st Avenue Southwest. The tunnel would end in the vicinity of Southwest Hudson Street, with the tail track in a north-south orientation under 41st Avenue Southwest. The guideway would be entirely in a tunnel. Stations would be located as follows:

- **Avalon Station.** The Avalon Station would be beneath Southwest Genesee Street and Fauntleroy Way Southwest. The three entrances to the station would be on both sides of Fauntleroy Way Southwest and on the north side of 35th Avenue Southwest.

- **Alaska Junction Station.** The Alaska Junction Station would be beneath 41st Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street along the east side of 41st Avenue Southwest.

According to the Visual and Aesthetics Technical Report, Preferred Alternative WSJ-3a* (and the other tunnel alternatives) would result in few changes to the visual character. The greatest change from this alternative to existing visual conditions would be at the south end of the alternative, where the underground tail tracks and above-ground egress vent shafts would be located. The tail track would be constructed using a cut-and-cover method, which would require the removal of residences on the east side of 41st Avenue Southwest between Southwest Edmonds Street and Southwest Hudson Street and result in a vacant lot or transportation resource. This would include the above-ground egress and vent shaft structure.

Tunnel 42nd Avenue Station Option (WSJ-3b)*

The Preferred Option WSJ-3b* alignment would be the same as Preferred Alternative WSJ-3a*, except the tunnel would extend to 42nd Avenue Southwest instead of 41st Avenue Southwest. The tunnel would end in the vicinity of Southwest Hudson Street, with a tail track in a north-south orientation under 42nd Avenue Southwest. The depth of the guideway would be entirely within a tunnel. The Avalon Station would be the same as described for Preferred Alternative WSJ-3a*. The Alaska Junction Station would be in a tunnel beneath 42nd Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street, with one on the east side and one on the west side of 42nd Avenue Southwest.

Short Tunnel 41st Avenue Station Alternative (WSJ-4)*

The alignment of Alternative WSJ-4* would be on elevated guideway along the south side of Southwest Genesee Street from 31st Avenue Southwest to the west side of Fauntleroy Way Southwest. It would continue along the west side of Fauntleroy Way Southwest on elevated guideway before transitioning to at-grade near 37th Avenue Southwest. Both 37th Avenue Southwest and 38th Avenue Southwest would be modified to end in a turnaround between Southwest Genesee Street and Fauntleroy Way Southwest. The guideway would turn west near Southwest Oregon Street and transition into a tunnel with a portal in the vicinity of Southwest Oregon Street and 38th Avenue Southwest. The tunnel would turn south and end south of Southwest Hudson Street, with a tail track in a north-south orientation along and under 41st Avenue Southwest. The height of the guideway would range between a tunnel and approximately 40 feet high. A tunnel in West Seattle was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for this alternative. Stations would be located as follows:

- **Avalon Station.** Avalon Station would be elevated along the south side of Southwest Genesee Street and east of 35th Avenue Southwest. The top of the station structure would be approximately 40 feet high.
- **Alaska Junction Station.** The Alaska Junction Station would be in a tunnel beneath 41st Avenue Southwest and south of Southwest Alaska Street. Station entrances would be on Southwest Alaska Street and Southwest Edmonds Street.

Medium Tunnel 41st Avenue Station Alternative (WSJ-5)*

The Alternative WSJ-5* alignment would begin in a retained cut south of Southwest Yancy Street and follow the east side of the West Seattle Bridge on-ramp to Southwest Genesee Street. This alternative would enter a tunnel at Southwest Genesee Street and 37th Avenue Southwest. It would then curve southwest west of 37th Avenue Southwest to 41st Avenue

Southwest and terminate at Southwest Hudson Street, with a tail track in a north-south orientation under 41st Avenue Southwest. The guideway would be entirely in a tunnel. A tunnel in West Seattle was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for this alternative. Stations would be located as follows:

- **Avalon Station.** Avalon Station would be in a retained cut south of Southwest Genesee Street, beneath Fauntleroy Way Southwest. Station entrances would be on either side of 35th Avenue Southwest.
- **Alaska Junction Station.** The Alaska Junction Station would be in a tunnel beneath 41st Avenue Southwest and Southwest Alaska Street. Station entrances would be on either side of Southwest Alaska Street along the east side of 41st Avenue Southwest.

2.3.2 Ballard Link Extension

Both the West Seattle Link Extension and Ballard Link Extension would include improvements in SODO. The Ballard Link Extension would begin near the existing SODO Station and proceed north to enter a new tunnel under Downtown Seattle. It would pass through the Chinatown-International District and have a new International District/Chinatown Station connected to the existing station. While the Ballard Link Extension would not serve the existing Stadium Station on the Central Link line, one of the alternatives in the Chinatown-International District would rebuild it because of the profile and alignment curvature to reach Chinatown-International District station depths. The Ballard Link Extension would generally follow the corridor of 5th Avenue or 6th Avenue and Westlake Avenue North through Downtown Seattle to South Lake Union. In South Lake Union, the tunnel would turn west toward Uptown. Five underground stations—Midtown Station, Westlake Station, Denny Station, South Lake Union Station, and Seattle Center Station—would be included. Passengers would be able to transfer from the Ballard Link Extension to the existing Central Link line at SODO, International District/Chinatown, and Westlake stations. Passengers currently traveling directly between south Seattle and points north of Westlake Station on the Central Link line (including the existing Capitol Hill, University of Washington, University District, Roosevelt Station, and Northgate stations) would be required to transfer at the SODO, International District/Chinatown, or Westlake stations when the Ballard Link Extension is built. The Tacoma to Ballard line would not serve the existing Stadium Station, and riders on that line would need to transfer to the West Seattle to Everett line to reach the Stadium Station.

The Ballard Link Extension would exit the tunnel at a portal near Elliott Avenue West and continue either elevated, at-grade, or in a retained cut along Elliott Avenue West. It would then travel through Interbay either elevated along 15th Avenue West or elevated on the west side of Interbay Golf Center. It would cross over or under Salmon Bay near 15th Avenue Northwest with a bridge or in a tunnel and continue north to a terminus near Northwest Market Street. Stations would be constructed at Smith Cove, Interbay, and Ballard. The following sections describe the preferred alternatives, preferred alternatives with third-party funding, and other Build Alternatives for the extension by segment.

2.3.2.1 SODO Segment

The SODO Segment includes the area between approximately South Forest Street in the SODO neighborhood and South Holgate Street at the north end. The West Seattle Link Extension also includes improvements in the SODO Segment. The SODO Segment alternatives for the Ballard Link Extension would be continuations of the SODO alignments in the West

Seattle Link Extension and would connect to the SODO alignments in West Seattle Link Extension with the same alternative name.

The West Seattle Link Extension improvements would be operational in 2031, while the Ballard Link Extension would be operational in 2036. Therefore, the Ballard Link Extension assumes the West Seattle Link Extension improvements are in place.

The SODO Segment includes the existing SODO Station and the SODO Station constructed as part of the West Seattle Link Extension. The Ballard Link Extension would not include construction of a new station in SODO. The Ballard Link Extension would include track north of the existing SODO Station to connect it to the existing Central Link line that would continue south to Tacoma Dome.

Because the West Seattle Link Extension would temporarily terminate the line with tail tracks north of the SODO Station, the Ballard Link Extension would permanently connect the West Seattle Link Extension tail tracks to the existing Link light rail line to Lynnwood and Everett in 2036. The new SODO Station and associated tail tracks would be part of the West Seattle Link Extension. The connection would begin at the tail tracks north of the new SODO Station (which would be part of the West Seattle Link Extension) and continue north, at-grade or in a retained cut. It would connect to the existing Link light rail line in the vicinity of South Holgate Street.

At-Grade Alternative (SODO-1a)

Preferred Alternative SODO-1a would begin at the existing Link light rail line near South Lander Street. The alternative would continue north at-grade immediately east of the West Seattle Link Extension line (which would already be constructed) and would include the existing SODO Station. It would continue north under the new grade separation of South Holgate Street, which would be constructed as part of the Ballard Link Extension. This alternative would only connect to Alternative CID-1a* and Alternative CID-2a.

At-Grade South Station Option (SODO-1b)

Option SODO-1b would be the same as Preferred Alternative SODO-1a, except for the SODO Station location. The existing SODO Station would be moved south as part of the West Seattle Link Extension (refer to Section 2.2.1.1, West Seattle Link Extension), and the Ballard Link Extension would begin at the existing Link light rail line north of South Lander Street at the relocated SODO Station. This option would connect to all the alternatives in the Chinatown-International District Segment.

Mixed Profile Alternative (SODO-2)

For the Ballard Link Extension, Alternative SODO-2 would be similar to Option SODO-1b and would begin at the existing Central Link line near South Lander Street and continue north at-grade immediately east of the West Seattle Link line (which would already be constructed). The Ballard Link Extension line would connect to the existing SODO Station (that would be moved south as part of the West Seattle Link Extension). Similar to the other Ballard Link Extension SODO alternatives, South Holgate Street would be constructed as a new roadway overcrossing. This alternative would only connect to Alternative CID-1a* and Alternative CID-2a.

2.3.2.2 Chinatown-International District Segment

The Chinatown-International District Segment would include the area from South Holgate Street to James Street and includes one station (International District/Chinatown Station).¹

The Sound Transit Board did not identify a preferred alternative in this segment. The station alternatives on 4th Avenue South (Alternative CID-1a* and Option CID-1b*) would provide a pedestrian undercrossing for direct underground passenger transfer to the southbound line of the existing International District/Chinatown Station. Passenger transfer to the northbound line would require passengers to go up to street level and then go down to the existing station platform. The station alternatives on 5th Avenue South (Alternative CID-2a and Option CID-2b) would provide a pedestrian undercrossing for direct underground passenger transfer to the northbound line of the existing International District/Chinatown Station. Passenger transfer to the southbound line would require passengers to go up to street level and then down to the existing station platform. Direct underground passenger transfer to the other direction of travel could be provided at these stations but would require mining under the existing Central Link line, which would have engineering and operational challenges.

Alternative CID-1a* and Option CID-1b* would both require reconstruction of the 4th Avenue South Viaduct. Such reconstruction was not included in the Sound Transit 3 Plan (Sound Transit 2016); therefore, third-party funding could be required for this alternative and option. Based on assessments to date, the construction duration in this segment could take longer for Alternative CID-1a* and Option CID-1b* (primarily due to reconstruction of the 4th Avenue South Viaduct) compared to Alternative CID-2a and Option CID-2b. Construction in the area of the station (generally between Seattle Boulevard South and James Street) for Alternative CID-1a* would take approximately 9 to 11 years, and Option CID-1b* would take approximately 8 to 10 years. Construction in the station area for Alternative CID-2a would take approximately 8 to 9 years, and Option CID-2b would take approximately 6.5 to 7.5 years. The construction duration for the Alternative CID-2a diagonal station configuration would be shorter. It is anticipated that construction in the station area of the diagonal station configuration would take approximately 5 to 6 years.

The 4th Avenue South Viaduct rebuild could lengthen the overall schedule of the Ballard Link Extension, but whether there is a delay, and the extent of that delay, would not be known until final design and construction sequencing is determined.

4th Avenue Shallow Alternative (CID-1a)*

Alternative CID-1a* would begin at-grade east of the existing Link light rail line and extend north from South Holgate Street. The Stadium Station on the existing light rail line would be removed and rebuilt to accommodate the tunnel portal for the Ballard Link Extension and realignment of the existing light rail line. However, the Ballard Link Extension would not connect to this existing light rail line and Stadium Station.

This alternative would enter a tunnel between South Massachusetts Street and South Royal Brougham Way. The tunnel would continue to the northwest under the existing Link light rail line at South Royal Brougham Way and then north under 4th Avenue South. A new International

¹ Chinatown-International District is the name for this neighborhood according to Seattle City Ordinance 119297 (1999), and the existing light rail station in this neighborhood is named the International District/Chinatown Station. In this report, "Chinatown-International District" is used to refer to the neighborhood and the segment, and "International District/Chinatown Station" is used to refer to the station.

District/Chinatown Station would be under 4th Avenue South, west of the existing International District/Chinatown Station. The 4th Avenue South Viaduct would be demolished and reconstructed to accommodate construction of this station. The station platform would be approximately 80 feet deep. Station entrances would be on the west and east side of 4th Avenue South, and the eastern station entrance would also be accessible from the existing International District/Chinatown Station plaza at South King Street.

From the station, the tunnel alignment would continue north under 4th Avenue South to Yesler Way, at which point it would begin transitioning to follow 5th Avenue or 6th Avenue in the Downtown Segment.

The reconstruction of the 4th Avenue South Viaduct was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for this alternative.

4th Avenue Deep Station Option (CID-1b)*

Option CID-1b* would begin at-grade slightly farther east of the existing Link light rail line than Alternative CID-1a* and extend north from South Holgate Street. The tunnel portal would be in the vicinity of South Massachusetts Street, and the tunnel alignment would begin transitioning to follow 4th Avenue South farther south than Alternative CID-1a*. From Seattle Boulevard South to James Street, the alignment and station location would be similar to Alternative CID-1a* but would be deeper. Station entrances would be the same as Alternative CID-1a*. The International District/Chinatown Station platform would be approximately 190 feet deep, approximately 110 feet deeper than Alternative CID-1a*. The deeper tunnel and station would allow the station to be mined rather than constructed using cut-and-cover methods and would reduce surface disturbance during construction. The 4th Avenue South Viaduct would be demolished and reconstructed to accommodate construction of this station. This option would only connect to Alternative DT-1 in the Downtown Segment. The reconstruction of the 4th Avenue South Viaduct was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for this alternative.

5th Avenue Shallow Alternative (CID-2a)

Alternative CID-2a would begin at-grade east of the existing Link light rail line and extend north from South Holgate Street. This alternative would enter a tunnel north of South Massachusetts Street and continue north beneath 6th Avenue South. The tunnel would transition to be under 5th Avenue South near Seattle Boulevard South. The International District/Chinatown Station would be under 5th Avenue South, east of the existing International District/Chinatown Station. The station platform would be approximately 90 feet deep (to the lower platform). There is also a diagonal station configuration where the tunnel would be under 6th Avenue South and transition to 5th Avenue South between South Weller Street and South Jackson Street. The station platform for the diagonal station configuration would be between 5th Avenue South and 6th Avenue South and would be approximately 25 feet deeper at approximately 115 feet deep. In both configurations, the station entrance would be on the east side of 5th Avenue South, at the corner of South King Street. From the station, the tunnel alignment would continue north to James Street, either staying under 5th Avenue or transitioning to be under 6th Avenue.

5th Avenue Deep Station Option (CID-2b)

Option CID-2b would be the same as Alternative CID-2a, except that the tunnel and the station would be deeper and the station platforms would not be stacked. Station entrances would be the same as Alternative CID-2a. The deeper tunnel and station would allow the station to be mined rather than constructed using cut-and-cover methods and would reduce surface disturbance during construction. The International District/Chinatown Station platform would be

approximately 180 feet deep, approximately 90 feet deeper than Alternative CID-2a. This option would only connect to Preferred Alternative DT-1.

2.3.2.3 Downtown Segment

The Downtown Segment includes the area between James Street in Downtown Seattle and 2nd Avenue West in Uptown. This segment includes five stations: Midtown, Westlake, Denny, South Lake Union, and Seattle Center.

5th Avenue/Harrison Street Alternative (DT-1)

Preferred Alternative DT-1 would be in a tunnel generally heading north under 5th Avenue and Westlake Avenue and then heading west under Harrison Street and Republican Street. Stations would be located as follows:

- **Midtown Station.** This station would be beneath 5th Avenue between Columbia Street and Madison Street. One station entrance would be on the corner of 5th Avenue and Columbia Street and the other on the corner of 4th Avenue and Madison Street. The station entrance on 4th Avenue would connect to the station via an underground walkway beneath Madison Street. For this alternative to connect to Alternative CID-1a*, Option CID-1b*, and Option CID-2b, the alignment between the Chinatown-International District Segment and Midtown Station and the station platform would need to be deeper.
- **Westlake Station.** This station would be beneath 5th Avenue between Pike Street and Pine Street and have three entrances. Two station entrances would be provided on 5th Avenue at the corners of Pike Street and Pine Street, and one station entrance would be on Pine Street between 4th Avenue and 5th Avenue. The station platform would connect to the existing Westlake Station at Pine Street via pedestrian undercrossings.
- **Denny Station.** This station would be beneath Westlake Avenue between Denny Way and Blanchard Street. Station entrances would be on Westlake Avenue near the Denny Way intersection and south of Blanchard Street.
- **South Lake Union Station.** This station would be beneath Harrison Street, between Dexter Avenue North and just west of Aurora Avenue North. Station entrances would be on Harrison Street at the corners of Dexter Avenue North and Aurora Avenue North.
- **Seattle Center Station.** This station would be beneath Republican Street, east of 1st Avenue North. One station entrance would be on Republican Street at the corner of Queen Anne Avenue North, and the other entrance would be farther east at the corner of 2nd Avenue North (now a pedestrian walkway and campus maintenance and delivery access roadway within Seattle Center).

Preferred Alternative DT-1 would only connect to Preferred Alternative SIB-1 and Alternative SIB-2 in the South Interbay Segment.

6th Avenue/Mercer Street Alternative (DT-2)

Alternative DT-2 would be in a tunnel generally heading north under 6th Avenue and Terry Avenue, and then west under Mercer Street. Stations would be located as follows:

- **Midtown Station.** This station would be beneath 6th Avenue, between Madison Street and Seneca Street. Interstate 5 would be directly east of the station. One station entrance would be on 6th Avenue and the other on 5th Avenue, both between Spring Street and Seneca Street. The station entrance on 5th Avenue would connect to the station via a pedestrian undercrossing.

- **Westlake Station.** This station would be beneath 6th Avenue, between Pine Street and Olive Way. One station entrance would be at 6th Avenue and Olive Way, and the other entrance would be at 6th Avenue and Pine Street. The existing Westlake Station at Pine Street east of 5th Avenue would be modified to provide connection to the new station via a pedestrian undercrossing.
- **Denny Station.** This station would be beneath Terry Avenue North, between Denny Way and John Street. Both station entrances would be on Terry Avenue North, one at the corner of Denny Way and the other at John Street with a pedestrian connection to Boren Avenue.
- **South Lake Union Station.** This station would be north of Mercer Street between Aurora Avenue North and Taylor Avenue North. Both station entrances would be on Mercer Street one at the corner of Taylor Avenue North and the other at Aurora Avenue North with pedestrian connections at both Aurora Avenue North and Mercer Street.
- **Seattle Center Station.** This station would be beneath Mercer Street, between Warren Avenue North and Queen Anne Avenue North. Station entrances would be on Mercer Street at the corners of Warren Avenue North and 1st Avenue North.

Alternative DT-2 would only connect to Alternative SIB-3 in the South Interbay Segment.

2.3.2.4 South Interbay Segment

The South Interbay Segment includes the area between 2nd Avenue West in Uptown and West Dravus Street (west of 17th Avenue West) and West Barrett Street (east of 17th Avenue West) in Interbay. There would be one station in this segment, the Smith Cove Station.

Galer Street Station/Central Interbay Alternative (SIB-1)

Preferred Alternative SIB-1 would continue the tunnel beneath Republican Street in the Downtown Segment from 2nd Avenue West to a tunnel portal on the east side of 5th Avenue West. From the tunnel portal, the alternative would become elevated and cross to the west side of Elliott Avenue West and continue northwest. The guideway would cross to the east side of Elliott Avenue West near West Mercer Place and would continue northwest between the east side of Elliott Avenue West and Kinnear Park. North of Kinnear Park, the alignment would transition to the west side of Elliott Avenue West to enter the Smith Cove Station.

Smith Cove Station would be elevated above the West Galer Street Flyover, and the top of the station structure would be approximately 90 feet high. The station entrances would be on both sides of West Galer Street and accessed from Elliott Avenue West. The West Galer Street Flyover pedestrian facility would be modified to maintain its function in approximately the same location, providing access to the station. In addition to bus stops, this alternative would include a bus layover facility at the station, with access from Elliott Avenue West.

From the Smith Cove Station, the elevated guideway would cross over the Magnolia Bridge and continue north along the east side of the BNSF Railway tracks to West Armory Way. From West Armory Way, the alignment would continue north along the western edge of Interbay Golf Center and Interbay Athletic Center. The elevated guideway would continue over West Dravus Street and connect to Preferred Alternative IBB-1a in the Interbay/Ballard Segment. The elevated guideway for this alternative would be between about 30 and 80 feet high and would be highest near West Armory Way to allow for a future bridge over the BNSF Railway tracks. For this alternative to connect to the tunnel alternatives (Preferred Alternative IBB-2a* and Preferred Option IBB-2b*) in the Interbay/Ballard Segment, it would transition from elevated to a retained cut along the Interbay Athletic Center to continue under West Dravus Street.

Prospect Street Station/15th Avenue Alternative (SIB-2)

Alternative SIB-2 would continue the tunnel beneath Republican Street in the Downtown Segment from 2nd Avenue West to a tunnel portal on the east side of 5th Avenue West. From the tunnel portal, the alternative would become elevated and cross to the west side of Elliott Avenue West and continue northwest. The guideway would cross to the east side of Elliott Avenue West near West Mercer Place and would continue northwest between the east side of Elliott Avenue West and Kinnear Park. It would enter an elevated Smith Cove Station north of Kinnear Park on the east side of Elliott Avenue West. The station would be north of West Prospect Street with station entrances and a bus layover facility in addition to bus stops, all accessed from Elliott Avenue West. The top of the station structure would be approximately 60 feet high. The station would have a retaining wall on the east side.

From the Smith Cove Station, the elevated guideway would continue northwest along the east side of Elliott Avenue West and then transition to a retained cut along the edge of the Southwest Queen Anne Greenbelt before turning north and transitioning to the center of 15th Avenue West near West Newton Street. It would continue on elevated guideway in the middle of 15th Avenue West to West Barrett Street. The elevated guideway would be about 40 feet tall in this area. This alternative would only connect to the bridge alternatives (Option IBB-1b and Alternative IBB-3) in the Interbay/Ballard Segment.

Prospect Street Station/Central Interbay Alternative (SIB-3)

Alternative SIB-3 would continue the tunnel under West Mercer Street from the Downtown Segment from 2nd Avenue West to a tunnel portal east of Elliott Avenue West on the northwestern edge of Kinnear Park, south of West Prospect Street. This alternative would continue north from the tunnel portal in a retained cut to Smith Cove Station north of West Prospect Street, with station entrances and a bus layover facility in addition to bus stops all accessed from Elliott Avenue West. The station would be in a retained cut with the top of the station structure approximately 30 feet above the existing ground surface.

From the Smith Cove Station, Alternative SIB-3 would continue north in a retained cut along the edge of the Southwest Queen Anne Greenbelt. Most of the retained cut would have a retaining wall on the east side. The alternative would transition to elevated guideway near West Howe Street and cross 15th Avenue West at West Armory Way to travel northwest along the northern side of West Armory Way. From West Armory Way, it would continue north along the western edge of Interbay Golf Center and Interbay Athletic Complex and then continue over West Dravus Street to connect to Alternative IBB-1a. The elevated guideway would range in height from approximately 30 feet to 80 feet and would be highest at the Interbay Athletic Complex for it to pass over West Dravus Street. For this alternative to connect to the tunnel alternatives (Preferred Alternative IBB-2a* and Preferred Option IBB-2b*) in the Interbay/Ballard Segment, it would transition from elevated to at-grade along the Interbay Athletic Complex and continue under West Dravus Street.

2.3.2.5 Interbay/Ballard Segment

The Interbay/Ballard Segment encompasses the area between West Dravus Street (west of 17th Avenue West) and West Barrett Street (east of 17th Avenue West) in Interbay to Northwest 58th Street in Ballard. All alternatives would have two stations: Interbay and Ballard. Although a tunnel alternative is considered in the environmental review for this segment, a tunnel in Interbay/Ballard was not included in the Sound Transit 3 Plan; therefore, third-party funding could be required for the tunnel alternatives.

Elevated 14th Avenue Alternative (IBB-1a)

Preferred Alternative IBB-1a would cross over West Dravus Street on elevated guideway parallel to the BNSF tracks and then curve northeast to Interbay Station. The station would be just north of West Dravus Street between the railroad tracks and 17th Avenue West. The top of the station structure would be approximately 80 to 90 feet high. Station access would be from West Dravus Street and 17th Avenue West. Thorndyke Avenue West and 17th Avenue West would provide roadway circulation underneath the station.

This alternative would continue on elevated guideway from Interbay Station northeast over the West Emerson Street interchange and then curve north to cross Salmon Bay on a fixed-span bridge on the east side of the Ballard Bridge (15th Avenue Bridge). The bridge over Salmon Bay would have a clearance of approximately 136 feet over the navigation channel in Salmon Bay. This height could be adjusted through coordination with the United States Coast Guard.

This alternative would continue north within the 14th Avenue Northwest right-of-way before transitioning to the east edge of the road south of Northwest Market Street. Ballard Station would be on the east side of 14th Avenue Northwest, straddling Northwest Market Street, with station entrances on both sides of Northwest Market Street. The top of the station structure would be approximately 80 feet high. Elevated tail tracks would extend north of the station along the east side of 14th Avenue Northwest and would then curve west to end above the center of the roadway. The elevated guideway for this alternative would range in height from approximately 30 to 140 feet and would be highest south and north of Salmon Bay where it transitions to the bridge.

Elevated 14th Avenue Alignment Option (from Prospect Street Station/15th Avenue) (IBB-1b)

Option IBB-1b is a design option for connecting Alternative SIB-2 in the South Interbay Segment to Preferred Alternative IBB-1a bridge over Salmon Bay. The alignment would start north of the Interbay Station on 15th Avenue West. It would extend to the northeast of the intersection of 15th Avenue West and West Emerson Street on elevated guideway and would connect to the 14th Avenue alignment bridge over Salmon Bay. The bridge over Salmon Bay and the elevated guideway to the north would be the same as for Preferred Alternative IBB-1a.

Tunnel 14th Avenue Alternative (IBB-2a)*

Preferred Alternative IBB-2a* would cross under West Dravus Street in a retained cut parallel to the BNSF Railway tracks and then curve northeast to Interbay Station. The station would be in a retained cut north of West Dravus Street, between 17th Avenue West and Thorndyke Avenue West. The top of the station structure would be approximately 30 feet high. The station entrances would be on 17th Avenue West and West Bertona Street. The station would require realignment and reconstruction of the northern end of 17th Avenue West and Thorndyke Avenue West, and truncation of 16th Avenue West at West Bertona Street.

This alternative would continue in a retained cut from Interbay Station to a tunnel portal between 15th Avenue West and Thorndyke Avenue West. The tunnel would travel northeast under the West Emerson Street interchange, under Salmon Bay (east of Ballard Bridge), and then curve north beneath 14th Avenue Northwest to Northwest Market Street. The station would be under 14th Avenue Northwest and Northwest Market Street, with station entrances on both sides of Northwest Market Street. Tail tracks would extend beneath 14th Avenue Northwest north of the station.

Tunnel 15th Avenue Station Option (IBB-2b)*

The Interbay Station and tunnel alignment for Preferred Option IBB-2b* would be the same as Preferred Alternative IBB-1a until just north of West Nickerson Street, where it would head north under Salmon Bay and continue under the east side of 15th Avenue Northwest to the Ballard Station. The station would be east of 15th Avenue Northwest and south of Northwest Market Street, with access from both sides of 15th Avenue Northwest. An underground walkway beneath 15th Avenue Northwest would provide access from the west side of the road. Tail tracks would extend north of the station underneath the east side of 15th Avenue Northwest.

Elevated 15th Avenue Alternative (IBB-3)

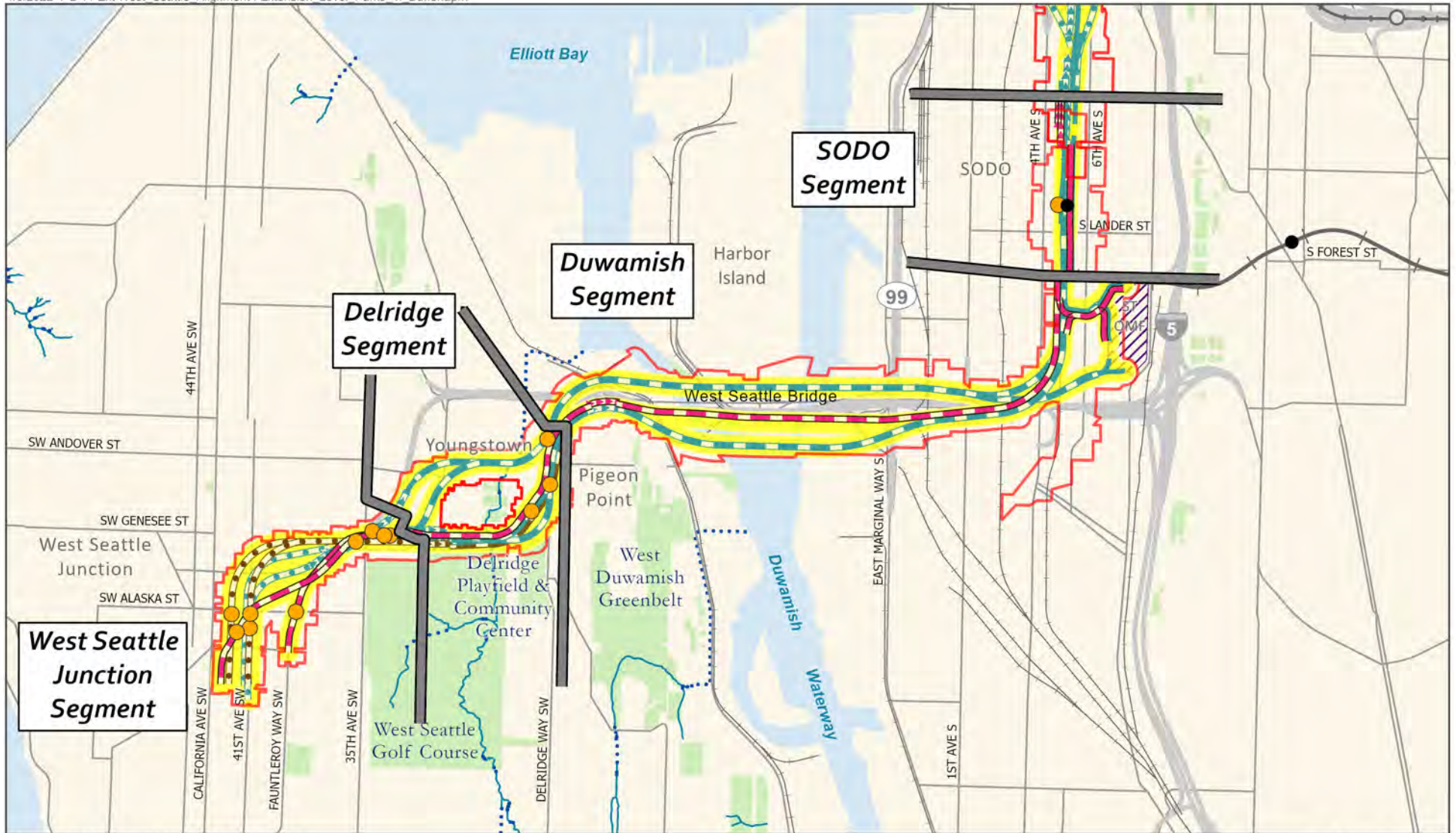
Alternative IBB-3 would cross over West Dravus Street in the median of 15th Avenue West. Interbay Station would be elevated above 15th Avenue West, straddling West Dravus Street. Station entrances would be on West Dravus Street above 15th Avenue West on both the east and west sides of 15th Avenue West. The top of the station structure would be approximately 80 feet high.

This alternative would continue on elevated guideway from the Interbay Station on the west side of 15th Avenue West and climb to cross over the West Emerson Street interchange. From the interchange, the alternative would cross over the east side of Fishermen's Terminal west of the Ballard Bridge and cross Salmon Bay on a moveable bridge. The bridge would have a clearance of approximately 70 feet over the navigation channel in Salmon Bay when closed but would open to allow taller vessels to pass underneath. This height could be adjusted through coordination with the Coast Guard.

This alternative would continue north from the bridge on elevated guideway on the west side of 15th Avenue Northwest and transition to the east edge of 15th Avenue Northwest near Northwest 52nd Street. The Ballard Station would be elevated above the east edge of 15th Avenue Northwest, south of Northwest Market Street. The top of the station structure would be approximately 80 feet high. The station would have entrances on both sides of 15th Avenue Northwest. Elevated tail tracks would extend north of the station along the east edge of 15th Avenue Northwest within the road right-of-way. The elevated guideway for this alternative would range from approximately 50 to 80 feet high and would be highest south and north of Salmon Bay where it transitions to the bridge. This alternative would only connect to Alternative SIB-2.

2.4 Study Area

The study area for the Section 4(f) evaluation, shown on Figures 2-2 and 2-3, includes both the direct impact study area used for the parks and recreational resources analysis, which is 250 feet around the alternatives, construction staging areas, and ancillary facilities, and the area of potential effects for historic and archaeological resources, which was established in accordance with Section 106 of the National Historic Preservation Act. The State Historic Preservation Officer concurred with FTA's area of potential effects in February 2020. On March 25, 2021, FTA, in cooperation with Sound Transit, defined a revised area of potential effects that includes proposed station locations, staging areas, and other project elements that had not previously been identified; the State Historic Preservation Officer concurred with the revised area of potential effects on March 26, 2021. Since then, Sound Transit identified new construction elements that required additional revisions to the area of potential effects. On September 7, 2021, FTA, in consultation with the State Historic Preservation Officer defined the area of potential effects based on these additional revisions. On October 5, 2021, the State Historic Preservation Officer conditionally concurred with FTA's revised area of potential effects.



Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New
- Existing

Segment Line

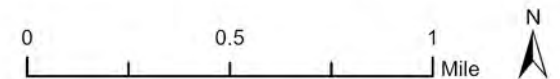
- Sound Transit Operations and Maintenance Facility (ST OMF)
- Existing Link Light Rail
- East Link Light Rail (Under Construction)

- Railroad
- Stream
- Piped Stream
- Park

- Area of Potential Effects
- Parks Study Area

FIGURE 2-2
Ballard Link Extension
Section 4(f) Study Area
Ballard Link Extension

*West Seattle and
Ballard Link Extensions*



Subsequently, the State Historic Preservation Officer, FTA, and Sound Transit met on November 18, 2021 to discuss conditional concurrence and area of potential effects concerns voiced by consulting parties and the State Historic Preservation Officer. As the project advances, FTA and Sound Transit will continue to consult with the State Historic Preservation Officer and other consulting parties on the area of potential effects to address specific concerns regarding historic districts and individual resources.

The area of potential effects to historic and archaeological resources for each alternative extends from elements of the project alternatives (e.g., guideway, stations, and construction staging areas) to the nearest tax parcel or a maximum of 200 feet where large tax parcels are adjacent to project elements. One parcel is a standard area of potential effect extent for linear transportation projects because potential direct and indirect effects to historic properties typically do not extend beyond one parcel. The area of potential effects is larger in the following areas to account for potential visual effects:

- West Seattle Link Extension:
 - SODO Segment: The area of potential effects is extended one additional parcel from the guideway where project alternatives would reconstruct South Lander Street to cross over the existing and new light rail alignments.
 - Delridge Segment: On Southwest Genesee Street between 26th Avenue Southwest and 30th Avenue Southwest, the high guideway height of alternatives extends the area of potential effects to two parcels to the north of Southwest Genesee Street.
- Ballard Link Extension:
 - SODO Segment: The area of potential effects is extended one additional parcel from the guideway where project alternatives would reconstruct South Holgate Street to cross over the existing and new light rail alignments.
 - Interbay/Ballard Segment: Where some alternatives include a high-level fixed bridge, the area of potential effects extends 0.25 mile from the center of the new high-level bridges at 14th Avenue Northwest and 15th Avenue Northwest. It also extends to parcels on the southwest side of the Ballard Bridge (between 21st Avenue West and the shoreline, north of West Nickerson Street) and includes all of Fishermen's Terminal.

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3 WEST SEATTLE LINK EXTENSION

3.1 Section 4(f) Resources in the Study Area

The Section 4(f) resources in the West Seattle study area are mapped on Figures 3-1a through 3-1h. Attachment H.1, Section 4(f) Status of Parks and Recreational Resources in the Study Area, lists the parks and recreational facilities in the study area, and whether they are considered Section 4(f) resources and why (or why not). More information about the parks and recreational resources in the study area can be found in Sections 4.2.17 and 4.3.17, Parks and Recreational Resources, of the Draft Environmental Impact Statement. More information about historic and archaeological resources can be found in Sections 4.2.16 and 4.3.16, Historic and Archaeological Resources, and Appendix N.5, Historic and Archaeological Resources Technical Report, of the Draft Environmental Impact Statement. Historic properties included in this evaluation reflect FTA's determinations of eligibility (September 3, 2021), eligibility of some properties is still subject to ongoing consultation with the State Historic Preservation Officer. The official with jurisdiction for each Section 4(f) park and recreational resource is the resource owner identified in the parks and recreational resources tables in this section; the official with jurisdiction for Section 4(f) historic resources is the State Historic Preservation Officer. For individual properties that are eligible for Section 4(f) protection as both a park resource and a historic resource, Sound Transit will consult with the resource's official with jurisdiction as well as the State Historic Preservation Officer.

There are five trails in the West Seattle Link Extension study area that are used by both commuters and recreationists:

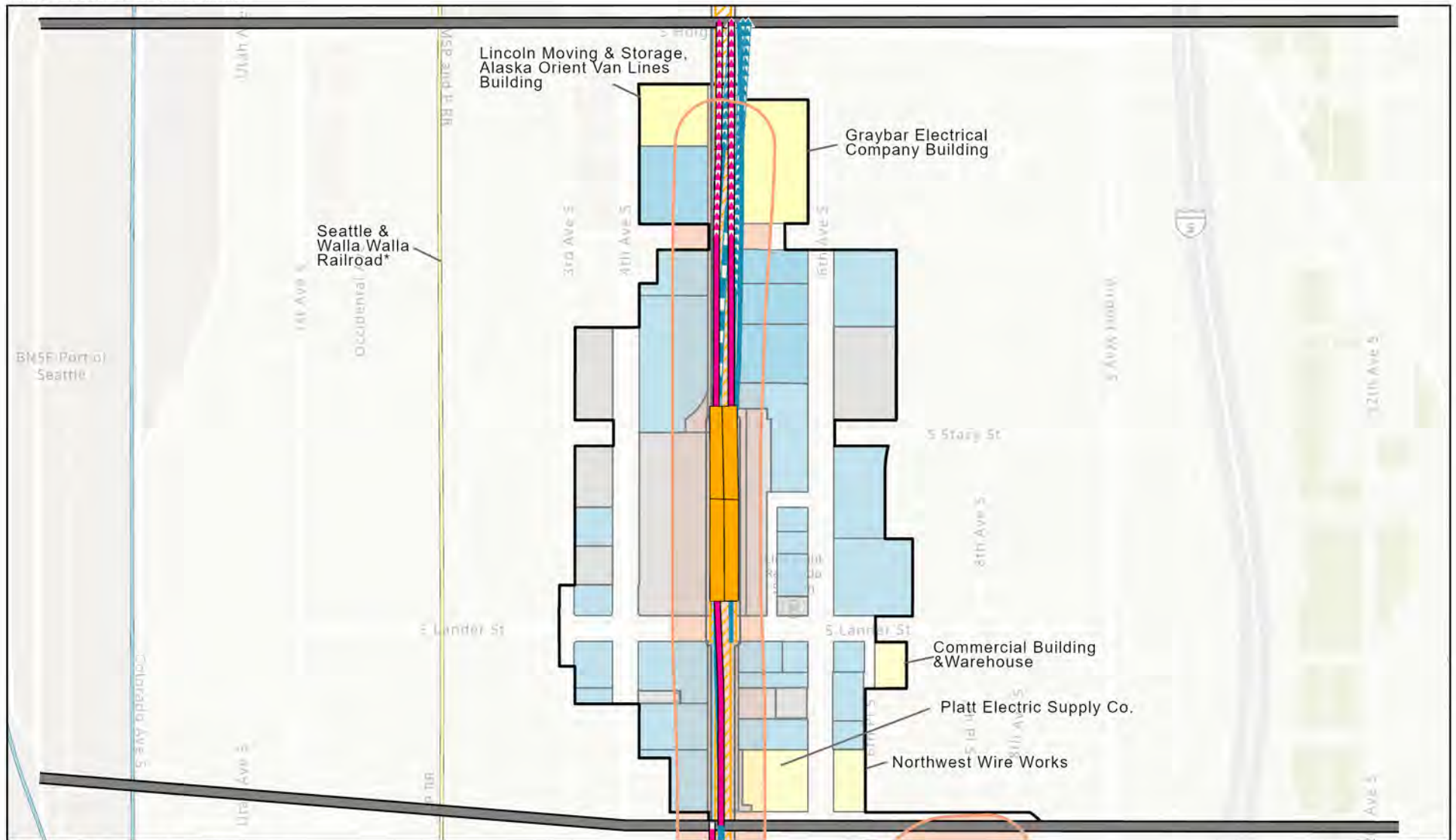
- SODO Trail
- West Seattle Bridge Trail
- Duwamish Trail
- Delridge Connector Trail
- Alki Trail

However, FTA has determined that these trails are part of the transportation system and function primarily for transportation based on the Seattle Department of Transportation's inclusion of these trails in its Bicycle Master Plan (City of Seattle 2014). These multi-use, paved trails are entirely or mostly within public right-of-way, and are part of the existing bicycle network, which is considered an extension of the City's transportation network by the City of Seattle. Therefore, these trails are not subject to Section 4(f) protection in accordance with Code of Federal Regulations Title 23 Section 774.13(f)(4). Potential impacts to these trails under the National Environmental Policy Act are discussed in Section 3.7, Non-motorized, in Chapter 3, Transportation Environment and Consequences, of the Draft Environmental Impact Statement.

National Register Eligibility Criteria

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.



Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- SODO Busway

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

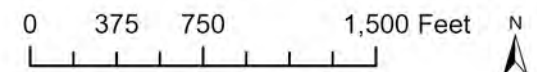
- Eligible
- Not Eligible
- Constructed after 1980 or Undeveloped

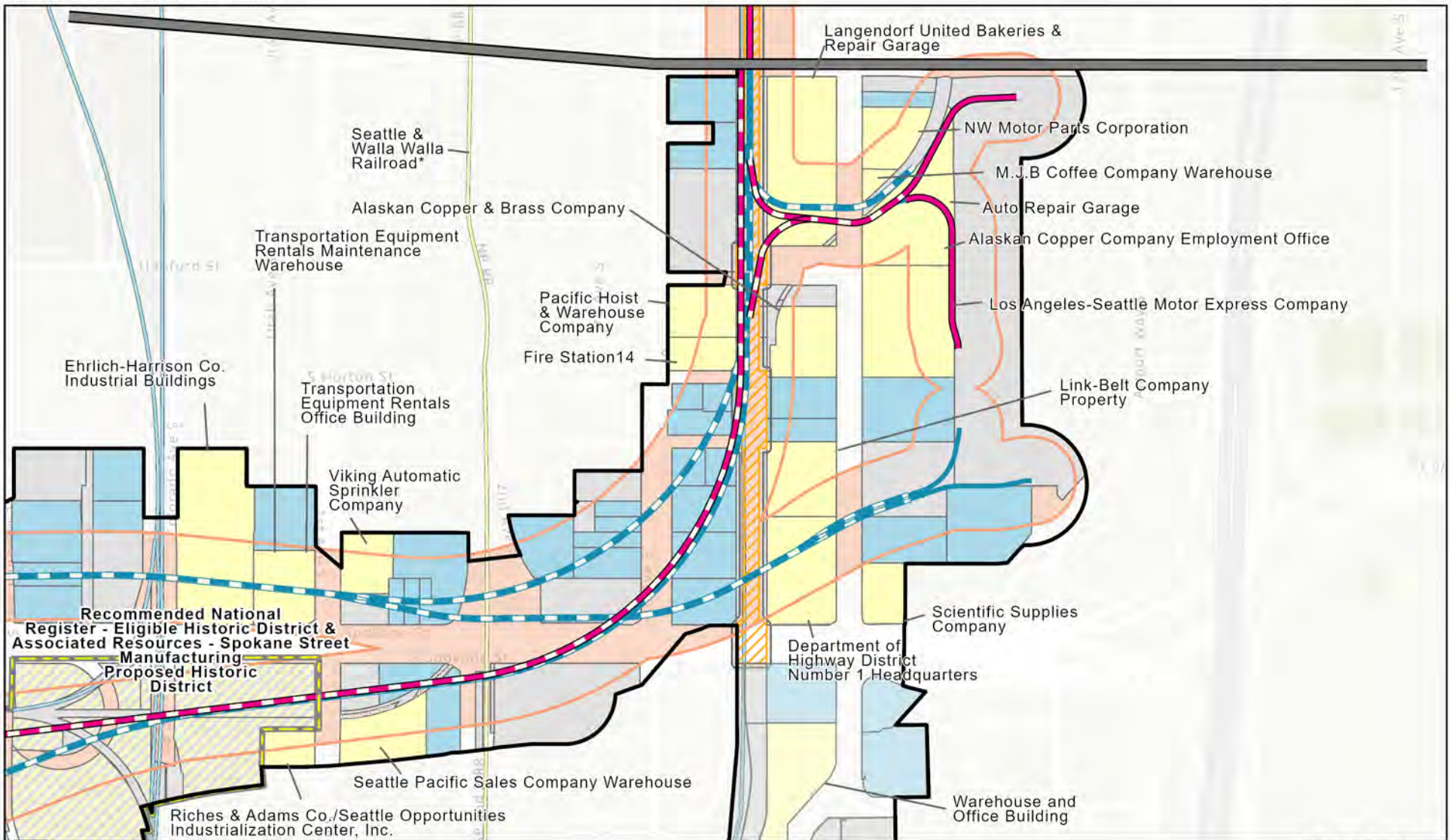
* Linear Resources:

Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 3-1a
Section 4(f) Resources
West Seattle Link Extension -
SODO Segment

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- SODO Busway

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Undeveloped
- Eligible Historic District Boundary

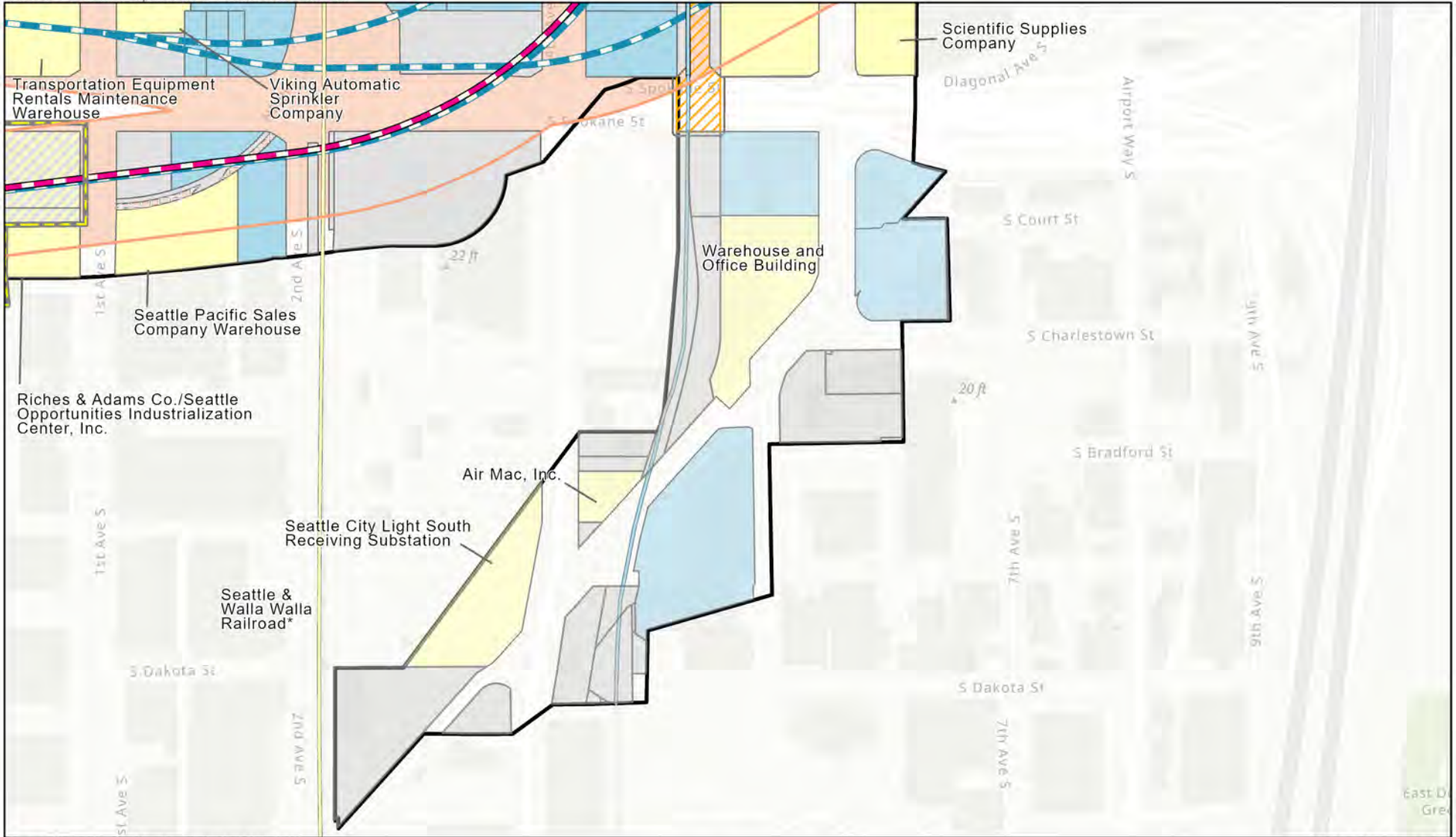
* Linear Resources:

Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 3-1b
Section 4(f) Resources
West Seattle Link Extension -
Duwamish Segment (East)

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- - - Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- SODO Busway
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Undeveloped
- Eligible Historic District Boundary

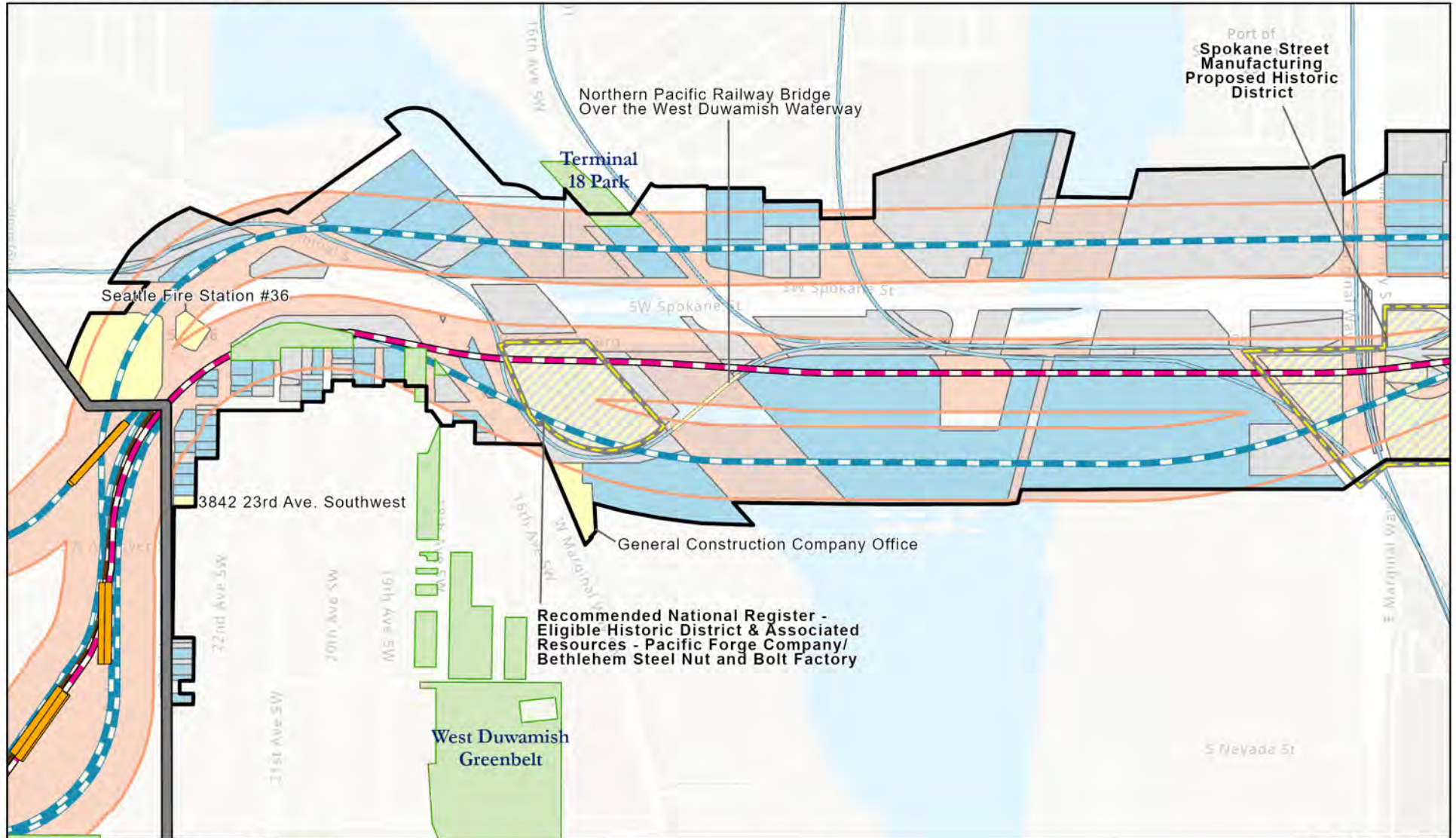
* Linear Resources:

Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 3-1c
Section 4(f) Resources
 West Seattle Link Extension -
 Duwamish Segment (Central)

*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area

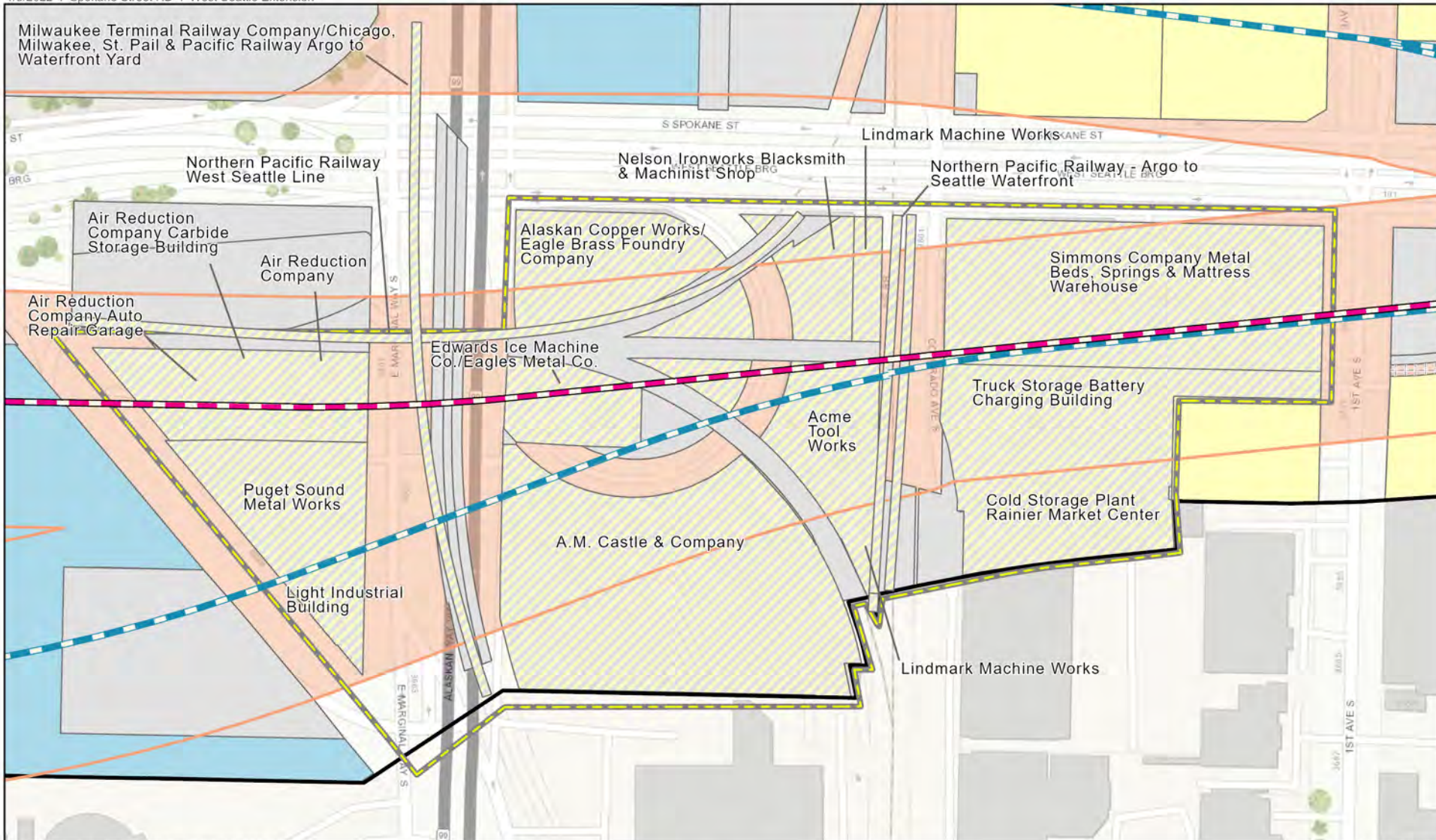
National Register Eligibility Status

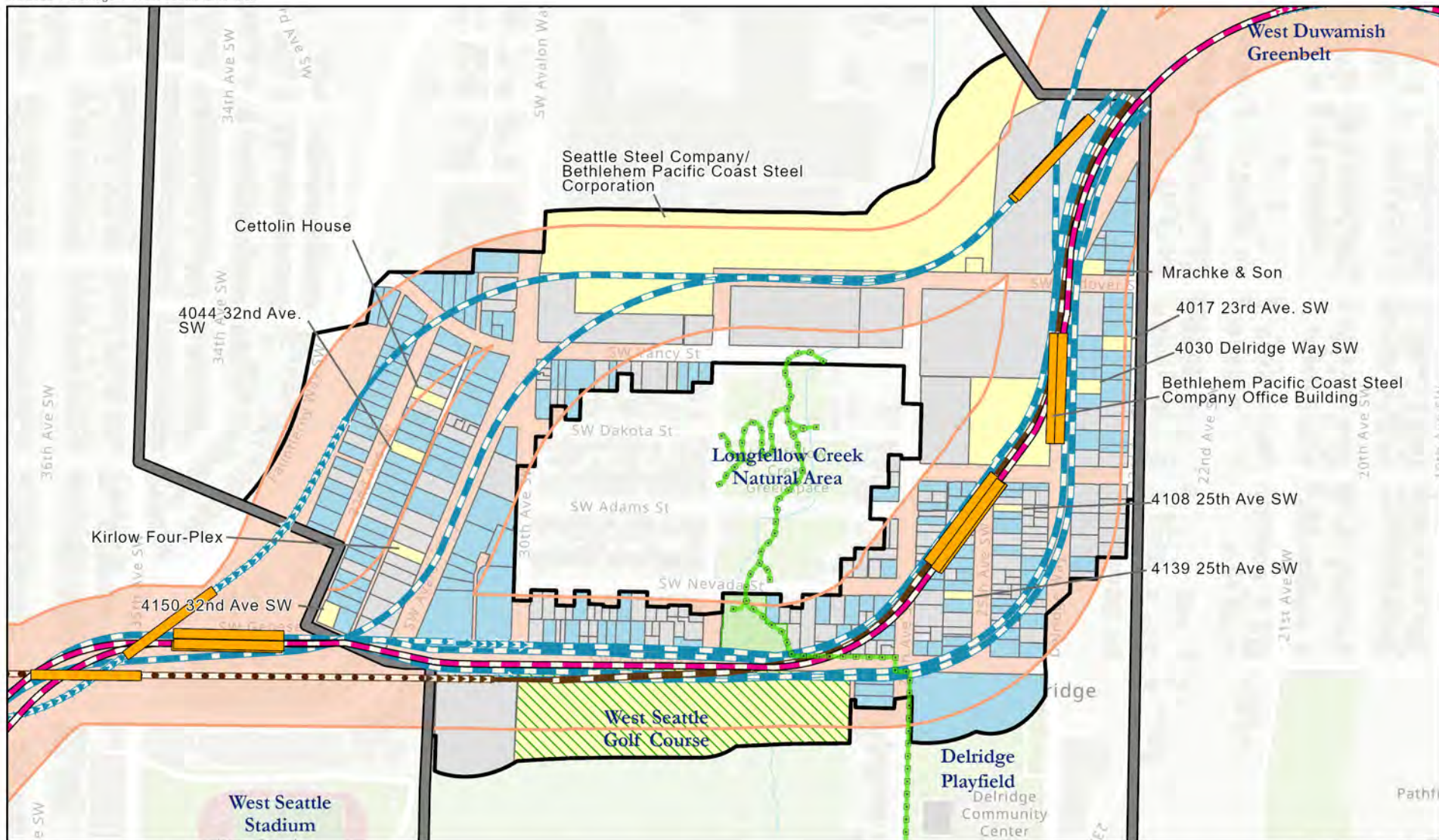
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Eligible Historic District Boundary

FIGURE 3-1d
Section 4(f) Resources
 West Seattle Link Extension -
 Duwamish Segment (West)

*West Seattle and
 Ballard Link Extensions*





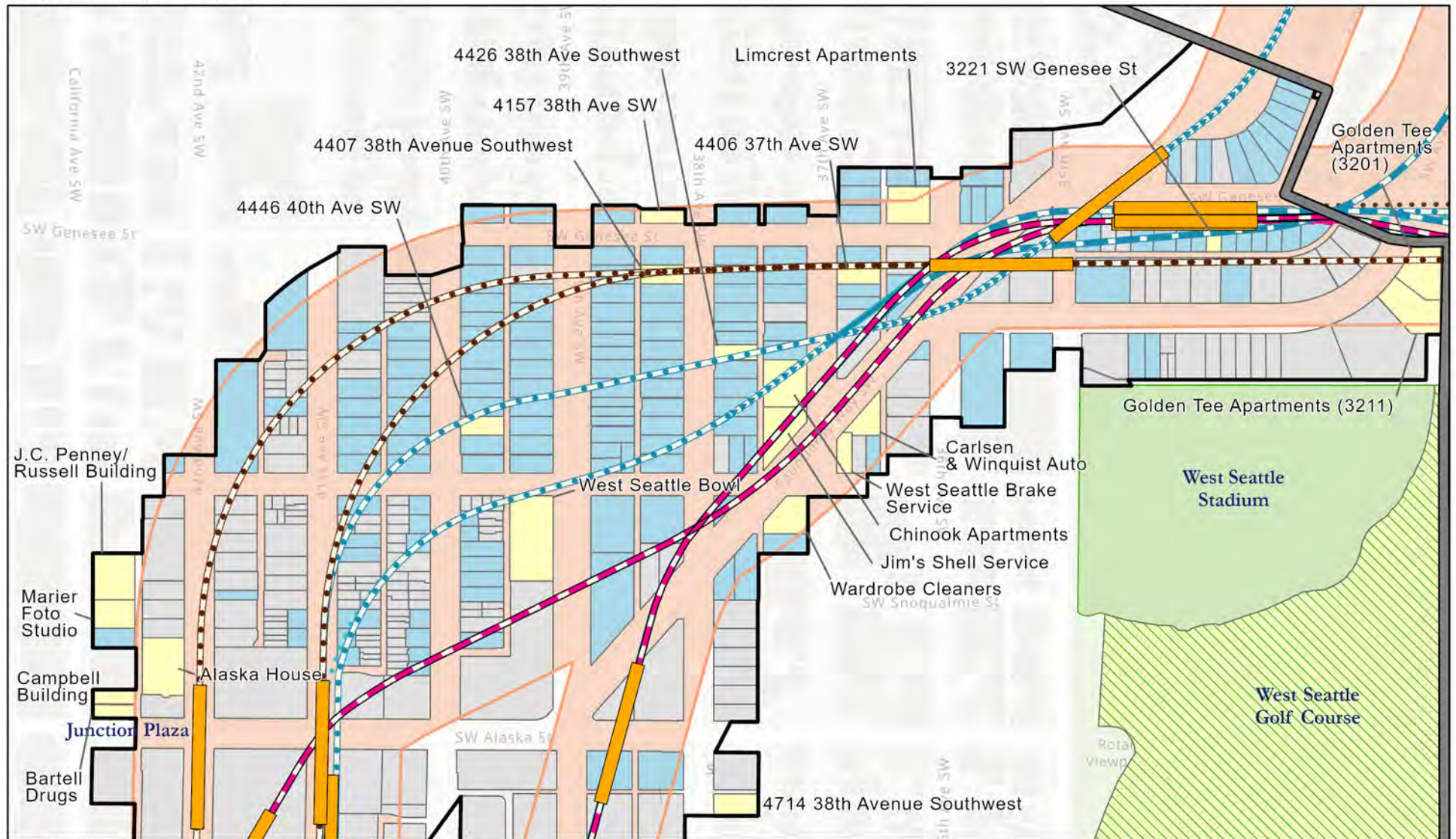


Source: City of Seattle, King County (2019, 2020, 2021).

FIGURE 3-1f
Section 4(f) Resources
West Seattle Link Extension -
Delridge Segment

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- Section 4(f) Parks and Recreation Facilities Study Area

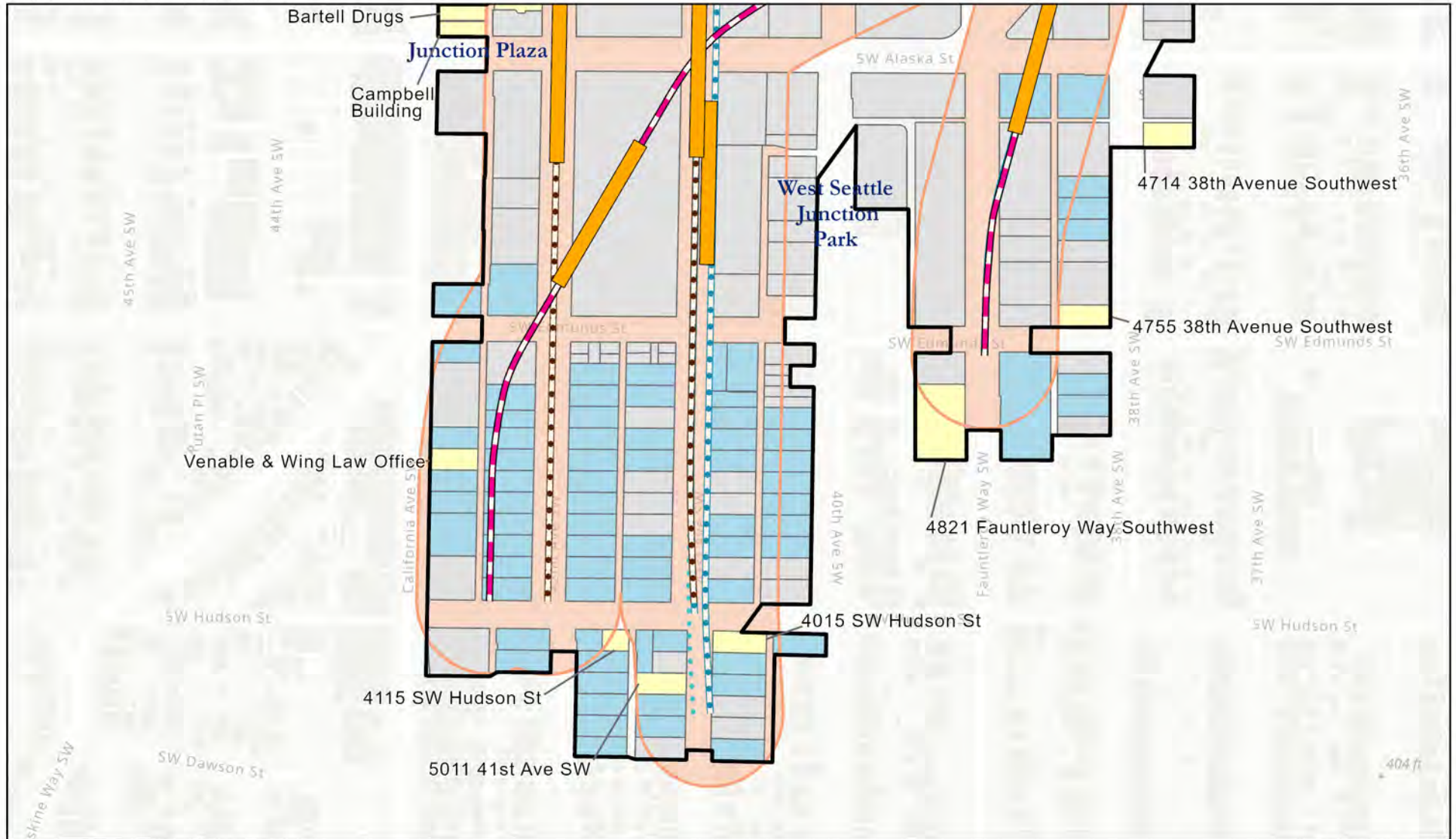
National Register Eligibility Status

- Eligible
- Eligible Park
- Not Eligible
- Constructed after 1980 or Vacant

FIGURE 3-1g
Section 4(f) Resources
 West Seattle Link Extension -
 West Seattle Junction Segment (North)

*West Seattle and
 Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

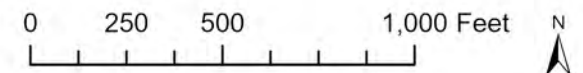
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Vacant

FIGURE 3-1h
Section 4(f) Resources
 West Seattle Link Extension -
 West Seattle Junction Segment (South)

*West Seattle and
 Ballard Link Extensions*



3.1.1 SODO Segment

3.1.1.1 Parks and Recreational Resources

There are no Section 4(f) parks and recreational resources in the SODO Segment.

3.1.1.2 Historic Resources

Section 4(f) historic resources in the SODO Segment are described in Table 3-1.

Table 3-1. Section 4(f) Historic Resources in the SODO Segment, West Seattle Link Extension

Property	Address	Built Date	National Register Eligibility Status	Figure
Lincoln Moving & Storage, Alaska Orient Van Lines Building	1924 4th Avenue South	1966	Recommended Eligible (Criterion C)	3-1a
Graybar Electric Company Building	1919 6th Avenue South	1960	Recommended Eligible (Criterion C)	3-1a
Platt Electric Supply Co.	2757 6th Avenue South	1970	Recommended Eligible (Criterion C)	3-1a
Commercial Building and Warehouse	625 South Lander Street	1953	Recommended Eligible (Criteria A and C)	3-1a
Northwest Wire Works	2752 6th Avenue South	1947	Recommended Eligible (Criteria A and C)	3-1a

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

3.1.2 Duwamish Segment

3.1.2.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the Duwamish Segment are described in Table 3-2.

Table 3-2. Section 4(f) Parks and Recreational Resources in the Duwamish Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
Terminal 18 Park	Port of Seattle	3401 Klickitat Avenue Southwest	A 1.1-acre shoreline park with a walking path, picnic table, and benches.	3-1c
West Duwamish Greenbelt	Seattle Parks and Recreation	West Marginal Way Southwest and Highland Park Way Southwest	A 197-acre urban forest comprised of multiple parcels that contain trails for walking and hiking and wildlife habitat. This area of the greenbelt in the study area has a steep grade and does not contain recreational activities, features, or attributes, nor is it designed for public access.	3-1c

3.1.2.2 Historic Resources

Section 4(f) historic resources in the Duwamish Segment are described in Table 3-3.

Table 3-3. Section 4(f) Historic Resources in the Duwamish Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Seattle Pacific Sales Company Warehouse	3800 1st Avenue South	1968	Recommended Eligible (Criterion C)	3-1b
Alaskan Copper and Brass Company	3223 6th Avenue South	1950	Recommended Eligible (Criteria A and C)	3-1b
Alaskan Copper Company Employment Office	2958 6th Avenue South	1941	Recommended Eligible (Criterion C)	3-1b
Auto Repair Garage	2958 6th Avenue South	1948	Recommended Eligible (Criterion A)	3-1b
Los Angeles-Seattle Motor Express Company	3200 6th Avenue South	1945	Recommended Eligible (Criteria A and C)	3-1b
Department of Highways District No. 1 Headquarters/Maintenance Facility - Car/Paint Building	450 South Spokane Street	1931	Previously Determined Eligible (Criteria A and C)	3-1b
Department of Highways District No. 1 Headquarters/Maintenance Facility - Maintenance Building	450 South Spokane Street	1931	Previously Determined Eligible (Criteria A and C)	3-1b
Department of Highways District No. 1 Headquarters/Maintenance Facility – Maintenance/Garage Building	450 South Spokane Street	1959	Previously Determined Eligible (Criteria A and C)	3-1b
Department of Highways District No. 1 Headquarters/Maintenance Facility - Office/Administrative Building	450 South Spokane Street	1931	Previously Determined Eligible (Criteria A and C)	3-1b
Department of Highways District No. 1 Headquarters/Maintenance Facility - Storage Building	450 South Spokane Street	1931	Previously Determined Eligible (Criteria A and C)	3-1b
Ehrlich-Harrison Co. Industrial Buildings (2 buildings)	60 South Spokane Street	1941	Recommended Eligible (Criterion C)	3-1b
Transportation Equipment Rentals Office Building	3443 1st Avenue South	1968	Recommended Eligible (Criterion C)	3-1b
Transportation Equipment Rentals Maintenance Warehouse	3443 1st Avenue South	1968	Recommended Eligible (Criterion C)	3-1b
Fire Station 14	3224 4th Avenue South	1922	Previously Determined Eligible; Designated Seattle Landmark	3-1b
Langendorf United Bakeries	2901 6th Avenue South	1952	Recommended Eligible (Criteria A and C)	3-1b

Property	Address	Built Date	National Register Eligibility Status	Figure
Langendorf United Bakeries Repair Garage	2901 6th Avenue South	1955	Recommended Eligible (Criteria A and C)	3-1b
Link-Belt Company Property	3405 6th Avenue South	1946	Recommended Eligible (Criterion C)	3-1b
NW Motor Parts Corporation Building	2930 6th Avenue South	1951	Recommended Eligible (Criterion C)	3-1b
M.J.B. Coffee Company Warehouse	2940 6th Avenue South	1954	Recommended Eligible (Criteria A and C)	3-1b
Pacific Hoist and Warehouse Company	3200 4th Avenue South	1931	Recommended Eligible (Criterion C)	3-1b
Riches and Adams Co./Seattle Opportunities Industrialization Center, Inc.	3627 1st Avenue South	1954	Recommended Eligible (Criterion A)	3-1b
Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal	Railroad right-of-way from Black River Junction near Renton to Lake Washington Ship Canal in Interbay	1883	Previously Determined Eligible (Criterion A)	3-1b
Scientific Supplies Company	600 South Spokane Street	1954	Recommended Eligible (Criterion C)	3-1b and 3-1c
Viking Automatic Sprinkler Company	3434 1st Avenue South	1964	Recommended Eligible (Criteria A and C)	3-1b and 3-1c
Warehouse and Office Building	3623 6th Avenue South	1961	Recommended Eligible (Criterion C)	3-1b and 3-1c
Air Mac, Inc.	3838 4th Avenue South	1953	Recommended Eligible (Criterion C)	3-1c
Seattle City Light South Receiving Substation	3839 4th Avenue South	1938	Recommended Eligible (Criteria A and C)	3-1c
General Construction Company Office	3840 West Marginal Way Southwest	1931	Recommended Eligible (Criteria A and C)	3-1d
Northern Pacific Railway Bridge over the West Duwamish Waterway	South of Spokane Street, near Klickitat Way Southwest	1911	Recommended Eligible (Criterion C); Designated Seattle Landmark	3-1d
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory East Warehouse	3800 West Marginal Way Southwest	1968	Contributes to recommended eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory historic district (Criteria A and C)	3-1d
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District	3800 West Marginal Way Southwest	1917 to 1968	Recommended Eligible Historic District (Criteria A and C)	3-1d
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic Office	3800 West Marginal Way Southwest	1968	Contributes to recommended eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory historic district (Criteria A and C)	3-1d

Property	Address	Built Date	National Register Eligibility Status	Figure
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory North Warehouse	3800 West Marginal Way Southwest	1968	Contributes to recommended eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory historic district (Criteria A and C)	3-1d
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Pacific Coast Forge Building	3800 West Marginal Way Southwest	1917	Contributes to recommended eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory historic district (Criteria A and C)	3-1d
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory South Warehouse	3800 West Marginal Way Southwest	1948	Contributes to recommended eligible Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory historic district (Criteria A and C)	3-1d
Seattle Fire Station 36	3600 23rd Avenue Southwest	1972	Recommended Eligible (Criteria A and C)	3-1d
Single-Family Residence	3842 23rd Avenue Southwest	1914	Recommended Eligible (Criterion C)	3-1d
Spokane Street Manufacturing Historic District	Multiple	1918-1968	Recommended Eligible Historic District (Criterion A)	3-1e
Edwards Ice Machine Co./Eagle Metals Co.	3628 East Marginal Way South	1924	Contributes to Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Cold Storage Plant/Rainier Market Center	3625 1st Avenue South	1944	Recommended Individually Eligible (Criteria A and C), contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Truck Storage Battery Charging Building	3625 1st Avenue South	1944	Recommended Individually Eligible (Criterion A), contributes to Spokane Street Manufacturing Historic District (Criterion A)	3-1e
The Simmons Company Metal Beds, Springs & Mattress Warehouse	99 South Spokane Street	1929	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Nelson Iron Works Blacksmith & Machinist Shop	45 South Spokane Street	1918	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Acme Tool Works	3626 East Marginal Way South	1941	Recommended Individually Eligible (Criterion A), contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e

Property	Address	Built Date	National Register Eligibility Status	Figure
Lindmark Machine Works	3626 East Marginal Way South	1947	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Lindmark Machine Works	49 South Spokane Street	1920	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Air Reduction Company	3623 East Marginal Way South	1916	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Air Reduction Company Carbide Storage Building	3621 East Marginal Way South	1951	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Air Reduction Company Auto Repair Garage	3621 East Marginal Way South	1951	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Puget Sound Sheet Metal Works	3651 East Marginal Way South	1942	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Light Industrial Building	3633 East Marginal Way South	1968	Contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
A.M. Castle and Company	3640 to 60 East Marginal Way South	1945	Recommended Individually Eligible (Criteria A and C), contributes to recommended eligible Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Alaskan Copper Works/Eagle Brass Foundry Company	3600 East Marginal Way South	1918	Eligible (Criterion A), contributes to the Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Northern Pacific Railway-Argo to Seattle Waterfront	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Milwaukee Terminal Railway Company/Chicago, Milwaukee, St. Paul & Pacific Railway-Argo to Waterfront Yard	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	3-1e
Northern Pacific Railway West Seattle Line	Seattle, Washington	1909	Contributes to the Spokane Street Manufacturing Historic District (Criterion A)	3-1e

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

3.1.3 Delridge Segment

3.1.3.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the Delridge Segment are described in Table 3-4.

Table 3-4. Section 4(f) Parks and Recreational Resources in the Delridge Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
Delridge Playfield	Seattle Parks and Recreation	4458 Delridge Way Southwest	Playfield for soccer, baseball, softball, skate park, tennis courts, and playground. 14 acres, and includes the Delridge Community Center.	3-1e
Longfellow Creek Natural Area	Seattle Parks and Recreation	35th Avenue Southwest	5.9-acre protected conservation area in the Longfellow Creek watershed; contains part of the Longfellow Legacy Trail (see below) and Dragonfly Pavilion and Garden.	3-1e
Longfellow Creek Legacy Trail	Seattle Parks and Recreation	Trail extends from Roxhill Park to the south to Southwest Yancy Street to the north	A 4.2-mile trail connecting the Delridge and Westwood neighborhoods and multiple parks. In the project study area, the trail is located on 26th Avenue Southwest and Southwest Genesee Street paved roadways and connects via staircase to the Longfellow Creek Natural Area, where the trail is gravel and dirt.	3-1e
West Seattle Golf Course	Seattle Parks and Recreation	35th Avenue Southwest	Public golf course. 138 acres, and one of five public golf courses in the city of Seattle.	3-1e

3.1.3.2 Historic Resources

Section 4(f) historic resources in the Delridge Segment are described in Table 3-5.

Table 3-5. Section 4(f) Historic Resources in the Delridge Segment

Historic Property	Address	Built Date	National Register Eligibility Status	Figure
Bethlehem Pacific Coast Steel Company Office Building	4045 Delridge Way Southwest	1960	Recommended Eligible (Criteria A and C)	3-1e
Cettolin House	4022 32nd Avenue Southwest	1928	Recommended Eligible (Criterion C)	3-1e
Contemporary Ranch House	4150 32nd Avenue Southwest	1959	Recommended Eligible (Criterion C)	3-1e
Kirlow Four-Plex	3074 Southwest Avalon Way	1967	Recommended Eligible (Criterion C)	3-1e
Mrachke & Son	3860 to 3864 Delridge Way Southwest	1930	Recommended Eligible (Criteria A and C)	3-1e
Residence	4030 Delridge Way Southwest	1906	Recommended Eligible (Criteria A and C)	3-1e

Historic Property	Address	Built Date	National Register Eligibility Status	Figure
Residence	4017 23rd Avenue Southwest	1907	Recommended Eligible (Criteria A and C)	3-1e
Residence	4044 32nd Avenue Southwest	1925	Recommended Eligible (Criterion C)	3-1e
Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation	2424 Southwest Andover Street	1966	Previously Determined Eligible (Criterion A)	3-1e
Single-family Craftsman Residence	4108 25th Avenue Southwest	1907	Recommended Eligible (Criteria A and C)	3-1e
Single-family Craftsman Residence	4139 25th Avenue Southwest	1909	Recommended Eligible (Criterion C)	3-1e
West Seattle Golf Course	4600 35th Avenue Southwest	1936	Recommended Eligible (Criteria A and C)	3-1e

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

3.1.4 West Seattle Junction Segment

3.1.4.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the West Seattle Junction Segment are described in Table 3-6. Fauntleroy Place is in this segment, but FTA and Sound Transit propose that it does not play an important role in meeting the City of Seattle's park and recreation objectives because it is a small, grassy street triangle with one bench and is not used for recreational purpose by the public.

Therefore, it is recommended that Fauntleroy Place be determined not to be a significant park resource and not subject to Section 4(f) approval in accordance with Code of Federal Regulations Title 23 Section 774.11(c), pending City of Seattle concurrence.

Table 3-6. Section 4(f) Parks and Recreational Resources in the West Seattle Junction Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
West Seattle Stadium	Seattle Parks and Recreation	4432 35th Avenue Southwest	The stadium contains a football field, a track, and two sets of stands, one of which is historic.	3-1e, 3-f
Junction Plaza Park	Seattle Parks and Recreation	4545 42nd Avenue Southwest	A 0.2-acre neighborhood park, with a grass lawn, benches, plaza and walking path.	3-1f and 3-1g
West Seattle Junction Park	Seattle Parks and Recreation	Mid-block of 40th Avenue Southwest between Southwest Edmunds Street and Southwest Alaska Street	A 0.4-acre planned park with a proposed design that includes several play elements, gathering spaces, café seating, benches, picnic lawn, and pathways. ^a	3-1g

^a The Seattle Parks and Recreation Department purchased the land for this park in 2012. City Ordinance 124078 authorized the acceptance and recording of the deed for the purpose of open space, park and recreation. The City has begun conceptual design for the park and has engaged the community in park planning.

3.1.4.2 Historic Resources

Section 4(f) historic resources in the West Seattle Junction Segment are listed in Table 3-7.

Table 3-7. Section 4(f) Historic Resources in the West Seattle Junction Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Residence	4407 38th Avenue Southwest	1924	Recommended Eligible (Criterion C)	3-1f
Carlsen & Winqvist Auto	4480 Fauntleroy Way Southwest	1946	Recommended Eligible (Criteria A and C)	3-1f
Chinook Apartments	4431 37th Avenue Southwest	1959	Recommended Eligible (Criterion C)	3-1f
Contemporary Ranch House	3221 Southwest Genesee Street	1959	Recommended Eligible (Criterion C)	3-1f
Golden Tee Apartments	3201 Southwest Avalon Way	1967	Recommended Eligible (Criterion C)	3-1f
Golden Tee Apartments	3211 Southwest Avalon Way	1967	Recommended Eligible (Criterion C)	3-1f
J.C. Penney/Russell Building	4520 California Avenue Southwest	1926	Recommended Eligible (Criteria A and C)	3-1f
Limcrest Apartments	3600 Southwest Genesee Street	1956	Recommended Eligible (Criterion C)	3-1f
Marier Foto Studio	4528 California Avenue Southwest	1928	Recommended Eligible (Criteria A and C)	3-1f
Residence	4446 40th Avenue Southwest	1908	Recommended Eligible (Criterion A)	3-1f
Residence	4426 38th Avenue Southwest	1932	Recommended Eligible (Criterion C)	3-1f
Single-Family Residence	4406 37th Avenue Southwest	1953	Recommended Eligible (Criterion C)	3-1f
Single-Family Residence	4157 38th Avenue Southwest	1956	Recommended Eligible (Criterion C)	3-1f
Wardrobe Cleaners	4500 Fauntleroy Way Southwest	1949	Recommended Eligible (Criterion C)	3-1f
West Seattle Bowl	4505 39th Avenue Southwest	1948	Recommended Eligible (Criterion A)	3-1f
West Seattle Brake Service	4464 37th Avenue Southwest	1948	Recommended Eligible (Criteria A and C)	3-1f
Jim's Shell Service	4457 Fauntleroy Way Southwest	1965	Recommended Eligible (Criterion A)	3-1f
Alaska House	4545 42nd Avenue Southwest	1979	Recommended Eligible (Criterion C)	3-1f
Bartell Drugs	4548 California Avenue Southwest	1929	Recommended Eligible (Criteria A and C)	3-1f and 3-1g

Property	Address	Built Date	National Register Eligibility Status	Figure
Campbell Building	4554 California Avenue Southwest	1918	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	3-1f and 3-1g
Single-Family Residence	4714 38th Avenue Southwest	1939	Recommended Eligible (Criterion C)	3-1g and 3-1g
Residence	4115 Southwest Hudson Street	1913	Recommended Eligible (Criterion C)	3-1g
Apartment Complex (two buildings)	4821 Fauntleroy Way Southwest	1957	Recommended Eligible (Criterion C)	3-1g
Craftsman Bungalow	4015 Southwest Hudson Street	1906	Recommended Eligible (Criteria A and C)	3-1g
Residence	5011 41st Avenue Southwest	1925	Recommended Eligible (Criterion C)	3-1g
Single-Family Residence	4755 38th Avenue Southwest	1957	Recommended Eligible (Criterion C)	3-1g
Venable and Wing Law Office	4826 California Avenue Southwest	1963	Recommended Eligible (Criterion C)	3-1g

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

3.2 Section 4(f) Resources Potential Use Determinations

This section assesses impacts to Section 4(f) resources in the West Seattle Link Extension study area by segment alternatives and provides preliminary determinations as to whether impacts would result in a use of that resource under Section 4(f). Summary tables of the findings in this section are presented in Section 3.3, Summary of Preliminary Use Determinations.

For the discussion in this section, if a Section 4(f) resource is referred to as “not impacted,” it means that the particular resource would not have property permanently incorporated or temporarily occupied by any alternative, nor would there be a constructive use.

3.2.1 SODO Segment

3.2.1.1 Parks and Recreational Resources

There are no Section 4(f) parks and recreational resources in the SODO Segment.

3.2.1.2 Historic Resources

There would be no impacts to any Section 4(f) historic resources from any SODO Segment alternatives; therefore, there would be no use of a Section 4(f) historic resource in the SODO Segment. Section 106 consultation is ongoing, but is expected to determine that none of the historic resources in the SODO Segment would be adversely affected by the West Seattle Link Extension.

3.2.2 Duwamish Segment

3.2.2.1 Parks and Recreational Resources

Terminal 18 Park would not be impacted by any Duwamish Segment alternatives. Impacts to the West Duwamish Greenbelt from Duwamish Segment alternatives are discussed below.

West Duwamish Greenbelt

Alternative DUW-2 would not impact this resource.

Figure 3-2 shows the impacts to the West Duwamish Greenbelt described below. Figure 3-2 shows the northernmost parcels of the greenbelt only.

Alternative DUW-1a

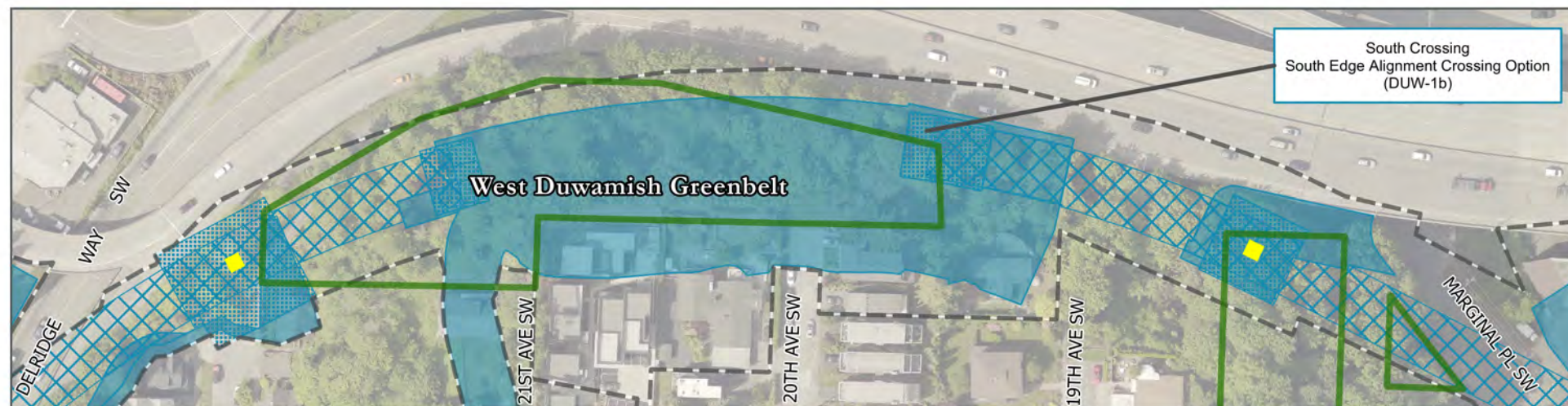
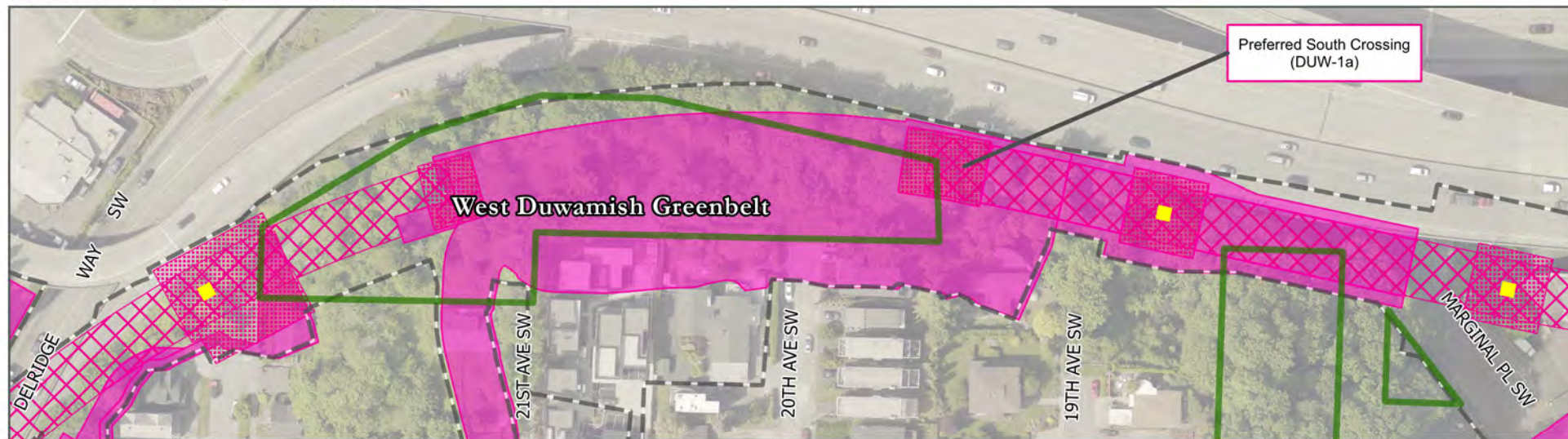
Preferred Alternative DUW-1a would permanently incorporate approximately 1.2 acres of the northernmost parcels of the greenbelt and convert this area to a transportation use; approximately 0.6 percent of total area of the greenbelt would be permanently impacted. The area that would be impacted is at the north end of the greenbelt, adjacent to the south side of the West Seattle Bridge.

This area of the greenbelt has a steep grade and does not contain recreational activities, features, or attributes, nor is it designed for public access. While a public staircase connects Southwest Marginal Place to Southwest Charlestown Street in this area, it does not connect to or provide access to the trail system within the greenbelt. The permanent incorporation of land under Preferred Alternative DUW-1a would not affect the greenbelt's recreational trails, which are south of the study area.

Preferred Alternative DUW-1a could impact the wildlife habitat function of the greenbelt in that area by removing large trees, which support wildlife species such as great blue heron and peregrine falcon. During construction, up to an additional 0.3 acre of the West Duwamish Greenbelt would be temporarily impacted; this area of the greenbelt has a steep grade and does not contain recreational amenities or features, nor is it designed for public access; the greenbelt's recreational trails would not be impacted by this temporary project construction.

The wildlife habitat temporarily impacted during construction would be replanted with low-growing vegetation, but large trees would not be allowed near the guideway. Preferred Alternative DUW-1a would not result in noise, visual, or access impacts to the remainder of the greenbelt.

Conclusion. Based on the above assessment, although land would be permanently incorporated at this resource and some of its wildlife habitat would lose mature trees, Preferred Alternative DUW-1a would not adversely affect the recreational activities, features, or attributes of this resource that qualify it for protection under Section 4(f) because the project includes measures to minimize harm (vegetation restoration and replacement property of equal function and value). Therefore, impacts to the West Duwamish Greenbelt under Preferred Alternative DUW-1a are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.



Source: City of Seattle, King County (2019, 2020, 2021), EagleView Technologies, Inc.(2019).

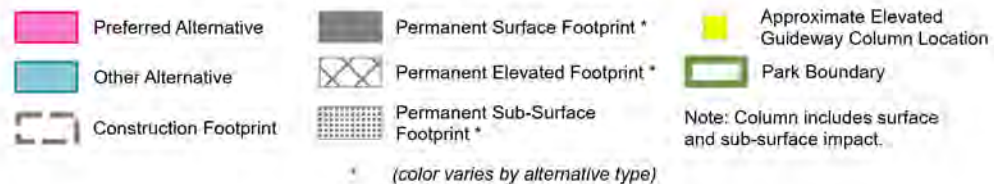
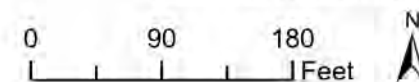


FIGURE 3-2
West Duwamish Greenbelt
Permanent and Construction Impacts
 West Seattle Link Extension - Duwamish Segment

West Seattle and Ballard Link Extensions



Option DUW-1b

Option DUW-1b would permanently incorporate approximately 1.3 acres of the West Duwamish Greenbelt; approximately 0.7 percent of the total area of the greenbelt would be permanently impacted. The area that would be impacted is at the north end of the greenbelt, adjacent to the south side of the West Seattle Bridge. This area of the greenbelt has a steep grade and does not contain recreational amenities or features, nor is it publicly accessible. The permanent incorporation of land under Option DUW-1b would not affect the greenbelt's recreational trails, which are south of the study area. However, Option DUW-1b could impact the wildlife habitat function of the greenbelt in that area by removing large trees, which support wildlife species such as great blue heron and peregrine falcon. During construction of Option DUW-1b, up to an additional 0.3 acre of the West Duwamish Greenbelt would be temporarily impacted. This area of the greenbelt has a steep grade and does not contain recreational activities, features, or attributes, nor is it designed for public access; the greenbelt's recreational trails would not be impacted by this temporary project construction.

The wildlife habitat temporarily impacted during construction would be replanted with low-growing vegetation, but large trees would not be allowed near the guideway. Option DUW-1b would not result in noise, visual, or access impacts to the remainder of the greenbelt.

Conclusion. Based on the above assessment, although land would be permanently incorporated at this resource and some of its wildlife habitat would lose mature trees, Option DUW-1b would not adversely affect the recreational activities, features, or attributes of this resource that qualify it for protection under Section 4(f) because the project includes measures to minimize harm (vegetation restoration and replacement property of equal function and value). Therefore, impacts to the West Duwamish Greenbelt under Option DUW-1b are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

3.2.2.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any Duwamish Segment alternatives:

- Link-Belt Company Property
- Alaskan Copper Works/Eagle Brass Foundry Company
- Alaskan Copper and Brass Company
- NW Motor Parts Corporation Building
- Scientific Supplies Company
- Riches & Adams Co./Seattle Opportunities Industrialization Center, Inc.
- General Construction Company Office
- Northern Pacific Railway Bridge over the West Duwamish Waterway
- Los Angeles-Seattle Motor Express Company
- Air Mac, Inc.
- Warehouse and Office Building
- Seattle City Light South Receiving Substation

- M.J.B. Coffee Company Warehouse
- Seattle Pacific Sales Company Warehouse
- Single-Family Residence, 3842 23rd Avenue Southwest
- Northern Pacific Railway-Argo to Seattle Waterfront
- Milwaukee Terminal Railway Company/Chicago, Milwaukee, St. Paul & Pacific Railway-Argo to Waterfront Yard
- Northern Pacific Railway West Seattle Line
- Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

Section 4(f) historic resources that would be impacted by at least one Duwamish Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report, of the Draft Environmental Impact Statement.

Viking Automatic Sprinkler Company

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Viking Automatic Sprinkler Company historic resource would constitute a use under Section 4(f).

Erlich-Harrison Co. Industrial Buildings

Preferred Alternative DUW-1a and Option DUW-1b would not impact these resources.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative DUW-2 would **not** result in an adverse effect under Section 106. As such, impacts to the Erlich-Harrison Co. Industrial Buildings historic resource under Alternative DUW-2 are proposed to be *de minimis* under Section 4(f).

Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District

Alternative DUW-2 would not impact this resource.

Alternative DUW-1a and Option DUW-1b

Preferred Alternative DUW-1a and Option DUW-1b would both result in the demolition of one or more buildings within this historic district, which would cause an adverse effect under Section 106 to the district and its contributing resources (Historic Office, Pacific Coast Forge Building, North Warehouse, South Warehouse, and East Warehouse). The exact buildings to be demolished would be determined during final design once the structural integrity of buildings

can be evaluated, as some buildings may be connected. Sound Transit would minimize the number of buildings demolished as much as possible. As described in Draft Environmental Impact Statement Sections 4.2.16 and 4.3.16, Historic and Archaeological Resources, and Appendix N.5, Historic and Archaeological Resources Technical Report, the buildings within the historic district are not individually eligible for the National Register.

Conclusion. The adverse effect under Section 106 to the Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District and its contributing resources under Section 106 would constitute a use under Section 4(f).

Fire Station 14

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative DUW-2 would **not** result in an adverse effect under Section 106. As such, impacts to the Fire Station 14 historic resource under Alternative DUW-2 are proposed to be *de minimis* under Section 4(f).

Pacific Hoist and Warehouse Company

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative DUW-2 would **not** result in an adverse effect under Section 106. As such, impacts to the Pacific Hoist and Warehouse Company historic resource under Alternative DUW-2 are proposed to be *de minimis* under Section 4(f).

Langendorf United Bakeries

Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2

Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 would **not** result in an adverse effect under Section 106. As such, impacts to the Langendorf United Bakeries historic resource under Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 are proposed to be *de minimis* under Section 4(f).

Langendorf United Bakeries Repair Garage

Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2

Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 would **not** result in an adverse effect under Section 106. As such impacts to the Langendorf United Bakeries Garage under Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 are proposed to be *de minimis* under Section 4(f).

A.M. Castle and Company

Preferred Alternative DUW-1a and Alternative DUW-2 would not impact this resource.

Option DUW-1b

Option DUW-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the A.M. Castle and Company historic resource would constitute a use under Section 4(f).

Alaskan Copper Company Employment Office

Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2

Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Alaskan Copper Company, Employment Office historic resource would constitute a use under Section 4(f).

Auto Repair Garage

Alternative DUW-2 would not impact this resource.

Alternative DUW-1a and Option DUW-1b

Preferred Alternative DUW-1a and Option DUW-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Auto Repair Garage historic resource would constitute a use under Section 4(f).

Department of Highways District No. 1 Headquarters – Office/Administrative Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Department of Highways District Number 1 Headquarters – Office/Administrative Building historic resource would constitute a use under Section 4(f).

Department of Highways District No. 1 Headquarters - Maintenance Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Department of Highways District Number 1 Headquarters - Maintenance Building historic resource would constitute a use under Section 4(f).

Department of Highways District No. 1 Headquarters - Storage Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would permanently incorporate land from this historic resource and would cause an adverse effect under Section 106.

Conclusion. Because land would be permanently incorporated from this historic resource and there would be an adverse effect under Section 106, Alternative DUW-2 would result in a use of the Department of Highways District Number 1 Headquarters - Storage Building historic resource under Section 4(f).

Department of Highways District No. 1 Headquarters - Car/Paint Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 would constitute a use of the Department of Highways District No. 1 Headquarters Car/Paint Building historic resource under Section 4(f).

Department of Highways District No. 1 Headquarters - Maintenance/Garage Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 would constitute a use of the Department of Highways District No. 1 Headquarters Maintenance/Garage Building historic resource under Section 4(f).

Spokane Street Manufacturing Historic District

Alternative DUW-2 would not impact this resource.

Alternative DUW-1a

Preferred Alternative DUW-1a would result in the demolition of the following contributing resources:

- Truck Storage Battery Charging Building
- Acme Tool Works
- Edwards Ice Machine Co./Eagle Metals Co.
- Simmons Company Metal Beds, Springs, & Mattress Warehouse at 99 South Spokane Street
- Lindmark Machine Works at 3626 East Marginal Way South
- Lindmark Machine Works at 49 South Spokane Street
- Air Reduction Company at 3623 East Marginal Way South
- Air Reduction Company Carbide Storage Building at 3621 East Marginal Way South
- Air Reduction Company Auto Repair Garage at 3621 East Marginal Way South
- Light Industrial Building at 3633 East Marginal Way South
- Nelson Iron Works Blacksmith & Machinist Shop

The demolition of these resources would cause an adverse effect under Section 106 to the district and its contributing resources.

Option DUW-1b

Option DUW-1b would result in the demolition of the same historic resources in the Spokane Street Manufacturing Historic District as Preferred Alternative DUW-1a, except for the Lindmark Machine Works building at 49 South Spokane Street. This option would also result in demolition of the following additional contributing resources in this district:

- A.M Castle and Company Building
- Puget Sound Sheet Metal Works
- Cold Storage Plant/Rainer Market Center

The demolition of these resources would cause an adverse effect under Section 106 to the district and its contributing resources.

Truck Storage Battery Charging Building

Alternative DUW-2 would not impact this resource.

Alternative DUW-1a and Option DUW-1b

Preferred Alternative DUW-1a and Option DUW-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Truck Storage Battery Charging Building historic resource would constitute a use under Section 4(f).

Acme Tool Works

Alternative DUW-2 would not impact this resource.

Alternative DUW-1a and Option DUW-1b

Preferred Alternative DUW-1a and Option DUW-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Acme Tool Works historic resource would constitute a use under Section 4(f).

Cold Storage Plant/Rainier Market Center

Alternative DUW-1a and Alternative DUW-2 would not impact this resource.

Option DUW-1b

Option DUW-1b would permanently incorporate land from this historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Cold Storage Plant/Rainier Market Center historic resource would constitute a use under Section 4(f).

Transportation Equipment Rentals Office Building

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 would constitute a use of the Transportation Equipment Rentals Maintenance Warehouse historic resource under Section 4(f).

Transportation Equipment Rentals Maintenance Warehouse

Preferred Alternative DUW-1a and Option DUW-1b would not impact this resource.

Alternative DUW-2

Alternative DUW-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 would constitute a use of the Transportation Equipment Rentals Maintenance Warehouse historic resource under Section 4(f).

Seattle Fire Station 36

Preferred Alternative DUW-1a and Option DUW-1b (when connecting to Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-5 or Alternative DEL-6*) would not impact this resource. Alternative DUW-2 would also not impact this resource.

Alternative DUW-1a and Option DUW-1b (when connecting to Alternative DEL-3 or Alternative DEL-4*)

Preferred Alternative DUW-1a and Option DUW-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 would constitute a use of the Fire Station 36 historic resource under Section 4(f).

3.2.3 Delridge Segment

3.2.3.1 Parks and Recreational Resources

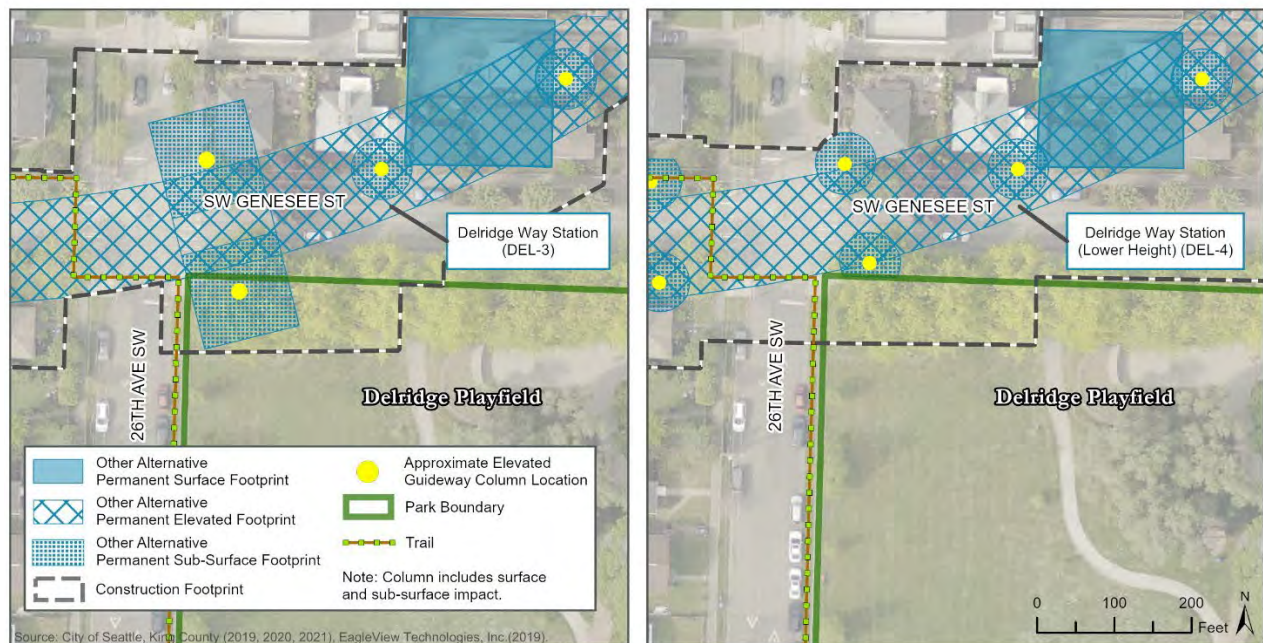
Alternative DEL-5 and Alternative DEL-6* would not impact Section 4(f) parks and recreational resources. As described in Sections 4.2.17 and 4.3.17, Parks and Recreational Resources, of the Draft Environmental Impact Statement, Alternative DEL-6* is predicted to have a noise impact at Longfellow Creek Natural Area. However, this noise impact would be mitigated as described in Section 4.2.7.6.1, Noise, of the Draft Environmental Impact Statement, with noise levels during operations reduced to below existing noise levels.

Each of the Section 4(f) parks and recreational resources in the Delridge Segment (Delridge Playfield, Longfellow Creek Natural Area, and West Seattle Golf Course) would be impacted by at least one alternative, as described below.

Delridge Playfield

Figure 3-3 shows the impacts to Delridge Playfield described in the following subsections. Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-5, and Alternative DEL-6* would not impact the Delridge Playfield.

Figure 3-3. Delridge Playfield Impacts, West Seattle Link Extension – Delridge Segment



Alternative DEL-3

This alternative would permanently incorporate less than 0.1 acre of the playfield to accommodate an elevated guideway column; approximately less than 1 percent of the total area of the playfield would be permanently impacted. The area that would be permanently incorporated is adjacent to Southwest Genesee Street and does not contain recreational activities, features, or attributes. An additional 0.1 acre of the Delridge Playfield property adjacent to Southwest Genesee Street would be temporarily impacted during construction. The area that would be temporarily impacted is adjacent to Southwest Genesee Street and does not contain recreational amenities or features, but the alternative could temporarily impact access to

the pathway within the park from Southwest Genesee Street for short periods of time. The area disturbed during construction would be fully restored when construction is completed. There would be no adverse effect to the activities, features, or attributes that qualify the Delridge Playfield for protection under Section 4(f) as a result of the permanent incorporation of land or during construction. There would be no noise, visual, or access impacts to the recreational part of this resource.

Conclusion. Although land would be permanently incorporated, Alternative DEL-3 would not adversely affect the recreational activities, features, or attributes of this resource either permanently or temporarily; therefore, impacts to the Delridge Playfield under Alternative DEL-3 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

*Alternative DEL-4**

There would be no permanent incorporation of land at Delridge Playfield under this alternative. However, 0.1 acre of the Delridge Playfield property adjacent to Southwest Genesee Street would be temporarily occupied during construction. The area that would be temporarily occupied is adjacent to Southwest Genesee Street and does not contain any recreational activities, features, or attributes, but the alternative could temporarily impact access to the pathway within the park from Southwest Genesee Street for short periods of time. The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases, and the duration of the temporary occupancy of Delridge Playfield would be approximately 1.5 years, so less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: The area of the Delridge Playfield that would be temporarily occupied is at the northwest corner of the park. Trees and grass would be removed from this corner for construction of the guideway, but there are no recreational features or amenities in the area of the park that would be impacted. As such, the magnitude of changes to this Section 4(f) resource would be minor.

3. **Criterion:** *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.*

Finding: None of the activities, features, or attributes of the Delridge Playfield would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the playfield as they currently do. The Delridge Playfield is a 14-acre property with amenities located throughout. The area of temporary occupancy is a small area of lawn with a few street trees at the northern edge of the property, adjacent to a busy roadway; there are no recreational activities, features, or attributes in this part of the park. Although the construction of this alternative could temporarily impact access to the pathway within the park from Southwest Genesee Street for short periods of time, there are alternate pathways and access points for visitors. There would be no temporary or

permanent noise, visual, or access impacts that interfere with the protected activities, features, or attributes of the property.

4. **Criterion:** *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).*

Finding: The approximate 0.1 acre of vegetated land disturbed during temporary occupancy would be restored to existing conditions or better after construction.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

Conclusion. Alternative DEL-4* would not adversely affect the recreational activities, features, or attributes of the Delridge Playfield either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Longfellow Creek Natural Area

Figure 3-4 shows project impacts to the Longfellow Creek Natural Area, which are described below by alternative. Preferred Alternative DEL-2a*, Alternative DEL-3, Alternative DEL-4*, and Alternative DEL-5 would not impact this resource.

Alternative DEL-1a

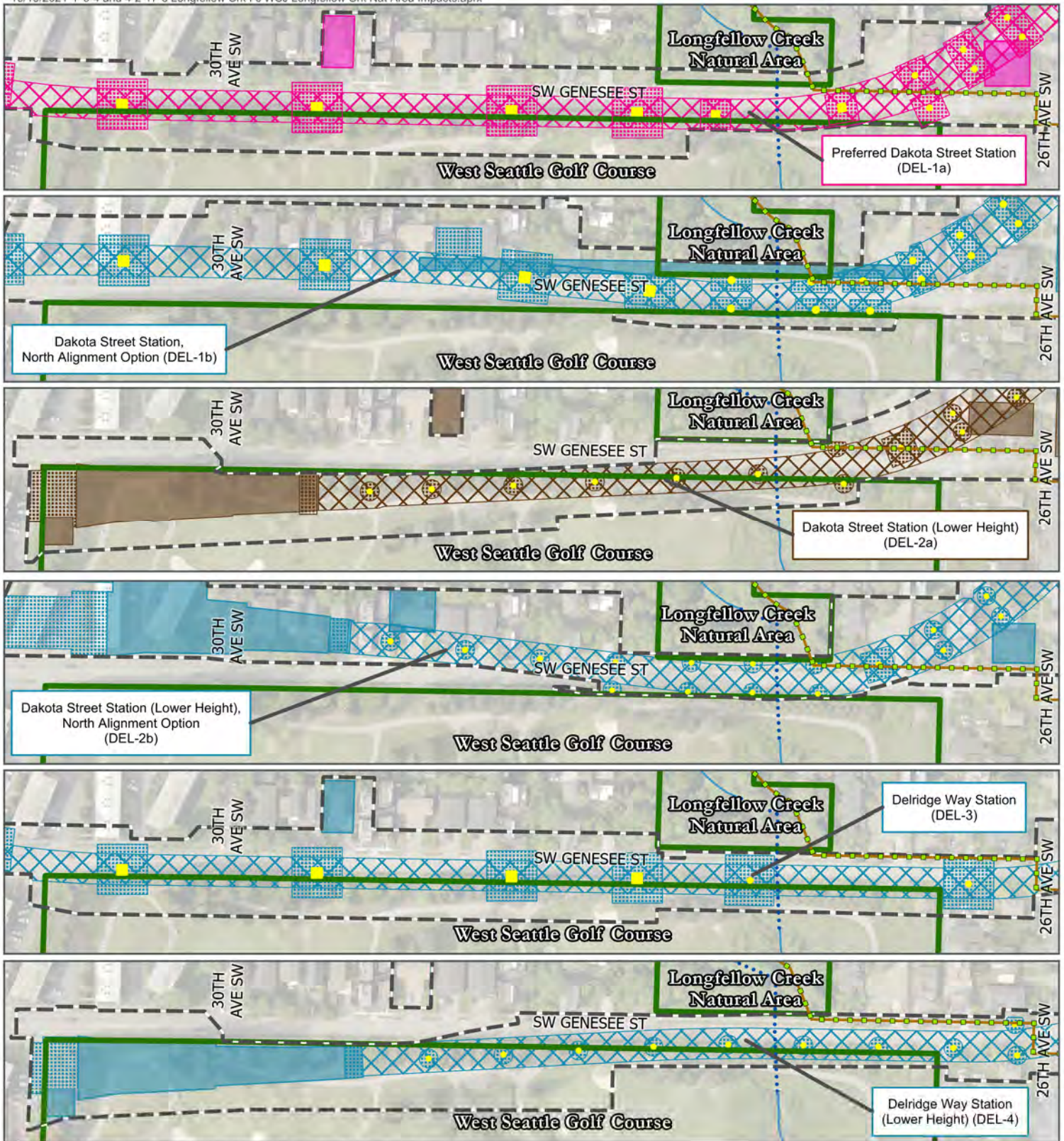
There would be no permanent incorporation of land at Longfellow Creek Natural Area under this alternative. However, Preferred Alternative DEL-1a would temporarily occupy 0.1 acre of the Longfellow Creek Natural Area during construction. The impacts would include removal of trees and construction of a temporary work trestle in the natural area to provide additional space on Southwest Genesee Street for equipment to maneuver. The temporarily occupied area is on the south end of the natural area. The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases, so the duration of the temporary occupancy of Longfellow Creek Natural Area (3 to 4 years) would be less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: The part of the Longfellow Creek Natural Area that would be temporarily occupied is vegetated with plants and trees, but does not contain recreational amenities or features and is not utilized for recreational purposes by the public. Access to the Longfellow Creek Legacy Trail (which travels through the natural area) from Southwest Genesee Street would be temporarily restricted, but construction would not inhibit the public's ability to visit the trail or the natural area because there are other points of access nearby. Visitors would still have easy access to the trail in the natural area throughout the construction period.



Source: City of Seattle, King County (2019, 2020, 2021), EagleView Technologies, Inc. (2019).

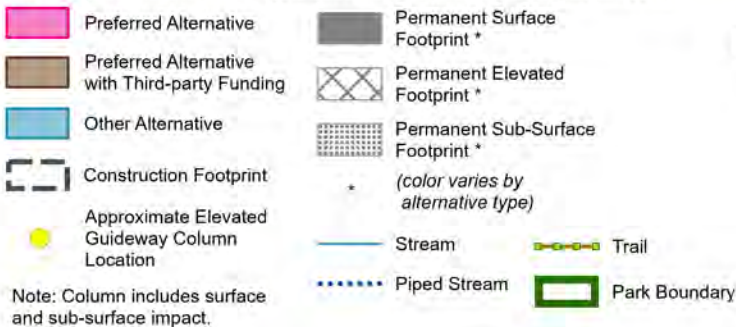
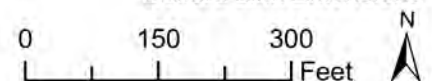


FIGURE 3-4
Longfellow Creek Natural Area, Longfellow Creek
Legacy Trail and West Seattle Golf Course
Permanent and Construction Impacts
West Seattle Link Extension -
Delridge Segment
West Seattle and
Ballard Link Extensions



(Impacts to the greater trail resource are described separately). As such, the magnitude of changes to this Section 4(f) resource would be minor.

3. **Criterion:** *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.*

Finding: None of the activities, features, or attributes of the Longfellow Creek Natural Area would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the natural area via the trail as they currently do. Although the southern access point to the trail would be temporarily closed, visitors would still be able to use the trail and enjoy the natural area from other points of access. There would be no temporary or permanent noise, visual, or access impacts that interfere with the protected activities, features, or attributes of the property.

4. **Criterion:** *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).*

Finding: The approximate 0.1 acre of vegetated land disturbed during temporary occupancy would be restored to existing conditions or better after construction.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

Conclusion. Preferred Alternative DEL-1a would not adversely affect the recreational activities, features, or attributes of the Longfellow Creek Natural Area either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Option DEL-1b

Option DEL-1b would permanently incorporate approximately 0.1 acre of the south end of the natural area, adjacent to Southwest Genesee Street; approximately 2 percent of the total area of the natural area would be permanently impacted. The area that would be impacted is vegetated with plants and trees, does not contain any recreational activities, features, or attributes, and is not used by the public for recreation. Access to the Longfellow Creek Legacy Trail (which travels through the natural area) would not be impacted. Option DEL-1b would also temporarily occupy less than 0.1 acre of the south end of the natural area to construct the project. Access to the Longfellow Legacy Trail from Southwest Genesee Street would be temporarily restricted, but construction would not inhibit use of the trail or the natural area from other points of access. Therefore, visitors would still have easy access to enjoy the trail in the natural area throughout the construction period. (Impacts to the greater trail resource are described separately). The area disturbed during construction would be restored, including planting of trees when construction is completed. As such, there would be no adverse effect on the activities, features, or attributes that qualify the natural area for protection under Section 4(f) as a result of the permanent incorporation of land or during construction.

Conclusion. Option DEL-1b would not adversely affect the recreational activities, features, or attributes of this resource either permanently or temporarily during construction; therefore, impacts to the Longfellow Creek Natural Area under this option are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

*Option DEL-2b**

Option DEL-2b* would permanently incorporate less than 0.1 acre of the south end of the Longfellow Creek Natural Area, adjacent to Southwest Genesee Street; approximately less than 2 percent of the total area of the natural area would be permanently impacted. The area that would be impacted is at the south end of the natural area. Access to the Longfellow Creek Legacy Trail (which travels through the natural area) would not be impacted. This alternative would temporarily occupy less than 0.1 acre of the natural area to construct the project. The area that would be temporarily impacted is vegetated with plants and trees, does not contain recreational activities, features, or attributes, and is not used by the public for recreation. Access to the Longfellow Creek Legacy Trail from Southwest Genesee Street would be temporarily restricted, but construction would not inhibit use of the trail or the natural area from other points of access. Therefore, visitors would still have easy access to the trail in the natural area throughout the construction period. (Impacts to the greater trail resource are described separately). The area disturbed during construction would be restored when construction is completed, including planting of trees. As such, there would be no adverse effect on the activities, features, or attributes that qualify the natural area for protection under Section 4(f) as a result of the permanent incorporation of land or during construction. There would be no noise, visual, or access impacts to the recreational part of this resource.

Conclusion. Option DEL-2b* would not adversely affect the recreational activities, features, or amenities of this resource either permanently or temporarily during construction; therefore, impacts to the Longfellow Creek Natural Area under Option DEL-2b* are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

*Alternative DEL-6**

There would be no permanent incorporation of Longfellow Creek Natural Area with this alternative. A moderate noise impact was predicted in frequent-use areas of this park, but would be fully mitigated with proposed sound wall on the east side of the guideway along the park. This would not impact the recreational use of the park, and as such would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

Conclusion. Alternative DEL-6* would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f). Therefore, there would be no constructive use of Longfellow Creek Natural Area under Alternative DEL-6*.

Longfellow Creek Legacy Trail

Figure 3-4 shows project impacts to the Longfellow Creek Legacy Trail, which are described below by alternative. Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-2a, Alternative DEL-3, and Alternative DEL-4**

These alternatives would all construct an elevated guideway over portions of Southwest Genesee Street in the vicinity of the Longfellow Creek Trail, but they would avoid placing

guideway columns on the trail inside the Longfellow Creek Natural Area. These alternatives would all avoid a permanent or temporary use of the Longfellow Creek Legacy Trail resource, as well as any impacts to the trail access from Southwest Genesee Street. Each of these alternatives would result in the visible removal of trees along the south side of Southwest Genesee Street near the trail and the visual presence of an elevated guideway from areas of the trail, but these visual impacts would not substantially impair the ability of users to recreationally use the trail in the manner they do today.

Conclusion. Based on the above discussion, these alternatives would not adversely affect the recreational activities, features, or attributes of the Longfellow Creek Legacy Trail either permanently or temporarily, and there would be no substantial impairment to the resource as a result of proximity impacts. As such, there would be no constructive use of the Longfellow Creek Legacy Trail under Preferred Alternative DEL-2a*, Alternative DEL-3, and Alternative DEL-4*.

Alternative DEL-1a

Preferred Alternative DEL-1a would construct an elevated guideway over portions of Southwest Genesee Street in the vicinity of the Longfellow Creek Legacy Trail, but it would avoid placement of guideway columns on the trail inside the Longfellow Creek Natural Area.

This alternative would result in the temporary occupancy of the trail at the trail's access point from Southwest Genesee Street during construction. About 600 feet of trail between Southwest Nevada Street and Southwest Genesee Street would continue to be accessible, but the staircase to connect to Southwest Genesee Street would not be accessible. A signed detour would be provided via 26th Avenue Southwest and Southwest Nevada Street and via Southwest Dakota Street during temporary closures of 26th Avenue Southwest, to maintain continuity of the trail.

The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases and the duration of the temporary occupancy of the Longfellow Creek Trail would be approximately 3 to 4 years, so less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: There will be no permanent changes to the trail as a result of temporary occupancy during construction.

3. **Criterion:** *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.*

Finding: There will be no permanent changes to the trail as a result of temporary occupancy during construction. The project will provide a signed detour via 26th Avenue Southwest and Southwest Nevada Street and via Southwest Dakota Street during temporary closures of 26th Avenue Southwest to maintain continuity of the trail. As such, there would be no temporary or permanent interference with visitors using the trail as they currently do.

4. **Criterion:** *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).*

Finding: The temporarily occupied area would be fully restored when construction is complete.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

This alternative would result in the visible removal of trees along Southwest Genesee Street near the trail and the visual presence of an elevated guideway from areas of the trail, but these visual impacts would not substantially impair the ability of users to recreationally utilize the trail in the manner they do today.

Conclusion. Preferred Alternative DEL-1a would not adversely affect the recreational activities, features, or attributes of the Longfellow Creek Legacy Trail either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

*Option DEL-1b and Option DEL-2b**

Option DEL-1b and Option DEL-2b* would result in a permanent incorporation of the trail because the trail connection stairway to the sidewalk on Southwest Genesee Street would need to be relocated slightly northward due to widening of the roadway to the north by about 20 feet. However, the relocated trail access would provide the same function as the current trail, and trail users would be able to use the trail in the same manner they do today.

These options would also result in the temporary detour of the trail at the trail's access point from Southwest Genesee Street during construction. About 600 feet of trail between Southwest Nevada Street and Southwest Genesee Street would continue to be accessible, but the staircase to connect to Southwest Genesee Street would not be accessible. A signed detour would be provided via 26th Avenue Southwest and Southwest Nevada Street and via Southwest Dakota Street during temporary closures of 26th Avenue Southwest to maintain continuity of the trail.

Conclusion. Option DEL-1b and Option DEL-2b* would not adversely affect the recreational activities, features, or attributes of this resource either permanently or temporarily during construction; therefore, impacts to the Longfellow Creek Natural Area under this option are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

West Seattle Golf Course

Figure 3-4 shows project impacts to the West Seattle Golf Course, which are described below by alternative. Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a

There would be no permanent incorporation of land at the West Seattle Golf Course with this alternative. The project would require a 0.5-acre aerial easement along the north edge of the park property. The guideway would be approximately 150 feet high adjacent to the golf course,

and the area underneath the guideway would remain open and the aerial easement would not extend over the playable area. Trees in this area would be removed. Within the same area of the aerial easement, there would also be an underground easement for guideway column foundations, but the columns would be outside of the golf course property, in the right-of-way. However, construction of the Preferred Alternative DEL-1a would result in the temporary occupancy of approximately 1 acre of the north end of the golf course property, impacting up to three greens (holes 13, 14 and 16) and the cart path in the golf course. The affected greens would be modified, and the cart path re-routed to avoid the construction area. Although nearby play may be impacted during some construction activities involving large cranes (such as girder placement), these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times. The area temporarily occupied would be fully restored after construction. Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction. With the course modification to avoid impacts during construction, the course would be playable similar to how it is played today; the adverse effect to the golf course would be mitigated prior to construction. The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases, so the duration of the temporary occupancy of West Seattle Golf Course (up to 3 years) would be less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: Although a portion of the golf course would be modified to keep two greens playable during construction, it would continue to be used in the same manner it is currently (for playing golf); as such, the existing features and attributes that qualify the golf course for protection under Section 4(f) would be minimally impacted by project actions.

3. **Criterion:** *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.*

Finding: None of the activities, features, or attributes of the West Seattle Golf Course would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the golf course as they currently do. The impacted greens would be modified, and the cart path re-aligned prior to construction to ensure that the course remains playable. Although there would be periodic temporary interruptions to nearby play during some construction activities involving large cranes, these construction activities would have short time durations (less than an hour) and only play on nearby holes would be restricted during those times. This would not result in temporary interference because the golf course itself would remain open and the activity of golf would remain available to visitors at other areas of the course.

4. **Criterion:** *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).*

Finding: The approximate 1 acre of vegetated land disturbed during temporary occupancy would be restored to existing conditions or better after construction.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

There would be visual impacts associated with the installation of an elevated guideway adjacent to the golf course, which has views of Downtown Seattle, Elliott Bay, and Mount Rainier from various locations. While these views are a feature of the golf course, the golf course as a park/recreation Section 4(f) resource is primarily valued for providing an opportunity for the general public to actively recreate by playing golf and the golf course does not derive its primary purpose or significance from the quality of its views. It is the active recreational element from which the golf course derives its significance as a recreational resource and its subsequent protection under Section 4(f); an impact to views from some parts of the golf course would not substantially impair this recreational element. As such, there would be no adverse effect on the activities, features, or attributes that qualify the golf course for protection under Section 4(f).

Conclusion. Based on the above discussion, Preferred Alternative DEL-1a would not adversely affect the recreational activities, features, or attributes of the West Seattle Golf Course either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

*Option DEL-1b and Option DEL-2b**

There would be no permanent incorporation of land at the West Seattle Golf Course with these options. These options would require a less than 0.1-acre aerial easement for guideway overhang, and the columns and foundations would be outside of the golf course property, in the right-of-way. However, Option DEL-1b and Option DEL-2b* would temporarily occupy a small portion of land (up to 0.2 acre) on the north side of the golf course for up to 3 years during construction. This would require temporarily re-aligning a cart path for about 2 years for a short distance along the north end of the golf course where it parallels Southwest Genesee Street in order to retain its functionality. Sound Transit would coordinate with Seattle Parks and Recreation to re-align the cart path prior to construction. The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases, so the duration of the temporary occupancy of West Seattle Golf Course (up to 3 years) would be less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: The portion of the West Seattle Golf Course that would be temporarily occupied contains trees, grass, and a golf cart path. The cart path would be temporarily re-aligned for a short distance so that golfers can use it during project construction; the recreational features and amenities of the golf course would not be impacted. Therefore, the magnitude of the changes to the golf course property is minimal.

3. **Criterion:** *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.*

Finding: None of the activities, features, or attributes of the West Seattle Golf Course would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the golf course as they currently do. The impacted cart path would be re-aligned before construction begins to maintain its use by visitors. There would be no temporary or permanent noise, visual, or access impacts that interfere with the protected activities, features, or attributes of the property.

4. **Criterion:** *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).*

Finding: The up to 0.2 acre of vegetated land disturbed during temporary occupancy would be restored to existing conditions or better after construction.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

Conclusion. Based on the above discussion, neither Option DEL-1b nor Option DEL-2b* would adversely affect the recreational activities, features, or attributes of the West Seattle Golf Course either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

*Alternative DEL-2a**

This alternative would permanently incorporate approximately 1.4 acres of the West Seattle Golf Course because it would transition from an elevated guideway to a tunnel at the northwest corner of the property. Approximately 1 percent of the total area of the golf course would be permanently impacted. This alternative would remove some playable area along the northern property boundary and permanently impact five holes of the golf course (holes 13, 14, 15, 17, and 18). To mitigate for this permanent incorporation, the golf course could be modified to retain full functionality. However, the modified holes would need to have a minimum yardage; mitigation could include shortening a hole or reconfiguring part of the golf course. Protective fencing would need to be installed for this alternative between the course and the guideway to prevent golf balls from falling on the guideway or striking a train. After mitigation, there would still be an adverse effect on the features, attributes, or activities that qualify the golf course for protection under Section 4(f). As such, Preferred Alternative DEL-2a* would result in a use of the West Seattle Golf Course. In addition to the permanent incorporation impacts, Preferred Alternative DEL-2a* would also temporarily occupy an additional 1.2 acres of the golf course for construction, and would impact the same playable area as impacted by the permanent incorporation.

Conclusion. Preferred Alternative DEL-2a* would incorporate land from the West Seattle Golf Course and permanently adversely affect the features, attributes, or activities of the golf course. As such, impacts to the West Seattle Golf Course under Preferred Alternative DEL-2a* are proposed to be a use under Section 4(f).

Alternative DEL-3

There would be no permanent incorporation of land at the West Seattle Golf Course with this alternative. Alternative DEL-3 would require a 0.6-acre aerial easement along the north edge of the park property. The guideway would be approximately 140 feet along the golf course, and the area underneath the guideway would remain open and the aerial easement would not extend over the playable area. Trees in this area would be removed. Within the same area of the aerial easement, there would also be an underground easement for guideway column foundations, but the columns would be outside of park property in the right-of-way. However, construction of Alternative DEL-3 would result in the temporary occupancy of about 1.2 acre of the north end of the golf course property, impacting up to three greens (holes 13, 14 and 16) and the cart path in the golf course. The impacted greens would be modified, and the cart path re-routed to avoid the construction area. Although nearby play could be impacted during some construction activities involving large cranes (such as girder placement), these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times. The area temporarily occupied would be restored after construction. Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction. With the course modification to avoid impacts during construction, the course would be playable similar to how it is played today; the adverse effect to the golf course would be mitigated prior to construction.

The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: Although the overall duration of the West Seattle Link Extension construction would be approximately 5 years, the project would be constructed in phases, so the duration of the temporary occupancy of West Seattle Golf Course (up to 3 years) would be less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: Although a portion of the golf course would be modified to keep two greens playable during construction, it would continue to be used in the same manner as it is currently (for playing golf); as such, the existing features and attributes that qualify the golf course for protection under Section 4(f) would be minimally impacted by project actions.

3. **Criterion:** *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.*

Finding: None of the activities, features, or attributes of the West Seattle Golf Course would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the golf course as they currently do. The impacted greens would be modified, and the cart path re-aligned prior to construction to ensure that the course remains playable. Although there would be periodic temporary interruptions to nearby play during some construction activities involving large cranes, these construction activities would have short time durations (less than an hour) and only play on nearby holes would be restricted during those times. This would not result in temporary interference because the golf course itself would remain open and the activity of golf would remain available to visitors at other areas of the course.

4. **Criterion:** *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).*

Finding: The approximate 1.2 acre of vegetated land disturbed during temporary occupancy would be restored to existing conditions or better after construction.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit are requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

There would be visual impacts associated with the installation of an elevated guideway adjacent to the golf course, which has views of Downtown Seattle, Elliott Bay, and Mount Rainier from various locations. While these views are a feature of the golf course, the golf course is primarily valued for providing an opportunity for the general public to actively recreate by playing golf and is the attribute from which the golf course derives its significance as a recreational resource and its subsequent protection under Section 4. The golf course does not derive its primary purpose or significance from the quality of its views. An impact to views from some parts of the golf course would not substantially impair the active recreational element. As such, there would be no adverse effect on the activities, features, or attributes that qualify the golf course for protection under Section 4(f).

Conclusion. Based on the above discussion, Alternative DEL-3 would not adversely affect the recreational activities, features, or attributes of the West Seattle Golf Course either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

*Alternative DEL-4**

Alternative DEL-4* would permanently incorporate approximately 1.4 acres of the golf course because it would transition from an elevated guideway to a tunnel at the northwest corner of the golf course property. Approximately 1 percent of the total area of the golf course would be permanently impacted. This alternative would remove some playable area along the northern property boundary and impact five holes of the golf course (holes 13, 14, 15, 17, and 18). To mitigate for this permanent incorporation, the golf course could be modified to retain full functionality. However, the modified holes would need to have a minimum yardage; mitigation could include shortening a hole or reconfiguring part of the golf course. Protective fencing would need to be installed for this alternative between the course and the guideway to prevent golf balls from falling on the guideway or striking a train. After mitigation, there would still be an adverse effect on the features, attributes, or activities that qualify the golf course for protection under Section 4(f). As such, Alternative DEL-4* would result in a use of the West Seattle Golf Course. In addition to the permanent incorporation of land impacts, this alternative would also temporarily occupy an additional 1.2 acres of the golf course for construction and would impact the same playable area as impacted by the permanent incorporation.

Conclusion. Alternative DEL-4* would incorporate land from the West Seattle Golf Course and permanently adversely affect the features, attributes, or activities of the golf course. As such, impacts to the West Seattle Golf Course under this alternative are proposed to be a use under Section 4(f).

3.2.3.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any Delridge Segment alternatives:

- Residence, 4017 23rd Avenue Southwest
- Residence, 4044 32nd Avenue Southwest
- Cettolin House

Section 4(f) historic resources that would be impacted by at least one Delridge Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources.

West Seattle Golf Course

Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Option DEL-2b*, and Alternative DEL-3

Preferred Alternative DEL-1a, Option DEL-1b, Option DEL-2b*, and Alternative DEL-3 would not permanently incorporate land from the West Seattle Golf Course resource.

Although land would not be permanently incorporated, these alternatives would cause an adverse effect under Section 106 as a result of the introduction of a new elevated guideway adjacent to the golf course, which is an historic resource. This resource is historic because it is a public works project representative of 1930s public works projects and it represents the work of a master golf course architect. People using the West Seattle Golf Course would experience visual impacts from the new elevated guideway; however, the golf course's visual setting is not what qualifies it for Section 4(f) protection. Rather, the golf course qualifies for protection under Section 4(f) because it is a historic public works project designed by a master golf course architect. As such, the project's visual impact would **not** result in a substantial impairment of the protected activities, features, or attributes of the West Seattle Golf Course. The Section 4(f) Policy Paper provides further guidance in this matter: "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."

Conclusion. Based on the above discussion, there would be no use of the West Seattle Golf Course historic resource under Section 4(f) for Preferred Alternative DEL-1a, Option DEL-1b, Option DEL-2b*, or Alternative DEL-3.

Alternative DEL-2a* and Alternative DEL-4*

Preferred Alternative DEL-2a*, and Alternative DEL-4* would permanently incorporate land from this historic resource and would cause an adverse effect under Section 106.

Conclusion. Because land would be permanently incorporated from this historic resource and there would be an adverse effect under Section 106, Preferred Alternative DEL-2a* and Alternative DEL-4* would each result in a use of the West Seattle Golf Course historic resource under Section 4(f).

Bethlehem Pacific Coast Steel Company Office Building

Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Alternative DEL-2a, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4**

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Bethlehem Pacific Coast Steel Company Office Building would constitute a use under Section 4(f).

Residence, 4030 Delridge Way Southwest

Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Alternative DEL-2a, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4**

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4030 Delridge Way historic resource would constitute a use under Section 4(f).

Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4* would not impact this resource.

*Alternative DEL-5 and Alternative DEL-6**

Alternative DEL-5 and Alternative DEL-6* would both permanently incorporate land from this historic resource. However, both alternatives were found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative DEL-5 and Alternative DEL-6* would **not** result in an adverse effect under Section 106. As such, impacts to the Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation historic resource under both Alternative DEL-5 and Alternative DEL-6* are proposed to be *de minimis* under Section 4(f).

Mrachke & Son

Alternative DEL-5 and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Alternative DEL-2a, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4**

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Mrachke & Son historic resource would constitute a use under Section 4(f).

Single-Family Craftsman Residence, 4108 25th Avenue Southwest

Alternative DEL-3, Alternative DEL-4*, Alternative DEL-5, and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Alternative DEL-2a*, and Option DEL-2b*

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, and Option DEL-2b* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4108 25th Avenue Southwest historic resource would constitute a use under Section 4(f).

Single-Family Craftsman Residence, 4139 25th Avenue Southwest

Alternative DEL-3, Alternative DEL-4*, Alternative DEL-5, and Alternative DEL-6* would not impact this resource.

Alternative DEL-1a, Option DEL-1b, Alternative DEL-2a*, and Option DEL-2b*

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, and Option DEL-2b* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4139 25th Avenue Southwest historic resource would constitute a use under Section 4(f).

Contemporary Ranch House, 4150 32nd Avenue Southwest

Preferred Alternative DEL-1a, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, Alternative DEL-4*, and Alternative DEL-6* would not impact this resource.

Option DEL-1b and Alternative DEL-5

Option DEL-1b and Alternative DEL-5 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4150 32nd Avenue Southwest historic resource would constitute a use under Section 4(f).

Kirlow Four-Plex

Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, Alternative DEL-4*, and Alternative DEL-6* would not impact this resource.

Alternative DEL-5

Alternative DEL-5 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Kirlow Four-Plex historic resource would constitute a use under Section 4(f).

3.2.4 West Seattle Junction Segment

Some project alternatives in the West Seattle Junction Segment would require tunnel easements under Section 4(f) resources. All the Section 4(f) park resources located above a

proposed tunnel would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site. No historic properties were identified that would be substantially impaired by a tunnel underneath; therefore, those properties are not discussed further.

3.2.4.1 Parks and Recreational Resources

The West Seattle Stadium and West Seattle Junction Park would not be impacted by any West Seattle Junction Segment alternatives.

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Alternative WSJ-4*, and Alternative WSJ-5* would not impact any Section 4(f) parks and recreational resources. The impact to Junction Plaza Park from Preferred Option WSJ-3b* is discussed below.

Junction Plaza Park

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Alternative WSJ-4*, and Alternative WSJ-5* would not impact this resource.

Option WSJ-3b*

Preferred Option WSJ-3b* would permanently acquire the entire park for a station entrance; this would result in a use of Junction Plaza Park.

Conclusion. Preferred Option WSJ-3b* would permanently acquire the entire Junction Plaza Park, which would result in a use under Section 4(f).

3.2.4.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any West Seattle Junction Segment alternatives:

- Residence, 4407 38th Avenue Southwest
- Campbell Building
- Wardrobe Cleaners
- Craftsman Bungalow, 4015 Southwest Hudson Street
- Single-Family Residence, 4157 38th Avenue Southwest
- Bartell Drugs
- Residence, 4446 40th Avenue Southwest
- West Seattle Bowl
- Venable and Wing Law Office
- Residence, 4115 Southwest Hudson
- J.C. Penney/Russell Building
- Marier Foto Studio
- Single-Family Residence, 4714 38th Avenue Southwest
- Single-Family Residence, 4755 38th Avenue Southwest
- Apartment Complex (two buildings), 4821 Fauntleroy Way Southwest
- Alaska House

Section 4(f) historic resources that would be impacted by at least one West Seattle Junction Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report.

Limcrest Apartments

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a* (when connecting to Preferred Alternative DEL-2a*), Preferred Option WSJ-3b* (when connecting to Preferred Alternative DEL-2a*), Alternative WSJ-4*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-3a* and Option WSJ-3b* (when connecting to Option DEL-2b*)

Preferred Alternative WSJ-3a* and Preferred Option WSJ-3b* would result in the demolition of this historic building, which would cause an adverse effect under Section 106. Preferred Option WSJ-3b* would have this impact only when connecting to Option DEL-2b* (Figure 3-5).

Conclusion. The adverse effect under Section 106 to the Limcrest Apartments historic resource would constitute a use under Section 4(f).

Single-Family Residence, 4406 37th Avenue Southwest

Preferred Alternative WSJ-1 would not impact this resource.

Alternative WSJ-2, Alternative WSJ-3a*, Option WSJ-3b*, Alternative WSJ-4*, and Alternative WSJ-5*

These alternatives would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4406 37th Avenue Southwest historic resource would constitute a use under Section 4(f).

Carlsen & Winquist Auto

Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, Alternative WSJ-4*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-1

This alternative would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Carlsen & Winquist Auto historic resource would constitute a use under Section 4(f).

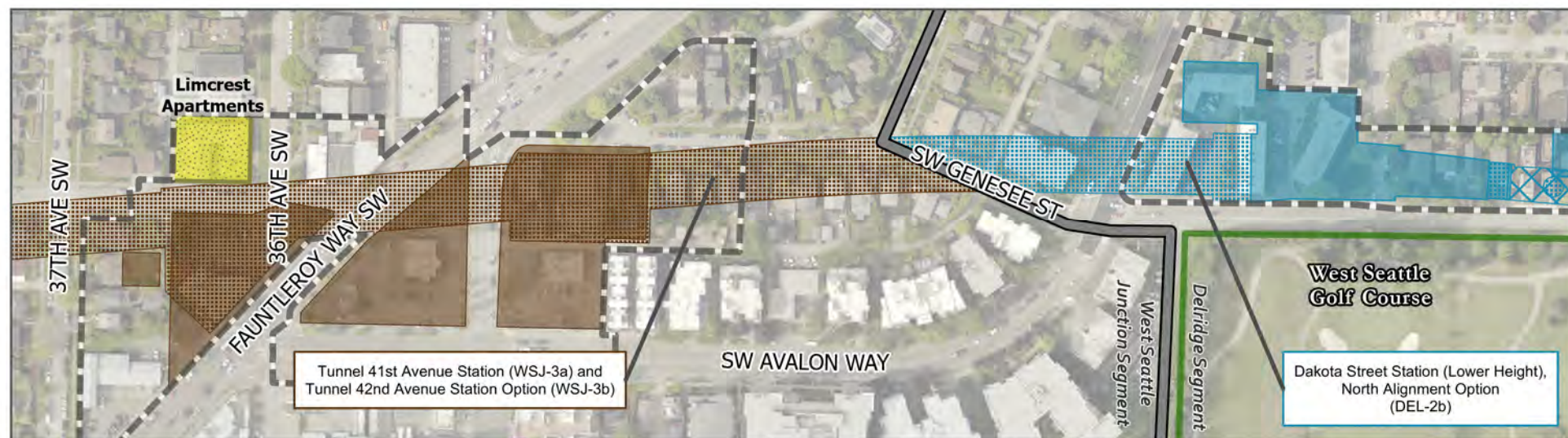
West Seattle Brake Service

Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, Alternative WSJ-4*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-1

This alternative would permanently incorporate land from this historic resource; however, it was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative WSJ-1 would **not** result in an adverse effect under Section 106. As such, impacts to the West Seattle Brake Service historic resource under Preferred Alternative WSJ-1 are proposed to be *de minimis* under Section 4(f).



Source: City of Seattle, King County (2019, 2020), EagleView Technologies, Inc.(2019).

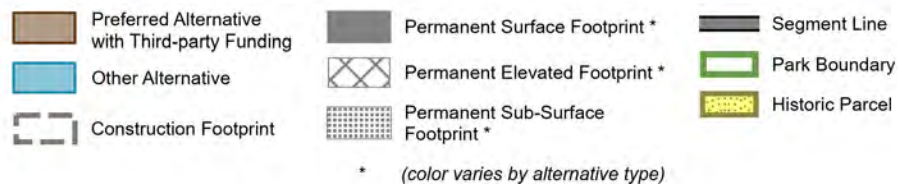
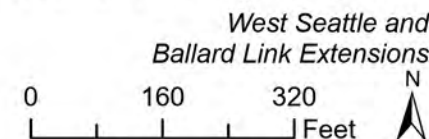


FIGURE 3-5
Limcrest Apartments Historic Property Impact
WSJ-3a and WSJ-3b connection to DEL-2a
WSJ-3a and WSJ-3b connection to DEL-2b
 West Seattle Link Extension -
 West Seattle Junction and Delridge Segments



Contemporary Ranch House, 3221 Southwest Genesee Street

Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-5* would not impact this resource.

*Alternative WSJ-1, Alternative WSJ-2, and Alternative WSJ-4**

These alternatives would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 3221 Southwest Genesee Street historic resource would constitute a use under Section 4(f).

Golden Tee Apartments (3201 Avalon Way Southwest)

Preferred Alternative WSJ-1 (when connecting to Option DEL-1b or Alternative DEL-5), Preferred Alternative WSJ-2 (when connecting to Option DEL-1b or Alternative DEL-5), Preferred Alternative WSJ-3a* (when connecting to Option DEL-2b*), Preferred Option WSJ-3b* (when connecting to Option DEL-2b*), Alternative WSJ-4* (when connecting to Option DEL-1b or Alternative DEL-5), and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-1 (when connecting to Alternative DEL-1a or Alternative DEL-3), Alternative WSJ-2 (when connecting to Alternative DEL-1a or Alternative DEL-3), Alternative WSJ-3a (when connecting to Alternative DEL-2a*), Option WSJ-3b* (when connecting to Alternative DEL-2a*), and Alternative WSJ-4* (when connecting to Alternative DEL-1a or Alternative DEL-3)*

These alternatives would result in the demolition of this historic building, which would cause an adverse effect under Section 106. This impact would occur only when these West Seattle Junction Segment alternatives connect to the Delridge Segment alternative(s) identified in parentheses above (Figure 3-6).

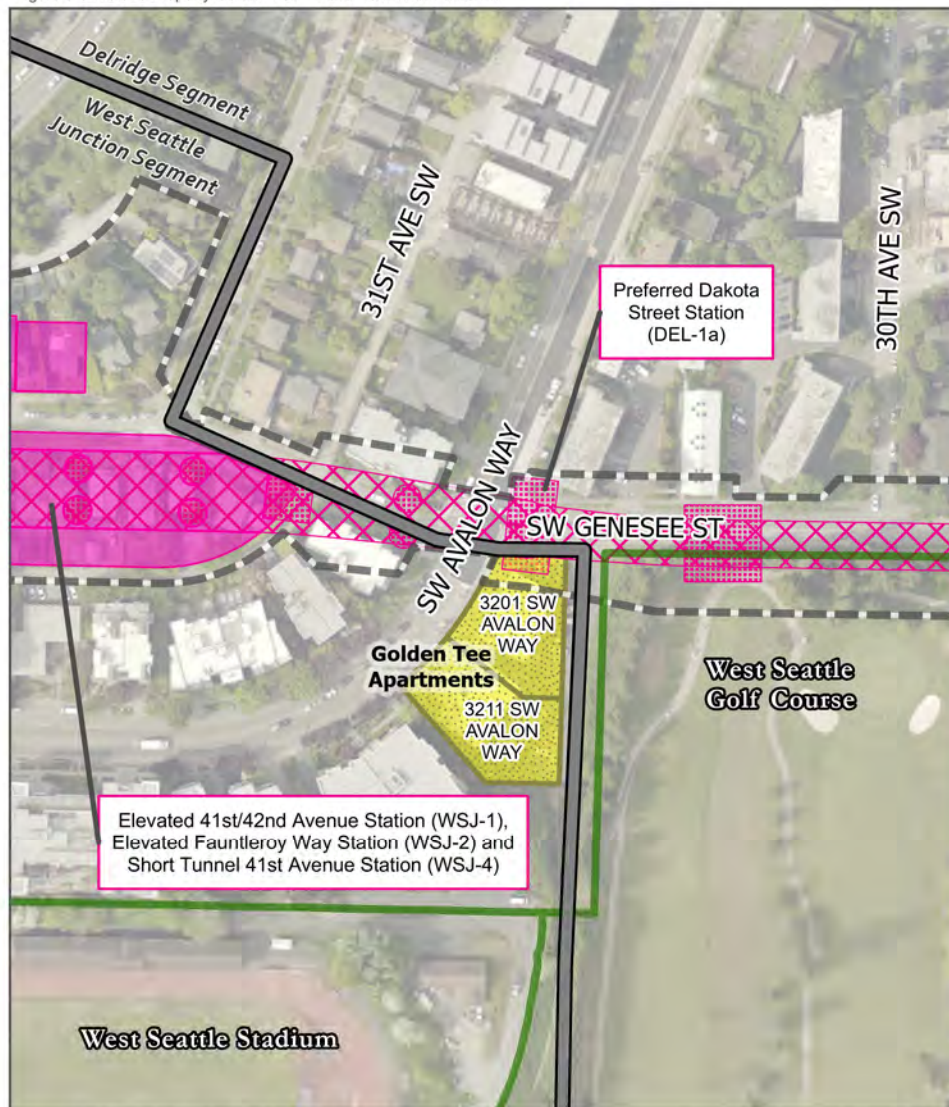
Conclusion. The adverse effect under Section 106 to the Golden Tee Apartments, 3201 Southwest Genesee Street, would constitute a use under Section 4(f).

Golden Tee Apartments, 3211 Southwest Avalon Way

Alternative WSJ-5* would not impact this resource.

Alternative WSJ-1, Alternative WSJ-2, Alternative WSJ-3a, Option WSJ-3b*, and Alternative WSJ-4**

These alternatives would not permanently incorporate land from the Golden Tee Apartments (3211 Southwest Avalon Way) historic resource; however, a preliminary finding of adverse effect under Section 106 has been made for these alternatives with respect to this historic resource. The Section 106 finding of adverse effect for this historic resource is associated with the demolition of its twin building next door at 3201 Southwest Avalon Way. The two buildings were built as one overall complex, and removal of one of the buildings (3201 Avalon Way Southwest) would result in a diminishment of integrity of design, feeling, and setting of the other (3211 Southwest Avalon Way). However, the remaining building at 3211 Southwest Avalon Way would continue to function as it presently does after the building at 3201 Avalon Way was demolished. This would not result in a constructive use under Section 4(f) because the main reason for the resource's National Register's eligibility is not its setting but its architectural style, which would not be impacted. Therefore, the setting and feeling are not substantially contributing to the historic value of the resource and it would retain its National Register eligibility. The diminishment of setting and feeling would not result in a substantial impairment of this resource under Section 4(f).



Source: City of Seattle, King County (2019, 2020), EagleView Technologies, Inc. (2019).

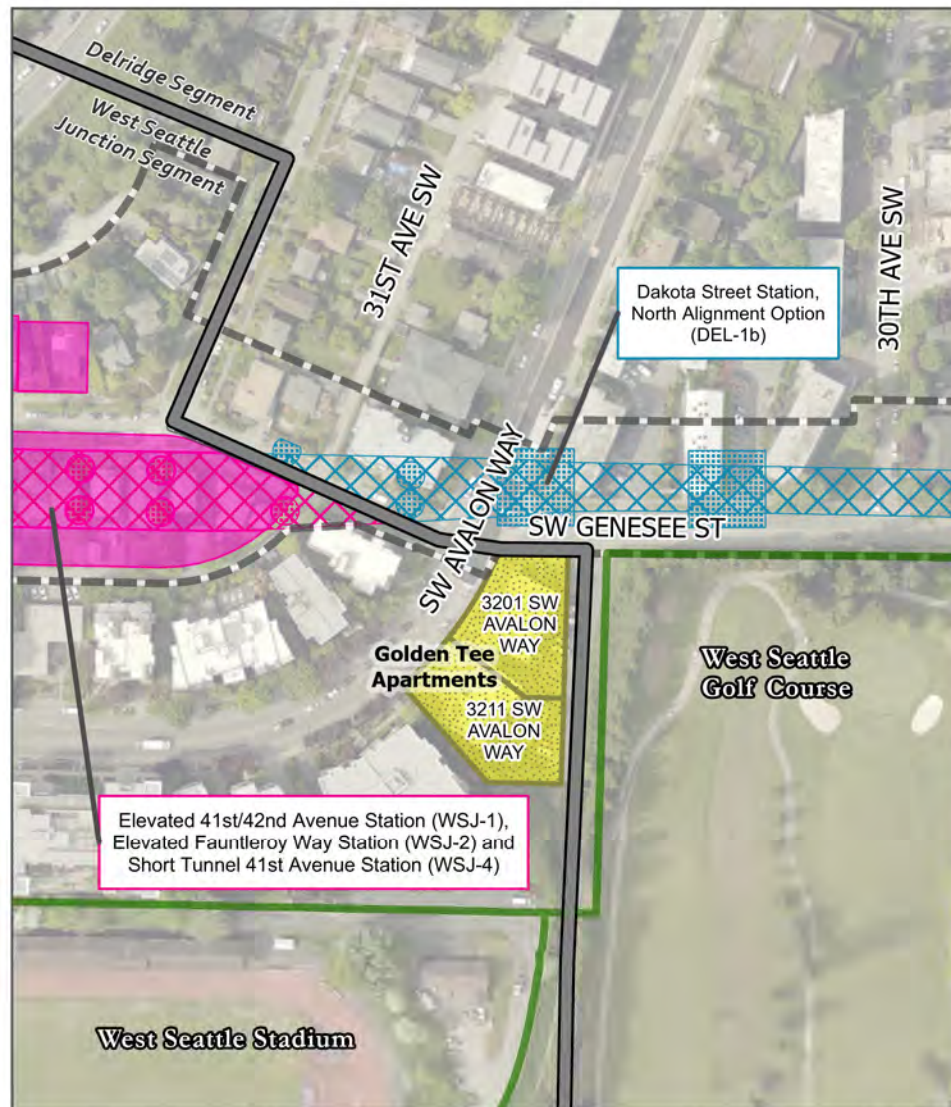
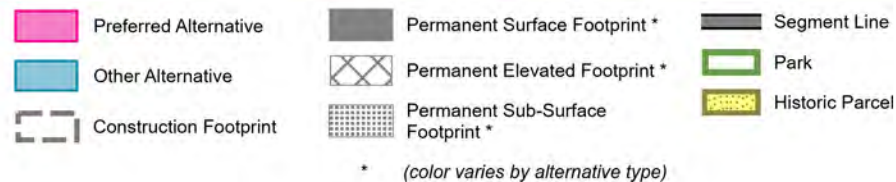
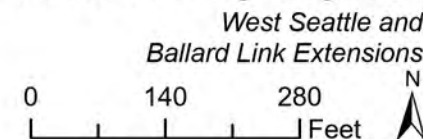


FIGURE 3-6
Golden Tee Apartments Historic Property Impact
WSJ-1, WSJ-2 and WSJ-4 connection to DEL-1a
WSJ-1, WSJ-2 and WSJ-4 connection to DEL-1b
 West Seattle Link Extension -
 West Seattle Junction and Delridge Segments



Conclusion. Although there would be an adverse effect under Section 106 related to proximity impacts, these proximity impacts would not result in a constructive use under Section 4(f) because they would not result in substantial impairment of the resource. As such, there would not be a Section 4(f) use of the Golden Tee Apartments, 3211 Southwest Avalon Way, historic resource.

Chinook Apartments

Preferred Alternative WSJ-1, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-2 and Alternative WSJ-4*

Preferred Alternative WSJ-2 and Alternative WSJ-4* would each result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Chinook Apartments historic resource would constitute a use under Section 4(f).

Residence, 5011 41st Avenue Southwest

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-4*

Alternative WSJ-4* would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 5011 41st Avenue Southwest historic resource would constitute a use under Section 4(f).

Residence, 4426 38th Avenue Southwest

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-4*

Alternative WSJ-4* would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 4426 38th Avenue Southwest historic resource would constitute a use under Section 4(f).

Jim's Shell Service

Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-5* would not impact this resource.

Alternative WSJ-1, Alternative WSJ-2, and Alternative WSJ-4*

Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, and Alternative WSJ-4* would all result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Jim's Shell Service historic resource would constitute a use under Section 4(f).

3.3 Summary of Preliminary Use Determinations

3.3.1 SODO Segment

There would be no Section 4(f) uses from any SODO Segment alternatives.

3.3.2 Duwamish Segment

Table 3-8 provides a summary of the preliminary Section 4(f) use determinations for the Duwamish Segment alternatives.

3.3.3 Delridge Segment

Table 3-9 provides a summary of the preliminary Section 4(f) uses for the Delridge Segment alternatives.

3.3.4 West Seattle Junction Segment

Table 3-10 provides a summary of the preliminary Section 4(f) uses for the West Seattle Junction Segment alternatives.

3.4 Avoidance Alternatives

In accordance with Code of Federal Regulations Title 23 Section 774.3, this section examines (for each segment) whether there is a feasible and prudent avoidance alternative, as defined in Code of Federal Regulations Title 23 Section 774.17 (and excerpted below), to the use of a Section 4(f) resource.

Feasible and prudent avoidance alternative.

(1) A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.

(2) An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

Table 3-8. Summary of Preliminary Section 4(f) Use Determinations by Alternative for the Duwamish Segment

Resource	Preferred South Crossing Alternative (DUW-1a)	South Crossing South Edge Crossing Alignment Option (DUW-1b)	North Crossing Alternative (DUW-2)
West Duwamish Greenbelt	<i>de minimis</i>	<i>de minimis</i>	No use
Viking Auto Sprinkler Company	No use	No use	Use
Ehrlich-Harrison Co. Industrial Buildings	No use	No use	<i>de minimis</i>
Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District	Use	Use	No use
Fire Station 14	No use	No use	<i>de minimis</i>
Pacific Hoist and Warehouse Company	No use	No use	<i>de minimis</i>
Langendorf United Bakeries	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
Langendorf United Bakeries Repair Garage	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
A.M. Castle and Company	No use	Use	No use
Alaskan Copper Co. Employment Office	Use	Use	Use
Auto Repair Garage	Use	Use	No use
Department of Highway District No. 1 Headquarters/Maintenance Facility – Office/Administrative Building	No use	No use	Use
Department of Highway District No. 1 Headquarters/Maintenance Facility – Maintenance Building	No use	No use	Use
Department of Highway District No. 1 Headquarters/Maintenance Facility – Storage Building	No use	No use	Use
Department of Highway District No. 1 Headquarters/Maintenance Facility – Car/Paint Building	No use	No use	Use
Department of Highway District No. 1 Headquarters/Maintenance Facility – Maintenance/Garage Building	No use	No use	Use
Spokane Street Manufacturing Historic District	Use	Use	No use
Truck Storage Battery Charging Building	Use	Use	No use
Acme Tool Works	Use	Use	No use
Cold Storage Plant/Rainier Market Center	No use	Use	No use
Transportation Equipment Rentals Office Building	No use	No use	Use
Transportation Equipment Rentals Maintenance Warehouse	No use	No use	Use
Fire Station 36	Use ^a	Use ^a	No use

^a Use would potentially occur when connecting to Alternative DEL-3 or Alternative DEL-4* in the Delridge Segment.

Table 3-9. Summary of Preliminary Section 4(f) Use Determinations by Alternative for the Delridge Segment

Resource	Preferred Dakota Street Station Alternative (DEL-1a)	Dakota Street Station North Alignment Option (DEL-1b)	Preferred Dakota Street Station Lower Height Alternative (DEL-2a)*	Dakota Street Station Lower Height North Alignment Option (DEL-2b)*	Delridge Way Station Alternative (DEL-3)	Delridge Way Station Lower Height Alternative (DEL-4)*	Andover Street Station Alternative (DEL-5)	Andover Street Station Lower Height Alternative (DEL-6)*
Delridge Playfield	No use	No use	No use	No use	<i>de minimis</i>	No use: Temporary Occupancy	No use	No use
Longfellow Creek Natural Area	No use: Temporary Occupancy	<i>de minimis</i>	No use	<i>de minimis</i>	No use	No use	No use	No use
Longfellow Creek Legacy Trail	No use: Temporary Occupancy	<i>de minimis</i>	No use	<i>de minimis</i>	No use	No use	No use	No use
West Seattle Golf Course (park)	No use: Temporary Occupancy	No use: Temporary Occupancy	Use	No use: Temporary Occupancy	No use: Temporary Occupancy	Use	No use	No use
West Seattle Golf Course (historic property)	No use	No use	Use	No use	No use	Use	No use	No use
Bethlehem Pacific Coast Steel Company Office Building	Use	Use	Use	Use	Use	Use	No use	No use
Residence, 4030 Delridge Way Southwest	Use	Use	Use	Use	Use	Use	No use	No use
Seattle Steel Company/Bethlehem Pacific Coast Steel Corporation	No use	No use	No use	No use	No use	No use	<i>de minimis</i>	<i>de minimis</i>
Mrachke & Son	Use	Use	Use	Use	Use	Use	No use	No use

Resource	Preferred Dakota Street Station Alternative (DEL-1a)	Dakota Street Station North Alignment Option (DEL-1b)	Preferred Dakota Street Station Lower Height Alternative (DEL-2a)*	Dakota Street Station Lower Height North Alignment Option (DEL-2b)*	Delridge Way Station Alternative (DEL-3)	Delridge Way Station Lower Height Alternative (DEL-4)*	Andover Street Station Alternative (DEL-5)	Andover Street Station Lower Height Alternative (DEL-6)*
Single-family Craftsman Residence, 4108 25th Avenue Southwest	Use	Use	Use	Use	No use	No use	No use	No use
Single-family Craftsman Residence, 4139 25th Avenue Southwest	Use	Use	Use	Use	No use	No use	No use	No use
Contemporary Ranch House, 4150 32nd Avenue Southwest	No use	Use	No use	No use	No use	No use	Use	No use
Kirlow Four-Plex	No use	No use	No use	No use	No use	No use	Use	No use

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

Table 3-10. Summary of Preliminary Section 4(f) Use Determinations by Alternative for the West Seattle Junction Segment

Resource	Preferred Elevated 41st/42nd Avenue Station Alternative (WSJ-1)	Preferred Elevated Fauntleroy Way Station Alternative (WSJ-2)	Preferred Tunnel 41st Avenue Station Alternative (WSJ-3a)*	Preferred Tunnel 42nd Avenue Station Option (WSJ-3b)*	Short Tunnel 41st Avenue Station Alternative (WSJ-4)*	Medium Tunnel 41st Avenue Station Alternative (WSJ-5)*
Junction Plaza Park	No use	No use	No use	Use	No use	No use
Limcrest Apartments	No use	No use	Use ^a	Use ^a	No use	No use
Single-family Residence, 4406 37th Avenue Southwest	No use	Use	Use	Use	Use	Use
Carlsen & Winquist Auto	Use	No use	No use	No use	No use	No use
West Seattle Brake Service	<i>de minimis</i>	No use	No use	No use	No use	No use
Contemporary Ranch House, 3221 Southwest Genesee Street	Use	Use	No use	No use	Use	No use
Golden Tee Apartments (3201 Avalon Way Southwest)	Use ^b	Use ^b	Use ^c	Use ^c	Use ^b	No use
Golden Tee Apartments (3211 Avalon Way Southwest)	No use	No use	No use	No use	No use	No use
Chinook Apartments	No use	Use	No use	No use	Use	No use
Residence, 5011 41st Avenue Southwest	No use	No use	No use	No use	Use	No use
Residence, 4426 38th Avenue Southwest	No use	No use	No use	No use	Use	No use
Jim's Shell Service	Use	Use	No use	No use	Use	No use

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

^a Use would only occur when connecting to Option DEL-2b*. No use would occur with other connectors.

^b Use would only occur when connecting to Preferred Alternative DEL-1a or Alternative DEL-3 in the Delridge Segment. No use would occur with other connectors.

^c Use would only occur when connecting to Preferred Alternative DEL-2a*. No use would occur with other connectors.

(3) An alternative is not prudent if:

(i) it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

(ii) it results in unacceptable safety or operational problems;

(iii) after reasonable mitigation, it still causes:

(A) Severe social, economic, or environmental impacts;

(B) Severe disruption to established communities;

(C) Severe disproportionate impacts to minority or low-income populations; or

(D) Severe impacts to environmental resources protected under other Federal statutes;

(iv) it results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

(v) it causes other unique problems or unusual factors; or

(vi) it involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

The *Section 4(f) Policy Paper* (United States Department of Transportation 2012) states that, along with the No Build Alternative, potential alternatives to avoid the individual use of Section 4(f) property must be considered and may include one or more of the following avoidance categories:

- **Location Alternatives.** A location alternative refers to rerouting the entire project along a different alignment.
- **Alternative Actions.** An alternative action could be a different mode of transportation, such as rail transit or bus service, or some other action that does not involve construction such as the implementation of transportation management systems or similar measures.
- **Alignment Shifts.** An alignment shift is rerouting a portion of the project to a different alignment to avoid a specific resource. An example of an alignment shift alternative would be redesigning a proposed freeway exit ramp so that it loops around a Section 4(f) resource (such as a park) on a revised alignment footprint rather than intersecting with the park itself as a way of attempting to avoid a Section 4(f) use of the park.
- **Design Changes.** A design change is a modification of the proposed design in a manner that would avoid impacts, such as reducing the planned median width, building a retaining wall, or incorporating design exceptions. To differentiate from the alignment shift alternative while using the previous freeway exit ramp example, a design change alternative would stay in the same proposed exit ramp footprint but would fly over the park (via an elevated structure) as a way of attempting to avoid a Section 4(f) use of the park.

For each segment, a discussion of avoidance alternatives is provided when all the project alternatives in that segment would result in the individual use of a Section 4(f) resource. The discussion of avoidance alternatives for each segment is organized in the same order as the four avoidance categories above, with the discussion becoming more specific in each subsequent category. For example, location alternatives that would avoid many resources at once are discussed first, followed by alternative actions that consider other modes. Next is

alignment shifts to avoid single resources or clusters of resources, and last is design changes to avoid or reduce impacts on a specific resource.

As described in Chapter 1, Purpose and Need, in the Draft Environmental Impact Statement, and in Section 2.1 of this appendix, the project corridor, including mode and markets served, was defined during the Sound Transit 3 planning process, and the project as defined in the Sound Transit 3 Plan was incorporated into Puget Sound Regional Council's 2018 Regional Transportation Plan (Puget Sound Regional Council 2018b). Funding to serve these corridors and markets was approved by voters in 2016. Chapter 2, Alternatives Considered, and Appendix M, Summary of Alternatives Development, in the Draft Environmental Impact Statement describe the Alternatives Development and screening process for the WSBLE Project, including the alternatives that were considered but not carried forward into the Draft Environmental Impact Statement. The project alternatives discussed in the Draft Environmental Impact Statement represent Sound Transit's best attempt to balance the purpose and need of the project against potential impacts, while providing a range of alternatives for the public to consider and from which FTA and Sound Transit can choose. Much of the study area is in a highly developed, urban area. There are also many design constraints unique to light rail that must be considered when evaluating avoidance alternatives. These include a maximum grade of 6 percent, a minimum radius of 625 feet for horizontal curves (which means the guideway cannot make sharp turns), and stations must be on a straight section of track that is at least 500 feet long. For elevated guideway, the typical column spacing is 130 feet, with a maximum span of 600 feet for long-span bridges. Column size and type can be impacted by guideway height and the span between columns, with higher guideways and columns farther apart requiring larger columns and underground foundations. Sound Transit has sought to locate the project within existing public transportation right-of-way to reduce impacts to public and private property (including Section 4(f) resources), and to reduce the cost associated with property acquisition.

There is not a full-length project avoidance alternative for the West Seattle Link Extension because all alternatives in the Duwamish and West Seattle Junction segments would impact a Section 4(f) resource. Most alternatives within these segments can connect to more than one alternative in adjacent segments, but may not connect to all alternatives in adjacent segments. A potential avoidance alternative in one segment may not be able to connect to a potential avoidance alternative in the adjacent segment(s), and considering avoidance alternatives only for the full length of the project could limit avoidance alternatives within a specific segment.

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. The following discussion describes how the WSBLE Build Alternatives represent Sound Transit's best attempt at minimizing and avoiding Section 4(f) resources in the densely developed project corridor. Avoidance alternatives are described for individual resources or collections of resources, and the reasons these were not found to be feasible or prudent are provided. The avoidance alternatives are not feasible and prudent generally because they would result in other severe social, economic, or environmental impacts; engineering challenges; and/or costs of extraordinary magnitude. Alternatives that would result in impacts on other Section 4(f) resources (due to the density of these resources in the study area) would not be considered avoidance alternatives.

When considering impacts to historic resources, designers first considered all possible measures to avoid and minimize impacts to the resource. Demolition is only proposed when no options exist to avoid or minimize impacts. As such, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternatives, which states:

after reasonable mitigation, it still causes:

- (A) Severe social, economic, or environmental impacts;*
- (B) Severe disruption to established communities;*
- (C) Severe disproportionate impacts to minority or low-income populations; or*
- (D) Severe impacts to environmental resources protected under other Federal statutes;*

and (3)(vi), which states:

It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude

Avoidance for demolished historic resources is evaluated for location alternatives, alternative actions, and alignment shifts.

3.4.1 SODO Segment

Each of the three SODO Segment alternatives would avoid an individual Section 4(f) Use of any Section 4(f) resources.

3.4.2 Duwamish Segment

Because none of the Build Alternatives in the Duwamish Segment would avoid an individual Section 4(f) use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment.

The following discussion of avoidance alternatives for the Duwamish Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

3.4.2.1 No Build Alternative

The No Build Alternative is required by the National Environmental Policy Act process and includes all existing and committed transportation infrastructure, facilities, and services contained in the region's fiscally constrained and federally approved Regional Transportation Plan (Puget Sound Regional Council 2018b) as well as the Sound Transit 3 Plan (Sound Transit 2016). The No Build Alternative would avoid a use of all Section 4(f) resources.

As per Code of Federal Regulations Title 23 Section 774.17 of the Section 4(f) regulations, an alternative is not feasible if it cannot be built as a matter of sound engineering judgment. FTA has determined that the No Build Alternative would be feasible from an engineering perspective because no construction would be required to implement the alternative.

The No Build Alternative would not adequately support the purpose and need of the project as described in Section 2.3 of this appendix. The No Build Alternative would not improve mobility nor increase transit capacity and connectivity for regional connections, nor achieve any of the project needs listed in Section 2.3. The No Build Alternative would be inconsistent with local and regional comprehensive plans, which include or are consistent with implementation of the WSBLE Project.

Based on the above assessment, the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

3.4.2.2 Location Alternatives

In order to meet the project purpose and need, the project must cross the Duwamish Waterway either to the north or south of the existing West Seattle Bridge in order to serve the markets identified in the Sound Transit 3 Plan. Sound Transit considered other alternatives in this area during the Alternatives Development process, but they were not carried forward into this Draft Environmental Impact Statement. Table 3-11 describes the location alternatives considered and why they are not prudent.

3.4.2.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

3.4.2.4 Alignment Shifts

Alignment shifts were considered to avoid parks and/or historic resources that would have an individual use from one or more alternatives in the Duwamish Segment. Table 3-12 describes the alignment shifts considered and why they are not prudent.

3.4.2.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraph (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 3.5, Measures to Minimize Harm.

Permanent project elements that would result in a use of the West Duwamish Greenbelt include guideway foundations; slope stabilization (retaining walls or cut slopes and anchors); stabilized slope treatment, including low-height vegetation, drainage improvements for surface flow collection and conveyance, and subsurface slope drains; and access roads for construction and maintenance of guideway and slope. Trees that could result in damage to the guideway would also be cleared. To minimize impacts to the West Duwamish Greenbelt with Preferred Alternative DUW-1a and Option DUW-1b, the alignment approaching the greenbelt from the east would be offset from the slope as much as practical to minimize the impacts within the greenbelt while maintaining the minimum required distance from the West Seattle Bridge.

Table 3-11. Duwamish Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • Viking Auto Sprinkler Company • Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District • A.M. Castle and Company • Alaskan Copper Co. Employment Office • Auto Repair Garage • Department of Highway District No. 1 Headquarters/Maintenance Facility: <ul style="list-style-type: none"> ○ Office/Administrative Building ○ Maintenance Building ○ Storage Building ○ Car/Paint Building ○ Maintenance/Garage Building • Spokane Street Manufacturing Historic District • Truck Storage Battery Charging Building • Acme Tool Works • Cold Storage Plant/Rainier Market Center • Transportation Equipment Rentals Office Building • Transportation Equipment Rentals Maintenance Warehouse • Fire Station 36 	<p>There would be an individual use of these resources under Preferred Alternative DUW-1a, Option DUW-1b, or DUW-2.</p> <p>A tunnel for the entire alignment between the SODO Station and the West Seattle Junction Station could avoid most of these historic resources. However, this would likely not avoid an individual use of the Alaskan Copper Co. Employment Office, which would be impacted by the connection to the existing Operations and Maintenance Facility Central as identified for the existing Draft Environmental Impact Statement alternatives. Therefore, it would not be an avoidance alternative. A tunnel was also not considered due to technical feasibility and cost issues, as described below:</p> <ul style="list-style-type: none"> • Technical feasibility issues are primarily related to the impractical tunnel length, which is related to the depth that would have been required under the Duwamish Waterway. In order to meet the operation grade requirements for light rail, the tunnel would need to begin in the SODO Segment to be deep enough to go under the Duwamish Waterway at the necessary depth, and would not be able to exit the ground until the Delridge valley. The location and depth of the tunnel in the SODO area could make connecting to the Sound Transit Operations and Maintenance Facility Central not possible. Connecting to this facility is necessary for maintenance and storage of light rail vehicles. Poor soil conditions in both the SODO and Duwamish segments would require continuous ground improvements along the alignment and require the depth of the tunnel under the Duwamish Waterway to be approximately 300 feet deep to avoid ground improvements in the waterway. These ground improvements would require property acquisition or easements along the length of the tunnel, which could result in greater business displacements. Connecting to the Operations and Maintenance Facility Central would require an even longer tunnel that would require ground improvements on the Union Pacific Rail Argo railyard and Port of Seattle Terminal 106, which would further increase business displacements and could affect regional freight mobility. • The length of the tunnel between the SODO Station and the West Seattle Junction Station would also make the cost for this alternative more than \$2 billion more than the elevated alternatives. It would result in construction costs of extraordinary magnitude greater than the segment alternatives being evaluated in the Draft Environmental Impact Statement and would involve multiple factors that would cumulatively cause unique problems or impacts of extraordinary magnitude. 	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude (paragraph (3)(iv)).</p> <p>It causes other unique problems or unusual factors (paragraph (3)(v)).</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude (paragraph (3)(v)).</p> <p>It causes other unique problems or unusual factors. (paragraph (3)(v)).</p>

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District A.M. Castle and Company Alaskan Copper Co. Employment Office Auto Repair Garage Spokane Street Manufacturing Historic District 	<p>There would be an individual use of these resources under Preferred Alternative DUW-1a and Option DUW-1b.</p> <p>A more southerly alignment that would cross the Duwamish Waterway in the Georgetown vicinity and followed a more gradual slope to reach Alaska Junction and connect areas south of Alaska Junction, was suggested during scoping. Some alignment suggestions included using the approximate corridors of Myers Way South, Southwest Roxbury Way, and 35th Avenue Southwest. Routes to Georgetown were considered in Level 1 but were not carried forward because they would not meet the purpose of the project, which is to provide light rail transit service to communities in the project corridor as defined through the local planning process and reflected in the Sound Transit 3 Plan (Sound Transit 2016; see Chapter 1, Purpose and Need, of the Draft Environmental Impact Statement). Georgetown and the areas south of Alaska Junction listed in these suggested alternatives were not communities identified in the project corridor in Sound Transit 3. This alignment would not have avoided the West Duwamish Greenbelt because the greenbelt extends to this area, but the more southerly alignment would have avoided the identified historic properties.</p>	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>It causes other unique problems or unusual factors (paragraph (3)(v)).</p>

Table 3-12. Duwamish Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
Alaskan Copper Company Employment Office, Auto Repair Garage	<p>There would be an individual use of these resources under Preferred Alternative DUW-1a, Option DUW-1b, and Alternative DUW-2.</p> <p>These resources would be impacted by all Duwamish Segment alternatives by the track that would connect the West Seattle Link Extension to the Sound Transit Operations and Maintenance Facility Central, which is directly east of the Alaskan Copper property that includes both the employment office and auto repair garage buildings. These resources are located on the east side of 6th Avenue South, between South Forest Street and South Horton Street. Due to the size of the Alaskan Copper property and the configuration of the existing Operations and Maintenance Facility Central, avoiding this property would require accessing the Central maintenance facility from either the far north end or far south end, where integrating into the existing trackwork would require reconfiguration of the maintenance facility, which was completed in 2009. Proposed track connection locations to the Operations and Maintenance Facility Central for the West Seattle Link Extension were established in coordination with Sound Transit operations and based on existing track constraints (train turnout locations need to be on flat/tangent track) and the requirement for multiple connection locations. All proposed Duwamish Segment alternatives would connect on the north side of the maintenance facility, connecting to an at-grade circulating track.</p> <p>Locating the mainline connection farther south is not feasible as a matter of sound engineering judgment due to the horizontal curve from the south (from Duwamish Waterway crossing to the SODO Busway) and the space needed for special trackwork elements. Locating the mainline connection farther north is also not feasible due to the track profile transitioning to at-grade at South Lander Street. Also, reconfiguration of the maintenance facility to allow a connection without impacting either building would be cost-prohibitive, especially since the facility is still relatively new. Reconfiguration would also result in substantial disruption to existing operations. For these same reasons, the Auto Repair Garage on the Alaskan Copper property cannot be avoided by Preferred Alternative DUW-1a or Option DUW-1b, which have slightly different connections to the maintenance facility due the different alignment from Alternative DUW-2.</p>	<p>This alignment shift alternative would not be feasible per paragraph (2) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p style="padding-left: 40px;">An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.</p> <p>This alignment shift alternative would also not be prudent under paragraph (3)(iii), which states:</p> <p style="padding-left: 40px;">It results in unacceptable safety or operational problems.</p> <p>or under paragraph (3)(v), which states:</p> <p style="padding-left: 40px;">It causes other unique problems or unusual factors.</p>

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> • Viking Automatic Sprinkler Company • A.M. Castle and Company • Department of Highway District No. 1 Headquarters/Maintenance Facility: <ul style="list-style-type: none"> ○ Office/Administrative Building ○ Maintenance Building ○ Storage Building ○ Car/Paint Building ○ Maintenance/Garage Building • Spokane Street Manufacturing Historic District • Truck Storage Battery Charging Building • Acme Tool Works • Cold Storage Plant/Rainier Market Center 	<p>There would be an individual use of these resources under Preferred Alternative DUW-1a, Option DUW-1b, or Alternative DUW-2.</p> <p>To avoid all of these Section 4(f) resources, an alignment was evaluated that would cross the Duwamish Waterway primarily on the south side of the West Seattle Bridge and then transition to the north side of the bridge after the crossing, on the west side of the waterway. This alignment would have to cross over the West Seattle Bridge three times in order to avoid all of these resources:</p> <p>(1) crossing to the south side of the bridge to avoid the historic resources on the north side of the bridge, which are all east of the Duwamish Waterway,</p> <p>(2) crossing to the north side of the bridge to avoid the West Duwamish Greenbelt, on the west side of the Duwamish Waterway, and</p> <p>(3) crossing back to the south side to reach the Delridge Station.</p> <p>Crossing over the West Seattle Bridge multiple times would require even taller structures than the Draft Environmental Impact State alternatives, would have longer water crossings, and would have longer spans with more curvature, which is structurally less desirable. These spans would also require larger, more expensive foundations and have more constrained locations for the larger foundations. These spans could also require additional in-water columns, which would have additional severe ecosystem impacts to federally protected environmental resources, and could affect navigation in the Duwamish Waterway.</p>	<p>This alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> • Viking Automatic Sprinkler Company • Department of Highway District No. 1 Headquarters/Maintenance Facility: <ul style="list-style-type: none"> ○ Office/Administrative Building ○ Maintenance Building ○ Storage Building ○ Car/Paint Building ○ Maintenance/Garage Building • Transportation Equipment Rentals Office Building • Transportation Equipment Rentals Maintenance Warehouse 	<p>There would be an individual use of these resources under Alternative DUW-2.</p> <p>To avoid these historic resources on the north side of the West Seattle Bridge, an alignment shift farther north than Alternative DUW-2 than what is currently proposed in this Draft Environmental Impact Statement was considered but would have greater impacts on Port of Seattle and Northwest Seaport Alliance terminals. It would directly cross Terminal 18, which is the largest container facility in the Pacific Northwest, and would permanently affect operations of this facility. Impacts to operation of this container facility would have regional economic impacts. A crossing farther north would also likely require longer over-water spans of the Duwamish Waterway because it widens to the north, which could result in more in-water impacts. An alignment shift to the south to avoid these resources was not considered because Preferred Alternative DUW-1a is already located to the south.</p>	<p>This alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes;</p>
<ul style="list-style-type: none"> • A.M. Castle and Company Building • Cold Storage Plant/Rainier Market Center 	<p>There would be an individual use of these resources under Option DUW-1b.</p> <p>An alignment shift to the north to avoid these resources was not considered because Preferred Alternative DUW-1a is already located to the north of these resources. An alignment shift to the south was not considered because impacts would result in an individual use of Duwamish Village Park and Shoreline Habitat (formerly known as Terminal 105 Park), and would require crossing a wider section of the Duwamish Waterway, increasing in-water impacts.</p>	<p>This alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes;</p>

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> Pacific Forge Company/Bethlehem Steel Nut and Bolt Factory Historic District A.M. Castle and Company Alaskan Copper Co. Employment Office Auto Repair Garage Spokane Street Manufacturing Historic District 	<p>There would be an individual use of this resource under Preferred Alternative DUW-1a and Option DUW-1b.</p> <p>An alignment shift to the north to avoid these resources was not considered because Alternative DUW-2 is already located to the north. An alignment shift to the south to avoid this resource was not considered because the West Duwamish Greenbelt extends several miles to the south, and an alignment farther to the south of these historic resources and the greenbelt is discussed under Section 3.4.2.2, Location Alternatives.</p>	<p>This alignment shift alternative would not be feasible per paragraph (2) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>An alternative is not feasible if it cannot be built as a matter of sound engineering judgment It results in unacceptable safety or operational problems.</p> <p>This alignment shift alternative would not be feasible per paragraph (3)(ii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It results in unacceptable safety or operational problems;</p>
Fire Station 36	<p>There would be an individual use of this resource under Preferred Alternative DUW-1a and Option DUW-1b when connecting to Alternative DEL-3 or Alternative DEL-4* in the Delridge Segment. Use of this resource would be avoided when connecting to Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-5, or Alternative DEL-6*; therefore, further alignment shifts are not considered.</p>	<p>Connections to Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-5, or Alternative DEL-6* are avoidance alternatives for this property.</p>

The degree of impacts within the greenbelt would vary based on the alternative that it would connect to in the Delridge Segment, but impacts would be minimized by having the section of guideway at-grade and benched into the slope with retaining walls when connecting to Preferred Alternative DEL-1a, Preferred Alternative DEL-2a*, Option DEL-1b, Option DEL-2b*, Alternative DEL-3, or Alternative DEL-4*. When connecting to Alternative DEL-5 or Alternative DEL-6*, the guideway would be entirely on elevated columns through the greenbelt, but would still need an access road to construct the foundations and columns, and for permanent maintenance. Building this road would require an approximately 80-foot-tall, anchored cut slope. Minimizing an impact to the park by using a retaining wall was considered, but a wall of this height is not feasible as a matter of sound engineering judgment and would not be feasible per paragraph (2) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17.

3.4.3 Delridge Segment

Alternative DEL-6* would avoid an individual use of all Section 4(f) resources in the Delridge Segment. However, Alternative DEL-6* only connects to Alternative WSJ-5* in the adjoining West Seattle Junction Segment, and Alternative WSJ-5* results in the individual Use of a Section 4(f) historic resource. As such, when Alternative DEL-6* is considered in the full context of the project (that is, the entirety of the West Seattle Link Extension), it is **not** an avoidance alternative, because its selection would subsequently necessitate the selection of Alternative WSJ-5*, which in turn results in an individual use of a Section 4(f) resource. Therefore, an avoidance alternatives analysis is required for the Delridge Segment.

The following discussion of avoidance alternatives for the Delridge Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

3.4.3.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

3.4.3.2 Location Alternatives

In order to meet the purpose and need of the project, an alternative must serve the Delridge neighborhood and provide a connection to the Avalon and Alaska Junction station areas in order to serve the markets identified in the Sound Transit 3 Plan. During the Alternatives Development process, Sound Transit considered other alternatives in this area that would have avoided the West Seattle Golf Course and the historic resources in the Delridge Segment; those alternatives were not carried forward into the Draft Environmental Impact Statement. Table 3-13 describes the location alternatives considered and why they are not prudent.

Table 3-13. Delridge Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> West Seattle Golf Course Bethlehem Pacific Coast Steel Company Office Building Mrachke and Sons Residence, 4030 Delridge Way Southwest Single-family Craftsman Residence, 4108 25th Avenue Southwest Single-family Craftsman Residence, 4139 25th Avenue Southwest Contemporary Ranch House, 4150 32nd Avenue Southwest Kirlow Four-Plex 	<p>There would be an individual use of one or more of these resources under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, Alternative DEL-4*, or Alternative DEL-5.</p> <p>An alignment was studied along the West Seattle Bridge/Fauntleroy Way Southwest that would avoid these resources. It was not carried forward because it was projected to have the following unique problems:</p> <ul style="list-style-type: none"> It would have lower ridership than other alternatives and the Delridge Station associated with the alignment, which would compromise the project's ability to meet the purpose and need. It would be north of the West Seattle Bridge in an industrial area that would be more difficult for prospective riders to access, which would compromise the project's ability to meet the purpose and need. It would have substantial engineering construction challenges associated with longer and more expensive spans, including one over 700 feet long, crossing the Duwamish Waterway and industrial properties. It would have substantial effects on freight mobility and future freight capacity expansion opportunities within this designated Manufacturing and Industrial Center. 	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <ul style="list-style-type: none"> It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)). It causes other unique problems or unusual factors (paragraph (3)(v)).

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> West Seattle Golf Course Bethlehem Pacific Coast Steel Company Office Building Mrachke and Sons Residence, 4030 Delridge Way Southwest Single-family Craftsman Residence, 4108 25th Avenue Southwest Single-family Craftsman Residence, 4139 25th Avenue Southwest Contemporary Ranch House, 4150 32nd Avenue Southwest Kirlow Four-Plex 	<p>There would be an individual use of one or more of these resources under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, Alternative DEL-4*, or Alternative DEL-5.</p> <p>An alignment along Southwest Yancy Street was studied that would avoid these resources. It was not carried forward because:</p> <ul style="list-style-type: none"> It was projected to have lower ridership than other alternatives It lacked an Avalon Station, making it inconsistent with the Sound Transit 3 Plan and therefore less able to meet the project purpose and need. 	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <ul style="list-style-type: none"> It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)). It causes other unique problems or unusual factors (paragraph (3)(v)). It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude (paragraph (3)(vi)).
West Seattle Golf Course	<p>There would be an individual use of this park and historic resource under Preferred Alternative DEL-2a* and Alternative DEL-4*.</p> <p>An alignment south of the West Seattle Golf Course could potentially serve the Delridge neighborhood but was not analyzed further because it would not provide a connection to the Avalon or Alaska Junction station areas. The golf course extends approximately 0.75 mile south to Southwest Brandon Street. The Longfellow Creek Natural Area is on the south side of the golf course and continues to Southwest Sylvan Way; an alignment south of the golf course would likely adversely impact this greenspace. Avoiding the greenspace would require extending the location alternative alignment almost 2 miles south to Sylvan Way Southwest, which would result in an alignment that would also not serve the Avalon or Alaska Junction station areas.</p>	<p>A location alternative south of Southwest Genesee Street would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <ul style="list-style-type: none"> It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)). It causes other unique problems or unusual factors (paragraph (3)(v)).

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> Bethlehem Pacific Coast Steel Company Office Building Mrachke and Sons Residence, 4030 Delridge Way Southwest Single-family Craftsman Residence, 4108 25th Avenue Southwest Single-family Craftsman Residence, 4139 25th Avenue Southwest Contemporary Ranch House, 4150 32nd Avenue Southwest Kirlow Four-Plex 	<p>There would be an individual use of one or more of these resources under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, Alternative DEL-4*, or Alternative DEL-5.</p> <p>A tunnel for the entire alignment might avoid the identified historic properties, but might not avoid all of the parks and historic properties in the Delridge Station area. A tunnel was not analyzed further due to technical feasibility issues related to the impractical tunnel length and depth that would have been required under the Duwamish Waterway. In order to meet the operation grade requirements for light rail, the tunnel would need to begin in the SODO Segment to be deep enough to go under the Duwamish Waterway at the necessary depth and under the Delridge valley. The tunnel and station would then be over 200 feet deep and have a much greater cost in the West Seattle Junction Segment, due to the variation in topography along the corridor in West Seattle. In addition, a tunnel would likely not avoid all historic resources, which would be impacted by the station locations as identified in existing alternatives (see discussion below regarding Alignment Shifts for avoidance of historic properties at stations). However, as discussed above, the location and depth of the tunnel in the SODO and Duwamish segments would have several unique impacts that make it not prudent. The length of the tunnel would also make the cost for this alternative substantially more than elevated alternatives.</p>	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <ul style="list-style-type: none"> It causes other unique problems or unusual factors (paragraph (3)(v)).

3.4.3.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

As discussed in Chapter 2 of the Draft Environmental Impact Statement, the West Seattle and Ballard Link Extensions minimum operable segment (M.O.S.) is from the SODO Station to the Smith Cove Station and from the SODO Station to the Delridge Station. The M.O.S. provides for phasing project completion, which would delay the use of Section 4(f) resources in the project segments beyond the M.O.S. However, the M.O.S. would be an interim condition until the project is completed consistent with the approved Sound Transit 3 Plan, and therefore it is not an avoidance alternative.

3.4.3.4 Alignment Shifts

Alignment shifts were considered to avoid parks and/or historic resources that would have an individual use from one or more alternatives in the Delridge Segment. Table 3-14 describes the alignment shifts considered and why they are not prudent.

3.4.3.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraph (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 3.5, Measures to Minimize Harm.

3.4.4 West Seattle Junction Segment

Because none of the Build Alternatives in the West Seattle Junction Segment would avoid an individual Section 4(f) use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment. Avoidance alternatives were considered for historic resources only because there are multiple avoidance alternatives for the one park that would have an individual use (Junction Plaza Park).

The following discussion of avoidance alternatives for the West Seattle Junction Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

Table 3-14. Delridge Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
West Seattle Golf Course	<p>There would be an individual use of this park and historic resource under Preferred Alternative DEL-2a* and Alternative DEL-4*.</p> <p>Option DEL-2b* is already evaluated as an option to these two alternatives to avoid impacting the golf course while still entering a tunnel near Southwest Genesee Street and Southwest Avalon Way.</p> <p>Preferred Alternative DEL-1a, Option DEL-1b, and Alternative DEL-3 would have <i>de minimis</i> impacts on the West Seattle Golf Course, and therefore avoidance alternatives are not discussed for this resource.</p>	<p>Option DEL-2b* could require third-party funding and, if additional funding is not obtained, might not be prudent per paragraph (3)(iv) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude.</p>
Mrachke & Sons	<p>There would be an individual use of this resource under Preferred Alternative DEL-1a, Option DEL-1b, and Alternative DEL-3.</p> <p>For Preferred Alternative DEL-1a and Option DEL-1b, the property would be acquired for construction of the guideway on straddle bents across the intersection of Delridge Way Southwest and Southwest Andover Street. For Alternative DEL-3, a straddle bent is necessary in this location where the guideway widens to allow for the installation of a station platform. An alignment shift to the west for all alternatives to avoid this resource would result in a greater number of business displacements and demolition of the Bethlehem Pacific Coast Steel Company Office Building historic resource (which would not be demolished under any existing Delridge Segment alternatives, as described below in Design Changes), and, therefore, is not a Section 4(f) avoidance alternative. An alternative shift to the east to avoid this resource would result in substantial engineering construction challenges associated with steep slopes in areas of known landslides. It would also have at least 25 additional residential displacements, and would affect at least one structure that is recommended eligible for listing on the National Register and, therefore, is not a Section 4(f) avoidance alternative. Continuing to shift east would increase engineering challenges related to the steep slope, and it is unlikely that all eligible structures could be avoided because of the age of most homes in this neighborhood (many circa 1900).</p>	<p>Based on the severe social, economic, and historic property impacts, this alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <ul style="list-style-type: none"> (A) Severe social, economic, or environmental impacts; (B) Severe disruption to established communities; (C) Severe disproportionate impacts to minority or low-income populations; or (D) Severe impacts to environmental resources protected under other federal statutes.

Resource	Alignment Shifts	Assessment
Bethlehem Pacific Coast Steel Company Office Building	<p>There would be an individual use of this resource under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4*.</p> <p>This historic building would be directly north of the Delridge Station for Preferred Alternative DEL-1a and Option DEL-1b and directly to the west of the Delridge Station for Alternative DEL-3. Preferred Alternative DEL-1a and Option DEL-1b would have the Delridge Station located near Southwest Dakota Street, and an alignment shift to avoid a use of this historic resource would require shifting the station farther south from Southwest Dakota Street and closer to Delridge Way Southwest. Due to the operational limitation on track curvature, this alignment would have to be shifted even farther south (south of Southwest Genesee Street), which would result in a use of the Delridge Playfield and West Seattle Golf Course; therefore, this alignment shift alternative is not a Section 4(f) avoidance alternative.</p> <p>Under Alternative DEL-3, the Delridge Station would be over Delridge Way Southwest, and an alignment shift to the east to completely avoid this property would have substantial engineering construction challenges associated with stabilizing the steep hillside east of Delridge Way Southwest that is in a known landslide area. This shift would still result in a use of 4030 Delridge Way Southwest and, therefore, is not a Section 4(f) avoidance alternative. Continuing to shift east would increase engineering challenges related to the steep slope and increase residential displacements and neighborhood impacts. In addition, due to the age of homes in this neighborhood (many circa 1900), it is unlikely that eligible structures could be avoided entirely.</p>	This alignment shift would not be an avoidance alternative.
4030 Delridge Way Southwest	<p>There would be an individual use of this resource under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, Option DEL-2b*, Alternative DEL-3, and Alternative DEL-4*.</p> <p>Under Preferred Alternative DEL-1a and Option DEL-1b, this historic property would be acquired for construction of the guideway (on straddle bents across Delridge Way Southwest as it approaches the Delridge Station) and to reduce the amount of staging area needed on the west side of the road at the Bethlehem Pacific Coast Steel Company Office Building. A straddle bent is necessary in this location where the guideway widens to allow for installation of the station platform. Under Alternative DEL-3, the property would be acquired for an entrance on the east side of the Delridge Station, which would be over the roadway.</p> <p>For all of these alternatives, an alignment shift to the west to avoid this resource would result in demolition of the Bethlehem Pacific Coast Steel Company Office Building historic resource (which would not be demolished under any existing Delridge Segment alternatives, as described below in Design Changes) and, therefore, is not a Section 4(f) avoidance alternative.</p> <p>For all of these alternatives, an alignment shift to the east to completely avoid this property would necessitate constructing the Delridge Station along the west slope of Pigeon Point, a steep slope and known landslide area that would be difficult for potential riders to access. This alignment shift would also result in a greater number of residential displacements.</p>	<p>An alignment shift east would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <ul style="list-style-type: none"> (A) Severe social, economic, or environmental impacts; (B) Severe disruption to established communities; (C) Severe disproportionate impacts to minority or low-income populations; or (D) Severe impacts to environmental resources protected under other federal statutes.

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> 4108 25th Avenue Southwest 4139 25th Avenue Southwest 	<p>There would be an individual use of these resources under Preferred Alternative DEL-1a, Option DEL-1b, Preferred Alternative DEL-2a*, and Option DEL-2b*.</p> <p>An alignment shift to the west to avoid this resource would result in demolition of the Bethlehem Pacific Coast Steel Company Office Building historic resource (which would not be demolished under any existing Delridge Segment alternatives, as described below in Design Changes) and, therefore, is not a Section 4(f) avoidance alternative.</p> <p>An alignment shift to the east to avoid this resource would necessitate the Delridge Station being located on Delridge Way Southwest, which is already evaluated as Alternative DEL-3 and is not an avoidance alternative because it results in the use of other Section 4(f) resources.</p>	<p>This alignment shift would not be an avoidance alternative.</p>
4150 32nd Avenue Southwest	<p>There would be an individual use of this resource under Option DEL-1b and Alternative DEL-5.</p> <p>For Option DEL-1b to avoid this property, the alignment would need to shift south along Southwest Genesee Street before entering the Avalon Station, which would result in impacts to the West Seattle Golf Course, similar to Preferred Alternative DEL-1a. For Alternative DEL-5 to avoid this property, the alignment would also need to shift south before entering the Avalon Station. Alternative DEL-5 would enter the Avalon Station after heading south on Avalon Way Southwest; due to operational limitations on track curvature, the Avalon Station itself would need to be shifted further south, resulting in the displacement of eight multi-family properties with a combined total of 41 residential units.</p>	<p>This alignment shift would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>

Resource	Alignment Shifts	Assessment
Kirlow Four-Plex	<p>There would be an individual use of this resource under Alternative DEL-5 due to placement of a straddle bent across Avalon Way Southwest as the guideway approaches the Avalon Station. The guideway widens at this location to have the station platform installed between the tracks. North of this property, the guideway would be in the middle of Avalon Way Southwest to reduce property impacts on either side of the roadway.</p> <p>An alignment shift to the east to avoid this property would have resulted in substantially greater residential displacements, including units in an apartment complex that provides transitional housing.</p> <p>An alignment shift to the west along 32nd Avenue West would result in the use of Section 4(f) historic resources on the east side of the road; therefore, an alignment shift to the west would not be an avoidance alternative.</p> <p>Alternative DEL-6* is an alternative that is already being evaluated on the west side of 32nd Avenue Southwest; although it does avoid Section 4(f) resources, it connects only to an alternative in the West Seattle Junction Segment that has an individual Section 4(f) use and therefore is not an avoidance alternative.</p>	<p>An alignment shift to the east would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p> <p>There are no possible alignment shifts to the west that would be avoidance alternatives.</p>

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

3.4.4.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.

3.4.4.2 Location Alternatives

In order to meet the purpose and need of the project, an alternative must serve the Avalon and Alaska Junction station areas to serve the markets identified in the Sound Transit 3 Plan. The West Seattle Bridge/Fauntleroy Alternative studied during the Alternatives Development process had an Avalon Station parallel to Fauntleroy Way Southwest and would have avoided an individual use of 3221 Southwest Genesee, Golden Tee Apartments, and Limcrest Apartments. However, it would still have resulted in individual uses of one or more of the historic resources on Fauntleroy Way Southwest, including Carlsen & Winquist Auto, Jim's Shell Service, Chinook Apartments, or 4406 37th Avenue Southwest because these historic resources are on both sides of the road. Therefore, the West Seattle Bridge/Fauntleroy Alternative is not a Section 4(f) avoidance alternative. In addition, as described above for the Delridge Segment in Section 3.4.3.2, Location Alternatives, this location alternative was not carried forward because it would compromise the project's ability to meet the purpose and need and have other unique problems that would make it not prudent per paragraphs (3)(i) and (v) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17.

There are no other location alternatives that would serve the station locations identified in the Sound Transit 3 Plan. As such, no location alternative would be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.

3.4.4.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

As discussed in Chapter 2 of the Draft Environmental Impact Statement, the West Seattle and Ballard Link Extensions M.O.S. is from the SODO Station to the Smith Cove Station and from the SODO Station to the Delridge Station. The M.O.S. provides for phasing project completion, which would delay the use of Section 4(f) resources in the project segments beyond the M.O.S. However, the M.O.S. would be an interim condition until the project is completed consistent with the approved Sound Transit 3 Plan and, therefore, is not an avoidance alternative.

3.4.4.4 Alignment Shifts

Alignment shifts were considered to avoid parks and/or historic resources that would have an individual use from one or more alternatives in the West Seattle Junction Segment. Table 3-15 describes the alignment shifts considered and why they are not prudent.

3.4.4.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraph (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 3.5, Measures to Minimize Harm.

3.5 Measures to Minimize Harm

As described in the Avoidance Alternatives section above, Sound Transit has looked for opportunities to reduce project impacts, including impacts on Section 4(f) resources, throughout the design development for the WSBLE Project. The WSBLE Build Alternatives evaluated in this Section 4(f) Evaluation incorporate Sound Transit's best attempt at minimizing and avoiding Section 4(f) resources in the densely developed project corridor. Methods of minimization and avoidance included adjustments to the horizontal alignment, vertical profile, and placement of stations and support facilities. These design adjustments are included in the Build Alternatives that are being evaluated.

Sections 3.5.1 and 3.5.2 describe minimization measures for visual effects and noise and vibration impacts, respectively, that could apply to both parks and historic resources. Section 3.5.3, Parks and Recreation Measures to Minimize Harm, describes measures to minimize harm specific to parks, and Section 3.5.4, Historic Resources Measures to Minimize Harm, describes measures to minimize harm specific to historic resources.

3.5.1 Minimization of Visual Effects

Specific measures to minimize visual effects during construction include the implementation of design guidelines. The following describes the design guidelines that would be incorporated where practical:

- Sound Transit would develop specific design criteria for the WSBLE Project that would guide project design through a balanced set of system-wide elements and contextual elements, such as a consistent architectural theme for elevated elements and stations, consistent signage, and a system-wide art program. These criteria would be developed by interdisciplinary teams with input from local communities and the City of Seattle, and would be integrated with existing plans, including plans for redevelopment.
- Sound Transit would adhere to City of Seattle design standards and design review process, if applicable, to promote visual unity in station areas.

Table 3-15. West Seattle Junction Avoidance Alternatives - Alignments Shifts

Resource	Alignment Shifts	Assessment
3221 Southwest Genesee Street	<p>There would be an individual use of this resource under Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, and Alternative WSJ-4*.</p> <p>This use would occur because of the location of the Avalon Station (between Avalon Way Southwest and 35th Avenue Southwest). This historic resource is in the middle of the block, so the station would need to be shifted either to the south or north to avoid it. Shifting the station to the north would result in the use of the historic resource at 4150 32nd Avenue Southwest (directly across the street to the north) and would increase residential displacement at a multi-family property that includes units used for transitional housing. Shifting the station to the south would increase the amount of permanent and construction period property acquisition of the West Seattle Golf Course and would displace eight additional multi-family properties with a total of 241 units. Therefore, neither the north nor south alignment shift would be a Section 4(f) avoidance alternative.</p>	This alignment shift would not be an avoidance alternative.
Golden Tee Apartments, 3201 Southwest Avalon Way	<p>There would be an individual use of this resource under Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, and Alternative WSJ-4*, but only when connecting to Preferred Alternative DEL-1a or Alternative DEL-3 in the Delridge Segment.</p> <p>Use of this resource would be avoided when connecting to Option DEL-1b or Alternative DEL-5; therefore, further alignment shifts are not considered. Preferred Alternative WSJ-3a* and Preferred Option WSJ-3b* would both result in an individual use of the Golden Tee Apartments, but only when connecting to Preferred Alternative DEL-2a* or Alternative DEL-4* in the Delridge Segment. Use of this resource would be avoided when connecting to Option DEL-2b* or Alternative DEL-5; therefore, further alignment shifts are not considered.</p>	Connections to Option DEL-2b* or Alternative DEL-5 are avoidance alternatives for this property.

Resource	Alignment Shifts	Assessment
Carlsen & Winquist Auto	<p>There would be an individual use of this resource under Preferred Alternative WSJ-1.</p> <p>An alignment shift to the west to avoid this resource is not considered because all other segment alternatives are already to the west of Preferred Alternative WSJ-1 and would avoid this resource.</p> <p>An alignment shift to the east to avoid this resource would require greater use of private property instead of public right-of-way, which would increase the project cost and have greater neighborhood impacts, including up to 200 additional residential displacements, about 10 additional business displacements, and displacement of the West Seattle and Fauntleroy Y.M.C.A.</p>	<p>Alternatives WSJ-2, WSJ-3a*, WSJ-3b*, WSJ-4*, and WSJ-5* are avoidance alternatives to the west for this property.</p> <p>An alignment shift to the east would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>
Jim's Shell Service	<p>There would be an individual use of this resource under Preferred Alternative WSJ-1, Preferred Alternative WSJ-2, and Alternative WSJ-4*.</p> <p>An alignment shift to the west to avoid this resource would result in a use of the Chinook Apartments, while an alignment shift to the east would result in a use of Carlsen & Winquist Auto; therefore, this is not a Section 4(f) avoidance alternative.</p>	This alignment shift would not be an avoidance alternative.
Limcrest Apartments	<p>There would be an individual use of this resource under Preferred Alternative WSJ-3a* and Preferred Option WSJ-3b*, but only when connecting to Option DEL-2b* in the Delridge Segment. Use of this resource would be avoided when connecting to Preferred Alternative DEL-2a* or Alternative DEL-4*; therefore, further alignment shifts are not considered.</p>	Connections to Preferred Alternative DEL-2a* or Alternative DEL-4* are avoidance alternatives for this property.

Resource	Alignment Shifts	Assessment
4406 37th Avenue Southwest	<p>There would be an individual use of this resource under Preferred Alternative WSJ-2, Preferred Alternative WSJ-3a*, Preferred Option WSJ-3b*, Alternative WSJ-4*, and Alternative WSJ-5*.</p> <p>For all alternatives, an alignment shift to the north to avoid this resource would result in a use of the Limcrest Apartments, while an alignment shift to the south would result in a use of Carlsen & Winqvist Auto and Jim's Shell Service; therefore, this is not a Section 4(f) avoidance alternative.</p>	This alignment shift would not be an avoidance alternative.
4426 38th Avenue Southwest	<p>There would be an individual use of this resource under Alternative WSJ-4*.</p> <p>An alignment shift to the north to avoid this resource would result in a use of the Limcrest Apartments, while an alignment shift to the south would result in a use of Carlsen & Winqvist Auto; therefore, this is not a Section 4(f) avoidance alternative.</p>	This alignment shift would not be an avoidance alternative.
Chinook Apartments	<p>There would be an individual use of this historic resource under Preferred Alternative WSJ-2 and Alternative WSJ-4*.</p> <p>An alignment shift to the north to avoid this resource would result in a use of the Limcrest Apartments, while an alignment shift to the south would result in a use of Carlsen & Winqvist Auto; therefore, this is not a Section 4(f) avoidance alternative.</p>	This alignment shift would not be an avoidance alternative.
5011 41st Avenue Southwest	<p>There would be an individual use of this historic resource under Alternative WSJ-4*.</p> <p>An alignment shift to the west was not considered because Preferred Option WSJ-3b* is already located to the west. An alignment shift to the east was not considered because Preferred Alternative WSJ-2 is already located to the east.</p>	Preferred Alternative WSJ-2 and Preferred Option WSJ-3b* are avoidance alternatives.

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

- After project construction Sound Transit would surplus unused parcels, which could potentially be redeveloped consistent with Sound Transit's transit-oriented development policies and City of Seattle plans.
- When possible, existing vegetation would be preserved. The decision whether to revegetate disturbed areas following construction would be determined based on future use of lands outside the guideway.
- Sound Transit would plant appropriate vegetation within and adjoining the project right-of-way to replace existing street trees and other visually important vegetation that is removed for the project, and/or to provide screening for sensitive visual environments and/or sensitive viewers.
- Exterior lighting at stations would be designed to minimize height and use source shielding to avoid luminaries (bulbs) that would be directly visible from residential areas, streets, and highways. Shielding would also limit spillover light and glare in residential areas.
- During construction, visual screening would be provided along some areas where construction activities would be seen by nearby sensitive viewers. Visual screening would include construction of a barrier to screen ground-level views into construction areas where practical. Nighttime construction lighting would be shielded and directed downward to avoid light spillover onto adjacent sensitive uses.

3.5.2 Minimization of Noise and Vibration Effects

Section 7 of the Noise and Vibration Technical Report (WSBLE Draft Environmental Impact Statement Appendix N.3) provides a description of means to reduce and monitor potential noise and vibration effects during light rail construction and operation. Key noise and vibration minimization strategies are summarized below.

3.5.2.1 Noise

The operational noise analysis conducted for the project did not identify noise-related adverse effects to historic properties, but did identify one alternative in the Delridge Segment that would result in a noise impact to a Section 4(f) park property. Potential mitigation measures consistent with Sound Transit's Light Rail Noise Mitigation Policy (Sound Transit 2004) would be considered for all noise impacts.

Sound Transit's noise mitigation policy is to mitigate both moderate and severe impacts beginning with source treatment, followed by treatments in the noise path. If source and path treatments are not sufficient to mitigate the impact, Sound Transit would evaluate and implement sound insulation at affected properties where the existing building does not already achieve sufficient exterior-to-interior reduction of noise levels.

For most identified noise impacts, sound walls were the selected method of reducing noise levels, consistent with Sound Transit's Light Rail Noise Mitigation Policy (Sound Transit 2004). Sound walls are effective at eliminating most predicted noise impacts in both the West Seattle Link and Ballard Link Extensions.

All construction activities would be required to comply with codified sound limits. Nighttime construction would require a noise variance from the City of Seattle. Noise mitigation would likely be required for construction activities to comply with Seattle Municipal Code or variance sound level limits.

3.5.2.2 Vibration

The operational vibration analysis conducted for the project did not identify vibration impacts to Section 4(f) resources. For construction-related vibration impacts, the primary means of mitigating vibration from construction activities is to require the contractor to prepare a detailed construction vibration control plan. A noise and vibration control engineer or acoustician would work with the contractor to prepare the plan in conjunction with the contractor's specific equipment and methods of construction. Key elements of a plan include:

- Contractor's specific equipment types
- Schedule and methods of construction
- Identification of all Category 1 buildings (high-sensitivity buildings, such as hospitals with vibration-sensitive equipment, and universities conducting physical research operations) and special buildings near construction sites
- Methods for projecting construction vibration levels
- Construction vibration limits
- Specific vibration control measures where predicted levels exceed the limits
- Methods for responding to community complaints

Construction would be carried out in compliance with Sound Transit specifications and all applicable local regulations. Specific construction vibration mitigation measures would be developed during the design phase when more detailed construction means and methods information is available. The following mitigation measures would be applied as needed to minimize construction vibration impacts:

- **Pre-construction survey** – Prior to the start of construction, a survey of buildings including inspection and photographs of building foundations would be completed near construction areas.
- **Construction timing** – Nighttime construction in residential neighborhoods would be avoided. Sound Transit would arrange with businesses to avoid interfering with sensitive daytime activities. Local ordinances would be followed unless variances are obtained.
- **Equipment location** – Stationary construction equipment would be as far as possible from vibration-sensitive sites.
- **Continuous vibration monitoring** – Monitoring would be implemented at particularly sensitive receivers, if needed.
- **Alternative construction methods** – Using alternative construction methods to minimize the use of impact and vibratory equipment (e.g., pile-drivers and compactors).

3.5.3 Parks and Recreation Measures to Minimize Harm

According to City of Seattle Ordinance 118477, any City park land permanently acquired by the project must be replaced with land of equivalent or better size, value, location, and usefulness. Sound Transit would coordinate with Seattle Parks and Recreation to find suitable replacement property for acquired park land and displaced parks.

Table 3-16 summarizes the resource-specific measures to minimize harm to Section 4(f) park resources.

Table 3-16. Proposed Measures to Minimize Harm by Section 4(f) Park Resource – West Seattle Link Extension

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
West Duwamish Greenbelt			
DUW-1a	<i>de minimis</i> (Preliminary concurrence requested)	This alternative would permanently incorporate 1.2 acres (approximately 0.6 percent of the total area) and temporarily occupy up to an additional 0.3 acre of greenbelt land. This alternative could impact the wildlife habitat function of the greenbelt in the study area by removing large trees, which support wildlife species such as great blue heron and peregrine falcon.	The temporarily impacted area would be replanted with low-growing vegetation when construction is completed, but large trees would not be allowed near the guideway. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
DUW-1b	<i>de minimis</i> (Preliminary concurrence requested)	This alternative would permanently incorporate 1.3 acres (approximately 0.7 percent of the total area) and temporarily occupy up to an additional 0.3 acre of greenbelt land. This alternative could impact the wildlife habitat function of the greenbelt in the study area by removing large trees, which support wildlife species such as great blue heron and peregrine falcon.	The temporarily impacted area would be replanted with low-growing vegetation when construction is completed, but large trees would not be allowed near the guideway. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
DUW-2	Alternative would not impact resource.		
Delridge Playfield			
DEL-1a	Alternative would not impact resource.		
DEL-1b	Alternative would not impact resource.		
DEL-2a*	Alternative would not impact resource.		
DEL-2b*	Alternative would not impact resource.		
DEL-3	<i>de minimis</i> (Preliminary concurrence requested)	This alternative would permanently incorporate less than 0.1 acre (approximately less than 1 percent of the total area) of the playfield to accommodate an elevated guideway column and would temporarily occupy an additional 0.1 acre during construction.	The temporarily impacted area would be fully restored when construction is completed. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
DEL-4*	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	This alternative would temporarily occupy 0.1 acre of the playfield during construction.	The temporarily occupied area would be fully restored when construction is completed.
DEL-5	Alternative would not impact resource.		
DEL-6*	Alternative would not impact resource.		

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
Longfellow Creek Natural Area			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	This alternative would temporarily occupy 0.1 acre of the natural area during construction. Some trees at the south edge along Southwest Genesee Street on the west end of the park may need to be removed.	The temporarily occupied area would be fully restored when construction is completed, including replacing any trees removed.
DEL-1b	de minimis (Preliminary concurrence requested)	This alternative would permanently incorporate 0.1 acre (approximately 2 percent of the total area) of the south end of the natural area and would temporarily occupy less than 0.1 acre during construction. Some trees at the south edge along Southwest Genesee Street on the west end of the park may need to be removed.	The temporarily impacted area would be fully restored when construction is completed, including replacing any trees removed. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
DEL-2a*	Alternative would not impact resource.		
DEL-2b*	de minimis (Preliminary concurrence requested)	Same as Option DEL-1b.	
DEL-3	Alternative would not impact resource.		
DEL-4*	Alternative would not impact resource.		
DEL-5	Alternative would not impact resource.		
DEL-6*	Alternative would not impact resource after mitigation for noise impact.		
Longfellow Creek Legacy Trail			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	Access to trail from Southwest Genesee Street temporarily disrupted.	Provide signed detour via 26th Avenue Southwest and Southwest Nevada Street and via Southwest Dakota Street during temporary closures of 26th Avenue Southwest to maintain continuity. The temporarily occupied area would be fully restored when construction is completed.
DEL-1b	de minimis (Preliminary concurrence requested)	Trail connection to sidewalk relocated with reconstruction of sidewalk. Access to trail from Southwest Genesee Street temporarily disrupted.	Provide signed detour via 26th Avenue Southwest and Southwest Nevada Street and via Southwest Dakota Street during temporary closures of 26th Avenue Southwest to maintain continuity. Trail connection at Southwest Genesee Street restored when construction is completed.
DEL-2b*	de minimis (Preliminary concurrence requested)	Same as Option DEL-1b.	

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
West Seattle Golf Course			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	<p>This alternative would temporarily occupy approximately 1 acre of the north end of the golf course property.</p> <p>The temporary occupancy would impact up to three greens (holes 13, 14 and 16) and the cart path in the golf course.</p> <p>Nearby play may be impacted during some construction activities involving large cranes (such as girder placement), but these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times.</p> <p>Trees would need to be removed along the north edge of the golf course.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>The greens (holes 13, 14, and 16) potentially affected by the temporary occupancy would be modified and the cart path re-routed to avoid the construction area. These modifications would occur prior to, and would last throughout the 2- to 3-year construction period in this area. The greens and cart path would be fully restored after construction. Use of these holes could be limited during modification and restoration periods.</p> <p>Vegetation removed would be replaced with trees and lower growing vegetation after construction in consultation with the City of Seattle. Fencing along the north edge of the golf course would be replaced. Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction; the course would be playable similar to how it is played today.</p>

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
DEL-1b	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	<p>This alternative would temporarily occupy up to 0.2 acre on the north end of the golf course; a cart path is in this area.</p> <p>Some trees would need to be removed along the north edge of the golf course on the east side.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>A cart path would be temporarily re-aligned for a short distance to retain its functionality during construction; the cart path would be re-aligned for about 2 years. The area of temporary occupancy would be fully restored after construction. Area along the south edge would be replanted with trees and lower growing vegetation in consultation with the City of Seattle. Fencing along the north edge of the golf course would be replaced. Sound Transit would coordinate with Seattle Parks and Recreation to re-align the cart path prior to construction and returned to original condition after construction, which would limit use of the path during those times.</p>
DEL-2a*	Use.	<p>This alternative would permanently impact 1.4 acres (approximately 1 percent of the total area) of the golf course as it transitions from an elevated guideway to a tunnel at the northwest corner of the property and would temporarily occupy an additional 1.2 acres during construction. The alternative would remove some playable area along the northern property boundary and permanently impact five holes of the golf course (holes 13, 14, 15, 17, and 18).</p>	<p>The temporarily impacted area would be fully restored after construction. To mitigate for the permanent impacts, the golf course could be modified to retain functionality. However, the modified holes would need to have a minimum yardage; mitigation could include shortening a hole or reconfiguring part of the golf course. Fencing along the north edge of the golf course would be installed between the golf course and the light rail. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p>
DEL-2b*	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	Same as Option DEL-1b.	

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
DEL-3	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	<p>This alternative would temporarily occupy 1.2 acres of the north end of the golf course property. The temporary occupancy would impact up to three greens (holes 13, 14, and 16) and the cart path in the golf course. Nearby play may be impacted during some construction activities involving large cranes (such as girder placement), but these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times.</p> <p>Trees would need to be removed along the north edge of the golf course.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>The greens (holes 13, 14, and 16) potentially affected by the temporary occupancy would be modified and the cart path re-routed to avoid the construction area. These modifications would occur prior to, and would last throughout the 2- to 3-year construction period in this area. The greens and cart path would be fully restored after construction. Use of these holes could be limited during modification and restoration periods.</p> <p>Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction; the course would be playable similar to how it is played today. Vegetation removed would be replaced with trees and lower growing vegetation after construction in consultation with the City of Seattle. Fencing along the north edge of the golf course would be replaced.</p>
DEL-4*	Use.	<p>This alternative would permanently impact 1.4 acres (approximately 1 percent of the total area) of the golf course as it transitions from an elevated guideway to a tunnel at the northwest corner of the property and would temporarily occupy an additional 1.2 acres during construction. The alternative would remove some playable area along the northern property boundary and permanently impact five holes of the golf course (holes 13, 14, 15, 17, and 18).</p>	<p>The temporarily impacted area would be fully restored after construction. To mitigate for the permanent impacts, the golf course could be modified to retain functionality. However, the modified holes would need to have a minimum yardage; mitigation could include shortening a hole or reconfiguring part of the golf course. Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction. Fencing along the north edge of the golf course would be installed between the golf course and the light rail. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p>

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
DEL-5	Alternative would not impact resource.		
DEL-6*	Alternative would not impact resource.		
<i>Junction Plaza Park</i>			
WSJ-1	Alternative would not impact resource.		
WSJ-2	Alternative would not impact resource.		
WSJ-3a*	Alternative would not impact resource.		
WSJ-3b*	Use.	This alternative would permanently acquire the park for a station entrance.	Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
WSJ-4*	Alternative would not impact resource.		
WSJ-5*	Alternative would not impact resource.		

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

3.5.4 Historic Resources Measures to Minimize Harm

Measures to minimize or mitigate harm to Section 4(f) historic resources, beyond the design measures already included in the project, are not known at this time as Sound Transit and FTA continue to consult with the State Historic Preservation Officer, Tribes, and other consulting parties. These measures will be coordinated with the Washington State Department of Archaeology and Historic Preservation, local jurisdictions, and interested parties. They will also be memorialized in the Section 106 Memorandum of Agreement or Programmatic Agreement for this project, consistent with Section 106 of the National Historic Preservation Act. The specific mitigation measures for each affected historic resource will be developed in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties under Section 106. The following typical mitigation measures for impacts to historic resources are from Section 11.2, Resolution of Adverse Effects, in Appendix N.5, Historic and Archaeological Resources Technical Report:

- Relocating the historic properties
- Documenting historic properties or resources that would be demolished
- Installing interpretive/educational signage, or other options that provide a public benefit (e.g., exhibits, HistoryLink essays, documentaries, or historic property nominations)
- Implementing data recovery of archaeological or architectural information and materials
- Preparing National Register nominations for National Register-eligible properties within the area of potential effects
- Preparing an ethnographic study
- Developing detailed monitoring and inadvertent discovery plan to focus monitoring efforts and research questions prior to anticipated archaeological discovery

Designated Seattle landmarks and districts that would be directly modified, would be subject to review issuance of certificate of approval from the Landmarks Board and/or District Review Boards.

Pre-construction surveys would be conducted to document the existing conditions of buildings near construction areas, and the contractor would be responsible for repairing damage resulting from the project. During final design, all impacts and potential mitigation measures would be reviewed for verification.

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties. Property-specific design changes on properties that would not be displaced in order to minimize project impacts are described below by segment.

3.5.4.1 Duwamish Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the Duwamish Segment. To minimize impacts to the Department of Highways District No. 1 Headquarters/Maintenance Facility - Office/Administrative Building, Maintenance Building, and Storage Building under Preferred Alternative DUW-1a, the construction staging area was reduced to preserve these historic buildings and only remove two other buildings on the property.

3.5.4.2 Delridge Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the Delridge Segment. To minimize impacts to the Bethlehem Pacific Coast Steel Company Office Building historic resource under Preferred Alternative DEL-1a and Option DEL-1b, the construction staging area was reduced to preserve the historic building and only use the parking areas on the property. Similarly, the design for Alternative DEL-3 was also modified to preserve the historic building.

3.5.4.3 West Seattle Junction Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the West Seattle Junction Segment. To minimize impacts to the Carlsen & Winkquist Auto historic resource from Preferred Alternative WSJ-1, the construction staging area was reduced to preserve the historic building and only use the parking areas on the property.

3.6 Least Harm Analysis

When there is no feasible and prudent avoidance alternative, FTA may approve only the alternatives that cause the least overall harm based on an assessment of the seven factors listed in Code of Federal Regulations Title 23 Section 774.3(c)(1):

- 1) The ability of the alternative to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property).
- 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.

- 3) The relative significance of each Section 4(f) property.
- 4) The views of the official(s) with jurisdiction over each Section 4(f) property.
- 5) The degree to which each alternative meets the purpose and need for the project.
- 6) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).
- 7) Substantial differences in costs among the alternatives.

Following public review of and comment on the WSBLE Draft Environmental Impact Statement and the potential impacts of proposed alternatives, which includes this Section 4(f) evaluation; continued consultation with officials having jurisdiction on the proposed *de minimis* findings after public comment is received; and consultation regarding adverse effects on historic resources with the State Historic Preservation Office and consulting parties, Sound Transit will prepare a Least Harm Analysis to be included in the Final Section 4(f) Evaluation, which will be prepared in conjunction with the Final Environmental Impact Statement for this project.

4 BALLARD LINK EXTENSION

4.1 Section 4(f) Resources in the Study Area

The Section 4(f) parks and recreational resources in the Ballard Link Extension study area are mapped on Figures 4-1a through 4-1m. Attachment H.1, Section 4(f) Status of Parks and Recreational Resources in the Study Area, lists the parks and recreational facilities in the study area and identifies which are not Section 4(f) resources and why. More information about the parks and recreational resources presented below can be found in Sections 4.2.17 and 4.3.17, Parks and Recreational Resources, of the Draft Environmental Impact Statement. More information about historic and archaeological resources can be found in the Draft Environmental Impact Statement Section 4.16.2 and 4.16.3, Historic and Archaeological Resources, and Appendix N.5, Historic and Archaeological Resources Technical Report. Historic properties included in this evaluation reflect FTA's determinations of eligibility (September 3, 2021); the eligibility of some properties is still subject to ongoing consultation with the State Historic Preservation Officer. The official with jurisdiction for each Section 4(f) park and recreational resource is the resource owner identified in the parks and recreational resources tables in this section; the official with jurisdiction for Section 4(f) historic resources is the State Historic Preservation Officer. For individual properties that are eligible for Section 4(f) protection as both a park resource and a historic resource, Sound Transit will consult with the resource's official with jurisdiction as well as the State Historic Preservation Officer.

There are five trails in the Ballard Link Extension study area that are used by both commuters and recreationists:

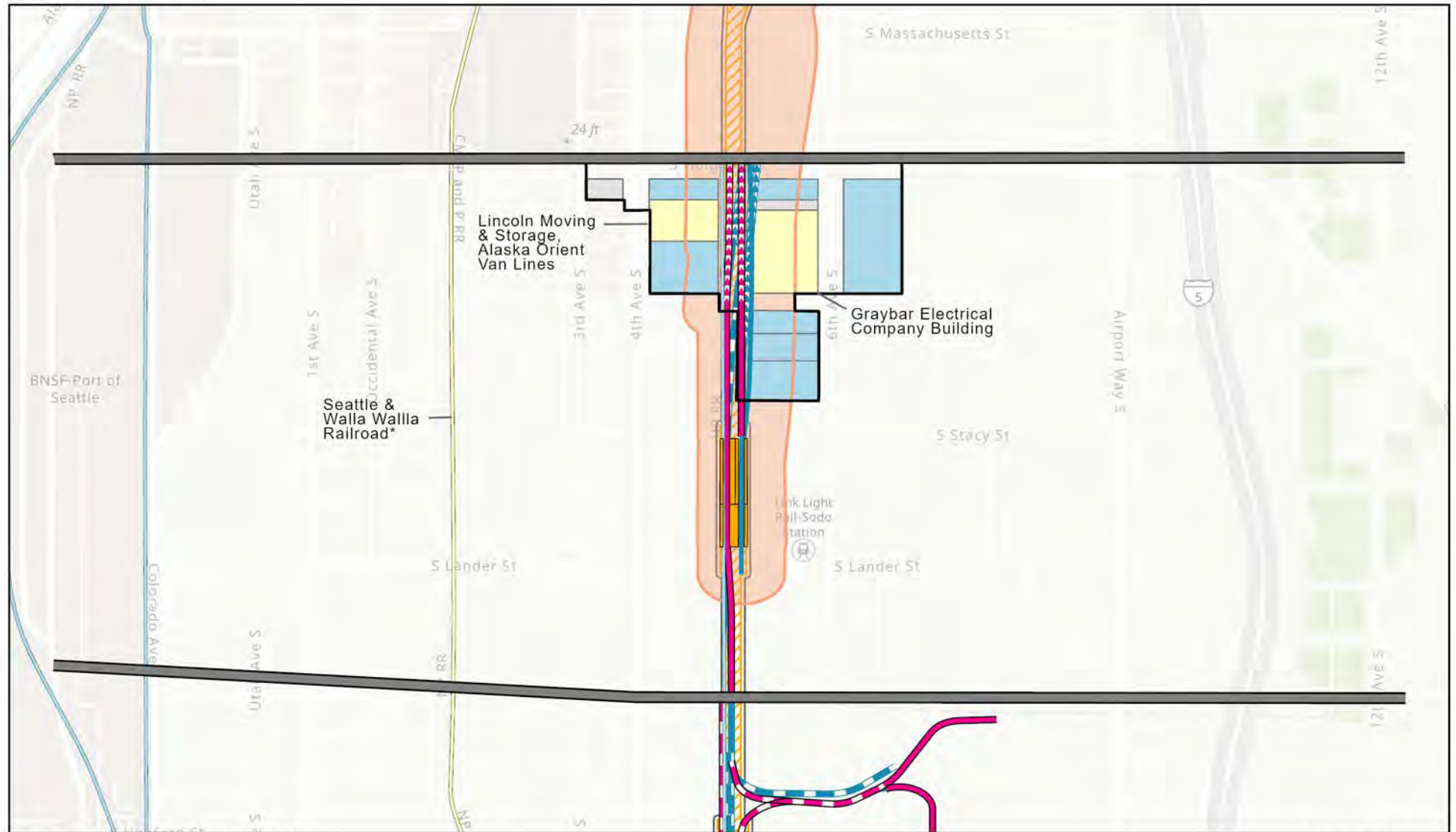
- SODO Trail
- Elliott Bay Trail
- Ship Canal Trail
- Burke-Gilman Trail
- Magnolia Connector Trail

FTA has determined that these trails are part of the transportation system and function primarily for transportation based on the Seattle Department of Transportation's inclusion of these trails in its Bicycle Master Plan (City of Seattle 2014). These multi-use, paved trails are entirely or mostly within public right-of-way, and are part of the existing bicycle network, which is considered an extension of the City's transportation network by the City of Seattle. Therefore, these trails are not subject to Section 4(f) protection in accordance with Code of Federal Regulations Title 23 Section 774.13(f)(4). Potential impacts to these trails under the National Environmental Policy Act are discussed in Section 3.7, Non-motorized, in Chapter 3, Transportation Environment and Consequences, of the Draft Environmental Impact Statement.

National Register Eligibility Criteria

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.



Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects
- Parcel

- Park

- SODO Busway

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

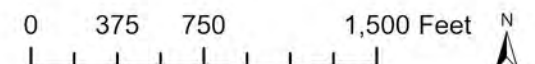
- Eligible
- Not Eligible
- Constructed after 1980 or Undeveloped

* Linear Resources:

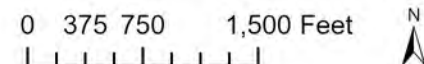
Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/North Pacific Railway Black River Junction to the Lake Washington Ship Canal

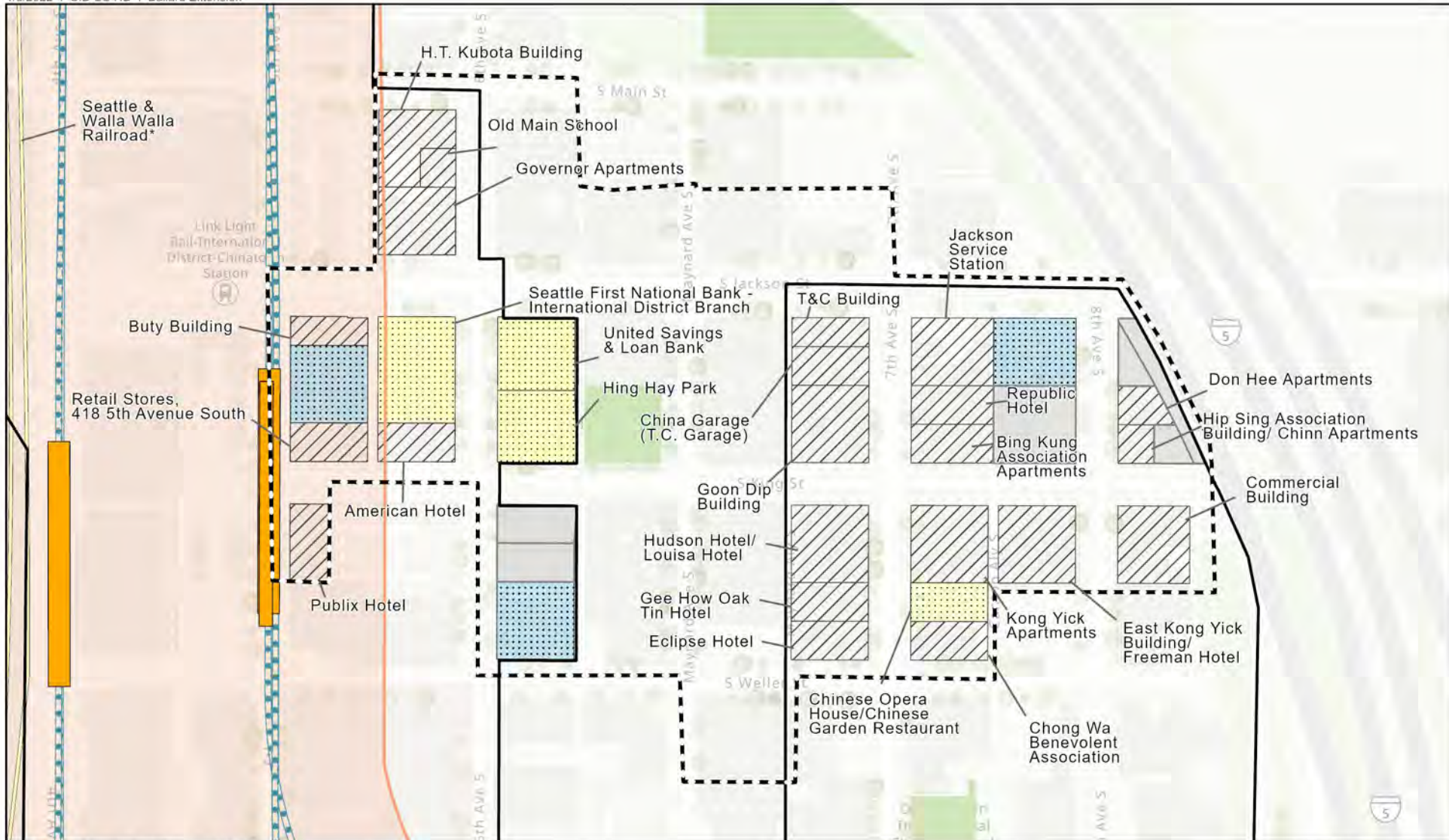
FIGURE 4-1a
Section 4(f) Resources
Ballard Link Extension -
SODO Segment

West Seattle and
Ballard Link Extensions



* Linear Resources:
Seattle and Walla Walla Railroad/Puget Sound Shore Railroad
Company/Seattle, Lake Shore and Eastern Railroad/North Pacific
Railway Black River Junction to the Lake Washington Ship Canal

West Seattle and
Ballard Link Extensions



Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area
- Seattle Chinatown Historic District

National Register Eligibility Status

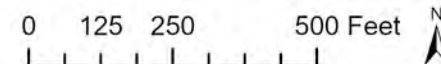
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Contributing
- Non-Contributing

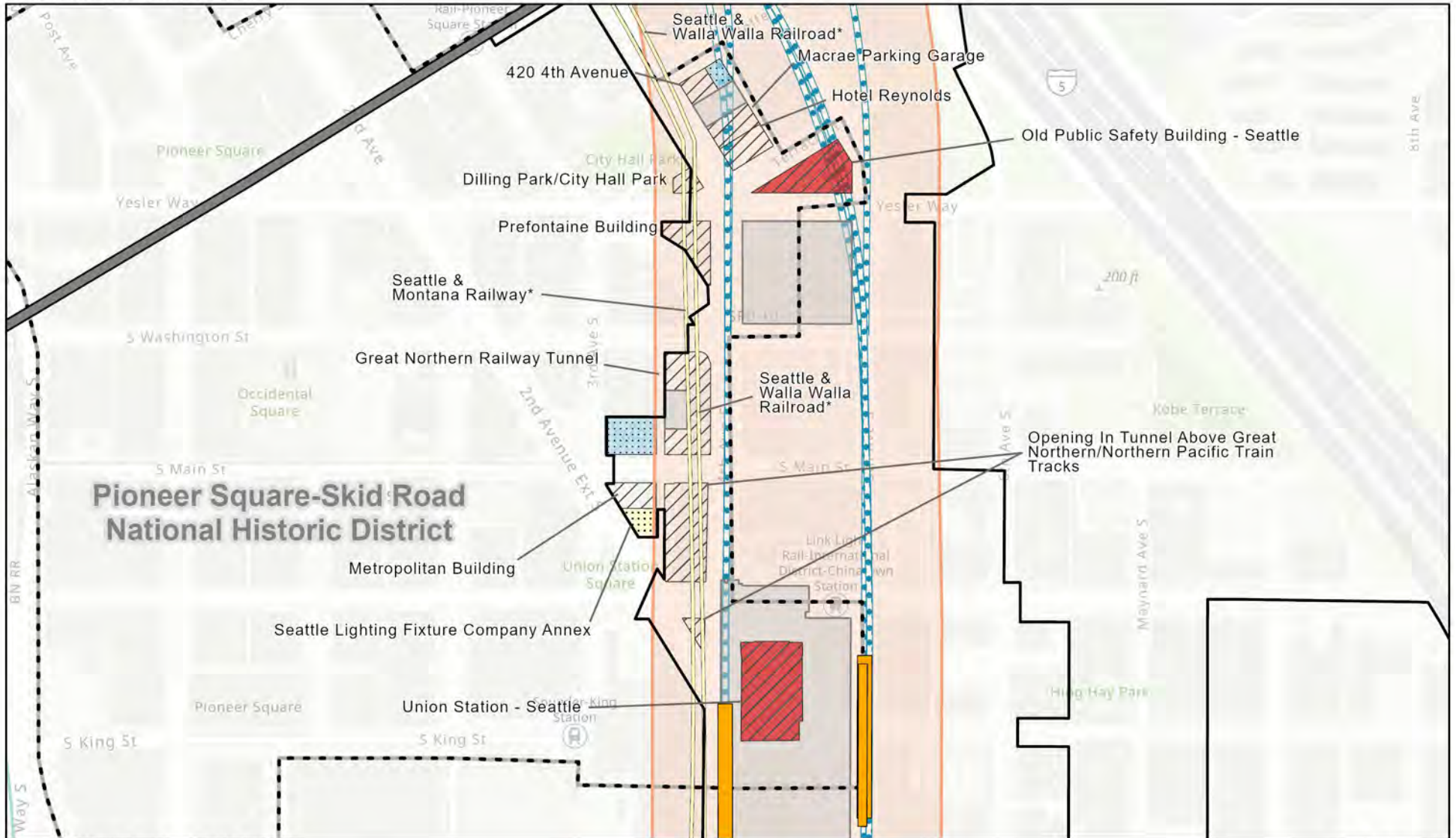
* Linear Resources:

Seattle & Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle Lake Shore & Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 4-1c
Section 4(f) Resources
Seattle Chinatown Historic District
Ballard Link Extension -
Chinatown-International
District Segment

*West Seattle and
Ballard Link Extensions*





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- Section 4(f) Parks and Recreation Facilities Study Area

- Pioneer Square-Skid Road Historic District

National Register Eligibility Status

- National Register Listed
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Contributing
- Non-Contributing

* Linear Resources:

Seattle & Montana Railway/Great Northern Railway Main Line/
Seattle Lake Shore & Eastern Railroad Ballard Branch Line
Seattle & Walla Walla Railroad/Puget Sound Shore Railroad
Company/Seattle Lake Shore & Eastern Railroad/Northern
Pacific Railway Black River Junction to the Lake Washington
Ship Canal

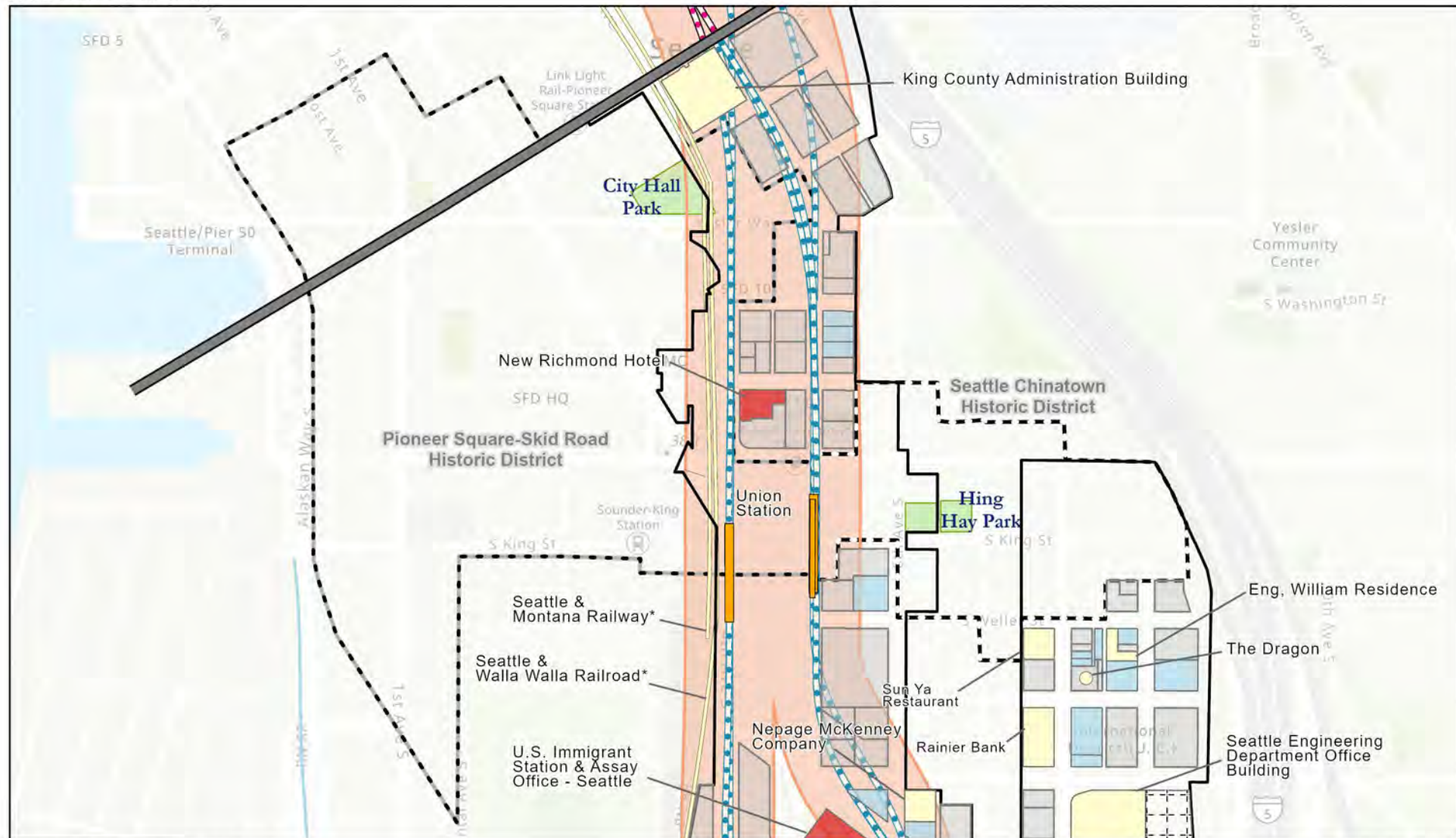
FIGURE 4-1d

Section 4(f) Resources

Pioneer Square-Skid Road Historic District
Ballard Link Extension -
Chinatown-International
District Segment

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area
- Pioneer Square-Skid Road Historic District
- Seattle Chinatown Historic District

* Linear Resources:

Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line

Seattle & Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle Lake Shore & Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

National Register Eligibility Status

- National Register Listed
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- ROE requested - Not yet evaluated

FIGURE 4-1e
Section 4(f) Resources
Ballard Link Extension -
Chinatown-International
District Segment (North)

*West Seattle and
Ballard Link Extensions*

0 500 1,000 2,000 Feet





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- - - Tunnel
- At-Grade
- - - Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- National Register Listed
- Eligible
- Eligible Park
- Not Eligible
- Constructed after 1980 or Vacant

* Linear Resources:

Seattle & Montana Railway/Great Northern Railway Main Line/
Seattle Lake Shore & Eastern Railroad Ballard Branch Line

Seattle & Walla Walla Railroad/Puget Sound Shore Railroad
Company/Seattle Lake Shore & Eastern Railroad/Northern
Pacific Railway Black River Junction to the Lake Washington
Ship Canal

0 500 1,000 2,000 Feet



FIGURE 4-1f
Section 4(f) Resources
Ballard Link Extension -
Downtown Segment (South)

*West Seattle and
Ballard Link Extensions*

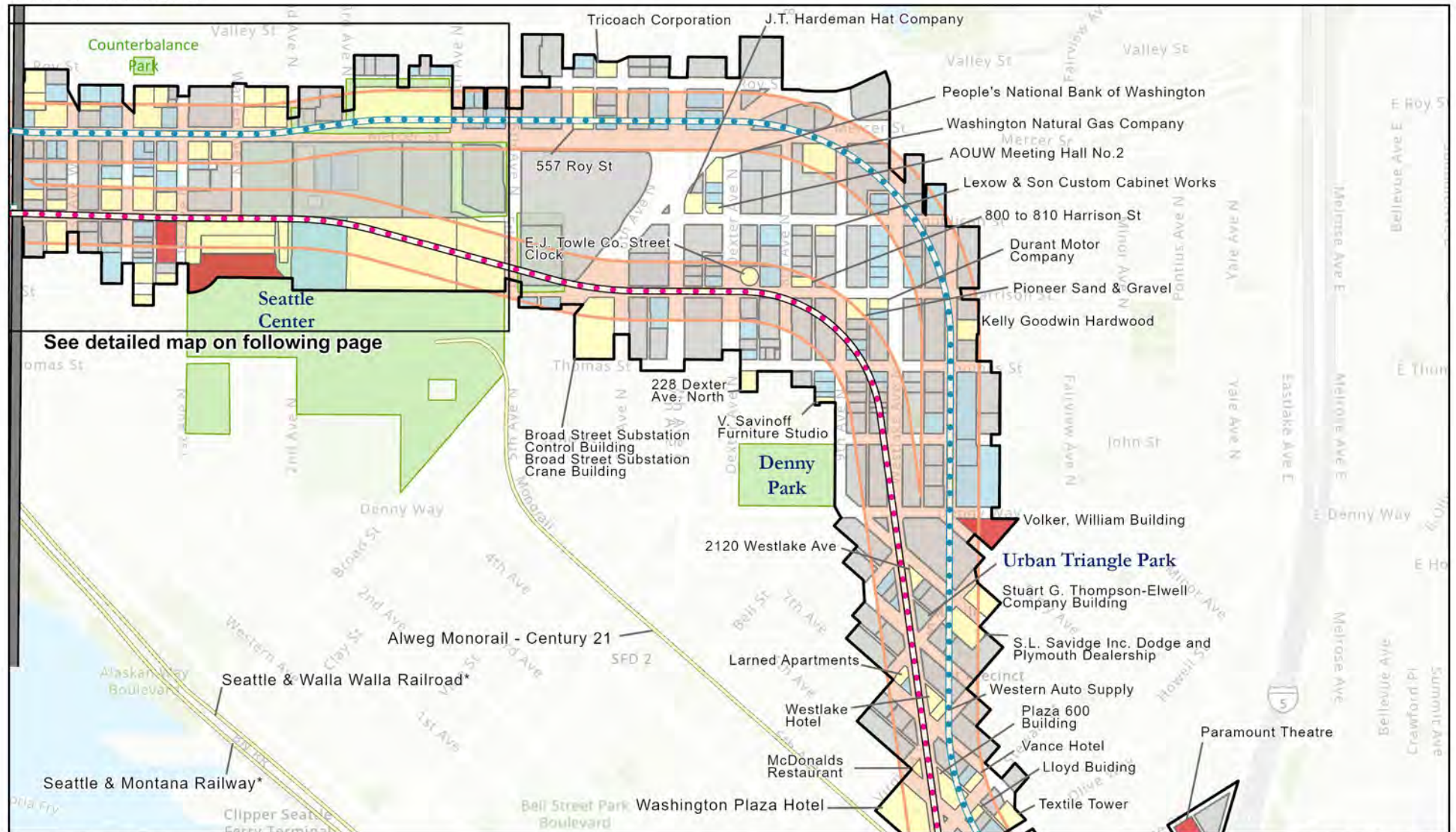
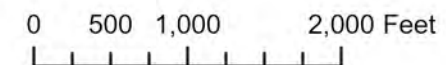
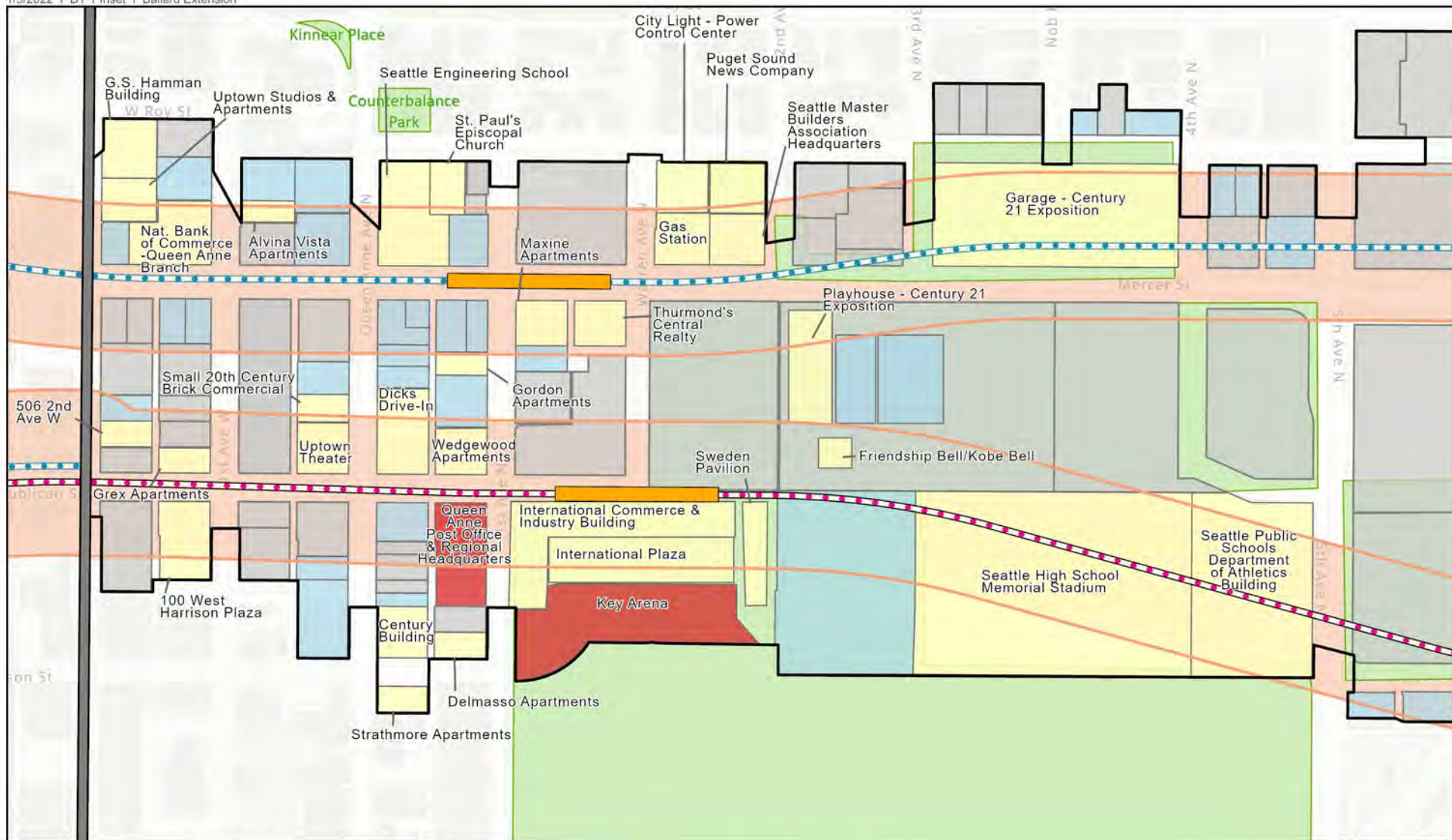


FIGURE 4-1g
Section 4(f) Resources
Ballard Link Extension -
Downtown Segment (North)

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- National Register Listed
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant

FIGURE 4-1h
Section 4(f) Resources
 Seattle Center Vicinity
 Ballard Link Extension -
 Downtown Segment

*West Seattle and
 Ballard Link Extensions*

0 250 500 1,000 Feet



**Alternatives**

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line

- Area of Potential Effects

- Parcel

- Park

- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Eligible Park
- Not Eligible
- Constructed after 1980 or Vacant

*** Linear Resources:**

Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line

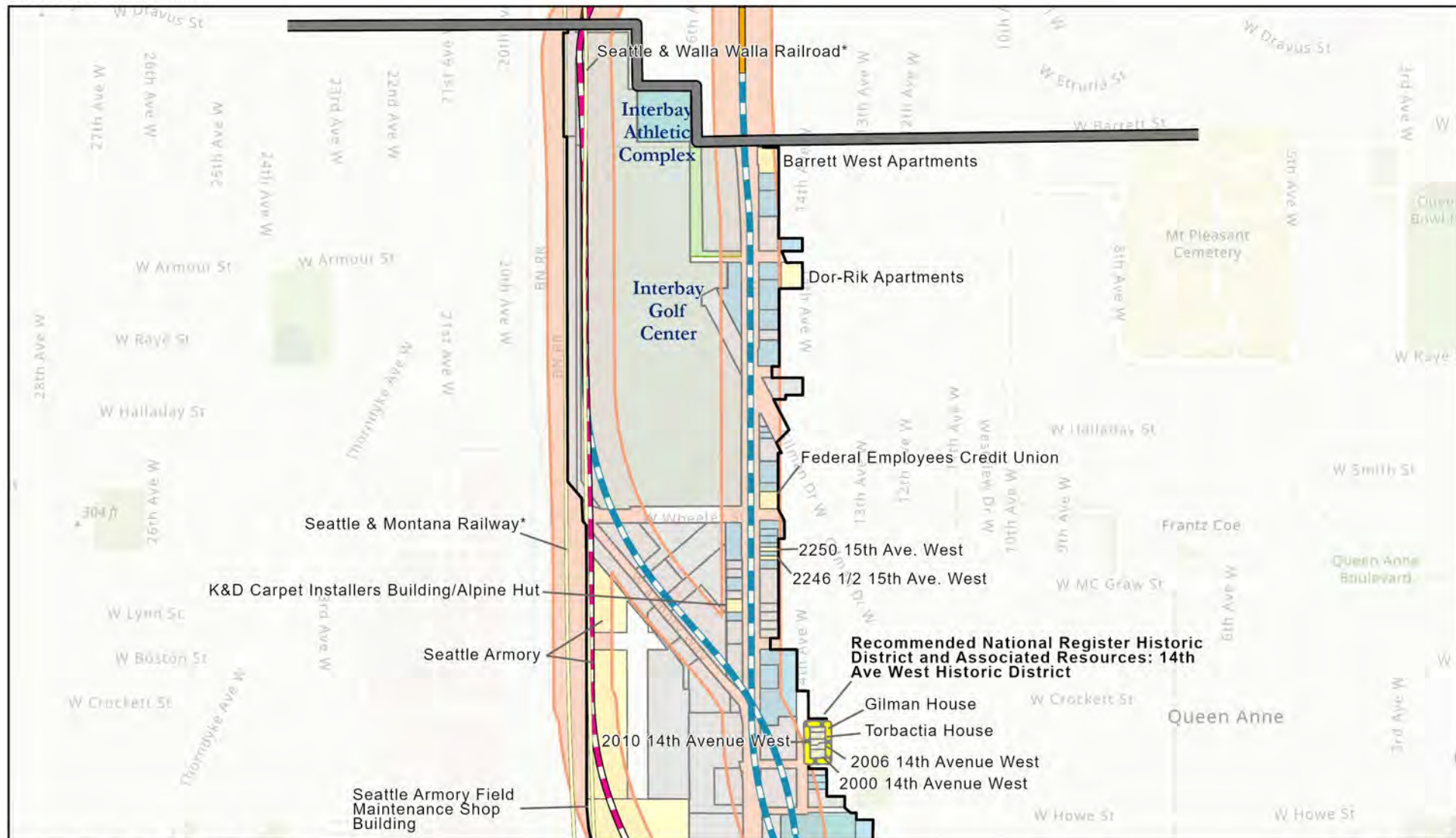
Seattle & Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle Lake Shore & Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 4-1i
Section 4(f) Resources
 Ballard Link Extension -
 South Interbay Segment (South)

*West Seattle and
 Ballard Link Extensions*

0 500 1,000 2,000 Feet





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Eligible Historic District Boundary

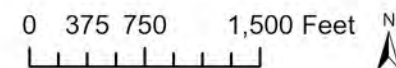
* Linear Resources:

Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line

Seattle & Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle Lake Shore & Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 4-1j
Section 4(f) Resources
Ballard Link Extension -
South Interbay Segment (North)

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- Tunnel
- At-Grade
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Eligible Historic District Boundary

* Linear Resources:

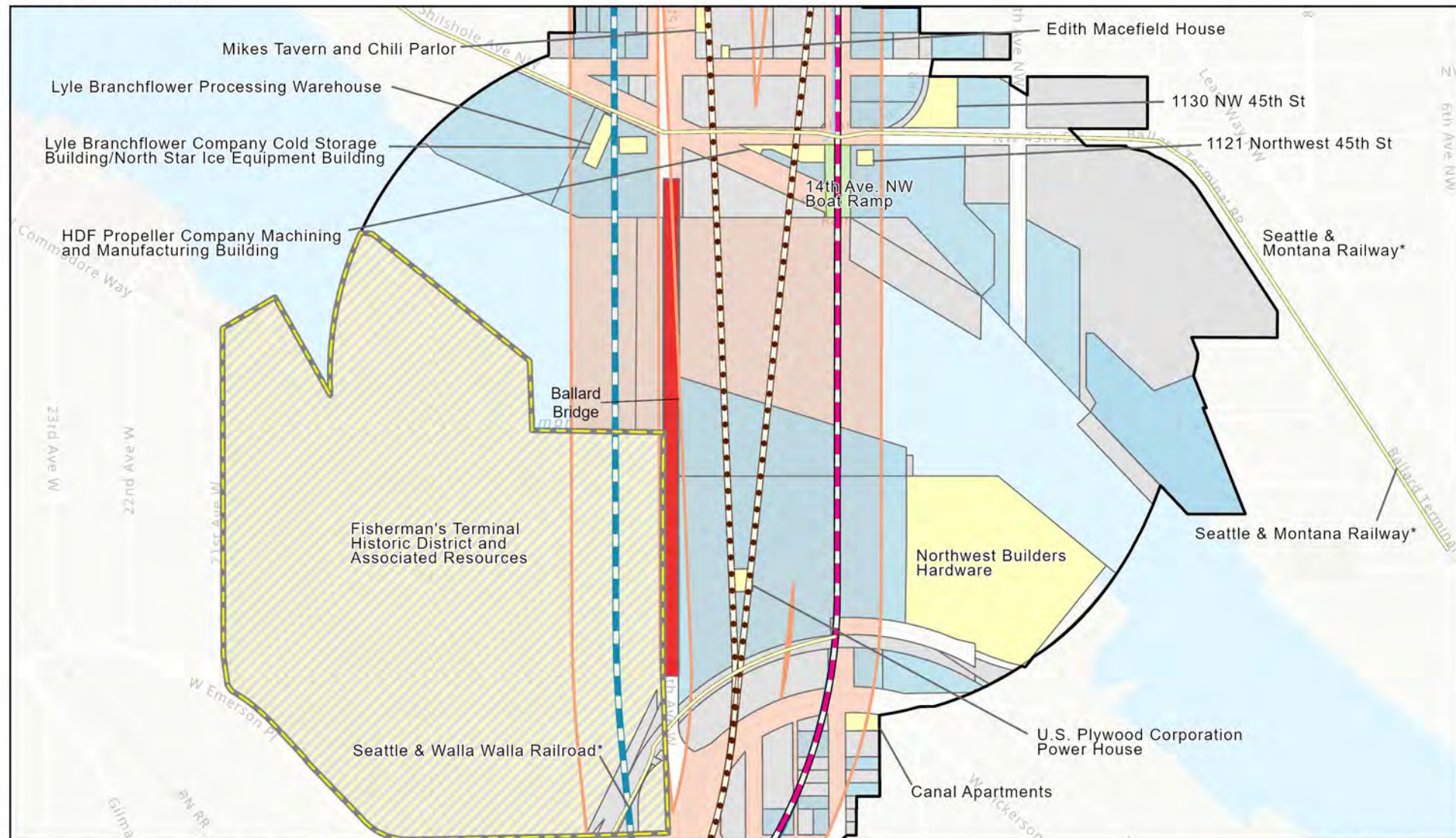
Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line

Seattle & Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore & Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal

FIGURE 4-1k
Section 4(f) Resources
Ballard Link Extension -
Interbay/Ballard Segment (South)

West Seattle and
Ballard Link Extensions





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

- National Register Listed
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant
- Eligible Historic District Boundary

* Linear Resources:

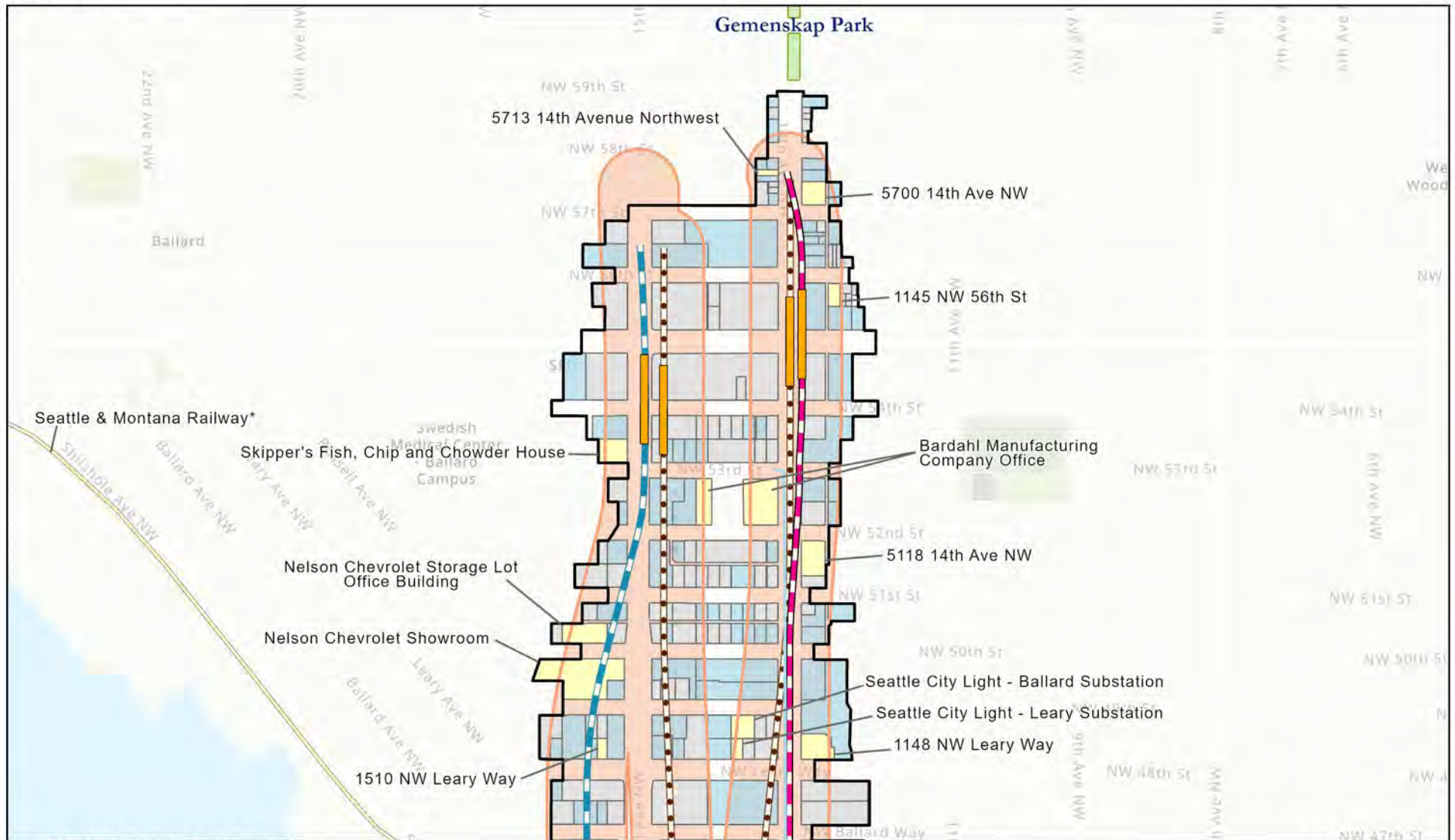
Seattle & Montana Railway/
Great Northern Railway Main Line/Seattle Lake Shore & Eastern
Railroad Ballard Branch Line

FIGURE 4-11
Section 4(f) Resources
Ballard Link Extension -
Interbay/Ballard Segment (Central)

*West Seattle and
Ballard Link Extensions*

0 375 750 1,500 Feet





Source: City of Seattle, King County (2019, 2020, 2021).

Alternatives

- Preferred Alternative
- Preferred Alternative with Third-party Funding
- Other Alternatives

Alternative Profile

- Elevated
- At-Grade
- Tunnel
- Retained Cut

Station

- New

- Segment Line
- Area of Potential Effects
- Parcel
- Park
- Section 4(f) Parks and Recreation Facilities Study Area

National Register Eligibility Status

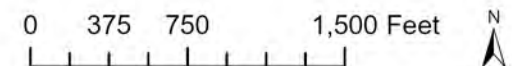
- Eligible
- Not Eligible
- Constructed after 1980 or Vacant

* Linear Resources:

Seattle & Montana Railway/
Great Northern Railway Main Line/Seattle Lake Shore & Eastern
Railroad Ballard Branch Line

FIGURE 4-1m
Section 4(f) Resources
Ballard Link Extension -
Interbay/Ballard Segment (North)

*West Seattle and
Ballard Link Extensions*



4.1.1 SODO Segment

4.1.1.1 Parks and Recreational Resources

No Section 4(f) parks or recreational resources are in the SODO Segment of the Ballard Link Extension.

4.1.1.2 Historic Resources

The Section 4(f) historic resources in the SODO Segment are described in Table 4-1.

Table 4-1. Section 4(f) Historic Resources in the SODO Segment, Ballard Link Extension

Property	Address	Built Date	National Register Eligibility Status	Figure Number
Lincoln Moving & Storage, Alaska Orient Van Lines Building	1924 4th Avenue South	1966	Recommended Eligible (Criterion C)	4-1a
Graybar Electric Company Building	1919 6th Avenue South	1960	Recommended Eligible (Criterion C)	4-1a

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

The Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal, constructed in 1883, is a linear feature that is located in the SODO, Chinatown-International District, Downtown, South Interbay, and Interbay/Ballard segments. It is located in railroad right-of-way from Black River Junction near Renton to Lake Washington Ship Canal in Interbay. It was previously determined eligible under Criterion A.

4.1.2 Chinatown-International District Segment

4.1.2.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the Chinatown-International District Segment are described in Table 4-2.

Table 4-2. Section 4(f) Parks and Recreational Resources in the Chinatown-International District Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
Hing Hay Park	Seattle Parks and Recreation	423 Maynard Avenue South	A 0.3-acre neighborhood park with café tables, outdoor fitness equipment, and activity areas for games, such as ping pong.	4-1c
City Hall Park	Seattle Parks and Recreation	450 3rd Avenue	A 0.9-acre park with grass, trees, walking path, benches, small tables, and chairs.	4-1e

4.1.2.2 Historic Resources

Section 4(f) resources in the Chinatown-International District Segment are described in Table 4-3.

Table 4-3. Section 4(f) Historic Resources in the Chinatown-International District Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Holgate Terminals Incorporated	1762 6th Avenue South	1960	Recommended Eligible (Criterion C)	4-1b
Disston, Inc. Plant	1701 4th Avenue South	1975	Recommended Eligible (Criteria A and C)	4-1b
Pacific National Bank of Washington	1763 4th Avenue South	1975	Recommended Eligible (Criterion C)	4-1b
Frye Investment Company Office Building	707 South Plummer Street	1951	Recommended Eligible (Criterion C)	4-1b
Eng, William Residence	611 8th Avenue South	1937	Eligible (Criterion A)	4-1b
Nepage McKenney Company	804 6th Avenue South	1924	Recommended Eligible (Criteria A and C), within the International Special Review District	4-1b and 4-1e
United States Immigrant Station and Assay Office – Seattle	815 Seattle Boulevard South (815 Airport Way South)	1931	National Register listed, within the International Special Review District	4-1b and 4-1e
Sun Ya Restaurant	605 7th Avenue South	1975	Recommended Eligible (Criteria A and C), within the International Special Review District	4-1b and 4-1e
Rainier Bank-International District Branch	666 South Dearborn Street	1979	Recommended Eligible (Criterion C), within the International Special Review District	4-1b and 4-1e
The Dragon	700 South Lane Street	1978	Recommended Eligible (Criterion C), within the International Special Review District	4-1b and 4-1e
Seattle Engineering Department Office Building	714 South Charles Street	1973	Recommended Eligible (Criterion C), within the International Special Review District	4-1b and 4-1e
Seattle Chinatown Historic District	Multiple	Multiple dates	National Register-listed historic district	4-1c and 4-1e
American Hotel	520 South King Street	1925	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Buty Building	501 South Jackson Street	1901	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Governor Apartments	514 South Jackson Street	1926	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
H.T. Kubota Building	513 South Main Street	1924	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Old Main School	307 6th Avenue South	1873	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District, designated Seattle Landmark	4-1c

Property	Address	Built Date	National Register Eligibility Status	Figure
Publix Hotel	504 5th Avenue South	1928	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Retail Stores	418 5th Avenue South	1926	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Seattle First National Bank - International District Branch	525 South Jackson Street	1959	Previously Determined Eligible and non-contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
United Savings and Loan Bank	601 South Jackson Street	1973	Recommended Eligible (Criteria A and C) and non-contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Goon Dip Building	664 South King Street	1911	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
China Garage (T.C. Garage)	413 7th Avenue South	1915	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
T and C Building	671 South Jackson Street	1915	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Eclipse Hotel	670 South Weller Street	1908	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Gee How Oak Tin Hotel	519 7th Avenue South	1907	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Hudson Hotel/Louisa Hotel	669 South King Street	1909	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Kong Yick Apartments	705½ South King Street	1910	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Chong Wa Benevolent Association	522 7th Avenue South	1929	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
East Kong Yick Building/Freeman Hotel	719 South King Street	1910	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Republic Hotel	412 7th Avenue South	1920	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Bing Kung Association Apartments	420 7th Avenue South	1916	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c

Property	Address	Built Date	National Register Eligibility Status	Figure
Don Hee Apartments	410 8th Avenue South	1910	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Hip Sing Association Building/Chinn Apartments	420 8th Avenue South	1910	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Commercial Building	805 South King Street	1925	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Jackson Service Station	701 South Jackson Street	1927	National Register-listed and contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c
Chinese Opera House/Chinese Garden Restaurant	516 7th Avenue South	1924	Recommended Eligible (Criterion C), within the International Special Review District	4-1c
Hing Hay Park	414 6th Avenue South	1973	Recommended Eligible (Criteria A and C) and non-contributing to the Seattle Chinatown Historic District, within the International Special Review District	4-1c and 4-1e
Pioneer Square-Skid Road National Historic District	Multiple	Multiple dates	National Register-listed historic district	4-1d and 4-1e
420 4th Avenue	420 4th Avenue	1924	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District	4-1d
Dilling Park/City Hall Park	City Hall Park (450 3rd Avenue)	1911	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Great Northern Railway Tunnel	201 4th Avenue South	1904	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Hotel Reynolds	410 4th Avenue (406 to 410 4th Avenue)	1905	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District	4-1d
Macrae Parking Garage	400 4th Avenue	1927	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District	4-1d
Metropolitan Building	222 2nd Avenue Extension South	1906	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Old Public Safety Building - Seattle	400 Yesler Way	1909	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d

Property	Address	Built Date	National Register Eligibility Status	Figure
Opening in Tunnel Above Great Northern/Northern Pacific Train Tracks (two locations)	4th Avenue South	1929	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Prefontaine Building	110 Prefontaine Place South	1909	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Seattle Lighting Fixture Company Annex	210 2nd Avenue Extension South	1946	Recommended Eligible (Criteria A and C) and non-contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District	4-1d
Union Station - Seattle	401 South Jackson Street	1911	National Register-listed and contributing to the Pioneer Square-Skid Road National Historic District, within the Pioneer Square Preservation District and the International Special Review District	4-1d
King County Administration Building	500 4th Avenue	1970	Previously Determined Eligible (Criteria A and C)	4-1e
New Richmond Hotel	308 4th Avenue South	1910	National Register-listed	4-1e

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

4.1.3 Downtown Segment

4.1.3.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the Downtown Segment are described in Table 4-4.

McGraw Square and Westlake Square are both in this segment, but FTA and Sound Transit propose that they do not play an important role in meeting the City of Seattle's park objectives because they are paved city squares and not used for recreational purpose by the public. The City of Seattle determined these resources do not qualify for protection under Section 4(f) because they are not significant park resources in the City Center Connector Streetcar Environmental Assessment (City of Seattle 2016). Therefore, it is recommended that McGraw Square and Westlake Square be determined not to be significant park resources and not subject to Section 4(f) protection in accordance with Code of Federal Regulations Title 23 Section 774.11(c), pending City of Seattle concurrence.

Table 4-4. Section 4(f) Parks and Recreational Resources in the Downtown Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
Naramore Fountain Park	Seattle Parks and Recreation	6th Avenue and Seneca Street	A 0.1-acre open space with benches and a fountain created by Japanese-American sculptor George Tsutakawa.	4-1f
Freeway Park	Seattle Parks and Recreation	Between 6th Avenue and 9th Avenue, bounded by Union Street to the north and Spring Street to the south	A 5-acre urban park with paved walkways, seating, vegetation, public art, and a water feature; it is part of the freeway lid over a portion of Interstate 5 in the heart of downtown.	4-1f
Westlake Park	Seattle Parks and Recreation	401 Pine Street	A 0.6-acre plaza with tables and chairs, public art, outdoor games, and a children's play area.	4-1f
Urban Triangle Park	Seattle Parks and Recreation	Westlake Avenue North and 8th Avenue	A 0.2-acre, triangular park with a public art feature and custom play structure.	4-1g
Denny Park	Seattle Parks and Recreation	100 Dexter Avenue	A 4.6-acre historic site that was dedicated as a public park in 1883. The park features an off-leash area, a grassy lawn, large trees, and benches.	4-1g
Seattle Center	Seattle Center	South of Mercer Street and north of Denny Way between 1st Avenue North and 5th Avenue North	A 74-acre civic, arts, and family gathering space; it is the former 1962 World's Fair site. Park features include greens, an interactive water fountain, and a play area.	4-1g and 4-1h

4.1.3.2 Historic Resources

Section 4(f) historic properties in the Downtown Segment are described in Table 4-5.

Table 4-5. Section 4(f) Historic Resources in the Downtown Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Arctic Building	306 Cherry Street	1913	National Register-listed (Criterion C); Designated Seattle Landmark	4-1f
Bank of California Building	901 5th Avenue	1973	Recommended Eligible (Criterion C)	4-1f
Ben Bridge Jewelers Clock	409 Pike Street	1929	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1f
Bergonian Hotel	405 Olive Way	1927	Previously Determined Eligible (Criterion C)	4-1f
Central Building	810 3rd Avenue	1907	Previously Determined Eligible (Criterion C); Designated Seattle Landmark	4-1f

Property	Address	Built Date	National Register Eligibility Status	Figure
Coliseum Building	1506 5th Avenue (5th Avenue and Pike Street)	1915	National Register-listed (Criterion C), designated Seattle Landmark	4-1f
Decatur Building	1521 6th Avenue	1922	Previously Determined Eligible (Criteria A and C)	4-1f
First Methodist Episcopal Church - Seattle	809 (801) 5th Avenue	1908	National Register-listed (Criteria A and C); Designated Seattle Landmark	4-1f
Floyd A. Narmore Fountain and Plaza	6th Avenue between Seneca and Spring streets	1967	Recommended Eligible (Criterion C)	4-1f
Frederick and Nelson Building	500 (512) Pine Street	1918	Previously Determined Eligible; Designated Seattle Landmark	4-1f
Freeway Park	700 Seneca Street (Center of Complex located at about University Street)	1974	National Register-listed (Criteria A and C)	4-1f
Grand Central Garage	719 4th Avenue	1919	Recommended Eligible (Criteria A and C)	4-1f
IBM Building	1200 5th Avenue	1962	Recommended Eligible (Criterion C)	4-1f
John H. McGraw Statue	5th Avenue and Stewart Street	1913	Recommended Eligible (Criterion C); Designated Seattle Landmark	4-1f
Leamington Hotel and Apartments	317 Marion Street	1916	National Register-listed (Criterion C); Designated Seattle Landmark	4-1f
Liggett Building	1424 4th Avenue	1927	National Register-listed (Criterion C); Designated Seattle Landmark	4-1f
Logan Building	1400 5th Avenue (500 Union Street)	1958	Previously Determined Eligible (Criterion C)	4-1f
Medical Dental Building - Seattle	507 (509) Olive Way	1925	National Register-listed	4-1f
Northern Bank and Trust Building	1500 4th Avenue	1907	National Register-listed (Criterion C)	4-1f
Olympic Hotel	411 University Street	1924	National Register-listed (Criterion C)	4-1f
Olympic Hotel Parking Garage and Airline Terminal Building	415 Seneca Street	1964	Previously Determined Eligible (Criterion C)	4-1f
One Union Square	600 University Street	1980	Recommended Eligible (Criteria A and C)	4-1f
O'Shea Building	501 Pine Street	1914	Previously Determined Eligible (Criteria A and C)	4-1f
Park Place Building	1200 6th Avenue	1971	Recommended Eligible (Criterion C)	4-1f
Plymouth Congregational Church	1217 6th Avenue	1967	Recommended Eligible (Criterion C)	4-1f
Rainier Club	411 Columbia Street (810 4th Avenue)	1903	National Register-listed (Criterion C); Designated Seattle Landmark	4-1f
Rainier Tower	1301 5th Avenue	1977	Recommended Eligible (Criterion C)	4-1f

Property	Address	Built Date	National Register Eligibility Status	Figure
Shafer Building	523 Pine Street	1923	National Register-listed (Criterion C); Designated Seattle Landmark	4-1f
Skinner Building/5th Avenue Theatre	1308 5th Avenue	1926	National Register-listed (Criterion C)	4-1f
Spring Apartment Hotel	1100 5th Avenue	1922; 1959	Previously Determined Eligible (Criterion C)	4-1f
The Dover Apartments	901 6th Avenue	1907	Recommended Eligible (Criteria A and C)	4-1f
The Pacific Building	710 3rd Avenue	1969	Recommended Eligible (Criterion C)	4-1f
The People's National Bank	1415 5th Avenue	1973	Recommended Eligible (Criteria A and C)	4-1f
United States Courthouse - Seattle	1010 5th Avenue	1940	National Register-listed (Criteria A and C)	4-1f
Washington Athletic Club	1325 6th Avenue	1929	National Register-listed (Criteria A and C); Designated Seattle Landmark	4-1f
Park Hilton Hotel	1113 6th Avenue	1980	Recommended Eligible (Criterion C)	4-1f
Women's University Club of Seattle	1105 6th Avenue	1922	National Register-listed (Criteria A and C); Designated Seattle Landmark	4-1f
Y.W.C.A. Building - Seattle	1118 5th Avenue	1914	National Register-listed (Criterion A); Designated Seattle Landmark	4-1f
Zedick Jewelers Street Clock	1525 (1529) 4th Avenue	1920	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1f
Lloyd Building	601 Stewart Street	1926	Previously Determined Eligible (Criterion C)	4-1f and 4-1g
Paramount Theatre	911 Pine Street	1928	National Register-listed (Criterion C)	4-1f and 4-1g
Plaza 600 Building	600 Stewart Street	1969	Previously Determined Eligible (Criterion C)	4-1f and 4-1g
McDonald's Restaurant	1950 6th Avenue	1979	Recommended Eligible (Criteria A and C)	4-1f and 4-1g
Textile Tower	1807 7th Avenue	1931	Recommended Eligible (Criteria A and C)	4-1f and 4-1g
Vance Hotel	620 Stewart Street	1926	Recommended Eligible (Criterion C)	4-1f and 4-1g
Washington Plaza Hotel	1900 5th Avenue	1969	Previously Determined Eligible (Criterion C)	4-1f and 4-1g
Apartments	800 to 810 Harrison Street	1911	Recommended Eligible (Criteria A and C)	4-1g
Broad Street Substation Control Building	319 6th Avenue North	1951	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1g
Broad Street Substation Crane Building	319 6th Avenue North	1951	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1g
Commercial Building	228 Dexter Avenue North	1933	Recommended Eligible (Criteria A and C)	4-1g

Property	Address	Built Date	National Register Eligibility Status	Figure
Durant Motor Company	333 Westlake Avenue North	1923	Previously Determined Eligible (Criterion C)	4-1g
E.J. Towle Co. Street Clock	406 Dexter Avenue North	1915	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	4-1g
J.T. Hardeman Hat Company	500 Aurora Avenue North	1920	Recommended Eligible (Criteria A and C)	4-1g
Kelly Goodwin Hardwood	310 Terry Avenue North	1915	Previously Determined Eligible (Criterion C)	4-1g
Larned Apartments	2030 7th Avenue	1909	Recommended Eligible (Criteria A and C)	4-1g
Lexow & Son Custom Cabinet Works	817 Republican Street	1946	Recommended Eligible (Criterion C)	4-1g
Office Building	557 Roy Street	1952	Recommended Eligible (Criterion C)	4-1g
People's National Bank of Washington	525 Dexter Avenue North	1948	Recommended Eligible (Criterion C)	4-1g
Pioneer Sand and Gravel	901 Harrison Street	1927	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	4-1g
Retail Stores	2120 Westlake Avenue	1909	Recommended Eligible (Criterion C)	4-1g
S.L. Savidge Inc. Dodge and Plymouth Dealership	2021 9th Avenue	1948	Recommended Eligible (Criteria A, and C)	4-1g
Stuart G. Thompson-Elwell Company Building	901 Lenora Street	1957	Recommended Eligible (Criterion C)	4-1g
Tricoach Corporation	703 6th Avenue North	1928	Recommended Eligible (Criterion C)	4-1g
V. Savinoff Furniture Studio	217 9th Avenue North	1946	Recommended Eligible (Criterion C)	4-1g
Volker, William, Building	1000 Lenora Street	1928	National Register-listed (Criterion C)	4-1g
Washington Natural Gas Company	850 Republican Street	1964	Recommended Eligible (Criteria A and C)	4-1g
Western Auto Supply	700 Virginia Street (2004 Westlake Avenue)	1923	Previously Determined Eligible (Criterion A)	4-1g
Ancient Order of United Workmen (A.U.O.W.) Meeting Hall Number 2	501 Dexter Avenue North	1952	Recommended Eligible (Criteria A and C)	4-1g
Westlake Hotel	2008 Westlake Avenue	1907	Recommended Eligible (Criteria A and C)	4-1g
100 West Harrison Plaza	100 West Harrison Street	1972	Recommended Eligible (Criterion C)	4-1h
Alvina Vista Apartments	612 1st Avenue West	1929	Recommended Eligible (Criterion C)	4-1h
Century Building	10 Harrison Street	1965	Recommended Eligible (Criteria A and C)	4-1h

Property	Address	Built Date	National Register Eligibility Status	Figure
City Light - Power Control Center	157 Roy Street	1963	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	4-1h
Delmasso Apartments	26 West Harrison Street	1930	Previously Determined Eligible (Criteria A and C)	4-1h
Dick's Drive In	500 Queen Anne Avenue North	1974	Recommended Eligible (Criterion A)	4-1h
Friendship Bell/Kobe Bell	305 Harrison Street	1968	Recommended Individually Eligible (Criteria A and C); Designated Seattle Landmark	4-1h
G.S. Hamman Building	119 West Roy Street	1924	Recommended Eligible (Criterion C)	4-1h
Garage – Century 21 Exposition	300 Mercer Street	1962	Recommended Individually Eligible (Criteria A and C)	4-1h
Gas Station	600 Warren Avenue North	1954	Recommended Eligible (Criterion C)	4-1h
Gordon Apartments	527 1st Avenue North	1929	Recommended Eligible (Criterion A)	4-1h
Grex Apartments	503 1st Avenue West	1930	Previously Determined Eligible (Criterion C)	4-1h
International Commerce and Industry Building (now K.E.X.P. Radio, Seattle International Film Festival [SIFF] Film Center and the Vera Project)	305 Harrison Street	1961	Previously Determined Individually Eligible (Criteria A and C); Designated Seattle Landmark	4-1h
International Plaza	305 Harrison Street	1961	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1h
Key Arena (now Climate Pledge Arena)	305 Harrison Street	1961	National Register-listed (Criterion A); Designated Seattle Landmark	4-1h
Maxine Apartments	105 Mercer Street	1929	Recommended Individually Eligible (Criterion C)	4-1h
National Bank of Commerce – Queen Anne Branch	100 West Mercer Street	1955	Recommended Eligible (Criterion C)	4-1h
Office Building	506 2nd Avenue West	1958	Recommended Eligible (Criterion C)	4-1h
Playhouse – Century 21 Exposition	201 Mercer Street	1962	Previously Determined Eligible (Criteria A and C)	4-1h
Puget Sound News Company	621 2nd Avenue North	1948	Recommended Eligible (Criteria A and C)	4-1h
Queen Anne Post Office and Regional Headquarters	415 1st Avenue North	1964	National Register-listed (Criterion A and C)	4-1h
Saint Paul's Episcopal Church	15 Roy Street	1962	Recommended Eligible (Criterion C)	4-1h
Seattle Engineering School	600 Queen Anne Avenue North	1918	Previously Determined Eligible (Criteria A and C)	4-1h

Property	Address	Built Date	National Register Eligibility Status	Figure
Seattle High School – Memorial Stadium	369 Republican Street (401 5th Avenue North)	1947	Previously Determined Eligible (Criteria A and C)	4-1h
Seattle Public Schools Department of Athletics Building	401 5th Avenue North	1965	Recommended Eligible (Criteria A and C)	4-1h
Seattle Master Builders Association Headquarters	170 Mercer Street	1951	Recommended Eligible (Criteria A and C)	4-1h
Small 20th Century Brick Commercial Building	513 Queen Anne Avenue North	1926	Recommended Eligible (Criterion C)	4-1h
Strathmore Apartments	7 Harrison Street	1908	Previously Determined Eligible (Criteria A and C)	4-1h
Sweden Pavilion (now Art/Not Terminal Gallery) G	305 Harrison Street	1961	Previously Determined Eligible (Criteria A and C); Designated Seattle Landmark	4-1h
Thurmond's Central Realty	123 Mercer Street	1955	Recommended Eligible (Criteria A and C)	4-1h
Uptown Studios and Apartments	610 2nd Avenue West	1953	Recommended Eligible (Criterion C)	4-1h
Uptown Theater	511 Queen Anne Avenue North	1926	Recommended Eligible (Criteria A and C)	4-1h
Wedgewood Apartments	505 1st Avenue North	1930	Recommended Eligible (Criterion C)	4-1h
Alweg Monorail - Century 21	5th Avenue	1962	Previously Determined Eligible (Criterion A); Designated Seattle Landmark	4-1f and 4-1g

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

4.1.4 South Interbay Segment

4.1.4.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the South Interbay Segment are described in Table 4-6.

4.1.4.2 Historic Resources

Section 4(f) historic resources in the South Interbay Segment are described in Table 4-7.

Table 4-6. Section 4(f) Parks and Recreational Resources in the South Interbay Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
Kinnear Park	Seattle Parks and Recreation	West Olympic Place	Historic 14.7-acre two-tiered park with off-leash dog run, hiking paths, a tennis court, and scenic views.	4-1i
Centennial Park	Port of Seattle	2711 Alaskan Way West	An 11-acre waterfront park with a bicycle and pedestrian path, picnic tables, benches, restrooms, and outdoor exercise equipment.	4-1i
Southwest Queen Anne Greenbelt	Seattle Parks and Recreation	West Howe Street & 12th Avenue West	12.6-acre greenbelt with forested trails for recreation.	4-1i
Interbay Golf Center (property includes Interbay P-Patch)	Seattle Parks and Recreation	2501 15th Avenue West	Public 9-hole golf course, plus driving range, miniature golf, and virtual reality gaming. 40.3 acres and one of five public golf courses in the city of Seattle. Interbay P-Patch is a 1.9-acre community garden with raised planting beds, tool sheds, and a food bank area.	4-1j
Interbay Athletic Complex	Seattle Parks and Recreation	3027 17th Avenue West	7.4-acre facility with a soccer stadium and two grass play fields.	4-1j

Table 4-7. Section 4(f) Historic Resources in the South Interbay Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Apartment Building	412 West Mercer Street	1958	Recommended Eligible (Criterion C)	4-1i
Cape Flattery Apartments	320 West Republican Street	1959	Recommended Eligible (Criterion C)	4-1i
Duplex	317 West Republican Street	1905	Recommended Eligible (Criterion C)	4-1i
Duplex	319 West Republican Street	1905	Recommended Eligible (Criterion C)	4-1i
Fourth Avenue West Apartments	515 4th Avenue West	1947	Recommended Eligible (Criterion C)	4-1i
Franconia Apartments	400 West Mercer Street	1930	Recommended Eligible (Criterion C)	4-1i
Gillespie House	1115 9th Avenue West	1936	Recommended Eligible (Criterion C)	4-1i
Gladding, McBean, and Company	945 Elliott Avenue West	1953	Previously Determined Eligible (Criterion C)	4-1i
Iris Apartments	415 West Roy Street	1928	Recommended Eligible (Criterion C)	4-1i
King County Metro Pumping Station	1523 West Garfield Street	1967	Recommended Eligible (Criterion A)	4-1i
Kinnear Park	899 West Olympic Place	1890	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	4-1i

Property	Address	Built Date	National Register Eligibility Status	Figure
Kinnear Park Comfort Station/Viewing Platform	899 West Olympic Place	1929	Recommended Eligible (Criteria A and C); Designated Seattle Landmark	4-1i
Lola Apartments	326 West Mercer Street	1929	Recommended Eligible (Criterion C)	4-1i
Mercer West Condominium	415 West Mercer Street	1962	Recommended Eligible (Criteria A and C)	4-1i
Metro Headquarters Building	410 4th Avenue West	1962	Recommended Eligible (Criterion C)	4-1i
Naomi Apartments	625 4th Avenue West	1930	Recommended Eligible (Criterion C)	4-1i
Powers Regulator Co.	511 2nd Avenue West	1955	Recommended Eligible (Criterion C)	4-1i
Office Building	411 West Mercer Street	1973	Recommended Eligible (Criterion C)	4-1i
Residence	317 1/2 West Republican Street	1905	Recommended Eligible (Criterion C)	4-1i
Residence	636 West Mercer Place	1907	Recommended Eligible (Criterion C)	4-1i
Residence	623 West Mercer Place	1932	Recommended Eligible (Criterion C)	4-1i
Residence	1015 West Lee Street	1911	Recommended Eligible (Criterion C)	4-1i
Sea View Apartments	519 West Roy Street	1932	Individually Eligible (Criteria A and C), designated Seattle landmark	4-1i
Sheet Metal Works and Roof Company	942 (934b) Elliott Avenue West	1929	Previously Determined Eligible (Criterion C)	4-1i
The Harbor House	521 5th Avenue West	1964	Recommended Eligible (Criteria A and C)	4-1i
Waterfront Employers of Washington and The Pacific Maritime Association	301 West Republican Street	1959	Recommended Eligible (Criteria A and C)	4-1i
Western Pacific Chemical Company	1436 [1430 to 1436] Elliott Avenue West	1940	Previously Determined Eligible (Criterion C)	4-1i
Westroy Apartments	421 West Roy Street	1931	Recommended Eligible (Criterion C)	4-1i
Wilson Machine Works	1038 Elliott Avenue West	1925	Previously Determined Eligible (Criteria A and C)	4-1i
Seattle Armory	1601 West Armory Way	1974	Recommended Eligible (Criteria A and C)	4-1i and 4-1j
Seattle Armory Field Maintenance Shop Building	1601 West Armory Way	1974	Recommended Eligible (Criterion A)	4-1i and 4-1j

Property	Address	Built Date	National Register Eligibility Status	Figure
14th Avenue West Group Historic District (2000, 2006, 2010, 2014, and 2016 14th Avenue West)	Multiple	1891 to 1906	Recommended Eligible, designated Seattle landmark	4-1j
Gilman House	2016 14th Avenue West	1891	Recommended Individually Eligible (Criterion C), contributes to recommended eligible 14th Avenue West Group Historic District; Designated Seattle landmark	4-1j
Torbactia House	2014 14th Avenue West	1901	Recommended Individually Eligible (Criterion C), contributes to recommended eligible 14th Avenue West Group Historic District; Designated Seattle landmark	4-1j
Residence	2010 14th Avenue West	1900	Recommended Individually Eligible (Criterion C), contributes to recommended eligible 14th Avenue West Group Historic District; Designated Seattle landmark	4-1j
Residence	2006 14th Avenue West	1906	Recommended Individually Eligible (Criterion C), contributes to recommended eligible 14th Avenue West Group Historic District; Designated Seattle landmark	4-1j
Residence	2000 14th Avenue West	1903	Recommended Individually Eligible (Criterion C), contributes to recommended eligible 14th Avenue West Group Historic District; Designated Seattle landmark	4-1j
Dor-Rik Apartments	2655 14th Avenue West	1961	Recommended Eligible (Criterion C)	4-1j
Federal Employees Credit Union	2500 15th Avenue West	1960	Recommended Eligible (Criterion C)	4-1j
Residence	2250 15th Avenue West	1905	Recommended Eligible (Criterion A)	4-1j
Residence	2246 1/2 15th Avenue West	1909	Recommended Eligible (Criterion A)	4-1j
K&D Carpet Installers Building/Alpine Hut	2215 15th Avenue West	1960	Recommended Eligible (Criteria A and C)	4-1j
Barrett West Apartments	2850 15th Avenue West	1964	Recommended Eligible (Criterion C)	4-1j

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

4.1.5 Interbay/Ballard Segment

4.1.5.1 Parks and Recreational Resources

Section 4(f) parks and recreational resources in the Interbay/Ballard Segment are described in Table 4-8.

Table 4-8. Section 4(f) Parks and Recreational Resources in the Interbay/Ballard Segment

Resource Name	Official with Jurisdiction	Location	Resource Activities, Features, and Attributes	Figure
14th Avenue Northwest Boat Ramp	Seattle Department of Transportation, Seattle Parks and Recreation City	4400 14th Avenue Northwest	A 0.6-acre facility that features a free public boat ramp that provides access to the Lake Washington Ship Canal. The site has two piers, two launch ramps, handicap parking spaces, and a portable restroom.	4-1l
Gemenskap Park	Seattle Department of Transportation, Seattle Parks and Recreation	5910 14th Avenue Northwest	A grassy 0.5-acre linear park with benches.	4-1m

4.1.5.2 Historic Resources

Section 4(f) historic resources in the Interbay/Ballard Segment are described in Table 4-9.

Table 4-9. Section 4(f) Historic Resources in the Interbay/Ballard Segment

Property	Address	Built Date	National Register Eligibility Status	Figure
Elmer & Moody Co. Woodwork	3635 Thorndyke Avenue West	1949	Recommended Eligible (Criteria A and C)	4-1k
Sweden Freezer Manufacturing Company	3401 Thorndyke Avenue West	1946	Recommended Eligible (Criterion A)	4-1k
Keller Supply Co.	3205 17th Avenue West	1955	Recommended Eligible (Criteria A and C)	4-1k
Interbay Pharmacy	1613 West Dravus Street	1959	Recommended Eligible (Criteria A and C)	4-1k
Madera on Queen Anne Condominiums	3608 14th Avenue West	1967	Recommended Eligible (Criterion C)	4-1k
Office Building	3220 17th Avenue West	1955	Recommended Eligible (Criteria A and C)	4-1k
Residence	3440 15th Avenue West	1911	Recommended Eligible (Criteria A and C)	4-1k
Residence	3442 15th Avenue West	1911	Recommended Eligible (Criteria A and C)	4-1k
Residence	3220 15th Avenue West	1920	Recommended Eligible (Criterion C)	4-1k
Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line	Ballard, Seattle	1890	Previously Determined Eligible (Criterion A)	4-1k
Superior Concrete Products Company	3615 15th Avenue West	1945	Recommended Eligible (Criterion A)	4-1k
Canal Apartments	1223 West Nickerson Street	1926	Recommended Eligible (Criterion C)	4-1k and 4-1l

Property	Address	Built Date	National Register Eligibility Status	Figure
Ballard Bridge	Spans Lake Washington Ship Canal	1919	National Register-Listed (Criterion C)	4-11
Edith Macefield House	1438 Northwest 46th Street	1900	Recommended Eligible (Criterion A)	4-11
Fishermen's Terminal Historic District	2000 West Emerson Place (1735 West Thurman Street)	Multiple	Recommended Eligible Historic District (Criterion A)	4-11
Fishermen's Terminal Fishing Vessel Owner's Marine Ways	2000 West Emerson Place (1511 West Thurman Street)	1919	Recommended Eligible (Criterion A), contributes to recommended eligible Fishermen's Terminal Historic District	4-11
Fishermen's Terminal Fishing Vessel Owner's Winch House	2000 West Emerson Place	1916	Previously Determined Eligible (Criterion A and C), contributes to recommended eligible Fishermen's Terminal Historic District	4-11
Fishermen's Terminal-South Bulkhead Wall	2000 West Emerson Place (1735 West Thurman Street)	1917	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-7	2000 West Emerson Place	1943	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-8	2000 West Emerson Place	1954	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal FVO Machine Building I-3	2000 West Emerson Place	1979	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-3	2000 West Emerson Place	1943	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Seattle Ship Supply Company Warehouse C-9	2000 West Emerson Place	1918	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Float 1	2000 West Emerson Place	1919	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Dock 3	2000 West Emerson Place	1944	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Dock 4	2000 West Emerson Place	1936	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Office C-10	2000 West Emerson Place	1938	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Downie Building	1900 West Emerson Place	1979	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-4	2000 West Emerson Place	1943	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11

Property	Address	Built Date	National Register Eligibility Status	Figure
Fishermen's Terminal Net Shed N-5	2000 West Emerson Place	1956	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-6	2000 West Emerson Place	1950	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Warehouse Building I-8	2000 West Emerson Place	1957	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Net Shed N-9	2000 West Emerson Place	1978	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Nordby Building	2000 West Emerson Place	1955	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal West Bulkhead	2000 West Emerson Place	1948	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Bathroom Building M-2	2000 West Emerson Place	1960	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal Bathroom Building M-15	2000 West Emerson Place	1960	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Fishermen's Terminal FVO Building M-4	2000 West Emerson Place	1960	Contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
Seattle First National Bank - Fishermen's Terminal Branch	2000 West Emerson Place	1964	Recommended Eligible (Criterion C) and contributes to recommended eligible Fishermen's Terminal Historic District (Criterion A)	4-11
HDF Propeller Company Machining and Manufacturing Building	4451 14th Avenue Northwest	1979	Recommended Eligible (Criterion A)	4-11
Industrial and Commercial Building	1121 Northwest 45th Street	1963	Recommended Eligible (Criteria A and C)	4-11
Industrial Building	1130 Northwest 45th Street	1910	Previously Determined Eligible (Criterion A)	4-11
Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building	4511 Shilshole Avenue Northwest	1945; 1960	Recommended Eligible (Criteria A and C)	4-11
Lyle Branchflower Company Processing Warehouse	4507 Shilshole Avenue Northwest	1950	Recommended Eligible (Criteria A and C)	4-11
Mike's Tavern and Chili Parlor	1447 Northwest Ballard Way	1940	Recommended Eligible (Criteria A and C)	4-11
Northwest Builders Hardware	1100 West Ewing Street	1957	Recommended Eligible (Criteria A and C)	4-11
United States Plywood Corporation Power House	4025 13th Avenue West	1938	Recommended Eligible (Criteria A and C)	4-11

Property	Address	Built Date	National Register Eligibility Status	Figure
Apartment Complex	5700 14th Avenue Northwest	1957	Recommended Eligible (Criterion C)	4-1m
Bardahl Manufacturing Company Office	1400 Northwest 52nd Street	1957	Recommended Eligible (Criteria A and C)	4-1m
Duplex	1145 Northwest 56th Street	1945	Recommended Eligible (Criterion C)	4-1m
Leary Substation	1414 Northwest Leary Way	1954	Recommended Eligible (Criteria A and C)	4-1m
Mid-Century Light Industrial Building	5118 14th Avenue Northwest	1963	Recommended Eligible (Criterion C)	4-1m
Nelson Chevrolet Showroom	1521 Northwest 50th Street	1973	Recommended Eligible (Criterion C)	4-1m
Nelson Chevrolet Storage Lot Office Building	1510 Northwest 50th Street	1956	Recommended Eligible (Criteria A and C)	4-1m
Skipper's Fish, Chip and Chowder House	5305 15th Avenue Northwest	1971	Recommended Eligible (Criteria A and C)	4-1m
Office Building	1148 Northwest Leary Way	1970	Recommended Eligible (Criterion C)	4-1m
Residence	5713 14th Avenue Northwest	1905	Recommended Eligible (Criterion C)	4-1m
Restaurant	1510 Northwest Leary Way	1927	Recommended Eligible (Criteria A and C)	4-1m
Seattle City Light - Ballard Substation	1415 Northwest 49th Street	1918	Recommended Eligible (Criteria A and C)	4-1m

Note: Property names correspond with the resource names documented on the Historic Property Inventory forms prepared for the Department of Archaeology and Historic Preservation. Property names typically reflect historic names of businesses or individuals that occupied the building in the past.

4.2 Section 4(f) Resources Preliminary Use Determinations

This section assesses impacts to Section 4(f) resources in the Ballard Link Extension study area from segment alternatives and provides preliminary determinations as to whether project impacts would result in a use of that resource under Section 4(f). Summary tables of the findings in this section are presented in Section 4.3, Summary of Preliminary Use Determinations.

For the discussion in this section, if a Section 4(f) resource is referred to as “not impacted,” it means that particular resource would not have property permanently incorporated or temporarily occupied by any alternative, nor would there be a constructive use.

The Seattle and Walla Walla Railroad/Puget Sound Shore Railroad Company/Seattle, Lake Shore and Eastern Railroad/Northern Pacific Railway Black River Junction to the Lake Washington Ship Canal would not be impacted by any alternatives in the Chinatown-International District, Downtown, South Interbay, and Interbay/Ballard segments and therefore it is not discussed further in this section.

4.2.1 SODO Segment

4.2.1.1 Parks and Recreational Resources

There are no Section 4(f) parks or recreational resources in the SODO Segment.

4.2.1.2 Historic Resources

The Lincoln Moving & Storage, Alaska Orient Van Lines Building would not be impacted by any SODO Segment alternative.

One Section 4(f) historic resource, Graybar Electric Company Building, would be impacted by SODO Segment alternatives as discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report, of the Draft Environmental Impact Statement.

Graybar Electric Company Building

Alternative SODO-1a (when connecting to Option CID-1b, Alternative CID-2a, and Option CID-2b), Option SODO-1b (when connecting to Option CID-1b*, Alternative CID-2a, and Option CID-2b), and Alternative SODO-2 (when connecting to Alternative CID-2a)*

These alternatives would result in the demolition of this historic building, which would cause an adverse effect under Section 106. This impact would occur only when the SODO Segment alternative is connecting to the Chinatown-International District Segment alternative(s), as identified in the parentheses above.

Conclusion. The adverse effect under Section 106 to the Graybar Electric Company Building would constitute a use under Section 4(f).

Alternative SODO-1a (when connecting to Alternative CID-1a), Option SODO-1b (when connecting to Alternative CID-1a*), and Alternative SODO-2 (when connecting to Alternative CID-1a*)*

These alternatives would permanently incorporate land from this historic resource, but they were found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative SODO-1a and Alternative SODO-2 would **not** result in an adverse effect under Section 106. As such, impacts to the Graybar Electric Company Building historic resource under Preferred Alternative SODO-1a (when connecting to Alternative CID-1a*), Option SODO-1b (when connecting to Alternative CID-1a*), and Alternative SODO-2 (when connecting to Alternative CID-1a*) are proposed to be *de minimis* under Section 4(f).

4.2.2 Chinatown-International District Segment

Some project alternatives in the Chinatown-International District Segment would require tunnel easements under Section 4(f) resources. All the Section 4(f) park resources located above a proposed tunnel would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site. No historic properties were identified that would be substantially impaired by a tunnel underneath; therefore, they are not discussed further in this segment.

4.2.2.1 Parks and Recreational Resources

There would be no impact to any Section 4(f) parks or recreational resources from any Chinatown-International District Segment alternatives.

4.2.2.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any Chinatown-International District Segment alternatives:

- King County Administration Building
- 420 4th Avenue
- Hotel Reynolds
- Macrae Parking Garage
- Old Public Safety Building – Seattle
- Prefontaine Building
- Great Northern Railway Tunnel
- Opening in Tunnel Above Great Northern/Northern Pacific Train Tracks (two locations)
- Buty Building
- Publix Hotel
- United States Immigrant Station and Assay Office – Seattle
- Dilling Park/City Hall Park
- New Richmond Hotel
- American Hotel
- Nepage McKenney Company
- Holgate Terminals Incorporated
- Pacific National Bank of Washington
- United Savings and Loan Bank
- Hing Hay Park
- Goon Dip Building
- China Garage (T.C. Garage)
- T and C Building
- Eclipse Hotel
- Gee How Oak Tin Hotel
- Hudson Hotel/Louisa Hotel
- Kong Yick Apartments
- Chong Wa Benevolent Association
- East Kong Yick Building/Freeman Hotel
- Republic Hotel
- Bing Kung Association Apartments
- Don Hee Apartments
- Hip Sing Association Building/Chinn Apartments
- Commercial Building (805 South King Street)
- Jackson Service Station
- Sun Ya Restaurant
- Rainier Bank-International District Branch
- The Dragon
- Chinese Opera House/Chinese Garden Restaurant
- Frye Investment Company Office Building

- Seattle Engineering Department Office Building
- Metropolitan Building
- Seattle Lighting Fixture Company Annex
- Governor Apartments
- Old Main School
- H.T. Kubota Building
- Disston, Inc. Plant
- Eng, William Residence

Section 4(f) historic resources that would be impacted by at least one Chinatown-International District Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report.

Seattle Chinatown Historic District

Alternative CID-1a* and Option CID-1b*

Neither Alternative CID-1a* nor Option CID-1b* would permanently incorporate land from the Seattle Chinatown Historic District resource; however, a preliminary finding of adverse effect under Section 106 has been made for these alternatives with respect to this historic resource. The Section 106 finding of adverse effect for this resource is associated with the proximity impacts of construction activities, including detour of traffic from 4th Avenue South to roads in this district. There would be no permanent incorporation of land into the project because Sound Transit currently owns the property in this district where permanent improvements would be made, or the improvements would be within existing public roadway right-of-way. Because of recent major infrastructure projects in the vicinity of this district, this alternative and option would have the potential to further stress the economic strength of this district due to increased traffic, potentially resulting in reduced investment or abandonment of the buildings. As a result, the construction in this area would be considered an adverse effect to this district. In addition, Union Station at 401 South Jackson Street, which contributes to this district and is individually National Register-listed, would be adversely affected by these alternatives; the impacts from incorporating a station entrance into this building would diminish its integrity of materials, design, workmanship, setting, and feeling. The other individually historic properties within this district in this segment would not be adversely affected. Some construction traffic would occur on streets in the vicinity of historic properties, but it would be temporary and would not alter or diminish any aspect of the individual properties' integrity. The protected activities, features, and attributes of the historic district would not incur permanent substantial diminishment and would retain National Register eligibility.

Conclusion. Neither Alternative CID-1a* nor Option CID-1b* would result in a permanent incorporation of land from this historic resource and although there would be an adverse effect under Section 106 related to proximity impacts for each alternative, these proximity impacts would not result in a constructive use under Section 4(f). As such, Alternative CID-1a* or Option CID-1b* would **not** result in a use of the Seattle Chinatown Historic District historic resource under Section 4(f).

Alternative CID-2a and Option CID-2b

Alternative CID-2a and Option CID-2b would result in the demolition of a building that contributes to this historic district, and a preliminary finding of adverse effect under Section 106 has been made for these alternatives with respect to this historic resource.

Conclusion. The adverse effect under Section 106 to the Seattle Chinatown Historic District historic resource would constitute a use under Section 4(f).

Pioneer Square-Skid Road National Historic District

Alternative CID-2a and Option CID-2b would not impact this resource.

Alternative CID-1a* and Option CID-1b*

Neither Alternative CID-1a* nor Option CID-1b* would permanently incorporate land from the Pioneer Square-Skid Road National Historic District resource; however, a preliminary finding of adverse effect under Section 106 has been made for both alternatives with respect to this historic resource. The Section 106 finding of adverse effect for this resource is associated with the proximity impacts of construction activities, including detour of traffic from 4th Avenue South to roads in this district, not with permanent impacts of the project. Because of recent major infrastructure projects in the vicinity of this district this alternative and option would have the potential to further stress the economic strength of this district due to increased traffic, potentially resulting in reduced investment or abandonment of the buildings. As a result, the construction in this area would be considered an adverse effect to this district. In addition, Union Station-Seattle at 401 South Jackson Street, which contributes to this district and is individually National Register-listed, would be adversely affected by these alternatives; the impacts from incorporating a station entrance into this building would diminish its integrity of materials, design, workmanship, setting, and feeling. The other individually historic properties within this district in this segment would not be adversely affected. Some construction traffic would occur on streets in the vicinity of historic properties, but it would be temporary and would not alter or diminish any aspect of the individual properties' integrity. The protected activities, features, and attributes of the historic district would not incur permanent substantial diminishment and would retain National Register eligibility.

Conclusion. Neither Alternative CID-1a* nor Option CID-1b* would result in a permanent incorporation of land from the Pioneer Square-Skid Road National Historic District resource. Although there would be an adverse effect under Section 106 related to proximity impacts for each alternative, these proximity impacts would not result in a constructive use under Section 4(f) because they would not result in substantial impairment of the resource. As such, there would **not** be a Section 4(f) use of this resource as a result of Alternative CID-1a* or Option CID-1b*.

Retail Stores, 418 5th Avenue South

Alternative CID-1a* and Option CID-1b* would not impact the resource at 418 5th Avenue South.

Alternative CID-2a and Option CID-2b

Alternative CID-2a and Option CID-2b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 418 5th Avenue South historic resource would constitute a use under Section 4(f).

Union Station-Seattle

Alternative CID-2a and Option CID-2b would not impact Union Station-Seattle.

Alternative CID-1a and Option CID-1b**

Alternative CID-1a* and Option CID-1b* would both permanently incorporate land from the Union Station historic resource, and each would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Union Station-Seattle historic resource would constitute a use under Section 4(f).

Seattle First National Bank – International District Branch

Alternative CID-1a* and Option CID-1b* would not impact the Seattle First National Bank – International District Branch resource.

Alternative CID-2a and Option CID-2b

Alternative CID-2a and Option CID-2b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 for to the Seattle First National Bank – International District Branch historic resource would constitute a use under Section 4(f).

4.2.3 Downtown Segment

Some project alternatives in the Downtown Segment would require tunnel easements under Section 4(f) resources. All the Section 4(f) park resources located above a proposed tunnel would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site. No historic properties were identified that would be substantially impaired by a tunnel underneath; therefore, they are not discussed further in this segment.

4.2.3.1 Parks and Recreational Resources

There are seven Section 4(f) parks and recreational resources in the Downtown Segment. Denny Park and Counterbalance Park would not be impacted by the two Downtown Segment alternatives. Impacts to the other resources are described in the subsections below.

Naramore Fountain Park

Preferred Alternative DT-1 would not impact Naramore Fountain Park.

Alternative DT-2

The entire Naramore Fountain Park would be permanently incorporated by Alternative DT-2 for the Midtown Station entrance (Figure 4-2). The historic fountain and plaza would be integrated into this alternative's station entrance; during construction, the historic fountain would be temporarily relocated and then reinstalled when construction is complete. The main features of this park (the small plaza, fountain, and seating) would remain, and the park would still be available for public use in the same manner it currently is today after construction of the station entrance. However, sufficient surface property interests would be acquired for project implementation, resulting in a permanent incorporation of land.

Conclusion. Based on the above description of impacts, the Alternative DT-2 permanent incorporation of Naramore Fountain Park would result in a use of the park under Section 4(f).

Freeway Park

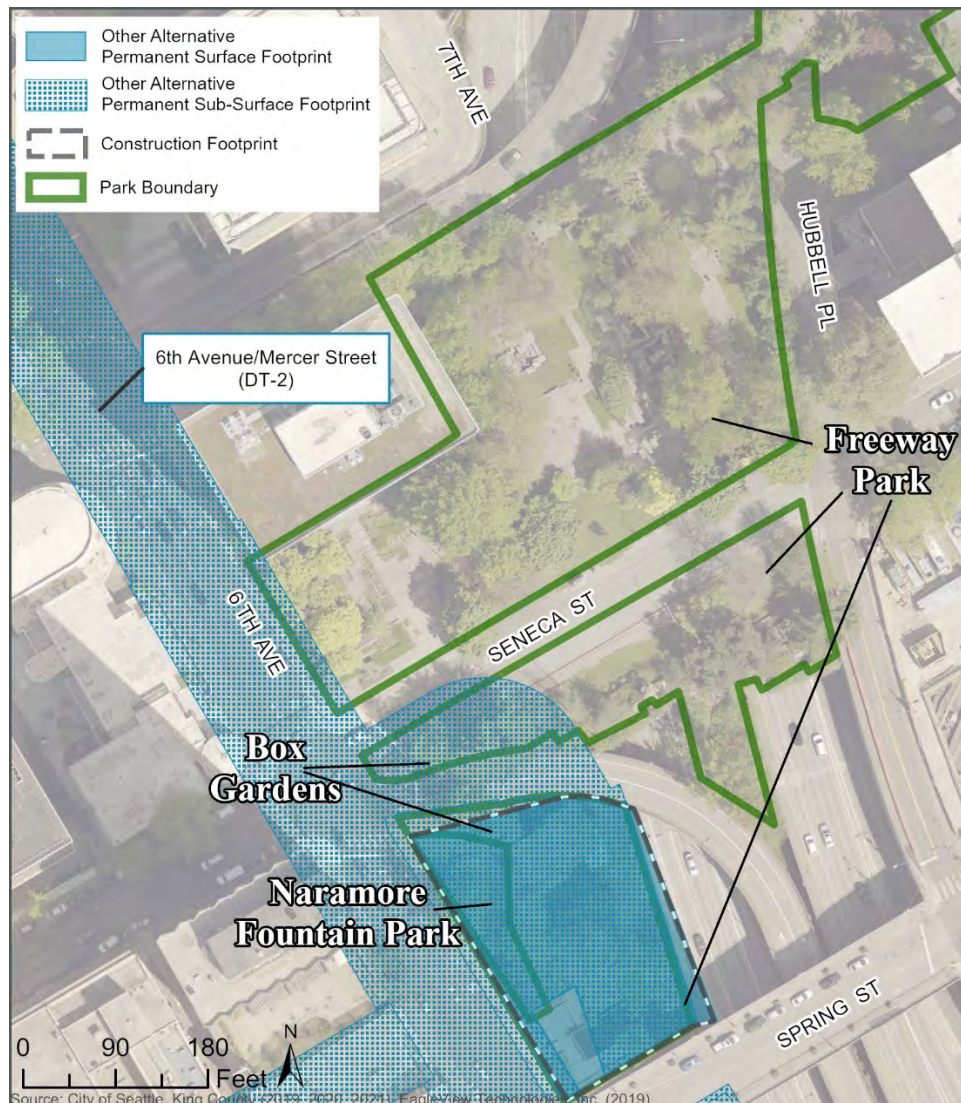
Preferred Alternative DT-1 would not impact Freeway Park.

Alternative DT-2

Alternative DT-2 would permanently incorporate approximately 0.5 acre of Freeway Park to accommodate the installation of a Midtown Station entrance (Figure 4-2). Approximately 10 percent of the total park area would be permanently impacted. This alternative would permanently incorporate the area of the park between Seneca Street and Spring Street east of Naramore Fountain Park and would remove the pathway and benches in this area. As such, the permanent incorporation would result in an adverse effect on the activities, features, or attributes that qualify it for protection under Section 4(f).

Conclusion. Based on the above description of impacts, the Alternative DT-2 permanent incorporation of Freeway Park would adversely affect the features, attributes, or activities of this resource and result in a use of the park under Section 4(f).

Figure 4-2. Naramore Fountain Park and Freeway Park Impacts, Ballard Link Extension – Downtown Segment



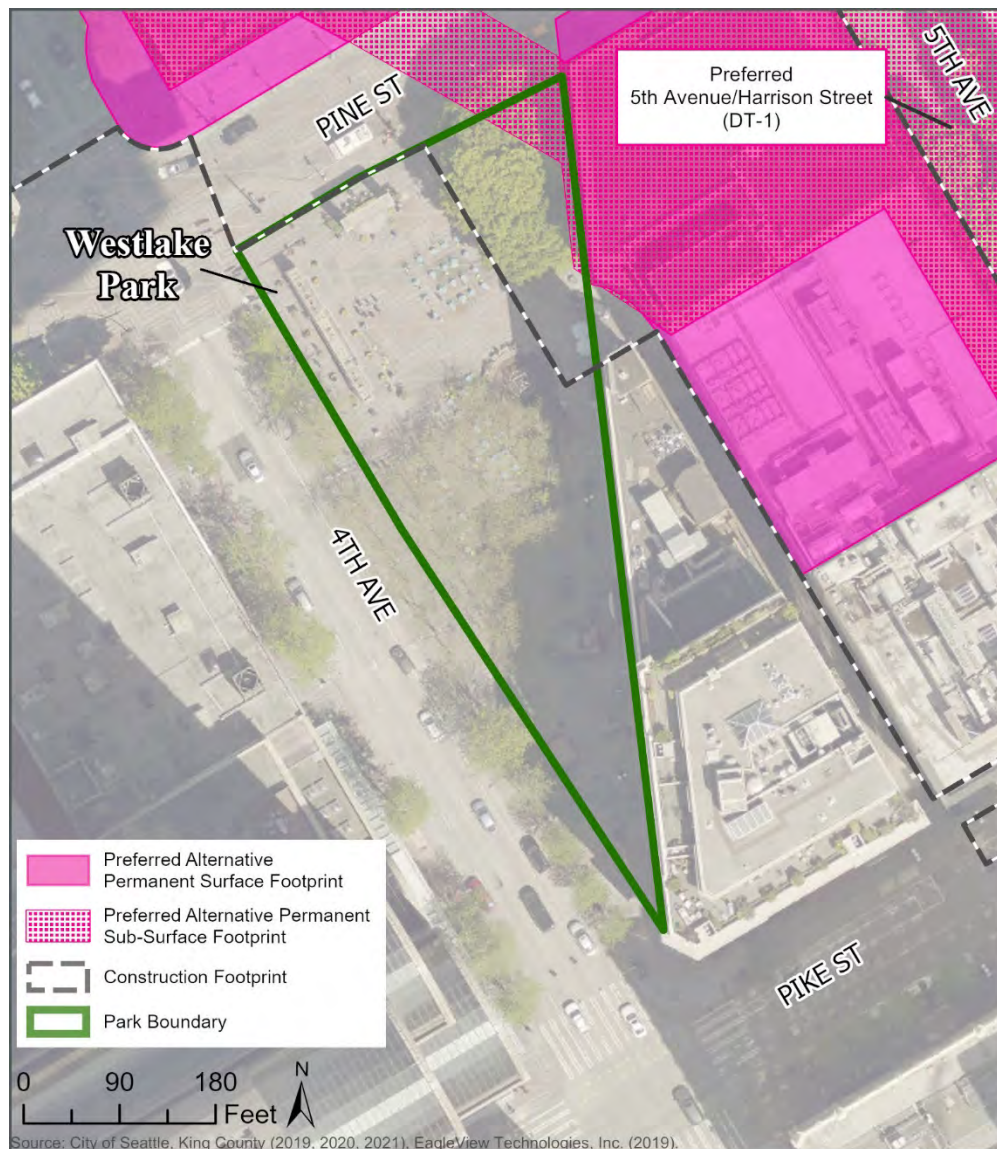
Westlake Park

Alternative DT-2 would not impact Westlake Park.

Alternative DT-1

There would be no permanent incorporation of Westlake Park with this alternative. During construction, this alternative would result in a temporary occupancy of about 0.1 acre of Westlake Park for construction of a pedestrian undercrossing under Pine Street connecting the existing Westlake Station and the new station (Figure 4-3). Temporary impacts would occur in the northeast corner of the park and would include removal of mature landscaping trees. This area contains landscaping with trees and a paved plaza. There would be no impact to the fountain, play area, or areas with programmed activities; as such, the park and recreational features and amenities that qualify this resource for protection under Section 4(f) would not be disturbed.

Figure 4-3. Westlake Park Impacts, Ballard Link Extension - Downtown Segment



The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: The overall duration of the Ballard Link Extension is approximately 10 years. The project would be constructed in phases so the duration of the temporary occupancy of Westlake Park would be approximately 6 years, which is less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: The area disturbed during construction would be restored (repaved and trees replanted) to existing or better-than-existing conditions when construction is completed. As such, the magnitude of changes to this resource would be minor.

3. **Criterion:** *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.*

Finding: None of the park and recreational activities, features, or attributes of Westlake Park would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the resource as they currently do. There would be no access impacts to the recreational part of this resource. There are no protected activities, features, or attributes of Westlake Park in the area that would be impacted.

4. **Criterion:** *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).*

Finding: The approximately 0.1 acre of property disturbed during temporary occupancy would be restored to existing conditions or better. Pavement would be replaced, and trees replanted.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit will be requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

Conclusion. Preferred Alternative DT-1 would not adversely affect the recreational activities, features, or attributes of Westlake Park either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Urban Triangle Park

Alternative DT-2 would not impact the Urban Triangle Park.

Alternative DT-1

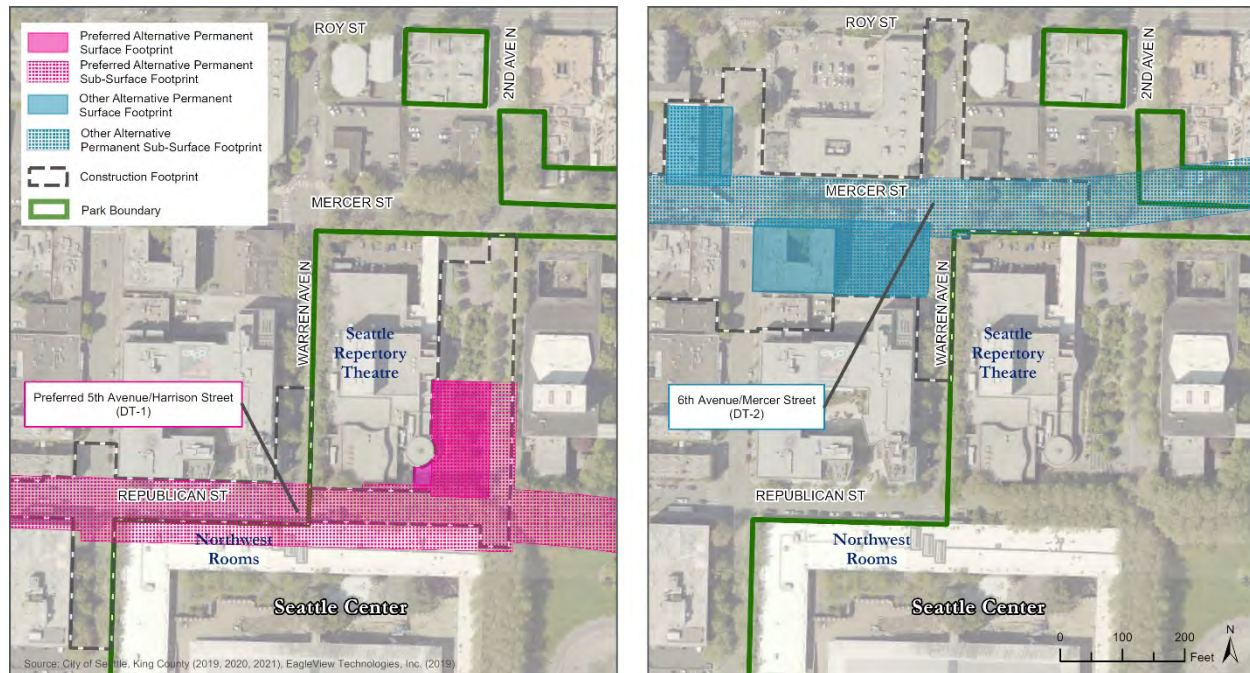
There would be no permanent incorporation of the Urban Triangle Park with this alternative. This alternative would result in a temporary closure of the entire park for up to 6 years during construction. The park would be returned to its pre-project condition following construction.

Conclusion. Based on the above description of impacts, the Preferred Alternative DT-1 temporary occupancy of the park would adversely affect the features, attributes, or activities of the Urban Triangle Park and result in a use of the park under Section 4(f).

Seattle Center

Figure 4-4 shows the impacts on this resource described below.

Figure 4-4. Seattle Center Impacts, Ballard Link Extension – Downtown Segment



Alternative DT-1

Preferred Alternative DT-1 would permanently incorporate approximately 0.6 acre of the Seattle Center property for the Seattle Center Station entrance. This would result in approximately less than 1 percent of the total area of Seattle Center permanently impacted. The permanently incorporated part of the property would include the southern entrance to the Seattle Repertory Theatre, as well as landscaping. There would be no impact to the greens, the interactive water fountain, the play area, or the event venues, so the park and recreational activities, features, and attributes that qualify this resource for protection under Section 4(f) would not be adversely impacted.

There would be no operational noise or vibration impacts after mitigation. Existing access points to the Seattle Center, including access to the Seattle Repertory Theatre would be retained. A new mode of access, light rail, would be added. There would be visual changes to this part of the Seattle Center campus, but these changes would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Construction activities and staging would occur in front of the Seattle Repertory Theatre, in a landscaped area known as Donnelly Garden and Theater Commons. This disturbed landscaped area would be restored after construction. During construction, this alternative would result in a temporary closure of 1.5 acres of the Seattle Center property, but the public would still be able to access the greens, interactive water fountain, play area, and event venues. Therefore, the

park and recreational activities, features, and attributes that qualify this resource for protection under Section 4(f) would not be adversely impacted during project construction.

Cut-and-cover construction would also occur on Republican Street, east of 1st Avenue North, to the north of the Northwest Rooms. The Northwest Rooms house the K.E.X.P. radio station, the Vera Project, and the SIFF Film Center. These facilities in the Northwest Rooms are expected to continue to operate during construction, but temporary relocation may also be considered due to noise and vibration impacts. Some sensitive receivers at Seattle Center could experience vibration or groundborne noise impacts during construction. Sound Transit would coordinate with Seattle Center during final design regarding construction phasing and timing for work on and near the campus to minimize the construction impacts on events at the campus as well as permanent campus tenants. Measures to minimize noise and vibration impacts associated with construction are described in Section 3.5, Minimization of Noise and Vibration Effects.

Access from Mercer Street to August Wilson Way on the east side of the Seattle Repertory Theatre (2nd Avenue North) would be closed during construction, but other access points exist to the west and east along Mercer Street. This would affect non-motorized access as well as campus maintenance and delivery access that uses this roadway. It is expected the theater would continue to operate during construction, with continued access from the main entrance off Mercer Street. Access to Seattle Center from the west along Republican Street and August Wilson Way would also be closed, but access farther south at the current Climate Pledge Arena and Thomas Street would be maintained. Construction would avoid the International Fountain Lawn and the path around the lawn would be maintained. Seattle Center events and activities are expected to be able to continue during construction. Mature trees along August Wilson Way that are designated as Exceptional Trees by the City would be removed for construction.

A benefit of the Preferred Alternative DT-1 Seattle Center Station is that it would provide direct light rail access to Seattle Center without requiring users to cross adjacent public streets, Seattle Center attracts over 12 million visitors each year. Light rail would be an attractive alternative to single-occupancy-vehicle access, which requires visitors to use parking facilities that are in high demand and farther away from the facility's event venues and recreational features. The Seattle Center Station would provide easy access to the events and attractions at Seattle Center that currently contribute to traffic and parking congestion in the area. Queuing for access to the station after large events could result in patrons potentially remaining longer on the Seattle Center campus near the station.

Conclusion. Based on the above discussion, Preferred Alternative DT-1 would not adversely affect the recreational amenities of this resource either permanently or temporarily during construction; therefore, impacts to Seattle Center under Preferred Alternative DT-1 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

Alternative DT-2

There would be no permanent incorporation of Seattle Center with this alternative. The Seattle Center Station would provide alternate access to the events and attractions at Seattle Center, which currently contribute to traffic and parking congestion in the area. Queuing for access to the station after large events could result in patrons potentially remaining longer on the Seattle Center campus near the station. This would not impact the recreational use of the park, and as such would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f). Therefore, there would be no constructive use of Seattle Center under Alternative DT-2.

During construction, this alternative would result in a temporary occupancy of less than 0.1 acre of Seattle Center for construction of the cut-and-cover Seattle Center Station. The area of Seattle Center that would be temporarily occupied is the northwest corner of the Seattle Repertory Theatre property. This area contains a sidewalk and a landscaping strip with trees and vegetation near the Seattle Repertory Theatre. The theater parking and access would not be affected. The retaining wall at the northwest corner of the theater would also not be affected. There would be no impact to the greens, interactive water fountain, play area, or event venues; as such, the park and recreational activities, features, or attributes that qualify this resource for protection under Section 4(f) would not be disturbed. Alternative DT-2 would require partial closure of Mercer Street for 3.5 years, between Warren Avenue North and 1st Avenue North, for construction of the Seattle Center Station, which would affect access to the north side of Seattle Center from Mercer Street. Closure of Mercer Street would affect traffic in this area and could make passenger and vehicle access to parking and event loading areas for Seattle Center more difficult. Some sensitive receivers at Seattle Center could experience vibration or groundborne noise impacts during construction. Sound Transit would coordinate with Seattle Center during final design regarding construction phasing and timing for work on and near the campus to minimize the construction impacts on events at the campus as well as permanent campus tenants. Measures to minimize noise and vibration impacts associated with construction are described in Section 3.5, Minimization of Noise and Vibration Effects.

The temporary occupancy exception criteria and findings are as follows:

1. **Criterion:** *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).*

Finding: The overall duration of the Ballard Link Extension is approximately 10 years. The project would be constructed in phases so the duration of the temporary occupancy of Seattle Center would be approximately 4 to 6 years, which is less than the time needed to construct the whole project. There would be no change in ownership of this resource.

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

Finding: The area disturbed during construction would be restored (repaved and street trees replanted) to existing or better-than-existing conditions when construction is completed. As such, the magnitude of changes to this resource would be minor.

3. **Criterion:** *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.*

Finding: None of the park and recreational activities, features, or attributes of Seattle Center would incur permanent adverse physical impacts, nor would there be temporary or permanent interference with visitors using the resource as they currently do. There would be no noise, visual, or access impacts to the recreational part of this resource. There are no protected activities, features, or attributes of Seattle Center in the area that would be impacted.

4. **Criterion:** *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).*

Finding: The approximately 0.1 acre of property disturbed during temporary occupancy would be restored to existing conditions or better. Pavement would be replaced, and street trees replanted.

5. **Criterion:** *There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.*

Finding: FTA and Sound Transit will be requesting documented agreement from the City of Seattle that the above temporary occupancy exception criteria are met for this resource.

Conclusion. Alternative DT-2 would not adversely affect the recreational activities, features, or attributes of Seattle Center either permanently or during temporary occupancy. The temporary occupancy is proposed to be minimal and would not constitute a use because it satisfies the temporary use exception conditions. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

4.2.3.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any Downtown Segment alternatives:

- Medical Dental Building – Seattle
- Lloyd Building
- Washington Plaza Hotel
- Plaza 600 Building
- McDonald's Restaurant
- Western Auto Supply
- Westlake Hotel
- Larned Apartments
- Volker, William, Building
- Olympic Hotel Parking Garage and Airline Terminal Building
- Women's University Club of Seattle
- United States Courthouse – Seattle
- The Dover Apartments
- First Methodist Episcopal Church – Seattle
- Plymouth Congregational Church
- Washington Athletic Club
- Park Hilton Hotel
- Logan Building
- Shafer Building
- Decatur Building
- Coliseum Building
- The People's National Bank
- One Union Square
- Park Place Building
- Durant Motor Company
- Kelly Goodwin Hardwood
- Dick's Drive In
- Wedgewood Apartments
- Queen Anne Post Office and Regional Headquarters
- Playhouse - Century 21 Exposition
- Friendship Bell/Kobe Bell
- Seattle High School – Memorial Stadium
- Seattle Public Schools Department of Athletics Building

- Ancient Order of United Workmen Meeting Hall Number 2
- J.T. Hardeman Hat Company
- Washington Natural Gas Company
- Lexow & Son Custom Cabinet Works
- 100 West Harrison Plaza
- Grex Apartments
- Office Building, 506 2nd Avenue West
- Uptown Theater
- Broad Street Substation Control Building
- Broad Street Substation Crane Building
- Y.W.C.A. Building – Seattle
- Seattle Master Builders Association Headquarters
- Gas Station, 600 Warren Avenue North
- Garage – Century 21 Exposition
- S.L. Savidge Inc. Dodge and Plymouth Dealership
- Seattle Engineering School
- Vance Hotel
- Stuart G. Thompson-Elwell Company Building
- Rainier Club
- Key Arena
- International Plaza
- Sweden Pavilion
- Pioneer Sand and Gravel
- Gordon Apartments
- People's National Bank of Washington
- Apartments, 800 to 810 Harrison Street
- Northern Bank and Trust Building
- Skinner Building/5th Avenue Theatre
- Rainier Tower
- Saint Paul's Episcopal Church
- City Light- Power Control Center
- IBM Building
- Olympic Hotel
- Bergonian Hotel
- Textile Tower
- Central Building
- Leamington Hotel and Apartments
- The Pacific Building
- Arctic Building
- Liggett Building
- Small 20th Century Brick Commercial Building
- V. Savinoff Furniture Studio
- Alvina Vista Apartments
- Uptown Studios and Apartments
- G.S. Hamman Building
- Puget Sound News Company
- Tricoach Corporation
- Delmasso Apartments

- Century Building
- Strathmore Apartments
- Commercial Building, 228 Dexter Avenue North
- Paramount Theatre
- Alweg Monorail - Century 21
- John H. McGraw Statue
- E.J. Towle Co. Street Clock
- Zedick Jewelers Street Clock
- Ben Bridge Jewelers Clock

Section 4(f) historic resources that would be impacted by at least one Downtown Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report.

Frederick and Nelson Building

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would permanently incorporate land from the Frederick and Nelson Building historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Frederick and Nelson Building historic resource would constitute a use under Section 4(f).

Retail Stores, 2120 Westlake Avenue

Alternative DT-2 would not impact this resource.

Alternative DT-1

Preferred Alternative DT-1 would permanently incorporate land from the 2120 Westlake Avenue historic resource, but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative DT-1 would not result in an adverse effect under Section 106. As such, impacts to the 2120 Westlake Avenue historic resource under Preferred Alternative DT-1 are proposed to be *de minimis* under Section 4(f).

Spring Apartment Hotel

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would permanently incorporate land from the Spring Apartment Hotel historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Spring Apartment Hotel historic resource would constitute a use under Section 4(f).

Bank of California Building

Alternative DT-2 would not impact this resource.

Alternative DT-1

Preferred Alternative DT-1 would result in the demolition of part of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Bank of California Building historic resource would constitute a use under Section 4(f).

O'Shea Building

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would permanently incorporate land from the O'Shea Building historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the O'Shea Building historic resource would constitute a use under Section 4(f).

Thurmond's Central Realty

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Thurmond's Central Realty historic resource would constitute a use under Section 4(f).

Maxine Apartments

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Maxine Apartments historic resource would constitute a use under Section 4(f).

National Bank of Commerce – Queen Anne Branch

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the National Bank of Commerce – Queen Anne Branch historic resource would constitute a use under Section 4(f).

Office Building, 557 Roy Street

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 557 Roy Street Office Building historic resource would constitute a use under Section 4(f).

Freeway Park

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would permanently incorporate land from the Freeway Park historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Freeway Park historic resource would constitute a use under Section 4(f).

International Commerce and Industry Building

Alternative DT-2 would not impact this resource.

Alternative DT-1

Preferred Alternative DT-1 would not permanently incorporate land from the International Commerce and Industry Building at Seattle Center. However, a preliminary finding of adverse effect under Section 106 has been made for this historic resource with respect to Preferred Alternative DT-1. The Section 106 finding of adverse effect for the International Commerce and Industry Building is associated with the proximity impacts of construction activities, not permanent impacts of the project. The protected activities, features, and attributes of this historic resource would not incur permanent substantial diminishment. As such, there would not be a constructive use of this historic resource as a result of Preferred Alternative DT-1 actions.

Conclusion. Preferred Alternative DT-1 would not result in a permanent incorporation of land from the International Commerce and Industry Building. Although there would be an adverse effect under Section 106 related to proximity impacts for this alternative, these proximity impacts would not result in a constructive use under Section 4(f). As such, there would not be a Section 4(f) use of the International Commerce and Industry Building as a result of Preferred Alternative DT-1 actions because the impacts would not result in substantial impairment of the resource.

Grand Central Garage

Alternative DT-2 would not impact this resource.

Alternative DT-1

Preferred Alternative DT-1 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Grand Central Garage historic resource would constitute a use under Section 4(f).

Floyd A. Naramore Fountain and Plaza

Preferred Alternative DT-1 would not impact this resource.

Alternative DT-2

Alternative DT-2 would permanently incorporate land from the Floyd A. Naramore Fountain and Plaza historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Floyd A. Naramore Fountain and Plaza historic resource would constitute a use under Section 4(f).

4.2.4 South Interbay Segment

Some project alternatives in the South Interbay Segment would require tunnel easements under Section 4(f) resources. All the Section 4(f) park resources located above a proposed tunnel would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site. No historic properties were identified that would be substantially impaired by a tunnel underneath; therefore, they are not discussed further in this segment.

4.2.4.1 Parks and Recreational Resources

There are five Section 4(f) park and recreational resources in the South Interbay Segment. Centennial Park would not be impacted by any South Interbay Segment alternatives. Impacts to the other resources are described in the subsections below.

Kinnear Park

Figure 4-5 shows the impacts on Kinnear Park described below.

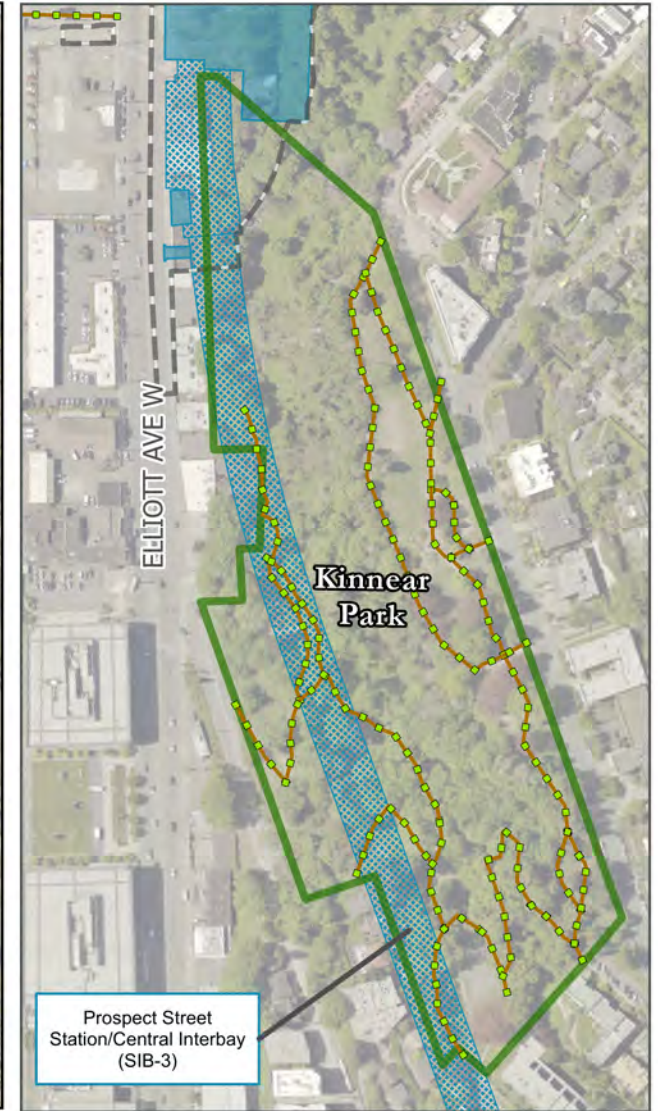
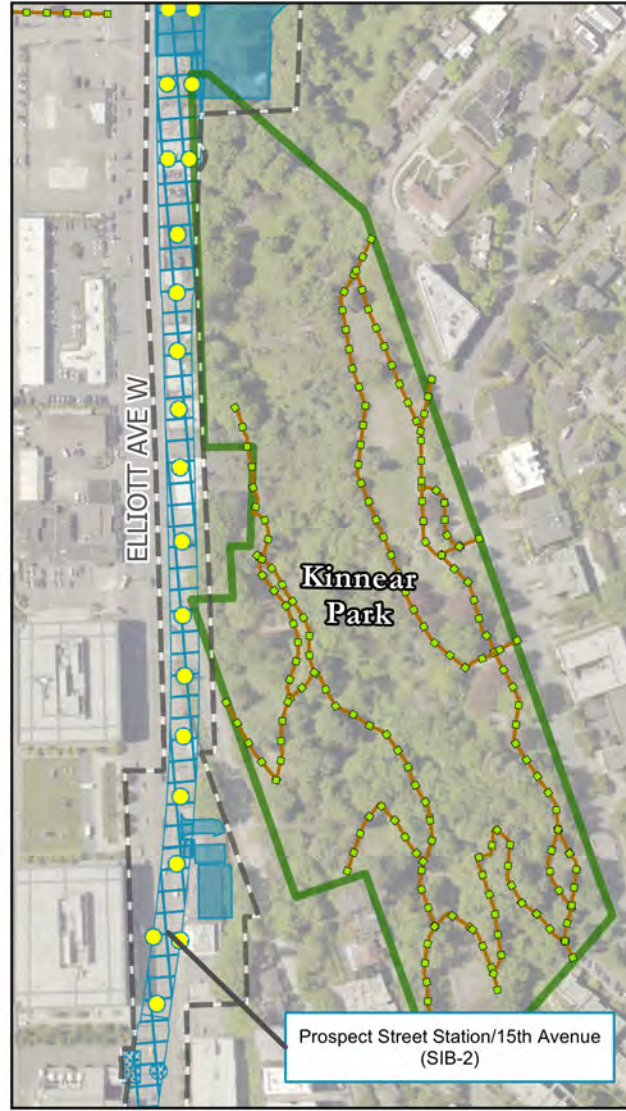
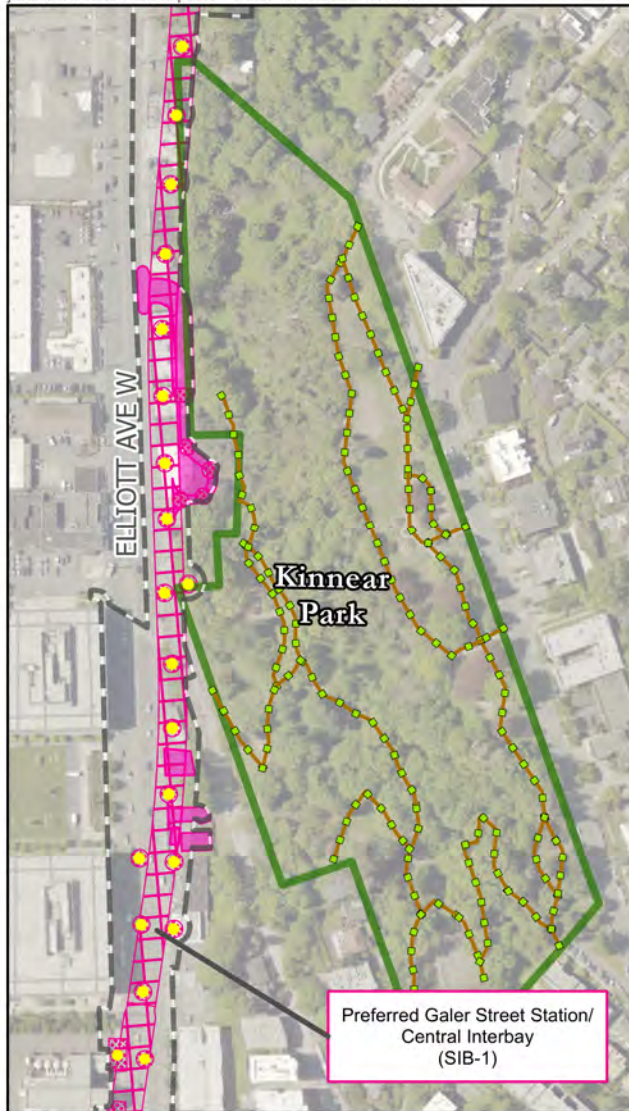
Alternative SIB-1

Preferred Alternative SIB-1 would permanently incorporate a small portion (0.1 acre) of the park property along its western edge to accommodate the elevated light rail guideway. Less than 1 percent of the total area of the park would be permanently impacted. This permanent incorporation would occur on a steep slope away from park amenities; no recreational activities, features, or attributes would be impacted, and the area that would be impacted is not used by the public for recreation.

During construction of Preferred Alternative SIB-1, up to an additional 0.1 acre of the park would be temporarily impacted. No recreational amenities or features would be impacted, and the temporarily impacted area is not used by the public for recreation. The temporarily impacted area would be fully restored after construction. Neither the permanent incorporation of land nor temporary construction impacts would adversely affect the park's activities, features, or attributes that qualify it for protection under Section 4(f).

Although there would be visual proximity impacts associated with Preferred Alternative SIB-1 (this alternative's elevated guideway would be seen through trees in the park by recreationists using some trails near the edge of Kinnear Park), the existing low visual quality of western views from the edge of the resource would not be lowered with the presence of the elevated guideway. Therefore, this proximity impact would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

Conclusion. Although land would be permanently incorporated, based on the above description of the impacts, Preferred Alternative SIB-1 would not adversely affect the recreational activities, features, or attributes of Kinnear Park permanently, temporarily during construction, or through proximity impacts. Therefore, the impacts to this resource under Preferred Alternative SIB-1 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.



Source: City of Seattle, King County (2019, 2020, 2021), EagleView Technologies, Inc. (2019).

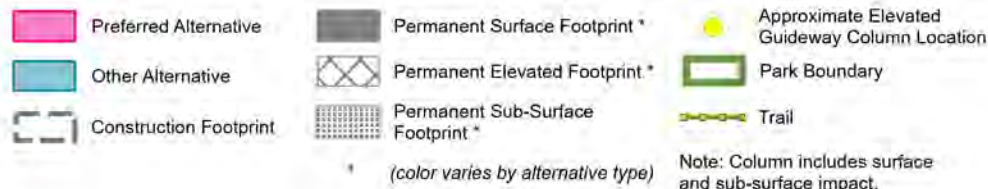
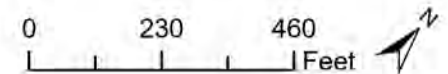


FIGURE 4-5
Kinnear Park Permanent and Construction Impacts
Ballard Link Extension -
South Interbay Segment
*West Seattle and
Ballard Link Extensions*



Alternative SIB-2

Alternative SIB-2 would permanently incorporate a small portion (0.1 to 0.2 acre) of the northwest corner of Kinnear Park property to accommodate the elevated guideway; up to approximately 1 percent of the park would be permanently impacted. This permanent incorporation would occur on a steep slope away from park amenities. No recreational amenities or features would be impacted, and the area that would be impacted is not used by the public for recreation. During construction of Alternative SIB-2, up to an additional 0.1 acre of the park would be temporarily impacted. No recreational amenities or features would be impacted, and the temporarily impacted area is not used by the public for recreation. The temporarily impacted area would be restored after construction. Neither the permanent incorporation of land nor temporary construction impacts would adversely affect the park's activities, features, or attributes that qualify it for protection under Section 4(f). Although there would be visual proximity impacts associated with Alternative SIB-2 (the elevated guideway would be seen through trees in Kinnear Park by recreationists using some trails near the edge of the park), the existing low visual quality of western views from the edge of the resource would not be lowered with the presence of the elevated guideway. Therefore, this proximity impact would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

Conclusion. Although land would be permanently incorporated, Alternative SIB-2 would not adversely affect the recreational activities, features, or attributes of Kinnear Park permanently, temporarily during construction, or through proximity impacts. Therefore, the impacts to this resource under Alternative SIB-2 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Alternative SIB-3

Alternative SIB-3 would permanently incorporate a small area (< 0.1 acre) to accommodate the tunnel portal. Less than 1 percent of the total area of the park would be permanently impacted. Trees and vegetation would be removed in this area in the north end of the park; no recreational amenities or features would be impacted, and the impacted area is not used by the public for recreation. During construction of Alternative SIB-3, up to an additional 0.3 acre of Kinnear Park would be temporarily impacted. Additional area for an underground easement would be needed where the tunnel would be below ground. No recreational activities, features, or attributes of the park would be impacted, and the temporarily impacted area is not used by the public for recreation. The temporarily impacted area would be restored after construction. Neither the permanent incorporation of land nor temporary construction impacts would adversely affect the park's activities, features, or attributes that qualify it for protection under Section 4(f). This alternative would remove vegetation at the north end of its route under Kinnear Park before the alignment would follow a retained cut. The removal of vegetation in this limited area of the park would lower the existing high-to-average visual unity and intactness in this area of the park interior to low. However, this visual impact would not impact the recreational use of the park, and as such would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f).

Conclusion. Although land would be permanently incorporated, based on the above description of the impacts, Alternative SIB-3 would not adversely affect the recreational activities, features, or attributes of Kinnear Park permanently, temporarily during construction, or through proximity impacts. Therefore, the impacts to this resource under Alternative SIB-3 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Southwest Queen Anne Greenbelt

Preferred Alternative SIB-1 would not impact this resource.

Figure 4-6 shows the impacts on the Southwest Queen Anne Greenbelt described below.

Alternative SIB-2

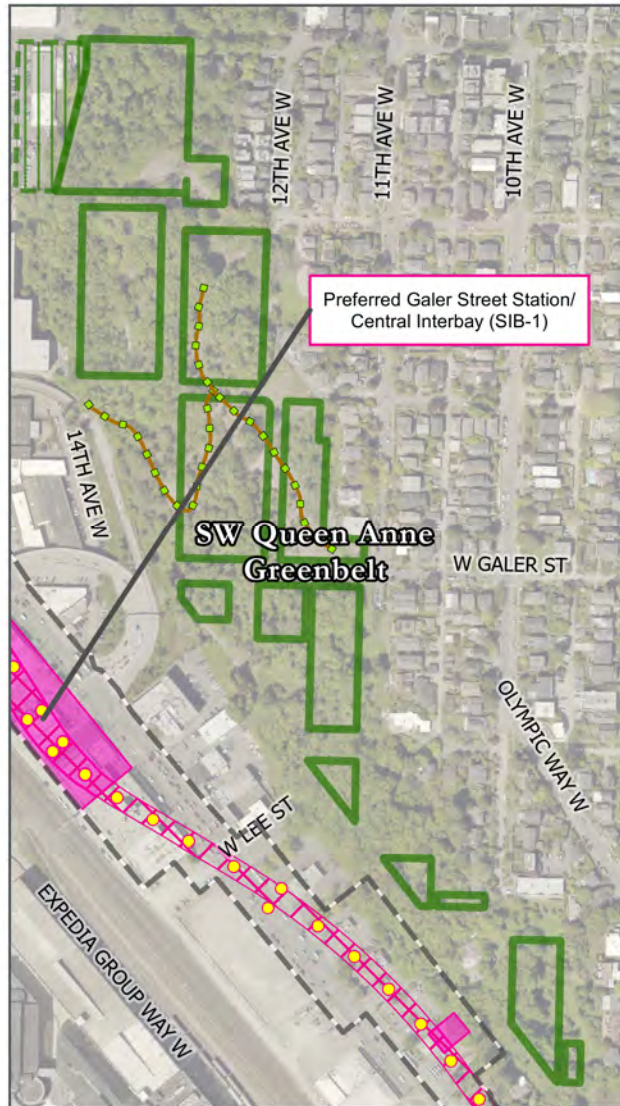
Alternative SIB-2 would permanently incorporate approximately 0.9 acre of the greenbelt property along its western edge to accommodate the installation of the elevated guideway. Approximately 7 percent of the total area of the greenbelt would be permanently impacted. The area that would be permanently incorporated includes trail access from 15th Avenue West that would be removed, but other access to the greenbelt's trail system would still be available to the public. The permanent incorporation and loss of trail access would result in an adverse effect on the activities, features, or attributes that qualify the resource for protection under Section 4(f). During construction of Alternative SIB-2, up to an additional 0.1 acre of the greenbelt would be temporarily impacted, but no recreational activities, features, or attributes would be impacted other than the trail access that would be permanently incorporated. The temporarily impacted area would be restored after construction.

For the Alternative SIB-2 alignment and Smith Cove Station, Sound Transit would remove trees along much of the western edge of the greenbelt north of the station. This removal of mature trees would be visible to trail users and would reduce the existing high visual quality of views within the greenbelt to low. However, this visual impact would not impact the recreational use of the greenbelt, and as such would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f). The Southwest Queen Anne Greenbelt does not derive its primary purpose or significance from the quality of its views.

Conclusion. Based on the above description of the impacts, Alternative SIB-2 would adversely affect the features, attributes, or activities of the Southwest Queen Anne Greenbelt. Therefore, the impacts to this resource under this alternative would be a Section 4(f) use.

Alternative SIB-3

Alternative SIB-3 would permanently incorporate the largest area (1 acre) of the Southwest Queen Anne Greenbelt for the installation of retained-cut guideway and station. Approximately 8 percent of the total area of the greenbelt would be permanently impacted. The area that would be permanently incorporated includes trail access to and from 15th Avenue West. Trail access at this location would be removed, but other access to the greenbelt's trail system would still be available to the public. The permanent incorporation and loss of trail access would result in an adverse effect on the activities, features, or attributes that qualify the resource for protection under Section 4(f). During construction of Alternative SIB-3, up to an additional 0.1 acre of the greenbelt would be temporarily impacted, but no recreational activities, features, or attributes would be impacted other than the trail access that would be permanently incorporated. The temporarily impacted area would be restored after construction.



Source: City of Seattle, King County (2019, 2020, 2021), EagleView Technologies, Inc. (2019).

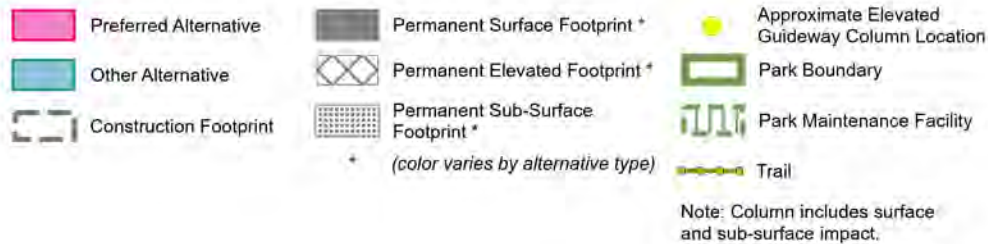
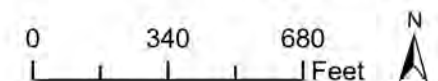


FIGURE 4-6
Southwest Queen Anne Greenbelt
Permanent and Construction Impacts
 Ballard Link Extension -
 South Interbay Segment
 West Seattle and
 Ballard Link Extensions



For the Alternative SIB-3 alignment and Smith Cove Station, Sound Transit would remove trees along much of the western edge of the greenbelt north of the station. This removal of mature trees that would be visible to trail users would reduce the existing high visual quality of views within the greenbelt to low. However, this visual impact would not impact the recreational use of the greenbelt, and as such would not substantially impair the protected activities, features, or attributes that qualify the property for protection under Section 4(f). The Southwest Queen Anne Greenbelt does not derive purpose or significance from the quality of its views.

Conclusion. Based on the above description of the impacts, Alternative SIB-3 would adversely affect the features, attributes, or activities of the Southwest Queen Anne Greenbelt. Therefore, the impacts to this resource under this alternative would be a Section 4(f) use.

Interbay Golf Center

Figure 4-7 shows the project impacts to the Interbay Golf Center described below. The project's impacts on the Interbay Golf Center would include land used for the Interbay P-Patch Community Garden.

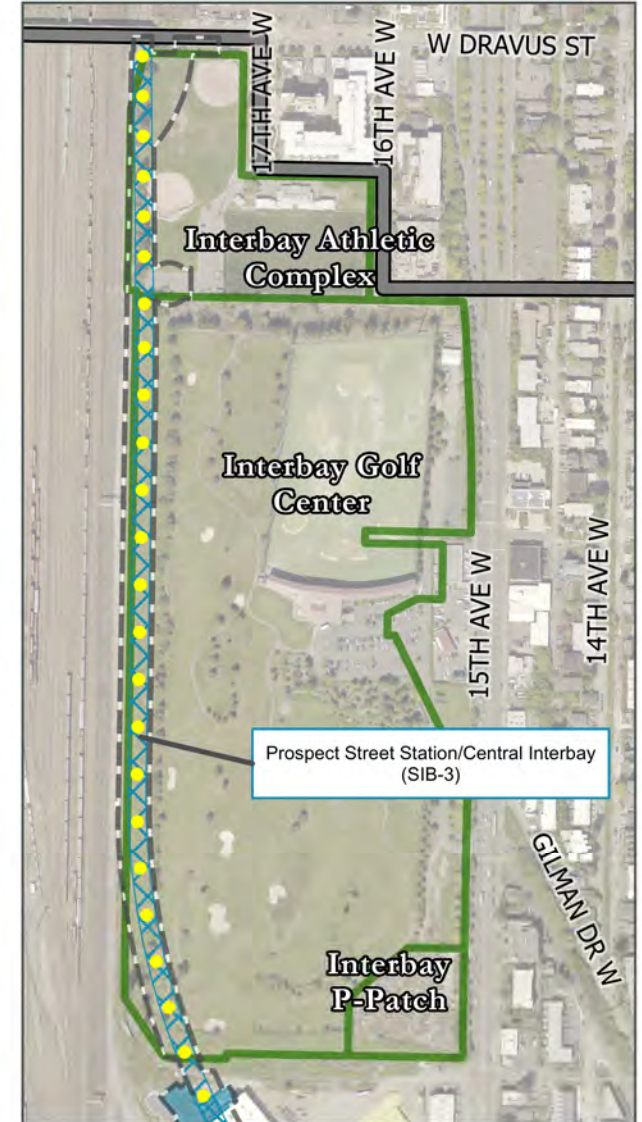
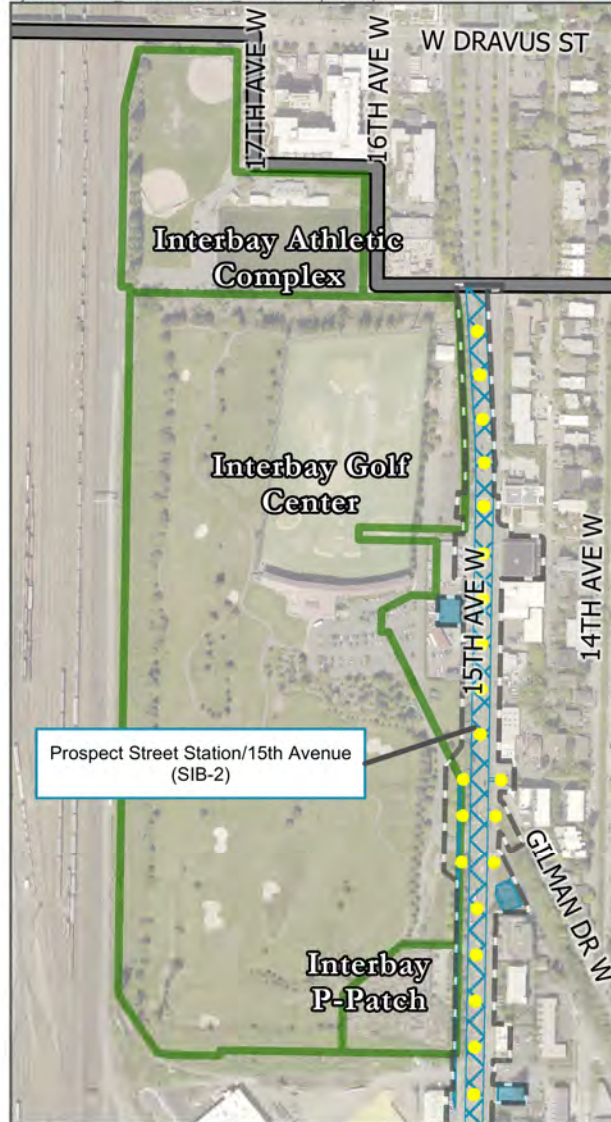
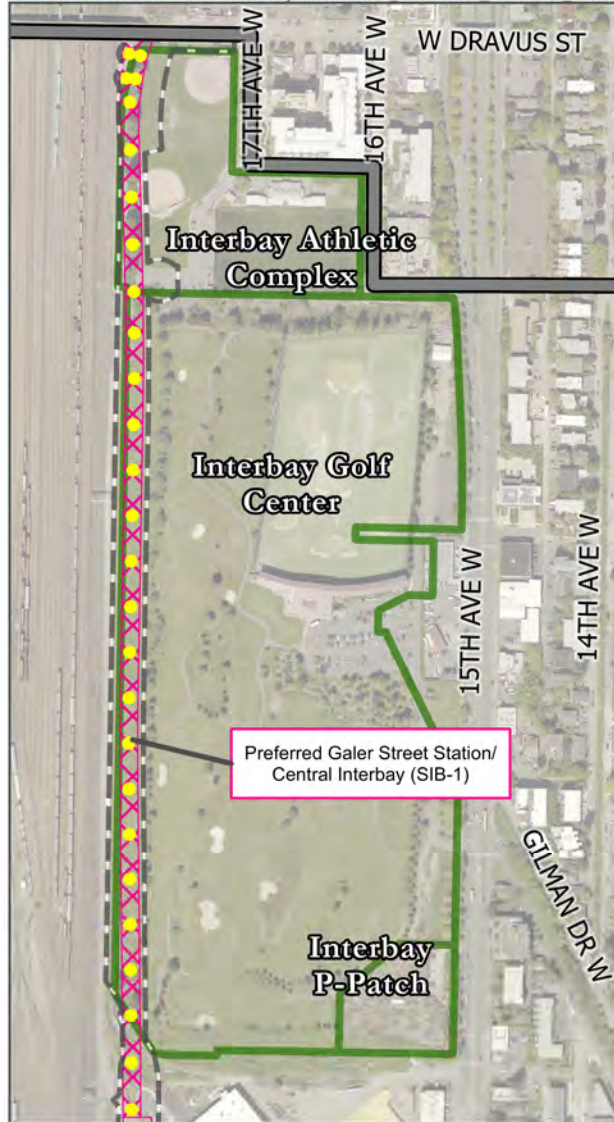
Alternative SIB-1

Preferred Alternative SIB-1 would permanently incorporate approximately 2.2 acres of the Interbay Golf Center property by placing guideway columns along the bottom of the western slope of the property between the playable area and the BNSF Railway tracks. Approximately 5 percent of the total area of the golf center would be permanently impacted. Protective fencing would be installed between the golf center and the guideway to prevent golf balls from landing on the tracks or striking trains. The golf center's playable area would not be impacted.

Preferred Alternative SIB-1 would temporarily occupy up to 1.5 acres of the Interbay Golf Center property during construction for an estimated 1 year to 2 years. This alternative would impact the western slope of the property between the playable area of the golf center and the BNSF Railway tracks. Neither the permanent incorporation of land nor temporary construction impacts would result in an adverse effect on the activities, features, or attributes that qualify the golf center for protection under Section 4(f). Vegetation along the west side of the Interbay Golf Center, which screens some views of the BNSF Railway tracks and freight trains to the west, would be removed under Preferred Alternative SIB-1. The presence of the elevated guideway would lower the average visual quality of views from the golf center somewhat but not enough to reduce it to a low visual quality rating. The golf center is in a commercial and industrial area, adjacent to a BNSF railyard, so views from the golf center are not a feature of the facility; the facility does not derive purpose or significance from the quality of its views.

The golf course is valued for providing an opportunity for the general public to play golf in the city. Therefore, the protected activities, features, or attributes of the property would not be substantially diminished by Preferred Alternative SIB-1.

Conclusion. Although land would be permanently incorporated, based on the above description of the impacts, Preferred Alternative SIB-1 would not adversely affect the recreational activities, features, or attributes of the Interbay Golf Center permanently, during construction, or through proximity impacts. Therefore, the impacts to this resource under Preferred Alternative SIB-1 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.



Source: City of Seattle, King County (2019, 2020, 2021), EagleView Technologies, Inc. (2019).

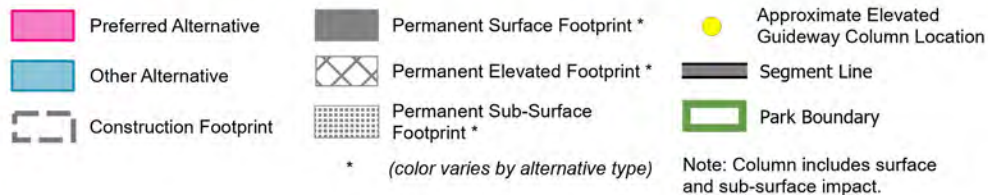
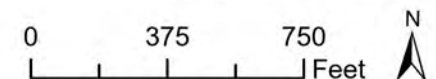


FIGURE 4-7
Interbay Golf Center, Interbay Athletic Complex, and
Interbay P-Patch Permanent and Construction Impacts
 Ballard Link Extension -
 South Interbay Segment

West Seattle and
 Ballard Link Extensions



Alternative SIB-2

Alternative SIB-2 would permanently incorporate a small portion (0.2 acre) of the golf center property on the east side due to the widening of 15th Avenue West and the installation of guideway straddle bents across this roadway. Approximately less than 1 percent of the total area of the golf center would be permanently impacted. The permanent incorporation would not impact the golf center's playable areas or access to the facility. The widening of 15th Avenue West would encroach on the Interbay P-Patch Community Garden portion of the property, but this impact would be at the edge of a small, landscaped area, outside the garden and parking areas. There would be no noise, visual, or access impacts to the recreational part of this resource. The permanent incorporation would not result in an adverse effect on the activities, features, or attributes that qualify the golf center or garden for protection under Section 4(f). During construction, Alternative SIB-2 would temporarily occupy 0.3 acre along the eastern edge of the golf center property. This would not impact the golf center's playable area or Interbay P-Patch Community Garden facilities. Access to the golf center from 15th Avenue West would be maintained during construction. The temporary construction impacts would not result in an adverse effect on the activities, features, or attributes that qualify the golf center or garden for protection under Section 4(f).

Conclusion. Although land would be permanently incorporated, based on the description of the impacts above, Alternative SIB-2 would not adversely affect the recreational activities, features, or attributes of the Interbay Golf Center permanently, temporarily during construction, or through proximity impacts. Therefore, the impacts to this resource under Alternative SIB-2 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, additional consultation is needed to reach concurrence.

Alternative SIB-3

Alternative SIB-3 would permanently incorporate 2.4 acres of Interbay Golf Center property by placing guideway columns across the southwest corner of the golf center, where the guideway would turn north from West Armory Way, and along the bottom of the western slope of the property between the playable area and the BNSF Railway tracks. Approximately less than 6 percent of the total area of the golf center would be permanently impacted. Protective fencing would be installed between the golf center and the elevated guideway to prevent golf balls from landing on the tracks or striking trains. The elevated guideway crossing the southwest corner of the property would impact the Number 5 hole green and Number 6 hole tee box. Preliminary discussions with Seattle Parks and Recreation indicate that these two impacted holes could be shortened to accommodate the project and remain playable, since there is not enough space to relocate them on the property. This project-performed mitigation could be used to address Alternative SIB-3's adverse impact on the golf course.

During construction, Alternative SIB-3 would temporarily occupy an additional 0.5 acre of the Interbay Golf Center property for an estimated 1 year to 2 years. The area of temporary construction impact would be the western slope of the property between the playable area of the golf center and the BNSF Railway tracks; it would not impact the golf center's playable area. Vegetation along the west side of the Interbay Golf Center, which screens some views of BNSF Railway tracks and freight trains to the west, would be removed under Alternative SIB-3. The presence of the elevated guideway would lower the average visual quality of views from the golf center somewhat but not enough to reduce it to a low visual quality rating. The golf center is in a commercial and industrial area, adjacent to a BNSF railyard, so views from the golf center are not a feature of the facility; the facility does not derive purpose or significance from the quality of its views. The golf course is valued for providing an opportunity for the general public to play

golf in the city. The protected activities, features, or attributes of the property would not be substantially diminished by the Alternative SIB-3.

Conclusion. Although land would be permanently incorporated, based on the above description of the impacts and potential mitigation measures, Alternative SIB-3 would not adversely affect the recreational activities, features, or attributes of the Interbay Golf Center permanently, temporarily during construction, or through proximity impacts. Therefore, the impacts to this resource under Alternative SIB-3 are proposed to be *de minimis*. FTA and Sound Transit are requesting documented preliminary concurrence from the City of Seattle. Based on coordination to date, the City of Seattle is likely to concur.

Interbay Athletic Complex

Alternative SIB-2 would not impact this resource.

Figure 4-7 shows the impacts to the Interbay Athletic Complex described below.

Alternative SIB-1 and Alternative SIB-3

Preferred Alternative SIB-1 and Alternative SIB-3 would permanently incorporate approximately 0.7 to 0.8 acre (approximately 10 percent of the total area) of the Interbay Athletic Complex for the elevated guideway columns and emergency access to the guideway. The area incorporated would impact the grass playfields; this impact would make the playfields unusable for their purpose (baseball and football). Both alternatives would also remove up to half of the parking lot at the south end of the property. The remaining property is not large enough to enable reconfiguration of the fields and parking. Sound Transit would work with Seattle Parks and Recreation to find suitable replacement property for the displaced playfields to serve the same neighborhood area. There may be an opportunity onsite for some mitigation measures to enhance the use of the soccer field and stadium, such as expanded parking. However, after mitigation, Preferred Alternative SIB-1 and Alternative SIB-3 would both still have an adverse effect on the activities, features, or attributes that qualify the Interbay Athletic Complex for protection under Section 4(f).

Conclusion. Based on the above description of the impacts, Preferred Alternative SIB-1 and Alternative SIB-3 would adversely affect the features, attributes, or activities of the Interbay Athletic Complex. Therefore, the impacts to this resource under both alternatives would be a Section 4(f) use.

4.2.4.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any South Interbay Segment alternatives:

- Cape Flattery Apartments
- Powers Regulator Co.
- Barrett West Apartments
- K&D Carpet Installers Building/Alpine Hut
- Residence, 2250 15th Avenue West
- Residence, 2246½ 15th Avenue West
- Lola Apartments
- Naomi Apartments
- Franconia Apartments
- Apartment Building, 412 West Mercer Street
- Iris Apartments

- Westroy Apartments
- Residence, 623 West Mercer Place
- Kinnear Park Comfort Station/Viewing Platform
- Gladding, McBean, and Company
- Sea View Apartments
- Office Building, 411 West Mercer Street
- 14th Avenue West Group Historic District
- Gilman House
- Torbactia House
- Residence, 2010 14th Avenue West
- Residence, 2006 14th Avenue West
- Residence, 2000 14th Avenue West
- The Harbor House
- Residence, 636 West Mercer Place
- Mercer West Condominium
- Fourth Avenue West Apartments
- Metro Headquarters Building
- Dor-Rik Apartments
- Gillespie House
- Residence, 1015 West Lee Street

Section 4(f) historic resources that would be impacted by at least one South Interbay Segment alternative are discussed in the following subsections. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report.

Waterfront Employees of Washington and the Pacific Maritime Association

Alternative SIB-3 would not impact this resource.

Alternative SIB-1 and Alternative SIB-2

Preferred Alternative SIB-1 and Alternative SIB-2 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Waterfront Employees of Washington and the Pacific Maritime Association historic resource would constitute a use under Section 4(f).

Duplex, 317 West Republican Street

Alternative SIB-3 would not impact this resource.

Alternative SIB-1 and Alternative SIB-2

Preferred Alternative SIB-1 and Alternative SIB-2 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 317 West Republican Street historic resource would constitute a use under Section 4(f).

Duplex, 319 West Republican Street

Alternative SIB-3 would not impact this resource.

Alternative SIB-1 and Alternative SIB-2

Preferred Alternative SIB-1 and Alternative SIB-2 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 319 West Republican Street historic resource would constitute a use under Section 4(f).

Residence, 317½ West Republican Street

Alternative SIB-3 would not impact this resource.

Alternative SIB-1 and Alternative SIB-2

Preferred Alternative SIB-1 and Alternative SIB-2 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 317½ West Republican Street historic resource would constitute a use under Section 4(f).

Federal Employees Credit Union

Preferred Alternative SIB-1 and Alternative SIB-3 would not impact this resource.

Alternative SIB-2

Alternative SIB-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Federal Employees Credit Union historic resource would constitute a use under Section 4(f).

Kinnear Park

Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3

Preferred Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3 would each permanently incorporate land from the Kinnear Park historic resource but were found not to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3 would not result in an adverse effect under Section 106. As such, impacts to Kinnear Park under Preferred Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3 are proposed to be *de minimis* under Section 4(f).

Sheet Metal Works and Roof Company

Alternative SIB-3 would not impact this resource.

Alternative SIB-1 and Alternative SIB-2

Preferred Alternative SIB-1 and Alternative SIB-2 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Sheet Metal Works and Roof Company historic resource would constitute a use under Section 4(f).

Wilson Machine Works

Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3

Preferred Alternative SIB-1, Alternative SIB-2, and Alternative SIB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Wilson Machine Works historic resource would constitute a use under Section 4(f).

Seattle Armory

Alternative SIB-2 and Alternative SIB-3 would not impact this resource.

Alternative SIB-1

Preferred Alternative SIB-1 would permanently incorporate land from the Seattle Armory Building historic resource but was found not to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative SIB-1 would not result in an adverse effect under Section 106. As such, impacts to the Seattle Armory Building historic resource under Preferred Alternative SIB-1 are proposed to be *de minimis* under Section 4(f).

Seattle Armory Field Maintenance Shop Building

Alternative SIB-2 and Alternative SIB-3 would not impact this resource.

Alternative SIB-1

Preferred Alternative SIB-1 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Seattle Armory Field Maintenance Shop Building historic resource would constitute a use under Section 4(f).

King County Metro Pumping Station

Alternative SIB-2 and Alternative SIB-3 would not impact this resource.

Alternative SIB-1

Preferred Alternative SIB-1 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative SIB-1 would not result in an adverse effect under Section 106. As such, impacts to the King County Metro Pumping Station historic resource under Preferred Alternative SIB-1 are proposed to be *de minimis* under Section 4(f).

Western Pacific Chemical Company

Alternative SIB-1

Preferred Alternative SIB-1 would permanently incorporate land from the Western Pacific Chemical Company historic resource but was found not to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative SIB-1 would not result in an adverse effect under Section 106. As such, impacts to the Western Pacific Chemical Company historic resource under Preferred Alternative SIB-1 are proposed to be *de minimis* under Section 4(f).

Alternative SIB-2 and Alternative SIB-3

Alternative SIB-2 and Alternative SIB-3 would both result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Western Pacific Chemical Company historic resource would constitute a use under Section 4(f).

4.2.5 Interbay/Ballard Segment

Some project alternatives in the Interbay/Ballard Segment would require tunnel easements under Section 4(f) resources. All the Section 4(f) park resources located above a proposed tunnel would also have surface impacts and therefore are included in this analysis. Historic properties under which a project alternative would tunnel but which would not have surface impacts were reviewed to determine if a tunnel would substantially impair the historic value of the site. No historic properties were identified that would be substantially impaired by a tunnel underneath; therefore, they are not described further in this segment.

4.2.5.1 Parks and Recreational Resources

There are two Section 4(f) resources in the Interbay/Ballard Segment. Gemenskap Park would not be impacted by any Interbay/Ballard Segment alternatives. The impact to the 14th Avenue Northwest Boat Ramp resource is described below.

14th Avenue Northwest Boat Ramp

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not impact the 14th Avenue Northwest Boat Ramp.

Alternative IBB-1a and Option IBB-1b

Under both Preferred Alternative IBB-1a and Option IBB-1b, Sound Transit would adjacently relocate the 14th Avenue Northwest Boat Ramp between the existing location and 11th Avenue Northwest, which would be accessible from Northwest 45th Street. Relocation would occur prior to construction to maintain shoreline access. This permanent impact would result in an adverse effect on the activities, features, or attributes that qualify the 14th Avenue Northwest Boat Ramp for protection under Section 4(f).

Conclusion. There would be a permanent incorporation of this resource by Preferred Alternative IBB-1a and Option IBB-1b, which would adversely affect the recreational activities, features, or attributes of the 14th Avenue Northwest Boat Ramp permanently. Therefore, the impacts to this resource under both Preferred Alternative IBB-1a and Option IBB-1b would be a Section 4(f) use.

4.2.5.2 Historic Resources

The following Section 4(f) historic resources would not be impacted by any Interbay/Ballard Segment alternatives:

- Interbay Pharmacy
- Mike's Tavern and Chili Parlor
- Skipper's Fish, Chip and Chowder House
- Fishermen's Terminal Historic District contributing resources: Net Shed N-7; Seattle First National Bank - Fishermen's Terminal Branch; Net Shed N-8; Net Shed N-3; Seattle Ship Supply Warehouse C-9; Float 1; Dock 3; Dock 4; Office C-10; Downie Building; Net Shed N-4; Net Shed N-5; Net Shed N-6; Warehouse Building I-8; Net Shed N-9; Nordby Building; West Wall Building; West Bulkhead; Bathroom Building M-2; Bathroom Building M-15; South Bulkhead Wall; FVO Machine Building I-3; FVO Building M-4
- Seattle City Light - Ballard Substation
- Leary Substation
- Edith Macefield House
- Industrial Building, 1130 Northwest 45th Street
- Mid-Century Light Industrial Building, 5118 14th Avenue Northwest
- Canal Apartments
- Northwest Builders Hardware
- Madera on Queen Anne Condominiums
- Office Building, 1148 Northwest Leary Way
- Bardahl Manufacturing Company Office
- Seattle & Montana Railway/Great Northern Railway Main Line/Seattle Lake Shore & Eastern Railroad Ballard Branch Line

Section 4(f) historic resources that would be impacted by at least one Interbay/Ballard Segment alternative are discussed below. Greater detail on impacts to historic resources in this segment is provided in Appendix N.5, Historic and Archaeological Resources Technical Report.

Industrial and Commercial Building, 1121 Northwest 45th Street

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a and Option IBB-1b

Preferred Alternative IBB-1a and Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 1121 Northwest 45th Street historic resource would constitute a use under Section 4(f).

Lyle Branchflower Company Processing Warehouse

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Lyle Branchflower Company Processing Warehouse historic resource would constitute a use under Section 4(f).

Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building historic resource would constitute a use under Section 4(f).

Nelson Chevrolet Storage Lot Office Building

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Nelson Chevrolet Storage Lot Office Building historic resource would constitute a use under Section 4(f).

Nelson Chevrolet Showroom

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would permanently incorporate land from the Nelson Chevrolet Showroom historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative IBB-3 would **not** result in an adverse effect under Section 106. As such, impacts to the Nelson Chevrolet Showroom historic resource under Alternative IBB-3 are proposed to be *de minimis* under Section 4(f).

Restaurant, 1510 Northwest Leary Way

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would not permanently incorporate land from the 510 Northwest Leary Way historic resource; however, a preliminary finding of adverse effect under Section 106 has been made for this alternative with respect to the historic resource. The Section 106 finding of adverse effect for this historic resource is associated with the introduction of an elevated guideway in direct proximity to 1510 Northwest Leary Way under this alternative, which would permanently diminish the property's integrity of setting and feeling. However, this property would remain intact and retain its ability to function; it would retain its National Register eligibility. Therefore, the diminishment of setting and feeling would not result in a substantial impairment of the resource under Section 4(f).

Conclusion. Alternative IBB-3 would not result in a permanent incorporation of land from the 1510 Northwest Leary Way historic resource. Although there would be an adverse effect under Section 106 related to proximity impacts for this alternative, these proximity impacts would not result in a constructive use under Section 4(f) because they would not result in substantial impairment of the resource. As such, there would not be a Section 4(f) use of this resource as a result of Alternative IBB-3 actions.

Residence, 5713 14th Avenue Northwest

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a and Option IBB-1b

Both Preferred Alternative IBB-1a and Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 5713 14th Avenue Northwest historic resource would constitute a use under Section 4(f).

Apartment Complex, 5700 14th Avenue Northwest

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-2a*

Preferred Alternative IBB-2a* would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 5700 14th Avenue Apartment Complex historic resource would constitute a use under Section 4(f).

HDF Propeller Company Machining and Manufacturing Building

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a and Option IBB-1b

Both Preferred Alternative IBB-1a and Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the HDF Propeller Company Machining and Manufacturing Building historic resource would constitute a use under Section 4(f).

Residence, 3440 15th Avenue West

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Option IBB-1b

Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 3440 15th Avenue West historic resource would constitute a use under Section 4(f).

Residence, 3442 15th Avenue West

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Option IBB-1b

Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 3442 15th Avenue West historic resource would constitute a use under Section 4(f).

Residence, 3220 15th Avenue West

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Option IBB-1b and Alternative IBB-3

Option IBB-1b and Alternative IBB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 3220 15th Avenue West historic resource would constitute a use under Section 4(f).

Superior Concrete Products Company

Option IBB-1b would not affect this resource.

Alternative IBB-1a, Alternative IBB-2a, Option IBB-2b*, and Alternative IBB-3*

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Superior Concrete Products Company historic resource would constitute a use under Section 4(f).

Elmer & Moody Co. Woodwork

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would permanently incorporate land from this historic resource but was found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Alternative IBB-3 would **not** result in an adverse effect under Section 106. As such, impacts to the Elmer & Moody Co. Woodwork historic resource under Alternative IBB-3 are proposed to be *de minimis* under Section 4(f).

Sweden Freezer Manufacturing Company

Option IBB-1b and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a, Alternative IBB-2a*, and Option IBB-2b*

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Sweden Freezer Manufacturing Company historic resource would constitute a use under Section 4(f).

Keller Supply Company

Option IBB-1b and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a, Alternative IBB-2a*, and Option IBB-2b*

Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Keller Supply Company historic resource would constitute a use under Section 4(f).

Fishermen's Terminal Historic District

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would permanently incorporate land from the Fishermen's Terminal Historic District historic resource and would cause an adverse effect under Section 106.

Conclusion. Because land would be permanently incorporated from this resource, the adverse effect under Section 106 to the Fishermen's Terminal Historic District would constitute a use under Section 4(f).

Fishermen's Terminal Fishing Vessel Owner's Winch House

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would permanently incorporate land from the property that includes Fishermen's Terminal Fishing Vessel Owner's Winch House historic resource and would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Fishermen's Terminal Fishing Vessel Owner's Winch House historic resource would constitute a use under Section 4(f).

Fishermen's Terminal Fishing Vessel Owners Marine Ways

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not affect this resource.

Alternative IBB-3

Alternative IBB-3 would incorporate land from this historic resource and the business that uses it would be displaced, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the Fishermen's Terminal Fishing Vessel Owners Marine Ways historic resource would constitute a use under Section 4(f).

United States Plywood Corporation Power House

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a and Option IBB-1b

Both Preferred Alternative IBB-1a and Option IBB-1b would permanently incorporate land from the United States Plywood Corporation Power House historic resource but were found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, both Preferred Alternative IBB-1a and Option IBB-1b would **not** result in an adverse effect under Section 106. As such, impacts to the United States Plywood Corporation Power House historic resource under Preferred Alternative IBB-1a and Option IBB-1b are proposed to be *de minimis* under Section 4(f).

Office Building, 3220 17th Avenue West

Preferred Alternative IBB-1a, Option IBB-1b, and Alternative IBB-3 would not affect this resource.

Alternative IBB-2a* and Option IBB-2b*

Preferred Alternative IBB-2a* and Preferred Option IBB-2b* would permanently incorporate land from this historic resource but were found **not** to cause an adverse effect under Section 106.

Conclusion. Although land would be permanently incorporated from this historic resource, Preferred Alternative IBB-2a* and Preferred Option IBB-2b* would **not** result in an adverse effect under Section 106. As such, impacts to the Office Building, 3220 17th Avenue West, historic resource under these alternatives are proposed to be *de minimis* under Section 4(f).

Duplex, 1145 Northwest 56th Street

Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3 would not affect this resource.

Alternative IBB-1a and Option IBB-1b

Preferred Alternative IBB-1a and Option IBB-1b would result in the demolition of this historic building, which would cause an adverse effect under Section 106.

Conclusion. The adverse effect under Section 106 to the 1145 Northwest 56th Street Duplex historic resource would constitute a use under Section 4(f).

Ballard Bridge

Preferred Alternative IBB-1a, Option IBB-1b, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b* would not impact this resource.

Alternative IBB-3

Alternative IBB-3 would not permanently incorporate land from the Ballard Bridge historic resource; however, a preliminary finding of adverse effect under Section 106 has been made for this alternative with respect to this historic resource. The Section 106 finding of adverse effect for this historic resource is associated with the introduction of an elevated guideway in direct proximity to the Ballard Bridge under this alternative, which would permanently diminish the property's integrity of setting and feeling. However, setting and feeling are not the features and attributes contributing to the historic value of the resource, and therefore, the diminishment of setting and feeling would not result in a substantial impairment of the resource under Section 4(f).

Conclusion. Alternative IBB-3 would not result in a permanent incorporation of land from the Ballard Bridge historic resource. Although there would be an adverse effect under Section 106 related to proximity impacts for this alternative, these proximity impacts would not result in a constructive use under Section 4(f) because this historic resource would retain its National Register eligibility and the adverse effect would be mitigated so it would not result in substantial impairment. As such, there would **not** be a Section 4(f) use of this historic resource for Alternative IBB-3.

4.3 Summary of Preliminary Use Determinations**4.3.1 SODO Segment**

Table 4-10 summarizes the proposed Section 4(f) uses for the SODO Segment alternatives.

Table 4-10. Summary of Proposed Section 4(f) Use and Adverse Effect Determinations for the SODO Segment, Ballard Link Extension

Resource	Preferred At-Grade Alternative (SODO-1a)	At-Grade South Station Option (SODO-1b)	Mixed Profile Alternative (SODO-2)
Graybar Electric Company Building	Use ^a	Use ^a	Use ^a

^a When connecting to Alternative CID-1a* in the Chinatown-International District Segment, impacts meet the *de minimis* threshold.

4.3.2 Chinatown-International District Segment

Table 4-11 summarizes the proposed Section 4(f) uses for the Chinatown-International District Segment alternatives.

Table 4-11. Summary of Proposed Section 4(f) Use and Adverse Effect Determinations for the Chinatown-International District Segment

Resource	4th Avenue Shallow Alternative (CID-1a)*	4th Avenue Deep Station Option (CID-1b)*	5th Avenue Shallow Alternative (CID-2a)	5th Avenue Deep Station Option (CID-2b)
Seattle Chinatown Historic District	No use	No use	Use	Use
Pioneer Square-Skid Road National Historic District	No use	No use	No use	No use
Retail Stores, 418 5th Avenue South (retail stores)	No use	No use	Use	Use
Union Station-Seattle	Use	Use	No use	No use
Seattle First National Bank - International District Branch	No use	No use	Use	Use

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

4.3.3 Downtown Segment

Table 4-12 summarizes the proposed Section 4(f) uses for the Downtown Segment alternatives.

Table 4-12. Summary of Preliminary Section 4(f) Use Determinations for the Downtown Segment

Resource	Preferred 5th Avenue/Harrison Street Alternative (DT-1)	6th Avenue/Mercer Street Alternative (DT-2)
Naramore Fountain Park	No use	Use
Freeway Park (park resource)	No use	Use
Urban Triangle Park	Use	No use
Westlake Park	No use: Temporary Occupancy	No use
Seattle Center (park resource)	<i>de minimis</i>	No use: Temporary Occupancy
Frederick and Nelson Building	No use	Use
Retail Stores, 2120 Westlake Avenue	<i>de minimis</i>	No use
Spring Apartment Hotel	No use	Use
Bank of California Building	Use	No use
O'Shea Building	No use	Use
Thurmond's Central Realty	No use	Use

Resource	Preferred 5th Avenue/Harrison Street Alternative (DT-1)	6th Avenue/Mercer Street Alternative (DT-2)
Maxine Apartments	No use	Use
National Bank of Commerce – Queen Anne Branch	No use	Use
Office Building, 557 Roy Street	No use	Use
Freeway Park (historic resource)	No use	Use
International Commerce and Industry Building	No use	No use
Grand Central Garage	Use	No use
Floyd A. Naramore Fountain and Plaza	No use	Use

4.3.4 South Interbay Segment

Table 4-13 summarizes the proposed Section 4(f) uses for the South Interbay Segment alternatives.

Table 4-13. Summary of Preliminary Section 4(f) Use and Adverse Effect Determinations for the South Interbay Segment

Resource	Preferred Galer Street Station/Central Interbay Alternative (SIB-1)	Prospect Street Station/15th Avenue Alternative (SIB-2)	Prospect Street Station/Central Interbay Alternative (SIB-3)
Kinnear Park (park resource)	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
Southwest Queen Anne Greenbelt	No use	Use	Use
Interbay Golf Center	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
Interbay Athletic Complex	Use	No use	Use
Waterfront Employers of Washington and The Pacific Maritime Association	Use	Use	No use
Duplex, 317 West Republican Street	Use	Use	No use
Duplex, 319 West Republican Street	Use	Use	No use
Residence, 317½ West Republican Street	Use	Use	No use
Federal Employees Credit Union	No use	Use	No use
Kinnear Park (historic resource)	<i>de minimis</i>	<i>de minimis</i>	<i>de minimis</i>
Sheet Metal Works and Roof Company	Use	Use	No use
Wilson Machine Works	Use	Use	Use
Seattle Armory	<i>de minimis</i>	No use	No use
Seattle Armory Field Maintenance Shop Building	Use	No use	No use
King County Metro Pumping Station	<i>de minimis</i>	No use	No use
Western Pacific Chemical Company	<i>de minimis</i>	Use	Use

4.3.5 Interbay/Ballard Segment

Table 4-14 summarizes the proposed Section 4(f) uses for the Interbay/Ballard Segment alternatives.

Table 4-14. Summary of Preliminary Section 4(f) Use and Adverse Effect Determinations for the Interbay/Ballard Segment

Resource	Preferred Elevated 14th Avenue Alternative (IBB-1a)	Elevated 14th Avenue Alignment Option (from Prospect Street Station/15th Avenue) (IBB-1b)	Preferred Tunnel 14th Avenue Alternative (IBB-2a)*	Preferred Tunnel 15th Avenue Station Option (IBB-2b)*	Elevated 15th Avenue Alternative (IBB-3)
14th Avenue Northwest Boat Ramp	Use	Use	No use	No use	No use
Industrial and Commercial Building, 1121 Northwest 45th Street	Use	Use	No use	No use	No use
Lyle Branchflower Company Processing Warehouse	No use	No use	No use	No use	Use
Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building	No use	No use	No use	No use	Use
Nelson Chevrolet Storage Lot Office Building	No use	No use	No use	No use	Use
Nelson Chevrolet Showroom	No use	No use	No use	No use	<i>de minimis</i>
Restaurant, 1510 Northwest Leary Way	No use	No use	No use	No use	No use
Residence, 5713 14th Avenue Northwest	Use	Use	No use	No use	No use
Apartment Complex, 5700 14th Avenue Northwest	No use	No use	Use	No use	No use
HDF Propeller Company Machining and Manufacturing Building	Use	Use	No use	No use	No use
Residence, 3440 15th Avenue West	No use	Use	No use	No use	No use
Residence, 3442 15th Avenue West	No use	Use	No use	No use	No use
Residence, 3220 15th Avenue West	No use	Use	No use	No use	Use
Superior Concrete Products Company	Use	No use	Use	Use	Use
Elmer & Moody Company Woodwork	No use	No use	No use	No use	<i>de minimis</i>
Sweden Freezer Manufacturing Company	Use	No use	Use	Use	No use
Keller Supply Co	Use	No use	Use	Use	No use

Resource	Preferred Elevated 14th Avenue Alternative (IBB-1a)	Elevated 14th Avenue Alignment Option (from Prospect Street Station/15th Avenue) (IBB-1b)	Preferred Tunnel 14th Avenue Alternative (IBB-2a)*	Preferred Tunnel 15th Avenue Station Option (IBB-2b)*	Elevated 15th Avenue Alternative (IBB-3)
Fishermen's Terminal Historic District	No use	No use	No use	No use	Use
Fishermen's Terminal Fishing Vessel Owner's Winch House	No use	No use	No use	No use	Use
Fishermen's Terminal Fishing Vessel Owners Marine Ways	No use	No use	No use	No use	Use
United States Plywood Corporation Power House	<i>de minimis</i>	<i>de minimis</i>	No use	No use	No use
Office Building, 3220 17th Avenue West	No use	No use	<i>de minimis</i>	<i>de minimis</i>	No use
Duplex, 1145 Northwest 56th Street	Use	Use	No use	No use	No use
Ballard Bridge	No use	No use	No use	No use	No use

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

4.4 Avoidance Alternatives

In accordance with Code of Federal Regulations Title 23 Section 774.3, this section examines (for each segment) whether there is a feasible and prudent avoidance alternative, as defined in Code of Federal Regulations Title 23 Section 774.17, to the use of a Section 4(f) resource. More information on the types of avoidance alternatives considered is provided in Section 3.4.

The Ballard Link Extension study area is within a highly developed, urban area. The project would be within Downtown Seattle and established neighborhoods, with parks, recreational facilities and historic properties throughout the study area. While all the alternatives in Downtown Seattle (the densest part of the study area) are in a tunnel, thereby minimizing impacts, the project still would result in impacts to Section 4(f) resources due to the construction of station entrances and other surface facilities for the light rail. Historic resources, in particular, are widespread within the study area.

There is not a full-length project avoidance alternative for the Ballard Link Extension because all alternatives in the Chinatown-International District, Downtown, South Interbay, and Interbay/Ballard segments would impact a Section 4(f) resource. Most alternatives within these segments can connect to more than one alternative in adjacent segments, but may not connect to all alternatives in adjacent segments. The potential avoidance alternative in one segment may not be able to connect to the potential avoidance alternative in the adjacent segment(s), and considering avoidance alternatives only for the full length project could limit avoidance alternatives within a specific segment.

When considering impacts to historic resources, project designers first considered all possible measures to avoid and minimize impacts to the resource. Demolition is only proposed when no options exist to avoid or minimize impacts. As such, design changes are not discussed for

resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17, which states:

after reasonable mitigation, it still causes:

- (A) Severe social, economic, or environmental impacts;
- (B) Severe disruption to established communities;
- (C) Severe disproportionate impacts to minority or low-income populations; or
- (D) Severe impacts to environmental resources protected under other Federal statutes;

and paragraph (vi), which states:

It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Avoidance for demolished historic resources is evaluated for location alternatives, alternative actions, and alignment shifts.

4.4.1 SODO Segment

All SODO Segment alternatives would have an individual use of a Section 4(f) resource when connecting to Option CID-1b*, Alternative CID-2a, or Option CID-2b in the Chinatown-International District Segment. This use would be avoided when connecting to Alternative CID-1a* in the Chinatown-International District Segment, but Alternative CID-1a* would also result in the individual Use of a Section 4(f) historic resource. Therefore, the alternatives cannot be considered an avoidance alternative when connecting to Alternative CID-1a* because of the Section 4(f) use that would occur with Alternative CID-1a*. When the SODO Segment alternatives are considered in the full context of the entire Ballard Link Extension project, none of them can be considered an avoidance alternative, because even if an alternative avoids a Section 4(f) resource in the SODO Segment, its connection to an alternative in the next segment would result in an individual use of a Section 4(f) resource. Therefore, an avoidance alternatives analysis is required for the SODO Segment.

The following discussion of avoidance alternatives for the SODO Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, Avoidance Alternatives, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

4.4.1.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.1, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.1.2 Location Alternative

The Ballard Link Extension was planned as a tunnel adjacent to the existing light rail line in this segment in the Sound Transit 3 Plan. The placement of the project adjacent to the existing line maximizes transit transfer opportunities at SODO Station as well as allowing connections of both the West Seattle and Ballard Link extensions to the current line. The new tunnel through downtown would allow Sound Transit to distribute passengers and trains through two tunnels. Balancing loads between the tunnels requires the West Seattle Link Extension to connect to the existing line continuing north, and the Ballard Link Extension to connect to the existing line continuing south. Connecting each extension to the existing line in SODO is necessary because SODO is between the south portal for both the existing and future downtown tunnels and where the lines need to diverge, with the existing line heading east to Beacon Hill, and the West Seattle Link Extension heading west to West Seattle. Connecting at this location would improve system reliability and reduce disruption to the system when under construction. Alternatives not directly adjacent to the existing line would therefore not meet the purpose and need, and as such would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.1.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.1.4 Alignment Shifts

Alignment shifts were considered to avoid the historic Graybar Electric Company Building resource that would have an individual use from all alternatives in the SODO Segment when connecting to Option CID-1b* in the Chinatown-International District Segment. The Sound Transit 3 Plan assumed the light rail alignment in this segment to run parallel to the existing Central Link so that the existing SODO Station could be used for connections to other light rail extensions. Locating project alternatives parallel to the existing line is necessary in this segment to allow for connection of the West Seattle Link Extension to the existing line that will continue to Lynnwood and Everett, and for connection of the Ballard Link Extension to the existing line that will continue south to Federal Way and Tacoma. As described above in Section 4.4.1.2, the project cannot meet its purpose and need without having an alignment close to the existing line. There are no alignment shift alternatives in this area that would avoid an individual use of Graybar Electric when connecting to Option CID-1b*, Alternative CID-2a, or Option CID-2b in the adjacent segment; therefore, there are no alignment shift alternatives that would avoid Section 4(f) resources in this segment.

4.4.1.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design

changes are not discussed for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraphs (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17.

While designing to avoid Section 4(f) properties and structures has been a goal for Sound Transit, completely avoiding an individual use of all Section 4(f) resources in this segment is not possible given the narrow corridor for connecting to adjacent segments and the design requirements for entering a tunnel north of South Holgate Street.

4.4.2 Chinatown-International District Segment

Because none of the Build Alternatives in the Chinatown-International District Segment would avoid an individual Section 4(f) use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment.

The following discussion of avoidance alternatives for the Chinatown-International District Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

4.4.2.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.2.2 Location Alternative

In order to meet the purpose and need of the project, an alternative must provide a connection to the existing International District/Chinatown station in order to serve the markets identified in the Sound Transit 3 Plan. The Ballard Link Extension was planned as a tunnel adjacent to the existing light rail line in this segment in the Sound Transit 3 Plan. This placement maximizes transit transfer opportunities to light rail at the existing International District/Chinatown Station, to Sounder and Amtrak rail lines at King Street Station, and to buses at the transit transfer hub in that area. Because the existing light rail line and other transit facilities travel through Pioneer Square-Skid Road National and Seattle Chinatown historic districts, the Ballard Link Extension also must travel through these districts to maximize transit transfer opportunities. Sound Transit placed the alignment in a tunnel to minimize impacts to the community and the historic districts.

Alternative CID-1a* and Option CID-1b* would avoid a use of the Seattle Chinatown Historic District, the Pioneer Square-Skid Road National Historic District, the retail stores at 418 5th Avenue South, and Seattle First National Bank-International District Branch, but would result in a use of Union Station-Seattle, and as such are not avoidance alternatives.

The 5th Avenue alternatives (Alternative CID-2a and Option CID-2b) would avoid the Pioneer Square-Skid Road National Historic District but would result in the use of the Seattle Chinatown Historic District, and as such are not avoidance alternatives.

Typically, placing the alternatives in a tunnel is a primary location alternative to avoid impacts, and Sound Transit has already used this option for this segment and can only further minimize, not avoid, impacts. The impacts associated with the tunnel alternatives are from station entrances, other needed surface structures, and construction; any tunnel alternative with a station in this area would result in the use of a Section 4(f) historic resource and would not be an avoidance alternative. Table 4-15 provides more detail on why these location alternatives would not be prudent.

4.4.2.3 Alternative Actions

Alternative actions were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.2.4 Alignment Shifts

Alignment shifts were considered to avoid historic resources that would have an individual use from one or more alternatives in the Chinatown-International District Segment. Table 4-16 describes the alignment shifts considered and why they are not prudent.

4.4.2.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. While designing to avoid Section 4(f) properties and structures has been a goal for Sound Transit, complete avoidance of Section 4(f) resources in this segment is not possible given the density of resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraphs (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 4.5, Measures to Minimize Harm.

To entirely avoid modifying Union Station-Seattle under Alternative CID-1a* and Option CID-1b*, an entrance on the east side of 4th Avenue would require removal of a multi-story commercial building to the south of Union Station that would have greater construction costs and employee displacements. Locating the station farther north or south would not provide an efficient transfer to the existing International District/Chinatown Station. As such, these design changes would result in unique cumulative impacts of extraordinary magnitude relative to the impact of modifying this resource.

Table 4-15. Chinatown-International District Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> Seattle Chinatown Historic District Pioneer Square-Skid Road National Historic District Union Station-Seattle 	<p>There would be an individual use of these resources under Alternative CID-1a* or Option CID-1b* or Alternative CID-2a or Option CID-2b.</p> <p>Location alternatives to the west were not considered because they would not easily allow for transfers to the existing International District/Chinatown Station and would still result in a use of the Pioneer Square-Skid Road National Historic District and would therefore not be a Section 4(f) avoidance alternative. There would be inadequate space in this area for a tunnel due to the existing State Route 99 tunnel and Elliott Bay shoreline, and this location would not provide a transfer opportunity at the existing International District/Chinatown Station.</p>	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>It causes other unique problems or unusual factors (paragraph (3)(v)).</p>
<ul style="list-style-type: none"> Seattle Chinatown Historic District Pioneer Square-Skid Road National Historic District Union Station-Seattle 	<p>There would be an individual use of these resources under Alternative CID-1a* or Option CID-1b* or Alternative CID-2a or Option CID-2b.</p> <p>Location alternatives to the east would need to be on the east side of Interstate 5 to avoid a use of both historic districts and would not provide a transfer opportunity at the existing International District/Chinatown Station. Without this transfer opportunity, the project would not increase capacity and connectivity in Downtown Seattle, which is part of the purpose and need of the project.</p>	<p>This location alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.</p>

Table 4-16. Chinatown-International District Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
Seattle Chinatown Historic District	<p>There would be an individual use of this resource under Alternative CID-2a and Option CID-2b.</p> <p>There would be an individual use of the Seattle Chinatown Historic District under Alternative CID-2a and Option CID-2b. All alternatives would be located within either the Seattle Chinatown Historic District or Pioneer Square-Skid Road National Historic District. Sound Transit 3 planned for the light rail alignment in this segment to run parallel to the existing Central Link so that the existing International District/Chinatown Station could be used for connections to other light rail extensions, Sounder, Amtrak, and bus service. The WSBLE Project cannot meet its purpose and need, a component of which is to provide high-quality rapid, reliable, and efficient light rail transit service to communities in the project corridor as defined through the local planning process and reflected in the Sound Transit 3 Plan, without having an alignment close to the existing line. The existing line is in the Seattle Chinatown Historic District, as is all the property between the existing line and Interstate 5. Property to the west of the existing line, all the way to the waterfront, is part of the Pioneer Square-Skid Road National Historic District. Although the alternatives are tunnel alternatives, they require surface structures, such as station entrances and vent shafts that would have impacts to these historic districts. There are no alignment shift alternatives in this area that would avoid both historic districts; therefore, there are no alignment shift alternatives that would avoid Section 4(f) resources in this segment. An alignment entirely outside of the historic district is described above under Location Alternatives.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
Union Station-Seattle	<p>There would be an individual use of this resource under Alternative CID-1a* and Option CID-1b*.</p> <p>An alignment shift to the east to avoid was not considered because Alternative CID-2a and Option CID-2b are already located to the east, but they both result in the use of a Section 4(f) resource and as such are not avoidance alternatives.</p> <p>An alignment shift farther to the west was not considered because the BNSF Railway railroad, used by Sounder, Amtrak, and BNSF Railway, is located directly to the west as is the Pioneer Square-Skid Road National Historic District.</p>	No alignment shifts that would be avoidance alternatives are possible.
<ul style="list-style-type: none"> Seattle First National Bank-International District Branch Retail Stores, 418 5th Avenue South 	<p>There would be an individual use of these resources under Alternative CID-2a and Option CID-2b.</p> <p>An alignment shift to the west to avoid an individual use of these resources was not considered because Alternative CID-1a* and Option CID-1b* are already located to the west. These alternatives result in the use of other historic resources, and therefore are not considered avoidance alternatives.</p> <p>An alignment shift to the east to avoid this resource would result in individual uses to other Section 4(f) resources contributing to the Seattle Chinatown District Historic District and Hing Hay Park; therefore, this is not an avoidance alternative.</p>	No alignment shifts that would be avoidance alternatives are possible.

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

Based on this discussion, the design changes alternatives described above would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

and paragraph (3)(vi), which states:

it involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

4.4.3 Downtown Segment

Because none of the Build Alternatives in the Downtown Segment would avoid an individual Section 4(f) use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment.

Although the alternatives in this segment are tunnel alternatives, they require surface structures, such as station entrances and vent shafts, and construction staging areas. The locations of the stations, surface structures, and construction staging areas in this segment would be in areas of high density in the middle of Downtown Seattle where there is no open, undeveloped property. Therefore, avoiding impacts to buildings is not possible, and historic properties are on every block around at least two of the proposed new stations this area. Sound Transit has made design decisions throughout the segment to avoid and minimize historic properties, but could not design alternatives with no impacts to historic properties because they are widespread within the study area.

The following discussion of avoidance alternatives for the Downtown Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

4.4.3.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.3.2 Location Alternative

In order to meet the purpose and need of the project, an alternative in the Downtown Segment must serve the Midtown, Westlake, Denny, South Lake Union, and Seattle Center station areas in order to serve the markets identified in the Sound Transit 3 Plan. There are no location alternatives that would avoid an individual use of all Section 4(f) resources because, although the alignment of the new tunnel could be moved, there would still be adverse impacts associated with the surface structures and construction staging areas. Given that this segment has the densest areas of development as the project travels through Downtown Seattle, surface

structures and construction staging areas would result in impacts to historic buildings and/or substantial increases in displacements in high rise buildings that would increase costs regardless of the alignment chosen. For this reason, moving the tunnel alignment to different locations to avoid Section 4(f) resources was not evaluated in detail. Table 4-17 provides more detail on why these location alternatives would not be prudent.

4.4.3.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.3.4 Alignment Shifts

Alignment shifts were considered to avoid historic resources that would have an individual use from one or more alternatives in the Downtown Segment. Table 4-18 describes the alignment shifts considered and why they are not prudent.

4.4.3.5 Design Changes

As design for the WSBLE Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraphs (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17.

Where possible, permanent facilities are proposed to be integrated into historic buildings in a way that would preserve the historic features of these buildings. While the buildings would be preserved, the Section 106 finding would still be an adverse effect, and a use would occur under Section 4(f). Other considerations for station entrances were spacing between entrances as well as between stations.

For construction staging areas, lower-value properties, such as parking garages, are preferable to higher-value properties with large numbers of displacements, such as high-rise buildings. Construction staging areas were chosen to minimize impacts to historic properties to the extent possible. Property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 4.5, Measures to Minimize Harm.

Table 4-17. Downtown Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • Naramore Fountain Park • Freeway Park (park resource) • Urban Triangle Park • Seattle Center (park resource) • Frederick and Nelson Building • Spring Apartment Hotel • Bank of California Building • O'Shea Building • Thurmond's Central Realty • Maxine Apartments • National Bank of Commerce – Queen Anne Branch • Office Building, 557 Roy Street • Freeway Park (historic resource) • Grand Central Garage • Floyd A. Naramore Fountain and Plaza 	<p>There would be an individual use of these resources under Preferred Alternative DT-1 or Alternative DT-2.</p> <p>Location alternatives to the west would not be possible due to the presence of the existing Downtown Seattle Transit Tunnel (under 3rd Avenue), the BNSF Railway tunnel (under 2nd Avenue), and the State Route 99 tunnel (under 1st Avenue).</p>	<p>Location alternatives to the west would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes (paragraph (3)(iii)).</p> <p>It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude (paragraph (3)(vi)).</p>

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • Naramore Fountain Park • Freeway Park (park resource) • Urban Triangle Park • Seattle Center (park resource) • Frederick and Nelson Building • Spring Apartment Hotel • Bank of California Building • O'Shea Building • Thurmond's Central Realty • Maxine Apartments • National Bank of Commerce – Queen Anne Branch • Office Building, 557 Roy Street • Freeway Park (historic resource) • Grand Central Garage • Floyd A. Naramore Fountain and Plaza 	<p>There would be an individual use of these resources under Preferred Alternative DT-1 or Alternative DT-2.</p> <p>Location alternatives to the east would result in one or more light rail stations needing to be sited on the east side of Interstate 5, which would not serve the markets defined in the Sound Transit 3 Plan; additionally, crossing under Interstate 5 twice would have greater construction risk. Sound Transit's system-wide operating plan includes providing transfers between lines at the two highest ridership stations (Westlake and International District/Chinatown) to balance passenger loads between lines through downtown. An alignment that does not provide these transfer opportunities would not meet the project purpose to improve regional mobility by increasing connectivity and capacity through Downtown Seattle to meet the projected transit demand.</p>	<p>Location alternatives to the east would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes (paragraph (3)(iii)).</p> <p>It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude (paragraph (3)(vi)).</p>

Table 4-18. Downtown Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> Naramore Fountain Park Floyd A. Naramore Fountain and Plaza Freeway Park Spring Apartment Hotel Bank of California Grand Central Garage 	<p>There would be an individual use of these resources under either Preferred Alternative DT-1 or Alternative DT-2.</p> <p>These uses are associated with entrances for the Midtown Station. Sound Transit looked at alignment shifts to avoid use of parks and historic resources for the Midtown Station entrance based on station entrance locations because the station entrances would be the primary source of impacts in the Downtown Segment. Sound Transit considered multiple station entrance locations for the Midtown Station for both segment alternatives because there are historic properties on every block in the area. Construction staging areas must be in close proximity to the stations, and locations were identified that would minimize residential and business displacements. This station is intended to be within one block of Madison Street to allow for bus transfers to and from the RapidRide G line along Madison Street.</p> <p>Shifting the alignment to the west would conflict with other tunnels, as described in Sections 4.4.3.2 and 4.4.2.2, Location Alternative.</p> <p>Shifting to the east would require crossing under Interstate 5, and stations would not serve the markets identified in the Sound Transit 3 Plan.</p>	<p>These alignment shift alternatives would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>It causes other unique problems or unusual factors (paragraph (3)(v)).</p>
Urban Triangle Park	<p>There would be an individual use of this resource under Preferred Alternative DT-1.</p> <p>An alignment shift to avoid the use of Urban Triangle Park was not considered for the Preferred Alternative DT-1 Denny Station because the park is proposed as construction staging and would be restored to park use after construction. The park was identified for this use based on being directly adjacent to the Preferred Alternative DT-1 alignment. The park was identified for construction staging rather than impacting surrounding historic properties or high-rise buildings that would have had greater cost and up to 400 additional residential displacements or up to 900,000 square feet of office space displaced. These displacements would be permanent compared to the temporary impact to the park.</p>	<p>This alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>

Resource	Alignment Shifts	Assessment
557 Roy Street	There would be an individual use of this resource under Alternative DT-2. An alignment shift to the north would result in use of the Tricoach Corporation building, a historic resource, and, therefore, this shift is not a Section 4(f) avoidance alternative. A shift to the south on Republican Street would locate the station adjacent to the State Route 99 tunnel portal and require tunneling directly under this portal. This alignment was evaluated during the Alternatives Development process and was not carried forward because of construction challenges related to the proximity to the State Route 99 tunnel as well as other major utility conflicts.	This alignment shift alternative would not be prudent per paragraph (3)(vi) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states: It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.
Frederick and Nelson Building O'Shea Building	There would be an individual use of these resources under Alternative DT-2. The use of this historic resources related to improvements to the existing Westlake Station entrance that would connect to the new Westlake Station underground. An alignment shift to the west to avoid these uses was not considered because Preferred Alternative DT-1 is already located to the west and is not an avoidance alternative. An alignment to the east was not considered because this location would not allow for a direct transfer to the existing Westlake Station, which is necessary for balancing ridership between lines, as described in Chapter 1, Purpose and Need, of the Draft Environmental Impact Statement.	Alignment shift to the west is not an avoidance alternative. An alignment to the east would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states: It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.
<ul style="list-style-type: none"> Thurmond's Central Realty Maxine Apartments National Bank of Commerce-Queen Anne Branch. 	There would be an individual use of these resources under Alternative DT-2. These uses are associated with entrances for the Seattle Center Station. Alignments on Roy Street to the north and Harrison Street to the south were considered during the Alternatives Development phase of the WSBLE Project. The Harrison Street alignment in this area was not carried forward because of its greater cost, engineering challenges associated with tunneling under Key [Climate Pledge] Arena, and greater residential and business displacement associated with a tunnel portal to the west of the station. The Roy Street alignment in this area was not carried forward because the Seattle Center Station would be farther from Seattle Center and less accessible to bus routes. In addition, it would have engineering challenges and potential impacts to Kinnear Park associated with a more northern tunnel portal to the west of the station.	This alignment shift alternative would not be prudent per paragraph (3)(vi) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states: It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> Thurmond's Central Realty Maxine Apartments 	<p>There would be an individual use of these resources under Alternative DT-2 for the Seattle Center Station.</p> <p>A shift of the Seattle Center Station to the east to avoid an individual use of these historic resources would result in the displacement of the Seattle Repertory Theatre. Although this theater is not historic, it is part of the Seattle Center campus, and is one of the venues that make Seattle Center a major cultural events center for the city. Relocating this theater within the same proximity to Seattle Center would be difficult without displacing another historic resource or another park use. A shift to the west or to the north was not considered because a station entrance would not be directly adjacent to Seattle Center, which is an essential consideration for locating this station. Locating the station on the west side of 1st Avenue North or on the north side of Mercer Street would locate the station entrance farther from Seattle Center, and would result in thousands of additional pedestrians crossing these streets daily to attend events and attractions at Seattle Center, and the project would not provide the same benefit of reducing more direct access to this major event center. A shift to the north side of Mercer Street would also require affecting either the historic resource at 600 Warren Avenue North or a large retail complex that includes a grocery store. A shift to the west side of 1st Avenue North would impact the historic resource at 527 1st Avenue North.</p>	<p>This alignment shift alternative would not be prudent per paragraph (3)(vi) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.</p>

4.4.4 South Interbay Segment

Because none of the Build Alternatives in the South Interbay Segment would avoid an individual Section 4(f) use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment.

The following discussion of avoidance alternatives for the South Interbay Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

4.4.4.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

4.4.4.2 Location Alternative

In order to meet the purpose and need of the project, an alternative must serve the Smith Cove station areas in order to serve the markets identified in the Sound Transit 3 Plan. To travel between Seattle Center and Ballard, the South Interbay Segment alternative alignments must travel through the Interbay neighborhood, which is constrained by waterbodies (Elliott Bay and Smith Cove) and hills (Queen Anne and Magnolia). South of the Magnolia Bridge, there is a narrow corridor between Queen Anne Hill and Elliott Bay, and the only roadway through this area is Elliott Avenue West. Alternatives on both the west and east sides of Elliott Avenue West are already considered in this Draft Environmental Impact Statement.

All South Interbay Segment alternatives would result in the individual use of parks and/or historic resources along Elliott Avenue West. There are two parks (Southwest Queen Anne Greenbelt and historic Kinnear Park) as well as three historic buildings on the east side of Elliott Avenue West, and one historic building on the west side of the road, directly across from one that is on the east side of the road. Avoiding all of these structures would not be possible because light rail in the center of the roadway would require widening to one or both sides, which would result in a use of one or more historic properties. Therefore, locating the light rail completely on either side of Elliott Avenue West would not avoid the individual use of parks or historic properties.

Table 4-19 provides more detail on why other location alternatives would not be feasible or prudent.

4.4.4.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

Table 4-19. South Interbay Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • 317 West Republican Street • 317½ West Republican Street • 319 West Republican Street • Waterfront Employees of Washington and the Pacific Maritime Association • Southwest Queen Anne Greenbelt • Sheet Metal Works and Roof Company • Wilson Machine Works 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>An individual use of these historic properties could be avoided by extending the tunnel farther north along Elliott Avenue West. Extending the tunnel portal farther north on the west side of Elliott Avenue West was studied in the Alternatives Development process but the design was modified to shift the tunnel portal to the east side of Elliott Avenue West due to a large, contaminated site present on the west side of the roadway. In addition, this alternative likely would have resulted in an individual use of the King County Metro Pumping Station, a historic resource.</p>	<p>This location alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>
<ul style="list-style-type: none"> • Southwest Queen Anne Greenbelt • Sheet Metal Works and Roof Company • Western Pacific Chemical Company • Wilson Machine Works 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>An individual use of this park and these historic properties could be avoided by an alternative farther west of Elliott Avenue West, on the west side of the BNSF Railway corridor. However, Centennial Park lies between the railway corridor and Elliott Bay. Closer to the Magnolia Bridge, the area west of the railway includes a large office park and Port of Seattle Terminal 86, which is a large grain terminal. An alternative west of the railway was not considered because it would not avoid an individual use of Section 4(f) resources due to the presence of Centennial Park, and it would be difficult to access a Smith Cove Station in this area because crossings over the BNSF Railway tracks are limited. This alternative would increase the station distance from Elliott Avenue West, where riders could transfer to other modes.</p>	<p>This location alternative would not be an avoidance alternative.</p>

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Sheet Metal Works and Roof Company Western Pacific Chemical Company Wilson Machine Works 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>Alternatives farther east of Elliott Avenue West are not possible due to the steep hillside of Queen Anne Hill that would require even greater disruption of this steep hillside and more extensive slope stabilization. Alternatives farther east would also likely still have individual use of either Kinnear Park or the Southwest Queen Anne Greenbelt.</p>	<p>This location alternative would not be feasible per paragraph (2) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.</p>
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Sheet Metal Works and Roof Company Western Pacific Chemical Company Wilson Machine Works Federal Employees Credit Union Seattle Armory Field Maintenance Shop Building 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>The Transit Expansion Study: Ballard to Downtown Seattle (City of Seattle and Sound Transit 2014), which identified the Interbay and Ballard corridor included in the Sound Transit 3 Plan, studied a location alternative that would have extended the downtown tunnel under Queen Anne Hill to West Galer Street and then would have exited the tunnel at West Galer Street to travel north through Interbay. This alternative, known as Corridor A (Interbay West) in the study, would have had an additional station on Queen Anne Hill. This location alternative was estimated to cost up to an additional \$800 million.</p>	<p>This location alternative, due to the additional cost of extraordinary magnitude, would not be prudent per paragraph (3)(iv) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude.</p>
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Sheet Metal Works and Roof Company Western Pacific Chemical Company Wilson Machine Works Federal Employees Credit Union Seattle Armory Field Maintenance Shop Building 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>The Transit Expansion Study: Ballard to Downtown Seattle also studied a location alternative that would have extended the downtown tunnel north under Queen Anne Hill to Fremont and then Ballard. This alternative, known as Corridor D (Queen Anne Tunnel) in the study, would not have included stations at Smith Cove or Interbay. This location alternative would not serve the markets identified in the Sound Transit 3 Plan and was estimated to cost up to an additional \$800 million.</p>	<p>This location alternative was found to compromise the project's ability to meet the purpose and need and would have additional cost of extraordinary magnitude. Therefore, it would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude (paragraph (3)(iv)).</p>

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Sheet Metal Works and Roof Company Western Pacific Chemical Company Wilson Machine Works Federal Employees Credit Union Seattle Armory Field Maintenance Shop Building 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>The Transit Expansion Study: Ballard to Downtown Seattle also studied a location alternative that would have extended north from South Lake Union at-grade on Westlake Avenue North and tunneled under the Lake Washington Ship Canal to Fremont and Ballard. The mode for this alternative, known as Corridor E (Westlake) in the study, was rapid streetcar, and it would not have included stations at Seattle Center, Smith Cove, or Interbay. This location alternative would not serve the markets identified. This location alternative would not serve the markets identified in the Sound Transit 3 Plan and was estimated to cost up to an additional \$800 million.</p>	<p>This location alternative would not serve the markets identified in the Sound Transit 3 Plan and, therefore, would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.</p>
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Interbay Athletic Complex Federal Employees Credit Union Seattle Armory Field Maintenance Shop Building 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>Several alternatives with an alignment along 20th Avenue West, west of the BNSF Railway, were evaluated in the Alternatives Development phase Level 1 and Level 2 evaluations. These alternatives along 20th Avenue West were expected to be more expensive because of a longer water crossing of Salmon Bay. The alternatives would have avoided use of the Southwest Queen Anne Greenbelt, Interbay Golf Center, and Interbay Athletic Complex. However, they would not have avoided an individual use of historic properties on Elliott Avenue West and as such were not avoidance alternatives.</p>	<p>This location alternative would not be an avoidance alternative.</p>
<ul style="list-style-type: none"> Southwest Queen Anne Greenbelt Sheet Metal Works and Roof Company Western Pacific Chemical Company Wilson Machine Works Federal Employees Credit Union Seattle Armory Field Maintenance Shop Building 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>A tunnel along the entire alignment that would have stations in Smith Cove and Interbay to avoid all park and historic resources was not considered because of the cost for this alternative would be between about \$500 and \$800 million, or up to 30 percent, greater than the other alternatives based on the station locations included in the current Preferred Alternative, and no additional source of funding has been identified. The additional cost of a tunnel in this segment results in additional construction costs of an extraordinary magnitude and would jeopardize the ability of Sound Transit to construct the entire project and to fully realize the project purpose and need and provide all the project benefits.</p>	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>It results in additional construction, maintenance, or operational costs of an extraordinary magnitude (paragraph (3)(iv)).</p>

As discussed in Chapter 2 of the Draft Environmental Impact Statement, the Ballard Link Extension-only M.O.S. is from the SODO Station to the Smith Cove Station. The M.O.S. provides for phasing project completion, which would delay the use of Section 4(f) resources in the project segments beyond the M.O.S. However, the M.O.S. would be an interim condition until the project is completed consistent with the approved Sound Transit 3 Plan and, therefore, is not an avoidance alternative.

4.4.4.4 Alignment Shifts

Alignment shifts were considered to avoid historic resources that would have an individual use from one or more alternatives in the South Interbay Segment. Table 4-20 describes the alignment shifts considered and why they are not prudent.

4.4.4.5 Design Changes

As design for the WSBL Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraphs (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 4.5, Measures to Minimize Harm.

4.4.5 Interbay/Ballard Segment

Because none of the Build Alternatives in the Interbay/Ballard Segment would avoid an individual use of all Section 4(f) resources, an analysis of potential avoidance alternatives is required for this segment.

The following discussion of avoidance alternatives for the Interbay/Ballard Segment addresses each of the four avoidance categories described in the introduction to Section 3.4, which includes identifying location alternatives, alternative actions, alignment shifts, and design changes where applicable. This analysis considers these four avoidance categories at decreasing scales, from segment-wide to site-specific.

4.4.5.1 No Build Alternative

As described in the Duwamish Segment Avoidance Alternative discussion (Section 3.4.2.1), the No Build Alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

Table 4-20. South Interbay Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> 317 West Republican Street 317½ West Republican Street 319 West Republican Street Waterfront Employees of Washington and the Pacific Maritime Association 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 and Alternative SIB-2.</p> <p>To avoid an individual use of these historic resources on West Republican Street under Preferred Alternative SIB-1 and Alternative SIB-2, the tunnel portal would need to shift north, which would require demolition of the Cape Flattery Apartments, a historic resource, which would be an individual use; therefore, this alignment shift is not a Section 4(f) avoidance alternative.</p>	No alignment shifts that would be avoidance alternatives are possible.
<ul style="list-style-type: none"> Sheet Metal Works and Roof Company Wilson Machine Works 	<p>There would be an individual use of these resources under Preferred Alternative SIB-1 or Alternative SIB-2 or Alternative SIB-3.</p> <p>Preferred Alternative SIB-1 and Alternative SIB-2 would have an individual use of the historic Sheet Metal Works and Roof Company resource, and all three alternatives in this segment would have an individual use of the historic Wilson Machine Works resource. To avoid these historic resources on Elliott Avenue West, as well as other historic resources on this roadway, the South Interbay Segment alignment shift alternative would need to remove travel lanes on this roadway, which is a principal arterial and the primary connection between Downtown Seattle and Interbay, Magnolia, and Ballard, with almost 60,000 vehicles daily. Elliott Avenue West is also a freight corridor and the primary access to the Port of Seattle's Terminal 91, which includes cruise terminal facilities as well as moorage for fishing and commercial vessels, research vessels, ships of state, and military vessels. Reducing the capacity of this roadway is not considered practical because of the important connection it provides for both residents and the freight industry.</p>	<p>Based on this assessment, this alignment shift alternative would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>
Federal Employees Credit Union	<p>There would be an individual use of this resource under Alternative SIB-2.</p> <p>To avoid an individual use of this historic resource on 15th Avenue West, additional land for construction staging would be needed from the Interbay Golf Center property, and would result in an individual use of the Interbay P-Patch Community Garden; therefore, this alignment shift is not a Section 4(f) avoidance alternative.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
Seattle Armory Field Maintenance Shop Building	<p>There would be an individual use of this resource under Preferred Alternative SIB-1.</p> <p>A shift to the west to avoid an individual use of this historic resource would result in an adverse effect and individual use of the King County Metro Pumping Station historic resource, and a shift to the east would result in an adverse effect on the Seattle Armory historic resource. Therefore, these alignment shifts are not Section 4(f) avoidance alternatives.</p>	No alignment shifts that would be avoidance alternatives are possible.

4.4.5.2 Location Alternatives

In order to meet the purpose and need of the project, an alternative must serve the Interbay and Ballard station areas to serve the markets identified in the Sound Transit 3 Plan.

Preferred Alternative IBB-1a and Option IBB-1b would both result in an individual use of multiple resources located along 14th Avenue Northwest. Alternative IBB-3, to the west, would avoid any uses of these historic resources but would result in the use of other Section 4(f) resources and therefore, is not a Section 4(f) avoidance alternative. Alternative IBB-3 would result in an individual use of multiple resources located along 15th Avenue West/Northwest. Preferred Alternative IBB-1a and Option IBB-1b are existing alternatives already evaluated east of Alternative IBB-3 that avoid a use of this resource, but they result in uses of other Section 4(f) resources and are therefore not avoidance alternatives.

Table 4-21 provides more detail on why other location alternatives would not be prudent.

4.4.5.3 Alternative Actions

Alternative actions, such as other modes of transportation, were evaluated and not carried forward during Sound Transit 3 Plan development, which defined the mode for this project as light rail. Therefore, alternative modes or actions would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:

it compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

As discussed in Chapter 2 of the Draft Environmental Impact Statement, the Ballard Link Extension-only M.O.S. is from the SODO Station to the Smith Cove Station. The M.O.S. provides for phasing project completion, which would delay the use of Section 4(f) resources in the project segments beyond the M.O.S. However, the M.O.S. would be an interim condition until the project is completed consistent with the approved Sound Transit 3 Plan and, therefore, is not an avoidance alternative.

4.4.5.4 Alignment Shifts

Alignment shifts were considered to avoid historic resources that would be affected by one or more alternatives in the Interbay/Ballard Segment. Table 4-22 describes the alignment shifts considered and why they are not prudent.

4.4.5.5 Design Changes

As design for the WSBL Project progresses, Sound Transit continues to look for opportunities to reduce project impacts, including impacts on Section 4(f) resources. As noted earlier, design changes were not considered for resources where the entire resource would be displaced because in such situations all potential design changes on the same alignment would not be prudent per paragraphs (3)(iii) and (v) under the definition of feasible and prudent avoidance alternatives in Code of Federal Regulations Title 23 Section 774.17. Information on property-specific design changes to minimize impacts that were incorporated into the alternative design are discussed further in Section 4.5, Measures to Minimize Harm.

Table 4-21. Interbay/Ballard Segment Avoidance Alternatives - Location Alternatives

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • 14th Avenue Northwest Boat Ramp • Industrial and Commercial Building, 1121 Northwest 45th Street • HDF Propeller Company Machining and Manufacturing Building • Residence, 5713 14th Avenue Northwest • Duplex, 1145 Northwest 56th Street • Superior Concrete Products Company • Fishermen's Terminal Historic District and Associated Historic Resources • Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building • Lyle Branchflower Company Processing Warehouse • Residence, 3220 15th Avenue West • Nelson Chevrolet Storage Lot Office Building • Sweden Freezer Manufacturing Company • Keller Supply Company 	<p>There would be an individual use of these resources under Preferred Alternative IBB-1a or Option IBB-1b or Preferred Alternative IBB-2a* or Option IBB-2b* or Alternative IBB-3.</p> <p>A bridge farther west of 15th Avenue Northwest, aligned with 20th Avenue Northwest, was evaluated during the Alternatives Development process. This alignment would have avoided an individual use of the 14th Avenue Northwest Boat Ramp, Fishermen's Terminal, and historic resources along 14th Avenue Northwest and 15th Avenue Northwest. It was not carried forward because it was projected to have lower ridership than other alternatives, higher construction costs, and substantial engineering construction challenges associated with crossing the BNSF Railways Balmer railyard and a longer crossing of Salmon Bay. The crossing of Salmon Bay would be where the bay is wider than it is at other proposed crossings to the east, which would have resulted in greater in-water impacts to ecosystems. This alternative would also have been closer to the Ballard Avenue National Historic District, and avoiding adverse effects to historic resources on this alignment would have been difficult due to the density of structures over 50 years old in this area (although all structures on this alignment were not evaluated).</p>	<p>This location alternative would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need (paragraph (3)(i)).</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes (paragraph (3)(iii)).</p> <p>It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude (paragraph (3)(vi)).</p>

Resource	Location Alternatives	Assessment
<ul style="list-style-type: none"> • 14th Avenue Northwest Boat Ramp • Industrial and Commercial Building, 1121 Northwest 45th Street • HDF Propeller Company Machining and Manufacturing Building • Residence, 5713 14th Avenue Northwest • Duplex, 1145 Northwest 56th Street • Superior Concrete Products Company • Fishermen's Terminal Historic District and Associated Historic Resources • Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building • Lyle Branchflower Company Processing Warehouse • Residence, 3220 15th Avenue West • Nelson Chevrolet Storage Lot Office Building • Sweden Freezer Manufacturing Company • Keller Supply Company 	<p>There would be an individual use of these resources under Preferred Alternative IBB-1a or Option IBB-1b or Preferred Alternative IBB-2a* or Option IBB-2b* or Alternative IBB-3.</p> <p>A bridge farther east of 14th Avenue Northwest, aligned with 11th Avenue Northwest (the next arterial east of 14th Avenue Northwest), was not considered for evaluation because it would locate the Ballard Station on the eastern edge of the City of Seattle's Ballard Urban Village and would not serve the project's intended population as well as station locations farther west that would be more centrally in the urban village.</p>	<p>This location alternative would not be prudent per paragraph (3)(i) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need.</p>

Table 4-22. Interbay/Ballard Segment Avoidance Alternatives - Alignment Shifts

Resource	Alignment Shifts	Assessment
14th Avenue Northwest Boat Ramp	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>An alignment shift to the west to avoid an individual use of this resource would displace the Seattle Maritime Academy, which is part of Seattle Central College. The academy provides classroom and hands-on training for careers in the regional and global maritime industry and features a new building built in 2016 and waterfront access for training vessels. A shift to the west would also displace the following: HDF Propeller Company Machining and Manufacturing Building (a National Register-eligible property); West Marine, which recently relocated and built a new 2-story building with underground parking; and a 5-story mixed-use office building with underground parking. Displacing these new developments and the school would result in substantial cost increases, and the school could be difficult to relocate. This alignment shift would not fully avoid Section 4(f) resources and therefore is not an avoidance alternative.</p> <p>An alignment shift to the east to avoid an individual use of this resource would result in additional business displacements on the east side of 14th Avenue Northwest, including a National Register-eligible office building at 1148 Northwest Leary Way. This alignment shift would not fully avoid Section 4(f) resources and therefore is not an avoidance alternative.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
HDF Propeller Company Machining and Manufacturing Building	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>This resource is directly northwest of the 14th Avenue Northwest Boat Ramp. An alignment shift to the west to avoid this building would also displace the Seattle Maritime Academy, West Marine, and the new 5-story mixed use office building.</p> <p>As described above for the 14th Avenue Northwest Boat Ramp, there is no alignment shift to the east that avoids all Section 4(f) resources.</p>	<p>This alignment shift would not be prudent under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes (paragraph (3)(iii)).</p> <p>It causes other unique problems or unusual factors (paragraph (3)(v)).</p>
1121 Northwest 45th Street	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>This resource is directly east of the 14th Avenue Northwest Boat Ramp. As described above for the 14th Avenue Northwest Boat Ramp, there is no alignment shift to the east that avoids all Section 4(f) resources.</p>	No alignment shifts that would be avoidance alternatives are possible.
Residence, 5713 14th Avenue Northwest	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>This historic property is on the west side of 14th Avenue Northwest, and shifting the alignment to the east to avoid this property would result in an individual use of a National Register-eligible apartment complex at 5700 14th Avenue Northwest and, therefore, is not a Section 4(f) avoidance alternative.</p> <p>Alternative IBB-3 is west of this property and avoids an individual use of this resource but results in individual uses at other Section 4(f) resources and is therefore also not an avoidance alternative; therefore, an alignment shift west of Preferred Alternative IBB-1a and Option IBB-1b is not considered.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
Apartment Complex, 5700 14th Avenue Northwest	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>This historic property is on the east side of 14th Avenue Northwest, and shifting the alignment to the east to avoid this property would result in an individual use of a National Register-eligible residence at 5713 14th Avenue Northwest and, therefore, is not a Section 4(f) avoidance alternative.</p> <p>Alternative IBB-3 is west of this property and avoids an individual use of this resource but results in individual uses at other Section 4(f) resources and is therefore also not an avoidance alternative; therefore, an alignment shift west of Preferred Alternative IBB-1a and Option IBB-1b is not considered.</p>	No alignment shifts that would be avoidance alternatives are possible.
Duplex, 1145 Northwest 56th Street	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a and Option IBB-1b.</p> <p>An alignment shift to either the west or the east to avoid an individual use of this property would result in greater impacts of private property instead of public right-of-way, which would substantially increase the project cost and have up to 265 residential displacements. An alignment shift to the west would also likely result in an individual use of another historic resource, Bardahl Manufacturing Company Office.</p>	<p>These alignment shifts would not be prudent in accordance with paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <ul style="list-style-type: none"> (A) Severe social, economic, or environmental impacts; (B) Severe disruption to established communities; (C) Severe disproportionate impacts to minority or low-income populations; or (D) Severe impacts to environmental resources protected under other federal statutes.
Fishermen's Terminal Historic District and Associated Historic Resources	<p>There would be an individual use of these resources under Alternative IBB-3.</p> <p>Due to the size of this historic property and the density of eligible resources, there are no alignment shifts for this property that could avoid other historic resources or avoid an individual use of the historic district. As such, there are no alignment shift avoidance alternatives. Alignments that would avoid the district and eligible resources within it are discussed above under Section 4.4.5.2, Location Alternatives.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> Lyle Branchflower Company Processing Warehouse Lyle Branchflower Company Cold Storage Building/North Star Ice Equipment Building 	<p>There would be an individual use of these resources under Alternative IBB-3.</p> <p>An alignment shift to the west to avoid this historic resource would also shift west on the Fishermen's Terminal Historic District property to the south, resulting in greater effects on this district and its contributing resources.</p> <p>An alignment shift to the east to avoid this historic resource would result in the use of the National Register-listed Ballard Bridge, and Preferred Alternative IBB-1a and Option IBB-1b are existing alternatives already evaluated east of the Ballard Bridge that avoid an individual use of this resource but result in individual uses at other Section 4(f) resources.</p>	No alignment shifts that would be avoidance alternatives are possible.
Nelson Chevrolet Storage Lot Office Building	<p>There would be an individual use of this resource under Alternative IBB-3.</p> <p>An alignment shift to the west to avoid the use of this property would result in an individual use of the Nelson Chevrolet Repair Garage and the Nelson Chevrolet Showroom and is therefore not an avoidance alternative. An alignment shift to the east would result in an individual use of the National Register-listed Ballard Bridge and, therefore, is also not an avoidance alternative.</p>	No alignment shifts that would be avoidance alternatives are possible.
Superior Concrete Products Company	<p>There would be an individual use of this resource under Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, Preferred Option IBB-2b*, and Alternative IBB-3.</p> <p>This property is south of Fishermen's Terminal and directly west of 15th Avenue West. An alignment shift to avoid this property is not possible for the same reasons described above for Fishermen's Terminal.</p>	No alignment shifts that would be avoidance alternatives are possible.

Resource	Alignment Shifts	Assessment
<ul style="list-style-type: none"> Residence, 3440 15th Avenue West Residence, 3442 15th Avenue West Residence, 3220 15th Avenue West 	<p>There would be an individual use of these resources under Option IBB-1b.</p> <p>Shifting Option IBB-1b to the west would have greater effects on the west side of the road, including impacts to Superior Concrete Products Company, which is an historic resource; therefore, this alignment shift is not an avoidance alternative.</p> <p>Shifting to the east would result in about 50 additional residential displacements; the majority of buildings that would potentially be affected were built prior to 1980 and, therefore, the shift could affect additional historic properties that have not yet been identified.</p> <p>The residence at 3220 15th Avenue West would also be an individual use of these resources under Alternative IBB-3. The alignment shifts for Option IBB-1b described above would also apply for Alternative IBB-3 in this location.</p>	<p>An alignment shift to the west would not be an avoidance alternative.</p> <p>An alignment shift to the east would not be prudent per paragraph (3)(iii) under the definition of feasible and prudent avoidance alternative in Code of Federal Regulations Title 23 Section 774.17, which states:</p> <p>After reasonable mitigation, it still causes:</p> <p>(A) Severe social, economic, or environmental impacts;</p> <p>(B) Severe disruption to established communities;</p> <p>(C) Severe disproportionate impacts to minority or low-income populations; or</p> <p>(D) Severe impacts to environmental resources protected under other federal statutes.</p>
<ul style="list-style-type: none"> Sweden Freezer Manufacturing Company Keller Supply Company 	<p>There would be an individual use of these resources under Preferred Alternative IBB-1a, Preferred Alternative IBB-2a*, and Preferred Option IBB-2b*.</p> <p>Shifting these alternatives to the west would result in a use of the Seattle and Montana Railway, which is an historic resource; therefore, this alignment shift is not an avoidance alternative. An alignment shift to the east would result in a use of the office building at 3220 17th Avenue West, which is an historic resource; therefore, this alignment shift is not an avoidance alternative.</p>	<p>No alignment shifts that would be avoidance alternatives are possible.</p>

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

4.5 Measures to Minimize Harm

As described in the Avoidance Alternatives section above, Sound Transit has looked for opportunities to reduce project impacts, including impacts on Section 4(f) resources, throughout the design development for the WSBLE Project. The WSBLE Build Alternatives evaluated in this Section 4(f) Evaluation incorporate Sound Transit's best attempt at minimizing and avoiding Section 4(f) resources in the densely developed project corridor. Methods of minimization and avoidance included adjustments to the horizontal alignment, vertical profile, and placement of stations and support facilities. These design adjustments are included in the Build Alternatives that are being evaluated. Typical mitigation measures for visual effects and noise and vibration impacts are described in Section 3.5, Measures to Minimize Harm.

4.5.1 Parks and Recreation Facilities Measures to Minimize Harm

According to City of Seattle Ordinance 118477, any City park land permanently acquired by the project must be replaced with land of equivalent or better size, value, location, and usefulness. Sound Transit would coordinate with Seattle Parks and Recreation to find suitable replacement property for acquired park land and displaced parks.

Table 4-23 summarizes the resource-specific measures to minimize harm to Section 4(f) park resources.

Table 4-23. Proposed Measures to Minimize Harm by Section 4(f) Park Resource – Ballard Link Extension

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
<i>Naramore Fountain Park</i>			
DT-1	Alternative would not impact resource.		
DT-2	Use.	This alternative would permanently acquire this park for a Midtown Station entrance.	<p>Prior designs considered use of historic structures along 6th Avenue, including Dover Apartments and University Women's Club, for the Midtown Station entrance. Use of the park was selected because of the ability to integrate park features, including Floyd A. Naramore Fountain, into the station entrance plaza and not displace any residents or businesses.</p> <p>The historic fountain and plaza would be integrated into this alternative's station entrance. The area would function as it does currently and still be available for recreational use in the same manner it currently is today.</p>
<i>Freeway Park</i>			
DT-1	Alternative would not impact resource.		

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
DT-2	Use.	This alternative would permanently incorporate part of the park to accommodate a Midtown Station entrance; benches and a pathway between Seneca Street and Spring Street east of Naramore Fountain Park would be removed.	Use of this property was minimized by only using the portion of the park south of Seneca Street. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
Westlake Park			
DT-1	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	This alternative would temporarily occupy approximately 0.1 acre of the northeast corner of this park. This area contains landscaping with trees and paved plaza.	The area temporarily occupied during construction would be restored when construction is completed. Landscaping trees removed would be replaced.
DT-2	Alternative would not impact resource.		
Urban Triangle Park			
DT-1	Use.	This alternative would result in a temporary closure of the entire park for up to 6 years during construction.	The park would be restored after construction.
DT-2	Alternative would not impact resource.		
Seattle Center			
DT-1	<i>de minimis</i> . (Preliminary concurrence requested)	<p>This alternative would permanently incorporate 0.6 acre (approximately less than 1 percent of the total area) of Seattle Center land for the Seattle Center Station entrance and would temporarily occupy 1.5 acres during construction.</p> <p>Removes southern exit to the Seattle Repertory Theatre, as well as landscaping, which includes Donnelly Garden and Theater Commons. Views of the International Fountain and the Space Needle from the Seattle Repertory Theatre lobby could be blocked by the station entrance. Mature trees along August Wilson Way that are designated as Exceptional Trees by the City would be removed for construction.</p> <p>Access from Mercer Street to August Wilson Way would be closed during construction, affecting non-motorized access and campus maintenance and</p>	<p>The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p> <p>Sound Transit would coordinate with Seattle Center on a construction management plan related to access and noise to minimize impacts to uses.</p> <p>Groundborne noise and vibration for sensitive receivers for operation would be mitigated to levels below FTA impact criteria.</p>

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
		<p>delivery access. Access from the west along Republican Street and August Wilson Way would be closed.</p> <p>Vibration and/or groundborne noise impact during construction at K.E.X.P., the Vera Project, the Seattle Repertory Theatre, SIFF Film Center, and the Cornish Playhouse.</p>	
DT-2	No use. Temporary occupancy exception conditions would be satisfied. (Preliminary concurrence requested)	<p>This alternative would result in a temporary occupancy of less than 0.1 acre of Seattle Center for construction of the cut-and-cover Seattle Center Station. The area that would be temporarily occupied is the northwest corner of the Seattle Repertory Theatre property. This area contains a landscaping strip with trees and vegetation and a small portion of the paved parking lot for the Seattle Repertory Theatre. The retaining wall will not be affected. A small permanent easement is needed at the edge of the property line underground adjacent to the station box.</p> <p>Partial closure of Mercer Street for 3.5 years, between Warren Avenue North and 1st Avenue North.</p> <p>Vibration impact at the Seattle Repertory Theatre and groundborne noise impact at Seattle Opera and McCaw Hall during construction.</p>	<p>The temporarily occupied area would be restored after construction.</p> <p>Sound Transit would coordinate with Seattle Center on a construction management plan related to access and noise to minimize impacts to uses.</p> <p>Pre-construction surveys would be conducted to document the existing conditions of buildings, and the contractor would be responsible for repairing damage resulting from the project.</p> <p>Operational groundborne noise and vibration impacts to sensitive receivers would be mitigated to levels below FTA impact criteria.</p>
Kinnear Park			
SIB-1	<i>de minimis</i> . (Preliminary concurrence requested)	<p>This alternative would permanently incorporate 0.1 acre of park property (approximately less than 1 percent of total area) along its western edge to accommodate the elevated light rail guideway and temporarily occupy up to an additional 0.1 acre during construction.</p>	<p>The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p>

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
SIB-2	<i>de minimis</i> . (Preliminary concurrence requested)	This alternative would permanently incorporate 0.1 to 0.2 acre (up to approximately 1 percent of total area) of the northwest corner of the park property to accommodate the elevated light rail guideway and would temporarily occupy up to an additional 0.1 acre during construction.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-3	<i>de minimis</i> . (Preliminary concurrence requested)	This alternative would permanently incorporate 0.4 acre (approximately 3 percent of total area) of park property to accommodate a tunnel portal and would temporarily occupy up to an additional 0.3 acre during construction.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
Southwest Queen Anne Greenbelt			
SIB-1	Alternative would not impact resource.		
SIB-2	Use.	This alternative would permanently incorporate approximately 0.9 acre (approximately 7 percent of total area) of the greenbelt property along its western edge to accommodate the installation of the elevated guideway and it would temporarily occupy an additional 0.1 acre during construction.	<p>The design located the alignment as far to the west as possible to minimize impacts to the greenbelt.</p> <p>Permanent project elements in the greenbelt include improvements to the drainage of the hill, a maintenance road behind the retaining wall required to stabilize the Queen Anne hillside, and hi-rail access where the guideway would be at-grade for a short distance.</p> <p>The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p>
SIB-3	Use.	This alternative would permanently incorporate 1 acre (approximately 8 percent of total area) of the greenbelt property for the installation of retained-cut guideway and station and it would temporarily occupy an additional 0.1 acre during construction.	<p>The design located the alignment as far to the west as possible. Permanent project elements in the greenbelt would include improvements to the drainage of the hill, a maintenance road behind the retaining wall required to stabilize the Queen Anne hillside, and hi-rail access.</p> <p>The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.</p>

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
Interbay Golf Center			
SIB-1	<i>de minimis</i> . (Preliminary concurrence requested)	This alternative would permanently incorporate approximately 2.2 acres (approximately 5 percent of the total area) of the golf center land along the bottom of the western slope of the property, and it would temporarily occupy up to an additional 1.5 acres during construction. The golf center's playable area would not be impacted.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-2	<i>de minimis</i> . (Preliminary concurrence requested)	This alternative would permanently incorporate 0.2 acre (approximately less than 1 percent of the total area) of golf center land on the east side of the property and would temporarily occupy 0.3 acre during construction. The golf center's playable areas or access to the facility would not be impacted.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-3	<i>de minimis</i> . (Preliminary concurrence requested)	This alternative would permanently incorporate 2.4 acres (approximately 6 percent of the total area) of golf center land in the southwest corner of the property and along the bottom of the western slope of the property and temporarily occupy 0.5 acre during construction. This alternative would impact the playable area of the golf course (hole 5 green and hole 6 tee box).	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate. Preliminary discussions with Seattle Parks and Recreation indicate that the two impacted holes could be shortened to accommodate the project and retain their use. This project-performed mitigation would be designed in coordination with the City of Seattle and could address the adverse impact on the golf course.
Interbay Athletic Complex			
SIB-1	Use.	This alternative would permanently incorporate approximately 0.7 to 0.8 acre (approximately 10 percent of the total area) of athletic complex land, which would make the playfields unusable for their purpose (baseball and football) and remove up to half of the parking lot.	The design located these alignments as far to the west as possible on the property. While the grass playfields would not be usable, the soccer stadium was avoided. Sound Transit would work with Seattle Parks and Recreation to find suitable replacement property (approximately 3.7 acres) for the displaced playfields to serve the same neighborhood area. There may be an opportunity onsite for some mitigation measures to enhance the use of the soccer field and stadium, such as expanded parking into the area of the displaced playfield.
SIB-2	Alternative would not impact resource.		
SIB-3	Use.	Same as Preferred Alternative SIB-1.	

Alternative	Preliminary Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
14th Avenue Northwest Boat Ramp			
IBB-1a	Use.	This alternative would displace the boat ramp.	These alignments were designed to avoid the boat ramp itself, but placement of bridge columns would make vehicle access for launching boats from the ramp difficult and access could not be maintained during construction. Due to the multi-year construction period, Sound Transit determined permanent relocation would allow for the function of this facility to be maintained without a break in visitor access. Sound Transit would relocate the boat ramp near its current location prior to construction to maintain shoreline access.
IBB-1b	Use.	Same as Preferred Alternative IBB-1a.	
IBB-2a*	Alternative would not impact resource.		
IBB-2b*	Alternative would not impact resource.		
IBB-3	Alternative would not impact resource.		

* As described in the introduction to Chapter 2, Alternatives Considered, at the time the Sound Transit Board identified alternatives for study in the Draft Environmental Impact Statement some alternatives were anticipated to require third-party funding based on early cost estimates. The asterisk identifies these alternatives and the alternatives that would only connect to these alternatives in adjacent segments.

4.5.2 Historic Resources Measures to Minimize Harm

Measures to minimize or mitigate harm to Section 4(f) historic resources, beyond the design measures already included in the project, will be coordinated with the Washington State Department of Archaeology and Historic Preservation, local jurisdictions, and interested parties. They also will be memorialized in the Section 106 Memorandum of Agreement or Programmatic Agreement for this project, consistent with Section 106 of the National Historic Preservation Act. The specific mitigation measures for each affected historic resource would be developed in consultation with the State Historic Preservation Officer, Tribes, and other consulting parties under Section 106. Typical mitigation measures for impacts to historic resources are described in Section 3.5.4.

Pre-construction surveys would be conducted to document the existing conditions of buildings near construction areas, and the contractor would be responsible for repairing damage resulting from the project. During final design, all impacts and potential mitigation measures would be reviewed for verification.

Other measures to minimize harm to specific properties are described below by segment. No additional measures for the SODO Segment were identified, and therefore it is not discussed below.

4.5.2.1 Chinatown-International District Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the Chinatown-International District Segment. To minimize impacts to Union Station-Seattle for Alternative CID-1a* and Option CID-1b*, the station entrance was designed to be integrated into the concourse

area of the building. Efforts would be made to retain the exterior structure during construction. If the structure could not be retained, it would be rebuilt to its current condition. Focusing the station entrance in the concourse area of the building would minimize long-term impacts on the main building, including the Great Hall. Previous designs considered greater use of the Union Station building but were dismissed.

4.5.2.2 Downtown Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the Downtown Segment. Table 4-24 describes design changes to minimize impacts on properties not displaced. As a result of these design strategies, many of the historic buildings that could have been demolished would remain, with their use changed to a station entrance.

Table 4-24. Downtown Segment Design Measures to Minimize Harm on Historic Resources

Resource	Alternative	Design Changes
2120 Westlake Avenue (retail)	DT-1	Prior designs considered demolition of the building for a tunnel vent structure. The design was modified to integrate the tunnel vent into the building while preserving the exterior.
Spring Apartment Hotel	DT-2	Prior designs considered use of historic structures for the Midtown Station entrance, but the design changed to use the parking garage on the Spring Apartment Hotel property, which is not historic. Structures on all sides of this parking garage are listed in or eligible for listing in the National Register.
Floyd A. Naramore Fountain and Plaza	DT-2	See Naramore Fountain Park in Table 4-23.
Freeway Park (historic resource)	DT-2	Use of this property was minimized by only using the portion of the park south of Seneca Street.
Frederick and Nelson Building	DT-2	Use of this property was minimized by proposing reconstruction of the existing station entrance in this building as well as excavation down to a new pedestrian tunnel that would be mined under the building to connect to a new station under 6th Avenue rather than demolishing the building to work underneath it.
O'Shea Building	DT-2	Use of this property was minimized by excavating in the basement of the existing building, below the existing station platform level, to provide a connection to a new pedestrian tunnel that would be mined under the building to the east to connect to the new station under 6th Avenue, rather than demolishing the building to work underneath it.

4.5.2.3 South Interbay Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the South Interbay Segment. The following text describes design changes to minimize project impacts on a property that would not be displaced.

To minimize impacts to Western Pacific Chemical Company from Alternative SIB-2 and Alternative SIB-3, the design was modified to avoid requiring demolition of the building. Use of the property would involve use of the parking lots and likely would require relocation of the current business, but the structure would remain and could be used following construction.

4.5.2.4 Interbay/Ballard Segment

Sound Transit has made design changes during the alternative design process and will continue to do so throughout project design to minimize impacts on historic properties in the Interbay/Ballard Segment. The following text describes design changes to minimize project impacts on properties that would not be displaced.

To minimize impacts to the Fishermen's Terminal Historic District resource under Alternative IBB-3, the locations of guideway columns were designed to avoid as many historic resources as possible while also minimizing in-water impacts associated with this alternative's Salmon Bay crossing.

To minimize impacts to the 5713 14th Avenue Northwest commercial building resource under Preferred Alternative IBB-1a and Option IBB-1b, the construction staging area was modified to exclude the historic building. However, the property would still need to be acquired for the project due to construction directly in front that would cut off access and require a small portion of the front yard for construction staging because a column for a straddle bent would be directly in front of the property and the column foundation would extend under the front of the property.

4.6 Least Harm Analysis

When there is no feasible and prudent avoidance alternative, FTA may approve only the alternatives that cause the least overall harm based on an assessment of the seven factors listed in Code of Federal Regulations Title 23 Section 774.3(c)(1):

- 1) The ability of the alternative to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property).
- 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.
- 3) The relative significance of each Section 4(f) property.
- 4) The views of the official(s) with jurisdiction over each Section 4(f) property.
- 5) The degree to which each alternative meets the purpose and need for the project.
- 6) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f).
- 7) Substantial differences in costs among the alternatives.

Following public review of and comment on the WSBLE Draft Environmental Impact Statement and the potential impacts of the proposed alternatives, which includes this Section 4(f) evaluation; continued consultation with officials having jurisdiction on the proposed *de minimis* findings after public comment is received; and consultation regarding adverse effects on historic resources with the State Historic Preservation Office and consulting parties, Sound Transit will prepare a Least Harm Analysis to be included in the Final Section 4(f) Evaluation, which will be prepared in conjunction with the Final Environmental Impact Statement for this project.

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5 COORDINATION

Table 5-1 lists the coordination meetings conducted to date regarding Section 4(f) resources. Table 5-2 lists the concurrence requests sent by Sound Transit to officials with jurisdiction. A copy of the concurrence request sent to the City of Seattle is provided in Attachment H.2. Copies of correspondence with the State Historic Preservation Officer are provided in Attachment N.5F of Appendix N.5, Historic and Archaeological Resources Technical Report.

Table 5-1. Section 4(f) Consultation Summary

Date	Format	Participants	General Topic(s)
February 6, 2019	Tour	Sound Transit, Washington State Department of Archaeology and Historic Preservation	Corridor tour and overview of alignments
December 2, 2019	Meeting	Sound Transit, Seattle Parks and Recreation	Overview of West Seattle alternatives and potential impacts to parks
December 5, 2019	Meeting	Sound Transit, Seattle Parks and Recreation	Overview of Interbay and Ballard alternatives and potential impacts to parks
December 19, 2019	Meeting	Sound Transit, Seattle Parks and Recreation	Overview of Downtown alternatives and potential impacts to parks
February 27, 2020	Meeting	Sound Transit, Seattle Parks and Recreation, Premier Golf, Seattle Public Utilities	Overview of impacts to golf courses
March 10, 2020	Teleconference	Sound Transit, Seattle Parks and Recreation	Overview of impacts to Interbay Athletic Complex
August 3, 2021	Teleconference	Sound Transit, City of Seattle	Review draft Section 4(f) appendix.
August 9, 2021	Teleconference	Sound Transit, Port of Seattle	Review draft Section 4(f) appendix.
September 10, 2021	Teleconference	Sound Transit, Seattle Parks and Recreation	Discussion of comments on draft Section 4(f) appendix and clarification on <i>de minimis</i> and temporary occupancy concurrence.
September 13, 2021	Teleconference	Sound Transit, City of Seattle, Seattle Center	Discussion of comments on draft Section 4(f) appendix and clarification on <i>de minimis</i> and temporary occupancy concurrence.

Table 5-2. Concurrences Requested

Concurrence Item	Agency	Date Requested	Date Received
Significance of park and recreational resources; Section 4(f) preliminary <i>de minimis</i> and temporary occupancy use exception determinations	City of Seattle	October 13, 2021	Pending
Significance of historic resources	Washington State Historic Preservation Officer	September 3, 2021	November 9, 2021

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6 REFERENCES

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Attachment H.1
Section 4(f) Status of Parks and Recreational
Resources in the Study Area

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Table H.1-1. Parks and Recreational Section 4(f) Resources – West Seattle Link Extension

Segment	Resource Name	Ownership/Maintenance	Size/Length	Resource Type	Primary Use	Significant Resource? Yes/No	4(f) Resource? Yes/No
SODO	SODO Trail	Sound Transit, Seattle Department of Transportation	1 mile	Paved connector trail	Non-motorized transportation	No	No, primary purpose is transportation ^a
Duwamish	West Seattle Bridge Trail	Seattle Department of Transportation, Port of Seattle	2 miles	Paved trail	Non-motorized transportation	No	No, primary purpose is transportation ^a
Duwamish	Harbor Marina Corporate Center at Terminal 102	Port of Seattle	600 feet of shoreline	Waterfront park	Public shoreline access	No	No, primary purpose is landscaping and marina access
Duwamish	Terminal 18 Park	Port of Seattle	1.3 acres	Waterfront park	Passive use	Yes	Yes
Duwamish	Duwamish Trail	Seattle Department of Transportation, Seattle Parks and Recreation, Port of Seattle	1.9 miles	On-street trail	Non-motorized transportation	No	No, primary purpose in study area is transportation ^a
Duwamish	West Duwamish Greenbelt	Seattle Parks and Recreation	28.0 acres	Greenspace	Recreation/Conservation	Yes	Yes
Duwamish	22nd Avenue Southwest Street-end	Seattle Department of Transportation	<0.1 acre	Street-end park	Passive Use	No	No, permitted use in public right-of-way
Duwamish	Delridge Connector Trail	Seattle Department of Transportation	0.4 mile	Paved trail	Non-motorized transportation	No	No, primary purpose is transportation ^a
Duwamish	Alki Trail	Seattle Department of Transportation, Seattle Parks and Recreation, Port of Seattle	4.4 miles	Paved trail	Non-motorized transportation	No	No, primary purpose in study area is transportation ^a
Delridge	Delridge Playfield	Seattle Parks and Recreation	14.0 acres	Playground	Active use	Yes	Yes
Delridge	Longfellow Creek Natural Area	Seattle Parks and Recreation	5.9 acres	Greenspace	Conservation/recreation	Yes	Yes
Delridge	Longfellow Creek Legacy Trail	Seattle Parks and Recreation	4.2 miles	Recreation trail	Recreation	Yes	Yes
Delridge	West Seattle Golf Course	Seattle Parks and Recreation	138.1 acres	Recreation area	Golf	Yes	Yes

Attachment H.1 Section 4(f) Status of Parks and Recreational Resources in the Study Area

Segment	Resource Name	Ownership/Maintenance	Size/Length	Resource Type	Primary Use	Significant Resource? Yes/No	4(f) Resource? Yes/No
West Seattle Junction	West Seattle Stadium	Seattle Parks and Recreation	11.6 acres	Recreation area	Active use	Yes	Yes
West Seattle Junction	Fauntleroy Place	Seattle Parks and Recreation	0.1 acre	Street triangle	Passive use/leisure activity	No	No, not a significant park ^b
West Seattle Junction	West Seattle Junction Park	Seattle Parks and Recreation	0.4 acre	Planned park	Passive use/leisure activity	Yes	Yes
West Seattle Junction	Junction Plaza Park	Seattle Parks and Recreation	0.2 acre	Neighborhood park	Passive use/leisure activity	Yes	Yes

Note: For a discussion of study area parks and recreational resources, see Sections 4.2.17 and 4.3.17, Parks and Recreational Resources, in Chapter 4, Affected Environment and Environmental Consequences. For a discussion of potential project effects to paved multi-modal trails in the study area, see the Non-motorized Facilities subsections in Chapter 3, Transportation Environment and Consequences.

^a Code of Federal Regulations Title 23 Section 774.13(f)(4) provides an exception to Section 4(f) regulations for trails, paths, bikeways, and sidewalks that are part of the local transportation system and which function primarily for transportation. This trail meets the exception criteria because it is a Seattle Department of Transportation multi-use trail, the purpose of which is to provide another transportation option for city residents.

^b Preliminary determination; waiting for concurrence from Seattle Parks and Recreation.

Table H.1-2. Parks and Recreational Section 4(f) Resources – Ballard Link Extension

Segment	Resource Name	Ownership/Maintenance	Size/Length	Resource Type	Primary Use	Significant Resource? Yes/No	4(f) Resource? Yes/No
SODO and Chinatown-International District	SODO Trail	Sound Transit, Seattle Department of Transportation	1 mile	Paved/off-street path	Non-motorized transportation	No	No, primary purpose is transportation ^a
Chinatown-International District	Hing Hay Park	Seattle Parks and Recreation	0.3 acre	Public square	Community/gathering	Yes	Yes

Attachment H.1 Section 4(f) Status of Parks and Recreational Resources in the Study Area

Segment	Resource Name	Ownership/Maintenance	Size/Length	Resource Type	Primary Use	Significant Resource? Yes/No	4(f) Resource? Yes/No
Chinatown-International District	City Hall Park	Seattle Parks and Recreation	0.9 acre	Public square	Historic/cultural	Yes	Yes
Downtown	Naramore Fountain Park	Washington State Department of Transportation, Seattle Parks and Recreation	0.9 acre	Public square	Passive use	Yes	Yes
Downtown	Freeway Park	Washington State Department of Transportation, Seattle Parks and Recreation	5.2 acres	Large urban park	Passive use/leisure activity	Yes	Yes
Downtown	Westlake Park	Seattle Parks and Recreation	0.6 acre	Neighborhood park	Passive use/leisure activity	Yes	Yes
Downtown	McGraw Square	Seattle Parks and Recreation/Seattle Department of Transportation	<0.1 acre	Public square	Historic/cultural	No	No, not a significant park ^b
Downtown	Westlake Square	Seattle Parks and Recreation	<0.1 acre	Street triangle	Passive use/leisure activity	No	No, not a significant park ^b
Downtown	Urban Triangle Park	Seattle Parks and Recreation	0.2 acre	Street triangle	Passive use/leisure activity	Yes	Yes
Downtown	Denny Park	Seattle Parks and Recreation	4.6 acres	Neighborhood park	Passive use/leisure activity	Yes	Yes
Downtown	Counterbalance Park	Seattle Parks and Recreation	0.3 acre	Neighborhood park	Passive use/leisure activity	Yes	Yes
Downtown	Seattle Center	Seattle Center	74 acres	Regional event center	Museums, performance venues, festivals	Yes	Yes
South Interbay	Kinnear Park	Seattle Parks and Recreation	14.7 acres	Large urban park	Passive use/leisure activity	Yes	Yes
South Interbay	Centennial Park	Port of Seattle	18.4 acres	Waterfront park	Passive use/leisure activity	Yes	Yes
South Interbay	Southwest Queen Anne Greenbelt	Seattle Parks and Recreation	12.6 acres	Greenspace	Recreation/Conservation	Yes	Yes

Attachment H.1 Section 4(f) Status of Parks and Recreational Resources in the Study Area

Segment	Resource Name	Ownership/Maintenance	Size/Length	Resource Type	Primary Use	Significant Resource? Yes/No	4(f) Resource? Yes/No
South Interbay	Elliott Bay Trail	Port of Seattle, Seattle Department of Transportation, and Seattle Parks and Recreation	3.4 miles	Paved/rail-trail	Non-motorized transportation	No	No, primary purpose is transportation ^a
South Interbay	Interbay Golf Center; property includes the Interbay P-Patch Community Garden	Seattle Parks and Recreation	40.3 acres	Recreation area	Golf/tennis/athletic use	Yes	Yes
South Interbay	Interbay Athletic Complex	City of Seattle, Seattle Pacific University	7.4 acres	Recreation area	Golf/tennis/athletic use	Yes	Yes
Interbay/Ballard	Ship Canal Trail	Seattle Department of Transportation, Seattle Parks and Recreation	1.9 miles	Paved/off-street path	Non-motorized transportation	No	No, primary purpose is transportation ^a
Interbay/Ballard	14th Avenue Northwest Boat Ramp	Seattle Department of Transportation, Seattle Parks and Recreation	0.6 acre	Boat ramp	Public shoreline access	Yes	Yes
Interbay/Ballard	Burke-Gilman Trail	City of Seattle	18.8 miles	Paved trail	Non-motorized transportation	No	No, primary purpose is transportation ^a
Interbay/Ballard	Greg's Garden P-Patch	King County Metro Transit	0.1 acre	Garden	Community/gathering	No	No, leased use on land owned by transit agency
Interbay/Ballard	Gemenskap Park	Seattle Department of Transportation, Seattle Parks and Recreation	0.5 acre	Neighborhood park	Passive use/leisure activity	Yes	Yes

Note: For a discussion of study area parks and recreational resources, see Sections 4.2.17 and 4.3.17, Parks and Recreational Resources, in Chapter 4, Affected Environment and Environmental Consequences. For a discussion of potential project effects to paved multi-modal trails in the study area, see the Non-motorized Facilities subsections in Chapter 3, Transportation Environment and Consequences.

^a Code of Federal Regulations Title 23 Section 774.13(f)(4) provides an exception to Section 4(f) regulations for trails, paths, bikeways, and sidewalks that are part of the local transportation system and which function primarily for transportation. This trail meets the exception criteria because it is a Seattle Department of Transportation multi-use trail, the purpose of which is to provide another transportation option for city residents.

^b Preliminary determination; waiting for concurrence from Seattle Parks and Recreation.

Attachment H.2
City Preliminary Concurrence Request

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October 13, 2021

Jesus Aguirre, Superintendent
Seattle Parks and Recreation
100 Dexter Ave N.
Seattle, WA 98109

Subject: West Seattle and Ballard Link Extensions Project Section 4(f) Preliminary
Concurrence Request

Dear Superintendent Aguirre:

As part of the West Seattle and Ballard Link Extensions Draft Environmental Impact Statement (EIS) documentation process, Sound Transit and the Federal Transit Administration (FTA), as the lead federal agency, are evaluating the potential impacts of the project on public parks and recreational facilities. Sound Transit is working with the FTA to prepare a draft Section 4(f) Evaluation that describes the impacts of the project on these facilities. The draft Section 4(f) Evaluation will be included in the DEIS and is expected to be distributed to the public and agencies for comment later this year.

The U.S. Department of Transportation Act of 1966 requires a Section 4(f) Evaluation. Under the Act, FTA cannot approve a transportation project such as the West Seattle and Ballard Link Extensions that requires the use of publicly-owned land from a significant public park, recreation area, or wildlife and waterfowl refuge, or any land from a significant historic site, unless a determination is made that:

- There is no feasible and prudent avoidance alternative, as defined in § 774.17, to the use of land from the property; and
- The action includes all possible planning, as defined in § 774.17, to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), will have a *de minimis* impact. A *de minimis* impact (23 CFR 774.17) is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

In addition, temporary occupancies of land that are so minimal as to not constitute a use are exempt from Section 4(f) approval. In order to qualify as a temporary occupancy, the following conditions must be satisfied (774.13(d)):

- Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in the ownership of the land;
- Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the Section 4(f) property are 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 land being used must be fully restored.

Federal guidance encourages early coordination with officials with jurisdiction of the Section 4(f) resource to ascertain the position of the officials to obtain their preliminary views. The intent of our letter is to continue that coordination and confirm previous

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Peter M. Rogoff

discussions between Sound Transit and City of Seattle staff regarding the project's potential impacts to parks and recreation resources. Throughout the EIS process and project design, Sound Transit and FTA will continue to consult with the City to further detail specific mitigation plans for affected parks and recreation resources.

Federal regulations stipulate that "officials with jurisdiction over the Section 4(f) resource must concur in writing" with a *de minimis* finding (23 CFR 774.5(2)). The regulations also require that an opportunity for public review and comment concerning the effects of the project on the Section 4(f) resource be provided prior to such written concurrence. This requirement will be met with the distribution of the Draft EIS for review and comment by the public, agencies, and organizations. Federal regulations also require documented agreement of the officials with jurisdiction regarding whether the project meets the conditions for temporary occupancy (23 CFR 774.13(d)). FTA will request final concurrence in writing by the City of Seattle on the *de minimis* findings and temporary occupancy following the comment period for the Draft EIS. At that time, it is anticipated that the City will provide final concurrence on *de minimis* determinations and temporary occupancy conditions for the West Seattle and Ballard Link Extensions. Following the City's written concurrence, FTA will make final Section 4(f) and *de minimis* and temporary occupancy determinations, and the Final EIS will include documentation of the City's concurrence and FTA's determination.

At this time, Sound Transit is requesting the City's preliminary concurrence on *de minimis* and temporary occupancy for resources affected by the project. In addition, Sound Transit is also requesting the City's concurrence regarding the Section 4(f) status for Fauntleroy Place. The City's preliminary statement regarding concurrence will be included in the Draft EIS for purposes of the analysis and inform the public and other agencies of the City's initial opinion regarding the Section 4(f) uses of these resources.

The attached tables lists the park resources for which Sound Transit requests Section 4(f) preliminary concurrence and includes a summary of potential impacts to each resource and proposed mitigation for impacts, which has been updated to reflect ongoing coordination since the City's review of the administrative draft version of the Draft EIS and the Section 4(f) analysis. Based on the potential impacts and proposed mitigation, Sound Transit believes that preliminary *de minimis* determinations can be made for a number of resources depending on project alternative and that the project meets the temporary occupancy requirements for various resources depending on the alternative. At this time, the West Duwamish Greenbelt is not included in this preliminary concurrence request. Based on our coordination to date, we would like to continue consultation on this resource.

In addition, Sound Transit requests concurrence from the City of Seattle that Fauntleroy Place is not a public park of national, State, or local significance, and, therefore, Section 4(f) does not apply. The term significant means that in comparing the availability and function of the park, recreation area or wildlife and waterfowl refuge, with the park, recreation or refuge objectives of the agency, community or authority, the property in question plays an important role in meeting those objectives (Federal Highway Administration Section 4(f) Policy Paper, 2012). While Fauntleroy Place is a city park and potential impacts to this park and mitigation for impacts will be included in the Draft EIS, including any replacement required consistent with City Ordinance 118477, Sound Transit believes that the park lacks local significance and is exempt from Section 4(f) protection.

We ask that you provide preliminary concurrence on these determinations as outlined in the attachment. If the City is unable to provide preliminary concurrence on a particular resource at this time, Sound Transit would appreciate a response providing preliminary concurrence contingent on specific information or mitigation. Sound Transit acknowledges that a formal concurrence from the City of Seattle will require further discussions and review of public comments received on the Draft EIS.

Sound Transit appreciates the City's continued coordination on potential resource impacts. The City's response to this preliminary concurrence request will assist Sound Transit as the project progresses

Jesus Aguirre, Superintendent

October 13, 2021

Page 3

toward confirming or modifying the preferred alternatives. We are requesting response to this request within 30 days in order to incorporate the city's response in the Draft EIS. We look forward to continued coordination through environmental review, the Board's identification of the preferred alternative, final design, and construction. Please contact me at (206) 696-5072 or Lauren.Swift@soundtransit.org if you have any questions.

Sincerely,

Lauren Swift

Lauren Swift

Central Corridor Environmental and Business Operations Manager

Attachment: West Seattle Link Extension Proposed Preliminary Section 4(f) Determinations
Ballard Link Extension Proposed Preliminary Section 4(f) Determinations

cc: David Graves

Anne Fennessy

Sara Maxana

Sandy Gurkewitz

Table 1: West Seattle Link Extension Proposed Preliminary Section 4(f) Determinations

Alternative	Potential Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
<i>Delridge Playfield</i>			
DEL-3	<i>de minimis</i>	This alternative would permanently incorporate less than 0.1 acre (approximately less than 1 percent of the total area) of the playfield to accommodate an elevated guideway column and would temporarily occupy an additional 0.1 acre during construction.	The temporarily impacted area would be fully restored when construction is completed. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
DEL-4*	No use. Temporary occupancy exception conditions would be satisfied.	This alternative would temporarily occupy 0.1 acre of the playfield during construction.	The temporarily occupied area would be fully restored when construction is completed.
<i>Longfellow Creek Natural Area</i>			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied.	This alternative would temporarily occupy 0.1 acre of the natural area during construction. Some trees at the south edge along Southwest Genesee Street on the west end of the park may need to be removed.	The temporarily occupied area would be fully restored when construction is completed, including replacing any trees removed.
DEL-1b	<i>de minimis</i>	This alternative would permanently incorporate 0.1 acre (approximately 2 percent of the total area) of the south end of the natural area and would temporarily occupy less than 0.1 acre during construction. Some trees at the south edge along Southwest Genesee Street on the west end of the park may need to be removed.	The temporarily impacted area would be fully restored when construction is completed, including replacing any removed trees.
DEL-2b*	<i>de minimis</i>	Same as DEL-1b.	
<i>Longfellow Creek Legacy Trail</i>			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied.	Access to trail from SW Genesee temporarily disrupted.	Provide signed detour via 26 th Avenue SW and SW Nevada Street and via Dakota Street during temporary closures of 26 th Avenue SW to maintain continuity. The temporarily occupied area would be fully restored when construction is completed.
DEL-1b	<i>de minimis</i>	Trail connection to sidewalk relocated with reconstruction of sidewalk. Access to trail from SW Genesee temporarily disrupted.	Provide signed detour via 26 th Avenue SW and SW Nevada Street and via Dakota Street during temporary closures of 26 th Avenue SW to maintain continuity. Trail connection at SW Genesee restored when construction is completed.
DEL-2b*	<i>de minimis</i>	Same as DEL-1b.	

Alternative	Potential Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
West Seattle Golf Course			
DEL-1a	No use. Temporary occupancy exception conditions would be satisfied.	<p>This alternative would temporarily occupy approximately 1 acre of the north end of the golf course property</p> <p>The temporary occupancy would impact up to three greens (holes 13, 14 and 16) and the cart path in the golf course.</p> <p>Nearby play may be impacted during some construction activities involving large cranes (such as girder placement), but these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times.</p> <p>Trees would need to be removed along the north edge of the golf course.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>The greens (holes 13, 15 and 16) affected by the temporary occupancy would be modified and the cart path re-routed to avoid the construction area. The temporarily occupied area would be fully restored after construction. The construction period would be 2 to 3 years in the area, and modification of the affected holes would occur prior to construction and be returned to original condition after construction, which would limit use of the holes during those times.</p> <p>Vegetation removed would be replaced with trees and lower growing vegetation after construction in consultation with the City of Seattle. Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction; the course would be playable similar to how it is played today.</p>
DEL-1b	No use. Temporary occupancy exception conditions would be satisfied.	<p>This alternative would temporarily occupy up to 0.2 acre on the north end of the golf course; a cart path is in this area.</p> <p>Some trees would need to be removed along the north edge of the golf course on the east side.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>A cart path would be temporarily re-aligned for a short distance to retain its functionality during construction; the cart path would be re-aligned for about 2 years. The area of temporary occupancy would be fully restored after construction.</p> <p>Area along the south edge would be replanted with trees and lower growing vegetation in consultation with the City of Seattle.</p> <p>Sound Transit would coordinate with Seattle Parks and Recreation to re-align the cart path prior to construction.</p>

Alternative	Potential Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
DEL-2b*	No use. Temporary occupancy exception conditions would be satisfied.	Same as DEL-1b.	
DEL-3	No use. Temporary occupancy exception conditions would be satisfied.	<p>This alternative would temporarily occupy 1.2 acres of the north end of the golf course property. The temporary occupancy would impact up to three greens (holes 13, 14 and 16) and the cart path in the golf course. Nearby play may be impacted during some construction activities involving large cranes (such as girder placement), but these construction activities would have short time durations (less than an hour); therefore, play on nearby holes would only be restricted during those times.</p> <p>Trees would need to be removed along the north edge of the golf course.</p>	<p>The alternative's design limited staging areas on the golf course to only the location needed for construction of guideway columns in the Southwest Genesee Street right-of-way.</p> <p>The greens affected by the temporary occupancy would be modified and the cart path re-routed to avoid the construction area. The temporarily occupied area would be fully restored after construction. The construction period would be 2 to 3 years in the area, and modification of the affected holes would occur prior to construction and be returned to original condition after construction, which would limit use of the holes during those times.</p> <p>Sound Transit would coordinate with Seattle Parks and Recreation to determine the final mitigation to ensure the golf course is still playable throughout construction; the course would be playable similar to how it is played today.</p> <p>Vegetation removed would be replaced with trees and lower growing vegetation after construction in consultation with the City of Seattle.</p>

Table 2: Ballard Link Extension Proposed Preliminary Section 4(f) Determinations

Alternative	Potential Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
Westlake Park			
DT-1	No use. Temporary occupancy exception conditions would be satisfied.	This alternative would temporarily occupy approximately 0.1 acre of the northeast corner of this park. This area contains landscaping with trees and paved plaza.	The area temporarily occupied during construction would be restored when construction is completed.
Kinnear Park			
SIB-1	<i>de minimis.</i>	This alternative would permanently incorporate 0.1 acre of park property (approximately less than 1 percent of total area) along its western edge to accommodate the elevated light rail guideway and temporarily occupy up to an additional 0.1 acre during construction.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-2	<i>de minimis.</i>	This alternative would permanently incorporate 0.1 to 0.2 acre (up to approximately 1 percent of total area) of the northwest corner of the park property to accommodate the elevated light rail guideway and would temporarily occupy up to an additional 0.1 acre during construction.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-3	<i>de minimis.</i>	This alternative would permanently incorporate 0.4 acre (approximately 3 percent of total area) of park property to accommodate a tunnel portal and would temporarily occupy up to an additional 0.3 acre during construction.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
Interbay Golf Center			
SIB-1	<i>de minimis.</i>	This alternative would permanently incorporate approximately 2.2 acres (approximately 5 percent of the total area) of the golf center land along the bottom of the western slope of the property, and it would temporarily occupy up to an additional 1.5 acres during construction. The golf center's playable area would not be impacted.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.

Alternative	Potential Use Determination	Potential Impacts	Proposed Measures to Minimize Harm
SIB-2	<i>de minimis.</i>	This alternative would permanently incorporate 0.2 acre (less than 1 percent of the total area) of golf center land on the east side of the property and would temporarily occupy 0.3 acre during construction. The golf center's playable areas or access to the facility would not be impacted.	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate.
SIB-3	<i>de minimis.</i>	This alternative would permanently incorporate 2.4 acres (approximately 6 percent of the total area) of golf center land in the southwest corner of the property and along the bottom of the western slope of the property and temporarily occupy 0.5 acre during construction. This alternative would impact the playable area of the golf course (Number 5-hole green and Number 6-hole tee box).	The temporarily impacted area would be restored after construction. Sound Transit would provide replacement park land consistent with City of Seattle Ordinance 118477, as appropriate. Preliminary discussions with Seattle Parks and Recreation indicate that the two impacted holes could be shortened to accommodate the project and retain their use. This project-performed mitigation would be in coordination with the City of Seattle and could address the adverse impact on the golf course.