

Chapter 15. Regulatory Compliance

Projects that require compliance with NEPA typically also require compliance with a host of other federal environmental laws, which protect historic properties, parklands, water resources, air quality, endangered species, and other resources. Federal actions also must comply with Executive Orders on wetlands, floodplains, environmental justice, and other topics.

When an EIS or EA is prepared, FHWA's NEPA regulations require that the FEIS or FONSI either (1) "document compliance" with the requirements under other laws and Executive Orders or, if that is not possible, (2) "reflect consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met." 23 CFR 771.133.

Because of this requirement, compliance with other laws and Executive Orders should normally be discussed in a NEPA document. The appropriate level of detail will vary from project to project.

The following practices should help to ensure that the NEPA document sufficiently documents compliance with other laws and executive orders:

- *Describe the regulatory setting.* Many NEPA documents include a brief discussion of the regulatory setting before discussing impacts on a resources. This practice is an effective way to introduce relevant legal requirements and set the stage for documenting compliance. This approach is most effective if the requirements are described; it is much less useful to recite a list of laws without explaining what they require.
- *Use correct terminology when describing findings.* Compliance with other laws often involves specific findings – for example, a finding that the project is "not likely to adversely affect" a threatened or endangered species. It is important to use precise wording when stating these findings, so that there is no confusion about whether the required findings have been made.

- *Document the steps taken to comply with consultation requirements.* Some laws define a consultation process that must be followed – for example, Section 106 consultation for historic resources, and Section 7 consultation for threatened and endangered species. For these laws, demonstrating compliance involves showing that the required consultation has occurred. One efficient way to document compliance with such laws is to include a table in the NEPA document that lists the required consultation steps and shows when each one occurred.
- *Include dates of important documents and events.* Documentation of compliance should include specific dates – month, day, and year – for important events. For example, if the U.S. Fish and Wildlife Service issues a Biological Opinion (B.O.), the NEPA document should not just say that the B.O. was issued – it should give the exact date on which it was issued.
- *Include key correspondence and reports in appendices.* The appendices to the NEPA document can be used to compile documents that help to demonstrate compliance with other laws. It is especially valuable to include correspondence in which other agencies have made or concurred in findings – for example, letters in which officials concur in “de minimis” impact findings under Section 4(f).

Regulatory Setting Is Briefly Summarized

- OR: OR 62 FEIS - T&E Species
- OR: OR 62 FEIS - Water Quality
- UT: West Davis Corridor FEIS - Water Quality

Techniques to note:

- begins each resource section (e.g., T&E species) with a brief discussion of applicable regulatory requirements

Section 3.13 Content

- 3.13.1 Regulatory Setting
 - 3.13.1.1 Federal
 - 3.13.1.2 State
- 3.13.2 Affected Environment
- 3.13.3 Environmental Consequences
 - 3.13.3.1 Federal ESA
 - 3.13.3.2 State ESA
- 3.13.4 Avoidance, Minimization, and/or Mitigation Measures
 - 3.13.4.1 Aquatic Species and Habitat
 - 3.13.4.2 Riparian Habitat
 - 3.13.4.3 In-Stream or Near-Stream Work
 - 3.13.4.4 Terrestrial Wildlife Species and Habitat
 - 3.13.4.5 Plant Species and Habitat
- 3.13.5 Avoidance, Minimization, and/or Mitigation Commitments Incorporated Into the Preferred Alternative

T&E SPECIES

3.13

3.13 Threatened and Endangered Species

3.13.1 Regulatory Setting

3.13.1.1 Federal

The primary federal law protecting threatened and endangered species is the federal ESA: 16 United States Code (USC), Section 1531-1544, et seq. FHWA and ODOT's responsibilities under the act are regulated at 50 CFR Part 402. This Act and subsequent amendments provide for the conservation of threatened and endangered species and the ecosystems upon which they depend. Under Section 7 of the ESA, federal agencies, such as FHWA, are required to consult with the USFWS and/or the National Marine Fisheries Service (NMFS), jointly referred to as the Services, to ensure that FHWA is not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. Section 3 of ESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

Compliance with ESA can be demonstrated through "No-Effect" documentation, which is generally prepared by the applicant (in this case ODOT). For actions which are "Not Likely to Adversely Affect" species or their critical habitat, informal consultation is conducted and typically results in a concurrence letter from the Services. For actions which are "Likely to Adversely Affect" species or their critical habitat, formal consultation is conducted. The outcome of formal consultation is a Biological Opinion (BO) which may include an incidental take authorization. Additionally programmatic approaches for ESA consultations may be available.

3.13.1.2 State

Consultation with ODFW and/or Oregon Department of Agriculture (ODA) is required when species are state-listed as threatened or endangered. State-listed fish and wildlife species are regulated by the ODFW in ORS 496.171 to 496.192. State-listed plants are regulated by the ODA in ORS 564.100 to 564.135. Wildlife "take" is defined under state law as to kill or obtain possession or control of. Plant "take" is defined under state law as to collect, cut, damage, destroy, dig, kill, pick, remove, or otherwise disturb.

3.13.2 Affected Environment

The API for this analysis is defined as the project footprint with a 250 foot buffer on all sides, as shown in Figure 3.13-1. Areas within the API have the potential to support federal and state listed plant and wildlife species. Federal and state species lists were reviewed to determine which ESA species and critical habitat could potentially occur within the API.

For further information regarding ESA species, including citations to source documents, refer to the OR 62 Corridor Solutions Project Terrestrial Resources Technical Report, November 2011 and the OR 62 Corridor Solutions Project Aquatic Resources Technical Report, July 2011. These reports are available from the ODOT contact person identified on page i of this EIS

Techniques to note:

- begins each resource section with a brief discussion of applicable regulatory requirements

14.2.4 Clean Water Act

The U.S. Army Corps of Engineers (USACE) developed a definition of waters of the U.S. in the 1972 Clean Water Act (33 USC 1251). *Waters of the U.S.* are defined as waters currently or previously used for interstate or foreign commerce; all interstate waters; any waters, the destruction of which could affect interstate or foreign commerce; all impoundments; tributaries of the previously mentioned waters; the territorial seas; and wetlands adjacent to waters.

Wetlands are defined as a subset of waters of the U.S. and, under the Clean Water Act 404(b)(1) regulations (40 Code of Federal Regulations [CFR] 230), are considered special aquatic sites.

Pursuant to the Clean Water Act, USACE has jurisdiction over all waters of the U.S., including but not limited to traditionally navigable waters. USACE further defines wetlands in Section 404 of the Clean Water Act as:

... those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

USACE presently has jurisdiction over any waters that are adjacent to, bordering, or contiguous with navigable waterways. This EIS assumes that all waters of the U.S. in the ecosystem impact analysis area are jurisdictional and are subject to the authority of USACE.

Under Section 404 of the Clean Water Act, no discharge of dredged or fill material is permitted in waters of the U.S. if there is a less environmentally damaging practicable alternative to that part of the activity that would result in a discharge of fill material to waters of the U.S. An alternative is *practicable* if it is available and capable of being implemented after taking into consideration cost, existing technology, and logistics in light of the overall project purposes.

For actions that require a Section 404 permit, FHWA seeks to ensure that the alternatives analysis in FHWA's NEPA document provides the information necessary for USACE to conduct a Clean Water Act Section 404(b)(1) alternatives analysis and to select the least environmentally damaging practicable alternative.

What are waters of the U.S. and wetlands?

Waters of the U.S. are waters currently or previously used for interstate or foreign commerce; all interstate waters; any waters, the destruction of which could affect interstate or foreign commerce; all impoundments; tributaries of the previously mentioned waters; the territorial seas; and wetlands adjacent to waters.

Wetlands are a subset of waters of the U.S. and are considered special aquatic sites.

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Consultation Process Is Documented, with Key Dates Specified

(e.g., a chronological summary of steps in consultation process)

- MD: Red Line FEIS - Sec. 106 consultation
- OR: OR 62 FEIS - Sec. 7 consultation
- UT: West Davis Corridor FEIS - Sec. 7 consultation
- WA: I-90 Snoqualmie FEIS - Sec. 106 consultation

Techniques to note:

- summarizes steps taken to comply with procedural requirements, such as Section 106 consultation for historic resources
- includes references to key dates in consultation, which facilitates locating relevant supporting documents

December 2012

adverse effects, which could include unanticipated noise and vibration. This stipulation acknowledges that effects assessments and provides for consultation on the project. The draft Programmatic Agreement is included in Appendix III. The final executed Programmatic Agreement will be included in the project Record of Decision (ROD).

5.9.5 Section 106 Consultation

a. MD SHPO Consultation

This section discusses consultation efforts with Section 106 consulting parties, including the MD SHPO. The purpose of consultation has been to share information on the Preferred Alternative and to discuss the following:

- methodology in developing the APE;
- identification of historic properties listed or determined eligible for listing in the National Register (Determinations of Eligibility);
- assessment of effects; and
- avoidance, minimization, or mitigation efforts that may be needed to offset any adverse effects on cultural resources.

FTA has consulted with the MD SHPO to delineate the built environment APE, identify historic properties, and evaluate properties not previously evaluated for NRHP eligibility. To date, the MD SHPO has reviewed and commented on the following:

- *Cultural Resources Technical Report: Volume 1 – Red Line Corridor Transit Study: Cultural Resources Reconnaissance Survey* and APE delineation (August 25, 2005 correspondence)
- Evaluations in the *Historic Structures Survey Technical Report* (March 19, 2007 correspondence)
- *Cultural Resources Technical Report: Volume 4 – Red Line Corridor Transit Study: Bayview Extension Cultural Resources Reconnaissance Survey* and APE delineation (April 7, 2008 meeting)
- Evaluations in the *Red Line Corridor Transit Study – Bayview Extension; Historic Architectural Resources Survey* (June 9, 2010 correspondence, included follow-up comments on the original evaluations)
- Refined APE and list of additional properties for evaluation (January 17, 2012 correspondence)
- DOE and Short Forms provided in May and June 2012 (concurrence received in July 2012 and September 2012)

b. Section 106 Consulting Parties

The Red Line public outreach process was initiated in 2003, and a series of public scoping meetings and open houses continued into 2004 and 2005. MTA sent public notification mailings in 2005; these mailings included approximately 5,000 individuals and 250 community organizations. A community newsletter sent in 2005 described the Section 106 process and invited interested and consulting parties to a series of public meetings in 2005.

In 2006, MTA developed a Section 106 Public Participation Program that has been followed throughout the course of the project. At that time, no individuals or community groups had requested consulting party status and only three public comments on the project related to historic properties concerns. Twenty-six community organizations and three government agencies were invited to become consulting parties. No community organizations responded to the invitation. MTA proceeded with consultation with MHT, the Baltimore City Commission on Historic and Architectural Preservation (CHAP) and the Baltimore County Planning Department's preservation services staff. Only MHT and CHAP chose to participate actively.

In 2009, MTA received correspondence from a group of community organizations expressing concerns about the project's effects on the Canton Historic District. These organizations included the Anchorage Homeowners Association, Baltimore Harbor Watershed Association, Canton Community Association, Canton Cove Association, Canton Square Homeowners Association, and Waterfront Coalition. The groups requested and were granted consulting parties status, and were provided with project documentation related to the project and Canton Historic District. As project work continued in 2010 and 2011, consultation continued with MHT staff and CHAP, as appropriate.

FTA has complied with 36 CFR Part 800.2, and identified and contacted nine federally-recognized Native American tribes in October 2012, including the Absentee-Shawnee Tribe of Oklahoma, Delaware Nation, Delaware Tribe of Indians, Eastern Shawnee Tribe, Oneida Indian Nation, Onondaga Nation, Saint Regis Mohawk Tribe, Shawnee Tribe, and Tuscarora Nation. In addition, FTA has identified and contacted state-recognized tribes with cultural ties to the project area, including the Piscataway Indian Nation, Inc., Piscataway Conoy Confederacy and Subtribes, Inc., and the Cedarville Band of Piscataway Indians. The Delaware Tribe of Indians wishes to be considered a consulting party, and notified and further consulted if human remains or objects of cultural patrimony are found during construction activities. The Shawnee Tribe wishes to be considered a consulting party, if unanticipated discoveries are found during construction activities.

A consulting party meeting was held on **September 25, 2012** to share project information and listed/eligible historic properties within the APE identified. A second meeting was held on **October 17, 2012** to provide an overview of potential effects, and to discuss potential avoidance, minimization, and mitigation measures. Additional consulting party meetings are being planned to continue discussions on the effects, potential avoidance, minimization and mitigation measures, and the Programmatic Agreement.

In a letter dated November 6, 2012, the FTA notified the ACHP of the proposed finding of adverse effect on historic properties, in accordance with 36 CFR Part 800.6. The FTA asked the

ACHP to review information attached to the letter, to determine if the agency wishes to join the consultation process.

Additional tasks are required to complete the Section 106 process. Comments on the proposed effects determinations in the *Section 106 Assessment of Effects for Built Historic Properties* from MHT, consulting parties, and the public will be incorporated into a final *Section 106 Assessment of Effects for Built Historic Properties*. Additional consulting parties meetings will be held in December and January, as appropriate, to discuss comments on the effects determinations and finalize the Programmatic Agreement (refer to **Appendix H** for a draft of the document). Following formal concurrence on the effects determination and Programmatic Agreement, the Programmatic Agreement will be circulated for signatures. The executed Programmatic Agreement will be completed prior to the ROD.

5.10 Archeological Resources

The archeological investigations undertaken in support of the Red Line project have been conducted in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 470 et. Seq.); Archeology and Historic Preservation: The Secretary of the Interior's Standards and Guidelines (FR 48: 44716-44742), September 1983; Maryland Historical Trust's (MHT) Standards and Guidelines for Archeological Investigations in Maryland (1994); and MHT's Standards and Guidelines for Architectural and Historical Investigations in Maryland (2000).

5.10.1 Introduction and Methodology

A *Phase IA Archeological Assessment Technical Report* was prepared in 2007 by the Maryland Transit Administration (MTA) in support of the Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS). The *Phase IA Archeological Survey* provided a comprehensive overview of the archeological context and sensitivity for prehistoric and historic archeological sites within the project study corridor. Prehistoric sites include resources associated with Native American activities prior to Euro-American occupation in the region. Historic sites represent activities post-dating Euro-American occupation in the region.

For the current study, a predictive model for the Preferred Alternative was developed which incorporated evidence of prior disturbance, current land use and previously recorded cultural resources to justify areas of high, medium, and low cultural resource sensitivity. The results of the Phase IA survey and supporting predictive models identified 22 areas of archeological sensitivity along the Preferred Alternative, five areas in Baltimore County and 17 areas in Baltimore City.

Concurrently, data regarding subsurface conditions is being gathered through the archeological monitoring of project geotechnical borings. Initiated in December 2009, archeologists, working in conjunction with the geotechnical staff, are recording the soils in geotechnical bores collected from areas of archeological sensitivity in the limit of disturbance. The bores provide a glimpse of the soil stratigraphy in the project setting, including modern and historic fill, as well as the natural subsoil development. The soils information and any archeological observations are shared with the project geomorphologist. This monitoring effort is allowing the archeological team to verify the anticipated subsurface conditions in potentially sensitive

Techniques to note:

- summarizes steps taken to comply with procedural requirements, such as Section 106 consultation for historic resources
- includes key dates
- shows how the process was concluded (in this case, with a B.O. issued by the USFWS)

Electrofishing uses electric current to stun fish so they can be netted and removed from the area.

- **Hydroacoustic Noise.** Impact pile driving construction for the proposed crossing at Bear Creek, if necessary, would create hydroacoustic noise that has the potential to disturb, harm, or potentially kill aquatic species including SONCC coho salmon. The potential impacts from hydroacoustic noise include damage to internal organs, reduction of feeding success, increase in predation, and displacement from suitable habitat to less suitable habitat. The number of individuals affected depends on site conditions and the extent, duration, and timing of pile driving.
- **Potential for Toxic Spills.** There is a potential for leaks or spills of contaminants from equipment used in proximity to Bear Creek and other project-area streams. Such spills or leaks could be toxic to SONCC coho salmon. As described in Section 3.10.3, construction activities would include BMPs that, among other things, are meant to prevent spills and leaks from construction equipment or minimize the potential effects from a spill if one occurred.
- **Fish Removal.** In-water or near-water work typically includes isolation measures to prevent fish from entering the work area. In some cases, such as the pile driving next to Bear Creek and construction of a temporary bridge in Bear Creek, electrofishing could be necessary to remove fish from the work area which could result in harassment or death to some individual fish. These potential impacts are more thoroughly described in the Biological Assessment submitted to the NMFS dated December 21, 2010.
- **Storm water.** Ground disturbance during construction could result in increased sedimentation and turbidity to Bear Creek and other API streams; however with the incorporation of erosion and sediment control BMPs described in Section 3.10.3, impacts are expected to be negligible.

Impacts Common to Both Build Alternatives and JTA Phase

Construction impacts on SONCC coho salmon common to all build alternatives and JTA phase would occur in all other streams within the API except for Bear Creek. Bear Creek is the only stream crossed by the project that is known to support SONCC coho salmon within the API. All other streams in the API are designated critical habitat for SONCC coho salmon based on historic species usage, but there is no known SONCC coho salmon usage of these streams within the API boundary. Impacts could result from potential toxic spills and storm water runoff and would be similar to those described above for the SD Alternative.

Terrestrial Wildlife Species and Habitat

Construction-related activities would occur exclusively within the proposed footprint or within other already developed areas. Storm water runoff from disturbed areas during construction could cause some impacts if stormwater were to reach vernal pools. These impacts could include degradation of vernal pool habitat due to pollutants in the storm water and altered hydrology. Measures would be taken as part of construction storm water permit compliance to protect vernal pools from receiving storm water runoff during construction, thus reducing the potential for this type of impact to occur.

Plant Species and Habitat

There would be no additional impacts on Cook's lomatium or large-flowered woolly meadowfoam due to construction activities.

Federal ESA Consultation Process

Based on the impacts discussed above, FHWA found that the project "may affect, (and is) likely to adversely affect" SONCC coho salmon, vernal pool fairy shrimp, Cook's lomatium, and large-flowered woolly meadowfoam. A Biological Assessment (BA) was prepared for the aquatic species for review by NMFS, submitted on December 21, 2010, and for the terrestrial species to USFWS, submitted on December 22, 2011, in support of consultation with these agencies and to satisfy compliance with the federal ESA. The Biological Opinions (BOs) from both NMFS and USFWS will contain non-discretionary terms and conditions and recommended conservation measures. These BOs will be issued prior to the availability of the Final EIS. Cover letters which transmitted the BAs to USFWS and NMFS are included in Appendix G of this EIS.

NMFS issued its BO for the OR 62: I-5 to Dutton Road project March 20, 2013 (NMFS Highway 62 BO). The USFWS issued its BO for the project March 14, 2013 (USFWS Highway 62 BO). Both BOs are included in Appendix G.

Table 7-2 Consultations with Agencies That Are Not Cooperating or Participating Agencies

Agency Name	Coordination Topic
National Marine Fisheries Service	ESA
City of Medford	Traffic, Section 4(f)
Oregon Department of State Lands	404 Permit
Oregon State Historic Preservation Office	Section 106, Section 4(f)
Oregon Parks and Recreation Department	Section 6(f)
Confederated Tribes of Grand Ronde	General project information has been provided
Confederated Tribes of Siletz	General project information has been provided
Oregon Department of Land Conservation and Development	Statewide Planning Goal Exception
Jackson County	Statewide Planning Goal Exception

Techniques to note:

- includes a summary table that lists key events (with dates) in the consultation process

Table 7-3 ESA Consultation and Related Activities

Date	Description	Agencies
October 4, 2004	Agency scoping meeting for proposed project and site visit	ODOT FHWA Corps USFWS ODFW DSL
October 6, 2010	Pre-consultation meeting to discuss project vernal pool impacts, BA format, assessment methodology. First direction about forthcoming Programmatic Biological Opinion (PBO) from USFWS. The PBO was concerned about vernal pool fairy shrimp (<i>Branchinecta lynchi</i> (fairy shrimp or VPFS)); Cook's Lomatium (<i>Lomatium cookii</i> (Lomatium)); and large-flowered woolly meadowfoam (<i>Limnanthes floccosa ssp. grandiflora</i> (meadowfoam)). Collectively, these species are referred to as the listed vernal pool species. The PBO is targeted for the vernal pool complexes of Jackson County, Oregon.	ODOT USFWS
December 21, 2010	Aquatic Resources BA submitted to NMFS from FHWA	ODOT FHWA NMFS
January 25, 2011	USFWS issued Jackson County PBO for Vernal Pool Conservation Strategy (FWS Reference Number 13420-2011-F-0064) as described in October 6, 2010 entry above.	USFWS ODFW
December 22, 2011	Terrestrial BA submitted to USFWS from FHWA	ODOT FHWA USFWS
December 13-14, 2011	Pre-application meeting at ODOT Region 3 Tech Center for the JTA Phase of the OR 62: I-5 to Dutton Road Project and the Fern Valley Interchange Project.	ODOT ODFW USFWS Corps DSL
March 20, 2013	Biological Opinion received from NMFS	ODOT FHWA NMFS
March 26, 2013	Biological Opinion received from USFWS	ODOT FHWA USFWS

Techniques to note:

- summarizes steps taken to comply with procedural requirements, and gives the status of each step (completed, not required, submitted, etc.)

The Endangered Species Act is not pertinent to the WDC Project because there are no federally listed threatened or endangered species in the ecosystem impact analysis area that could be affected by the project alternatives. Table 14-1 provides an overview of the Endangered Species Act consultation process for the WDC Project. For copies of the correspondence related to this consultation, see Appendix 14B, Ecosystems Correspondence.

In addition to threatened and endangered species, USFWS also identifies a third category: candidate species. This category implies that a species of concern has a strong possibility of being listed under the Endangered Species Act in the future, though at this time the species does not benefit from the full regulatory weight of the Endangered Species Act.

FHWA's policy on candidate species (FHWA 2002) states that impacts on candidate species should be addressed in environmental documents for federal-aid highway projects. The FHWA policy states that documents prepared under the National Environmental Policy Act (NEPA) should identify candidate species as such and should describe any planned conservation measures. The FHWA policy also encourages state Departments of Transportation to implement conservation measures or proactively partner with federal agencies to avoid the need to list the species in the future.

Table 14-1. Status of the Informal Endangered Species Act Consultation Process for the WDC Project

Step	Status
Develop species list; USFWS concurs with list.	Completed. Initial species list reviewed in June 2010. List updated yearly during EIS process. ↓
Identify threatened or endangered species and/or critical habitat.	Completed. Conducted field surveys and literature reviews of the ecosystem impact analysis area. ↓
If species or critical habitat are identified, prepare a Biological Assessment.	Completed. A Biological Assessment is required only if the preferred alternative could affect federally listed species. No threatened or endangered species are in areas that could be affected by the project alternatives. ↓
Make determination to USFWS if the preferred alternative is likely to adversely affect species or critical habitat.	No-effect determination submitted to the Utah Department of Transportation (UDOT). USFWS does not require consultation if there is a no-effect determination. ↓
USFWS concurs with determination of no adverse impacts or starts the formal consultation process.	Not required. USFWS does not have to concur with no-effect determinations. ↓
Start the formal consultation process.	Not required.

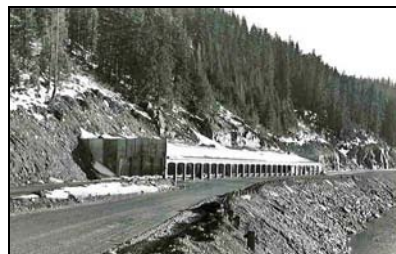
Techniques to note:

- summarizes steps taken to comply with procedural requirements, such as Section 106 consultation for historic resources

Permanent Impacts

Keechelus Lake Alignment Alternatives 2, 3, and 4 (the Preferred Alternative) would require removing and replacing the snowshed, which is a historic structure listed on the NRHP. None of the build alternatives for the Keechelus Lake Alignments or for the remaining project area would result in either direct or indirect impacts to any other known historic, archaeological, or cultural resource in the area of potential effect.

FHWA and WSDOT analyzed removal of the snowshed under Section 106 of the National Historic Preservation Act, and Section 4(f) of the Department of Transportation Act of 1966. Section 106 and Section 4(f) regulate the use of historic, cultural, and archaeological resources by transportation projects.



The existing snowshed, built in 1950, only covers two of the four lanes on I-90 and does not adequately protect the highway from avalanches, or accommodate traffic volumes and oversized loads.

Section 106

Section 106 promotes historic preservation by ensuring that historic properties are considered as part of a federal agency's decision-making process. Section 106 establishes a consultation and agreement process that FHWA must follow before approving WSDOT actions that have the potential to adversely affect cultural resources. The process includes the following steps:

1. **Consultation.** Consultation is a major component of the archaeological and historical survey. For this project, WSDOT carried out Section 106 consultation with FHWA, affected tribes including their Tribal Historic Preservation Officer (THPO), the SHPO from the Washington State DAHP, and the federal Advisory Council on Historic Preservation, which oversees Section 106 compliance. WSDOT consulted with the Confederated Tribes of the Colville Reservation, Muckleshoot Tribe, Snoqualmie Tribe, Tulalip Tribe, Wanapum Tribe and Yakama Nation. During consultation, WSDOT agreed to coordinate revegetation and mitigation plant lists with interested tribes to include plants traditionally used by Native Americans.



Cabins along Old US Highway 10 in the 1930s.

2. ***Determining NRHP Eligibility.*** NRHP eligibility is determined in the archaeological and historical survey by licensed professionals. WSDOT confirmed NRHP eligibility determinations in consultation with the SHPO and the THPOs.
3. ***Determining Adverse Effects.*** FHWA and WSDOT must determine if the project would have an adverse effect on any historic, cultural, or archaeological resources, based on the Section 106 criteria defined in CFR 800.5(a)(1), on all eligible resources within the area of potential effect. FHWA and WSDOT, in consultation with the SHPO and THPOs, determined that no cultural or archaeological resources would be adversely affected, and only one historic resource (the snowshed) would be adversely affected by the project. Following the decision to remove the snowshed, the lead agencies made a separate determination of impact for that resource and concluded that there would be an adverse impact. The DAHP concurred with these determinations.
4. ***Memorandum of Agreement.*** FHWA, WSDOT, and DAHP signed a Memorandum of Agreement on October 10, 2007. (See Chapter 5, *Programmatic Section 4(f) Evaluation*). This agreement commits FHWA and WSDOT to carry out measures to mitigate for adverse impacts to the snowshed.

Section 4(f)

Section 4(f) of the Department of Transportation Act prohibits the use of NRHP-eligible or -listed cultural and recreational resources for transportation projects unless there is no prudent and feasible alternative. If a project causes an adverse effect to an NRHP-eligible or -listed resource, it is considered a “use” under Section 4(f), and a Section 4(f) evaluation must be prepared. FHWA concluded that removal of the snowshed is a use under Section 4(f) and prepared a Programmatic Section 4(f) Evaluation, which appears as Chapter 5 of this document.

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Relevant Factors Listed and Considered

(e.g., factors listed in Section 4(f) regulations)

- MD: Red Line FEIS - Section 4(f) least harm
- WA: Mukilteo FEIS - Section 4(f) least harm

Techniques to note:

- demonstrates that each required factor has been considered (in this case, for compliance with Section 4(f))

ary structures would need to be

Emergency exits would be constructed in the sidewalk on the south side of Lombard Street. No additional extensions to the pedestrian connector between the Red Line Inner Harbor and Charles Center Metro Stations would be required because the underground station structure would be constructed adjacent to the proposed tunnel. While closures would occur on East Lombard Street during cut-and-cover construction activities, the intersection at Light and East Lombard Streets would remain open to traffic during construction.

The first row of the 100 East Pratt Street parking garage would require underpinning. The potential for and duration of, temporary access restrictions of building occupants would be determined during Final Design. All businesses and tenants of 104 East Lombard Street/111 Water Street would need to be relocated.

The estimated cost of Inner Harbor Station Alternative 9, including real estate acquisition, business relocation, building demolition, and construction of the three-level station structure would be approximately \$132.3 million.

6.10.8 Least Overall Harm Analysis Summary

The Preferred Alternative proposed Inner Harbor Station would require a Section 4(f) use because of demolition of two contributing historic buildings to the Business and Government Historic District, located at 108-112 and 114 East Lombard Street. **Each alternative was weighed against the seven criteria for evaluating least overall harm per 23 CFR 774.3(c)(1).**

1. The ability to mitigate adverse impacts to each Section 4(f) property including any measures that result in benefits to the property: For those alternatives that include demolition of contributing buildings to the Business and Government Historic District (Preferred Alternative proposed Inner Harbor Station and Alternatives 4, 6, and 9), mitigation of adverse impacts would be the same or similar, and would be outlined in the Programmatic Agreement (PA) with the SHPO and consulting parties. Under each of these alternatives, impacts to additional contributing buildings because of structural underpinning would be avoided. Mitigation for the minor impacts because of structural underpinning of contributing buildings under Inner Harbor Station Alternatives 5, 7, and 8 would be mitigated through the terms identified in the PA.
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: There would be “no adverse effect” to the Business and Government Historic District as a result of structural underpinning to contributing buildings under Inner Harbor Station Alternatives 5, 7, and 8. Of the alternatives that would require demolition of contributing buildings, several factors were considered. The Business and Government Historic District includes over 200 contributing buildings. Approximately 15 buildings within the district are individually listed or eligible for listing in the National Register, such as Baltimore City Hall and the Old Post Office and Court House. The buildings in the vicinity of the Inner Harbor Station are not individually listed in the National Register.

However, because of their prominent locations with frontages on multiple streets, the remaining harm to the Business and Government Historic District would be greater under Inner Harbor Station Alternatives 4, 6, and 9 than under the Preferred Alternative. The contributing buildings at 108-112 and 114 East Lombard Street are in the middle of a block with frontage on Lombard Street only, making them less prominent within the district than the other buildings being considered for demolition.

3. The relative significance of each Section 4(f) property: The contributing buildings in the vicinity of the Inner Harbor Station are considered to be of equal significance within the historic district. However, the historic buildings at the intersection at 31 Light Street and 34-36 Light Street are large and visually prominent from several vantage points. The mid-block building at 104 East Lombard Street (111 Water Street) has frontage on two streets within the district and occupies a larger footprint than those buildings at 108-112 and 114 East Lombard Street. Additionally, Water Street retains much of its historic character, and demolition of 104 East Lombard Street (111 Water Street) would affect the character of two blocks within the historic district.
4. The views of the official(s) with jurisdiction over each Section 4(f) property: At a consultation meeting on July 17, 2012 with the MTA and FTA, the MHT (official with jurisdiction) expressed informal support for the Preferred Alternative proposed Inner Harbor Station. This occurred in context of a discussion regarding projected ridership and connections at the Inner Harbor Station in relation to Purpose and Need, constraints within the vicinity including historic buildings and active businesses, and avoidance and minimization measures and consideration undertaken by the Red Line team. MHT would have an opportunity to review and comment on this Draft Section 4(f) Evaluation, and their views would be detailed in the Final Section 4(f) Evaluation.
5. The degree to which each alternative meets the purpose and need for the project: Each alternative meets the Purpose and Need; however, Inner Harbor Station Alternative 5 would require an additional connection to the proposed pedestrian tunnel leading to the Charles Center Metro Station.
6. After reasonable mitigation the magnitude of any adverse impacts to properties not protected by Section 4(f): only the Preferred Alternative proposed Inner Harbor Station would not directly impact or displace any current or foreseeable business operations within the downtown central business district. Each of the other alternatives evaluated in this least overall harm analysis would require permanent impacts or relocations to active businesses. This factor weighed heavily in the initial selection of a site for the Inner Harbor Station ancillary buildings, and in this draft least overall harm analysis.
7. Substantial differences in costs among the alternatives: The Preferred Alternative proposed Inner Harbor Station would cost less than all other alternatives under consideration, and includes real estate costs, business relocations required under each of the other Inner Harbor Station alternatives, and construction costs.

Table 6-4 presents a comparison of the alternatives by each of the seven factors discussed above. Based on the draft evaluation presented in this section and in **Table 6-4**, several factors outweigh the importance of protecting the Section 4(f) properties at 108-112 and 114 East Lombard Street. A final analysis and conclusion would be included in the Final Section 4(f)

5.5.3 Absence of Prudent and Feasible Avoidance Alternatives

Because none of the project's proposed alternatives completely avoids using Section 4(f) resources, Section 4(f) regulations require an analysis to determine if there are prudent and feasible avoidance alternatives.

The Preferred Alternative would use four resources that also would be used by the other Build alternatives. Any other alternative within the Mukilteo waterfront area would have a similar likelihood of using these resources, even if some design elements were modified or the alternatives had different footprints. Alternatives outside of Mukilteo that would have avoided these resources were considered but eliminated because they did not meet the project's purpose and need and worsened environmental effects (see *Chapter 2 Alternatives* for more information). The No-Build Alternative would not avoid the use of at least one Section 4(f) resource, and as it also does not satisfy the purpose and need, it does not qualify as a prudent and feasible alternative to a use. Therefore, none of the alternatives considered would constitute a feasible and prudent Section 4(f) avoidance alternative.

Techniques to note:

- demonstrates that each required factor has been considered (in this case, for compliance with Section 4(f))
- provides the full analysis in an appendix, in order to make the main volume more readable

5.5.4 Determining “Least Harm” Alternatives

Because no alternative completely avoids Section 4(f) uses, FTA can identify one or more “least harm” alternatives, considering factors defined in Section 4(f) regulations. *Appendix I* lists the factors to be considered; they include the remaining impacts to the Section 4(f) resources after mitigation, the degree to which each alternative meets the project's purpose and need, and any adverse impacts after mitigation to resources not protected by Section 4(f) resources.

FTA has incorporated in its analysis 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. *Appendix I* describes in more detail each of the alternatives' performance with respect to all of the least harm factors. The text below focuses on the primary conclusions of this complex analysis:

- The Preferred Alternative is most able to mitigate adverse impacts on the affected Section 4(f) properties. It includes measures that protect the affected historic properties, and replace the affected recreation property. Its mitigation measures reduce the remaining harm, after mitigation, to the properties, and offers design opportunities that recognize the historic significance of several of the properties. The mitigation measures are supported by the other agencies with jurisdiction over each of the properties.
- The Preferred Alternative best meets the project's purpose and need because it offers the most improvements to transportation conditions for pedestrians, bicyclists, transit riders, and vehicles; it has the shortest distances between the transit center, terminal, and the commuter rail station; and it performs at least as well as the other alternatives in all the other purpose and need areas.
- The Preferred Alternative has similar or lower environmental impacts and offers the highest benefits to other environmental resources. It addresses upland and in-water sources of contamination, including the Tank Farm Pier

and existing terminal facilities; it reduces the ferry system's impacts on the local transportation system and parking; it supports local land use plans; it avoids displacing a local business; and it opens up the largest area of the waterfront to public use, access, and potential developments consistent with the City of Mukilteo's plans.

The costs of the Preferred Alternative are reasonable compared to the other alternatives, and would not require the selection of any other alternative.

5.5.5 Section 4(f) Evaluation

The full Section 4(f) evaluation in *Appendix I* provides a more complete description of the factors FTA has considered and the analysis performed to support its finding that:

- FTA has found no feasible and prudent avoidance alternatives to using protected Section 4(f) resources.
- In developing the Preferred Alternative, WSDOT and FTA have conducted all possible planning to minimize harm to each property that would be used.
- Considering the Preferred Alternative's mitigation and enhancement measures for Section 4(f) uses, as well as its impacts and benefits, the Preferred Alternative would have the least overall harm to Section 4(f) resources and the environment.

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Required Findings Made, with Correct Wording

(e.g., EJ Determinations)

- CO: US 36 FEIS - Section 106 Findings
- UT: West Davis Corridor - EJ Findings
- WA: SR 520 FEIS - EJ Findings

Techniques to note:
- uses precise wording (consistent with regulations) when making findings of eligibility and effect under Section 106).

Keewaydin Subdivision

Site Description

The Keewaydin Subdivision is located on the north side of US 36 and directly west of Foothills Parkway. It is bounded by Apache Avenue on the south, Sioux Drive and Eutaw Drive on the north, Thunderbird Drive on the east, and Pawnee Drive on the west.

Eligibility Determination

This subdivision, constructed between 1958 and 1963, was initially developed by William Suitts and Richard Gray on land bought from Loyal and Sadie King, Jimmie H. Queen, Reginald Howard, and Willard M. Queen, Jr. The homes were constructed by individual builders that contracted for a certain number of homes while the development of curb, gutter, sewage, other utilities, and other issues, were handled by William Suitts, who also financed the development. While two models appear to have been made available to homeowners (a single-story ranch and a bi-level), most of the homes were custom, architect-designed homes as evidenced in the neighborhood's eclectic mix of architectural details from the late 1950s and early 1960s. Additional research is necessary to determine the significance of William Suitts and the local history of the development of this subdivision. For the purposes of the FEIS, it is being treated as an NRHP-eligible historic district associated with Criterion C.

Effects Determination

All three build packages include the construction of a noise wall within CDOT ROW south of Apache Avenue. The wall would end at the open space parcel west of the homes on Fox Drive. There are other homes that would be impacted by the wall west of 4125 Apache Avenue, but they were built after 1964, the cutoff date for surveying historic properties. This subdivision and the surrounding area is shown on Figure 4.7-24, Impacts to Keewaydin Subdivision and William Martin Homestead Addition Subdivision.

The new wall would be visible from the homes with front yards that face Apache Avenue and the highway, and the homes located on the corners of Mohawk Drive, Osage Drive, Ottawa Place, and Pawnee Drive, within the boundaries of the historic subdivision. The wall would have a visual impact on the potential historic district, but would be located approximately 100 feet from the edge of the district and the homes that face Apache Avenue and the highway. The noise walls would have a beneficial impact on the noise levels in the neighborhood/historic district. The indirect nature of these changes and the proposed benefits to the homes would not change or modify any of the qualities that may make the subdivision eligible as a historic district. Therefore, CDOT and FHWA have determined that the proposed undertaking would result in the Section 106 determination of No Adverse Effect.

Techniques to note:

- uses precise wording (consistent with regulations) when making findings regarding disproportionality of impacts under the the Executive Order on environmental justice

WDC. To mitigate this impact, UDOT will build a pedestrian underpass under the WDC to connect the communities on the opposite sides of the WDC. This underpass will also provide access to Fremont Park.

In Farmington, Alternatives B1 and B2 would not relocate any residences in an area with a higher concentration of minority populations but would cause noise impacts at four residences.

Overall, the B Alternatives would cause noise impacts at between 233 and 301 residences (B1–243; B2–233; B3–301; and B4–291). Of these, between 38 and 43 residences would be in areas with higher concentrations of low-income, minority, and poverty populations (B1–43; B2–39; B3–42; and B4–38).

No schools within 0.5 mile of the B Alternatives have a substantially higher percentage of minority students or students eligible for free or reduced-price lunches than the district-wide average.

According to FHWA’s guidance on environmental justice and NEPA (FHWA 2011), a disproportionately high and adverse effect on an environmental justice population would occur in the following situations:

- The adverse effect associated with the transportation project would be predominantly borne by the environmental justice population.
- The effect suffered by the minority population and/or low-income population would be appreciably more severe or greater in magnitude than the adverse effect that would be suffered by non-minority populations and/or low-income populations.

As noted above in this section, some areas with higher concentrations of minority and low-income populations would be affected by the WDC. However, the adverse effects from the WDC would not be predominantly borne by these populations, since a substantially greater number of non-environmental justice populations would be relocated, would have their communities divided, and would be affected by noise. In addition, the relocation, noise, and community cohesion effects that would be suffered by the minority and low-income populations would not be appreciably more severe or greater in magnitude than the adverse effects that would be suffered by non-minority populations and/or non-low-income populations. All populations would receive a similar benefit from the improved mobility provided by the WDC.

In summary, based on the above analysis, Alternatives B1–B4 would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further environmental justice analysis of Alternatives B1–B4 is required.

Techniques to note:

- uses precise wording (consistent with regulations) when making findings regarding disproportionality of impacts under the the Executive Order on environmental justice

and Discipline

Report (Attachment 7) contain more information about mitigation relating to Foster Island. With implementation of these measures, there would be no disproportionately high and adverse effects on tribes regarding the Foster Island TCP.

A draft version of the Memorandum of Agreement with the Muckleshoot Tribe is expected to be completed for review by summer 2011 and signed by the end of the year. Conditional upon execution of this agreement, WSDOT anticipates that effects on tribal treaty fishing will be fully mitigated and that there will be no disproportionately high and adverse effect on minority populations as a result of the project.

What is the Environmental Justice Determination for the project?

According to the FHWA implementing order, when determining whether a particular program, policy, or activity will have disproportionately high and adverse effects on minority and low-income populations, FHWA must take into account mitigation measures, enhancements, and potential offsetting benefits to the affected minority or low-income populations. Other factors that may be taken into account include design, comparative effects, and the relevant number of similar existing transportation system elements in non-minority and non-low-income areas.

There would not be a disproportionately high and adverse effect to minority or low income populations as a result of tolling. This finding was reached considering the following:

- All SR 520 users would benefit from a safer bridge that is less vulnerable to catastrophic failure and that would provide a faster, more reliable trip across SR 520.
- Increased transit options (including more routes, improved headways, and vanpool and ride-sharing programs) are being implemented across Lake Washington to provide more affordable and convenient options for avoiding the toll.
- Tolls would be lower at non-peak hours.

There would not be a disproportionately high and adverse effect on minorities as a result of project construction or operation on Foster Island.

In this case, the finding specifically refers to the tribal cultural resources of Foster Island.

This finding was reached considering:

- Measures in the current project design to minimize effects on the TCP
- The mitigation measures agreed upon as part of consultation under Section 106 of the NHPA

There would not be a disproportionately high and adverse effect to minorities as a result of project construction or operation in Lake Washington and associated waterbodies. In this case, the finding specifically refers to Muckleshoot Indian Tribe's treaty fishing rights.

This finding was reached considering:

- Measures in the project design to minimize effects on tribal fishing
- WSDOT's anticipated execution of an agreement with the Muckleshoot Indian Tribe to fully and fairly resolve issues associated with the impacts of the project on treaty rights.

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Supporting Documents Included in Appendix and Referenced

(e.g., cultural resources reports to support Section 106 findings)

- MD: Red Line FEIS - Support for Wetlands Delineations
- NC: Mid-Currituck FEIS - Support for Section 106 Findings

Techniques to note:

- includes references to correspondence in which regulatory agencies have made specific findings (e.g., jurisdictional determinations for waters of the U.S.)

December 2012

E, November 2010) and Eastern Mountains and Piedmont Region (USACE, July 2010). These manuals employ a three-parameter approach to wetland identification using hydrophytic vegetation, hydric soils, and hydrology. All three parameters must be present for an area to be considered a jurisdictional wetland under Section 404 of the Clean Water Act. Areas that do not meet all three of these parameters, but may still be regulated include palustrine open water (ponds), stream systems (waterways), and certain disturbed areas.

Agency field reviews were conducted with the USACE and the Maryland Department of the Environment (MDE) on May 9 and September 27, 2012 to gain agency jurisdictional determination concurrence on the waters of the US and wetland boundaries. Informal concurrence on the wetland and waterway boundaries was received in the field as reflected in meeting minutes, however, the preliminary jurisdictional determination letter formally documenting this concurrence is pending. The wetlands and waterways described below and shown on the mapping provided in the **Volume 2 Environmental Plate Series, Plate Series 2** reflect the results of these field reviews with the boundaries as shown. Minutes of the agency field reviews are provided in the *Natural Resources Technical Report* in **Appendix I** of this FEIS.

5.18.2 Existing Conditions

During the field investigation, 19 wetlands and 19 waterways were identified. All of the wetlands and waterways have been influenced to some degree by the intense development in the project study corridor, and the majority of the systems identified have been heavily manipulated through past ditching or filling. Despite the high degree of manipulation, these areas may still provide some limited functions such as groundwater discharge/recharge, wildlife habitat, and sediment trapping. The least affected and highest functioning wetlands in the project study corridor are those vegetated systems located in the forested floodplain of Dead Run and its tributaries along I-70 (W13, W18, and W21). These wetlands would be expected to provide groundwater discharge/recharge, flood desynchronization, terrestrial and aquatic wildlife habitat, and water quality benefits such as nutrient uptake and sediment trapping.

Each of the waters of the US, including wetlands, identified during the field investigation is described in detail in the *Natural Resources Technical Report*. The locations of waters of the US, including wetlands, are shown on detailed maps provided in **Volume 2 Environmental Plate Series, Plate Series 2**.

5.18.3 Future No-Build Conditions

The No-Build Alternative would not result in changes to the natural environment and no short and long-term effects are anticipated. A discussion of the effects from the Preferred Alternative follows.

5.18.4 Preferred Alternative

Effects to waters of the US, including wetlands, resulting from the Preferred Alternative, are shown in **Table 5-46**. At this stage of design, calculated effects are based on the anticipated limit of disturbance and include both long-term, permanent effects from project structures and facilities needed for operation of the transitway, and short-term, temporary effects from project construction. Both short- and long-term combined effects were calculated together,

Techniques to note:

- includes references to correspondence in which regulatory agencies have made specific findings (e.g., effects findings under Section 106 of the NHPA)

Improvements at the Dexter W. Snow House are not a part of the Preferred Alternative. The benefits and limitations of the two options for reducing hurricane evacuation clearance times are discussed in Section 2.1.10. In the case of ER2, emergency management officials have indicated that the 27-mile lane reversal associated with ER2 is not a realistic option.

Concurrence was requested and received from the HPO under the requirements of Section 106 of the National Historic Preservation Act of 1966 that the detailed study alternatives **would not adversely affect** the activities, features, and attributes that qualify the Dexter W. Snow House for protection under Section 4(f). **That effects determination is included under "Historic Architectural Resources Supplemental Materials" on the CD that accompanies this FEIS, at public review locations listed in Appendix C, and on the NCTA web site at <http://www.ncdot.gov/projects/midcurrituckbridge/>.** Thus, it appears there were grounds for a finding of *de minimis* (minimal) effect. Section 4(f) property may be used when FHWA determines that the use of the property, including any measure(s) committed to in order to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), would have a *de minimis* impact on the property (as defined in Title 23 CFR, Section 774.17). A *de minimis* impact determination under Title 23 CFR, Section 774.3(b) considers the requirement for all possible planning to minimize harm by reducing impacts on the Section 4(f) property to a *de minimis* level (Title 23 CFR, Section 774.117[5]). By publishing the DEIS, FHWA requested comments on the proposed finding of *de minimis* impact for the Dexter W. Snow House. None were received. A finding of *de minimis* impact for this property is not needed for the Preferred Alternative since it does not include a third outbound lane on US 158 and would not affect this property.

3.3 Natural Resource Characteristics and Impacts

This section considers the impacts of the detailed study alternatives, including the Preferred Alternative, on natural resources in the project area. It considers:

- How would water resources in the project area be affected?
- How would biotic resources be affected?
- How would wildlife on land be affected?
- How would aquatic wildlife be affected?
- How would invasive species be controlled?
- What impacts would occur to waters under the jurisdiction of the US Army Corps of Engineers?
- Would habitat used by threatened and endangered species be affected?

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