

Appendix I

Final Section 4(f) Evaluation



I. FINAL SECTION 4(F) EVALUATION

I.1 Introduction

This appendix addresses how the Mukilteo Multimodal Project is responding to a legal requirement known as Section 4(f), under 23 United States Code 138, which protects parks, recreation areas, historic and cultural resources, and wildlife and waterfowl refuges. It describes Section 4(f) and explains its role in the Federal Transit Administration's (FTA) decision-making process. It also explains several key terms, concepts, and standards that are used in the evaluation of project effects on Section 4(f) resources.

I.2 Section 4(f) Guidelines and Regulations

The U.S. Department of Transportation Act of 1966, Section 4(f), generally prohibits U.S. Department of Transportation (USDOT) agencies (including the FTA) from approving projects that would use land from:

...a significant publicly-owned park, recreation area or wildlife and waterfowl refuge or any significant historic site, unless there is no feasible and prudent alternative to the use of land from the property and the action includes all possible planning to minimize harm to the property resulting from the use.

A *use* is generally defined as a transportation activity that permanently or temporarily acquires land from a Section 4(f) property.

Section 4(f) applies to three types of resources:

- Significant publicly owned parks, and significant recreation areas that are open to the public.
- Significant publicly owned wildlife and waterfowl refuges, whether or not they are open to the public.
- Historic sites of national, state, or local significance, whether or not these sites are publicly owned or open to the public. In most cases, only historic properties listed in or eligible for inclusion in the National Register of Historic Places (NRHP) are protected under Section 4(f).

Section 4(f) properties may not be used for any transportation project receiving federal funds or approval from a USDOT agency, except where: (a) *de minimis* impact occurs; (b) there is a specific exception to a use in Section 4(f) regulations; or (c) no feasible or prudent alternative exists. Section 4(f) requires that the action include all possible planning to minimize harm to properties covered by the Act.

The Section 4(f) study area for this project is based on the Area of Potential Effects (APE) used for the historic, cultural, and archaeological resources investigations. This evaluation also takes into account the areas of effect and analyses from other environmental investigations, including parks and recreation, land use, noise, visual quality, water resources, ecosystems, and transportation, as described in the Final Environmental Impact Statement (EIS).

Section 6(f) Resources

State and local governments often obtain grants through the Land and Water Conservation Fund Act to acquire or make improvements to parks and recreation areas. Section 6(f) of this Act prohibits the conversion of property acquired or developed with these funds to a non-recreational purpose, without the approval of the U.S. Department of the Interior's National Park Service. Because Section 4(f) lands may have been developed with Section 6(f) funds, a Section 6(f) analysis was also conducted, and confirmed no potentially affected property was acquired or developed with these funds.

I.2.1 "Uses" of Section 4(f) Resources

Under Section 4(f), FTA cannot approve a transportation program or project that incorporates land or substantially affects the essential functions and features of a significant Section 4(f) resource, except under specific circumstances, as described in *Section I.2.2*. A use can be permanent, temporary, or constructive.

Permanent use involves acquisition and incorporation of the resource into the transportation facility. It includes fee simple and permanent easements use as well as the taking of any property within the established boundary of a Section 4(f) resource.

Temporary use occurs when the project temporarily occupies any portion of the resource (typically during construction). A temporary use of Section 4(f) land is generally prohibited unless:

- The duration of the occupancy is less than the time needed for the construction of the project, and there will be no change in ownership;
- Both the nature and magnitude of the changes to Section 4(f) resources are minimal;
- There are no anticipated permanent adverse physical changes or interference with protected activities, features, or attributes of the resource on a temporary or permanent basis;
- The land is restored to the same or better condition; and
- The appropriate federal, state, or local officials having jurisdiction over the resource and authority over the use of the property agree in writing that the use is not adverse.

Constructive, or indirect, use occurs when the proximity effects of the project are so great that they substantially impair the protected activities, features, or attributes of a property, even though the project does not physically use the property. For example, a constructive use would occur if project-related noise levels interfere with the use and enjoyment of a noise-sensitive public park property, such as an outdoor amphitheater or the sleeping area of a campground.

I.2.2 Permitted Uses of Section 4(f) Resources

Approval of a transportation use of a Section 4(f) resource may occur if the project proponent demonstrates the following:

- The use of the resource is among the specified regulatory exceptions to Section 4(f). This includes two exceptions being considered for this project: temporary use; and an exception for archaeological sites that are important for the information they may yield, but that do not require protection in place; or
- The use will have a *de minimis* impact on the property; or
- There is no feasible and prudent *avoidance* alternative to using the property; and
- The program or project includes all possible planning to minimize harm to the property resulting from the use.

De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges may not “adversely affect the activities, features, and attributes” of a Section 4(f) resource. Such a finding requires written concurrence from the official with jurisdiction over the resource, including public notice and comment. For historic and archaeological sites, a *de minimis* impact is defined if the project is within the boundaries of the site but FTA has determined “no adverse effect” in compliance with Section 106 of the National Historic Preservation Act. Prior to making a *de minimis* finding, FTA must receive concurrence on the determination of effect and the proposed *de minimis* finding from the State Historic Preservation Officer (SHPO). Once FTA determines that a transportation use of Section 4(f) property results in a *de minimis* impact, the project is not required to analyze avoidance alternatives, and the Section 4(f) evaluation process is complete.

When a project impact is greater than *de minimis*, the project proponent must determine whether there are feasible and prudent alternatives that would avoid impacts on Section 4(f) resources. An alternative is feasible if it can be built as a matter of sound engineering judgment. An alternative is determined to be prudent under the following conditions:

- It meets the project purpose and need and does not compromise the project to a degree that makes it unreasonable to proceed in light of its stated purpose and need.
- It does not cause extraordinary operational or safety problems.
- It causes no other unique problems or severe economic or environmental impacts.
- It would not cause extraordinary community disruption.
- It does not have construction costs of an extraordinary magnitude.
- There are no other factors that collectively have adverse impacts that present unique problems or reach extraordinary magnitudes.

Once a project proponent demonstrates that an alternative is not feasible and prudent, that alternative may be removed from consideration. If there are no prudent and feasible alternatives that can avoid all Section 4(f) resources, then FTA must determine which alternative results in the least overall harm to Section 4(f) resources.

The regulations list specific factors that FTA must consider when determining which alternative causes the “least overall harm”:

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

This evaluation describes the Section 4(f) resources in the study area of the project and identifies the Preferred Alternative’s impacts. Opportunities to avoid, minimize, or mitigate project impacts are considered followed by FTA’s determination of Section 4(f) use for each affected resource.

The evaluation then compares the Section 4(f) uses for the Preferred Alternative to the Section 4(f) uses for other alternatives, and considers whether there are feasible and prudent alternatives to avoid uses of all Section 4(f) properties. Finally, the evaluation considers the seven factors listed above to identify the alternative or alternatives that would result in the least overall harm.

I.2.3 Section 106 Historic and Cultural Resources

Section 4(f) resources include historic and cultural resources that qualify for protection under Section 106 of the National Historic Preservation Act. This evaluation incorporates the results and findings developed through the project’s Section 106 consultation process.

Section 106 requires consideration of the impacts of federal projects or actions on historic properties and archaeological resources that are eligible for listing or already listed on the NRHP. For this project, Section 106 compliance requires consultation between FTA and the SHPO at the Washington Department of Historic and Archaeological Preservation (DAHP). FTA and the Washington State Department of Transportation (WSDOT) have been coordinating with DAHP and interested tribes throughout the Section 106 consultation, which was originally initiated in 2004.

There are four ways, or criteria, through which a historic property or cultural resource can qualify for NRHP eligibility:

- **Criterion A.** The property is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B.** The property is associated with the lives of persons significant in our past.

- **Criterion C.** The property embodies 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.
- **Criterion D.** The property has yielded, or may be likely to yield, information important in prehistory or history. This criterion is generally associated with archaeological resources.

After identifying potential Section 4(f) historic resources based on their eligibility for inclusion in the NRHP, this evaluation analyzes the effects on the resource to determine if there is a Section 4(f) use.

Under Section 106, FTA consults with DAHP on the potential for the project to have adverse effects because it alters the characteristics that qualify a historic property for inclusion on the NRHP. Minor changes to a property, including changes to the non-historic characteristics of a property, can be considered not adverse.

FTA then considers the following criteria:

- If an alternative uses land from a historic site, but there is a finding of “no adverse effect” in the Section 106 process, a Section 4(f) *de minimis* finding may result. An “adverse effect” determination precludes a *de minimis* finding.
- If an alternative has only proximity impacts that are determined to have “no adverse effect” through the Section 106 process, FTA may make a finding of no constructive use for the Section 4(f) evaluation.
- If an alternative uses land from a historic site and the Section 106 process determines an adverse effect would result, a use would occur. FTA must then consider avoidance alternatives; the only exception to this is for certain types of archaeological properties.

The Section 106 process requires consultation to resolve any adverse effects. Commitments made in the Section 106 process and documented in the Memorandum of Agreement (MOA) may also satisfy the requirement under Section 4(f) to minimize harm resulting from the use of a historic property.

1.2.4 Identifying Section 4(f) Resources

The project team identified publicly owned parks, recreation areas, historic properties, and wildlife and waterfowl refuges in the study area through a review of existing public agency records, field inspections, and discussions with various public agency representatives. Through planning, design, and environmental scoping efforts conducted with the cooperating and participating agencies for the project, the team acquired additional information about the features, qualities, and characteristics of the Section 4(f) resources within the study area.

Parks and open spaces, recreation areas, and trails within 0.5 mile of the project alternatives were evaluated to determine the attributes qualifying them as Section 4(f) resources; these resources were then evaluated for use based on direct or indirect impacts. Those qualifying as Section 4(f) resources in the study area are shown in Figure I-1.

The *Cultural Resources Discipline Report* details the methods used for identifying and evaluating known and potential archaeological and historic resources within the study area. Figure I-1 shows the APE.

I.2.5 Agency Coordination

Section 4(f) evaluations require coordination and consultation with the officials having jurisdiction over each Section 4(f) property and the U.S. Department of Interior. In this project, the Section 4(f) properties include local parks, recreation facilities, and historic resources. The relevant agencies include DAHP, the parks and recreation departments of the Cities of Mukilteo and Everett, and the Port of Everett. FTA also consulted with interested tribes. *Appendix A* of the Final EIS contains the agency correspondence conducted for the project, including correspondence specifically for the Section 4(f) evaluation and the Section 106 consultations, as well as other EIS coordination.

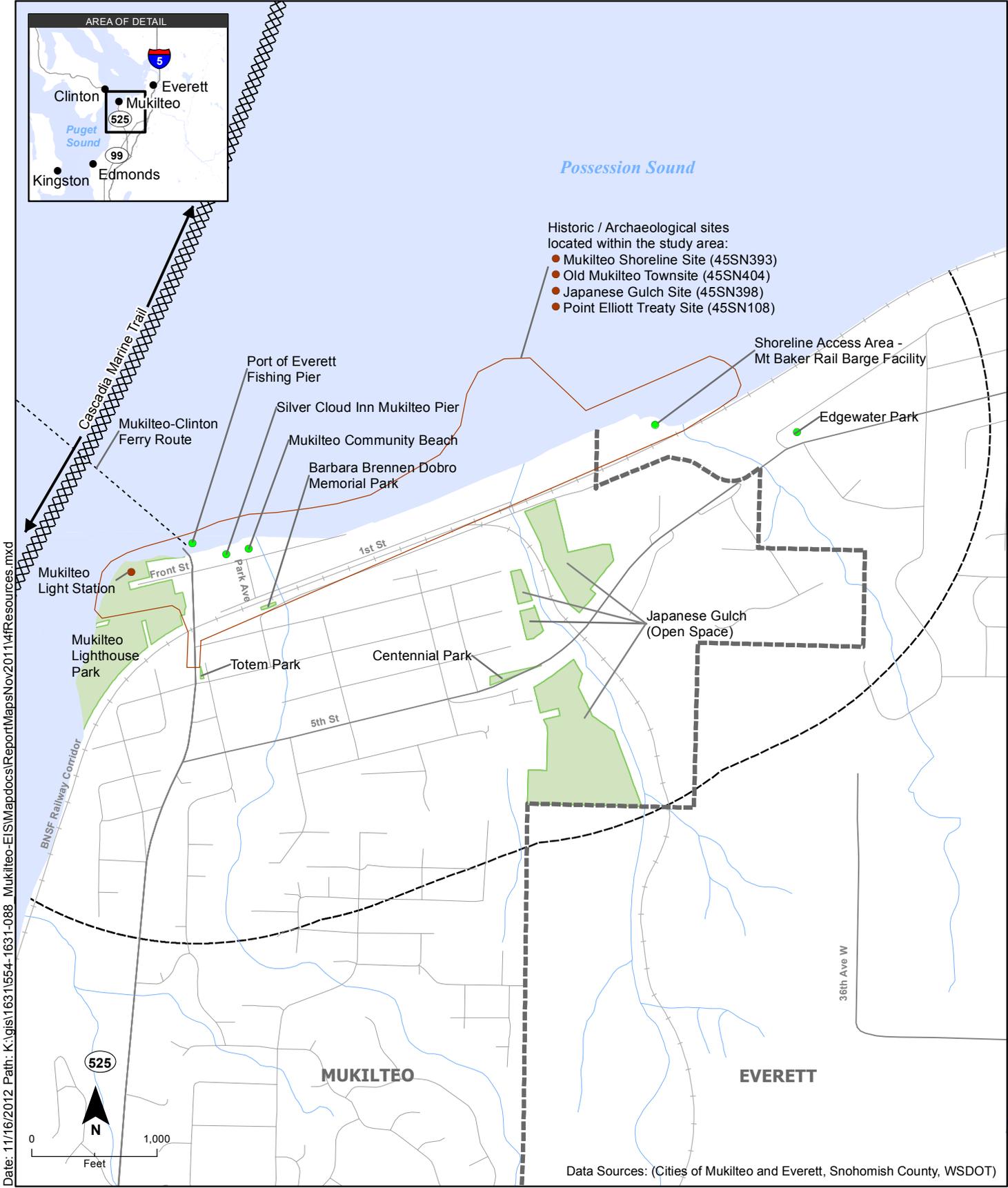
I.3 Project Alternatives

The Final EIS documents the analysis of four alternatives: No-Build, Preferred Alternative (a modified Elliot Point 2 Alternative from the Draft EIS), and two other action alternatives. These alternatives are summarized below, and Figure I-2 illustrates the Preferred Alternative.

With the No-Build Alternative, maintenance and structure replacements would occur in accordance with legislative direction to maintain and preserve ferry facilities. There would be no major facility investments to improve the operation, safety, security, or capacity at the terminal.

The Preferred Alternative would relocate the ferry terminal from its current location to the western portion of the Mukilteo Tank Farm, and would include a new bulkhead, trestle, transfer span, piers, towers, and berthing facilities for the ferry. A new two-story passenger building would be located parallel to the shoreline, and an overhead passenger loading ramp would connect to the second story of the new passenger building and extend out to the ferry berth. The Mukilteo Tank Farm Pier, existing terminal, and existing fishing pier and day moorage would be removed. The fishing pier and day moorage would be replaced on the new multimodal facility site. First Street would be realigned and extended east and west as a four-lane roadway to the loading area, and continue east as a two-lane roadway to an existing railroad grade crossing. The alternative also includes a continuous shoreline promenade, modified intersections, modified driveways for the Sound Transit Mukilteo Station, and the development of sidewalks and bicycle lanes, employee parking, toll booths, and ferry vehicle holding areas.

The Existing Site Improvements Alternative would reconstruct the terminal and its related facilities at the current site, which would be expanded and realigned. A new transit center would be constructed and the existing vehicle holding area would be reconfigured. New toll booths, operations buildings, and a passenger building would be constructed. New overhead passenger loading ramps would connect to the second story of the new passenger building.

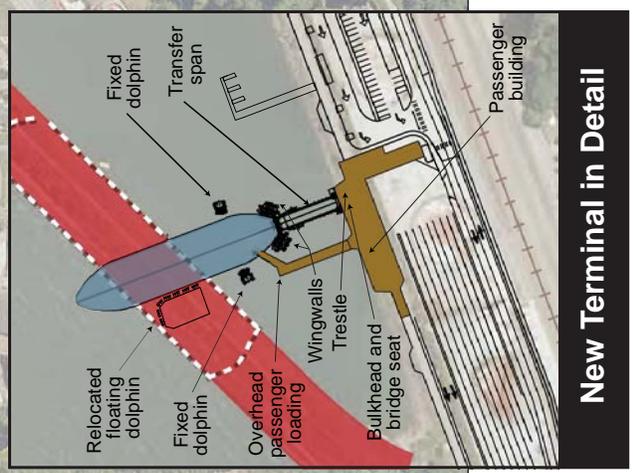
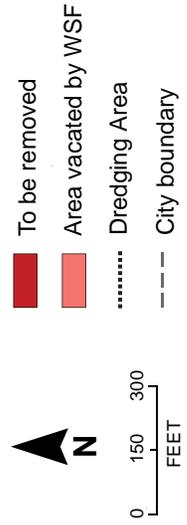


- Historic Resources
- Park and Recreational Resources
- 1/2 Mile Study Area
- Section 106 Area of Potential Effects
- City Boundary

Figure I-1. 4(f) Resources



DRAFT



New Terminal in Detail

Figure I-2. Preferred Alternative (Elliot Point 2)

The Elliot Point 1 Alternative would relocate the ferry terminal from its current location to the eastern portion of the Mukilteo Tank Farm. This alternative would also provide a transit center near the ferry terminal. A new passenger building and a maintenance building would be located over water upon a new concrete trestle. An overhead passenger loading ramp would connect to the second story of the new passenger building. The Tank Farm Pier and the existing ferry terminal would be removed. First Street would be realigned and extended east and west as a four-lane roadway extending to the Port of Everett Mount Baker Terminal. The alternative also includes modified intersections; a modification to the Sound Transit Mukilteo Station; the development of sidewalks and bicycle lanes, parking areas, toll booths, ferry vehicle holding areas, and shoreline promenades on each side of the new ferry dock; and the restoration of Japanese Creek to an open stream within the Mukilteo Tank Farm site.

I.4 Section 4(f) Resources

I.4.1 Parks and Recreation Resources

The project alternatives are located adjacent to several recreational areas associated with the Puget Sound shoreline; in addition, other parks and recreation resources within the study area are located inland. Figure I-1 shows the locations of the Section 4(f) resources within the study area.

The resources located within 0.5 mile of the alternatives are listed in Table I-1 (generally listed as they occur, west to east). The facilities that would be affected by one or more of the alternatives are described in the following paragraphs.

Table I-1. Parks and Recreation Resources Reviewed in Section 4(f) Evaluation

Park Resource	Owner/ Custodian	Recreational Use
Cascadia Marine Trail	U.S. waters	Recreation
Mukilteo Lighthouse Park	City of Mukilteo	Active and passive recreation
Port of Everett Fishing Pier and Day Moorage	Port of Everett	Active recreation
Silver Cloud Inn Pier	City of Mukilteo	Active recreation
Mukilteo Community Beach	City of Mukilteo	Shoreline access
Totem Park	City of Mukilteo	Passive recreation
Barbara Brennen Dobro Memorial Park	City of Mukilteo	Passive recreation
Centennial Park	City of Mukilteo	Passive recreation
Edgewater Park	City of Everett	Active and passive recreation
Port of Everett Mount Baker Terminal Shoreline Access Area	Port of Everett	Shoreline access (not currently open)
Japanese Gulch	City of Mukilteo	Passive recreation

Port of Everett Fishing Pier and Day Moorage

The Port of Everett pier is located on the east side of the existing Mukilteo ferry terminal dock. The pier is documented in the City of Mukilteo's 2012 Parks, Open Space, Recreation and Arts Plan. The pier is open year-round to the public, and offers seasonal day moorage slips for boaters.

Port of Everett Mount Baker Terminal Shoreline Access Area

East of the Mukilteo Tank Farm in the city of Everett is a public shoreline access area associated with the Port of Everett Mount Baker Terminal. It partially overlaps with an area locally referred to as Edgewater Beach. While this public shoreline access area is not designated as a park or open space by the parks departments of the Cities of Everett and Mukilteo, the area constitutes a permanent easement or dedication of public land for a public recreational use. The Port of Everett developed the area as part of permitting conditions for the terminal, with enhancements including parking, benches, and a shoreline walkway. The area is not yet officially open, but it is planned to be opened when access improvements are completed, and it qualifies as a Section 4(f) resource.

I.4.2 Historic Resources

Several properties within the project's APE are old enough that they were studied to determine if they qualify for the NRHP. Table I-2 presents the properties and identifies those that are listed or eligible for listing in the NRHP, and are Section 4(f) resources.

Table I-2. Historic and Cultural Resources Reviewed in Section 4(f) Evaluation

Resource	Location	NRHP-Eligible?	Within the APE?	Section 4(f) Resource?
Mukilteo Shoreline Site (45SN393)	Mukilteo Tank Farm Elliot Point	Yes	Yes	Yes
Point Elliott Treaty Site (45SN108)	Central Waterfront	Yes	Yes	Yes
Old Mukilteo Townsite (45SN404)	Park Avenue/ Front Street	Yes	Yes	Yes
Japanese Gulch Site (45SN398)	Japanese Creek/Mukilteo Tank Farm	Yes	Yes	Yes
Mukilteo Light Station (45SN123)	Elliot Point	Yes (listed)	Yes	Yes
Mukilteo Explosives Loading Terminal (MELT) barracks	Mukilteo Tank Farm	No	Yes	No
MELT pier	Mukilteo Tank Farm	No	Yes	No
MELT firehouse	Mukilteo Tank Farm	No	Yes	No
MELT superintendent's office	Mukilteo Tank Farm	No	Yes	No
Mukilteo Tank Farm fuel tanks	Mukilteo Tank Farm	No	Yes	No
Diamond Knot Ale House	Mukilteo waterfront	No	Yes	No
Ivar's restaurant	Mukilteo waterfront	No	Yes	No
SR 525 overpass	SR 525 at BNSF tracks	No	Yes	No
Mukilteo ferry terminal	Mukilteo waterfront	No	Yes	No

Resources Subject to Section 4(f)

Five properties within the study area qualify as Section 4(f) resources, and are shown in Figure I-1. Additional detail on these properties is provided in *Section 4.6 Cultural Resources* of the Final EIS. The paragraphs below describe the four properties that would be affected by one or more of the project alternatives.

Mukilteo Shoreline Site

The Mukilteo Shoreline Site (designated 45SN393 by DAHP) is a shell midden related to native inhabitants of the Puget Sound region, holding artifacts dating back more than a thousand years. This archaeological site is eligible for the NRHP under Criterion D for the important information the property may yield about the native inhabitants of the Puget Sound region.

Point Elliott Treaty Site

The Point Elliott Treaty Site (designated 45SN108 by DAHP) is significant under NRHP Criterion A for its association with the history of Indian-White relations and the development of federal Indian policy in the last half of the 19th century, both nationally and regionally. The treaty, signed at Point Elliott on January 22, 1855, was one of five treaties negotiated between 1854 and 1856 that represented a major change in relations with the Indian nations in the northwestern United States. The treaty site is also significant under NRHP Criterion B for its association with the individuals representing the United States government and the tribes during the Point Elliott treaty-making process. The site is also archaeologically significant under Criterion D because artifacts from the treaty period may be present.

The site retains integrity of location, association, and setting, although its physical appearance has changed since 1855. The retained features include its central location between the territories of the Lummi and Duwamish people, its characteristics as level land next to the sea where the large gathering for the treaty signing could be hosted, and its relationship to Puget Sound.

In some communications early in the project's development and in 2007 scoping comments, officials of some tribes suggested that the area of the treaty signing and the area of the shell midden could be Traditional Cultural Properties (TCPs) under Section 106 (and qualifying as Section 4(f) resources). Accordingly, during the development of the EIS, FTA and WSDOT made several requests for further tribal input regarding the project area as a potential TCP. None of the tribes provided any information in response to these requests or expressed a willingness to formally identify a TCP on or near the Point Elliot Treaty site or the Mukilteo Shoreline Site.

Old Mukilteo Townsite

The Old Mukilteo Townsite (designated 45SN404 by DAHP) consists of historic remains from Mukilteo's business district dating from at least 1880 to 1938. The U.S. Air Force determined the townsite is eligible for listing in the NRHP under Criterion A for its association with Mukilteo's development, and under Criterion D for the value of the information it offers about the early settlement of Mukilteo.

Japanese Gulch Site

The project has identified historic archaeological resources at Japanese Gulch (designated 45SN398 by DAHP), which contains two areas where an early 20th century Mukilteo Japanese community was located. The U.S. Air Force determined the site is eligible for listing in the NRHP under Criterion A for its association with Japanese immigration and its contribution to broad patterns of our history, and

under Criterion D for the value of the information it offers about a previously little-known segment of early Mukilteo society.

Resources Not Subject to Section 4(f)

The *Cultural Resources Discipline Report* identified nine cultural resources within the APE that are recommended as not eligible for NRHP listing: the Mukilteo Explosives Loading Terminal (MELT) barracks, pier, firehouse, superintendent's office, and the entire Mukilteo Tank Farm itself. It also includes the SR 525 overpass, Diamond Knot Ale House, Ivar's restaurant, and the existing Mukilteo ferry terminal. FTA has concluded that these properties do not qualify as Section 4(f) resources, and DAHP concurred in writing.

I.5 Evaluation of Section 4(f) Resource Use

I.5.1 Coordination

WSDOT and FTA have coordinated with the City of Mukilteo, the City of Everett, the Port of Everett, and the parks and recreation resource owners or managing jurisdictions in the project area. In conjunction with the Section 106 process, WSDOT and FTA have also consulted with DAHP and all interested tribes regarding cultural and historic resources, including the resolution of adverse effects. The tribes that WSDOT and FTA have contacted include the Tulalip Tribes, the Snohomish Tribal Community, the Suquamish Tribe, the Lummi Nation, the Stillaguamish Tribe, the Snoqualmie Indian Tribe, the Samish Nation, the Upper Skagit Indian Tribe, the Sauk-Suiattle Tribe, the Nooksack Tribe, and the Muckleshoot Indian Tribe.

This evaluation identifies the uses of Section 4(f) resources by the Preferred Alternative, along with the mitigation and avoidance measures FTA and WSDOT have developed in coordination with the properties' owners and jurisdictions. Where impacts to Section 4(f) properties are also being addressed through the project's Section 106 process, the Section 4(f) evaluation incorporates the Section 106 coordination, correspondence, and documentation as well. *Appendix A* of the Final EIS provides all correspondence conducted for the project, including for the Section 106 process.

I.5.2 Summary of Effects on Section 4(f) Properties

Table I-3 summarizes the evaluation results of the Preferred Alternative's effects on Section 4(f) resources. Table I-4 provides a summary of the impacts of the other alternatives being considered in the Final EIS.

Table I-3. Summary of Preferred Alternative's Effects on Section 4(f) Resources

Resource Name	Description of Project Activity	Use Determination
PARKS AND RECREATION RESOURCES		
Port of Everett Fishing Pier and Day Moorage	The existing ferry terminal would be removed, which would also require the removal of the fishing pier and day moorage.	Use
Mount Baker Terminal Shoreline Access Area	No effect	No use
Mukilteo Lighthouse Park	No effect	No use
Mukilteo Community Beach	No direct or indirect impacts to features that qualify the beach as a Section 4(f) resource. Demolition of existing terminal would be nearby and could temporarily alter access, but access would be maintained.	No use
Silver Cloud Inn Pier	No direct or indirect impacts to the features that qualify the pier as a Section 4(f) resource. Demolition of existing terminal would be nearby and could temporarily alter access, but access would be maintained.	No use
Barbara Brennen Dobro Memorial Park	No effect	No use
Totem Park	No effect	No use
Centennial Park	No effect	No use
Edgewater Park	No effect	No use
Japanese Gulch	No effect	No use
Cascadia Marine Trail	No effect	No use
HISTORIC RESOURCES		
Mukilteo Shoreline Site (45SN393)	Although the design avoids construction within the known limits of the midden, a potential for impacts still exists.	Use
Point Elliott Treaty Site (45SN108)	The alternative would occupy a portion of the site. Although there are currently no visible features related to the site's historic significance, development within the boundaries of the site is being considered a Section 4(f) use.	Use
Old Mukilteo Townsite (45SN404)	Adverse effect per Section 106 due to roadways, utilities, and retaining walls.	Use
Japanese Gulch Site (45SN398)	No effect	No use
Mukilteo Light Station (45SN123)	No effect	No use

Table I-4. Other Alternatives' Effects on Section 4(f) Resources

Name	Alternative	Description of Project Activity	Section 4(f) Result
Port of Everett Fishing Pier and Day Moorage	No-Build	Construction of replacement marine terminal facilities (trestle and transfer span) would require closure and reconstruction of the fishing pier and day moorage.	Use
	Existing Site Improvements	Replacement marine terminal facilities would be constructed in the space currently occupied by the fishing pier and day moorage, so it would need to be removed.	Use
	Elliot Point 1	The existing ferry terminal would be removed, which would also require removal of the fishing pier and day moorage.	Use
Mount Baker Terminal Shoreline Access Area	No-Build	No effect	No use
	Existing Site Improvements	No effect	No use
	Elliot Point 1	The alternative would modify portions of the shoreline access area but would maintain the shoreline public access features that qualify the property as a Section 4(f) resource.	<i>De minimis</i> ¹
Mukilteo Lighthouse Park	No-Build	No effect	No use
	Existing Site Improvements	No effect	No use
	Elliot Point 1	No effect	No use
Mukilteo Community Beach	No-Build	No effect	No use
	Existing Site Improvements	Temporary construction detours and access changes would occur, but the beach would remain open with no alteration to the features that qualify the beach as a Section 4(f) resource.	No use
	Elliot Point 1	Same as Existing Site Improvements.	No use
Silver Cloud Inn Pier	No-Build	Construction could alter surroundings but public access to the resource would remain.	No use
	Existing Site Improvements	Construction could alter surroundings but public access to the resource would remain.	No use
	Elliot Point 1	Construction could alter surroundings but public access to the resource would remain.	No use
Mukilteo Shoreline Site (45SN393)	No-Build	Adverse effect per Section 106 due to replacement of passenger building and foundation.	Use
	Existing Site Improvements	Adverse effect per Section 106 due to passenger/maintenance building, utilities, and underground stormwater treatment facility.	Use
	Elliot Point 1	Adverse effect per Section 106 due to utility and tank footing removal over midden.	Use
Point Elliott Treaty Site (45SN108)	No-Build	The alternative would occupy part of the site and replace existing facilities not related to the site's historic characteristics.	Use
	Existing Site Improvements	The alternative would occupy part of the site and replace and expand facilities not related to the site's historic characteristics.	Use
	Elliot Point 1	The alternative would occupy part of the site, remove facilities not related to the site's historic characteristics, and develop more portions of the site where there are no visible features related to its historic significance.	Use

Table I-4. Other Alternatives' Effects on Section 4(f) Resources

Name	Alternative	Description of Project Activity	Section 4(f) Result
Old Mukilteo Townsite (45SN404)	No-Build	No effect	No use
	Existing Site Improvements	Adverse effect per Section 106 due to utilities, roadways, terminal supervisor's building foundation, and retaining walls.	Use
	Elliot Point 1	Adverse effect per Section 106 due to roadways and stormwater treatment facility excavation.	Use
Japanese Gulch Site (45SN398)	No-Build	No effect	No use
	Existing Site Improvements	No effect	No use
	Elliot Point 1	Adverse effect per Section 106 due to excavation for the restoration of Japanese Gulch as an open stream and for construction of First Street extension.	Use

Note: As with the Preferred Alternative, the other alternatives would have no effect on the following other resources in the study area: Barbara Brennen Dobro Memorial Park, Totem Park, Centennial Park, Edgewater Park, and Mukilteo Light Station.

I.5.3 Discussion of Resources Affected by the Preferred Alternative

The Preferred Alternative would result in a use of two Section 4(f) resources; FTA also proposes to apply regulatory exception to allow project activities that affect two other resources.

Port of Everett Fishing Pier and Day Moorage

The Preferred Alternative must close and remove the pier and seasonal day moorage during terminal demolition. The Preferred Alternative would relocate the fishing pier and seasonal day moorage on the new multimodal facility site east of where the Tank Farm Pier is currently located; this new facility would be opened before the existing facility is removed.

Mukilteo Shoreline Site (45SN393)

Through the Section 106 process, FTA has determined the Mukilteo Shoreline Site would be adversely affected because the Preferred Alternative has the potential to encounter artifacts during construction. While the project has been designed to avoid areas where previously undisturbed artifacts are anticipated, there is still some potential that artifacts could be encountered during construction; FTA has therefore assumed a Section 4(f) use of the property.

The First Street extension for the Preferred Alternative would be located over a portion of the Mukilteo Shoreline Site, but the paving would be above new fill and would not disturb the archaeological resources within the site. Similarly, vehicle holding lanes for the Preferred Alternative would be located over a portion of the Mukilteo Shoreline Site, but construction on fill would avoid the archaeological resources within the site.

Old Mukilteo Townsite (45SN404)

The Preferred Alternative would extend First Street, replace utilities, and construct retained fill structures near the intersection of SR 525 and First Street, which could disturb archaeological resources. A stormwater treatment facility could also disturb archaeological resources within the site. FTA has determined these actions would have an adverse effect under Section 106 regulations, and has identified a Section 4(f) use of the property.

Point Elliott Treaty Site (45SN108)

The Preferred Alternative would occupy a portion of this site. Although the Preferred Alternative would not change the characteristics that qualify the site for the NRHP, it would occupy a portion of the site, which is associated with the treaty signing, its setting, and association with Possession Sound. FTA has determined that development within the boundaries of the site is a Section 4(f) use.

1.5.4 Comparison of the Ability of Alternatives to Avoid or Minimize Uses of Section 4(f) Resources

As shown in Table I-5, all of the Build alternatives, including the Preferred Alternative, would use the same Section 4(f) resources. The following discussion considers the overall potential of any of the project's Build alternatives to completely avoid the use of Section 4(f) resources, minimize the effects, or apply available exceptions to a Section 4(f) use. The discussion then gives the reasons why FTA has concluded there is no prudent and feasible alternative that would avoid the use of Section 4(f) resources while accomplishing the project's purpose and need.

Table I-5. Summary of Section 4(f) Uses by Build Alternatives

	Preferred Alternative	Existing Site Improvements	Elliot Point 1
Section 4(f) Resource Affected			
Port of Everett Fishing Pier and Day Moorage	Use	Use	Use
Mount Baker Terminal Shoreline Access Area	No use	No use	<i>De minimis</i>
Mukilteo Shoreline Site (45SN393)	Use	Use	Use
Point Elliott Treaty Site (45SN108)	Use	Use	Use
Old Mukilteo Townsite (45SN404)	Use	Use	Use
Japanese Gulch Site (45SN398)	No use	No use	Use
Total Section 4(f) Resources with a Use or Potential Use	4	4	5

I.5.5 Absence of Available Prudent and Feasible Avoidance Alternatives

None of the project's alternatives, including the Preferred Alternative, completely avoids using Section 4(f) resources. In addition to having its own Section 4(f) impacts, the No-Build Alternative is not a prudent and feasible avoidance alternative because it does not address the project's purpose and need.

All Build alternatives would result in a Section 4(f) use of the Mukilteo Shoreline Site, the Old Mukilteo Townsite, the Point Elliott Treaty Site, and the Port of Everett fishing pier and day moorage. The Elliot Point 1 Alternative could also affect the Japanese Gulch site, resulting in a Section 4(f) use.

In addition to searching for opportunities to avoid Section 4(f) uses by alternatives that FTA and WSDOT consider prudent and feasible, the agencies reviewed a large array of other design or siting choices for the project. However, any other alternative within the Mukilteo waterfront area would have similar issues for encountering these resources, even if some design elements were modified or the alternatives had different footprints. While the project's Section 106 consultations to develop a MOA are focused on the Preferred Alternative, FTA's evaluation of other alternatives assumes that similar mitigation agreements could be developed for the other alternatives to resolve their adverse effects.

The Final EIS's *Chapter 2 Alternatives* and *Appendix E* provide more detail about how WSDOT and FTA explored a wide range of alternatives. These alternatives included Mukilteo area alternatives developed in 2006 but later dropped from further consideration due to concerns about their overall impacts, and particularly about impacts to archaeological resources and the use of Section 4(f) properties.

In 2010, when WSDOT and FTA reinitiated the current National Environmental Policy Act (NEPA) process for the project, they developed a new set of concepts to consider. These included moving the terminal to other locations, including Everett or Edmonds, three concepts on Elliot Point, and a concept at the Mount Baker Terminal. After scoping, FTA and WSDOT dropped the Everett and Edmonds alternatives from consideration because they would not be prudent for the following reasons: they worsened transportation conditions compared to the No-Build Alternative and carried higher environmental impacts, thereby failing to achieve the project's purpose and need. The concept at the Mount Baker Terminal and the rejected Elliot Point concept both had impacts on Section 4(f) resources, a higher potential for other environmental impacts, and minimal multimodal benefits. These shortcomings make these concepts imprudent. In any case, because they affect Section 4(f) resources, they could not be avoidance alternatives.

I.5.6 Determining "Least Harm" Alternatives

Having concluded that there is no feasible and prudent alternative that completely avoids the use of Section 4(f) resources, FTA evaluated all of the EIS alternatives to identify a "least harm" alternative, considering the factors defined in Section 4(f) regulations. This least harm analysis incorporates the results of the environmental analysis, public comments on the Draft EIS, the information gathered through continuing Section 4(f) evaluation and coordination, and Section 106 consultations

with other agencies, tribes, and interested parties. Tables I-6 and I-7 list the factors FTA considered as it compared the Build alternatives.

Table I-6. Least Harm Evaluation of the Final EIS Alternatives

Least Harm Analysis Factor and Resource	Preferred Alternative	Existing Site Improvements	Elliot Point 1
Ability to mitigate adverse impacts on each Section 4(f) property, including any measures that result in benefits to the property, and 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			
<i>Port of Everett Fishing Pier and Day Moorage</i>	Permanent replacement prior to removal would avoid loss of short-term recreational opportunities, and replace an aging facility.	Similar to Preferred Alternative, but has fewer options for replacement sites.	Similar to Preferred Alternative
<i>Mount Baker Terminal Shoreline Access Area</i>	Not affected, but the alternative extends a roadway and bicycle/pedestrian facilities to help complete access currently needed for the facility.	Not affected	Modifies alternative to reach <i>de minimis</i> impact levels. Completes public access currently needed for the shoreline area, and provides a connecting shoreline promenade.
<i>Mukilteo Shoreline Site (45SN393)</i>	The effects of the use have been minimized by mitigation measures in a MOA developed through Section 106 consultations. The alternative involves mostly fill and paving over the site, with a commitment to avoid intact areas of the archaeological site. A cultural design process and interpretive features are also proposed.	Formal Section 106 consultation would be needed, but the measures to minimize adverse effects would be similar to those for the Preferred Alternative.	Would have the smallest area overlapping the shoreline site but adverse effects are still assumed. The measures to minimize adverse effects would be similar to those for the Preferred Alternative.
<i>Point Elliott Treaty Site (45SN108)</i>	The alternative does not alter characteristics that make the site significant, and it includes features and a cultural design approach to reflect the historic importance of the site; it also has measures protecting potential archaeological resources on the site.	The measures to minimize harm to the site would be similar to the Preferred Alternative.	The measures to minimize harm to the site would be similar to the Preferred Alternative.

Table I-6. Least Harm Evaluation of the Final EIS Alternatives

Least Harm Analysis Factor and Resource	Preferred Alternative	Existing Site Improvements	Elliot Point 1
<i>Old Mukilteo Townsite (45SN404)</i>	Mitigation has been defined through Section 106 consultations to avoid the loss of information about Mukilteo's early development.	This alternative has more construction activities that could encounter artifacts than the Preferred Alternative or the Elliot Point 1 Alternative. Formal Section 106 consultation would be needed, but the mitigation to resolve adverse effects would be similar to those for the Preferred Alternative.	Formal Section 106 consultation would be needed, but the mitigation to resolve adverse effects would be similar to those for the Preferred Alternative.
<i>Japanese Gulch Site (45SN398)</i>	Not affected	Not affected	Mitigation measures and agreements to be defined through Section 106 consultations would minimize impacts. Interpretive elements designed into the daylighting of Japanese Creek could increase public understanding of the site's historic significance.
The relative significance of each Section 4(f) property	The fishing pier with day moorage is a public amenity; other locations for shoreline fishing or moorage are limited. The Mukilteo Shoreline Site is one of the most intact midden sites in the region. FTA and WSDOT received many comments about the significance of the Mukilteo Shoreline Site, which is both historically and culturally important to Native Americans and others. The Point Elliott Treaty Site is culturally and historically important to Native Americans, and it is the site of a major historic event. The Old Mukilteo Townsite is significant for further understanding of Mukilteo's historic development.	Affects the same resources as the Preferred Alternative.	The Section 4(f) uses affect the same resources as the Preferred Alternative. An additional property, the Japanese Gulch Site, would also have a use. The site is significant to the history of Japanese immigrants to the Puget Sound region.

Table I-6. Least Harm Evaluation of the Final EIS Alternatives

Least Harm Analysis Factor and Resource	Preferred Alternative	Existing Site Improvements	Elliot Point 1
The views of the official(s) with jurisdiction over each Section 4(f) property	<p>The Advisory Council on Historic Preservation (ACHP) and DAHP have participated in the development of mitigation measures to resolve impacts related to the Section 4(f) use of the Mukilteo Shoreline Site, the Point Elliott Treaty Site, and the Old Mukilteo Townsite. FTA also consulted with interested tribes. Similarly, for the fishing pier and day moorage, the Port of Everett and the City of Mukilteo have agreed on the measures proposed to address the use, and have written letters of support for the relocation proposal.</p>	<p>Affects the same resources, but involved parties indicate the effects with this alternative area are considered higher. DAHP and ACHP have jurisdiction over the Mukilteo Shoreline Site. DAHP encourages the project to avoid construction within the midden, which may not be possible with this alternative. The Port of Everett and the City of Mukilteo indicate the fishing pier and day moorage is a significant resource and needs to be maintained, but relocation options have drawbacks and the recreational activities are more likely to be interrupted during construction.</p>	<p>The Section 4(f) uses affected the same resources and jurisdictions as the Preferred Alternative. Their views on effects to the historic or archaeological resources are generally the same as for the Preferred Alternative. For the fishing pier and day moorage, a replacement site remains to be confirmed, and would be less accessible to the public than with the Preferred Alternative.</p>
The degree to which each alternative meets the purpose and need for the project	See Table I-7	See Table I-7	See Table I-7
After reasonable mitigation, the magnitude of any adverse impacts on environmental resources not protected by Section 4(f)	<p>Consistent with the City of Mukilteo's plans for waterfront areas, and satisfies most shoreline management program requirements.</p>	<p>Least consistent with City of Mukilteo's plans to reconnect waterfront areas.</p>	<p>Consistent with City of Mukilteo's plans for waterfront areas; mitigation would help satisfy most shoreline management program requirements.</p>
<i>Hazardous Materials</i>	<p>Few long-term impacts; improves conditions in several areas where hazardous materials are present. Removes large pier with 3,900+ creosote-treated piles.</p>	<p>Few long-term impacts; potential benefits from addressing a site with remaining hazardous materials.</p>	<p>Similar to Preferred Alternative</p>

Table I-6. Least Harm Evaluation of the Final EIS Alternatives

Least Harm Analysis Factor and Resource	Preferred Alternative	Existing Site Improvements	Elliot Point 1
<i>Ecosystems</i>	High level of aquatic ecosystems benefit from removing the Tank Farm Pier and existing terminal with creosote-treated piles. Impacts likely due to loss of habitat for Dungeness crabs, in-water construction, and creation of new impervious surfaces.	Aquatic ecosystems benefit from replacing the existing ferry facility that has creosote-treated piles; in-water construction impacts expected.	High level of aquatic ecosystems benefit from Tank Farm Pier removal and existing ferry terminal replacement, as well as habitat restoration at Japanese Creek. Impacts likely due to loss of habitat for Dungeness crabs; in-water construction, and creation of new impervious surfaces.
<i>Transportation</i>	Improves safety and reliability, and reduces backups on SR 525 (see Table I-7 for multimodal effects).	Most impacts due to remaining queues and remaining safety concerns (see Table I-7 for multimodal effects).	Least impacts due to ferry traffic. Improves safety and reliability (see Table I-7 for multimodal effects).
Substantial differences in costs among the alternatives	Second highest cost, but not to a degree that WSDOT expects would prevent implementation.	Lowest cost, but not to a degree that would offer substantial advantages toward implementation.	Highest cost, but not to a degree WSDOT believes would prevent implementation.

Table I-7. Ability to Address Purpose and Need

Purpose and Need Element	Preferred Alternative	Existing Site Improvements	Elliot Point 1
Safety and Security			
Reduces conflicts between local and ferry vehicle traffic	Yes	Partially, through one-way street configurations	Yes
Reduces conflicts between vehicles and pedestrians/bicyclists	Yes	Partially, with street revisions and overhead loading	Yes
Provides a securable facility as required by the Department of Homeland Security	Yes	No	Yes
Addresses seismic and structural deficiencies	Yes	Yes	Yes
Transit Connectivity and Reliability			
<i>Ferry schedule reliability</i>			
<ul style="list-style-type: none"> Timely and reliable loading and unloading 	Yes	Yes, although delays due to traffic impacts still occur	Yes
<ul style="list-style-type: none"> Minutes over/under 15-minute reliability target 	5 minutes under	4 minutes under	5 minutes under

Table I-7. Ability to Address Purpose and Need

Purpose and Need Element	Preferred Alternative	Existing Site Improvements	Elliot Point 1
<i>Walking Distances</i>			
• Rail Station/Passenger Building	745 feet	1,650 feet	1,610 feet
• Transit Center/Passenger Building	225 feet	590 feet	540 feet
• Transit Center/Rail Station	970 feet	1,190 feet	1,080 feet
Reliable connections (on-time bus, rail, and ferry connections)	Yes	Yes	Yes
Transit facilities to support growth in travel demand	Yes	Yes	Yes
Pedestrian and bicycle improvements	Yes	Yes	Yes
Local transportation system impacts (daily backups on SR 525)	Reduced compared to today	Worse than today	Improved; SR 525 backups removed.

FTA has identified the following primary environmental differences and trade-offs among the alternatives:

- The Preferred Alternative uses the same Section 4(f) resources as other alternatives. It has a similar to better environmental performance as the Elliot Point 1 Alternative because it has a smaller footprint, and it has a better environmental performance than the Existing Site Improvements Alternative. It also includes design features that enhance public shoreline access and commemorate historically significant sites in the area. This alternative integrates a replacement within the site for the public fishing pier and day moorage that would be otherwise closed and reconstructed when the existing terminal is removed, thereby helping to avoid a lengthy closure. It would remove the Tank Farm Pier and existing terminal facilities, reduce the terminal’s impacts on the local transportation system, and effectively support local land use plans. It also enables more of the former Mukilteo Tank Farm site to be redeveloped for other uses compared to the Elliot Point 1 Alternative.
- The Elliot Point 1 Alternative would affect more Section 4(f) resources, but would have at least five uses of Section 4(f) resources. Its environmental performance is generally similar to the Preferred Alternative although it has more over-water structures, more in-water construction, and more paved surface. This alternative could provide additional natural resource and open-space benefits because it would daylight Japanese Creek and extend a roadway needed to open the Mount Baker Terminal shoreline access area. With a larger area for vehicle storage, it would have the highest ability to remove typical backups onto SR 525.
- The Existing Site Improvements Alternative has four uses of Section 4(f) resources. This alternative would create higher traffic impacts and more conflicts with the future land use plans of the City of Mukilteo. Its construction would also be more disruptive to the Mukilteo waterfront residents and businesses, and it would close the terminal for part of the construction period, causing greater overall construction period impacts than the Preferred Alternative or the Elliot Point 1 Alternative.

Several factors from the project's purpose and need also show notable differences among the alternatives.

Safety and Security

- The Preferred Alternative and Elliot Point 1 Alternative would provide features to help secure the facility during high security alert periods. The relocated facility would reduce the potential for traffic accidents and provide safe pedestrian and bicycle routes.
- The Existing Site Improvements Alternative would not allow the terminal facility to be readily secured to respond to increased maritime security orders from the U.S. Coast Guard. It would improve but not remove the potential for traffic accidents, including pedestrian and bicyclist accidents.

Transit Connections and Reliability

Each of the alternatives would improve connections and reliability, but there are differences:

- The Preferred Alternative would improve reliability as much as any alternative, and it would reduce queues much more than the Existing Site Improvements Alternative. It would also have the shortest distances between the transit center, terminal, and the commuter rail station.
- The Existing Site Improvements Alternative would partially improve reliability but would still have opportunities for conflicts and delays during loading and unloading. It would improve the transit center and terminal facilities, but users would have a slightly longer walk distance between them compared to the No-Build Alternative. This alternative would not shorten connections to the commuter rail station, but would improve some sidewalk connections.
- The Elliot Point 1 Alternative would improve reliability and reduce queues the most, and it would have the shortest distance between the transit center and the terminal. However, it would have the longest distance between the commuter rail station and the terminal.

I.5.7 Conclusions

Having carefully considered the project's potential uses of resources protected under Section 4(f), FTA finds that:

- There is no feasible and prudent avoidance alternative to using Section 4(f) resources. FTA has found no feasible and prudent alternatives other than those alternatives being considered in the Final EIS, which all involve Section 4(f) uses.
- The project includes all possible planning to minimize harm to Section 4(f) properties. These measures have been defined through Section 4(f) and Section 106 processes, and reflect input from the public during the Draft EIS comment period.

Because there are no prudent and feasible alternatives that avoid all Section 4(f) resources, FTA has carefully considered the factors required for a least overall harm analysis, and has concluded the Preferred Alternative would have the least overall harm to Section 4(f) resources and the environment.