

CHAPTER 1

Purpose and Need



1 PURPOSE AND NEED

1.1 The Mukilteo Multimodal Project

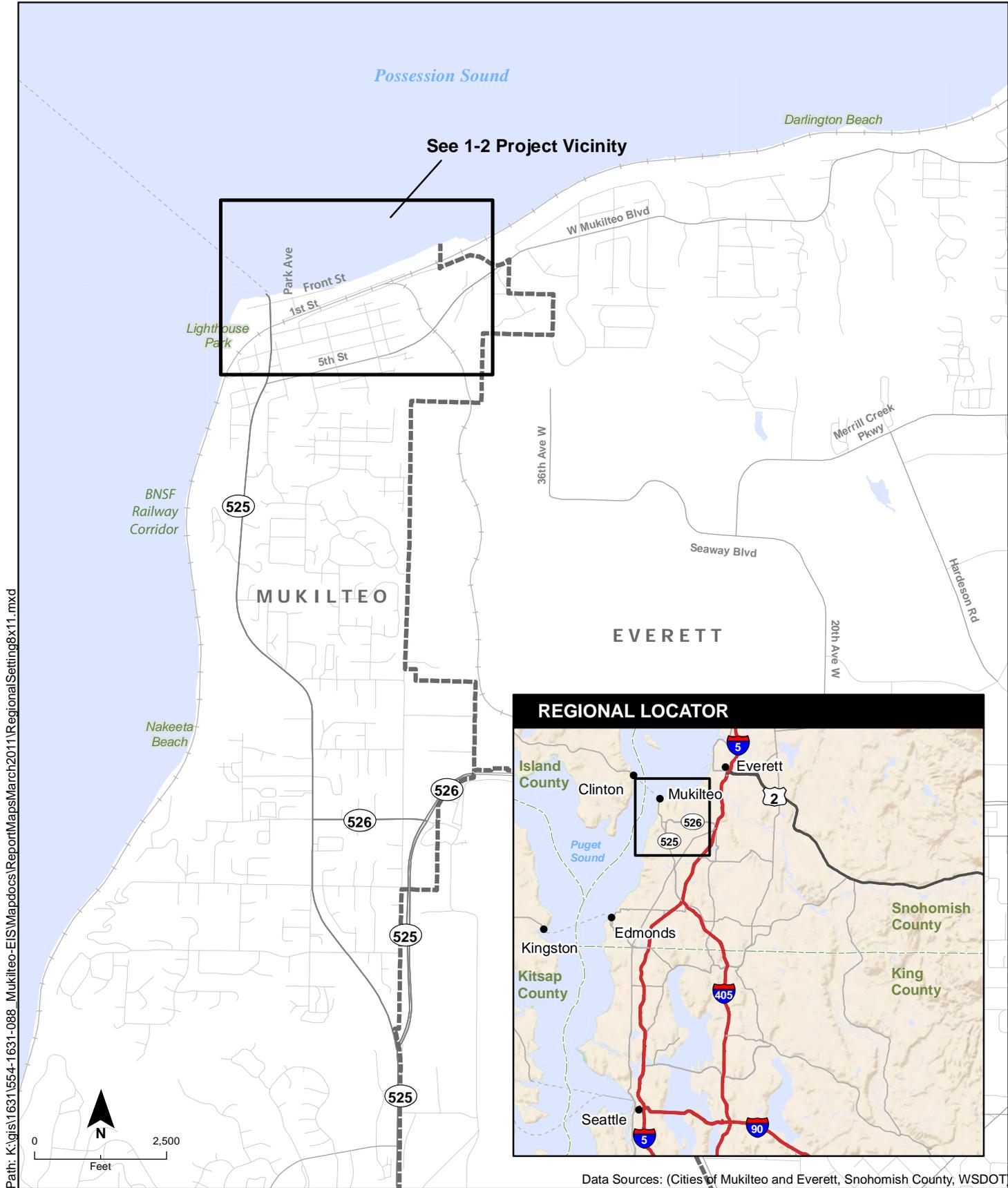
The Washington State Department of Transportation (WSDOT), Ferries Division (also known as Washington State Ferries [WSF]) proposes the Mukilteo Multimodal Project to improve the operations and facilities serving the mainland terminus of the Mukilteo-Clinton ferry route in Washington State. The Federal Transit Administration (FTA) may fund part of the proposed project.

WSDOT and FTA are preparing an Environmental Impact Statement (EIS) for the project in compliance with the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). As a source of funds for this project, FTA is the federal lead agency for the NEPA EIS process. WSDOT is the state lead agency for SEPA.

The ferry route is part of State Route (SR) 525, the major transportation corridor crossing Possession Sound, which separates Island County (Whidbey Island) from the central Puget Sound mainland. The Mukilteo-Clinton route is the second-busiest ferry route in terms of vehicle traffic in the state ferry system, and it has the third-largest annual ridership. The route connects to local and regional transportation systems serving many modes of travel, including bus and rail transit, freight, and vehicles, as well as bicycle and pedestrian use. Figure 1-1 shows the regional setting and Figure 1-2 shows the general project area.

1.2 The Mukilteo Ferry Terminal Area

The existing Mukilteo ferry terminal is located in the city of Mukilteo in Snohomish County, west of the Mukilteo/Everett city line. The shoreline in this area faces north to northwest and runs primarily east-west within the project area. There are a variety of land uses surrounding the terminal, including private properties holding residences and businesses, as well as large publicly owned properties. Elliot Point and Mukilteo Lighthouse Park are to the west of the current terminal. To the east is an approximately 20-acre property currently owned by the U.S. Air Force (Mukilteo Tank Farm), which holds a research facility operated by the National Oceanic and Atmospheric Administration (NOAA) Fisheries Service (the research facility is also known as NOAA Mukilteo Research Station). The Mukilteo Tank Farm is made up of lands and a long pier formerly used by the U.S. Army and later used by the U.S. Air Force. East of the Mukilteo Tank Farm is the Port of Everett's Mount Baker Terminal, a marine-to-rail intermodal facility, which also includes a small public shoreline access area with parking that is largely on the Mukilteo Tank Farm and currently not accessible to the public.



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----- City Boundary

Figure 1-1. Regional Setting



- Existing Terminal
- Project Area
- Mukilteo Tank Farm
- City Boundary

Figure 1-2. Project Vicinity

The BNSF Railway owns and operates the railroad that runs south of the terminal. The BNSF tracks mostly follow the shoreline between Seattle and Everett. East of where the railroad crosses under SR 525, it borders the Mukilteo Tank Farm and has a rail spur connection to the Mount Baker Terminal. Sound Transit’s Sounder commuter rail also uses the BNSF tracks. Its Mukilteo Station is located partially on the Mukilteo Tank Farm at the eastern end of First Street, north of the railroad.

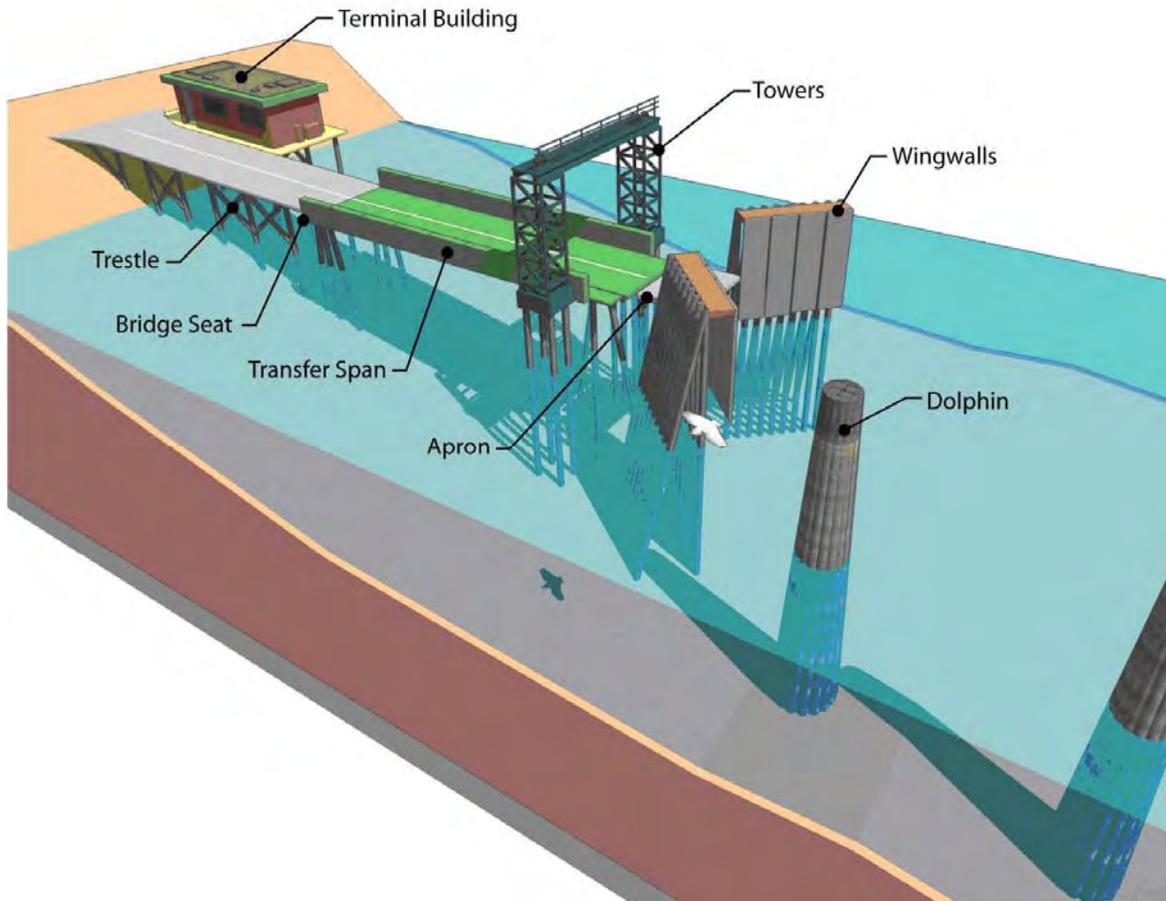
Existing Ferry Terminal Features and Operations

The existing Mukilteo ferry terminal includes facilities for marine operations, and onshore (or upland) facilities that support operations for loading and unloading vehicles and passengers. Typical features of a ferry terminal are described in the box at right and shown on page 1-5.

Features of the existing terminal include toll collection booths, holding areas for vehicles waiting to board the ferry, and non-motorized access facilities. Adjacent transportation facilities include a bus zone, SR 525, and the streets connecting to Mukilteo Station. Figure 1-3 shows the existing ferry terminal and its immediate surroundings. It also illustrates the common features of a ferry terminal and its individual components, using the current terminal as an example.

The marine components of the existing ferry terminal include structures used to guide and position berthing ferry vessels such as a floating outer dolphin, two fixed inner dolphins, and two wingwalls. The marine components also include structures used for vehicle loading, including the trestle, transfer span, and apron. A public fishing pier owned and maintained by the Port of Everett is adjacent to the east side of the existing transfer span. It consists of a timber-supported platform and three floating docks.

Key parts of a typical ferry terminal
fixed dolphin – an assembly of steel piles or concrete drilled shafts supporting a concrete cap and a fendering system.
floating dolphin – concrete or wooden barge structures located offshore clad with a perimeter fendering system and anchored to the seabed; used to help guide the ferry into the slip.
wingwall – an assembly of steel piles or concrete drilled shafts supporting a steel or concrete cap and a fendering system to guide and stop the ferry at its loading and unloading position.
tower – currently used to house and support the cable and counter weight system that supports, raises, and lowers the outboard end of the transfer span. (the tower system will be replaced by hydraulic lifts regardless of the alternative chosen.)
apron – adjustable ramp at the end of the transfer span that accommodates varying water heights.
transfer span – movable bridge that allows the vehicles and pedestrians access on and off the ferry; it is the link between the ferry and the trestle.
trestle and bridge seat – over-water stationary pile-supported bridge structure that serves as a connection between land and the nearshore end of the transfer span for both vehicle and pedestrian traffic (pedestrians do not use the trestle if overhead pedestrian loading is available).



Key Parts of a Typical Ferry Terminal

The on-land components of the existing ferry terminal include three toll booths and vehicle holding lanes with the capacity for approximately 216 vehicles, which allows the current terminal to store vehicles for about one-and-a-half ferry vessels. (The number of vehicles that can be placed in the holding area or on the ferry depends on the types of vehicles that are being loaded and other operating factors.) South of the holding area, there is a small building that houses the terminal supervisor's office. Ferry employee parking is located west of SR 525. The ferry passenger building is located west of the ferry dock.

Many destinations in downtown Mukilteo, including the terminal, are accessed through the intersection of SR 525 and Front Street. The other streets serving the ferry terminal and nearby properties include First Street and Park Avenue.

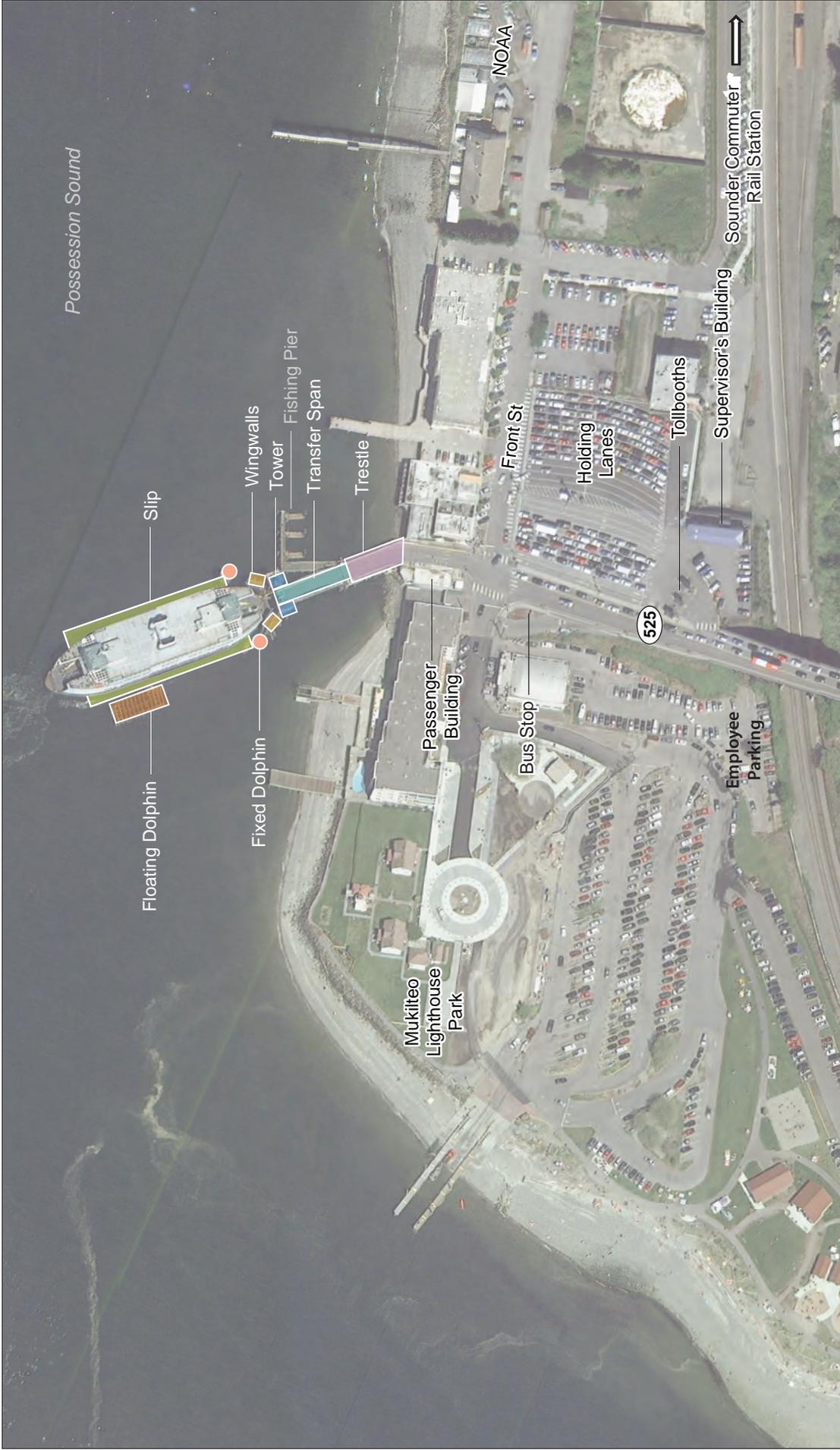


Figure 1-3. Existing Ferry Terminal Components



Mukilteo Tank Farm

The Mukilteo Tank Farm and the Tank Farm Pier are located east of the Mukilteo ferry terminal. Further details on the Mukilteo Tank Farm and the legislatively-directed action for the U.S. Air Force to convey the property to the Port of Everett and NOAA for Port and public uses are provided in *Chapter 2 Alternatives*.

1.3 Project Background

WSDOT began studying the Mukilteo Multimodal Project in 2004 to improve ferry operations, safety, transit connections, and access. It initiated the NEPA review process with the development of an environmental assessment. Early in 2006, based on environmental analysis and public and agency comments, FTA and WSDOT determined an EIS was needed. In 2007, the Washington State Legislature put the project on hold due to funding and constructability issues associated with the previously identified alternatives.

In 2009, WSDOT completed the *Washington State Department of Transportation Ferries Division Final Long-Range Plan: 2009–2030* (WSDOT 2009), which presents a vision for the future of the ferry system that maintains current levels of service and includes limited terminal improvements. The WSF Long-Range Plan is now a part of the latest Washington Transportation Plan 2030 (WTP), which was adopted by the Washington State Transportation Commission in December 2010.

WSDOT and FTA re-initiated this project's environmental process in February 2010 with new project concepts for review and evaluation.

The first step in the NEPA/SEPA process was project scoping, which has included extensive agency and public outreach, and a public comment period. The most recent project scoping period started in February 2010 and the public comment period ran from September 29 through November 19, 2010. Commenters expressed support for the project and the need to improve the Mukilteo ferry terminal. See *Chapter 6 Public Involvement* for additional details about project scoping and other public involvement efforts. *Chapter 2 Alternatives* describes how comments were considered and presents the development of alternatives to be studied in the EIS.

1.4 The Purpose and Need for the Proposed Mukilteo Multimodal Project

The purpose and need statement for this project will guide decisions about the project. A purpose and need statement was originally drafted when the environmental process began in 2006. In 2010, when the project was reinitiated, WSDOT and FTA revised the statement and invited comment on it during environmental scoping. The comments expressed strong agreement with the stated reasons for advancing the project.

1.4.1 Project Purpose

The purpose of the Mukilteo Multimodal Project is to provide safe, reliable, and efficient service and connections for general-purpose transportation, transit, high-occupancy vehicles (HOVs), pedestrians, and bicyclists traveling between Island County and the Seattle/Everett metropolitan area and beyond. The project is intended to:

- Reduce conflicts, congestion, and safety concerns for pedestrians, bicyclists, and motorists by improving local traffic and safety at the terminal and the surrounding area.
- Provide a terminal and supporting facilities with the infrastructure and operating characteristics needed to improve the safety, security, quality, reliability, and efficiency of multimodal transportation.
- Accommodate future demand projected for transit, HOV, pedestrian, bicycle, and general-purpose traffic.

1.4.2 Project Need

The existing facility is deficient in a number of aspects, including safety, multimodal connectivity, capacity, and the ability to support the goals of local and regional long-range transportation and comprehensive plans, including future growth in travel demand. Those factors, which are further described below, demonstrate the need for an improved multimodal facility.

Safety and Security

Safety is WSDOT's top priority, and security at transportation facilities is a national concern. Safety and security come into play with this project in several ways: at the pedestrian/vehicle interface, with the general traffic flow in the SR 525/Front Street vicinity, and in maintaining safety and security for the facility itself. The major safety and security concerns are:

- The Mukilteo ferry terminal has received few improvements since it was built in 1952. The existing timber structures, including the docking facilities, are beyond the end of their useful lives.
- The existing terminal does not meet current seismic standards. The existing facility is underlain by deep, potentially liquefiable soils that are highly susceptible to lateral spreading during an earthquake.
- Changed U.S. Coast Guard and U.S. Department of Homeland Security protocols now require the ability to secure terminal areas when there is a natural disaster, heightened security alert, or other emergency. The existing facility has city streets within the terminal area and does not allow for a physical separation between the terminal and open public areas, which

increases safety and security concerns, and could require WSDOT to interrupt service or close the terminal to respond to an emergency or heightened security alert.

- Collisions near the SR 525/Front Street intersection have included sideswipes, vehicle/pedestrian collisions, and collisions with parked vehicles.
- Because of congestion caused by ferry traffic, pedestrians often make high-risk decisions to cross the SR 525/Front Street intersection during breaks in ferry traffic. Near misses between vehicles and pedestrians are common. Pedestrians who access the terminal area, transit facilities, surrounding businesses, and Mukilteo Lighthouse Park compete with vehicles for access to this intersection.
- Other inadequate facilities include a lack of passenger drop-off/pickup area and poor bus access to the bus bay; both increase congestion and the risk of accidents.
- Passengers who are loading and unloading from the ferry or going between the toll booth and the terminal building must traverse routes that do not meet the requirements of the Americans with Disabilities Act.

Transit Connectivity and Reliability

The current facility provides poor connections between transit, rail, and ferry modes, which significantly hamper the quality and reliability of the transportation system in this area and add to the overall transportation and safety problems related to the terminal. The major concerns are:

- Transit connections at the Mukilteo ferry terminal cannot adequately serve current or future needs. There are only two bus bays, located 200 feet away, uphill and across a major local street. The limited transit facilities are inadequate to support the current service, including staging and layover needs for transit operations, and they have limited boarding areas and amenities for transit riders. The current configuration would not allow bus service to be expanded. In addition, the Sounder commuter rail stops at the Mukilteo Station, approximately 2,000 feet from the existing terminal, and the streets between the ferry terminal and the station have missing or substandard pedestrian and bicycle facilities.
- Keeping the ferry on schedule is integral to multimodal connectivity and the ability of the system to meet growing demand by allowing passengers to make on-time connections to scheduled bus and train service. Inefficient vehicle staging slows fare collection, which delays departures. Lack of a dedicated HOV access lane makes it difficult to fully implement WSDOT's preferential program for carpools and worsens operating efficiency. Also, pedestrians walking on and off the ferry use the same span that vehicles use. This requires

passengers and vehicles to be loaded at separate times, which leads to system inefficiency and can cause delays that last throughout the day.

Growth in Travel Demand

The Mukilteo-Clinton route connects the two segments of SR 525, the major transportation corridor between Island County (Whidbey Island) and the Seattle-Everett metropolitan area. SR 525 is classified as a Highway of Statewide Significance. In addition to serving ongoing travel demand, SR 525 is needed to connect the communities and military facilities on the island for evacuations, disaster relief, and medical emergencies. The ferry route needs to maintain reliable service to meet the needs of the people using this transportation corridor.

WSDOT's travel forecasts highlight the higher future demand for improved multimodal facilities serving the Mukilteo-Clinton route; WSDOT predicts a 73 percent increase in annual passengers (1,840,000 to 3,175,000) on the Mukilteo-Clinton route from 2006 to 2030.

The Mukilteo-Clinton route serves a high number of commuter trips, and growth in employment on both Whidbey Island and on the mainland is a primary reason for the predicted growth in trips by ferry. In response, the WSF Long-Range Plan calls for meeting the growing travel needs at the Mukilteo ferry terminal (WSDOT 2009), primarily through increasing the share of walk-on trips. This reinforces the need for improved connections between ferries and other modes, including transit, bicycle, and walking.

Other Related Objectives

Through its public planning and outreach efforts, including public scoping comments, WSDOT has also identified environmental and project development goals to help guide the project:

- The project should be fiscally responsible and supportive of state, regional, and local transportation plans including, but not limited to, the *Washington State Department of Transportation Ferries Division Final Long-Range Plan: 2009–2030* (WSDOT 2009), as well as regional and local land use plans.
- The project should be sensitive to the rich cultural and environmental resources of the vicinity in a manner that respects and enhances these resources.
- The project should not preclude development of a second slip at the terminal in the future to provide operational flexibility or additional capacity.

1.5 Planning History

The purpose and need for the project are supported and further reinforced by a long planning history that reflects more than 15 years of design and analysis completed by the City of Mukilteo, WSDOT, Sound Transit, and the Port of Everett to improve

the safety, reliability, multimodal connectivity, and capacity at the Mukilteo ferry terminal. This includes terminal area and project-level planning, WSDOT's long-range planning for the ferry system, and local and regional transportation planning efforts to improve multimodal travel throughout the region.

To supplement the planning history summarized below, the project team has prepared the *Alternatives History through 2009 Report* (WSDOT 2010). Further detail about specific alternatives considered is provided in *Chapter 2 Alternatives* of this EIS.

Improvements to the terminal have been discussed in various efforts since the 1970s. Major planning efforts began with the *Mukilteo Multimodal Terminal and Access Study* conducted by the City of Mukilteo in 1995. WSDOT began detailed master plan efforts with multiple concepts in the *Mukilteo Multimodal Terminal Master Plan Design Report* (WSDOT 2004a). Further concepts were developed and refined in 2004. Based on information developed for the environmental review, FTA determined that the project had the potential to cause significant impacts on natural and cultural resources and warranted preparation of an EIS. The EIS process began in 2006, which resulted in further development of potential alternatives.

During the initial EIS process, WSDOT and FTA evaluated two Build alternatives. They identified major challenges associated with potential effects on archaeological resources, the amount of over-water construction, and difficult geotechnical conditions, as well as concerns about high costs. The project was placed on hold in 2007 while additional planning and environmental investigations continued to address these areas of concern. Elements of the WSDOT Ferries Division Long-Range Plan (2009) also provided further direction on the goals and objectives for the project.

1.5.1 WSDOT (Ferries Division) Long-Range Plan

In 2009, WSDOT Ferries Division released its Long-Range Plan, which presents a cost-constrained vision for the future of the ferry system that maintains current levels of service and includes limited terminal improvements throughout the system. It also identifies vessel replacements needed to address the system's aging ferry fleet. The Long-Range Plan identified the system's needs in order to meet transportation demands, and established new operational and pricing strategies to meet those needs. It also identified vessel and terminal operations and capital requirements throughout the system. The plan's horizon covers 22 years—2009 to 2030 (fiscal years 2010 to 2031). It also was designed to meet federal planning requirements and be consistent with regional transportation planning efforts.

For the Mukilteo-Clinton route, the Long-Range Plan identified vessel replacements for 2014 and 2027 and the need for Mukilteo terminal capital investments. It defined the essential preservation elements required through 2030 if the existing terminal were to remain in place. In addition, the plan noted that drive-on trips make up a high proportion of the route's traffic. This reinforces the project's stated need to improve multimodal connections on this congested route in order to attract

more walk-on trips, helping to free up vehicle space and meet projected growth in demand. The Long-Range Plan also noted the need for the Mukilteo ferry terminal to achieve an acceptable level of service in order to comply with the state's Growth Management Act (GMA). For instance, Whidbey Island has requirements for transportation concurrency that could limit future growth on the island.

1.5.2 Other Related Planning Studies

Since the 1970s, a number of studies, feasibility reports, and plans of coordinating agencies called for relocating or expanding the terminal. They emphasized the need for continued ferry service from Whidbey Island to SR 525 on the mainland and also supported the need for effective connections between transportation modes. The primary studies included:

- Advanced Planning Study SR 525 and SR 526 (Washington State Highway Commission, Department of Highways 1972)—Addressed transportation needs, access alternatives, environmental considerations, and other criteria.
- Shoreline Master Program (City of Mukilteo 1974)—Identified locations for the terminal and utilities and the existing Mukilteo Tank Farm in the context of the overall shoreline plan.
- SR 525/SR 526 to Mukilteo Ferry Terminal Draft Environmental Impact Statement/Section 4(f) Evaluation (WSDOT 1980)—Discussed alternative alignments for SR 525 coming into Mukilteo in its current location and at Japanese Gulch.
- Mukilteo Ferry Terminal Study (Puget Sound Council of Governments 1990)—Included surveys of ridership, destination, and demand/usage; provided traffic forecasts for 2010; and discussed Transportation Demand Management/Transportation System Management (TDM/TSM) alternatives and three possible terminal locations.
- Waterfront Access Study (City of Mukilteo 1993)—Completed in cooperation with the Washington State Department of Natural Resources (DNR), this study identified waterfront access areas and types.
- Mukilteo North-South Bypass Feasibility Report (for the City of Everett 1993)—Looked at highway system concepts, environmental considerations, and corridor engineering, and developed a project prospectus for Japanese Gulch that specifically described traffic alternatives for the SR 526/North-South Bypass/Paine Field Boulevard intersection.
- Mukilteo Transportation Plan (for the City of Mukilteo 1994)—Served as the transportation element of the City's Comprehensive Plan (Updated 2009).

1.5.3 Terminal Area Planning Studies

In 2002, WSDOT began developing the *Mukilteo Multimodal Terminal Master Plan Design Report*, which built on the earlier planning efforts and helped develop the alternatives considered in the 2004 environmental review that ultimately was put on hold in 2007. It considered the previous plans and studies, in particular a programmatic (or plan-level) environmental review led by the City of Mukilteo with the participation of FTA, WSDOT, BNSF Railway, City of Everett, and Community Transit: the *Mukilteo Multimodal Terminal and Access Study Draft and Final Programmatic EIS* (City of Mukilteo 1995a, 1995b).

The City-led programmatic EIS considered 12 different alternatives for a new multimodal ferry terminal, including the existing site, a central waterfront area for the west part of the Mukilteo Tank Farm, an east Mukilteo Tank Farm alternative, and a systems management alternative. It identified the central waterfront as the preferred location for a new ferry terminal. The City's Comprehensive Plan, Transportation Plan, and Shoreline Master Program were revised accordingly.

The City's EIS also identified the need for improved multimodal connections, efficient capacity, and safety. Fifteen years later, these needs continue to be factors in the current proposal for an improved multimodal facility serving ferry, transit, and other connecting modes in downtown Mukilteo.

